# Table of Contents


**General Information** ..... 1-1
General Information ..... 1-3

**Body Systems** ..... 2-1
Fixed and Moveable Windows ..... 2-3
Horns and Pedestrian Alerts ..... 2-15
Lighting ..... 2-18
Mirrors ..... 2-53
Vehicle Access ..... 2-63

**Brakes** ..... 3-1
Trailer Brake Controls ..... 3-3

**Driver Information and Entertainment** ..... 4-1
Image Display Cameras ..... 4-3

**Engine/Propulsion** ..... 5-1
12 V Starting and Charging ..... 5-3

**HVAC** ..... 6-1
HVAC - Automatic ..... 6-3
HVAC - Manual ..... 6-15

**Power and Signal Distribution** ..... 7-1
Data Communications ..... 7-3
Electrical Component and Inline Harness Connector End Views ..... 7-29
Power Outlets ..... 7-673
Wiring Systems and Power Management ..... 7-684

**Safety and Security** ..... 8-1
Immobilizer ..... 8-3
Parking Assistance Systems ..... 8-7
Remote Functions ..... 8-14

**Transmission** ..... 9-1
Shift Lock Control ..... 9-3

**INDEX** ..... INDEX-1

# BLANK

# Section 1

# General Information

**General Information** . . . . . 1-3
**Introduction** . . . . . 1-3
Vehicle, Engine and Transmission ID and VIN Location, Derivative and Usage . . . . . 1-3
Vehicle Certification, Tire Placard, and Anti-Theft Label . . . . . 1-5
RPO Code List . . . . . 1-7

**BLANK**

# General Information

## Introduction

### Vehicle, Engine and Transmission ID and VIN Location, Derivative and Usage




5028742

The vehicle identification number (VIN) plate (1) is the legal identifier of the vehicle. The VIN plate is located on the upper left corner of the instrument panel. The VIN number can be seen through the windshield from the outside of the vehicle:

**Vehicle Identification Number (VIN) System**

| Position | Definition | Character | Description |
|---|---|---|---|
| 1 | Country of Origin | 1 | United States |
| | | 3 | Mexico |
| 2 | Manufacturer | G | General Motors |
| 3 | Vehicle Brand/Type | B | Chevrolet Incomplete |
| | | C | Chevrolet Truck |
| 4 | GVWR/Brake System/Body Style | N | 6,001–7,000 lbs/Hydraulic/Standard Cab |
| | | P | 6,001–7,000 lbs/Hydraulic/Crew Cab |
| | | R | 6,001–7,000 lbs/Hydraulic/Extended Cab |
| | | U | 7,001–8,000 lbs/Hydraulic/Crew Cab |
| | | V | 7,001–8,000 lbs/Hydraulic/Extended Cab |

## Vehicle Identification Number (VIN) System (cont'd)

| Position | Definition | Character | Description |
|---|---|---|---|
| 5/6 | Line Chassis/Series | W/A | 4x2, 1500 Chevrolet Silverado, Work Truck |
| | | W/B | 4x2, 1500 Chevrolet Silverado, Custom |
| | | W/C | 4x2, 1500 Chevrolet Silverado, LT |
| | | W/D | 4x2, 1500 Chevrolet Silverado, RST |
| | | W/E | 4x2, 1500 Chevrolet Silverado, LTZ |
| | | W/F | 4x2, 1500 Chevrolet Silverado, High Country |
| | | W/L | 4x2, 2500 Chevrolet Silverado Work Truck |
| | | W/M | 4x2, 2500 Chevrolet Silverado Custom |
| | | W/N | 4x2, 2500 Chevrolet Silverado LT |
| | | W/P | 4x2, 2500 Chevrolet Silverado LTZ |
| | | W/R | 4x2, 3500 Chevrolet Silverado Work Truck |
| | | W/S | 4x2, 3500 Chevrolet Silverado LT |
| | | W/T | 4x2, 3500 Chevrolet Silverado LTZ |
| | | W/9 | 4x2, 1500 Chevrolet Silverado, (Non-US, Non-Canada) |
| | | Y/A | 4x4, 1500 Chevrolet Silverado, Work Truck |
| | | Y/B | 4x4, 1500 Chevrolet Silverado, Custom |
| | | Y/C | 4x4, 1500 Chevrolet Silverado, Trail Boss Custom |
| | | Y/D | 4x4, 1500 Chevrolet Silverado, LT |
| | | Y/E | 4x4, 1500 Chevrolet Silverado, RST |
| | | Y/F | 4x4, 1500 Chevrolet Silverado, Trail Boss - LT |
| | | Y/G | 4x4, 1500 Chevrolet Silverado, LTZ |
| | | Y/H | 4x4, 1500 Chevrolet Silverado, High Country |
| | | Y/L | 4x4, 2500 Chevrolet Silverado Work Truck 4WD |
| | | Y/M | 4x4, 2500 Chevrolet Silverado Custom 4WD |
| | | Y/9 | 4x4, 1500 Chevrolet Silverado, (Non-US, Non-Canada) |
| 7 | Restraint System | E | RPO AY0 – Active Manual Belts, Airbags – Driver and Passenger – Front (1st row), Front Seat Side (1st row), Roof Side (all seating rows) |
| 8 | Engine Type | D | RPO L84, Engine Gas, 8 Cylinder, 5.3L, DI, DFM, Aluminum, GEN 5, VAR 2 |
| | | F | RPO L82, Engine Gas, 8 Cylinder, 5.3L, DI, AFM, Aluminum, GEN 5, VAR 1 |
| | | H | RPO LV3. Engine Gas, 6 Cylinder, 4.3L, GEN 5, SIDI, V6, VVT, OHV, E85 MAX, Aluminum |
| | | K | RPO L3B, Engine Gas, 4 Cylinder, L4, 2.7L, SIDI VVT, Turbo, DOHC, Aluminum |
| | | L | RPO L87, Engine Gas, 8 Cylinder, V8, 6.2L, DI AFM, Aluminum, GEN 5 |
| | | T | RPO LM2, Engine Diesel, 6 Cylinder, 3.0L, CRI, V6, DOHC, Turbo, VGT, Aluminum |
| | | Y | RPO L5P - ENGINE DIESEL, 8 CYL, 6.6L, DI, V8, TURBO, DURAMAX, GEN 5 W B: 4x2, 1500 Chevrolet Silverado Custom VAR. 1 |
| | | 7 | RPO L8T - ENGINE GAS, 8 CYL, 6.6L, SIDI, VVT, CAST IRON |
| 9 | Check Digit | — | Check Digit |
| 10 | Model Year | L | 2020 |

## Vehicle Identification Number (VIN) System (cont'd)

| Position | Definition | Character | Description |
|---|---|---|---|
| 11 | Plant Location | 1 | Flint, Michigan, USA |
| | | Z | Fort Wayne, Indiana, USA |
| | | G | Silao, Mexico |
| 12–17 | Plant Sequence Number | — | Plant Sequence Number |

**2.7L (L3B) Engine ID and VIN Derivative Location**

Engine Identification

**3.0L (LM2) Diesel Engine ID and VIN Derivative Location**

Engine Identification

**4.3L (LV3) Engine ID and VIN Derivative Location**

Engine Identification

**5.3L (L82 L84) or 6.2L (L87) Engine ID and VIN Derivative Location**

Engine Identification

**10L80 (MQB) Transmission ID and VIN Derivative Location**

Transmission Identification Information

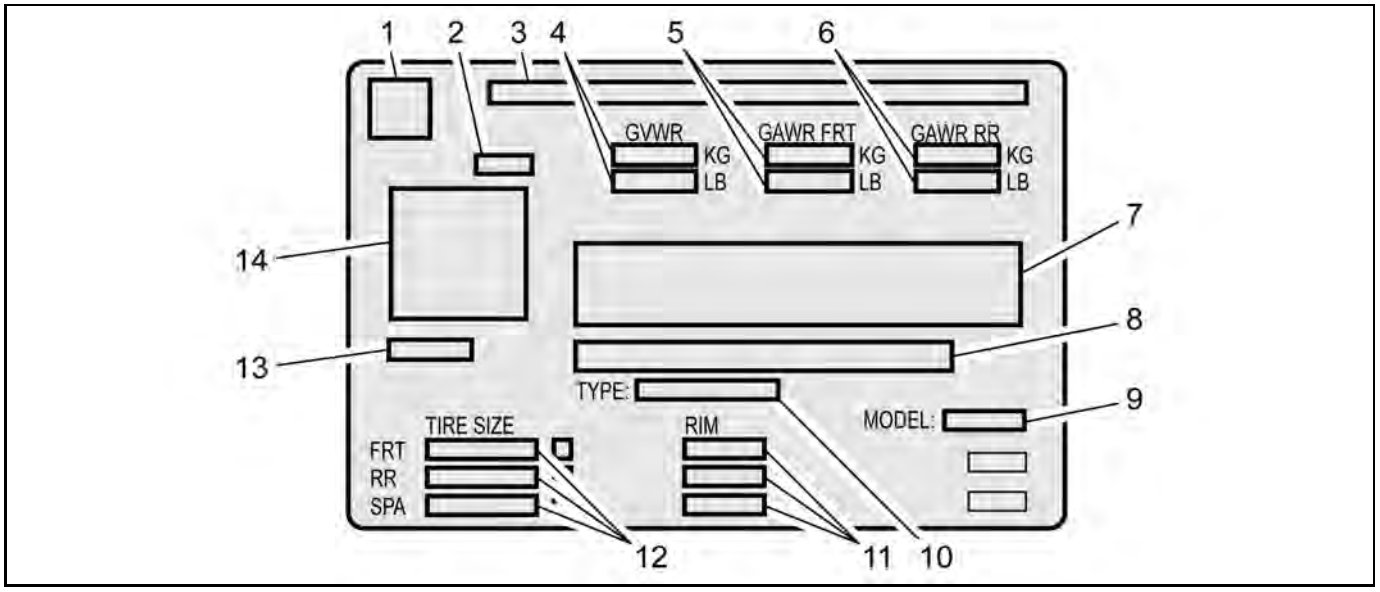
**6L80 (MYC) Transmission ID and VIN Derivative Location**

Transmission Identification Information

**8L90 (MQE) Transmission ID and VIN Derivative Location**

Transmission Identification Information

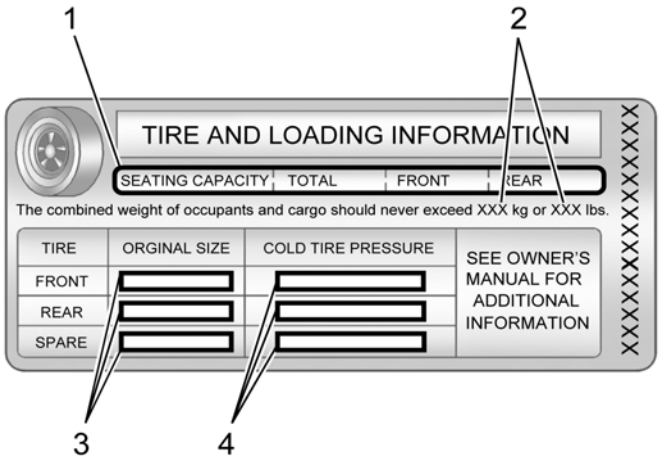
# Vehicle Certification, Tire Placard, and Anti-Theft Label




4992823

## Vehicle Certification Label

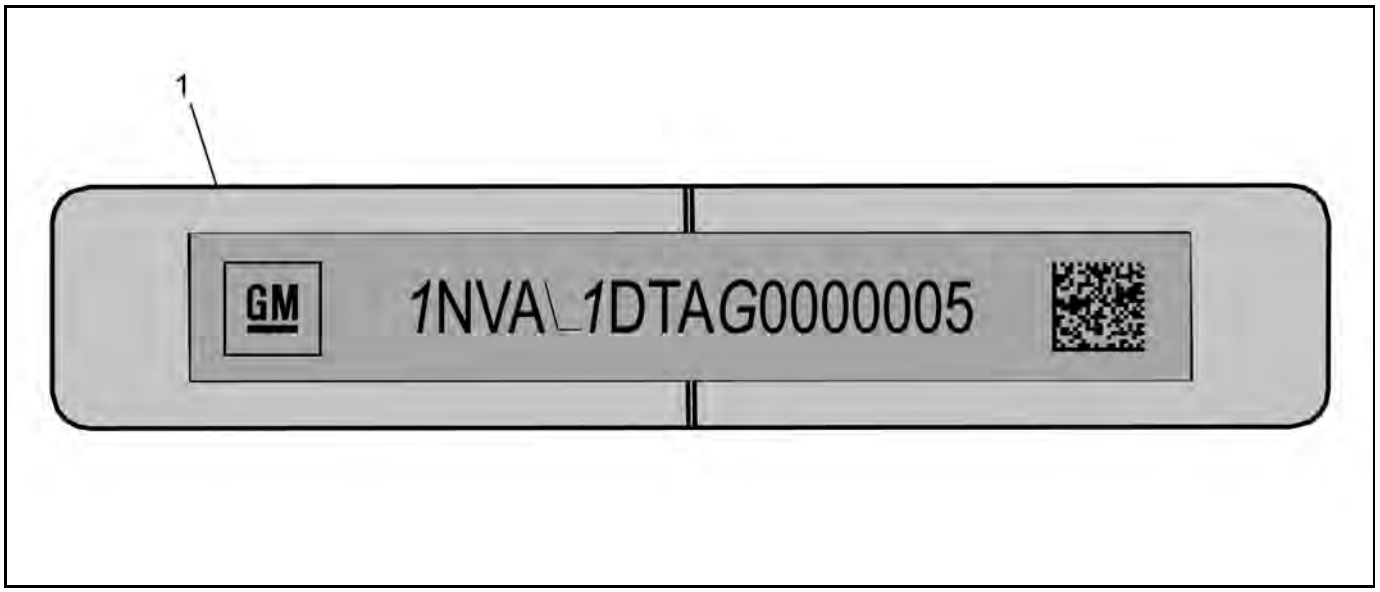
| Callout | Description |
|---|---|
| A vehicle-specific Certification label is attached to the vehicle's center pillar (B-pillar) and displays the following assessments: | |
| 1 | Logo |
| 2 | Final Date of Manufacture (Month and Year MM/YY)<br>Date of manufacture is to reflect the date that the vehicle is counted as built. In those cases where a replacement label is needed, the replacement label should reflect the actual build date not the date of replacement. |
| 3 | Name of Manufacturer |
| 4 | Maximum Gross Vehicle Weight Rating (GVWR) |
| 5 | Maximum Gross Axle Weight Rating (GAWR) - Front |
| 6 | Maximum Gross Axle Weight Rating (GAWR) - Rear |
| 7 | Certification Statement |
| 8 | Vehicle Identification Number (VIN) |
| 9 | Engineering Model Number |
| 10 | Vehicle Class Type (Pass Car, etc.) |
| 11 | Original Equipment Rim Size |
| 12 | Original Equipment Tire Size |
| 13 | Paint Code |
| 14 | QR Code<br>Once the QR code is scanned, the information will appear in this order on your smartphone or laptop: VIN, Model Year, Model, Build Month, Year, Engineering Book, Vehicle Order Number, 3 Digit RPO Codes sorted alphanumerically and the Paint Code (same code appears the lower left of the QR code) |




4962282

## Tire Placard

| Callout | Description |
|---|---|
| A vehicle-specific Tire and Loading Information label is attached to the vehicle's center pillar (B-pillar) and displays the following assessments: | |
| 1 | Specified Occupant Seating Positions |
| 2 | Maximum Vehicle Capacity Weight |
| 3 | Original Equipment Tire Size |
| 4 | Tire Pressure, Front, Rear, and Spare (Cold) |




4962289

## Anti-Theft Label

| Callout | Description |
|---|---|
| This legal identifier is in the front corner of the instrument panel, on the driver side of the vehicle. It can be seen through the windshield from outside. The Vehicle Identification Number (VIN) also appears on the Vehicle Certification and certificates of title and registration. | |
| 1 | Vehicle Identification Number (VIN) |

## RPO Code List

The following table provides the description of the Regular Production Option (RPO) codes that are available on the vehicle. The vehicle's RPO list is printed on the Service Parts Identification Label.

| RPO | Description |
|---|---|
| 00T | TOP COLOR-CONVERTIBLE, NIGHTSHADOW BLUE (450A) |
| 19T | TOP COLOR-CONVERTIBLE, BLACK |
| 1LS | PACKAGE-LS OPTION 1 |
| 1LT | PACKAGE-LT OPTION 1 |
| 1LZ | PACKAGE-LZ OPTION 1 |
| 1SE | PACKAGE-OPTION 05 |
| 1SS | PACKAGE-OPTION 17 |
| 21T | TOP COLOR-KALAHARI |
| 2F5 | SALES PACKAGE-RED INTERIOR, SPECIAL |
| 2LT | PACKAGE-LT OPTION 2 |
| 2SS | PACKAGE-SS OPTION 2 |
| 3DL | MOLDING I/P-INTR, CARBON FIBER |
| 3F9 | SEAT BELT COLOR-RED (01) |
| 3LT | PACKAGE-LT OPTION 3 |
| 4AA | INTERIOR TRIM-JET BLACK |
| 4F2 | INTERIOR TRIM-JET BLACK / KALAHARI |
| 4F7 | INTERIOR TRIM-JET BLACK / MED ASH GRAY |
| 4F9 | INTERIOR TRIM-JET BLACK / CERMIC WHITE (A1AC/BC) |
| 4G2 | INTERIOR TRIM-JET BLACK / ADRENALINE RED |
| 56H | ACCESSORY-WHEEL - 20 X 8.5, J FRT & 20 X 9.5, J, RR, ALUMINUM, DESIGN 2 |
| 56K | ACCESSORY-WHEEL - 20 X 8.5, J FRT & 20 X 9.5, J, RR, ALUMINUM, DESIGN 4 |

| RPO | Description |
|---|---|
| 56M | ACCESSORY-WHEEL - 20 X 8.5 - J - FRT & 20 X 9.5 - J - RR - ALUMINUM - DESIGN 5 |
| 56R | WHEEL-20 X 8.5, J, FRT & 20 X 9.5, J, RR, ALUMINUM, DESIGN 1 |
| 56S | WHEEL-20 X 8.5, J, FRT & 20 X 9.5, J, RR, ALUMINUM DESIGN 2 |
| 56V | WHEEL-20 X 8.5, J, FRT & 20 X 9.5, J, RR, ALUMINUM DESIGN 3 |
| 56W | WHEEL-20 X 8.5, J, FRT & 20 X 9.5, J, RR, ALUMINUM, DESIGN 4 |
| 56Y | WHEEL-20 X 8.5, J, FRT & 20 X 9.5, J, RR, ALUMINUM, DESIGN 5 |
| 56Z | WHEEL-20 X 8.5, J, FRT & 20 X 9.5, J, RR, ALUMINUM, DESIGN #6 |
| 57S | ACCESSORY-WHEEL - 20 X 8.5 - J - FRT & 20 X 9.5 - J - RR - ALUMINUM - DESIGN 8 |
| 57W | WHEEL-20 X 8.5, J, FRT & 20 X 9.5, J, RR, ALUMINUM, DESIGN 26 |
| 58E | WHEEL-20 X 8.5, J FRT & 20 X 9.5, J, RR, ALUMINUM, DESIGN 10 |
| 5A7 | WHEEL SPARE-NONE |
| 5AZ | ACCESSORY-SAFETY KIT - UNIVERSAL |
| 5JW | ACCESSORY-WHEEL - 20 X 8.5 - J - ALUMINUM - DESIGN 4 |
| 5JX | ACCESSORY-WHEEL - 20 X 8.5 - J - ALUMINUM - DESIGN 5 |
| 5K2 | ACCESSORY-DECAL PACKAGE - BODY SIDE, DESIGN 1 |
| 5KP | ACCESSORY-ILLUMINATED DOOR SILLS - ALTERNATE DESIGN |
| 5LQ | ACCESSORY-BRAKE UPGRADE PKG 2 - COMPLETE |
| 5V5 | ACCESSORY-SPOILER DESIGN 1 |
| 5V6 | ACCESSORY-INTERIOR ENHANCEMENT - PACKAGE A |
| 5V8 | ACCESSORY-INTERIOR ENHANCEMENT - PACKAGE B |
| 5VF | ACCESSORY-EXHAUST TIP - DESIGN 3 |
| 5VM | ACCESSORY-GROUND EFFECTS PACKAGE - ALTERNATE DESIGN |
| 5WF | ACCESSORY-BATTERY PROTECTION PACKAGE |
| 5YN | ACCESSORY-BADGE - INTERIOR TRIM, DESIGN 1 |
| 5ZB | ACCESSORY-CENTER CAP - WHEEL - DESIGN 5 |
| 5ZC | ACCESSORY-CENTER CAP - WHEEL - DESIGN 6 |
| 5ZD | ACCESSORY-CENTER CAP - WHEEL - DESIGN 7 |
| 5ZU | ACCESSORY-SPOILER - DECKLID - DESIGN 2 |
| 5ZV | ACCESSORY-SPOILER - DECKLID - DESIGN 3 |
| 5ZW | ACCESSORY-SPOILER - DECKLID - DESIGN 4 |

| RPO | Description |
|---|---|
| 5ZZ | ACCESSORY-SPOILER - DECKLID - DESIGN 5 |
| 62F | ACCESSORY-MAT - TRUNK/CARGO AREA - ALT DESIGN |
| 62O | ACCESSORY-CHMSL - CENTER HIGH MOUNT STOP LIGHT |
| 65C | LABEL, WARNING-CALIFORNIA, PROP 65 COMPLIANT |
| 6ZQ | ACCESSORY-SPOILER - DECKLID - DESIGN 6 |
| 9L3 | TIRE SPARE-NONE |
| A1V | MODEL CONVERSION-CHEVROLET LZ |
| A1X | MODEL CONVERSION-CHEVROLET 1LE |
| A1Y | MODEL CONVERSION-CHEVROLET SS |
| A1Z | MODEL CONVERSION-CHEVROLET ZL1 |
| A45 | MEMORY-SEAT ADJUSTER, MIRROR, POWER, DRIVER, PERSONALIZATION |
| A50 | SEAT-FRT BKT |
| A62 | SEAT RR-FIXED SEAT BACK |
| A9B | APPEARANCE PACKAGE-BLACK |
| AAQ | ADJUSTER PASS ST-POWER, 4 WAY (DO NOT USE ON NEW PROGRAMS AFTER MY18) |
| ACO | IDENTIFICATION-ACCESSORY CATALOG OFFERING |
| AJ9 | RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER & PASS, FRT & SEAT SIDE HIGH POSITION |
| AKQ | ADJUSTER PASS ST-SEAT, POWER, 6 WAY, VERT (DO NOT USE ON NEW PROGRAMS AFTER MY18) |
| AL0 | SENSOR INDICATOR-INFLATABLE RESTRAINT, FRT PASS/CHILD PRESENCE DETECTOR |
| AM7 | SEAT RR-FOLDING |
| AQJ | SEAT-FRT BKT, HIGH PERFORMANCE |
| AT8 | RESTRAINT PROVISIONS-CHILD, RR SEAT, RR FACING |
| ATH | LOCK CONTROL, ENTRY-REMOTE ENTRY, EXTENDED RANGE, PASSIVE ENTRY, ALL DOORS |
| AV3 | ADJUSTER FRT ST-POWER, 8 WAY, DRIVER - DO NOT USE ON NEW PROGRAMS AFTER MY18 |
| AXJ | VEHICLE TYPE-PASSENGER CAR |
| AYG | RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER & PASS FRT, SEAT SIDE, ROOF SIDE, KNEE |
| B2E | SALES-SPRING SPECIAL PACKAGE |
| B34 | COVERING FRT-FLOOR MATS, CARPETED INSERT |
| B3T | HOOD-ACTIVE, PEDESTRIAN PROTECTION |
| B3V | TEST-EXTENDED WATER |
| B7G | PLATE-DOOR SILL COVER, ILLUMINATED |

| RPO | Description |
|---|---|
| B9M | ORNAMENTATION-EXTR, TAIL LAMPS, SMOKED LENS VAR 1 |
| BAG | PARTS PKG-EXPORT |
| BD2 | ORNAMENTATION-EXTR, - NONE |
| BD4 | ORNAMENTATION-INTERIOR, NONE |
| BO3 | DECAL-STRIPE, ABALONE WHITE TRI-COAT |
| BO4 | DECAL-STRIPE, CARBON FLASH MET |
| BRD | SALES-INTERIOR 'ACCENT' TRIM PACKAGE - VAR 3 |
| BRJ | SALES-INTERIOR 'ACCENT' TRIM PACKAGE - VAR 5 |
| BTV | REMOTE START-ENGINE |
| C2U | DECAL-STRIPE, SILVER |
| C3O | DECAL-STRIPE, BLACK |
| C68 | HVAC SYSTEM-AIR CONDITIONER FRT, AUTO, ELECTRONIC CONTROLS |
| C70 | LAMP-INTR, AMBIENT, UPLEVEL |
| CF5 | ROOF-SUN, GLASS, SLIDING, ELEC (DO NOT USE NEXT NEW MAJOR) |
| CFW | HOOD-ALUMINUM, CARBON FIBER INSERT |
| CG3 | ORNAMENTATION-EXTR, NAMEPLATE |
| CG6 | ORNAMENTATION-EXTR, NAMEPLATE, VAR 1 |
| CJ2 | HVAC SYSTEM-AIR CONDITIONER FRT, AUTO TEMP CONT, AUX TEMP CONT |
| CM8 | ROOF-CONVERTIBLE, FOLDING, POWER, REMOTE CONTROL |
| D31 | MIRROR I/S R/V-TILT |
| D52 | SPOILER-RR END, SPORT |
| D5S | SPOILER-RR, BLADE |
| D5Z | SPOILER-RR, STANCHION |
| D80 | SPOILER-RR END PNL |
| D88 | DECAL-STRIPE, SPORT |
| DAZ | MIRROR O/S-LH & RH, REMOTE CONTROL, ELECTRIC, HEATED, LT SENSITIVE LH SIDE ONLY, ECE |
| DCP | PROCESSING-DIRECTIONS & CONNECTIONS SERVICE PACKAGE |
| DCT | MIRROR O/S-LH & RH, REMOTE CONTROL, MANUAL FOLDING, TURN SIG IND, COLOR |
| DD1 | MIRROR O/S-LH & RH, REMOTE CONTROL, ELECTRIC, HEATED, LT SENSITIVE LH SIDE ONLY |
| DD8 | MIRROR I/S R/V-LT SENSITIVE |
| DG7 | MIRROR O/S-LH & RH, REMOTE CONTROL, ELECTRIC, COLOR |
| DNS | EQUIPMENT-SUPPLIER INSTALLED |
| DRZ | MIRROR I/S R/V-LT SENSITIVE, FULL VIDEO DISPLAY |
| DSM | DECAL PACKAGE-HOOD WRAP |

| RPO | Description |
|---|---|
| DUU | DECAL PACKAGE-BLACK |
| DUV | DECAL PACKAGE-SWITCHBLADE SILVER |
| DVV | DECAL PACKAGE-BLACK MEET KETTLE METALLIC |
| DW7 | DECAL PACKAGE-ABALONE WHITE TRI-COAT |
| DW8 | DECAL PACKAGE-CARBON FLASH METALLIC |
| DX3 | STRIPE-(NONE) |
| ERI | EQUIPMENT-BATTERY SAVER |
| EXP | EXPORT- |
| F55 | CHASSIS-CONTINOUSLY VARIABLE REAL TIME DAMPING MAGNETO RHEOLOGICAL |
| FE2 | SUSPENSION SYSTEM-RIDE, HANDLING |
| FE3 | SUSPENSION SYSTEM-SPORT |
| FE4 | SUSPENSION SYSTEM-SPECIAL RIDE & HANDLING |
| FE9 | CERTIFICATION-EMISSION, FEDERAL |
| FEA | SUSPENSION SYSTEM-RIDE, HANDLING, PERFORMANCE, VAR 2 |
| FGF | FREQUENCIES-PHILIPPINES |
| FJW | VEHICLE FUEL-GASOLINE E15 |
| FTF | EXTENSION-FRT FASCIA, BODY COLOR |
| FTJ | EXTENSION-FRT FASCIA, BODY COLOR, VAR 1 |
| G16 | PRIMARY COLOR-EXTERIOR, CRUSH-1 (413C) |
| G7C | PRIMARY COLOR-EXTERIOR, PULL ME OVER RED SOLID (130X) |
| G7E | PRIMARY COLOR-EXTERIOR, CAUGHT RED HANDED TINTCOAT (132X) |
| G80 | AXLE POSITRACTION-LIMITED SLIP |
| G96 | AXLE POSITRACTION-LIMITED SLIP, ELECTRONIC |
| G9K | PRIMARY COLOR-EXTERIOR, SATIN STEEL GRAY MET-3 (464C) |
| GAZ | PRIMARY COLOR-EXTERIOR, SUMMIT WHITE (G) 8624 |
| GBA | PRIMARY COLOR-EXTERIOR, BLACK (G) 8555 |
| GJ0 | PRIMARY COLOR-EXTERIOR, STINGER MET -1 (624D) |
| GJI | PRIMARY COLOR-EXTERIOR, DARK SHADOW MET -1 (626D) |
| GKK | PRIMARY COLOR-EXTERIOR, OCONUS MET -1 (627D) |
| GKO | PRIMARY COLOR-EXTERIOR, SHOCK -1 (628D) |
| GLR | PRIMARY COLOR-EXTERIOR, ROWAN MET-1 (326E) |
| GT4 | AXLE REAR-3.73 RATIO |
| GW6 | AXLE REAR-3.27 RATIO |

| RPO | Description |
|---|---|
| H01 | INTERIOR TRIM CONFIG-LEATHER, LEVEL 1, KALAHARI (A1AC/BC) |
| H0W | INTERIOR TRIM CONFIG-SUEDE, LEVEL 1, JET BLACK / ADRENALINE RED |
| H0Y | INTERIOR TRIM CONFIG-LEATHER, LEVEL 1, JET BLACK |
| H13 | INTERIOR TRIM CONFIG-LEATHER, LEVEL 1, CERAMIC WHITE (A1AC/BC) |
| H16 | INTERIOR TRIM CONFIG-LEATHER, LEVEL 1, ADRENALINE RED (A1AC/BC) |
| H17 | INTERIOR TRIM CONFIG-LEATHER, LEVEL 1, MED ASH GRAY |
| H1T | INTERIOR TRIM CONFIG-CLOTH, LEVEL 1, JET BLACK |
| H72 | INTERIOR TRIM CONFIG-CLOTH, LEVEL 1, MED ASH GRAY |
| HRD | AXLE REAR-2.85 RATIO |
| HRE | AXLE REAR-2.77 RATIO |
| I20 | ENGINEERING YEAR-2020 |
| IOR | RADIO-INFOTAINMENT SYSTEM - 3.X LOW HMI, MIDLEVEL CONNECTIVITY 3.X |
| IOS | RADIO-INFOTAINMENT SYSTEM - 3.X MID/ HIGH HMI, ENHANCED CONNECTIVITY, VOICE RECOGNITION, MID SD NAV CAPABLE |
| IOT | RADIO-INFOTAINMENT SYSTEM - 3.X MID/ HIGH HMI, ENHANCED CONNECTIVITY, VOICE RECOGNITION, PREMIUM SD NAV |
| J55 | BRAKE SYSTEM-HEAVY DUTY |
| J6E | CALIPER COLOR-YELLOW |
| J6F | CALIPER COLOR-RED |
| J6G | BRAKE SYSTEM-POWER, FRT & RR DISC, ABS, 18", HEAVY DUTY |
| J6H | BRAKE SYSTEM-POWER, FRT & RR DISC, ABS, 19", HEAVY DUTY |
| J6L | CALIPER COLOR-ORANGE |
| J6M | BRAKE SYSTEM-PWR, FRT DISC & RR DRUM |
| J71 | BRAKE PARKING-POWER OPERATED |
| J77 | BRAKE PARKING-ELECTRONICALLY OPERATED |
| JF5 | PEDALS-SPORTY, ALLOY |
| JL9 | BRAKE SYSTEM-PWR, FRT & RR DISC, ANTILOCK, FRT & RR WHL |
| K05 | HEATER ENG-BLOCK |
| K4C | CHARGER-INDUCTIVE PORTABLE WIRELESS DEVICE |
| KA1 | HEATER SEAT FRT-DRVR & PASS |
| KB7 | SHIFT CONTROL-MANUAL SHIFT, AUTOMATIC TRANSMISSION |
| KC4 | COOLING SYSTEM-ENG OIL |
| KD1 | COOLING SYSTEM-TRANS, OIL |
| KNR | COOLING SYSTEM-AXLE |
| KQV | HEATER-SEAT, VENTED, FRT |

| RPO | Description |
|---|---|
| KR1 | REFRIGERANT-AIR CONDITIONING |
| KRV | REFRIGERANT-LOW GWP |
| KS9 | KNOB-TRANS CONT LEVER, SUEDE |
| KTI | KIT, TIRE-INFLATOR |
| LAL | PLANT CODE-LANSING, MI, USA (GRAND RIVER) |
| LGX | ENGINE-GAS, 6 CYL, 3.6L, V6, DI, DOHC, VVT, ALUM, GEN 2 |
| LT1 | ENGINE-GAS, 8 CYL, 6.2L, DI, AFM, VVT, HO, ALUM, GMNA |
| LT4 | ENGINE-GAS, 8 CYL, 6.2L,DI, SC, AFM, VVT, ALUM, GMNA |
| LTG | ENGINE-GAS, 4 CYL, 2.0L, SIDI, L4, ALUM DOHC, VVT, DCVCP, TURBO, E0-E100, ALUM |
| M13 | TRANSMISSION-MAN 6 SPD, 81MM, 4.45 1ST, 2.83 2ND, 1.98 3RD, 1.40 4TH, 1.00 5TH, 0.76 6TH |
| M5T | TRANSMISSION-AUTO 8 SPD, 8L45 |
| M97 | SHIFTER INTERLOCK-BRAKE, TRANS |
| MCR | RECEPTACLE-MEMORY CARD (DO NOT USE NEXT NEW MAJOR) |
| MH3 | TRANSMISSION-MAN 6 SPD, TREMEC, 85MM, 2.29 1ST, 0.818 5TH, 0.675 6TH |
| MI1 | TRANSMISSION-AUTO 10 SPD, 10L60, GEN 1, VAR 1 |
| MI2 | TRANSMISSION-AUTO 10 SPD, 10L80, GRX, VAR 1, GEN 1 |
| MI4 | TRANSMISSION-AUTO 10 SPD, 10L90, VAR 1, GEN 1 |
| MJK | TRANSMISSION-MAN 6 SPD, TR6060, 85MM, 2.28 1ST, 1.61 2ND, 1.20 3RD, 1.00 4TH, 0.81 5TH, 0.53 6TH |
| MM6 | TRANSMISSION-MAN 6 SPD, TREMEC, 85MM, 2.66 1ST, 0.50 6TH, O/D |
| MN6 | MERCHANDISED TRANS-MAN 6 SPD PROVISIONS |
| MTF | PROVISIONS-FIRE EXTINGUISHER MOUNTING |
| MX0 | MERCHANDISED TRANS-AUTO PROVISIONS, O/D |
| N06 | STEERING COLUMN LOCK-ELECTRICAL |
| N08 | LOCK CONTROL-FUEL FILLER DR, REM CONT |
| N10 | EXHAUST SYSTEM-DUAL |
| N26 | STEERING WHEEL-SUEDE |
| NA3 | EMISSION SYSTEM-JAPAN |
| NE1 | CERTIFICATION-EMISSION, GEOGRAPHICALLY RESTRICTED REGISTRATION FOR VEHICLES UP TO 14, 000 LBS GVW (USE 2003 MDL YR |
| NE8 | EVAPORATIVE SYSTEM-LEVEL 3 EMISSIONS |
| NEK | EVAPORATIVE SYSTEM-KOREA LEV3 EMISSIONS |

| RPO | Description |
|---|---|
| NKC | NOISE CONTROL-ACTIVE NOISE CANCELLATION, ENGINE |
| NKE | NOISE CONTROL-ELECTRONIC SOUND ENHANCER (DO NOT USE NEW MAJOR) |
| NM6 | EMISSION SYSTEM-PROCONVE L-6 |
| NP5 | STEERING WHEEL-LEATHER WRAPPED |
| NPP | EXHAUST SYSTEM-PERFORMANCE |
| NTB | EMISSION SYSTEM-FEDERAL, TIER 3 |
| NUB | EMISSION SYSTEM-CALIFORNIA, ULEV70 |
| NUC | EMISSION SYSTEM-CALIFORNIA, ULEV50 |
| NUE | EMISSION SYSTEM-CALIFORNIA, LEV160 |
| NUO | EMISSION SYSTEM-KOREAN, LEV160 |
| NV9 | STEERING-POWER, VARIABLE, ELECTRIC |
| P3H | ORNAMENTATION-EXTR, BOWTIE |
| PKJ | WHEEL-19 X 11, J, FRT & 19 X 12, J, RR ALUMINUM DESIGN 1 |
| Q7F | WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 5 |
| R0F | TIRE ALL-245/40ZR20 SL 95Y BW RF4 & 275/35ZR20 SL 97Y BW RF4 |
| R0G | TIRE ALL-285/30ZR20 SL (95Y) BW HW4 & 305/30ZR20 SL (99Y) BW HW4 |
| R0H | TIRE ALL-245/50R 18 SL 100V BW AL3 |
| R29 | TIRE ALL-245/40R20 SL95V BW RF3 |
| R6O | TIRE ALL-305/30ZR19 SL (98Y) BW HW5 & 325/30ZR19 SL (101Y) BW HW5 VAR 1 |
| R88 | ACCESSORY-ILLUMINATED EMBLEM - EXTERIOR - DESIGN 2 |
| REG | WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 7 |
| RIK | ACCESSORY-BADGE - EXTERIOR, PACKAGE, DESIGN 1 |
| RIN | ACCESSORY-BADGE - EXTERIOR, PACKAGE, DESIGN 2 |
| RMH | ACCESSORY-FRONT FASCIA EXTENSION - DESIGN 2 |
| RN2 | ACCESSORY-ILLUMINATED EMBLEM - EXTERIOR - DESIGN 1 |
| RNX | ACCESSORY-COVER - VEHICLE - OUTDOOR, DESIGN 2 |
| RO1 | ACCESSORY-GRILLES/GRILLE INSERT - ALTERNATE DESIGN 3 |
| RO2 | ACCESSORY-GRILLES/GRILLE INSERT - ALTERNATE DESIGN 4 |
| RQ9 | WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 1 |
| RQA | WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 2 |
| RSK | WHEEL-20 X 10.0, J, FRT & 20 X 11.0, J, RR, ALUMINUM, DESIGN 1 |
| RTH | WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 3 |
| RTJ | WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 4 |
| RTQ | WHEEL-20 X 10.0, J, FRT & 20 X 11.0, J, RR, ALUMINUM, DESIGN 2 |
| RVK | ACCESSORY-AIRBOX |

| RPO | Description |
|---|---|
| RWH | ACCESSORY-COVER - VEHICLE - INDOOR, DESIGN 1 |
| RWJ | ACCESSORY-COVER - VEHICLE - OUTDOOR, DESIGN 1 |
| RWS | ACCESSORY-FLOOR MATS - CARPET |
| RX0 | ACCESSORY-BRAKE CALIPERS |
| RXE | ACCESSORY-CATBACK/OFF-ROAD EXHAUST SYSTEM |
| RXH | ACCESSORY-CENTER CAP - WHEEL - DESIGN 1 |
| RXJ | ACCESSORY-CENTER CAP - WHEEL - DESIGN 2 |
| RY2 | ACCESSORY-DECALS/APPLIQUES |
| RYT | ACCESSORY-FIRST AID KIT |
| RZ3 | ACCESSORY-FRONT FASCIA EXTENSION - DESIGN 1 |
| RZB | ACCESSORY-GRILLES/GRILLE INSERT - ALTERNATE DESIGN 2 |
| S08 | ACCESSORY-HIGHWAY SAFETY KIT |
| S0O | ACCESSORY-ILLUMINATED FOOT WELLS |
| S0U | ACCESSORY-INTERIOR TRIM KIT - ALTERNATE FINISH 2 |
| S0V | ACCESSORY-INTERIOR TRIM KIT - ALTERNATE FINISH 3 |
| S47 | ACCESSORY-LUG NUTS |
| S54 | ACCESSORY-NAVIGATION MAP UPDATES |
| SA7 | ACCESSORY-SHIFT KNOBS - ALTERNATE FINISH |
| SAO | ACCESSORY-SMOKERS PACKAGE |
| SB2 | ACCESSORY-SPOILER - DECKLID - FLUSH MOUNT |
| SB3 | ACCESSORY-SPOILER - DECKLID - WING |
| SB7 | ACCESSORY-DECAL PACKAGE - DESIGN 1 |
| SB9 | ACCESSORY-DECAL PACKAGE - DESIGN 2 |
| SBF | RESTRAINT-SEAT BELT VAR. 1 |
| SBG | RESTRAINT-SEAT BELT, VAR 2 |
| SC1 | ACCESSORY-STABILIZER BAR KIT |
| SCG | ACCESSORY-STRUT - ALTERNATE FINISH |
| SCJ | ACCESSORY-SUSPENSION LOWERING KIT |
| SCY | ACCESSORY-TAIL LAMPS - ALTERNATE COLOR |
| SD5 | ACCESSORY-TIRE PRESSURE MONITOR |
| SF8 | ACCESSORY-DECAL PACKAGE - DESIGN 3 |
| SF9 | ACCESSORY-DECAL PACKAGE - DESIGN 4 |
| SFA | ACCESSORY-DECAL PACKAGE - DESIGN 5 |
| SFC | ACCESSORY-DECAL PACKAGE - DESIGN 6 |

| RPO | Description |
|---|---|
| SFE | ACCESSORY-WHEEL LOCKS |
| SFZ | ACCESSORY-EMBLEM - EXTERIOR - DESIGN 1 |
| SG3 | ACCESSORY-SPRINGS - SPORT SUSPENSION |
| SGE | WHEEL-18 X 7.5, J, ALUMINUM, DESIGN 8 |
| SH1 | ACCESSORY-ARMREST - DESIGN 2 |
| SH2 | ACCESSORY-ARMREST - DESIGN 3 |
| SHL | ACCESSORY-WHEEL - 20 X 8.5 - J - ALUMINUM - DESIGN 2 |
| SHQ | ACCESSORY-DECAL PACKAGE - DESIGN 11 |
| SHS | ACCESSORY-DECAL PACKAGE - DESIGN 13 |
| SHT | ACCESSORY-DECAL PACKAGE - DESIGN 14 |
| SHU | ACCESSORY-DECAL PACKAGE - DESIGN 15 |
| SIA | ACCESSORY-SPOILER EXTENSION - DECKLID |
| SIB | ACCESSORY-INTERIOR TRIM - ILLUMINATED - DESIGN 1 |
| SIC | ACCESSORY-INTERIOR TRIM - ILLUMINATED - DESIGN 2 |
| SJ8 | ACCESSORY-ILLUMINATION PACKAGE - INTERIOR AMBIENT |
| SKW | ACCESSORY-WHEEL - 20 X 8.5 - J - ALUMINUM - DESIGN 6 |
| SL1 | ACCESSORY-COVER - VEHICLE - INDOOR, DESIGN 2 |
| SL2 | ACCESSORY-FRONT FASCIA EXTENSION - ALTERNATIVE FINISH |
| SLN | ACCESSORY-STRUT TOWER BRACE |
| SNB | ACCESSORY-DECAL PACKAGE - DESIGN 18 |
| SNC | ACCESSORY-DECAL PACKAGE - DESIGN 19 |
| SNE | ACCESSORY-DECAL PACKAGE - DESIGN 20 |
| SNG | ACCESSORY-DECAL PACKAGE - DESIGN 21 |
| SNH | ACCESSORY-DECAL PACKAGE - DESIGN 22 |
| SNJ | ACCESSORY-DECAL PACKAGE - DESIGN 23 |
| SNM | ACCESSORY-DECAL PACKAGE - DESIGN 25 |
| SNP | ACCESSORY-DECAL PACKAGE - DESIGN 26 |
| SNQ | ACCESSORY-DECAL PACKAGE - DESIGN 27 |
| SNS | ACCESSORY-DECAL PACKAGE - DESIGN 28 |
| SPY | ACCESSORY-LUG NUTS - ALT FINISH |
| SPZ | ACCESSORY-WHEEL LOCKS - ALT FINISH |

| RPO | Description |
|---|---|
| SRI | WHEEL-20 X 8.5 - J - ALUMINUM - DESIGN 21 |
| STI | ACCESSORY-ROCKER MOLDINGS ALTERNATE FINISH 3 |
| T3S | LAMP-DAYTIME RUNNING, SEPARATE CAVITY, LED |
| T42 | SPOILER-DRAG, AIR FOIL |
| T43 | SPOILER-RR |
| T4F | HEADLAMPS-HIGH INTENSITY DISCHARGE |
| T4L | HEADLAMPS-LED |
| T61 | LAMP SYSTEM-DAYTIME RUNNING |
| T79 | LAMP-FOG, RR |
| T90 | LAMP-SIGNALING & MARKER, EXPORT |
| T94 | HEADLAMP RULE OF RD-LH RULE OF THE ROAD |
| TD2 | HANDLING CHARGE-FROM LGR, TO LGR - LOC CAM STRPG, AND BACK TO LGR |
| TDM | MODE-TEEN DRIVER SETTINGS |
| TR7 | CONTROL, HEADLAMPS-LEVELING SYSTEM, AUTOMATIC |
| TW7 | LAMP-TAIL & STOP, ECE, RH & LH RULE OF ROAD |
| U03 | HORN-NOISE REGULATION |
| U19 | SPEEDOMETER-INST, KILO & MILES, KILO ODOMETER |
| U2K | DIGITAL AUDIO SYSTEM-S-BAND |
| U77 | ANTENNA-RR WINDOW, RADIO |
| U80 | DISPLAY-COMPASS |
| UB3 | ANTENNA-FIXED, RR SPOILER, RADIO |
| UD7 | PARK ASSIST-REAR |
| UDA | COMMUNICATION SYSTEM-VEHICLE, DEACTIVATED |
| UDD | DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (MULTI COLOR STANDARD GRAPHIC) |
| UE1 | COMMUNICATION SYSTEM-VEHICLE, ONSTAR |
| UEU | SENSOR INDICATOR-FORWARD COLLISION ALERT |
| UFG | REAR CROSS TRAFFIC-ALERT |
| UHS | DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (MULTI COLOR ENHANCED GRAPHIC) |
| UJM | TIRE PRESS INDICATOR-MANUAL LEARN |
| UK1 | FREQUENCIES-JAPANESE |
| UKC | SIDE ACTIVE SAFETY-OBSTACLE DETECTION ENHANCED |
| UKP | FREQUENCIES-KOREAN |
| UL2 | FREQUENCIES-EUROPEAN |
| UL8 | FREQUENCIES-SAUDI ARABIAN |
| UMN | SPEEDOMETER-INST, MILES & KILO, MILES ODOMETER |

| RPO | Description |
|---|---|
| UPG | WIRELESS INTERFACE-SHORT RANGE |
| UQ3 | SPEAKER SYSTEM-ENHANCED AUDIO |
| UQA | SPEAKER SYSTEM-PREMIUM AUDIO, BRANDED AMPLIFIER |
| UQT | RECORDER-VEHICLE PERFORMANCE |
| UST | RECEPTACLE-DUAL USB, SINGLE AUX (DO NOT USE NEXT NEW MAJOR, SEE BFO) |
| UV6 | HEAD UP DISPLAY-WINDSHIELD |
| UVB | VISION-REAR VIEW, MONO, HD DIGITAL |
| UVD | STEERING WHEEL HEAT-MANUAL |
| V03 | COOLING SYSTEM-EXTRA CAPACITY |
| V18 | COOLER-ENGINE COOLANT, AUX |
| V78 | VEHICLE STATEMENT-VEHICLE LABEL CONTENT - NO CERT STATEMENT (ENGLISH TEXT) |
| V87 | VEHICLE STATEMENT-VEHICLE LABEL CONTENT - GULF STATES ORGANIZATION |
| V8A | VEHICLE STATEMENT-VEHICLE LABEL CONTENT - KOREA - KMVSS |
| V8B | VEHICLE STATEMENT-VEHICLE LABEL CONTENT - BRAZIL |
| V8C | VEHICLE STATEMENT-VEHICLE LABEL CONTENT - NO CERT STATEMENT |
| V8D | VEHICLE STATEMENT-VEHICLE LABEL CONTENT - U.S. FMVSS |
| V8E | VEHICLE STATEMENT-VEHICLE LABEL CONTENT - CANADA CMVSS |
| V8I | VEHICLE STATEMENT-VEHICLE LABEL CONTENT - ISRAEL FMVSS |
| VAV | ACCESSORY-FLOOR MATS - ALL WEATHER |
| VDN | ACCESSORY-COVER - VEHICLE - INDOOR - DESIGN 3 |
| VEB | ACCESSORY-PEDAL COVER SET |
| VGS | ACCESSORY-COVER - VEHICLE - OUTDOOR, DESIGN 4 |
| VK3 | LICENSE PLATE FRONT-FRT MOUNTING PKG |
| VLI | ACCESSORY-MAT - TRUNK / CARGO AREA |
| VLN | ACCESSORY-WINDSCREEN |
| VP6 | NOISE CONTROL- |
| VPH | VEHICLE PREPARATION-OVERSEAS DELIVERY |
| VPO | ACCESSORY-DECAL PACKAGE - DESIGN 8 |
| VPW | ACCESSORY-DECAL PACKAGE - DESIGN 9 |
| VQG | ACCESSORY-WEATHER PROTECTION PACKAGE |
| VQL | ACCESSORY-FUEL DOOR - DESIGN 1 |

| RPO | Description |
|---|---|
| VR5 | PROVISIONS-SLOW VEHICLE WARNING TRIANGLE MOUNTING (DO NOT USE NEXT NEW MAJOR) |
| VRU | ACCESSORY-COVER - VEHICLE - OUTDOOR - GRAY |
| VRV | ACCESSORY-SPLASH GUARDS - CUSTOM MOLDED - PAINTED |
| VT7 | OWNERS MANUAL-ENGLISH LANGUAGE |
| VTA | ACCESSORY-EXHAUST TIP - DESIGN 2 |
| VTD | ACCESSORY-GROUND EFFECTS PACKAGE |
| VTF | ACCESSORY-ARMREST - DESIGN 1 |
| VTG | ACCESSORY-INTERIOR TRIM KIT |
| VTU | ACCESSORY-FUEL DOOR - DESIGN 2 |
| VUP | ACCESSORY-DECAL PACKAGE - DESIGN 10 |
| VV4 | COMMUNICATION EQUIP-MOBILE INTERNET CONNECTIVITY |
| VVS | CALIBRATION-DAYTIME RUNNING LAMPS, NOT REQUIRED |
| VW9 | ACCESSORY-CENTER CAP - WHEEL - DESIGN 3 |
| VWD | ACCESSORY-CENTER CAP - WHEEL - DESIGN 4 |
| VY7 | KNOB-TRANS CONT LEVER, LEATHER |
| VYV | ACCESSORY-SHIFTER - SHORT THROW |
| VYW | ACCESSORY-FLOOR MATS - PREMIUM CARPET - DESIGN 1 |
| VYX | ACCESSORY-ENGINE COVERS |
| W0D | ACCESSORY-FUEL DOOR - DESIGN 3 |
| W0E | ACCESSORY-FUEL DOOR - DESIGN 4 |
| W1V | ACCESSORY-FLOOR MATS - PREMIUM CARPET - ALT DESIGN |
| W2D | ACCESSORY-CARGO NET |
| WBL | SALES PACKAGE-SPORT |
| WGK | ACCESSORY-INTERIOR TRIM KIT - DESIGN 1 |
| WGL | ACCESSORY-INTERIOR TRIM KIT - DESIGN 2 |
| WGT | ACCESSORY-INTERIOR TRIM KIT - DESIGN 4 |
| WHA | ACCESSORY-INTERIOR TRIM KIT - DESIGN 6 |
| WL2 | ACCESSORY-FLOOR MATS - PREMIUM CARPET - DESIGN 2 |
| WL3 | ACCESSORY-FLOOR MATS - PREMIUM CARPET - DESIGN 3 |
| WML | VIN MODEL YEAR-2020 |
| WPA | SALES PACKAGE-DRIVER CONFIDENCE |
| WR1 | WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 26 |
| WRS | MERCHANDISED PKG-RALLY SPORT (RS) |
| XAQ | ACCESSORY TIRE-TIRE ALL-245/40R20 SL95V BW RF3 VAR 1 |

| RPO | Description |
|---|---|
| XC8 | ACCESSORY TIRE-TIRE ALL-245/40ZR20 SL 95Y BW RF4 & 275/35ZR20 SL 97Y BW RF4 VAR 1 |
| XL7 | FREQUENCIES RATING-315 MHZ, LONG DISTANCE |
| XL8 | FREQUENCIES RATING-433 MHZ |
| XLC | CONTROL-LAUNCH, CUSTOM |
| Y3W | SALES PACKAGE-PREMIUM INFOTAINMENT |

| RPO | Description |
|---|---|
| Y4Q | SALES PACKAGE-TRACK PERFORMANCE |
| YF5 | CERTIFICATION-EMISSION, CALIFORNIA |
| YM8 | IDENTIFICATION-LIMITED PERSONALIZATION OPTION (LPO) |
| ZL1 | MERCHANDISED PKG-SPECIAL PERFORMANCE |
| ZN2 | SALES PACKAGE-CONVENIENCE AND LIGHTING |

# Section 2

# Body Systems

**Fixed and Moveable Windows** . . . . . 2-3
**Schematic and Routing Diagrams** . . . . . 2-3
Moveable Window Schematics . . . . . 2-4
Defogger Schematics . . . . . 2-11
**Description and Operation** . . . . . 2-12
Power Windows Description and Operation . . . . 2-12
Rear Window Defogger Description and Operation . . . . . 2-13

**Horns and Pedestrian Alerts** . . . . . 2-15
**Schematic and Routing Diagrams** . . . . . 2-15
Horn Schematics . . . . . 2-16
**Description and Operation** . . . . . 2-17
Horns System Description and Operation . . . . . 2-17

**Lighting** . . . . . 2-18
**Schematic and Routing Diagrams** . . . . . 2-18
Headlights/Daytime Running Lights (DRL) Schematics . . . . . 2-19
Fog Lights Schematics . . . . . 2-25
Exterior Lights Schematics . . . . . 2-26
Interior Lights Schematics . . . . . 2-41
Interior Lights Dimming Schematics . . . . . 2-43
**Description and Operation** . . . . . 2-47
Exterior Lighting Systems Description and Operation . . . . . 2-47
Interior Lighting Systems Description and Operation . . . . . 2-51

**Mirrors** . . . . . 2-53
**Schematic and Routing Diagrams** . . . . . 2-53
Inside Rearview Mirror Schematics . . . . . 2-54
Outside Rearview Mirror Schematics . . . . . 2-55
**Description and Operation** . . . . . 2-59
Automatic Day-Night Mirror Description and Operation . . . . . 2-59
Outside Mirror Description and Operation (With A45) . . . . . 2-59
Outside Mirror Description and Operation (Without A45) . . . . . 2-61

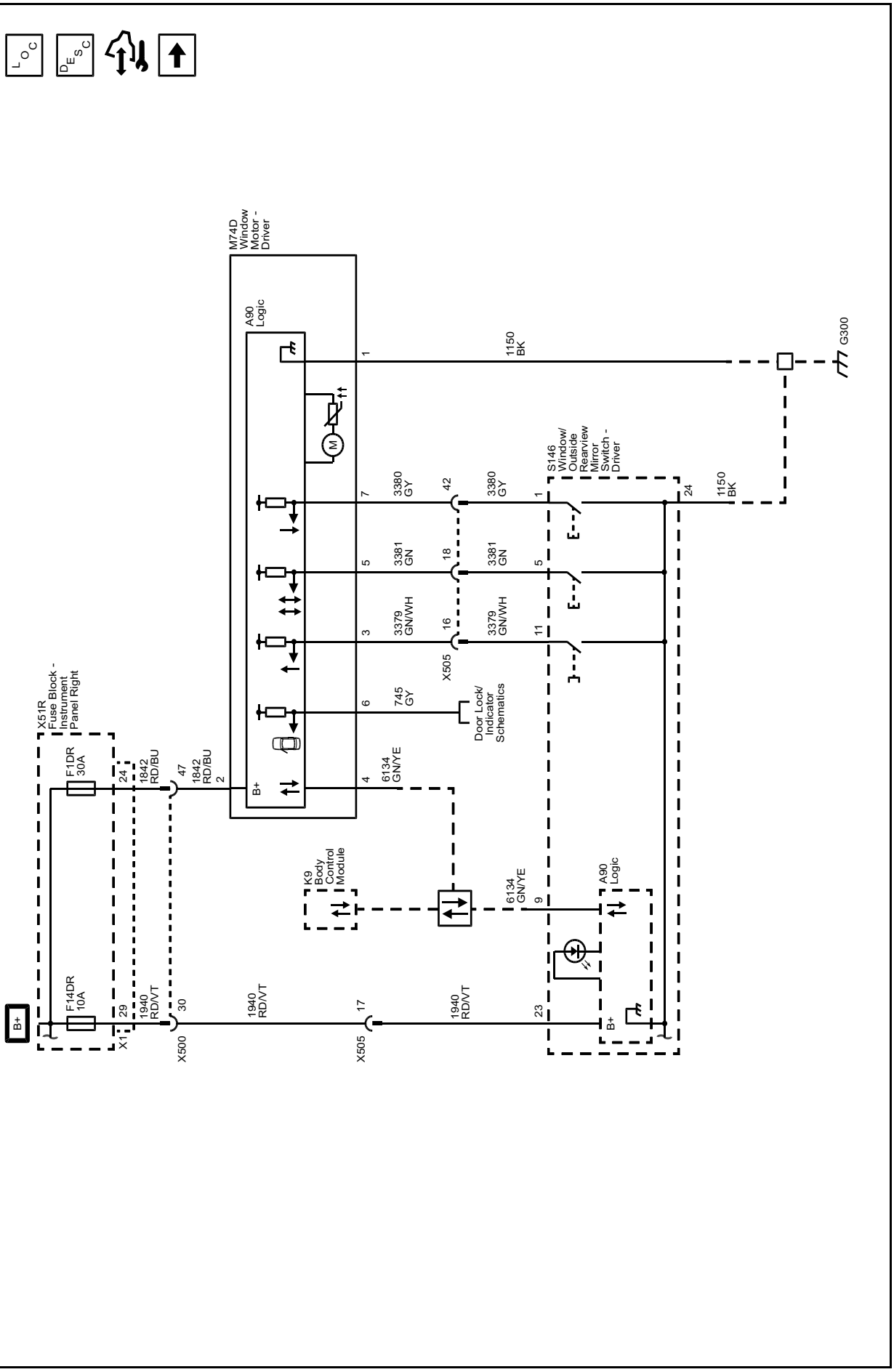
**Vehicle Access** . . . . . 2-63
**Schematic and Routing Diagrams** . . . . . 2-63
Door Lock/Indicator Schematics . . . . . 2-64
Release Systems Schematics . . . . . 2-68
Endgate Schematics . . . . . 2-69
**Description and Operation** . . . . . 2-73
Door Ajar Indicator Description and Operation . . . . . 2-73
Endgate Description and Operation (QT6) . . . . . 2-74
Endgate Description and Operation (QT5 Without MultiPro Tailgate) . . . . . 2-75
Endgate Description and Operation (QT5 With MultiPro Tailgate) . . . . . 2-75
Power Door Locks Description and Operation . . . . . 2-76

**BLANK**

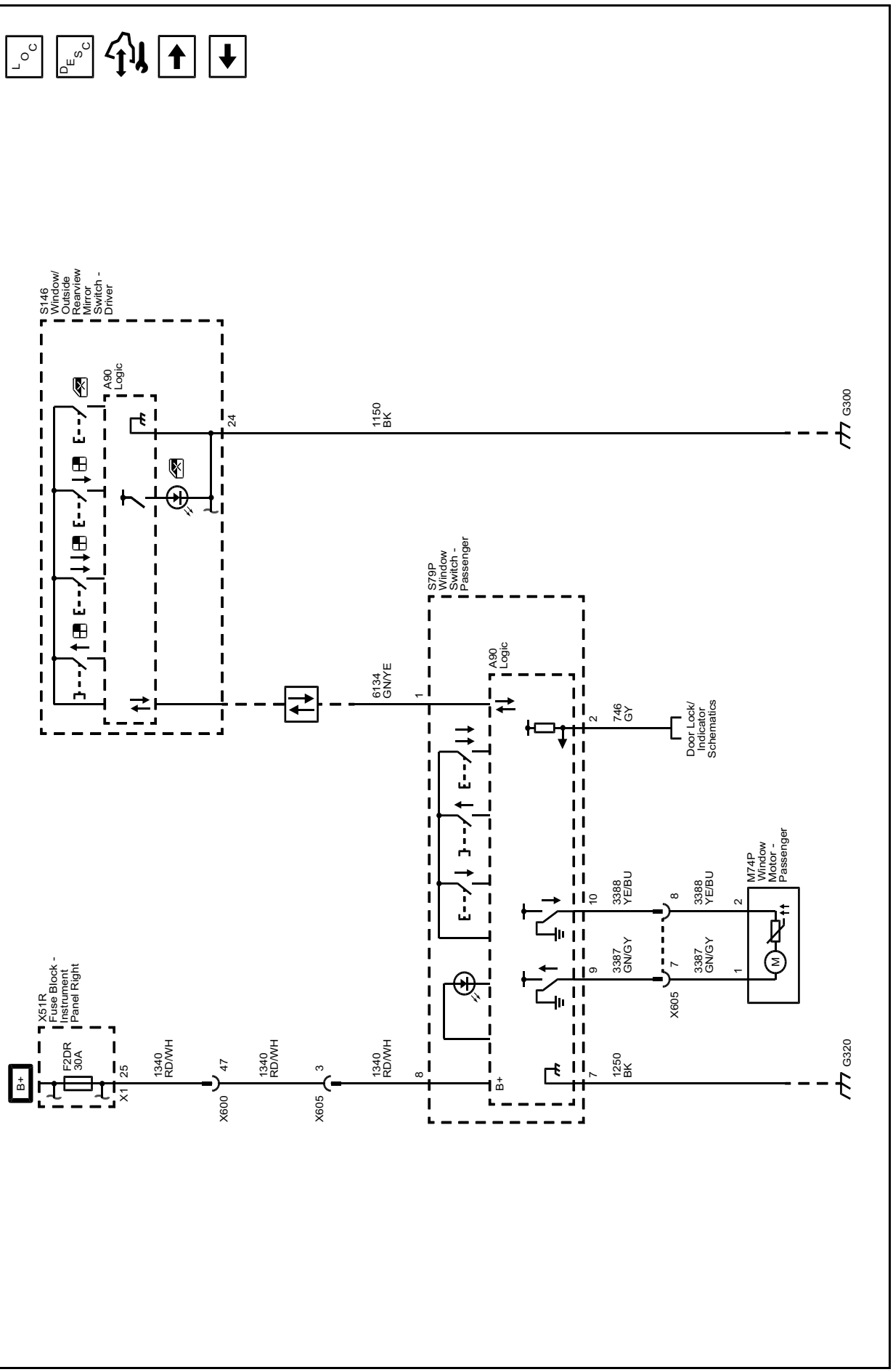
# Fixed and Moveable Windows

## Schematic and Routing Diagrams

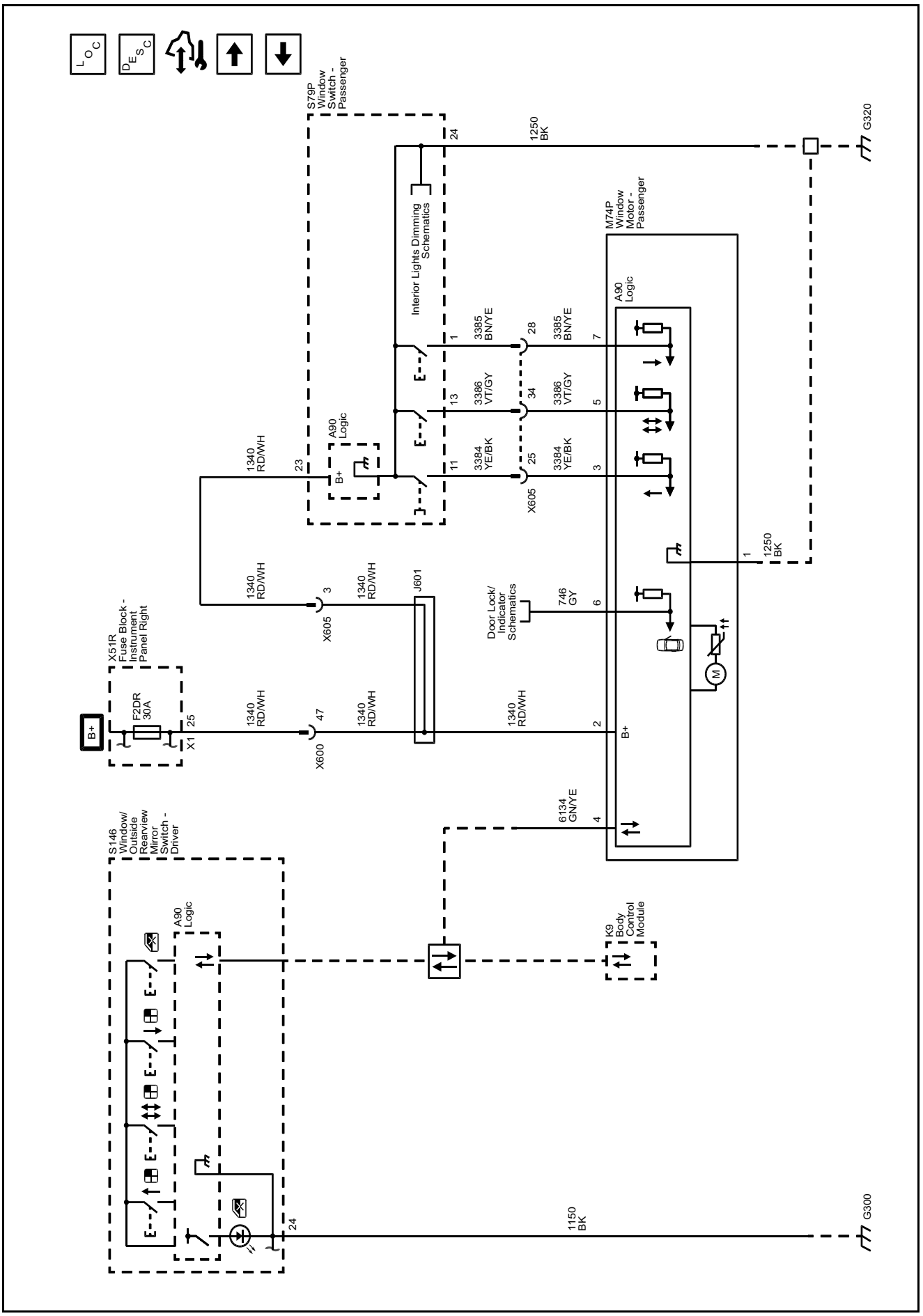
## Moveable Window Schematics (Driver Window (AXG))



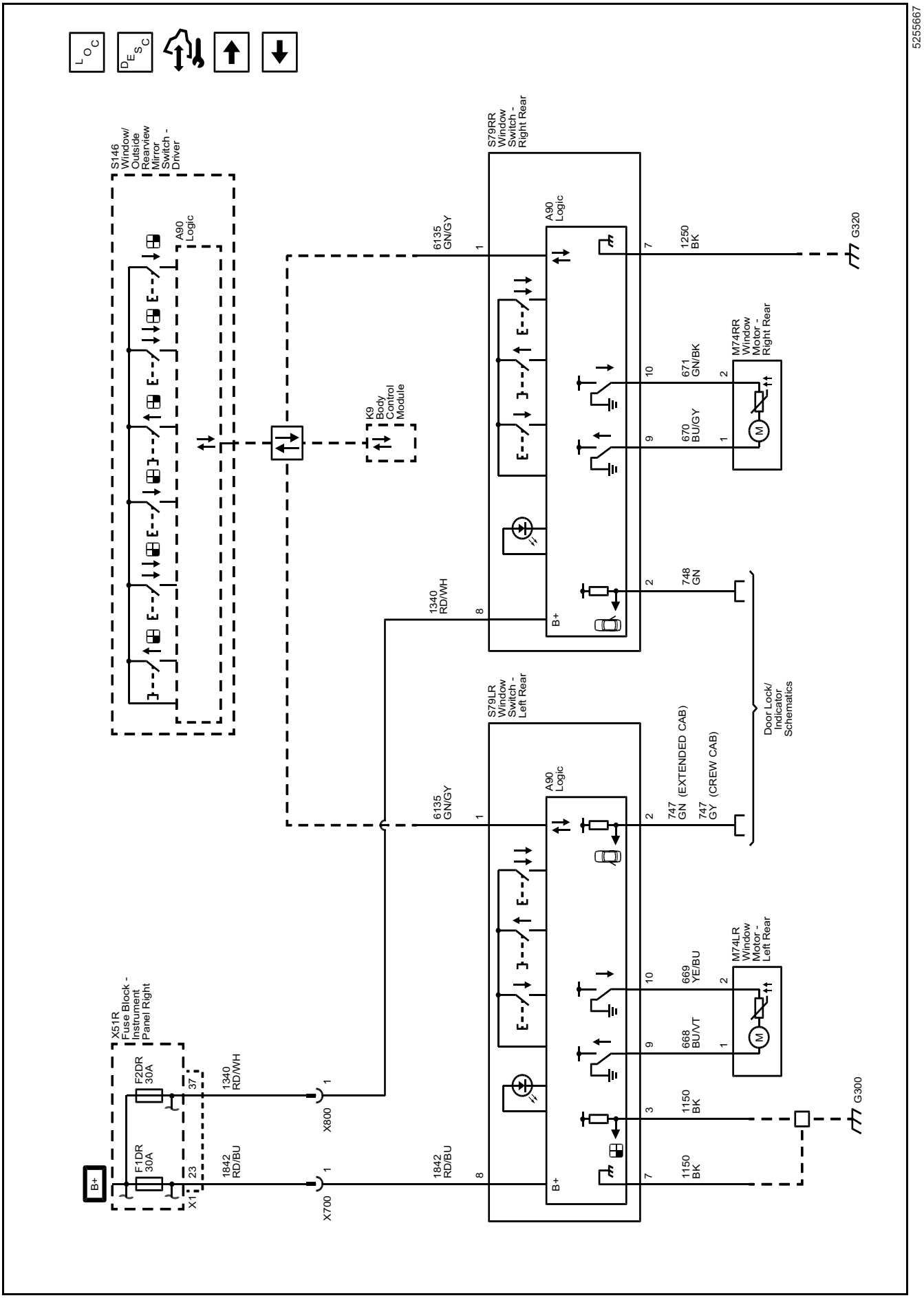
## Moveable Window Schematics (Passenger Window (AED))



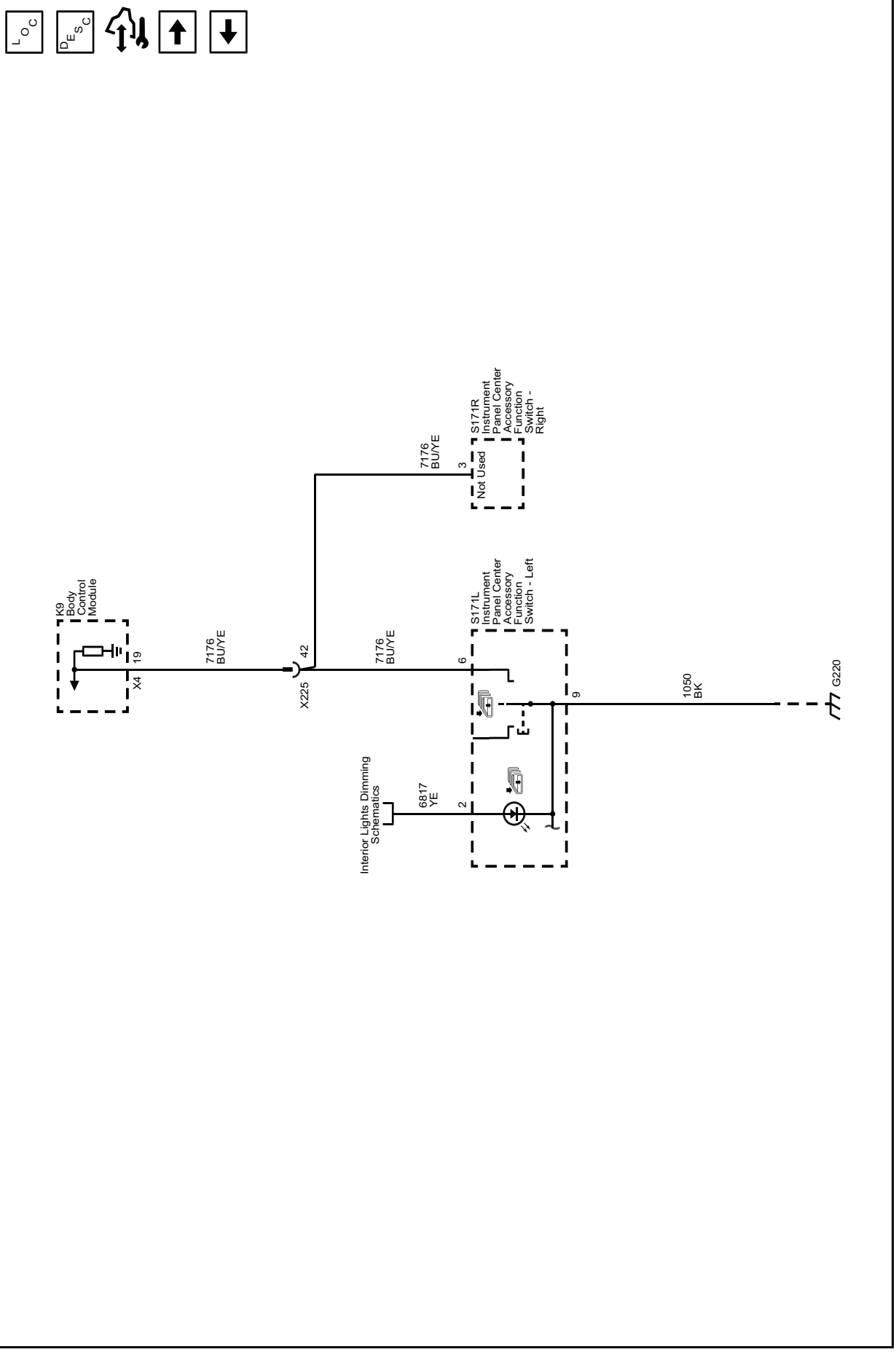
## Moveable Window Schematics (Passenger Window (AEF))



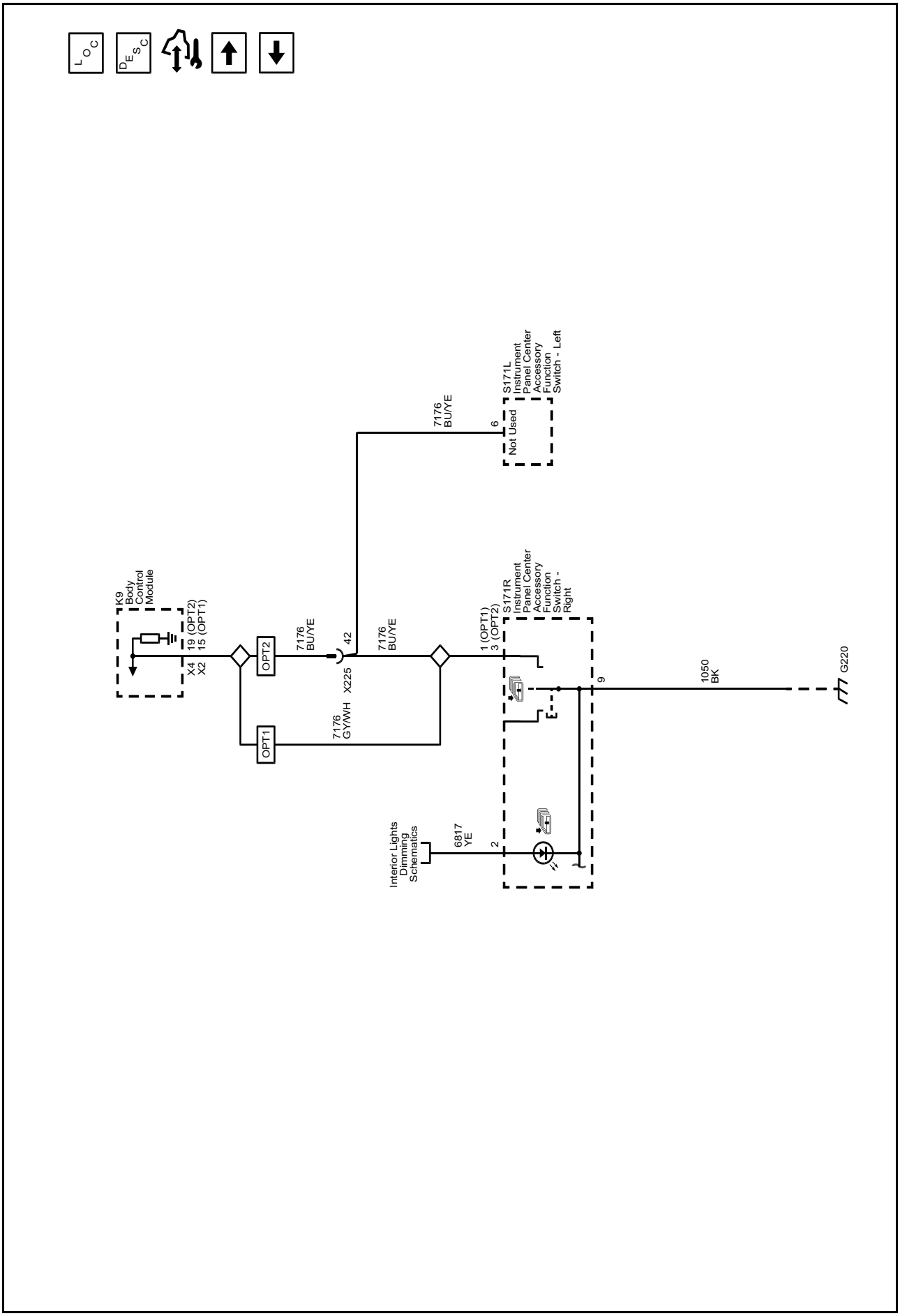
## Moveable Window Schematics (Rear Windows (AEQ))



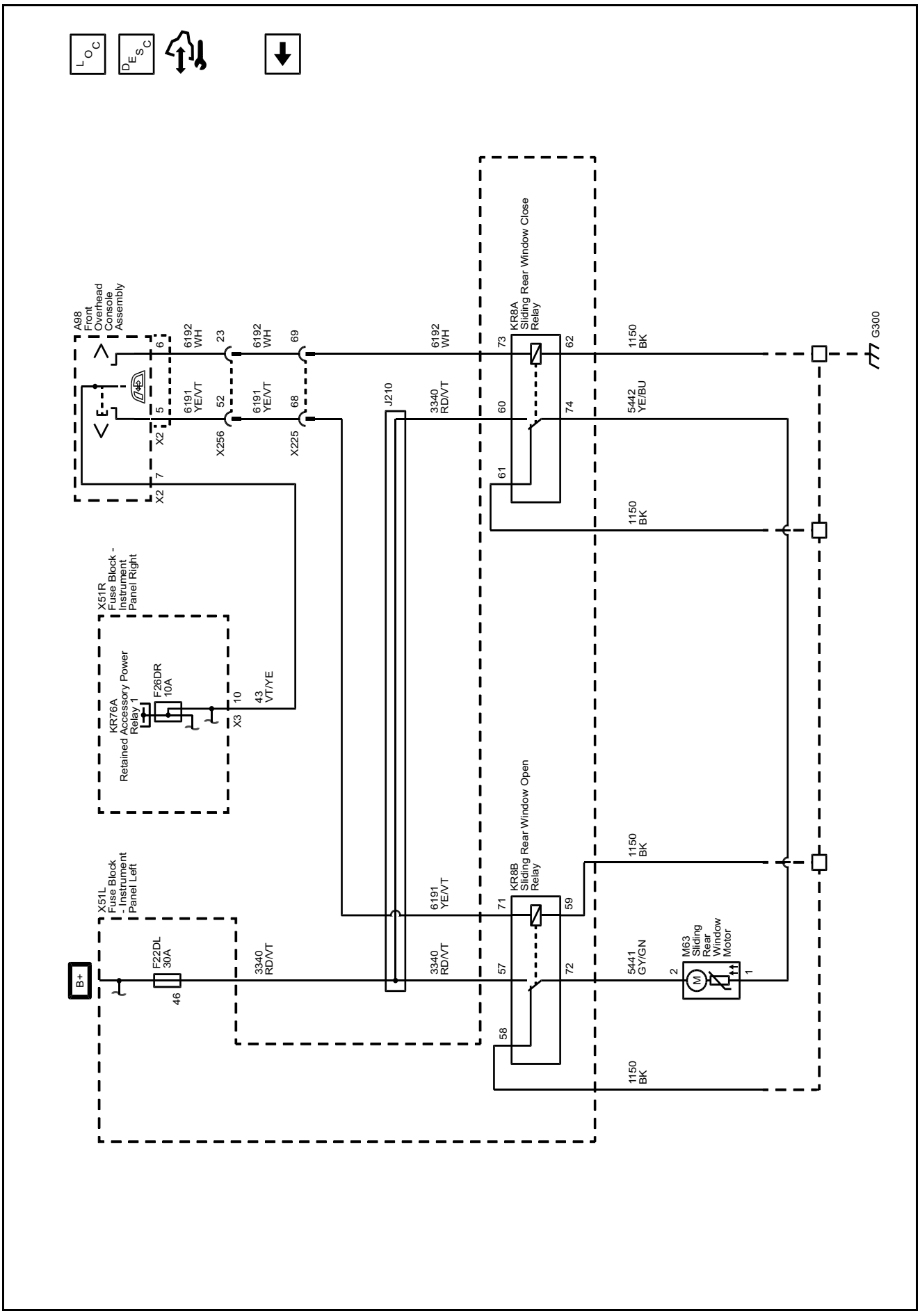
## Moveable Window Schematics (Global Window Express Down Switch (WLD) (In Left IP Accessory Function Switch))



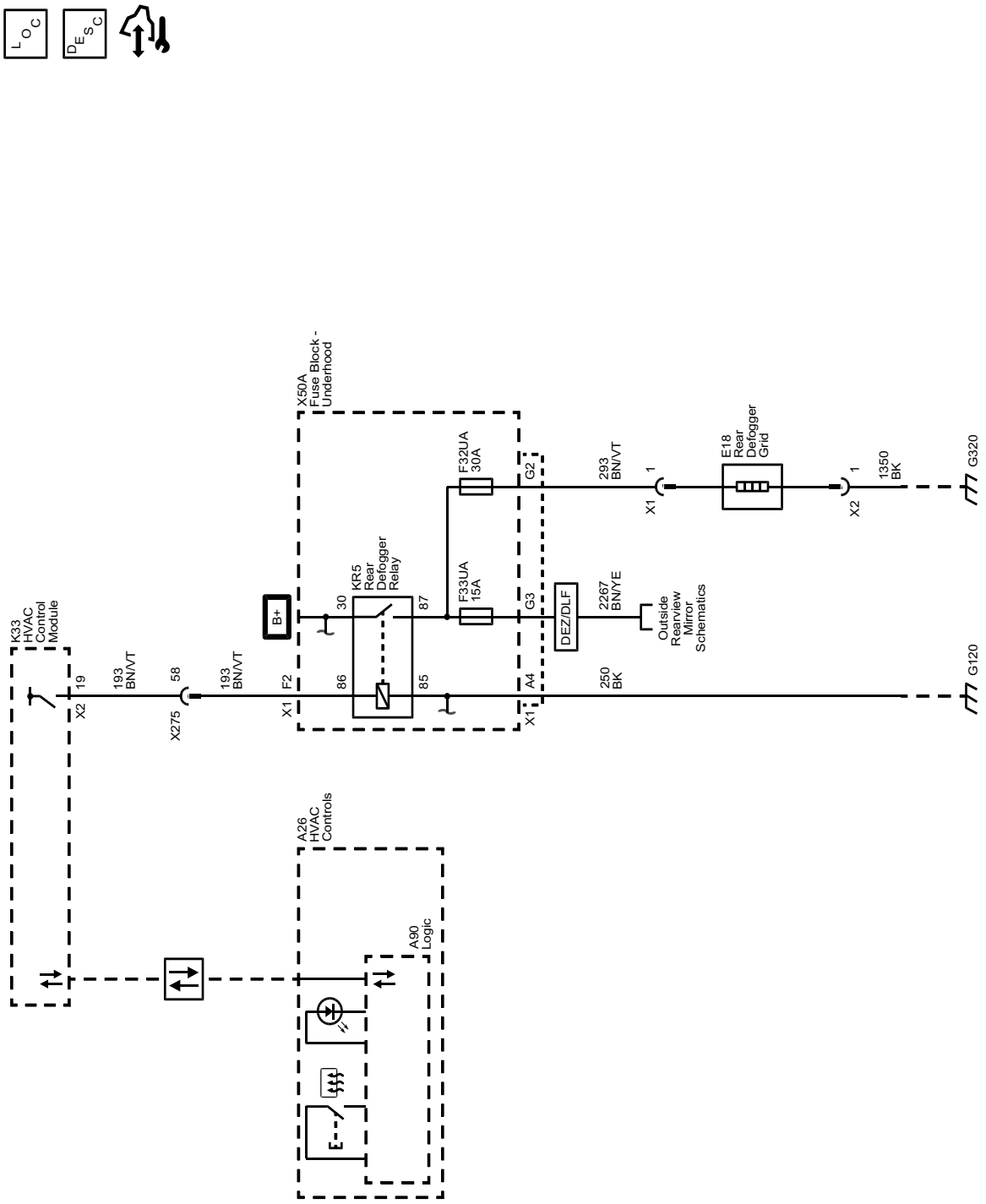
## Moveable Window Schematics (Global Window Express Down Switch (WLD) (In Right IP Accessory Function Switch))



## Moveable Window Schematics (Rear Sliding Window (A48))



## Defogger Schematics (Defogger)



# Description and Operation

## Power Windows Description and Operation

### Power Windows System Components

The power window system consists of the following components:

- Driver window switch
- Passenger window switch
- Left rear window switch
- Right rear window switch
- Global express down window switch
- Window motors in each of the doors
- 30A Fuse
- Body control module (BCM)

### Power Window System

This vehicle may be equipped with the following power window configurations:

- Driver door with express up and express down window motor
- Passenger door with express up and express down window motor
- Passenger door with express down only window motor
- Left rear door with express down only window motor
- Right rear door with express down only window motor

### Driver and Passenger Express Up and Express Down Power Window Motors

The driver and passenger doors contains a window motor is smart motor that will detect excessive resistance while performing the express up function and automatically reverse direction to prevent injury to any occupants that may become trapped between the closing window and the door frame. The automatic reverse safety feature can be overridden by pulling and holding the window switch.

The logic circuit within the window motor monitors the up, down and express signal circuits which are normally equal to B+ voltage. When a switch is used on the window switch, the contacts close causing a voltage drop within the appropriate signal circuit. The window motor will detect the voltage drop and will command the window to move in the direction requested.

The driver window switch communicates to the BCM by a serial data circuit. When the driver wishes to control the passenger window, the driver will use the appropriate switch on the driver window switch. When this switch is used, a serial data message is sent to the BCM requesting the passenger window motor command, the BCM will then send a serial data message to the passenger window motor which will then move in the direction requested.

### Passenger, Left Rear and Right Rear Express Down Only Window Motors

For the passenger, right rear and left rear doors, when their window switch is pressed in the down position, battery positive voltage is applied to their respective window motor control circuit and ground to the other window motor control circuit causing that window to open. When the individual window switch is pulled in the up position, voltage and ground is applied to the window motor in the opposite direction causing that window to close. The return path to ground is supplied through the inactive control circuit being normally grounded through the window switch.

The passenger and rear window switches communicates to the BCM by a serial data circuit. When the driver wishes to control the passenger, left rear or right rear window, the driver will use the appropriate switch on the driver window switch. When this switch is used, a serial data message is sent to the BCM requesting a window motor command, the BCM will then send a serial data message to the appropriate door window switch which will then command that window to move in the direction requested.

### Global Window Express Down Switch

The global express down switch (part of the instrument panel multifunction switch) may be used to commanded all windows to perform the express down function

### Lockout Switch Feature

The driver window switch contains a window lockout switch, when the driver presses the window lockout switch, a serial data message is sent to the BCM which will send a disable command to the rear window switches, deactivating them. The rear windows will still function normally from the switches on the driver window switch.

### Power Sliding Rear Window

NOTE: Power window lockout switch disables left rear and right rear passenger window switches only and has no effect on the operation of the power sliding window switch.

The power sliding rear window motor is controlled from the rear window OPEN/CLOSE switch through OPEN and CLOSE relays. The OPEN/CLOSE switch is supplied voltage from the body control module accessory voltage output circuit. When the switch is pressed in the OPEN or CLOSED position the OPEN or CLOSED relay coil will be supplied accessory voltage and energized through the appropriate relay control circuit. While the OPEN and CLOSE relays are in a de-energized state both motor control circuits will be closed to ground. When one of the relays is energized its motor control circuit will be closed to the battery voltage supply circuit and the other motor control circuit will remain grounded through the de-energized relay.

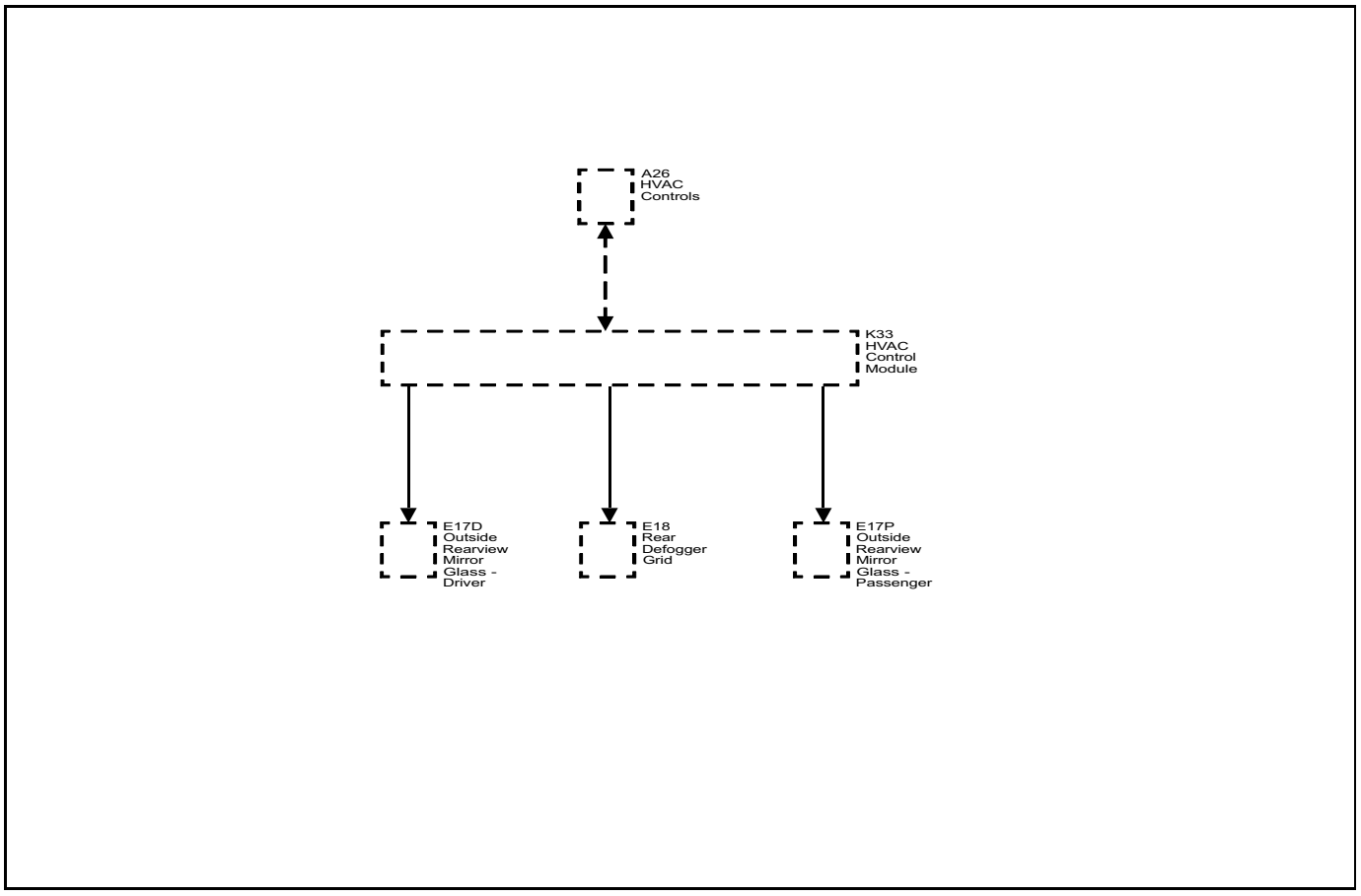
# Rear Window Defogger Description and Operation

## Rear Window Defogger System Components

The rear window defogger system consists of the following components:

- HVAC Control Module
- HVAC Controls
- Rear Defogger Relay
- Rear Defogger Grid
- Driver Outside Rearview Mirror
- Passenger Outside Rearview Mirror
- 40A Fuse

### A26-K33-X50A Defogger Block Diagram




3511665

## Rear Window Defogger Operation

The rear defog control system utilizes a single zone backlight design, driven with a single relay configuration. Additionally, up to two outside rear view mirrors can be heated if required. A switch for the customer to control the system is provided within the HVAC controls. Also included in the HVAC controls is an indicator to inform the customer with the current state of the system. The system is only operational when engine is running or during remote start.

Pressing the heated rear window switch causes the HVAC controls to send a serial data message to the HVAC control module requesting rear window defog operation. The HVAC control module upon receipt of the serial data message will provide voltage to the coil side of the rear defogger relay, this will energize the relay causing the relay switch contacts to close allowing B+ voltage to flow through the rear defogger grid control circuit to the rear defogger grid.

When the rear heated rear window switch is pressed and the engine is running, the rear window defogger grid will activate and will turn off automatically depending upon the vehicle speed (refer to owner's manual for rear window defogger operation cycles)

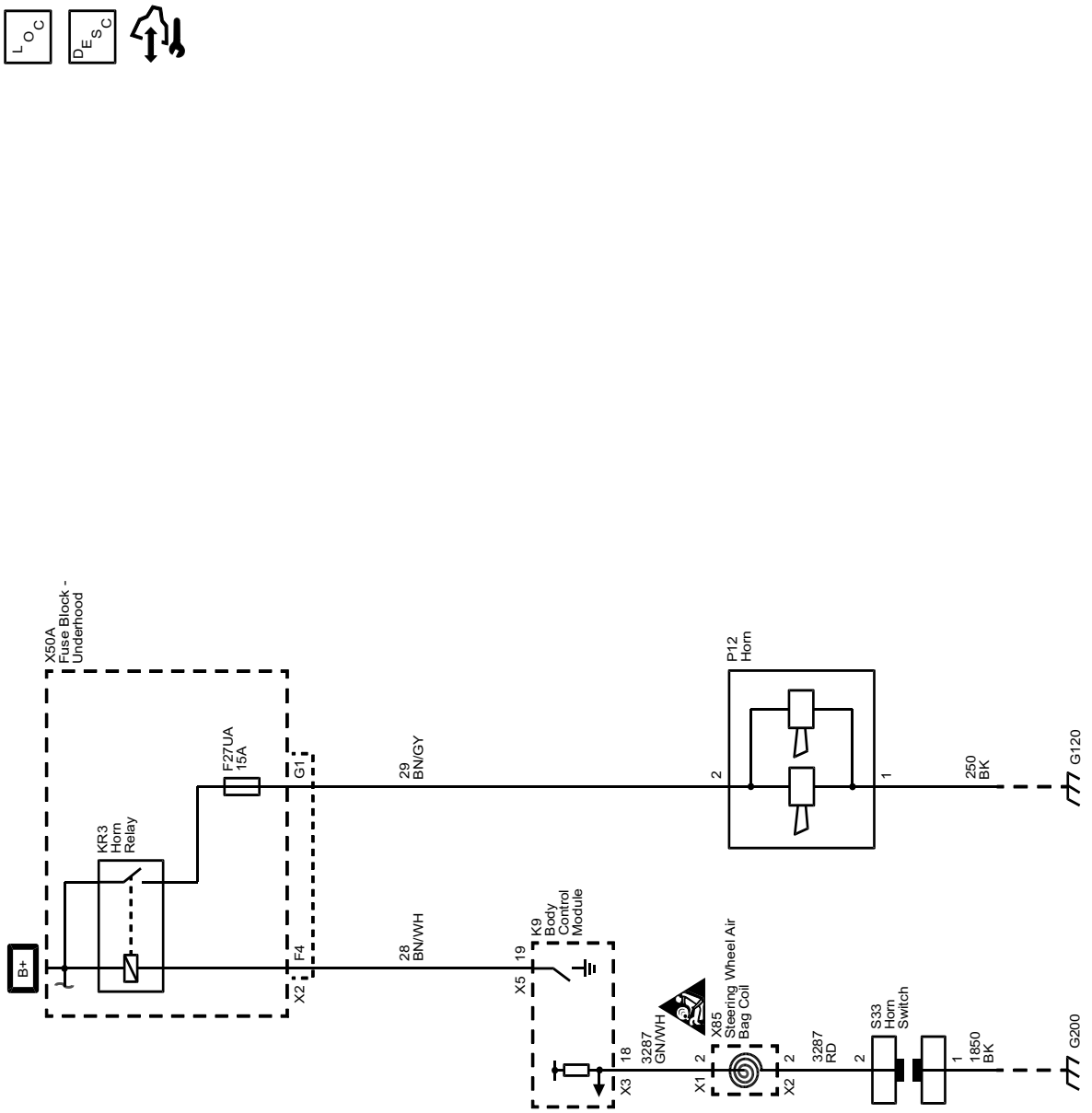
## Heated Mirrors

The heated mirrors are also controlled through the rear defogger relay. Whenever the rear window defogger is turned on battery voltage is supplied to the mirror heater elements through the left and right mirror heater element control circuits.

# Horns and Pedestrian Alerts

## Schematic and Routing Diagrams

## Horn Schematics (Horn)



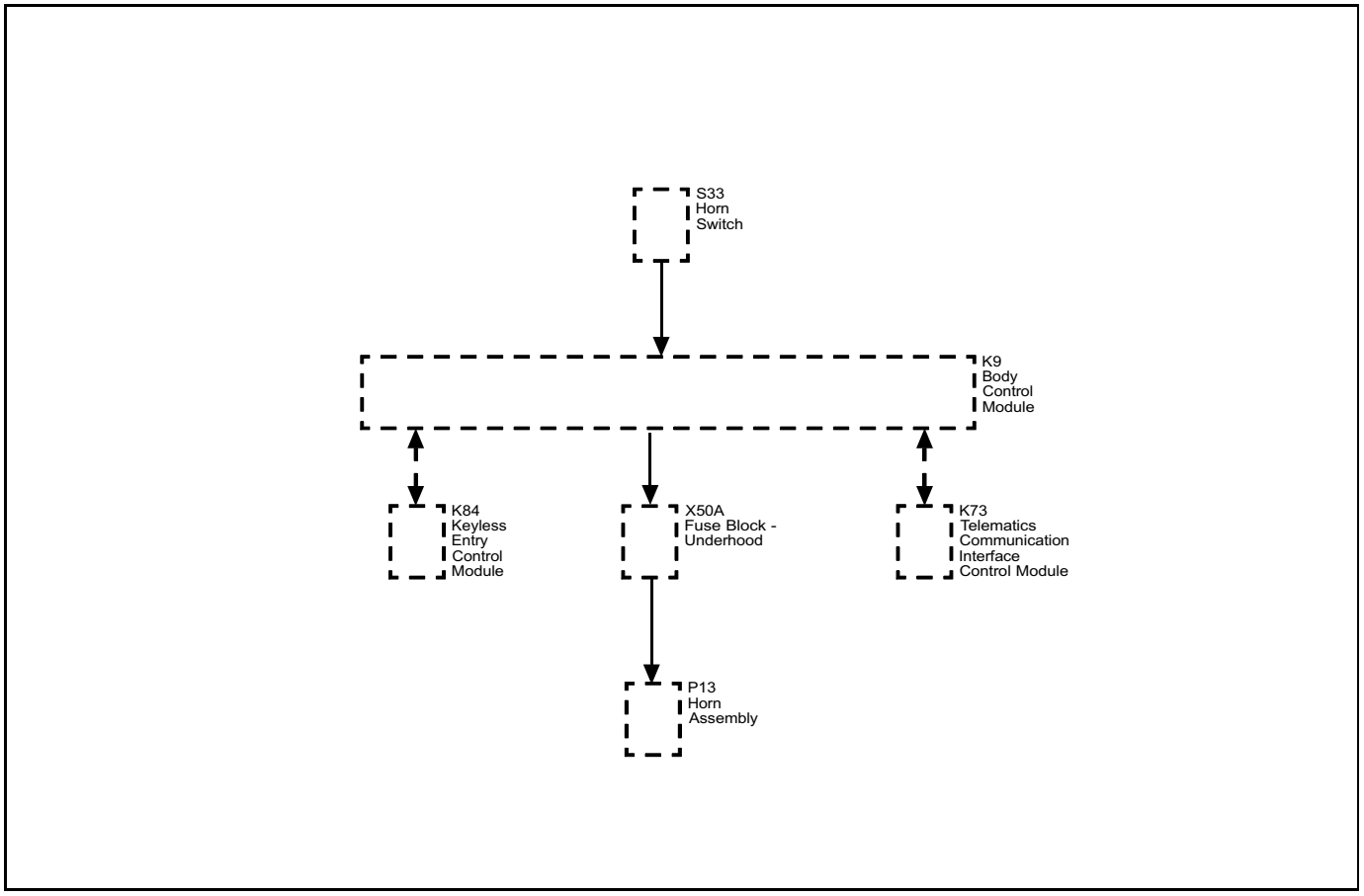
# Description and Operation

## Horns System Description and Operation

### System Description

The horn system consists of the following components:

- HORN fuse
- Underhood fuse block (Contains PCB horn relay)
- Horn switch
- Horn assembly
- Body control module (BCM)




3270443

### System Operation

The vehicle horn system is activated under the following conditions:

- When the horn switch is depressed
- The BCM commands the horns ON under any of the following conditions:
  - – When the content theft deterrent system detects a vehicle intrusion—For further information refer to Theft Systems Description and Operation.
  - – When the panic button is depressed on the remote control door lock transmitter—For further information refer to *Keyless Entry System Description and Operation on page 8-19*.
  - – When the keyless entry system is used to lock the vehicle, a horn chirp may sound to notify the driver that the vehicle has been locked. The notification feature may be enabled or disabled through personalization. For further information refer to *Keyless Entry System Description and Operation on page 8-19*.
  - – When the OnStar® system is used to sound the horns if equipped—For further information, refer to OnStar Description and Operation.

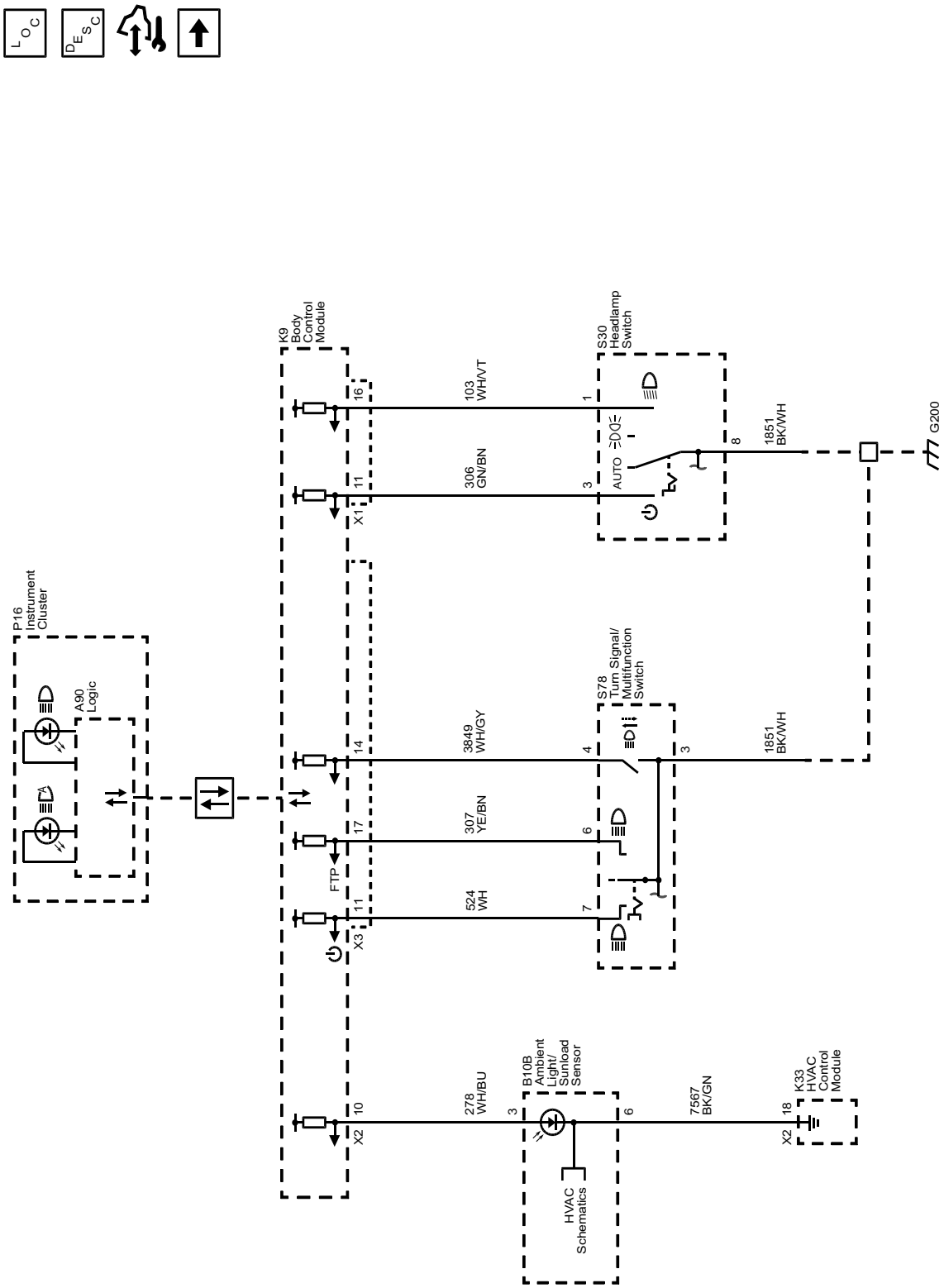
### Circuit Operation

Battery positive voltage is applied at all times to the horn relay coil and the horn relay switch. Pressing either of the horn switches applies ground to the horn relay control circuit. The BCM may also apply ground to the horn relay control circuit as described above. When the horn relay control circuit is grounded, the horn relay is energized and battery positive voltage is applied to the horns through the horn control circuit. The horns sound as long as ground is applied to the horn relay control circuit.

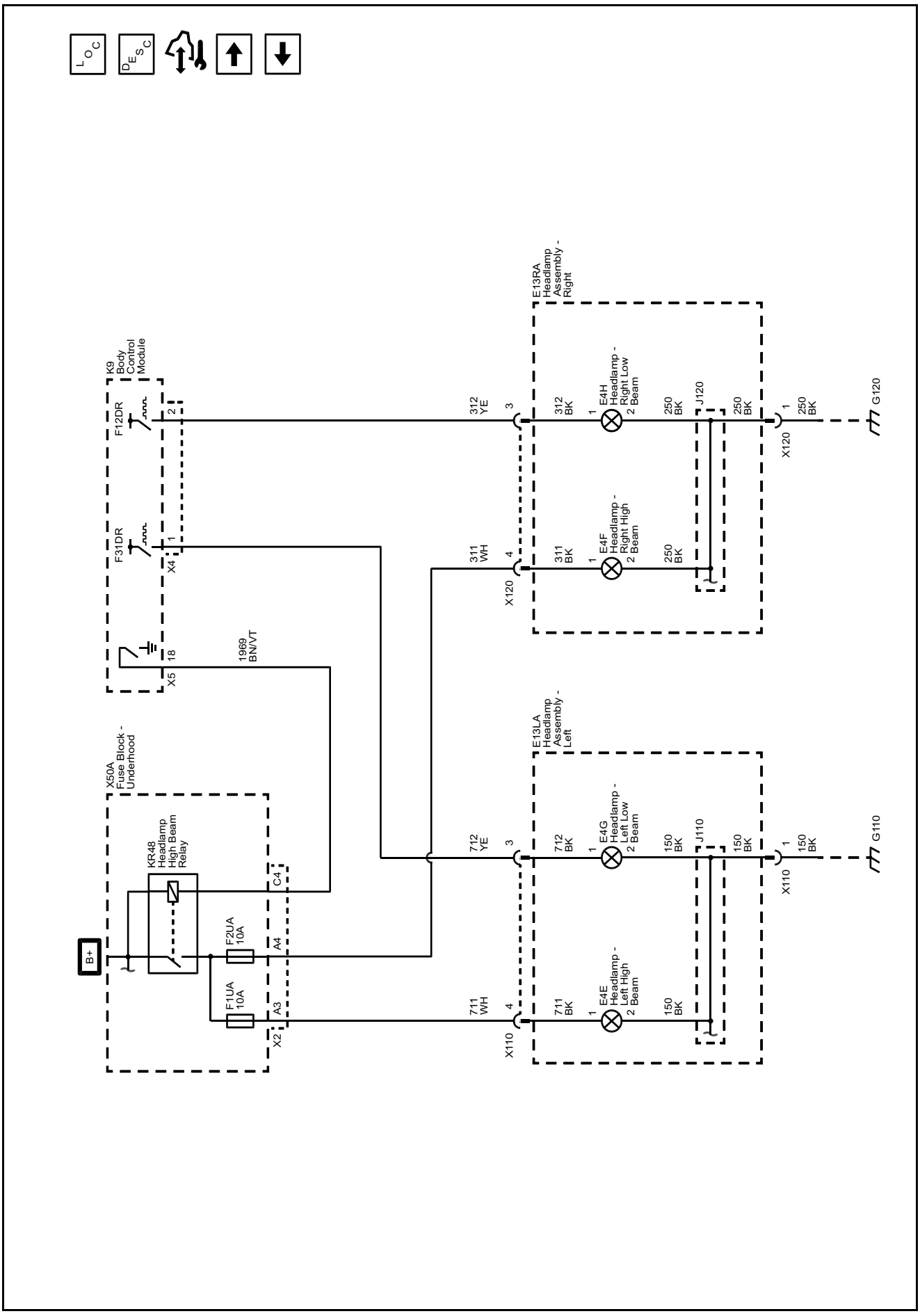
# Lighting

## Schematic and Routing Diagrams

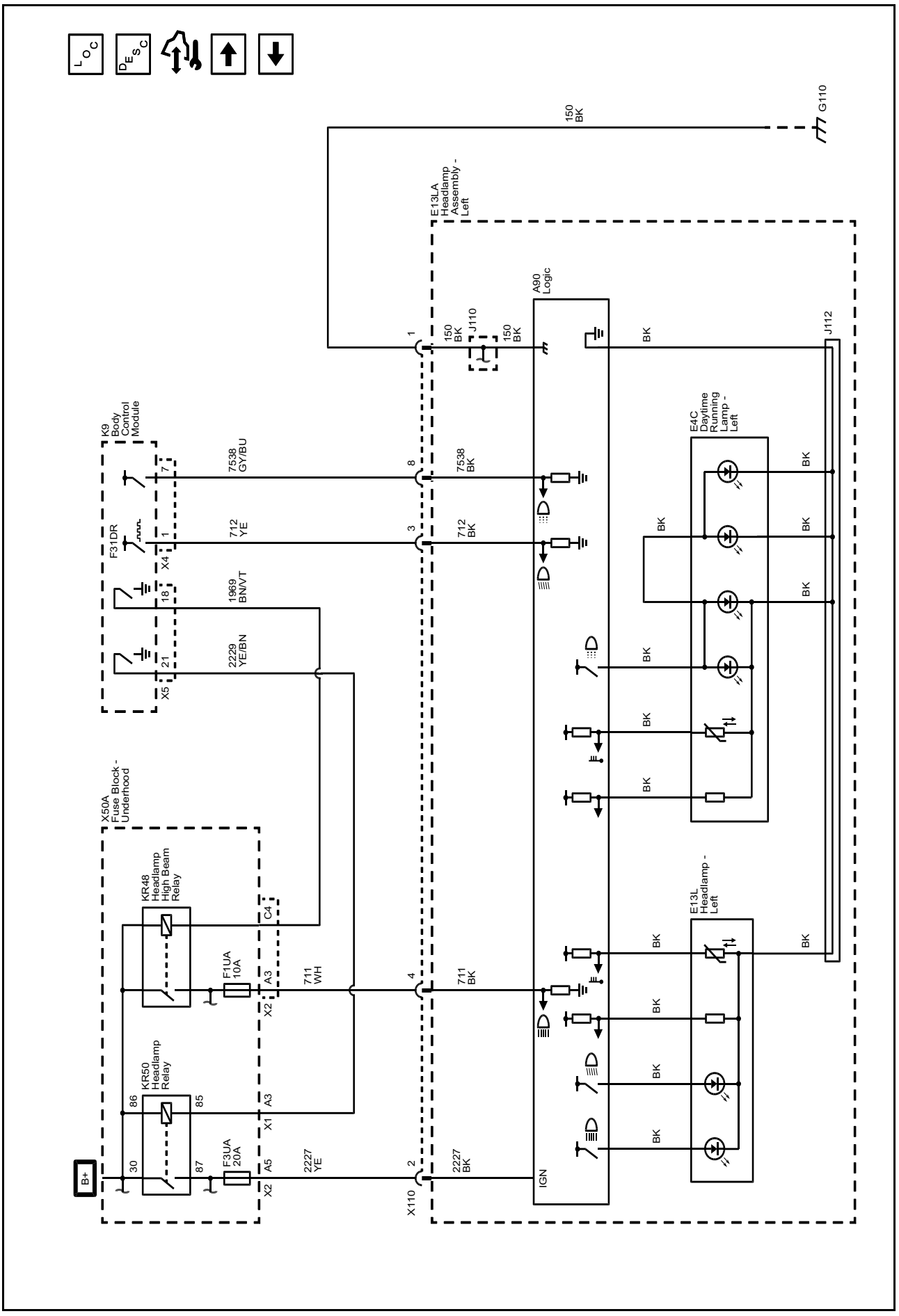
## Headlights/Daytime Running Lights (DRL) Schematics (Controls and Indicators)



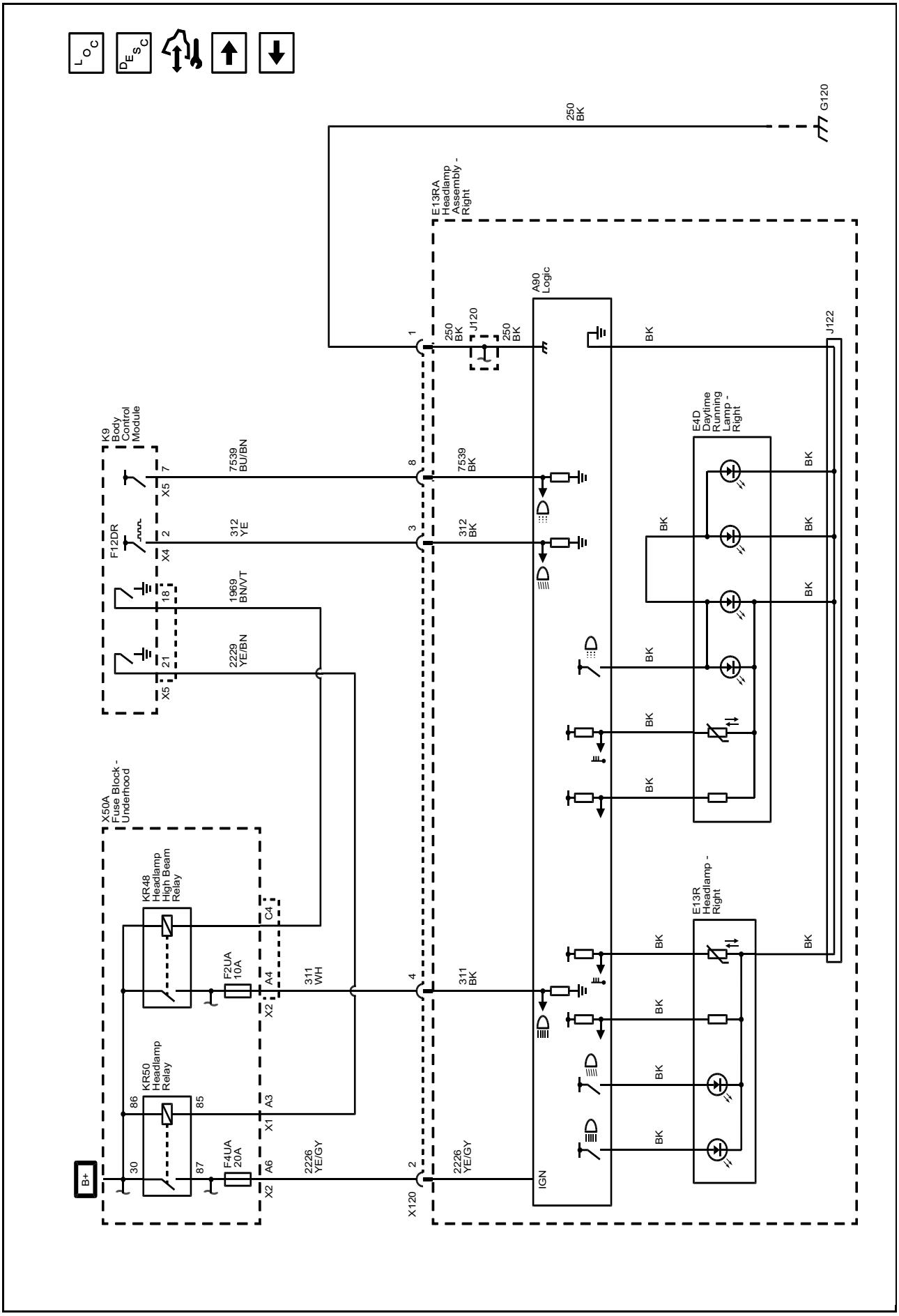
## Headlights/Daytime Running Lights (DRL) Schematics (Headlamps (GF2/GF5/GPZ))



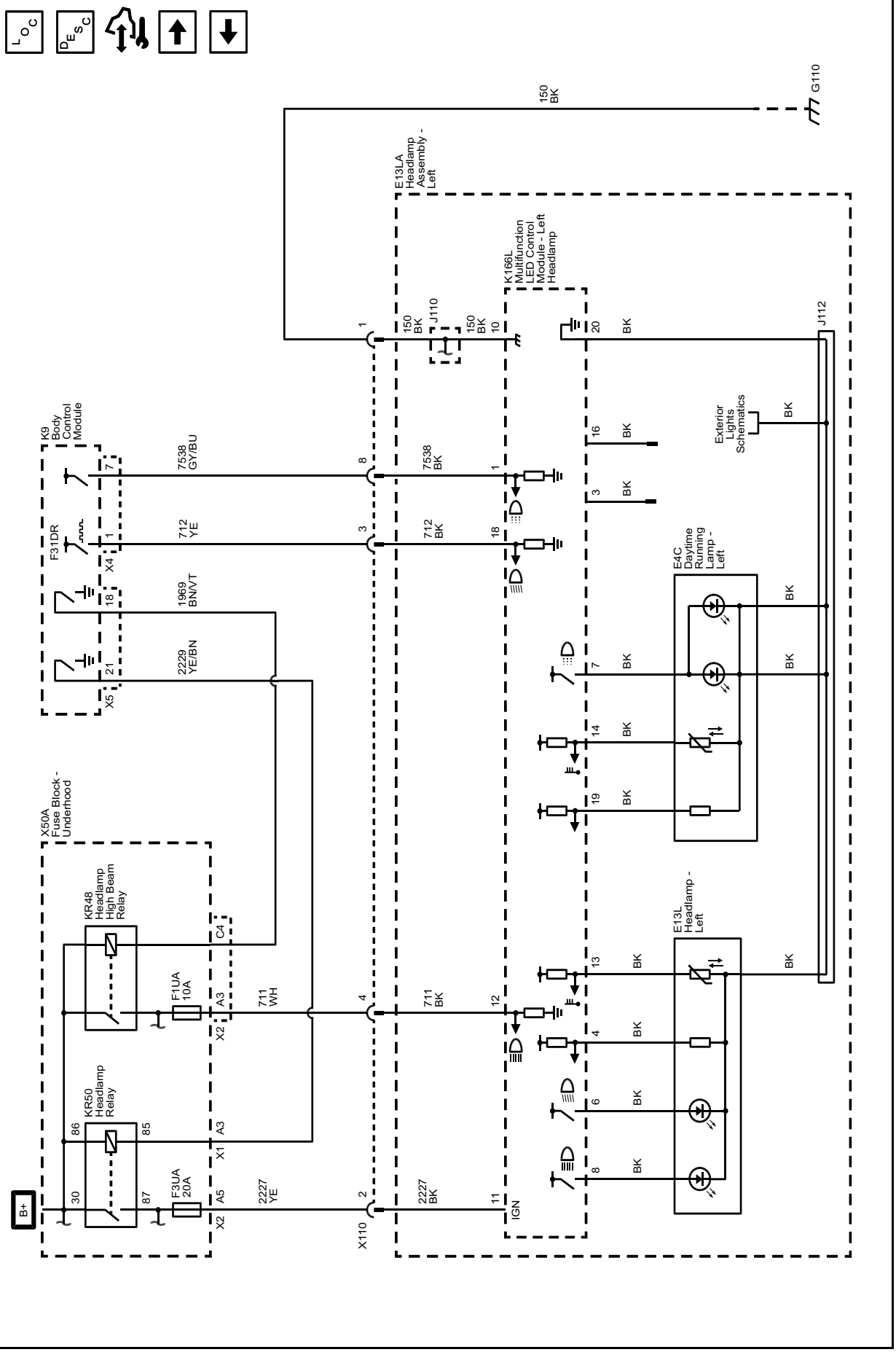
## Headlights/Daytime Running Lights (DRL) Schematics (Headlamps and Daytime Running Lamps - Left (GF3/GF4/GF9/GFC))



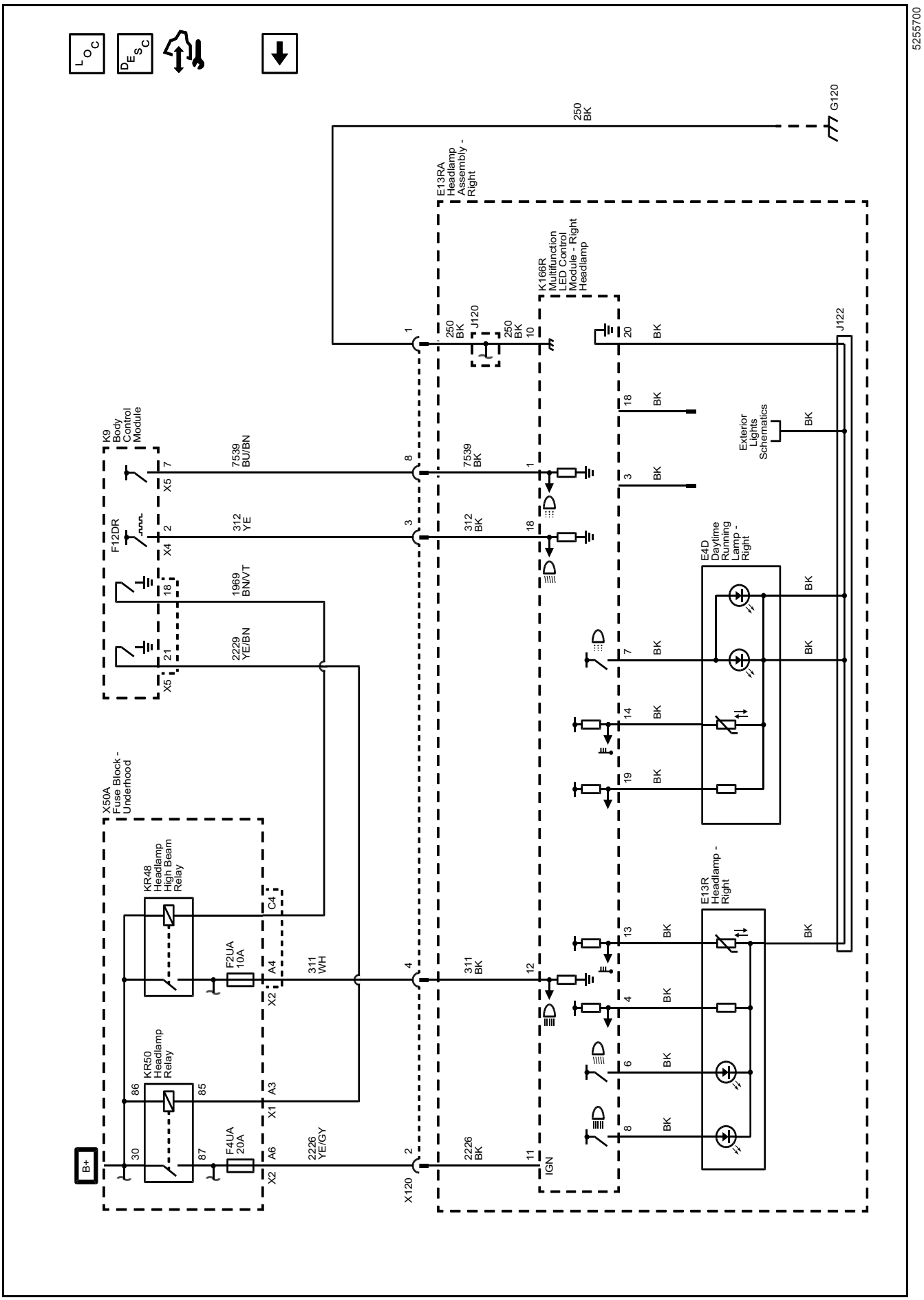
## Headlights/Daytime Running Lights (DRL) Schematics (Headlamps and Daytime Running Lamps - Right (GF3/GF4/ GF9/GFC))



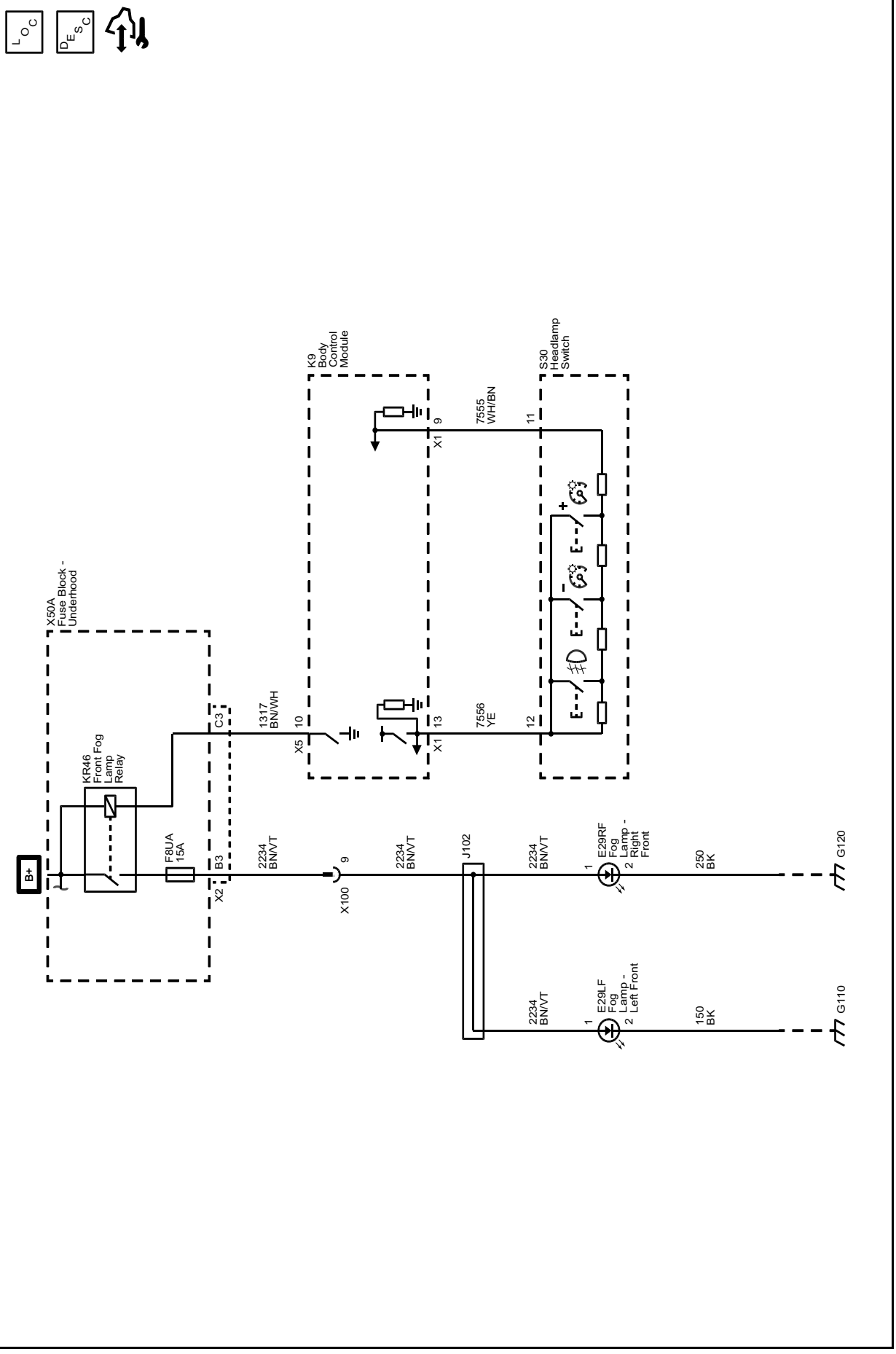
## Headlights/Daytime Running Lights (DRL) Schematics (Headlamps and Daytime Running Lamps - Left (GFD))



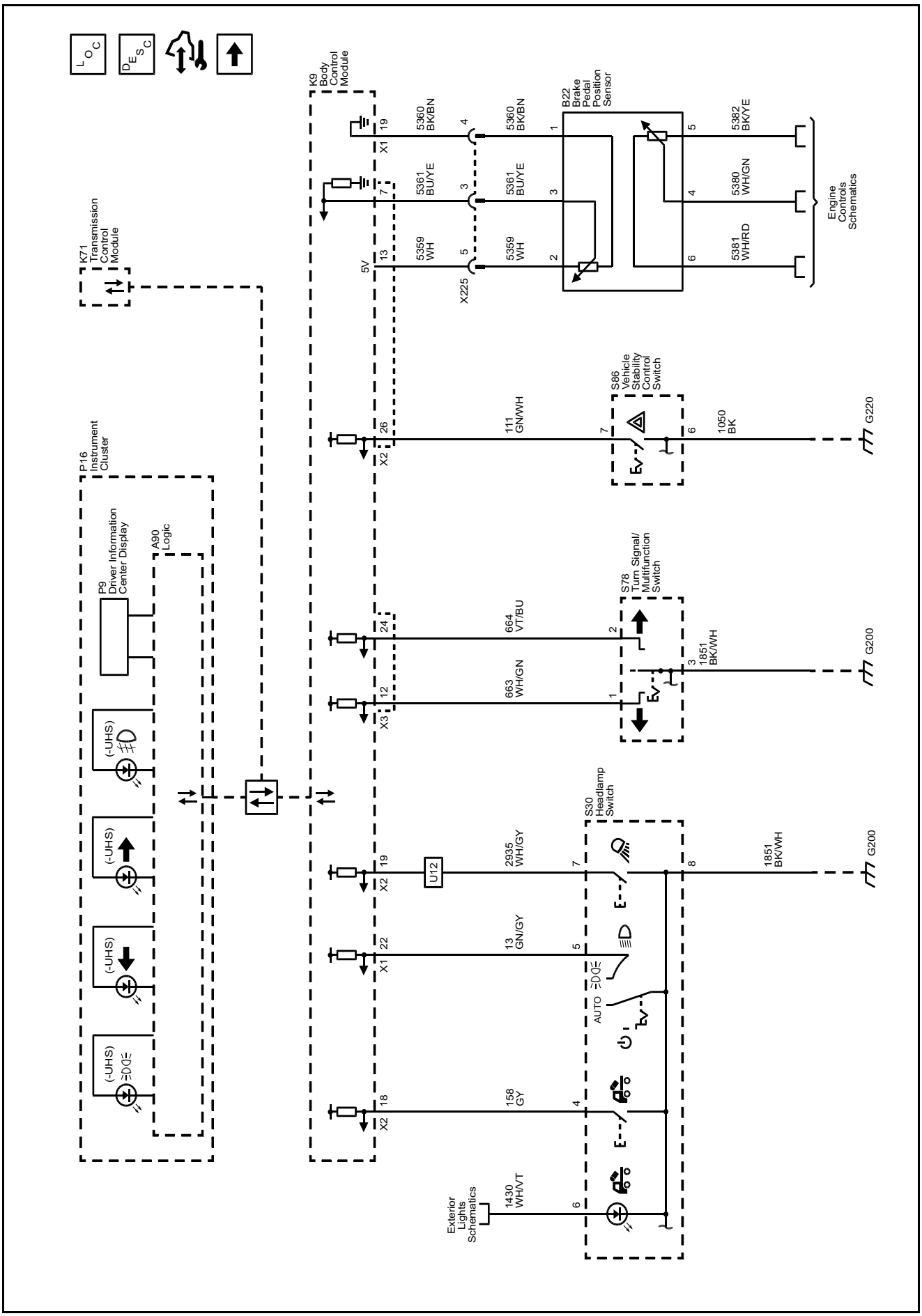
## Headlights/Daytime Running Lights (DRL) Schematics (Headlamps and Daytime Running Lamps - Right (GFD))



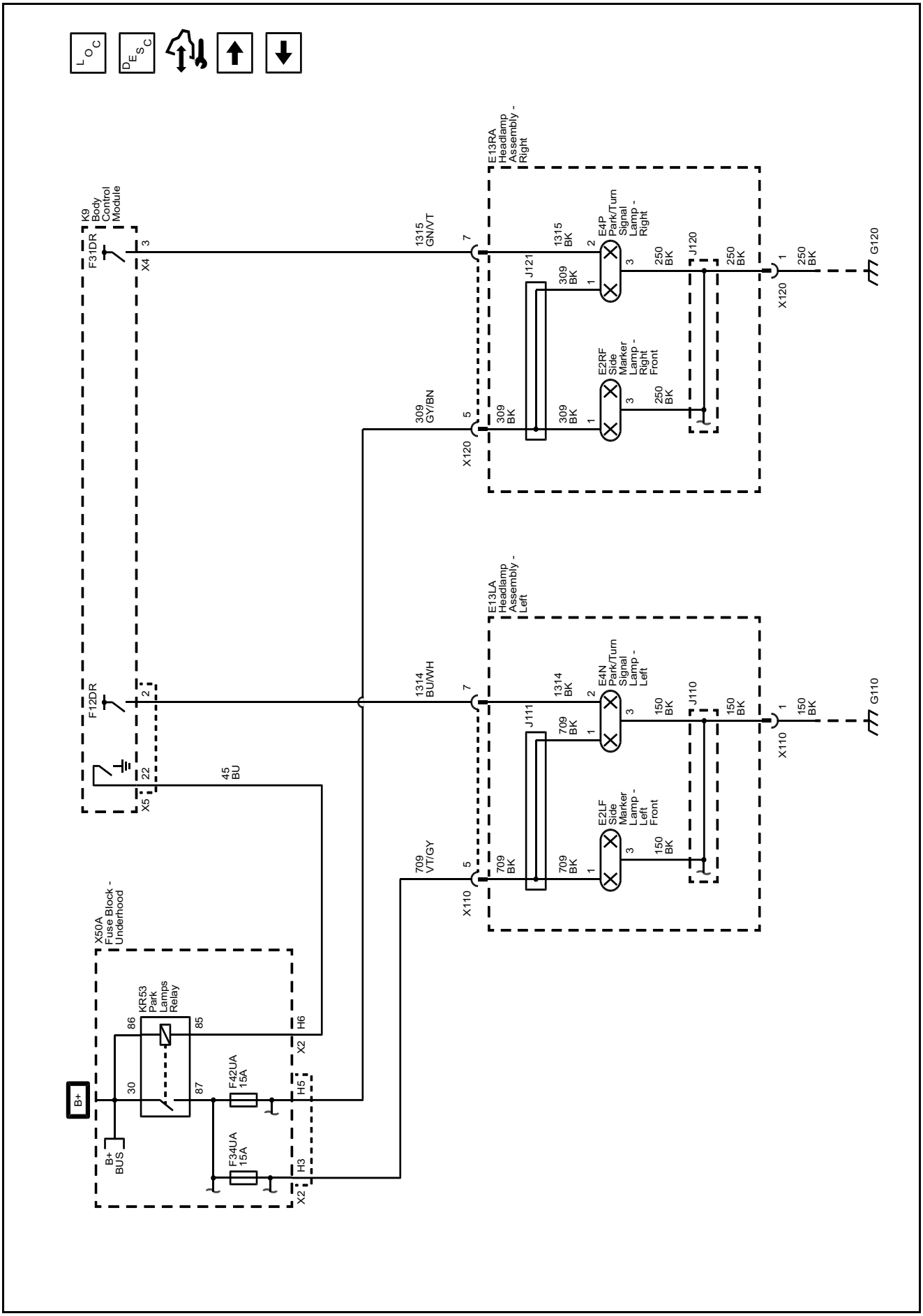
## Fog Lights Schematics (Fog Lamps (T3U))



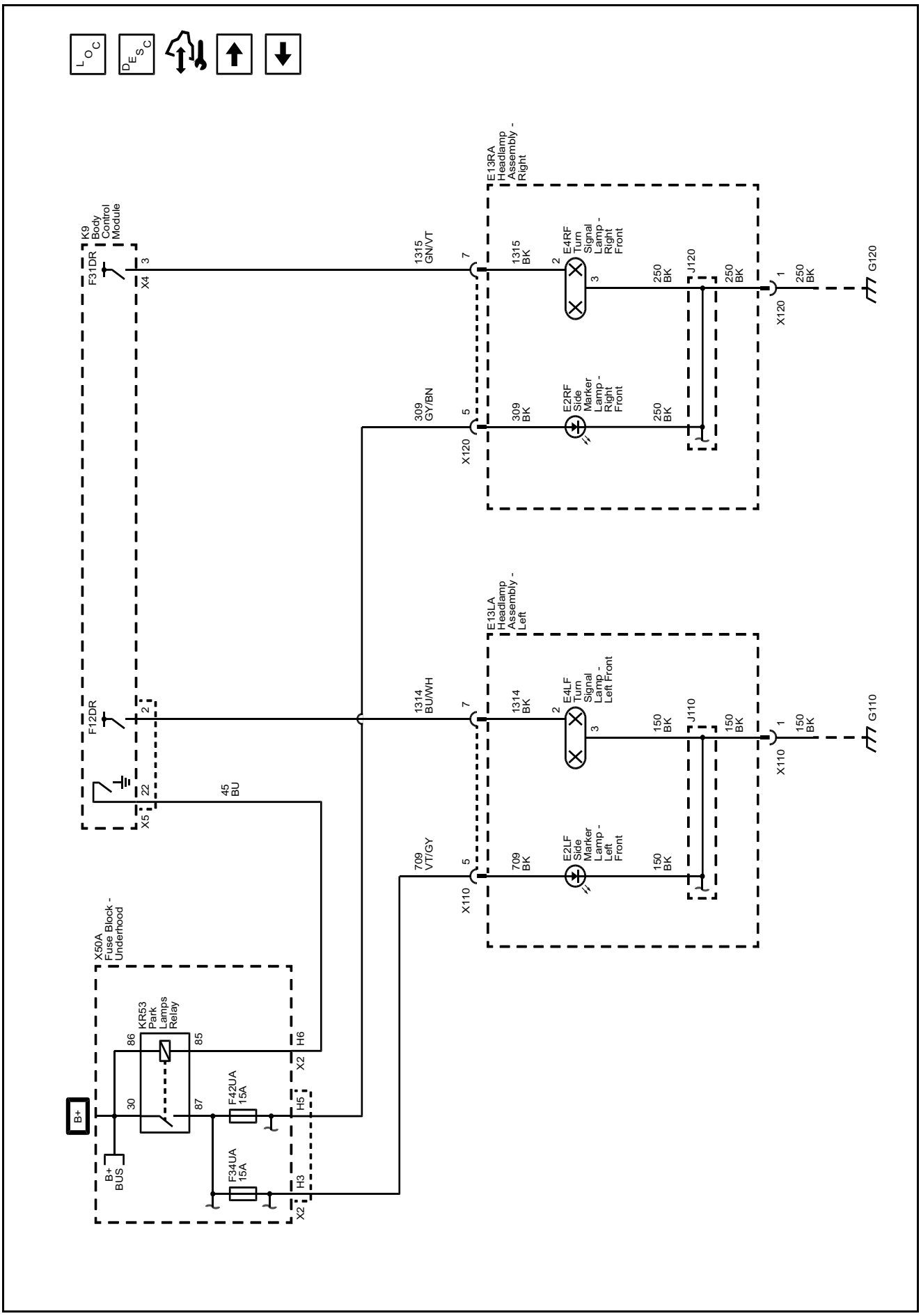
## Exterior Lights Schematics (Controls and Indicators)



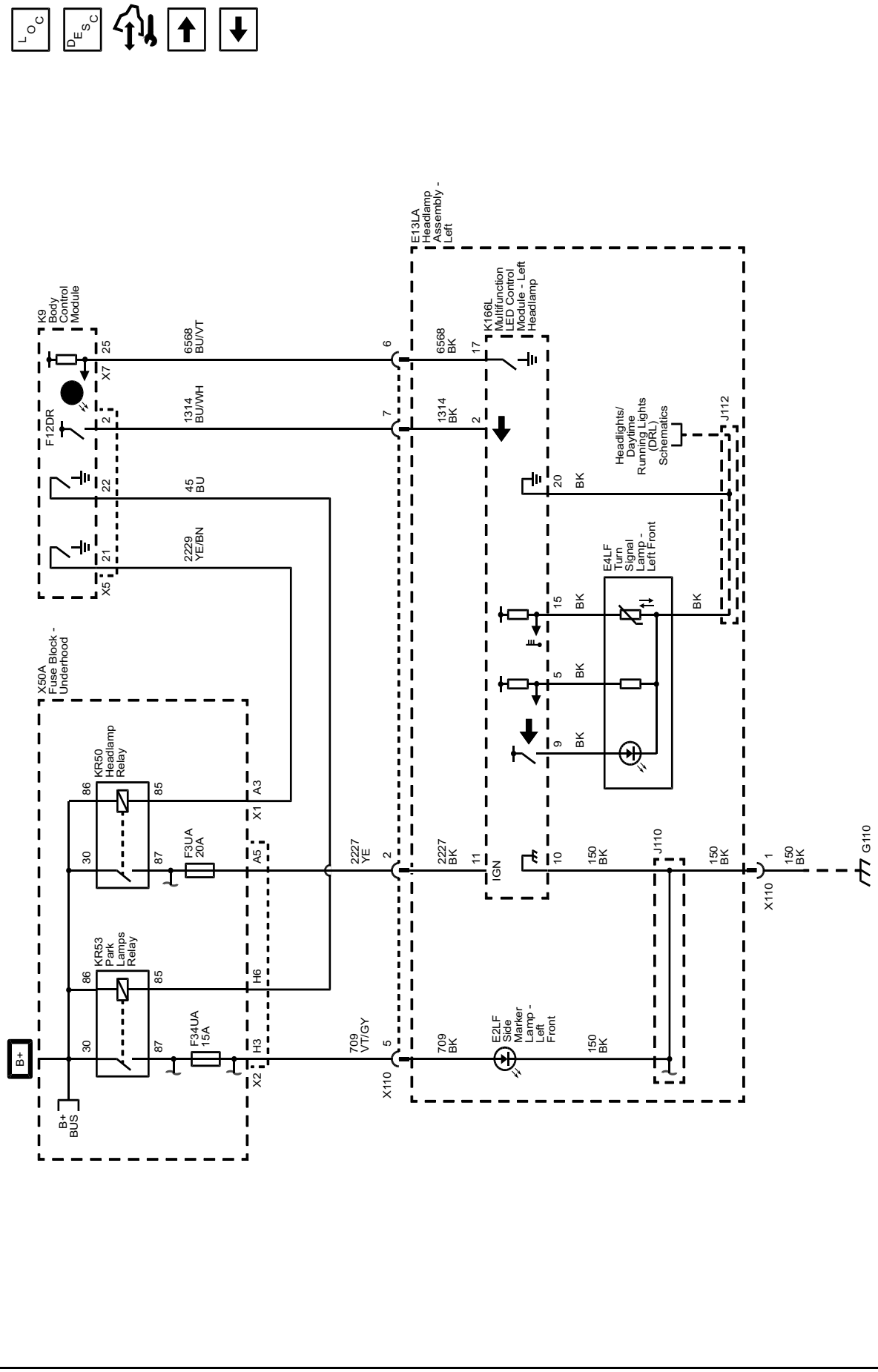
## Exterior Lights Schematics (Front Turn Signals and Side Marker Lamps (GF2/GF5/GPZ))



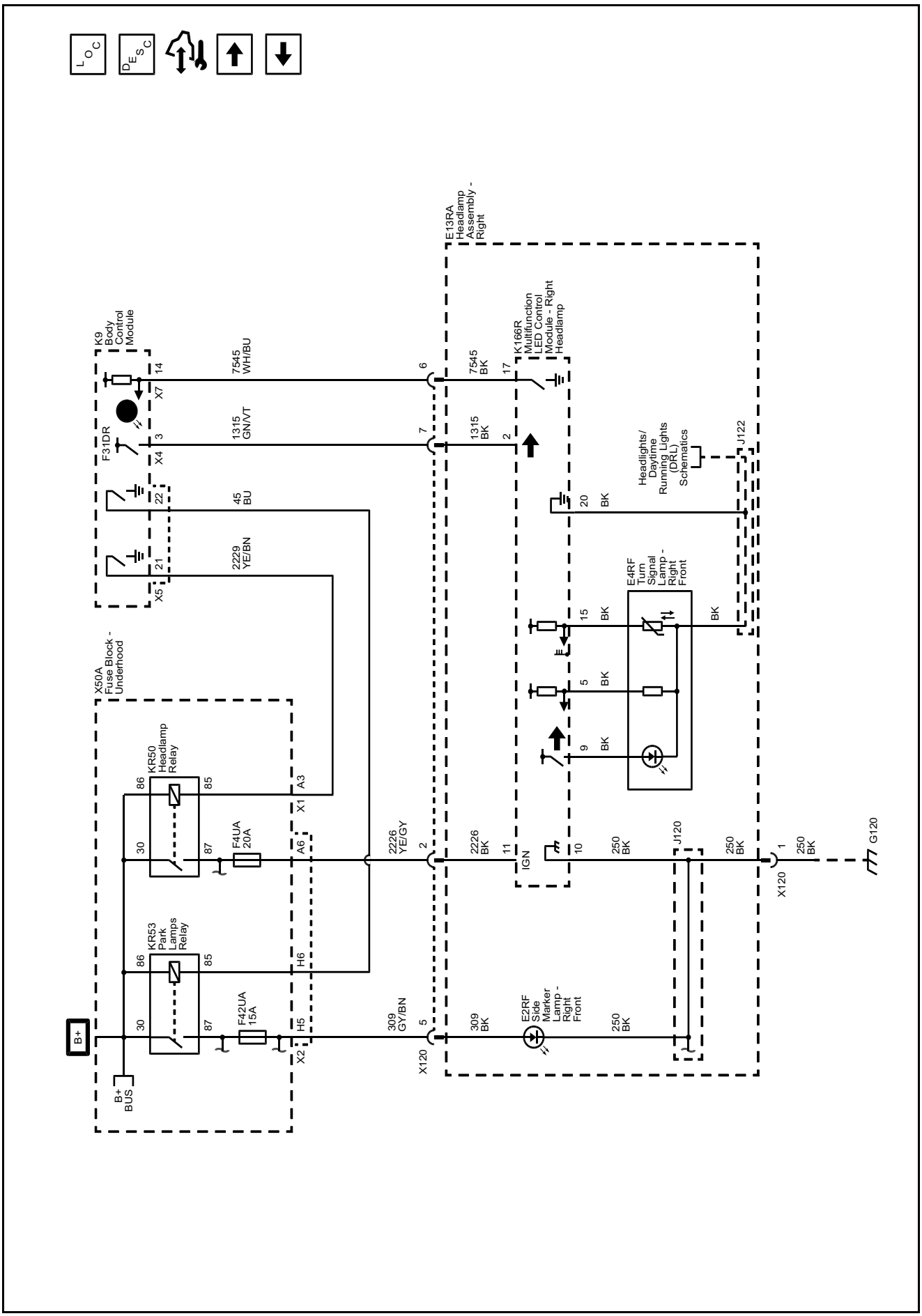
## Exterior Lights Schematics (Front Turn Signals and Side Marker Lamps (GF3/GF4/GF9/GFC))



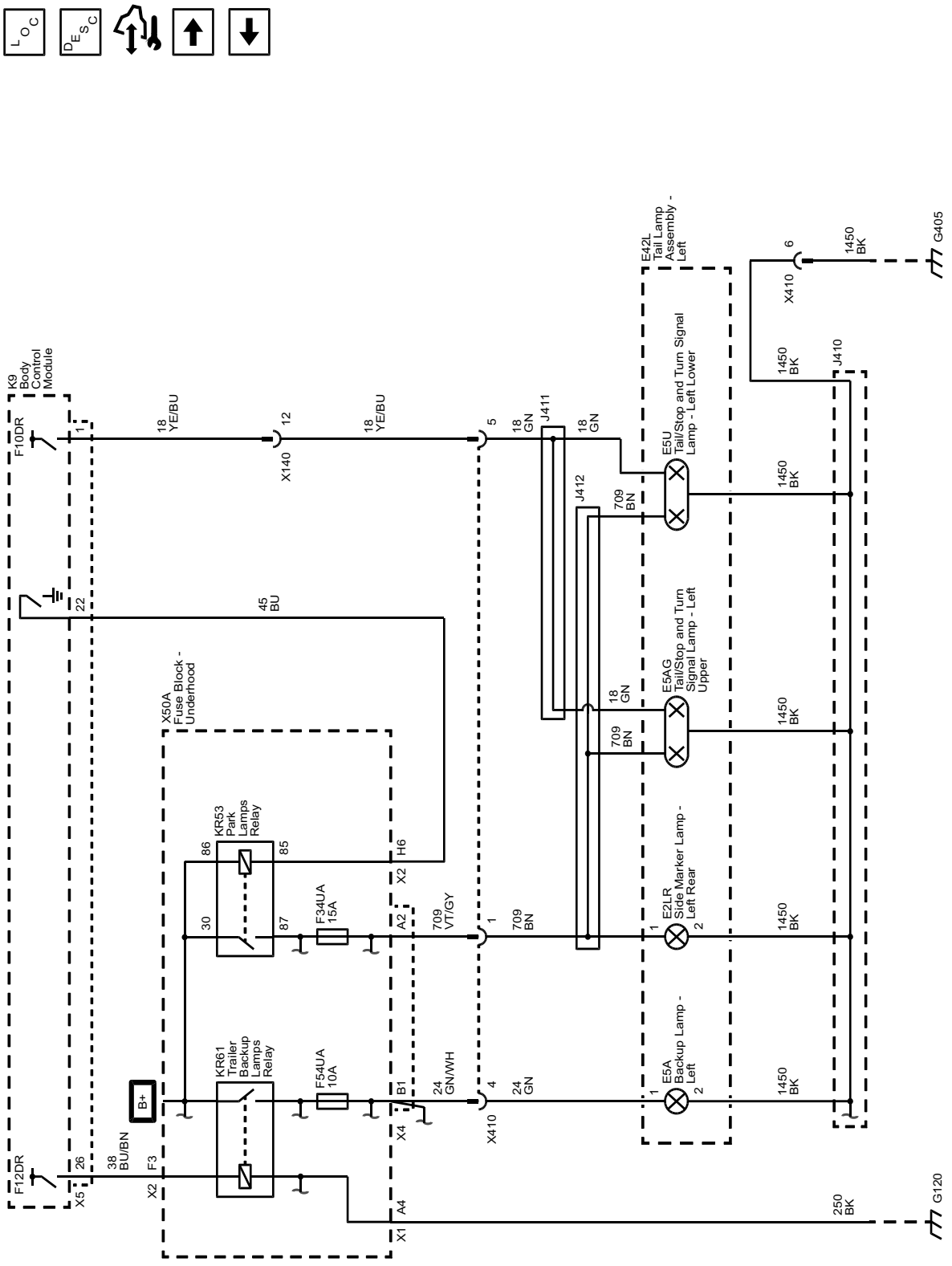
## Exterior Lights Schematics (Front Turn Signals and Side Marker Lamps - Left (GFD))



## Exterior Lights Schematics (Front Turn Signals and Side Marker Lamps - Right (GFD))

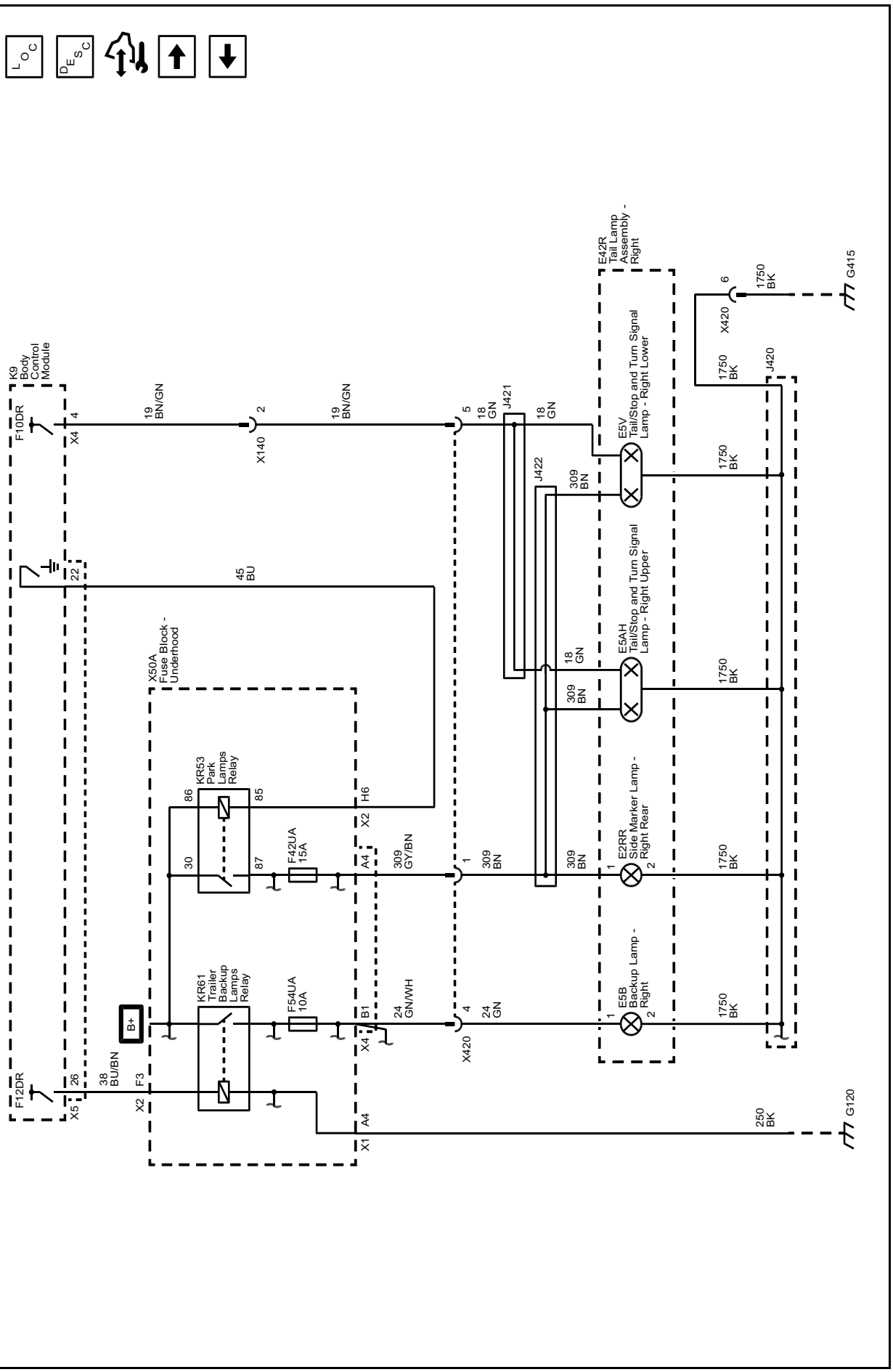


## Exterior Lights Schematics (Tail Lamp Assembly - Left (GF3/GF5))

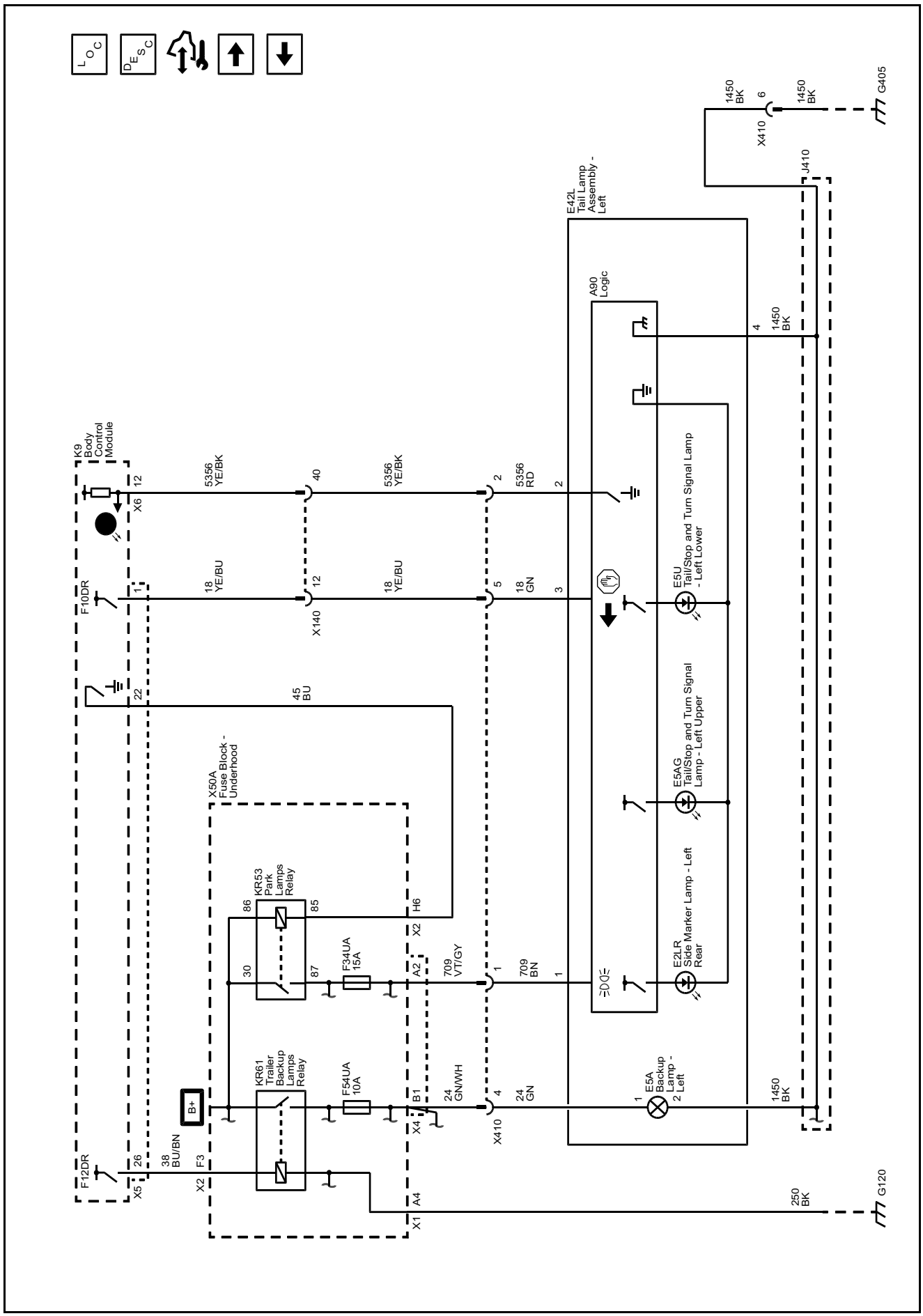



5255750

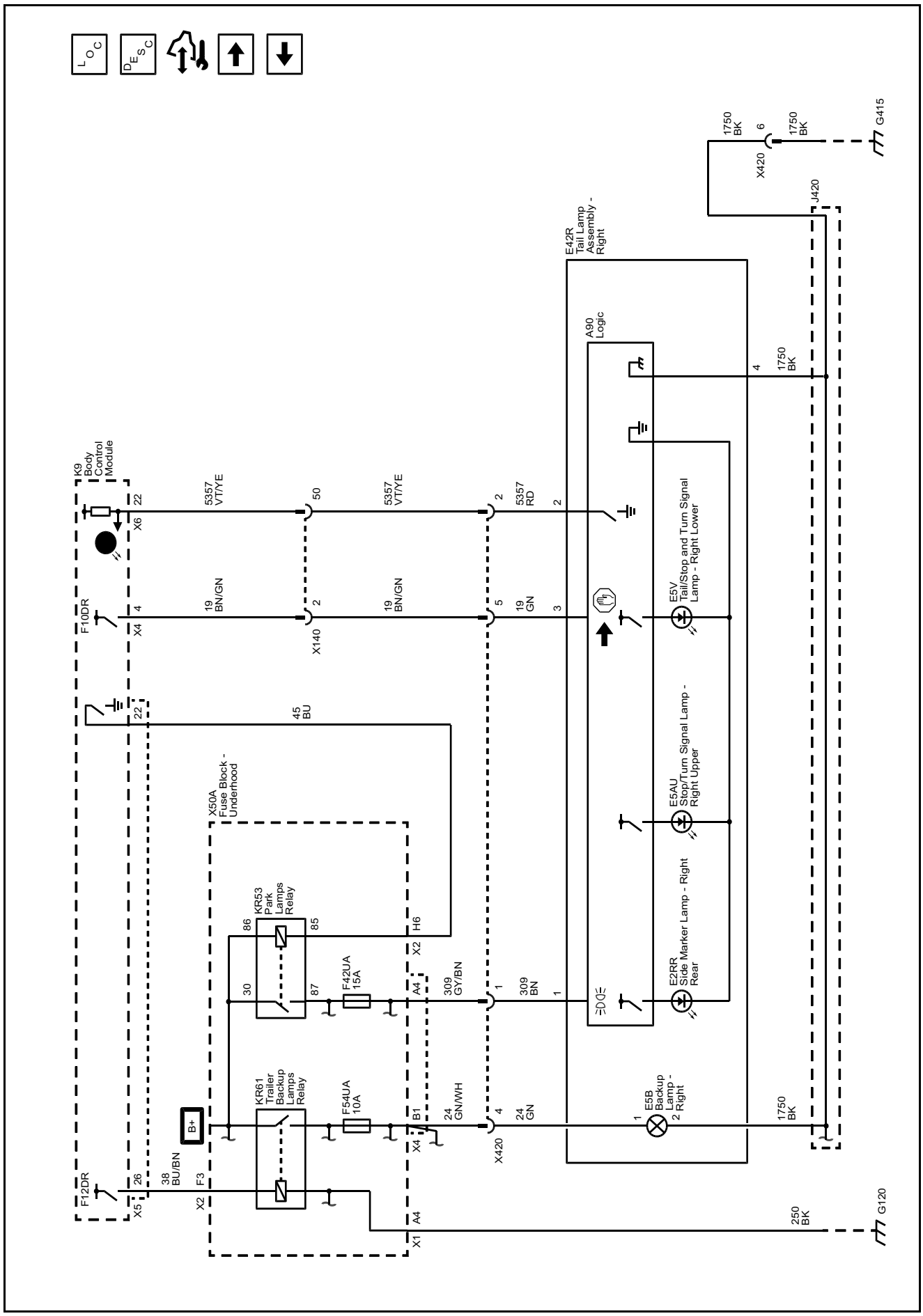
## Exterior Lights Schematics (Tail Lamp Assembly - Right (GF3/GF5))



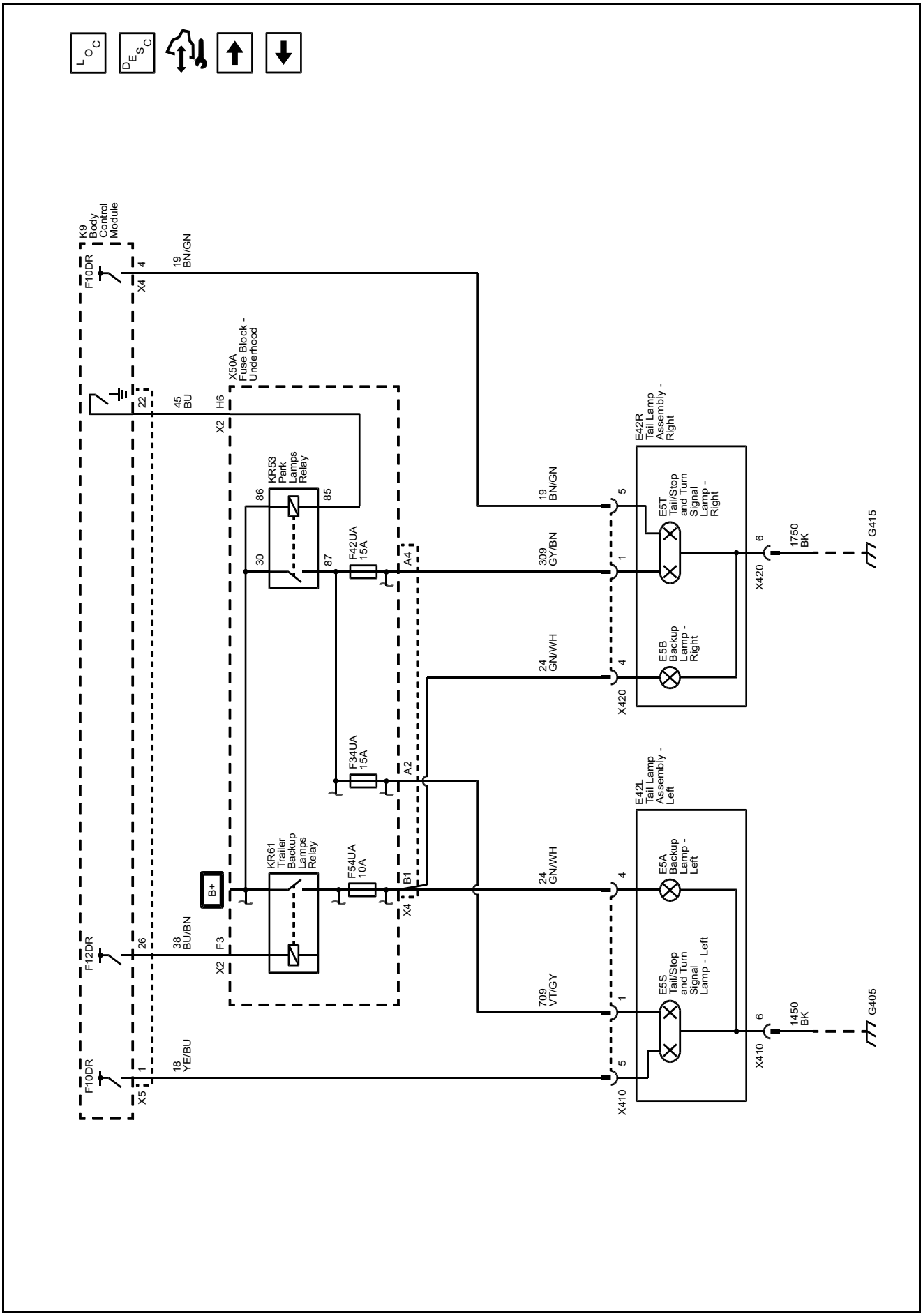
## Exterior Lights Schematics (Tail Lamp Assembly - Left (GF2/GF4/GF9/GFC/GFD/GPZ))



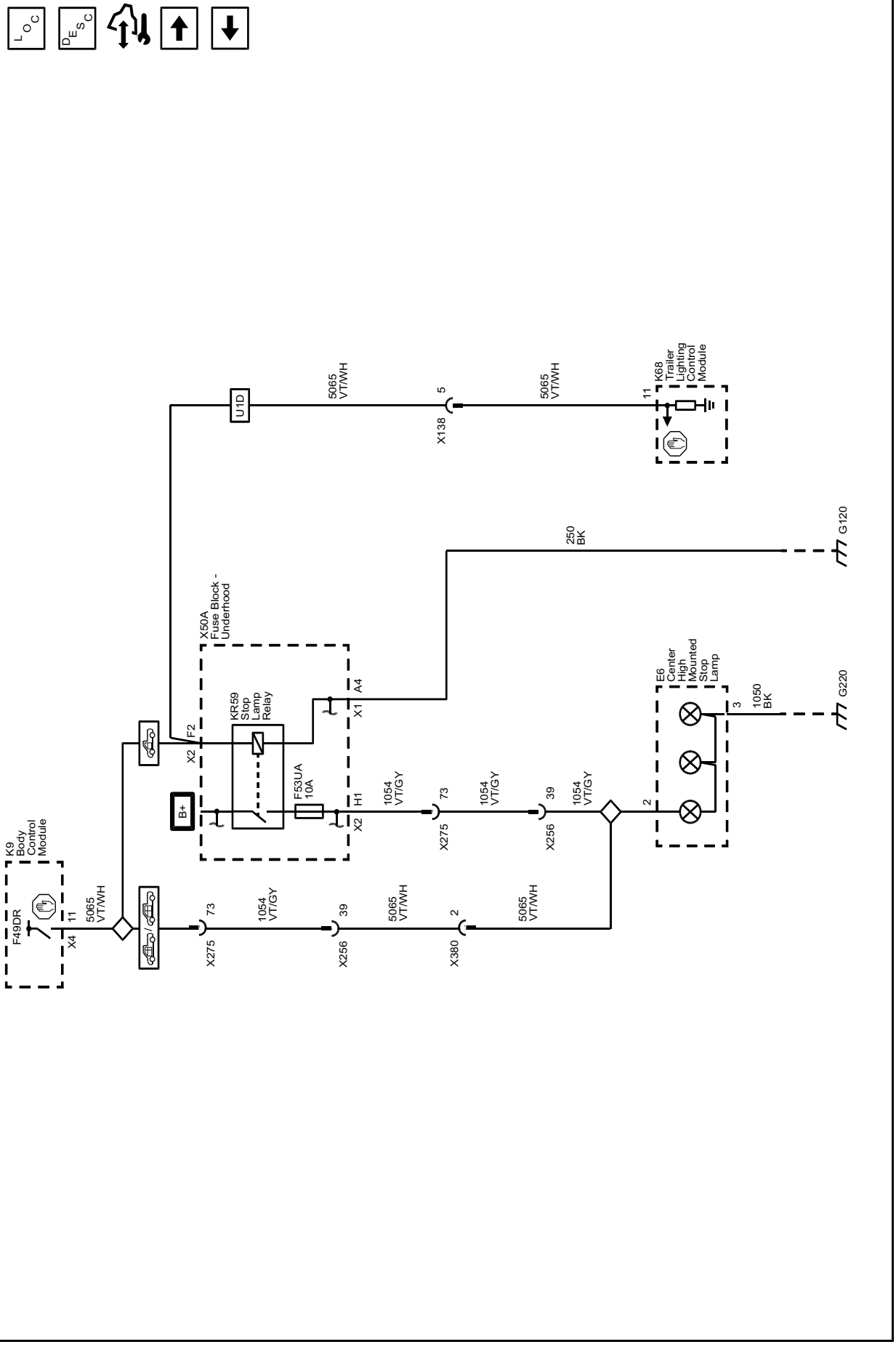
## Exterior Lights Schematics (Tail Lamp Assembly - Right (GF2/GF4/GF9/GFC/GFD/GPZ))



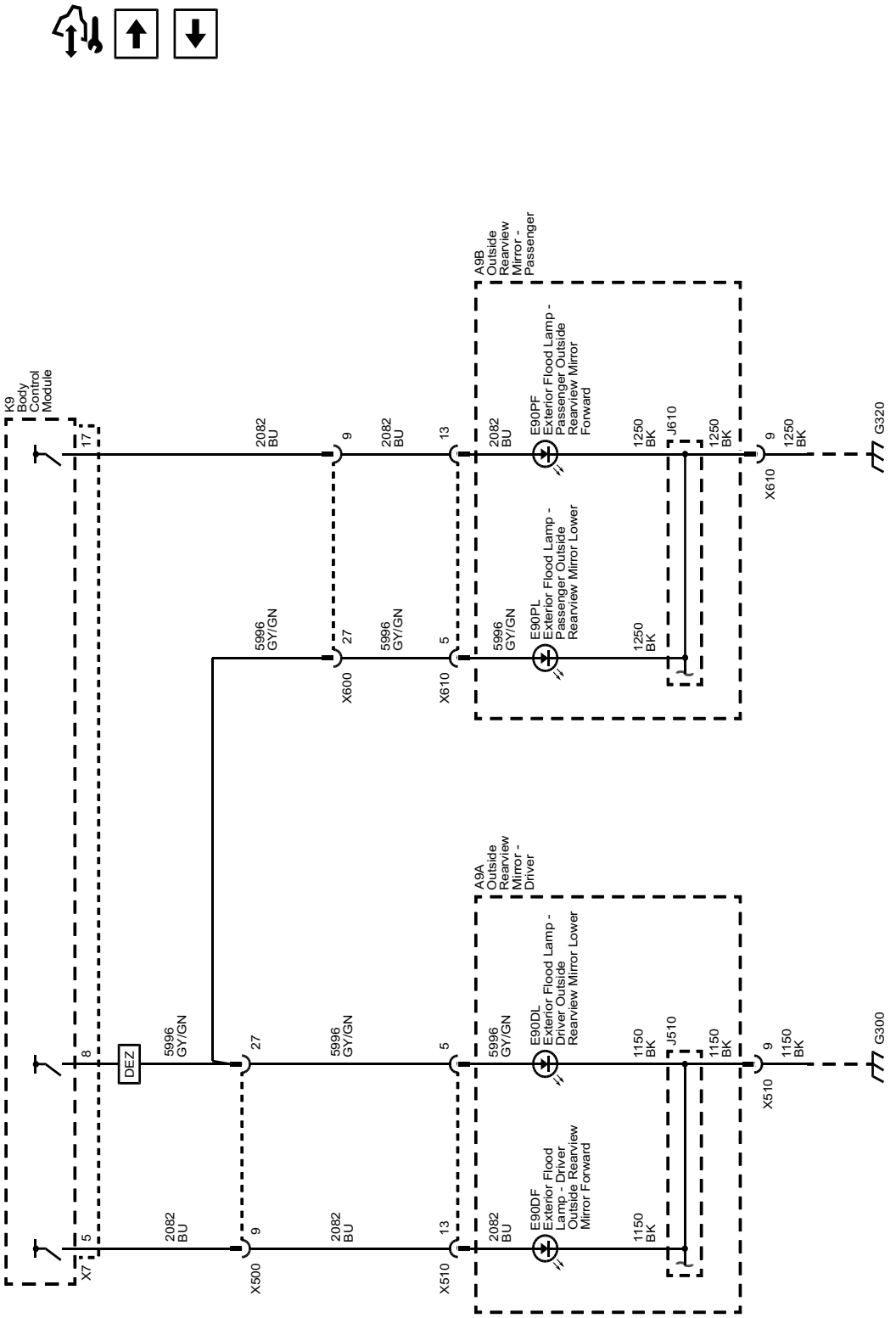
## Exterior Lights Schematics (Tail Lamp Assemblies (ZW9))



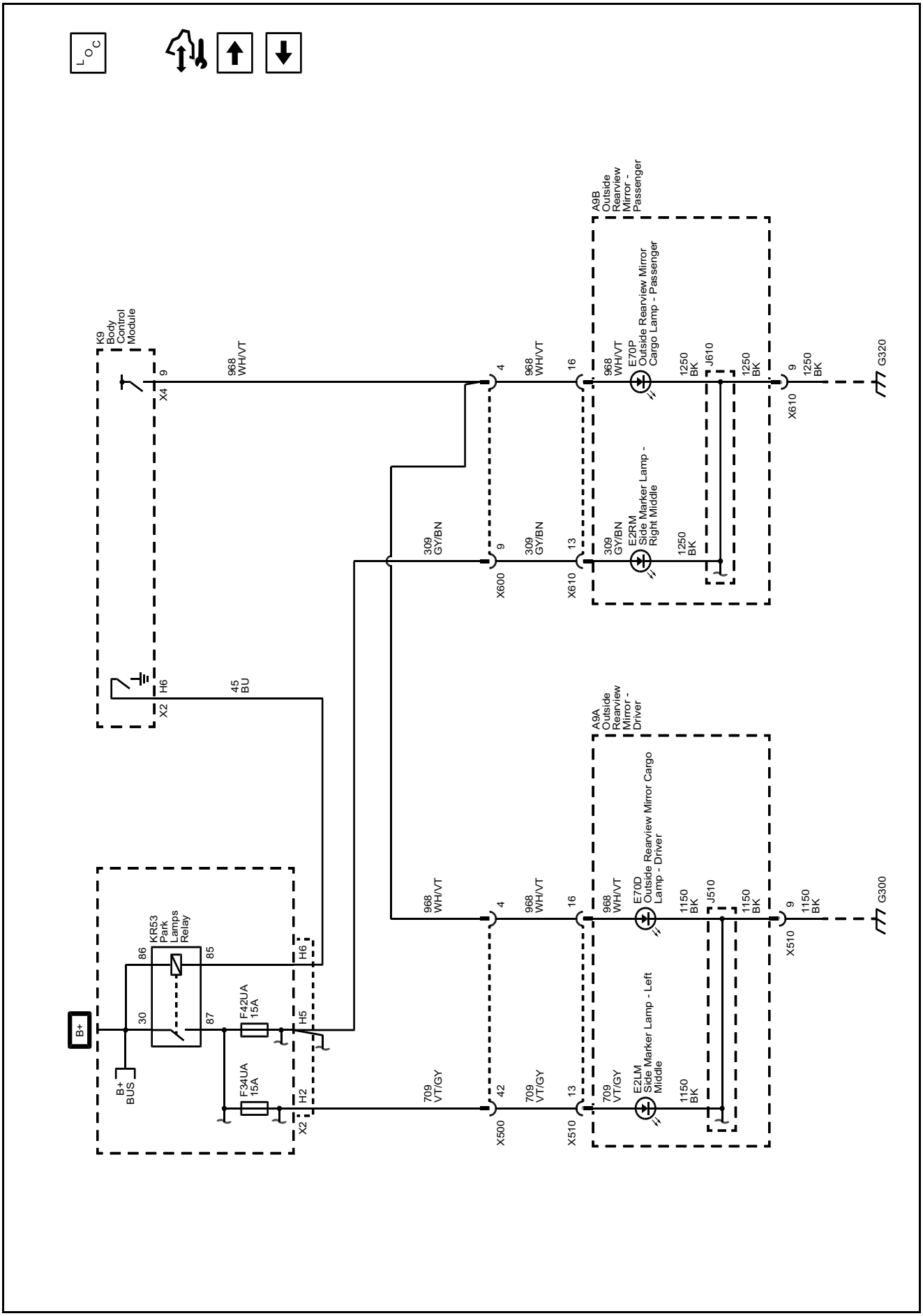
## Exterior Lights Schematics (Center High Mounted Stop Lamp)



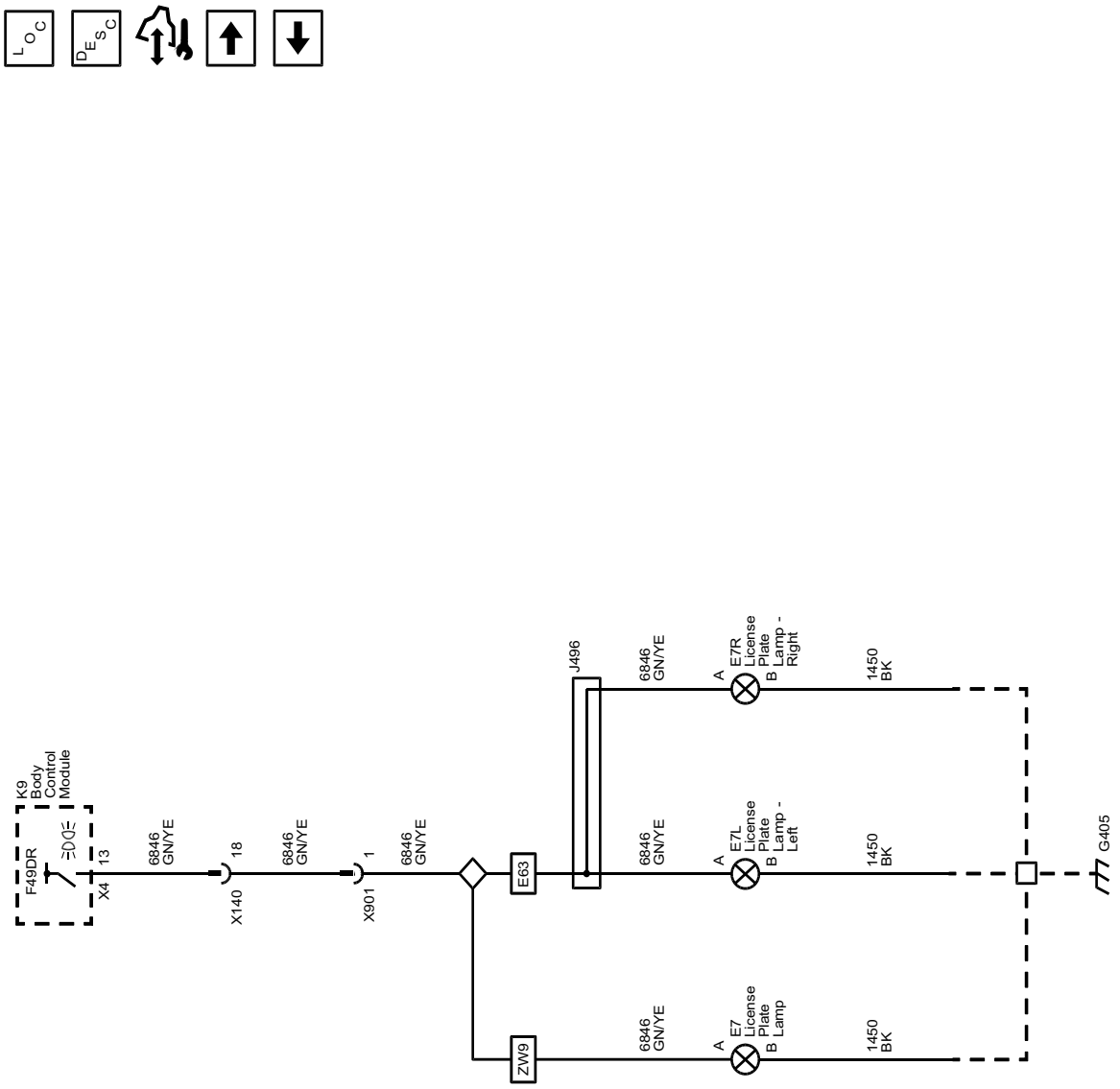
## Exterior Lights Schematics (Mirrors (1 of 2) (DEZ/DLF))



## Exterior Lights Schematics (Mirrors (2 of 2) (DPO/DQS))

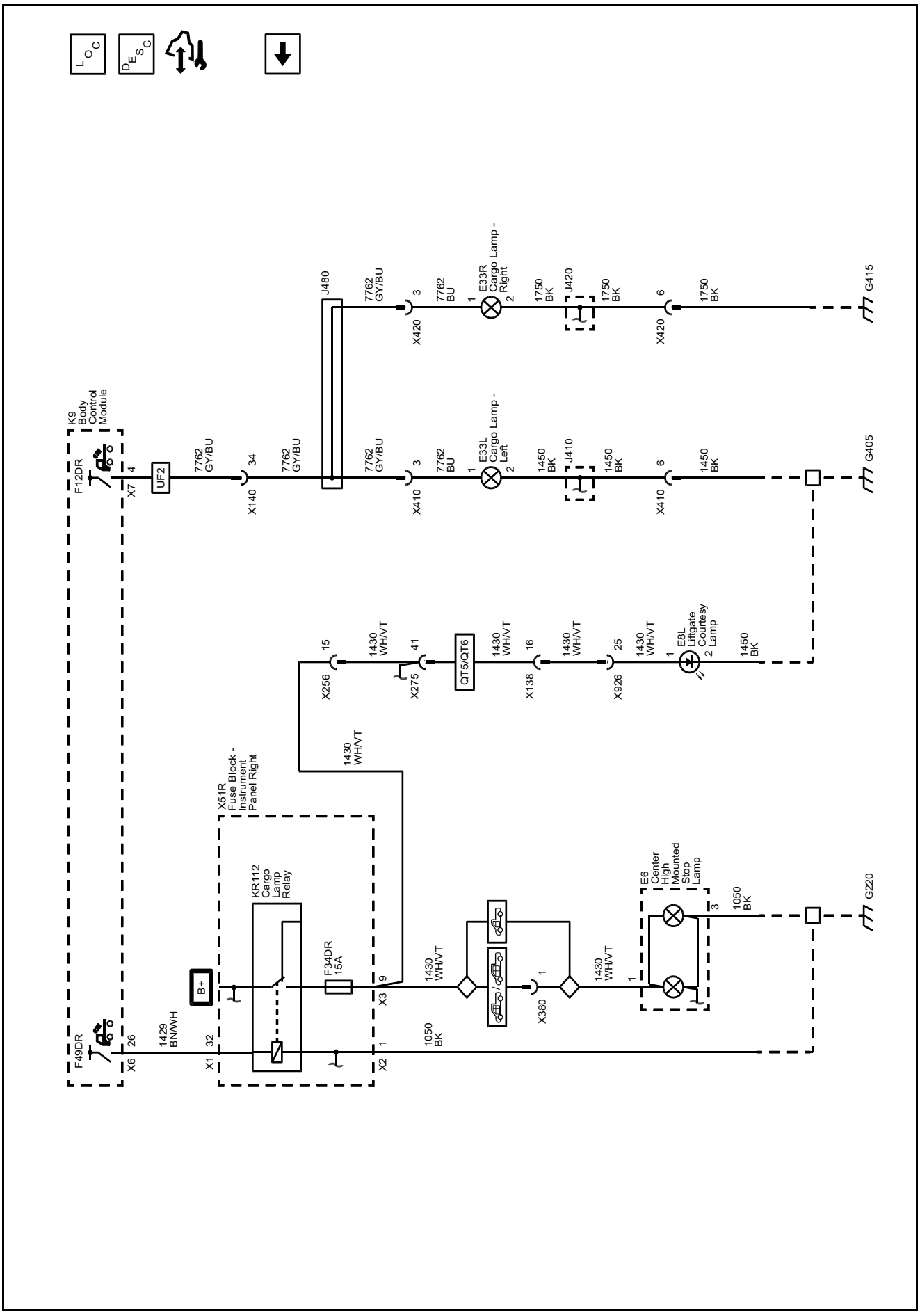


## Exterior Lights Schematics (License Plate Lamps)

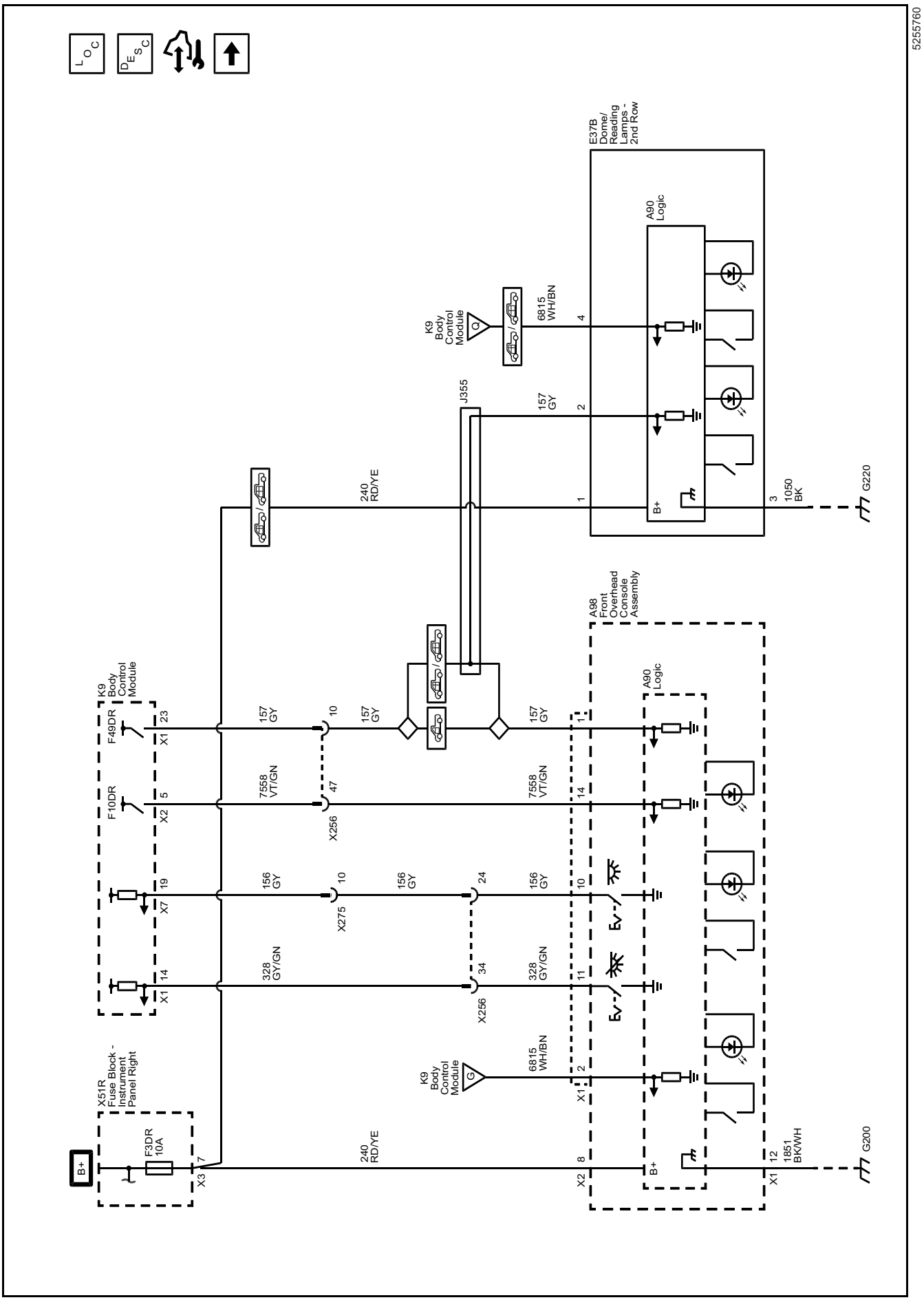



5255758

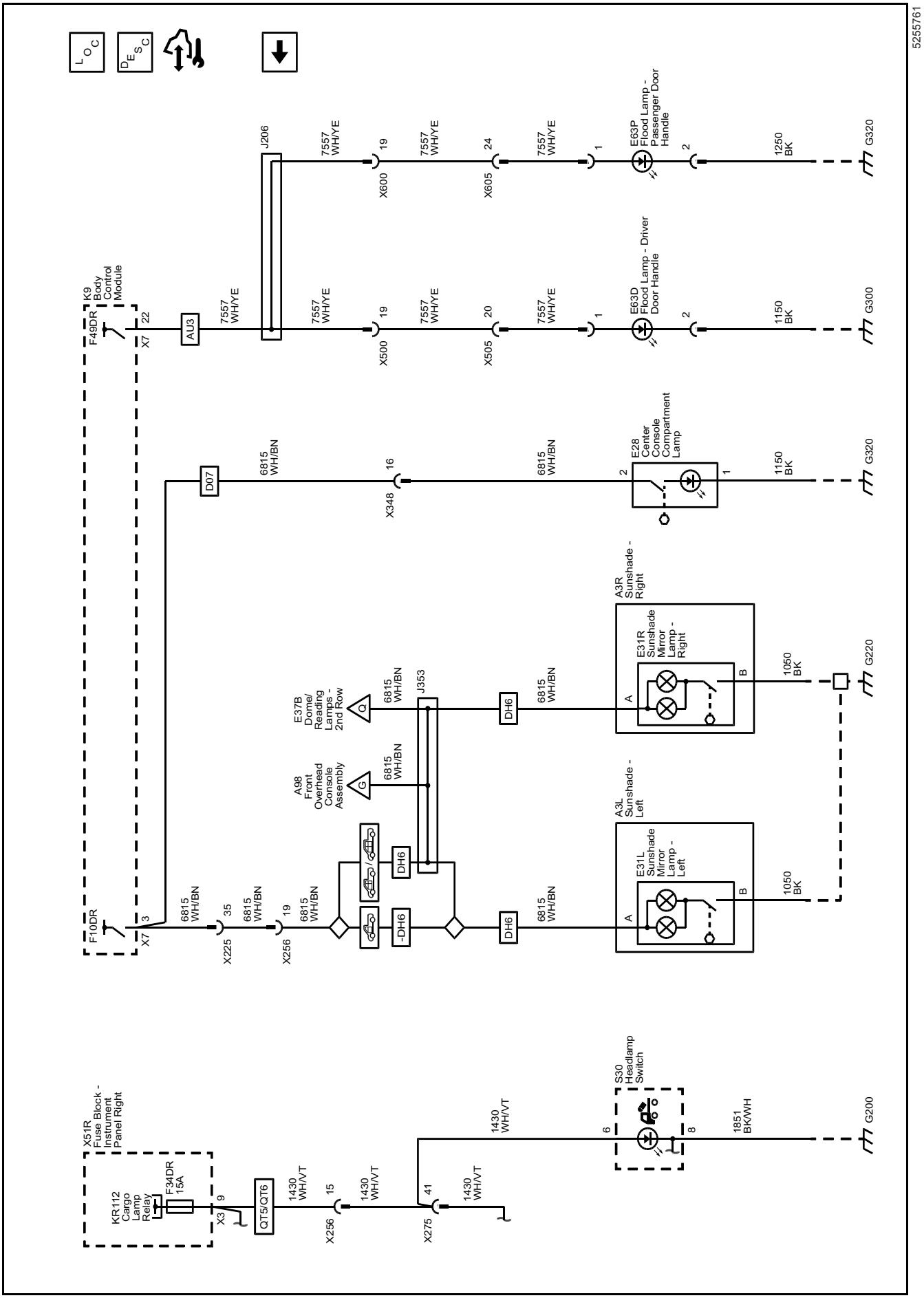
## Exterior Lights Schematics (Cargo Lamps (UF2))



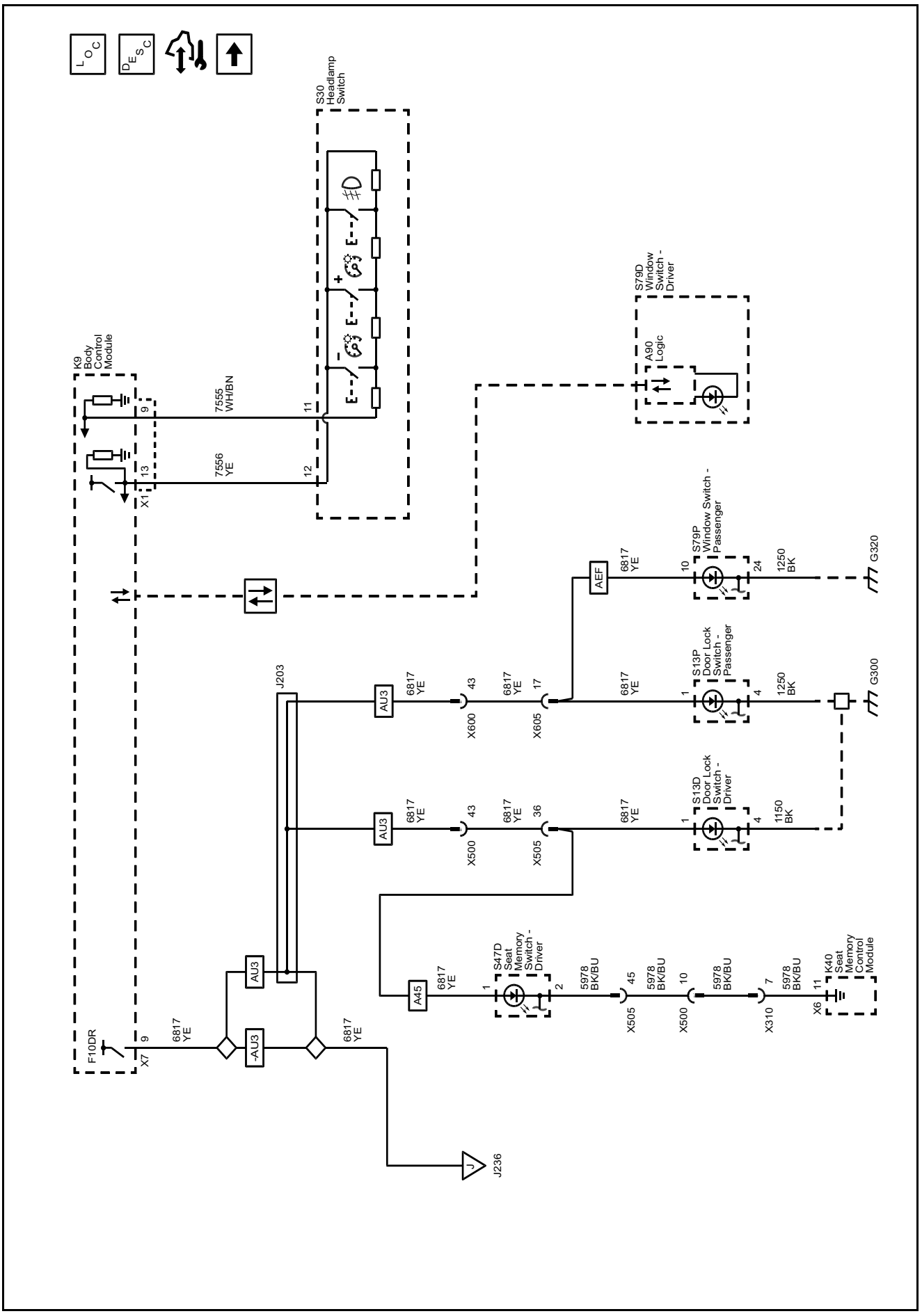
## Interior Lights Schematics (Controls and Overhead Lamps)



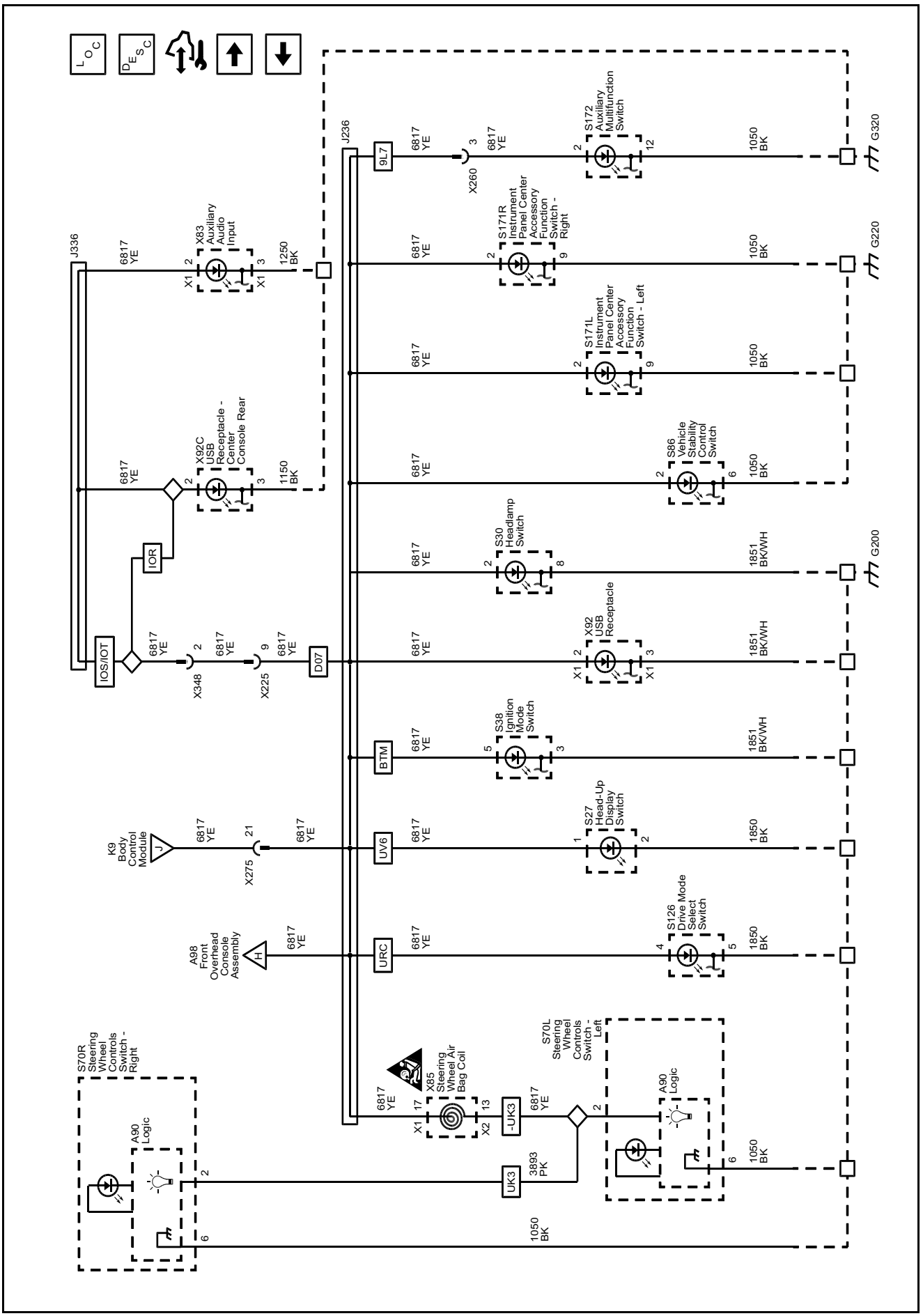
## Interior Lights Schematics (Cargo Lamp Indicator, Sunshade, Center Console, and Door Lamps)



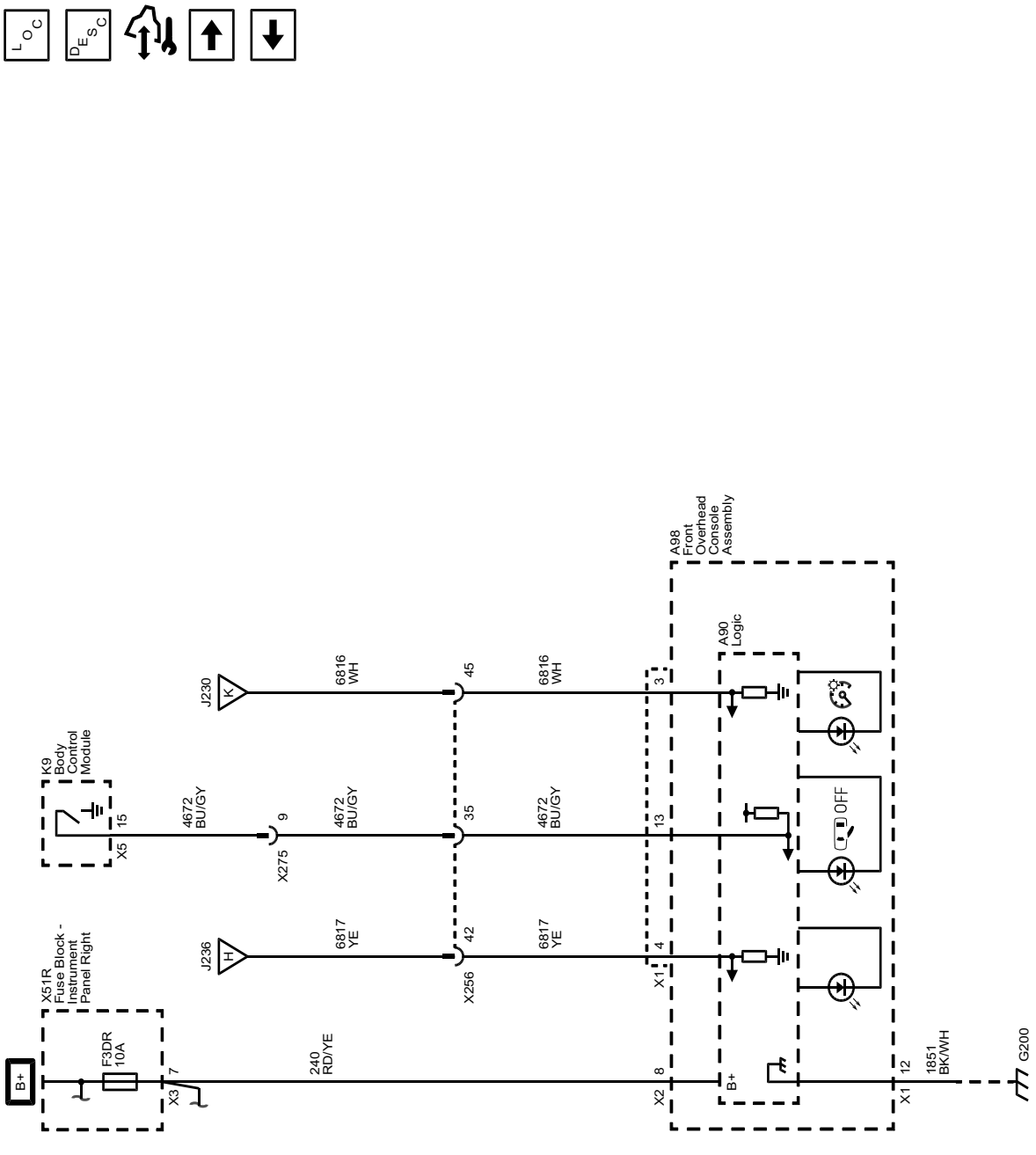
## Interior Lights Dimming Schematics (Controls and Backlights (1 of 2))



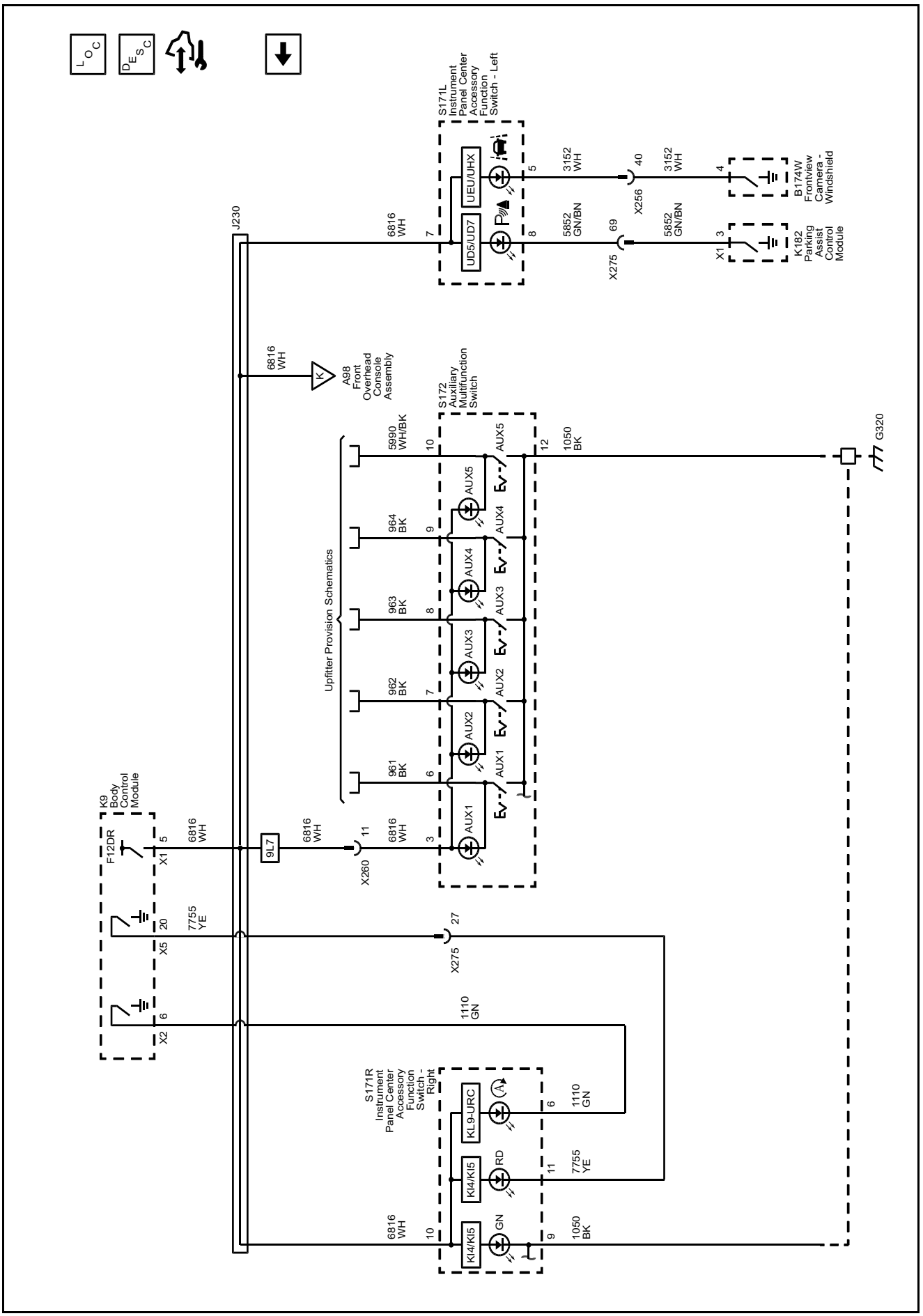
## Interior Lights Dimming Schematics (Backlights (2 of 2))



## Interior Lights Dimming Schematics (Front Overhead Console Assembly)



## Interior Lights Dimming Schematics (Indicators)



# Description and Operation

## Exterior Lighting Systems Description and Operation

The exterior lighting system consist of the following lamps:

- Automatic high beam assist
- Backup lamps
- Daytime running lamps
- Front fog lamps
- Hazard warning lamps
- Headlamps
- Park, tail, license, and marker lamps
- Stop lamps
- Turn signal lamps
- Trailer lighting

## Low Beam Headlamps

The headlamps may be turned ON in 3 different ways:

- When the headlamp switch is placed in the ON position, for normal operation
- When the headlamp switch is placed in the AUTO position, for automatic lamp control
- When the headlamp switch is placed in the AUTO position, with the windshield wipers ON in daylight conditions, after a 6 second delay

The BCM will also command the low beam headlamps ON during daylight conditions when the following conditions are met:

- Headlamp switch in the AUTO position
- Windshield wipers ON
- Vehicle in any gear but PARK

When the BCM commands the low beam headlamps ON, the vehicle operator will notice the interior backlighting for the instrument cluster and the various switches with backlighting control will dim to the level of brightness selected by the instrument panel dimmer switch.

The body control module (BCM) monitors three signal circuits from the headlamp switch. When the headlamp switch is in the AUTO position, all three signal circuits are open. When placed in the AUTO position, the BCM monitors inputs from the ambient light sensor to determine if headlamps are required or if daytime running lamps will be activated based on outside lighting conditions. When the headlamp switch is placed in the OFF position, the headlamp switch headlamps OFF signal circuit is grounded, indicating to the BCM that the exterior lamps should be turned OFF. With the headlamp switch in the PARK position, the headlamp switch park lamps ON signal circuit is grounded, indicating that the park lamps have been requested. When the headlamp switch is placed in the HEADLAMP position, both the headlamp switch park lamps ON signal circuit and the headlamp switch headlamps ON signal circuit are grounded. The BCM responds to the inputs by illuminating the park lamps and headlamps. When the low beam headlamps are requested, the BCM applies B+ to both low beam headlamp control circuits illuminating the low beam headlamps.

## High Beam Headlamps

When the low beam headlamps are ON and the turn signal/multifunction switch is placed in the high beam position, ground is applied to the BCM through the high beam signal circuit. The BCM responds to the high beam request by applying ground to the high beam relay control circuit which energizes the high beam relay. With the high beam relay energized, the switch contacts close allowing battery voltage to flow through the high beam fuse to the high beam control circuits to there respective high beam solenoid actuators located within the headlamp assemblies. With the left and right high beam solenoid actuators active, the solenoid shutters open in each headlamp assembly exposing the remaining portion of the headlamp that was covered by the shutters illuminating the high beams at full intensity.

## Automatic High Beam Assist (AHBA)

The automatic high beam assist (AHBA) system operates the high beam headlamps ON and OFF automatically when the system is activated and certain conditions are met. The AHBA system consists of a front camera module that detects light and is able to identify approaching vehicles on an even, straight road at a distance of greater than 0.4 km (0.25 mi). The front camera module analyzes light color, intensity, and movement. The AHBA system will turn OFF the high beam headlamps when approaching vehicle headlamps or preceding vehicle taillights are detected by the front camera module. AHBA can be deactivated when the headlamp dimmer switch is moved from the neutral position to the high beam or flash to pass positions. AHBA can be reactivated by operating the high beam select switch from the neutral position to the high beam position twice within 2 seconds.

### AHBA System Activation

- Vehicle ON
- Headlamp switch placed in the AUTO position
- Headlamp dimmer switch must be in the neutral position
- Outside lighting conditions must be dark
- Vehicle speed greater than 25 mph (40 km/h)

### AHBA System Operation

The following are conditions that the AHBA system will turn the high beam headlamps off during operation:

- The system detects approaching traffic headlamps
- The system detects preceding traffic tail lamps
- Ambient light level too high due to towns or twilight situations
- The vehicle’s speed drops below 13 mph (22 km/h)
- Delay

**Note:** AHBA may not operate properly if any of the following conditions exist:

- Approaching and preceding vehicles lamps are undetectable due to dirt, snow, road spray, smoke, fog, or any other airborne conditions.
- The front camera module is covered with ice, dirt, snow, haze, or is obstructed.
- The vehicle is being driven on winding or hilly road conditions which would make any on coming vehicle headlamps undetectable by the AHBA.

**AHBA System Deactivation**

- Manually operating the headlamp dimmer switch from neutral to high beam position
- AHBA is deactivated automatically when the front or rear fog lamps are turned ON

**AHBA System Indicator**

The status of the AHBA system is shown by a green indicator located on the instrument panel cluster. When AHBA is active, the indicator will be illuminated continuously. If the operator deactivates the AHBA system, the indicator will turn off.

## Daytime Running Lamps

The daytime running lamps will illuminate continuously when the following conditions are met:

- The ignition is in the RUN or CRANK position
- The shift lever is out of the PARK position for vehicles equipped with automatic transmissions or the parking brake is released for vehicles with manual transmissions
- The low and high beam headlamps are OFF

The ambient light sensor is used to monitor outside lighting conditions. The ambient light sensor provides a voltage signal that will vary between 0.2 and 4.9 volts depending on outside lighting conditions. The body control module (BCM) provides a 5 V reference signal to the ambient light sensor and the HVAC control module provides a low reference ground. The BCM monitors the ambient light sensor signal circuit to determine if outside lighting conditions are correct for either daytime running lights or automatic lamp control when the headlamp switch is in the AUTO position. In daylight conditions the BCM applies B+ to both daytime running lamp control circuits to the left and right multifunction light emitting diode (LED) control modules located in each headlamp assembly. The multifunction LED control modules respond the to the B+ input from the BCM by illuminating the left and right daytime running lamp LED's. Any function or condition that turns on the low beam headlamps will cancel daytime running lamps operation.

## Flash to Pass

When the turn signal/multifunction switch is momentarily placed in the flash to pass position, ground is applied to the turn signal/multifunction switch. The turn signal/multifunction switch applies ground to the body control module (BCM) through the flash to pass switch signal circuit. The BCM responds to the flash to pass request by applying ground to the high beam relay control circuit. This energizes the high beam relay, closing the switch side contacts of the high beam relay, applying battery voltage to the 3 pin high beam fuse. Battery voltage is applied from the high beam fuse through the high beam control circuit to the high beam headlamp assemblies. This causes the high beam headlamps to illuminate at full brightness momentarily.

## Front Fog Lamps

The front fog lamp relay is supplied with battery voltage at all times. The front fog lamp switch signal circuit is grounded momentarily by pressing the front fog lamp switch. The body control module (BCM) energizes the front fog lamp relay by applying ground to the front fog lamp relay control circuit. When the front fog lamp relay is energized, the relay switch contacts close and battery voltage is applied through the front fog lamp fuse to the front fog lamp supply voltage circuit which illuminates the front fog lamps.

## Hazard Lamps

The hazard flashers may be activated in any power mode. The hazard switch signal circuit is momentarily grounded when the hazard switch is pressed. The body control module (BCM) responds to the hazard switch signal input by supplying battery voltage to all four turn signal lamps in an ON and OFF duty cycle. When the hazard switch is activated, the BCM sends a serial data message to the instrument panel cluster requesting both turn signal indicators to be cycled ON and OFF.

The instrument panel dimmer switch controls the brightness of the interior backlighting components. When the instrument panel dimmer switch is placed in a desired brightness position, the body control module (BCM) receives a signal from the instrument panel dimmer switch and responds by applying a pulse width modulated voltage to the hazard switch light emitting diode (LED) backlighting control circuit illuminating the LED to the desired level of brightness.

## Park, Tail, and License Lamps

When the headlamp switch is placed in the HEAD or PARK position, ground is applied to the park lamp switch ON signal circuit to the body control module (BCM). The BCM responds by applying voltage to the park lamps, tail lamps, and license lamps control circuits illuminating the park, tail, and license lamps.

## Stop Lamps

The brake pedal position sensor is used to sense the action of the driver application of the brake pedal. The brake pedal position sensor provides an analog voltage signal that will increase as the brake pedal is applied. The body control module (BCM) provides a low reference signal and a 5 V reference voltage to the brake pedal position sensor. When the variable signal reaches a voltage threshold indicating the brakes have been applied, the BCM will apply battery voltage to the left and right stop lamp control circuits as well as the center high mounted stop lamp control circuit illuminating the left and right stop lamps and the center high mounted stop lamp.

## Turn Signal Lamps

Ground is applied at all times to the turn signal/ multifunction switch. The turn signal lamps may only be activated with the ignition switch in the ON or START

positions. When the turn signal/multifunction switch is placed in either the TURN RIGHT or TURN LEFT position, ground is applied to the body control module (BCM) through either the right turn or left turn signal switch signal circuit. The BCM responds to the turn signal switch input by applying a pulsating voltage to the front and rear turn signal lamps through there respective control circuits. When a turn signal request is received by the BCM, a serial data message is sent to the instrument cluster requesting the respective turn signal indicator be pulsed ON and OFF. Vehicles equipped with LED turn signals use an additional turn outage detection circuit for detecting when a LED turn signal goes out. This circuit is necessary due to the low current draw of LEDs. The turn outage detection circuit allows the module to alert the driver of the vehicle that a turn signal is out.

## Backup Lamps

### Automatic Transmission

With the engine ON and the transmission in the REVERSE position, the transmission control module (TCM) sends a serial data message to the body control module (BCM). The message indicates that the gear selector is in the REVERSE position. The BCM applies battery voltage to the backup lamps control circuit illuminating the backup lamps. Once the driver moves the gear selector out of the REVERSE position, a message is sent by the TCM via serial data requesting the BCM to remove battery voltage from the backup lamps control circuit. The engine must be ON for the backup lamps to operate.

### Manual Transmission

The engine control module (ECM) provides a signal circuit to the backup lamp switch which is permanently grounded. With the engine running and the transmission in the reverse position, the backup lamp switch signal circuit is pulled low and the ECM responds by sending a serial data message to the body control module (BCM). The message indicates that the gear selector is in the reverse position. The BCM energizes the backup lamp relay by applying battery voltage to the backup lamp relay control circuit. When the backup lamp relay is energized, the relay switch contacts close and battery voltage is applied through the backup lamp fuses to the backup lamp control circuits which illuminates the backup lamps. Once the driver moves the gear selector out of the reverse position, a message is sent by the ECM via serial data requesting the BCM to remove battery voltage from the backup lamp relay control circuit. The engine must be running for the backup lamps to operate.

## Exterior Courtesy Lighting

### Cargo Lamps

The cargo lamps are controlled by a cargo lamp relay and a dedicated cargo lamp control circuit from the body control module (BCM). The cargo lamp relay is supplied with ground at all times. The cargo lamp switch signal circuit is grounded momentarily by pressing the cargo lamp switch located within the headlamp switch. The body control module (BCM) responds by energizing the cargo lamp relay by applying battery voltage to the cargo lamp relay control circuit as well as the dedicated cargo lamp control circuit. When the cargo lamp relay is energized, the relay switch contacts close and battery voltage is applied through the cargo lamp fuse to the cargo lamp supply voltage circuit which illuminates the cargo lamps. Cargo lamps are located in the center high mounted stop lamp assembly, truck bed, and tailgate handle when equipped.

### Forward Flood Lamps

The flood lamp switch signal circuit is grounded momentarily by pressing the flood lamp switch located within the headlamp switch. The body control module (BCM) responds by applying battery voltage to the exterior flood lamp control circuits which illuminates the forward exterior flood lamps located within the exterior mirror assemblies. If the exterior flood lamps are left on with the vehicle off, the lights will shut off after approximately 10 minutes to prevent total battery discharge. The exterior flood lamps will immediately turn off if the vehicle leaves the parked position.

### Lower Flood Lamps

The body control module (BCM) supplies battery voltage to the exterior LED lighting located under each outside rearview mirror for approach lighting. When the keyless entry transmitter is operated to either the lock or unlock functions the LED lighting located under each outside rearview mirror are commanded ON for approach lighting.

## Trailer Lighting (With U1D)

The trailer lighting control module is supplied with battery voltage as well as ignition voltage and is permanently grounded. For lighting operation, the trailer lighting control module receives serial data messages from the body control module (BCM) indicating what lamps have been activated on the vehicle. The trailer lighting control module responds by applying voltage to the appropriate control circuits for the requested lamps illuminating the lamps on the attached trailer. The trailer lighting control module constantly monitors for trailer connection status, trailer lighting faults, and trailer theft deterrent purposes, this is accomplished through the lighting circuits of the trailer to determine if a trailer is connected. With the key OFF, the trailer lighting control module will periodically pulse the lighting circuits of the trailer to verify it is still connected. The lights on the trailer may flash at different intervals with the key OFF depending on which type of lights the trailer is built with. If a trailer is disconnected with the key ON, the vehicle will display a trailer disconnected message until a trailer is reconnected or the ignition is cycled.

### Backup Lamps

With the engine running and the transmission in the reverse position, the transmission control module (TCM) sends a serial data message that indicates the gear selector is in the reverse position. The Trailer Lighting Control Module responds by applying voltage to the X88 Trailer Connector on the Trailer Backup Lamps control circuit when a trailer is connected. Once the driver moves the gear selector out of the reverse position, a message is sent by the TCM via serial data

requesting the Trailer Lighting Control Module to remove battery voltage from the backup lamp control circuit.

**Park Lamps**

When the headlamp switch is placed in the HEAD or PARK position, ground is applied to the park lamp switch ON signal circuit to the body control module (BCM). The BCM responds by sending a serial data message to the Trailer Lighting Control Module. The Trailer Lighting Control Module responds by applying voltage to the X88 Trailer Connector on the Trailer Park Lamp control circuit when a trailer is connected.

**Stop Lamps**

The brake pedal position sensor is used to sense the action of the driver application of the brake pedal. The brake pedal position sensor provides an analog voltage signal that will increase as the brake pedal is applied. The body control module (BCM) provides a low reference signal and a 5 V reference voltage to the brake pedal position sensor. When the variable signal reaches a voltage threshold indicating the brakes have been applied, the BCM energizes the stop lamp relay circuit by applying voltage to the stop lamp relay control circuit. The Trailer Lighting Control Module senses the voltage on the stop lamp relay circuit and responds by applying voltage to the X88 Trailer Connector on the left and right Trailer Stop/Turn Signal Lamp control circuits when a trailer is connected.

**Turn Signal Lamps**

Ground is applied at all times to the turn signal/ multifunction switch. The turn signal lamps may only be activated with the ignition switch in the ON or START positions. When the turn signal/multifunction switch is placed in either the TURN RIGHT or TURN LEFT position, ground is applied to the body control module (BCM) through either the right turn or left turn signal switch signal circuit. The BCM responds by sending a serial data message to the Trailer Lighting Control Module. The Trailer Lighting Control Module responds by applying voltage to the X88 Trailer Connector on either the left or right Trailer Stop/Turn Signal Lamp control circuits when a trailer is connected.

## Trailer Lighting (Without U1D)

**Backup Lamps**

For backup lamp operation, the backup lamp relay is supplied with battery voltage at all times. With the engine running and the transmission in the reverse position, the transmission control module (TCM) sends a serial data message to the body control module (BCM). The message indicates that the gear selector is in the reverse position. The BCM energizes the backup lamp relay by applying battery voltage to the backup lamp relay control circuit. When the backup lamp relay is energized, the relay switch contacts close and battery voltage is applied through the backup lamp fuses to the backup lamp control circuits which illuminates the backup lamps. Once the driver moves the gear selector out of the reverse position, a message is sent by the TCM via serial data requesting the BCM to remove battery voltage from the backup lamp relay control circuit.

**Park Lamps**

When the headlamp switch is placed in the HEAD or PARK position, ground is applied to the park lamp switch ON signal circuit to the body control module (BCM). The BCM responds by applying voltage to the park lamps, tail lamps, license lamps, and trailer park lamps control circuits illuminating the park, tail, license, and trailer park lamps.

**Stop Lamps**

For stop lamp operation, the left and right trailer stop/ turn signal lamp relay's are supplied with battery voltage at all times. The brake pedal position sensor is used to sense the action of the driver application of the brake pedal. The brake pedal position sensor provides an analog voltage signal that will increase as the brake pedal is applied. The body control module (BCM) provides a low reference signal and a 5 V reference voltage to the brake pedal position sensor. When the variable signal reaches a voltage threshold indicating the brakes have been applied, the BCM energizes the left and right trailer stop/turn signal lamp relay's by applying voltage to the left and right stop lamp relay control circuits. With the left and right trailer stop/turn signal lamp relay's energized, the relay switch contacts close and battery voltage is applied through the left and right trailer stop/turn signal fuse's to the trailer stop lamp control circuits which illuminates the trailer stop lamps.

**Turn Signal Lamps**

For turn signal lamp operation, the left and right trailer stop/turn signal lamp relay's are supplied with battery voltage at all times. Ground is applied at all times to the turn signal/multifunction switch. The turn signal lamps may only be activated with the ignition switch in the ON or START positions. When the turn signal/multifunction switch is placed in either the TURN RIGHT or TURN LEFT position, ground is applied to the body control module (BCM) through either the right turn or left turn signal switch signal circuit. The BCM responds to the turn signal switch input by applying a pulsating voltage to the left and right trailer stop/turn signal lamp relay control circuits energizing the relay's in an ON and OFF cycle. With the left and right trailer stop/turn signal lamp relay's energized, the relay switch contacts cycle ON and OFF applying battery voltage through the left and right trailer stop/turn signal fuse's to the trailer turn signal lamp control circuits which illuminates the trailer turn signal lamps in an ON and OFF cycle.

## Battery Run Down Protection/ Inadvertent Power

To provide battery run down protection, the exterior lamps will be deactivated automatically under certain conditions. The BCM monitors the state of the headlamp switch. If the park or headlamp switch is ON when the ignition switch is placed in either the CRANK or RUN position and then placed in the OFF position, the BCM initiates a 10 minute timer. At the end of the 10 minutes, the BCM will turn off the control power output to the park lamp controls as well as the headlamp relay coils, deactivating the exterior lamps. This feature will be cancelled if any power mode other than OFF becomes active. The BCM will disable battery run down protection if any of the following conditions

exist. The park or headlamp switch is placed in the ON to OFF position, and back to the ON position during battery run down protection. The BCM determined that the park or headlamp switch was not active when the ignition was turned OFF.

# Interior Lighting Systems Description and Operation

## Interior Lamps

The interior lighting system consist of two groups. This first group includes lamps that may not be dimmed.

- Dome lamps
- Center console compartment lamps
- Reading lamps
- Sunshade mirror lamps

## Dome Lamps

The dome lamp switch has 3 positions: DOOR, OFF, and ON. The ON position provides a ground for continuous operation and the dome lamp will remain illuminated until the switch is placed in either the DOOR or OFF position. When in the DOOR position, the dome lamp operation is controlled by the body control module (BCM). When any door is opened, the door ajar switch contacts close and the BCM receives a door-open input. The BCM illuminates the dome lamp when any door is opened or a door lock/unlock request is activated with the key fob. After all doors have been closed, the dome lamp will remain illuminated approximately 3 seconds after the last door closes. When the driver places the dome lamp switch in the OFF position, the dome lamp will be disabled. In the event that the dome lamp were to remain illuminated for more than 10 minutes with the ignition switch in the OFF position and no doors opened, the BCM will deactivate the dome lamp control circuit to prevent total battery discharge. The dome lamps will turn OFF using the theater dimming feature when controlled by the BCM.

## Center Console Compartment Lamp

The inadvertent power supply voltage circuit from the BCM provides battery voltage to the center console compartment lamp. When the center console is opened, the center console compartment lamp switch contacts close providing a path to ground and the center console compartment lamp illuminates. If the operator inadvertently leaves the center console compartment door open with the center console compartment lamp ON, the BCM will turn all interior lamps OFF after 10 minutes has passed since any switch activation has been detected by the BCM.

## Reading Lamps

The inadvertent power supply voltage circuit from the BCM provides battery positive voltage to each reading lamp. When a reading lamp switch is activated, the switch contacts close providing a path to ground and the reading lamp illuminates. If the operator inadvertently leaves a reading lamp ON, the BCM will turn all interior lamps OFF after 10 minutes has passed since any switch activation has been detected by the BCM.

## Sunshade Mirror Lamps

The inadvertent power supply voltage circuit from the BCM provides battery voltage to each set of sunshade mirror lamps. When the sunshade mirror cover is opened, a switch closes providing ground and the sunshade lamps illuminate. If the operator inadvertently leaves a sunshade mirror cover open with the lamps ON, the BCM will turn all interior lamps OFF after 10 minutes has passed since any switch activation has been detected by the BCM.

## Keyless Entry Interior Illumination

When the operator uses the keyless entry transmitter in order to unlock the doors, the BCM receives a door-unlock signal. The BCM must receive inputs from various systems that indicate that the ignition switch is OFF, the courtesy lamp switch is OFF, and all doors are closed before the BCM will activate the interior lamps. After all doors have been closed, the courtesy lamps will turn OFF immediately if the ignition switch is turned to the ON position, the door locks are LOCKED, or approximately 20 seconds after the last door closes. The BCM will turn off the courtesy lamps through the theater dimming feature. The BCM keeps the courtesy lamps on for 40 seconds after an alarm event is completed.

## Interior Lamps Dimming

The second group includes lamps which may be dimmed. This group may use a combination of light emitting diodes (LED), incandescent lamps, and pulse width modulation (PWM) illumination.

- Dome/reading lamps – front
- Dome/reading lamps – rear
- Door lock switch – driver
- Door lock switch – passenger
- Garage door opener switch
- Headlamp switch
- HVAC control head assembly
- Multifunction switch – instrument panel
- Outside rearview mirror switch
- Park brake switch
- Radio
- Roof beacon switch
- Seat memory switch – driver
- Sliding rear window switch
- Steering wheel control switch – left
- Steering wheel control switch – right
- Sun roof switch
- Sun roof tilt switch
- Transfer case shift control switch
- Trailer brake control switch
- Window switch – driver
- Window switch – passenger

With the headlamp switch in the PARK or HEAD position, the park lamp switch signal circuit provides an input to the body control module (BCM). The BCM responds by applying voltage to the park lamps as well as the backlight dimming control circuits illuminating all components with interior backlighting. All interior

backlighting turns ON at the dimming level indicated by the instrument panel dimmer switch. The instrument panel dimmer switch is a momentary type switch and utilizes a resistor ladder to increase and decrease the brightness of the interior backlighting components. The instrument panel dimmer switch provides a voltage signal to the BCM that will increase as the brightness of the lights are increased and decrease as the brightness of the lights are decreased. The BCM provides a low reference signal and a B+ circuit to the instrument panel dimmer switch. When the instrument panel dimmer switch is held in the desired position, the dimmed voltage setting is applied from the instrument panel dimmer switch through the instrument panel dimmer switch signal circuit to the BCM. The BCM interprets the signal and applies a pulse width modulated voltage through the backlighting control circuits illuminating the interior backlighting to the requested level of brightness.

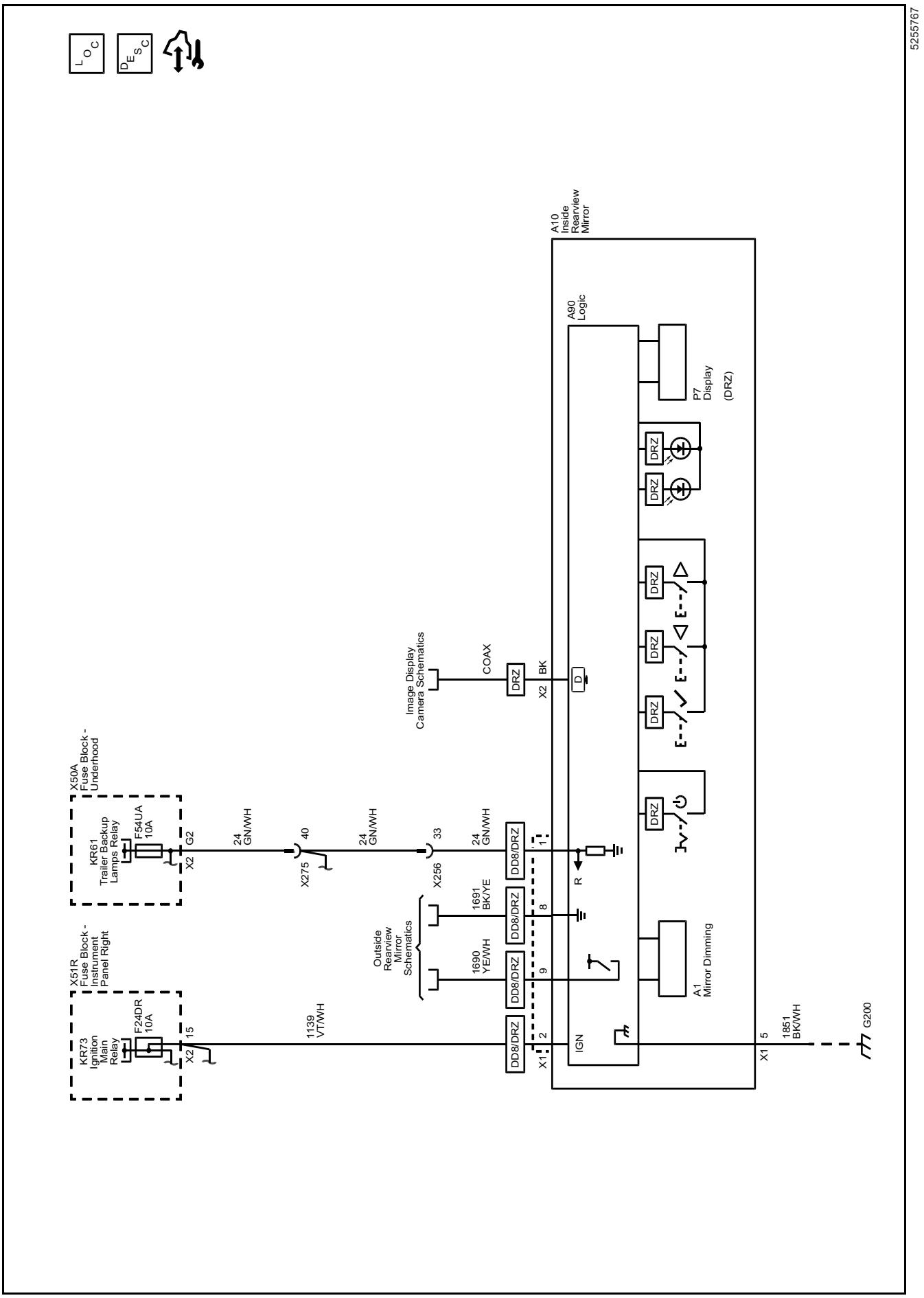
## Battery Rundown Protection/ Inadvertent Power

The BCM inadvertent power supply voltage circuit provides battery voltage to all of the interior courtesy lamps. In the event that any of these lamps were to remain illuminated for a period of more than 10 minutes with the ignition switch in the OFF position, the BCM will deactivate the inadvertent power supply voltage circuit to prevent total battery discharge. If the ignition switch is turned to any position other than OFF, or if a lamp switch is activated during this 10 minute period, the timer resets for another 10 minutes.

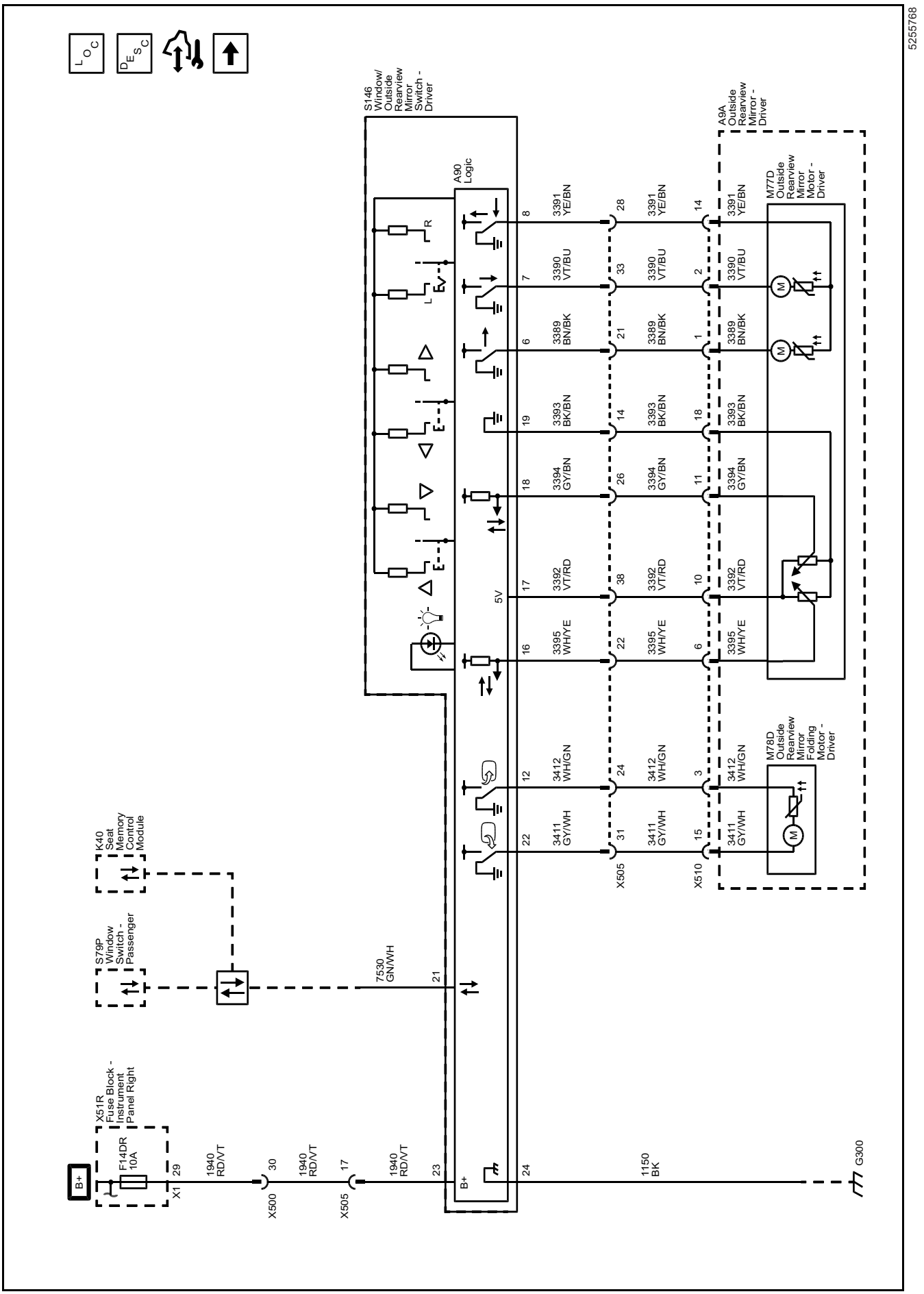
# Mirrors

## Schematic and Routing Diagrams

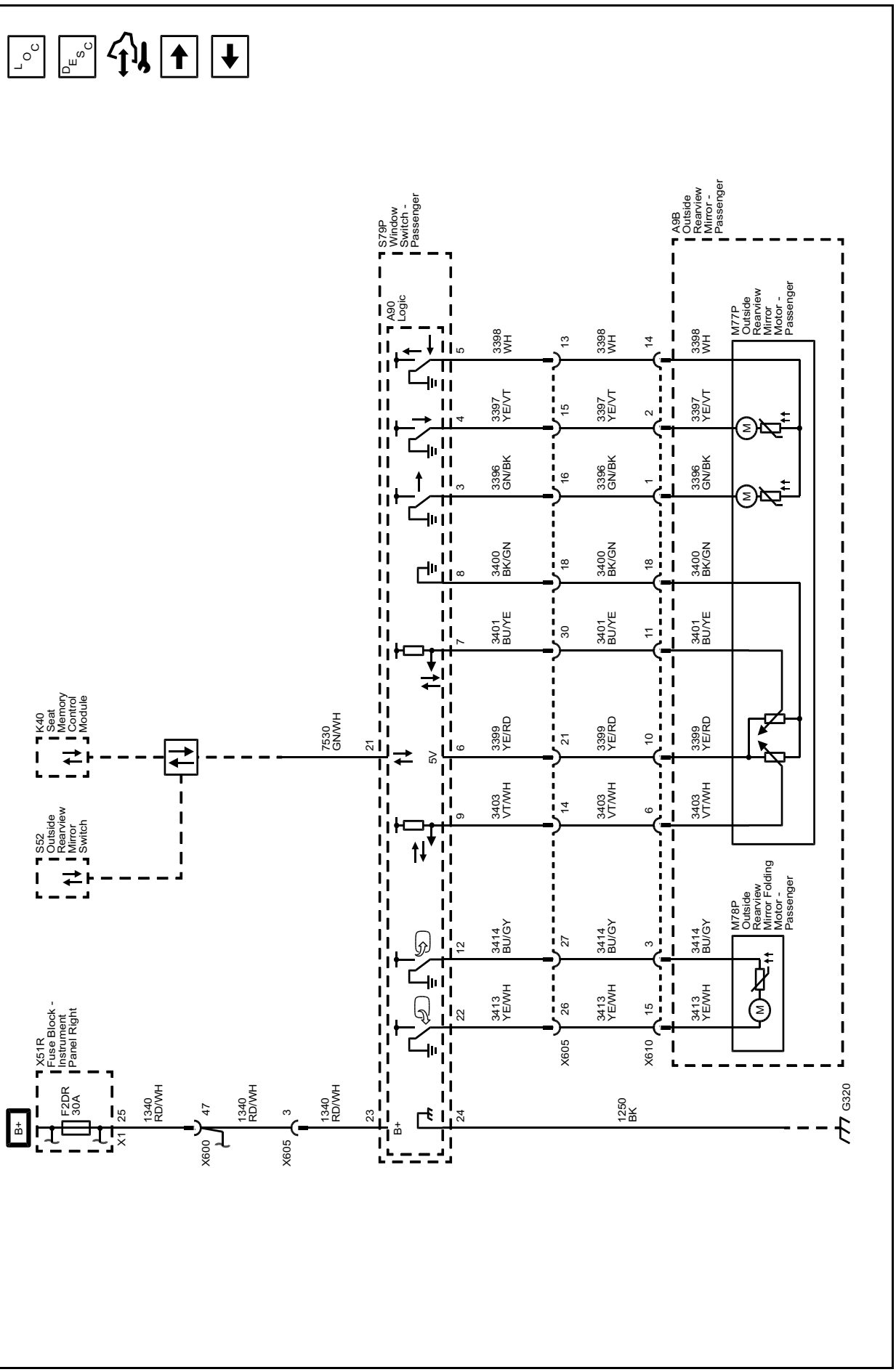
## Inside Rearview Mirror Schematics (Inside Rearview Mirror)



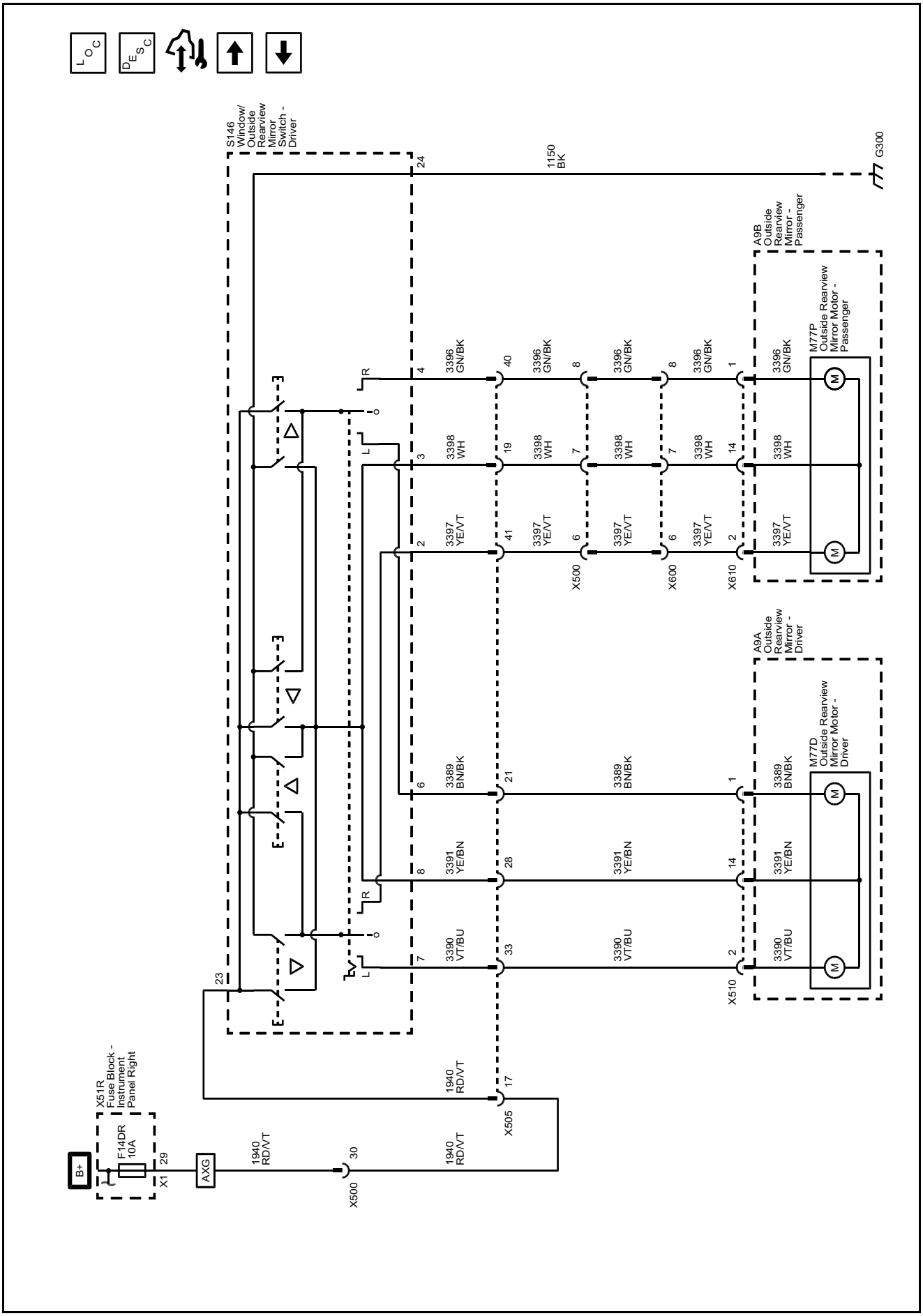
## Outside Rearview Mirror Schematics (Controls and Driver (A45))



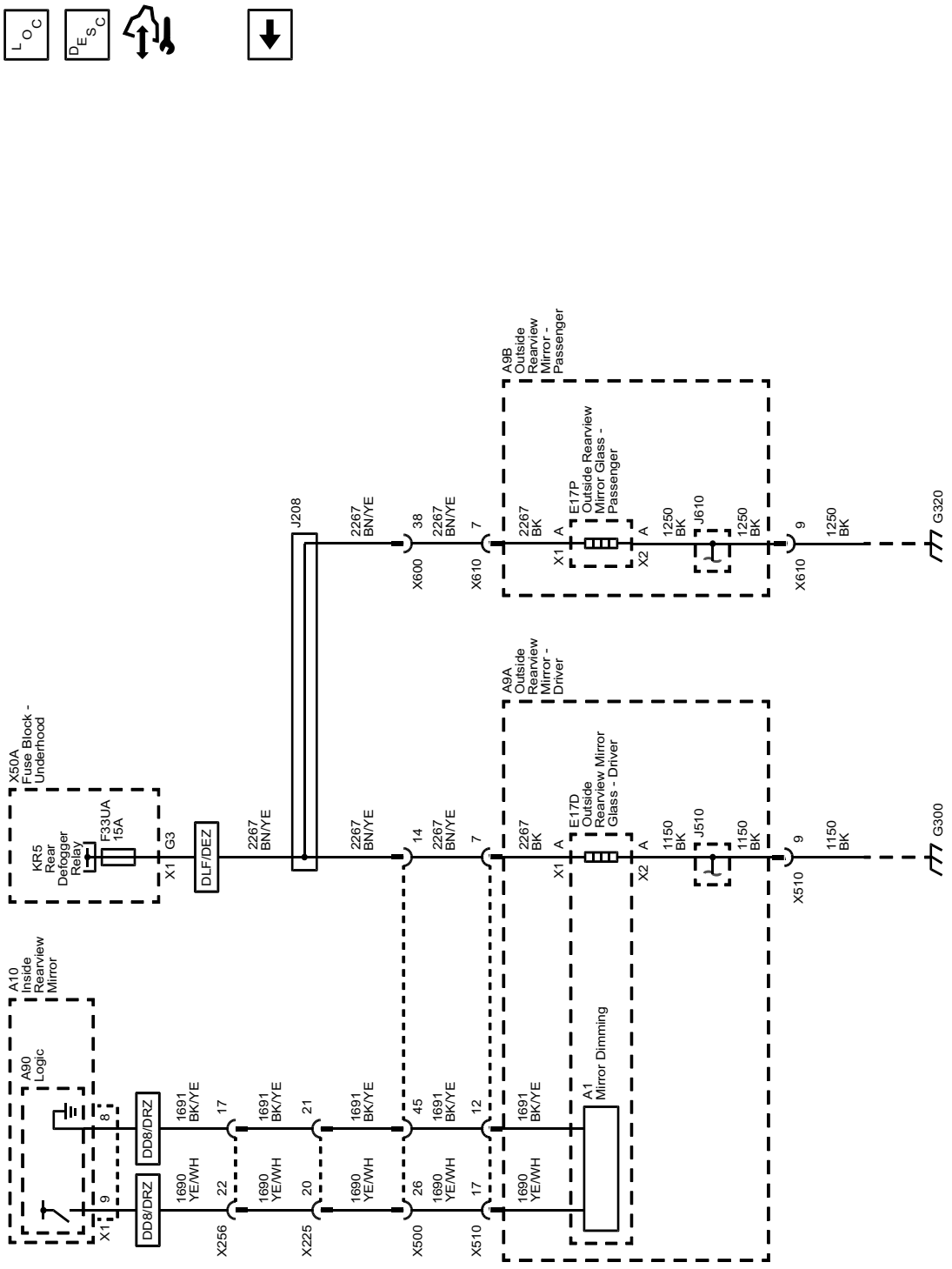
## Outside Rearview Mirror Schematics (Passenger (A45))



## Outside Rearview Mirror Schematics (Position (AXG-A45))



## Outside Rearview Mirror Schematics (Dimming (DD8/DRZ) and Heating (DLF/DEZ))



# Description and Operation

## Automatic Day-Night Mirror Description and Operation

### Inside Rearview Mirror with the Automatic Day-Night Feature System Operation

The inside rearview mirror uses 2 photocell sensors. One sensor is the headlight sensor, located on the face side of the mirror. The headlight sensor is used to determine light conditions present at the mirror face. The other sensor is the ambient light sensor, located on the rear of the mirror or windshield side. The ambient light sensor is used to determine the exterior light conditions. With a low exterior light condition detected, and a high light condition from behind the car, at the headlight sensor, the inside rearview mirror will automatically darken the face of the mirror.

In the daytime, the mirror is in a normal state because of the high exterior light condition that is indicated by the ambient light sensor. With the gear selector lever in the REVERSE position and the engine running, backup lamp supply voltage is supplied as an input to the inside rearview mirror. The mirror monitors this input to disable the automatic day-night feature. This allows the driver to see objects in the mirror clearly when backing up, even during the night.

### Driver Outside Rearview Mirror with Automatic Day-Night System Operation (If Equipped)

The automatic day-night feature of the driver outside rearview mirror is controlled by the inside rearview mirror. The inside rearview mirror supplies control and low reference to the driver outside rearview mirror. At night, with the automatic day-night feature enabled, the driver outside rearview mirror will automatically darken with the inside rearview mirror to reduce glare from headlamps behind the vehicle.

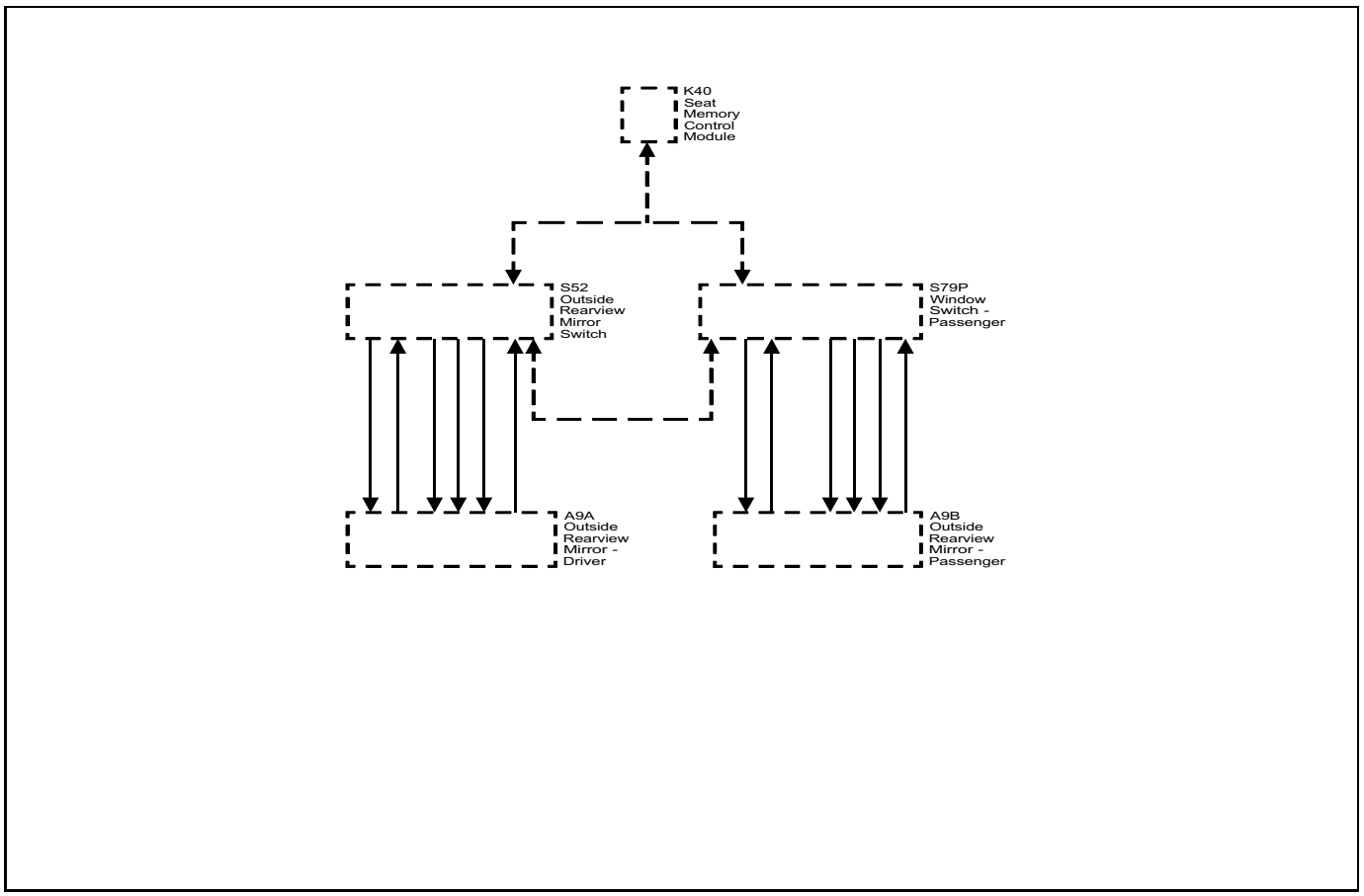
## Outside Mirror Description and Operation (With A45)

### Power Mirror System Components

The power mirror system consists of the following components:

- Memory Seat Control Module
- Outside Rearview Mirror Switch
- Passenger Window Switch
- Driver Outside Rearview Mirror
- Passenger Outside Rearview Mirror

## Power Mirrors with A45 Block Diagram




3520568

## Power Mirror System Controls

The outside mirror switch and passenger window switch are on a serial data circuit with the memory seat control module as the master. The mirror select and directional control switches are inputs to the memory seat module through the serial data circuit. When the memory seat module receives switch inputs from the outside mirror switch, mirror output commands are sent to the appropriate switch through the serial data circuit. The outside mirror switch and passenger window switch control the left and right outside rear view mirrors through bi-directional motor control circuits. The motor control circuits are floating while in an inactive state and the switches will apply power and ground to the control circuits as necessary to move the mirror in the commanded direction.

Mirror position is determined by both horizontal and vertical position sensors in each of the power mirrors. The outside mirror switch and passenger window switch supply a 5 V reference, low reference, and horizontal and vertical position signal circuits to these sensors. The signal circuits are referenced from 5 V by the switches and the signal circuit voltage levels represent the mirror positions. The mirror positions are sent to the memory seat module through the serial data circuit where they are stored for memory mirror operation. When the memory seat module receives a memory recall command, the memory seat module will send the go to position commands to the outside mirror switch and passenger window switch. The switches will then drive the appropriate mirror motors to the commanded position sensor settings.

## Mirror Folding

The outside rearview mirror switch sends the mirror select and mirror fold/unfold inputs to the passenger window switch and the memory seat control module through LIN data. When the memory seat control module receives a fold/unfold signal it will send a fold/unfold command to the outside rearview mirror switch and the passenger window switch. The outside mirrors will fold or unfold depending on their current state. The outside rearview mirror switch and the passenger window switch control the fold/unfold motors through bi-directional control circuits. If equipped with auto folding mirrors, the BCM receives the input of the lock/unlock button being held on the transmitter and sends the signal to the memory seat module through serial data to command the mirrors to fold/unfold.

## Heated Mirrors

The heated mirrors are controlled through the rear defog relay. Whenever the rear window defogger is turned on battery voltage is supplied to the mirror heater elements through the left and right mirror heater element control circuits.

# Outside Mirror Description and Operation (Without A45)

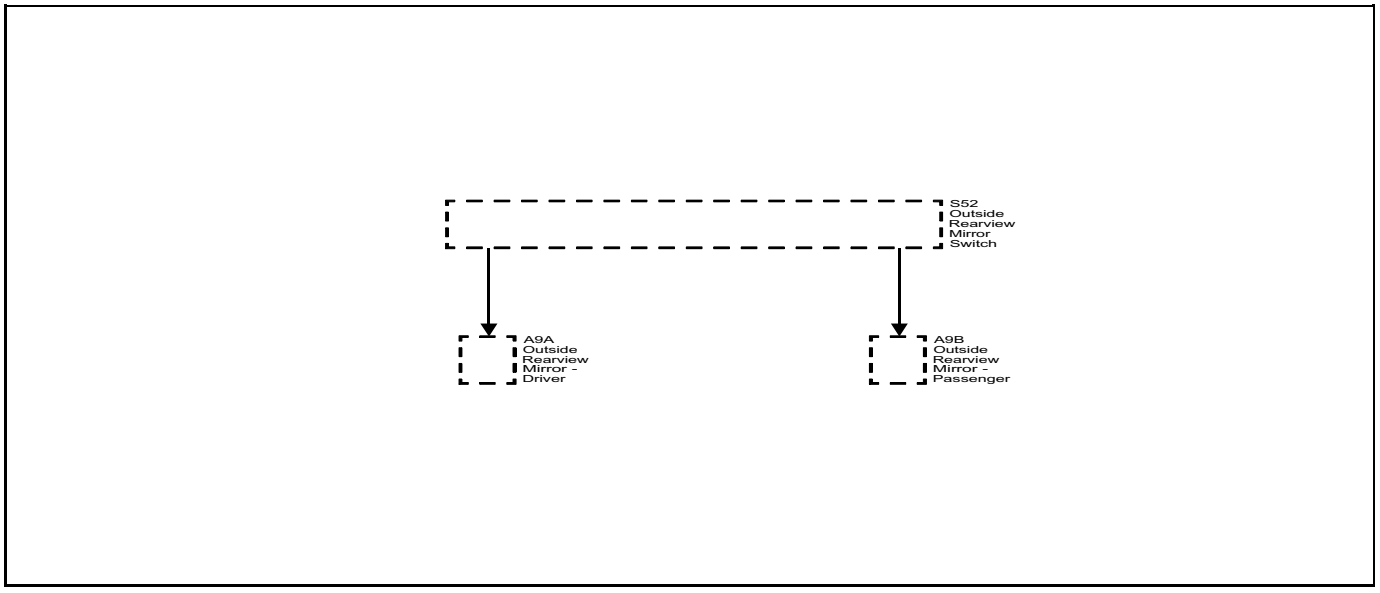
## Power Mirror System Components

The power mirror system consists of the following components:

- Mirror direction switch — Controls the left, right, up and down movements of the mirrors
- Mirror select switch — Allows the operator to select the mirror to be moved
- Left outside mirror — Contains both the horizontal and vertical mirror motors
- Right outside mirror — Contains both the horizontal and vertical mirror motors

Each of the outside power mirrors contains 2 motors. The up-down motor operates the vertical directions and the left-right motor operates the horizontal directions. Each of the power mirror motors are internally circuit breaker protected.

**Power Mirrors Without A45 Block Diagram**




3270441

## Power Mirror System Controls

The outside mirror switch incorporates a mirror select switch and a 4 position mirror direction switch.

The mirror select switch allows the driver to select the mirror to be moved by turning the switch to L position enabling the left outside mirror or turning the switch to R position enabling the right outside mirror.

The mirror direction switch is a 4 position switch that allows the operator to move the selected mirror up, down, left or right.

## Power Mirror System Operation

The outside mirror switch receives power through the battery positive voltage circuit from the underhood fuse block. The outside mirror switch also receives a constant ground.

The 4 positions of the direction switch have multiple switch contacts. When not in use, the directional contacts are isolated from any circuit. Each of the contacts are connected to opposing sides of the appropriate mirror motors through the selector switch. The selector switch interrupts or completes these circuits depending on the position of the selector switch, L or R.

If the mirror select switch is placed in the L position and the up switch is pressed, battery voltage will be supplied to the driver outside mirror vertical motor through the driver mirror motor up control circuit and return to the mirror switch through the driver mirror motor left/down control circuit, then to ground and the mirror will move up. If the down switch is pressed, the driver mirror motor left/down control circuit supplies battery voltage and the driver mirror motor up control circuit completes the path to the mirror switch, then to ground and the mirror will move down.

The remainder of the mirror functions operate in the same manner as described above. Placing the mirror control switch in opposing positions, left/right or up/

down, will reverse the voltage polarity to the mirror motor, utilizing the same circuits and the mirror will move accordingly.

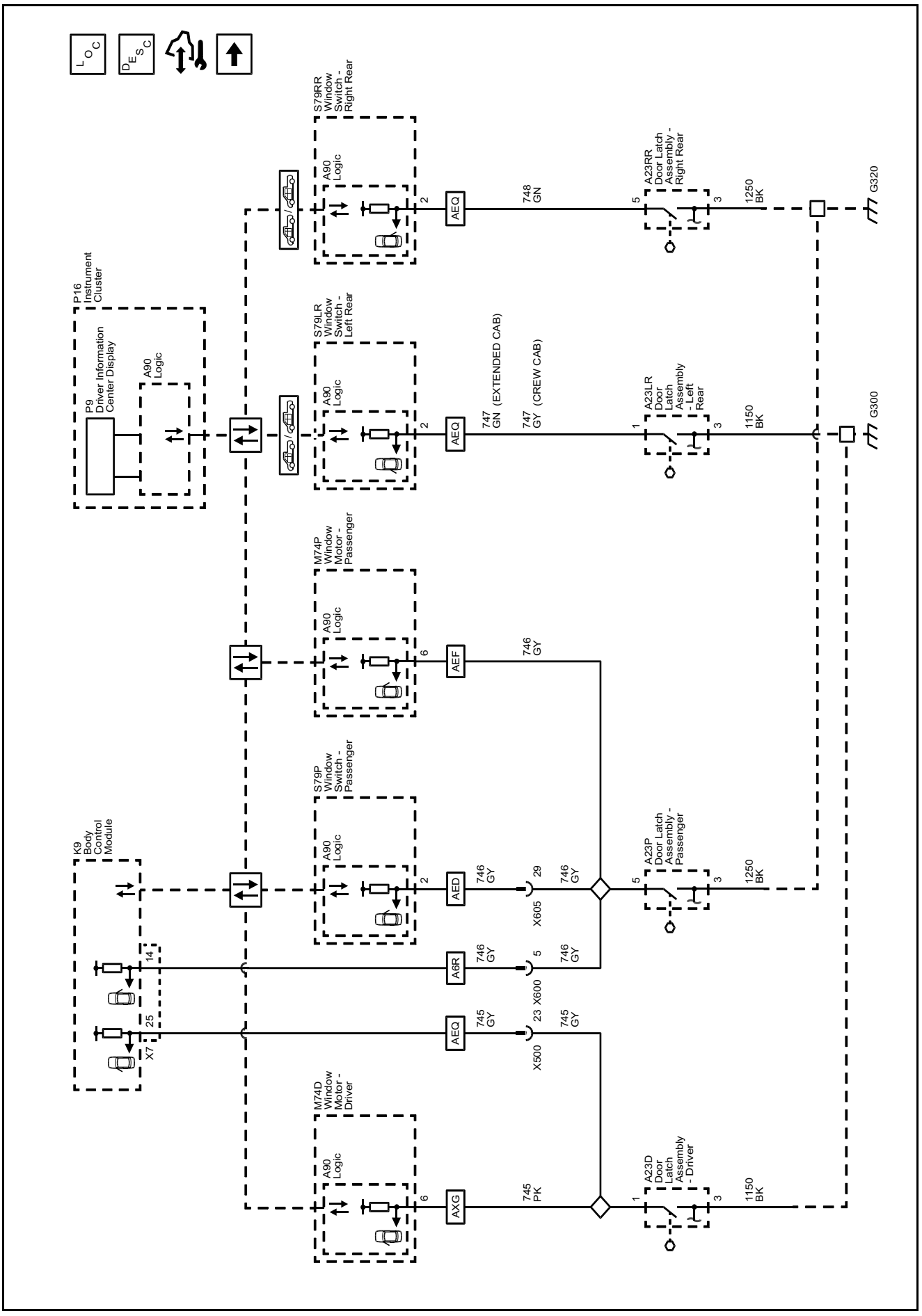
## Heated Mirrors

The heated mirrors are controlled through the rear defog relay. Whenever the rear window defogger is turned ON, battery voltage is supplied to the mirror heater elements through the left and right mirror heater element control circuits.

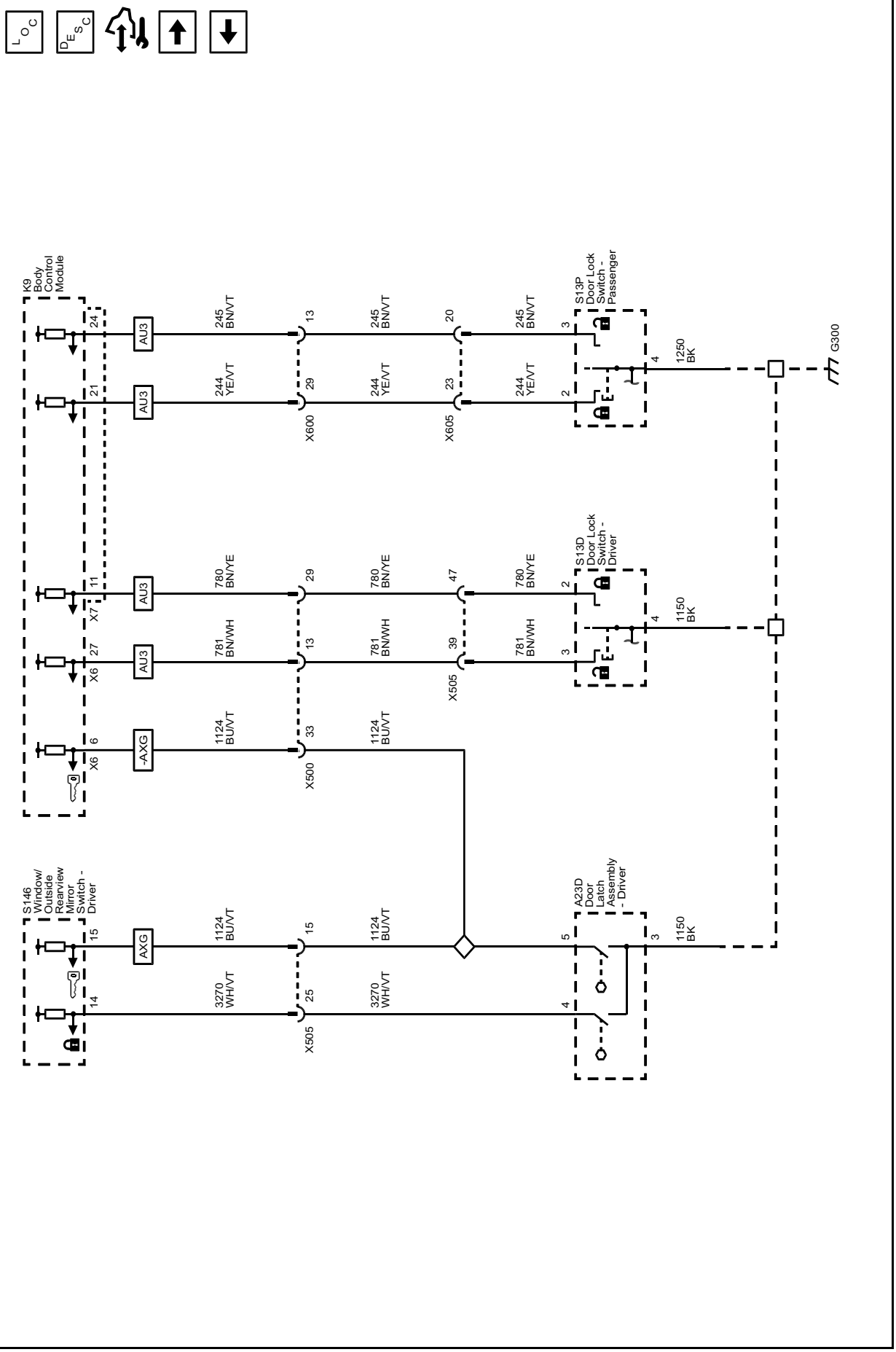
# Vehicle Access

## Schematic and Routing Diagrams

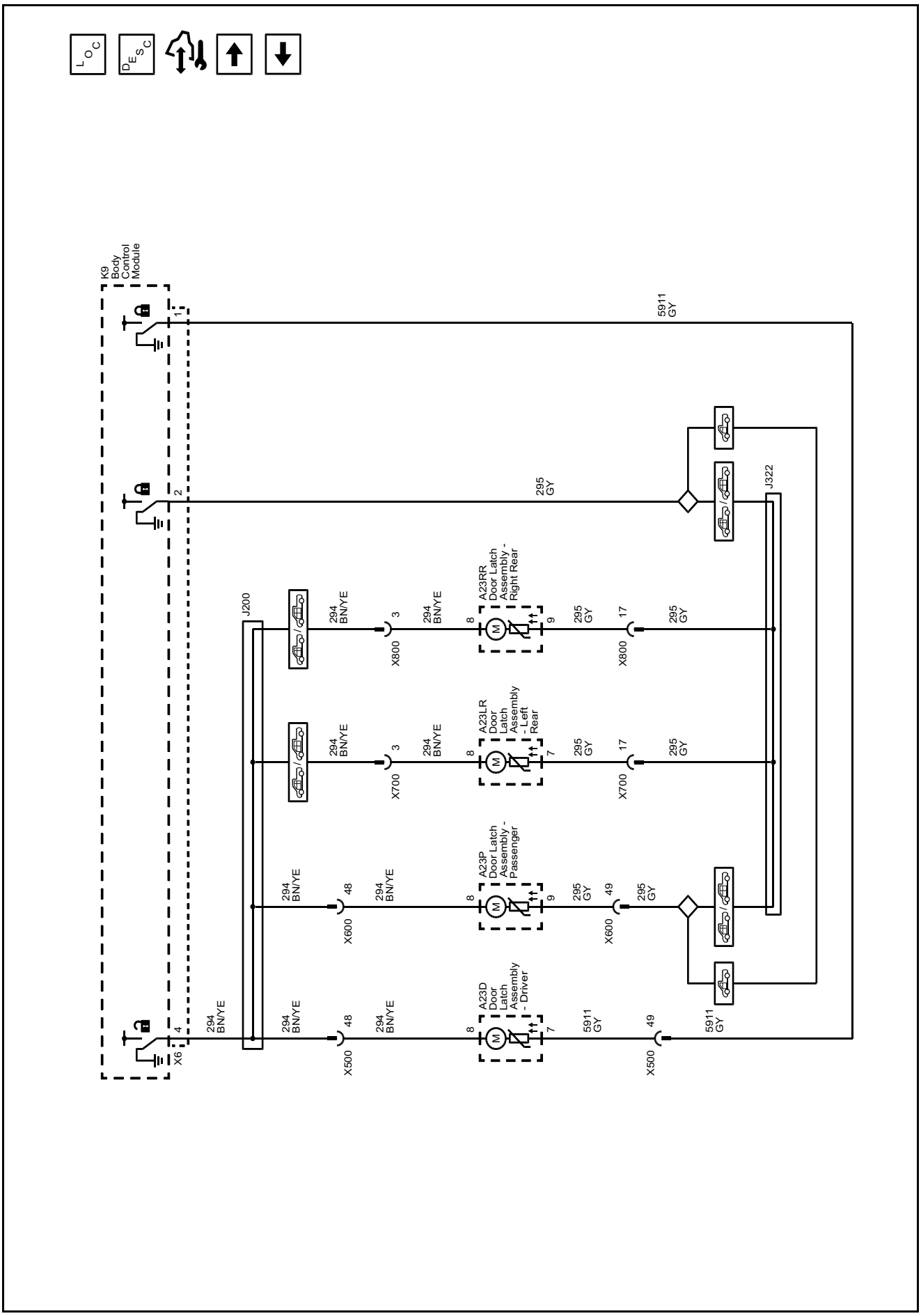
## Door Lock/Indicator Schematics (Ajar Switches)



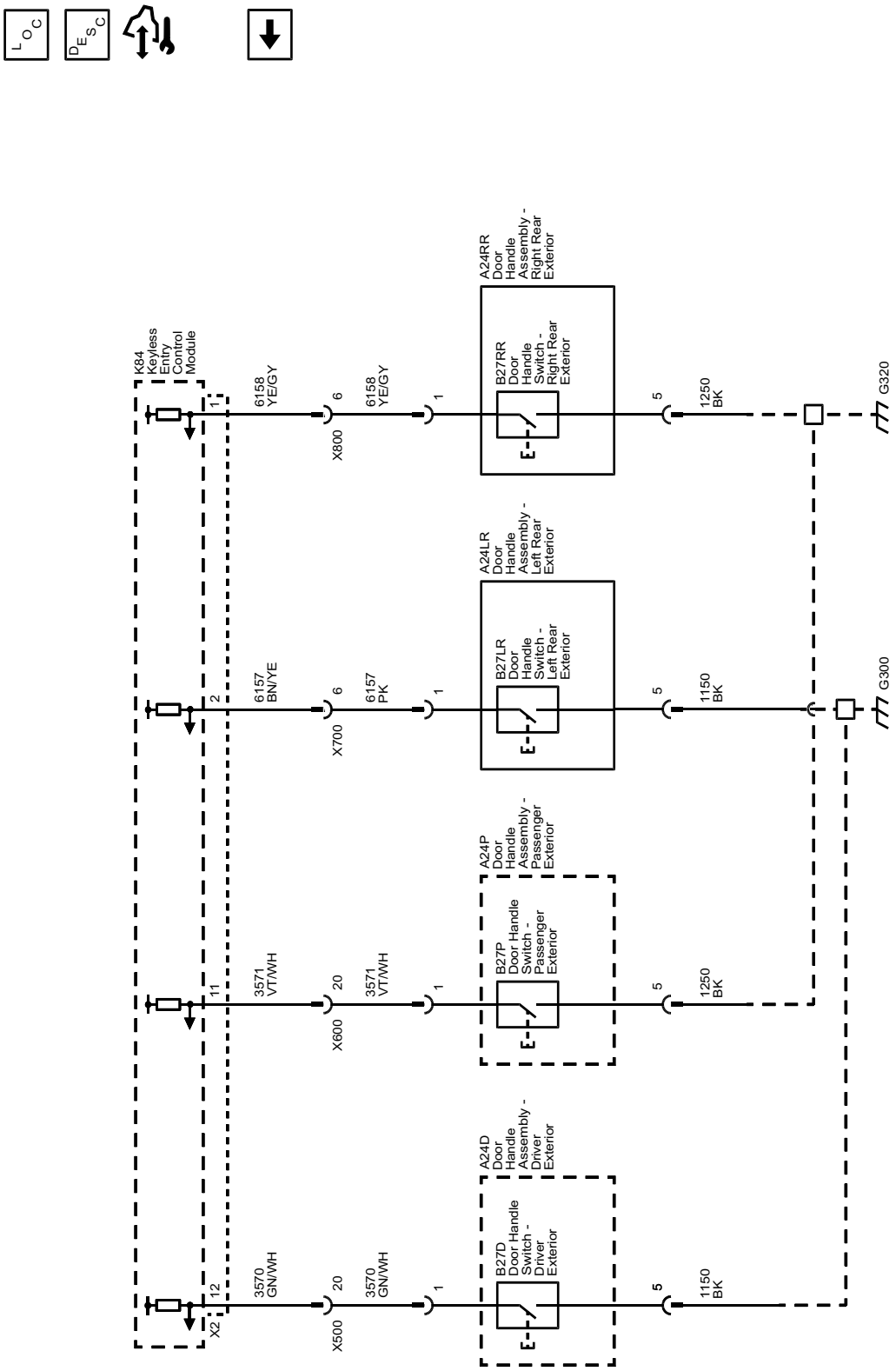
## Door Lock/Indicator Schematics (Controls and Lock Indicators)



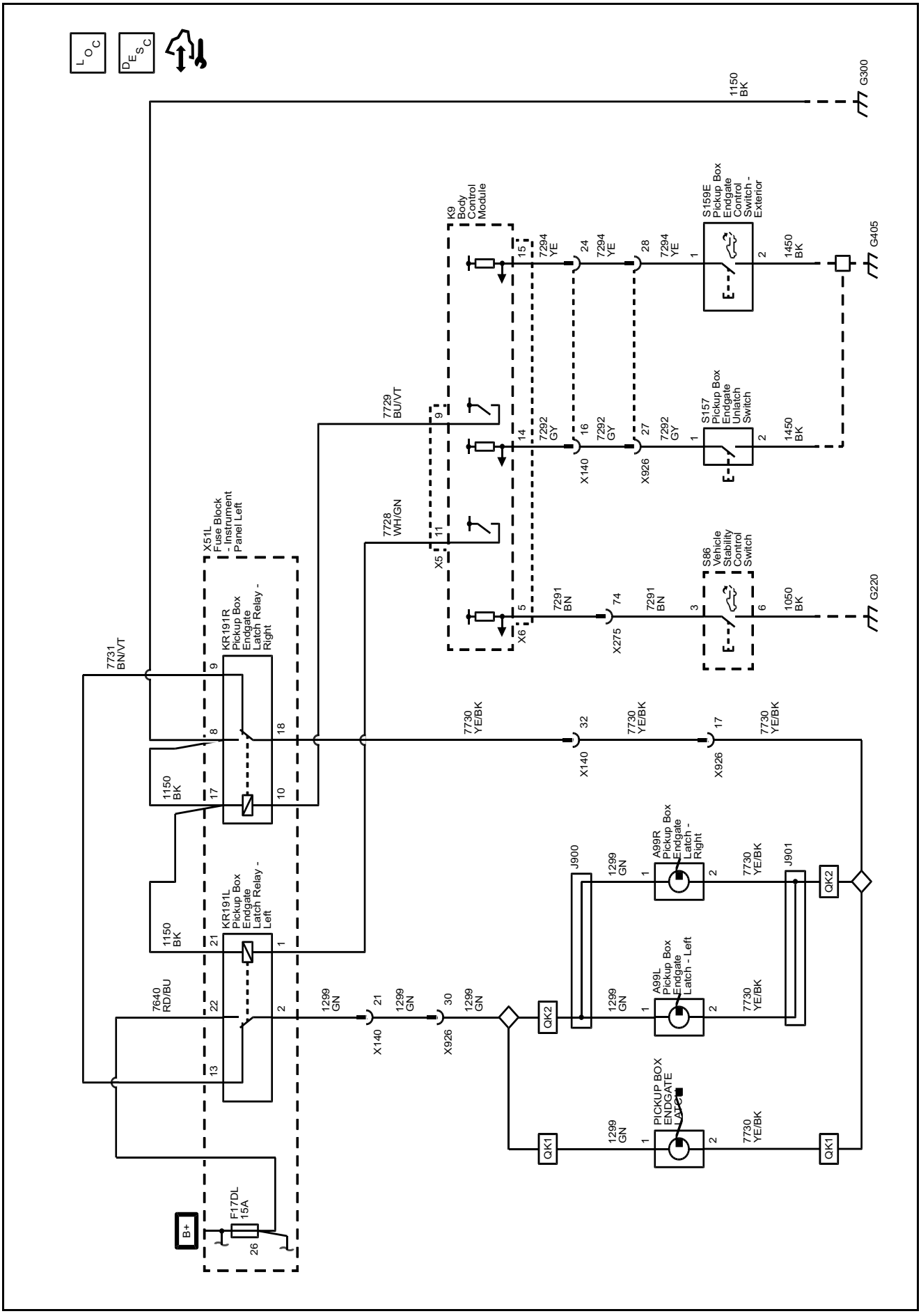
## Door Lock/Indicator Schematics (Actuators)



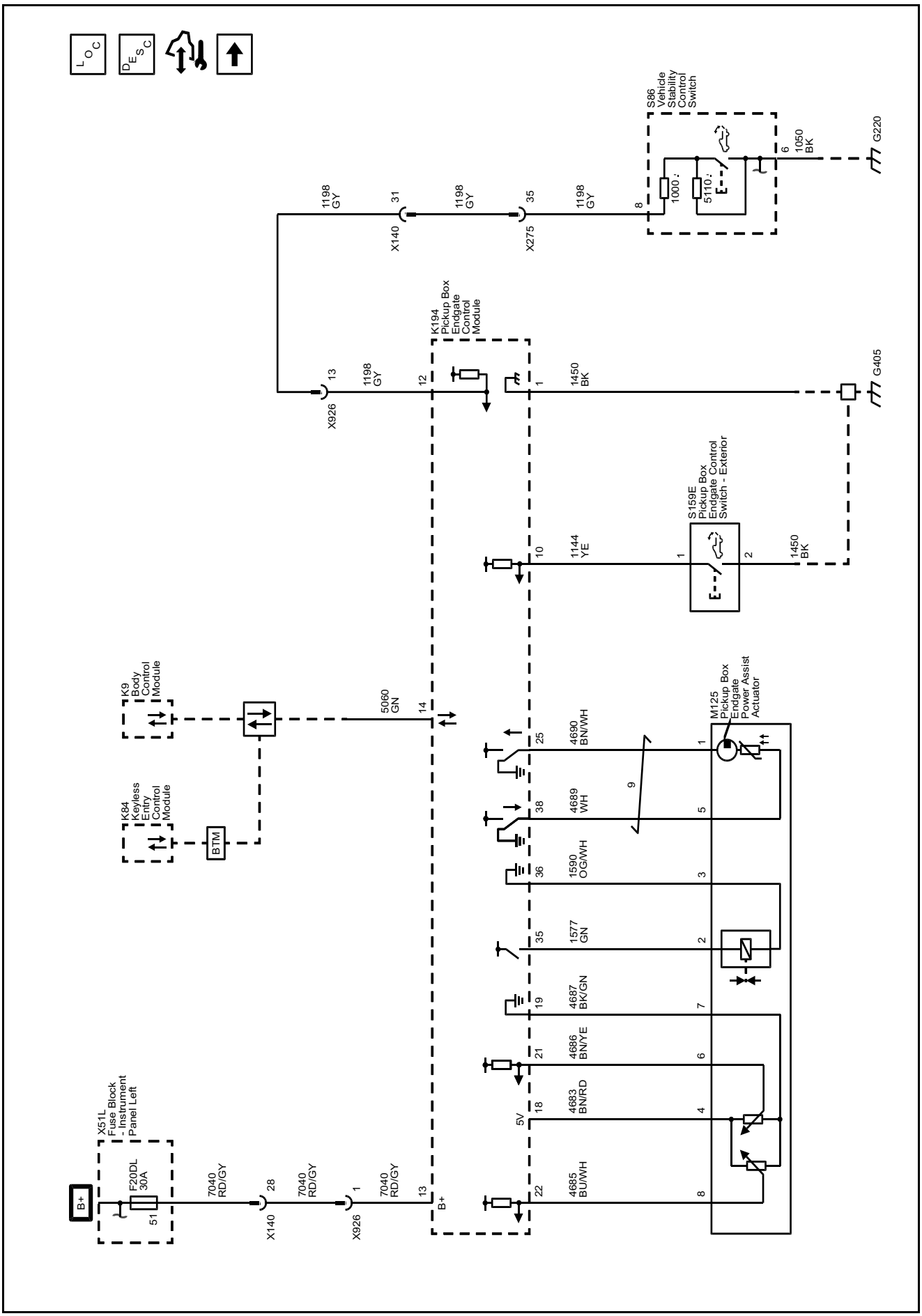
## Door Lock/Indicator Schematics (Handle Switches)



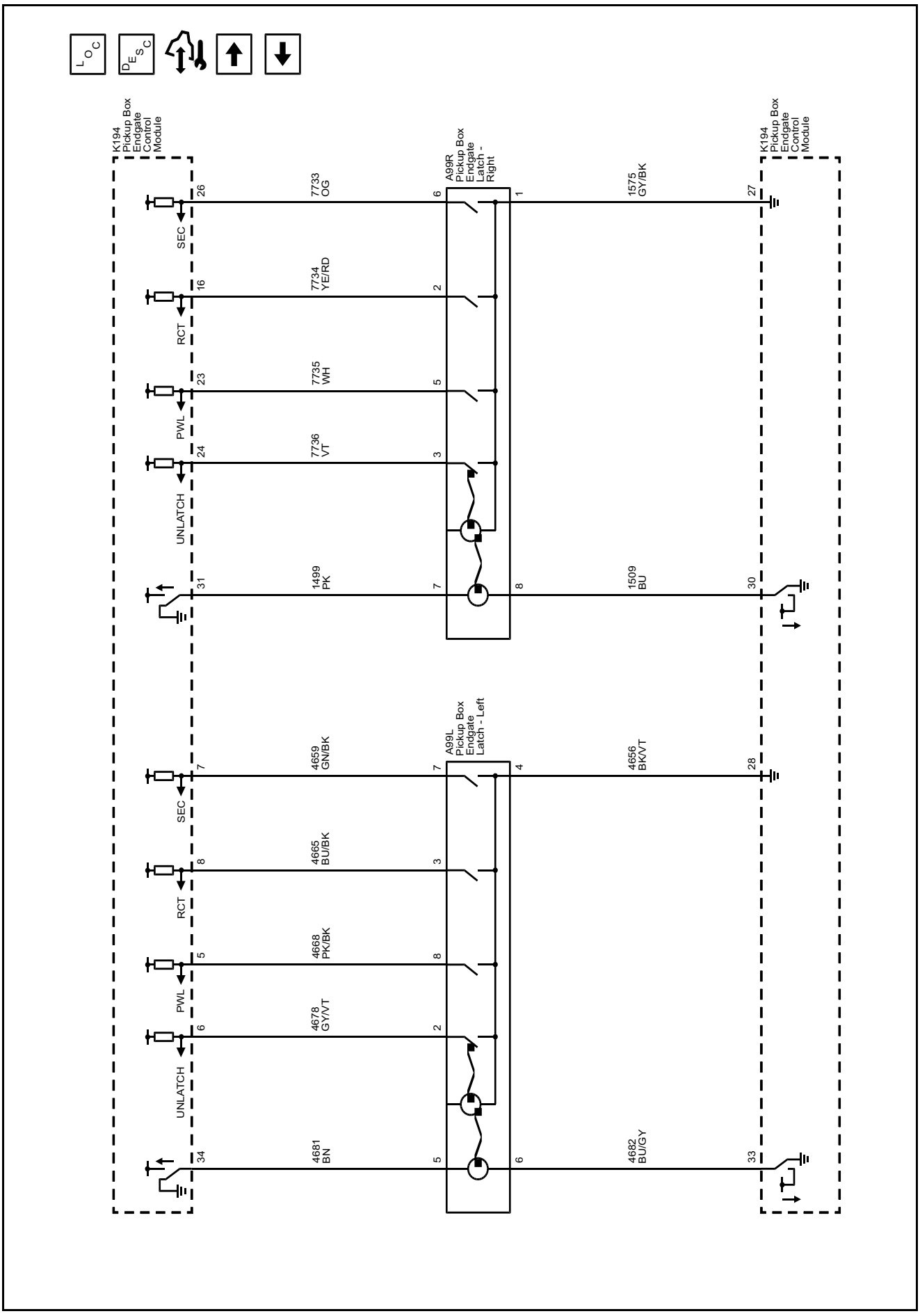
## Release Systems Schematics (Endgate Release (QT5))



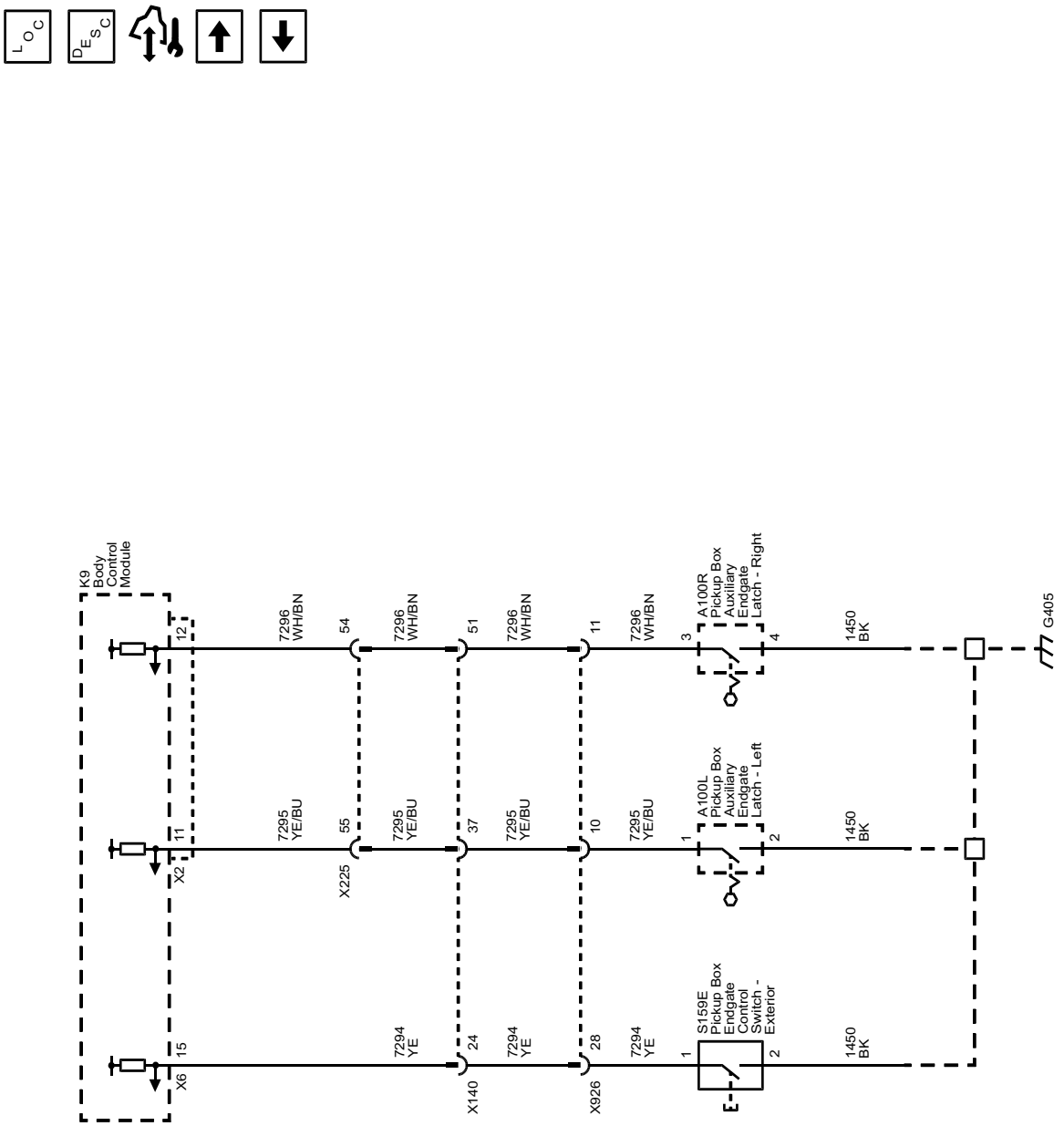
## Endgate Schematics (Power Endgate Controls (QT6))



## Endgate Schematics (Power Endgate Latches (QT6))

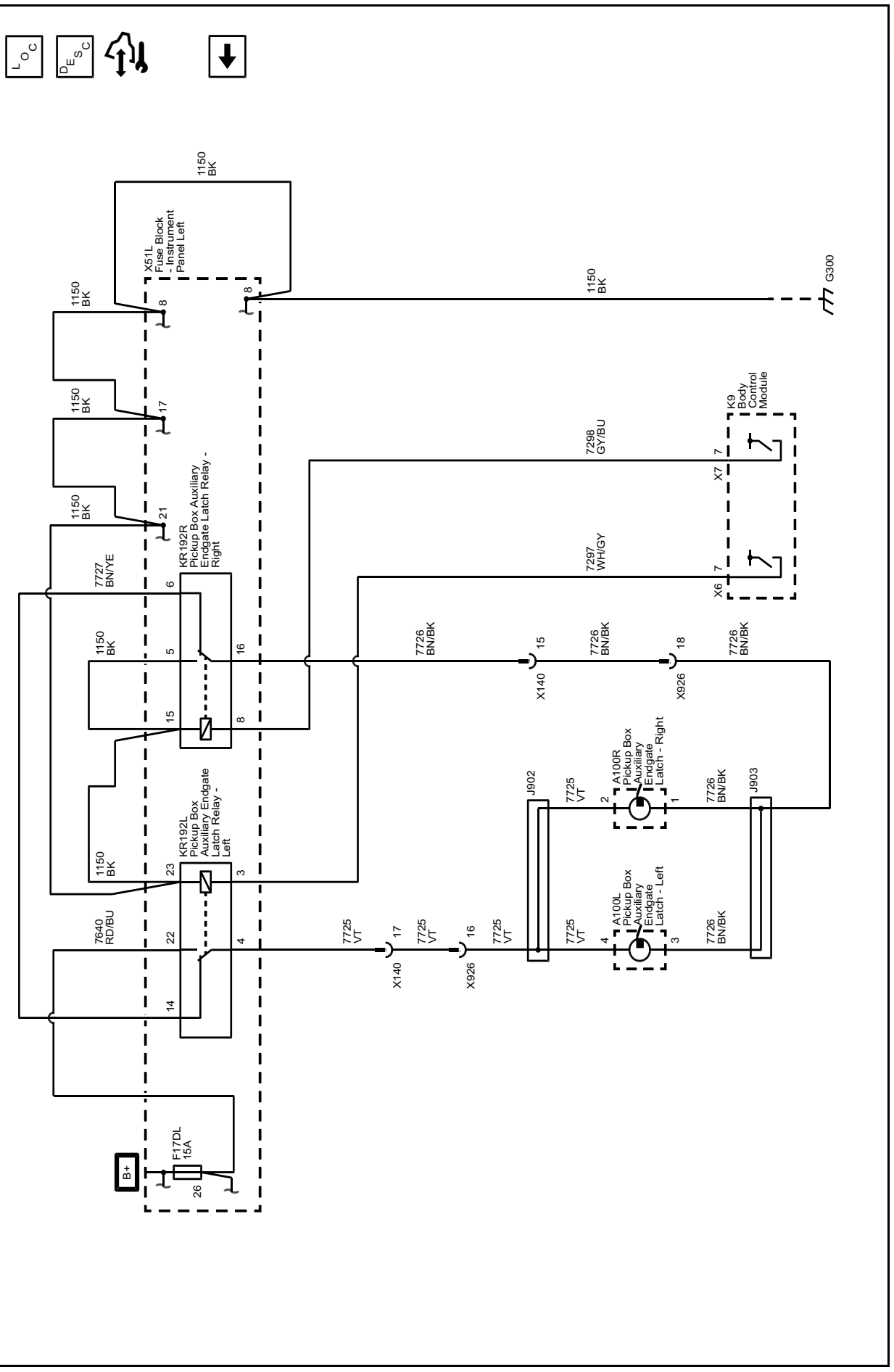


## Endgate Schematics (Auxiliary Endgate Latch Controls and Switches (QK2))




5255786

## Endgate Schematics (Auxiliary Endgate Latch Motors (QK2))



# Description and Operation

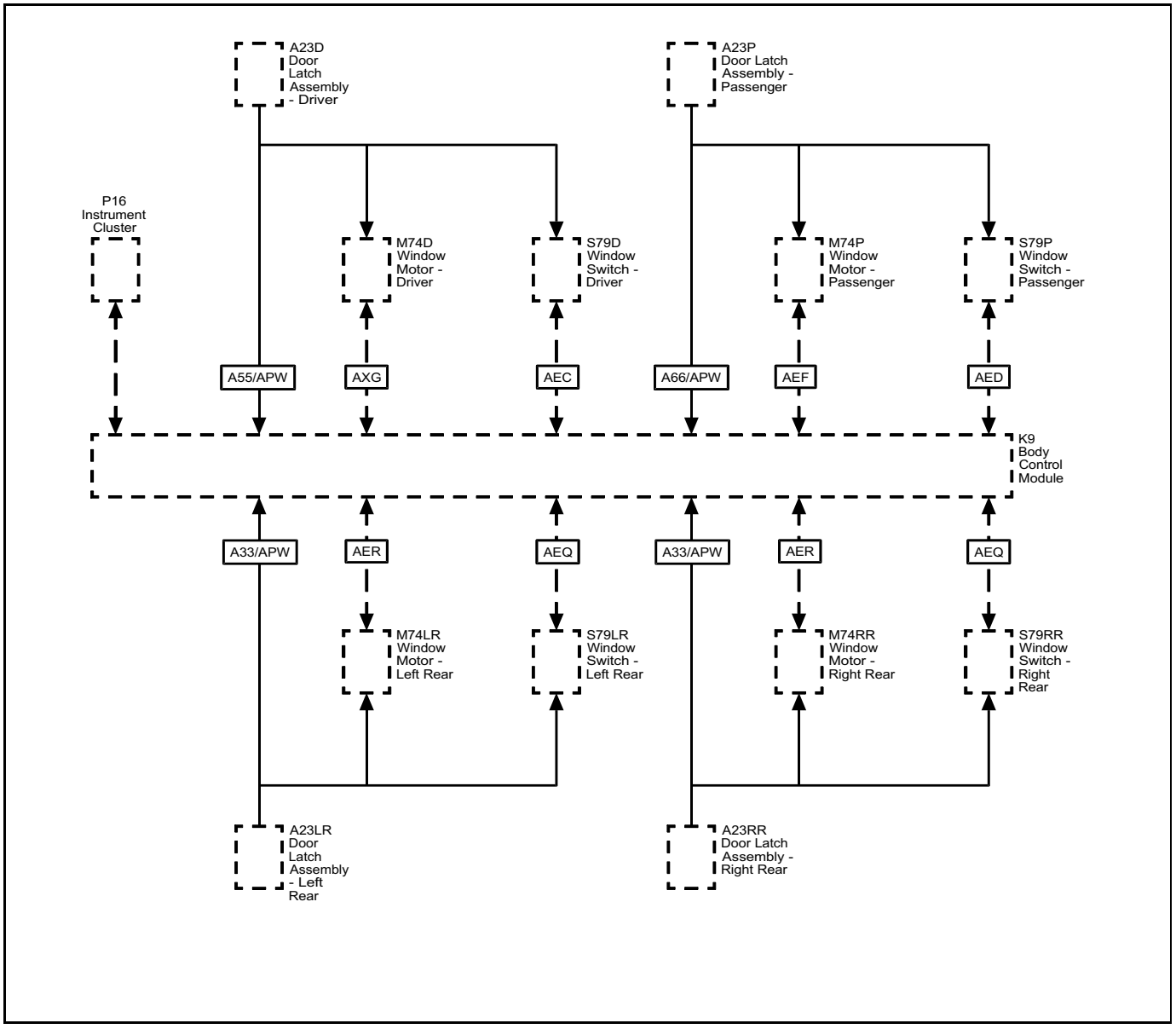
## Door Ajar Indicator Description and Operation

### Door Ajar Indicator System Components

The door ajar indicator system consists of the following components:

- Body control module
- Instrument cluster
- Driver door latch
- Passenger door latch
- Left rear door latch
- Right rear door latch
- Driver window motor (AXG)
- Driver window switch (AEC)
- Passenger window motor (AEF)
- Passenger window switch (AED)
- Left rear window motor (AER)
- Left rear window switch ( AEQ)
- Right rear window motor (AER)
- Right rear window switch (AEQ)

**Door Ajar Indicator Block Diagram**




3556440

## Door Ajar System

Depending upon if the vehicle is equipped with express up/down power windows, express down only power windows, power windows without any express functions or manual crank windows affects how the driver and passenger door ajar signal circuits are configured and monitored.

## Driver, Passenger and Rear Door Ajar (AXG, AEF and AER)

The window motors provide a 12V signal to the respective door ajar switch within the door latch to indicate the status of the door. When the door is open, the contract within the ajar switch closes providing a ground part for the signal circuit. The window motor will detect the voltage drop in the ajar signal circuit and will send a serial data message to the body control module. The body control module will then send a message to the instrument cluster which will illuminate the door ajar icon.

## Driver, Passenger and Rear Doors Ajar (AEC, AED and AEQ)

The driver, passenger and rear window switches provide a 12V signal to the respective door ajar switch within the door latch to indicate the status of the door. When the door is open, the contract within the ajar switch closes providing a ground part for the signal circuit. The window switch will detect the voltage drop in the ajar signal circuit and will send a serial data message to the body control module. The body control module will then send a message to the instrument cluster which will illuminate the door ajar icon.

## Driver, Passenger and Rear Doors Ajar (A55, A66, A33 or Manual Crank Windows)

The body control module provides a 12V signal to each door ajar switch within the door latch to indicate the status of the door. When the door is open, the contract within the ajar switch closes providing a ground part for the signal circuit. The body control module will detect the voltage drop in the ajar signal circuit and will send a message to the instrument cluster which will illuminate the door ajar icon

# Endgate Description and Operation (QT6)

## System Description

The power endgate system consists of the following components:

- Rear gate module
- Pickup box endgate power assist actuator
- Pickup box endgate position sensor (part of the power assist actuator)
- Interior pickup box endgate control switch (Part of the Instrument panel multifunction switch)
- Exterior pickup box endgate control switch
- Right pickup box endgate latch assembly
- Left pickup box endgate latch assembly
- Keyless entry transmitter
- Remote control door lock receiver

## Operation

The power endgate can be commanded to power open and power close by the following methods:

- An open or close command from the interior pickup box endgate control switch
- An open or close command from the exterior pickup box endgate control switch
- An open or close request by a signal from the keyless entry transmitter to the remote control door lock receiver

The rear gate module will respond to a request by commanding the left and right pickup box endgate latches to release the endgate and activate the pickup box endgate power assist actuator and lower the endgate or to raise and cinch the endgate closed.

## Power Latch

The rear gate module continuously monitors power endgate operation and calculates its location and direction of travel from an endgate position sensor (part of the power assist actuator). One input returns the position of the endgate relative to the x-axis and y-axis. The rear gate module then uses these 2 inputs together to calculate its angle relative to the endgate.

The left and right pickup box endgate latches are bi-directional motors and latch or unlatch operation is the result of the direction of the motor rotation. The rear gate module controls the left and right pickup box endgate latches through the control circuits by supplying power and ground in the appropriate polarity. The motor control circuits are monitored by the rear gate module prior to activation for a high or low condition and during motor operation for an insufficient current flow condition. The ratchet, pawl, and sector switches are part of the left and right pickup box endgate latches and are used by the rear gate module to determine the state of the latch during the process of latching or unlatching. Each of the latch switch signal circuits are supplied battery voltage and monitored within the rear gate module. The latch switches share a common low reference circuit from the rear gate module and when the switch contacts close the signal circuit goes low and the rear gate module determines the switch to be active.

The exterior pickup box endgate control switch signal circuit is supplied battery voltage by the rear gate module. When the switch is pressed the contacts close and the signal circuit goes low, the rear gate module will detect the voltage drop and will command the endgate to release and lower or to power raise the endgate to the closed position.

For vehicles without the optional passive keyless entry, when the exterior pickup box endgate control switch is pressed, the rear gate module will check the status of the vehicle door locks by sending a serial data message to the body control module requesting the door lock status. If the vehicle doors are locked, the rear gate module will ignore the signal from the exterior pickup box endgate control switch. If the vehicle doors are unlocked, the rear gate module will permit the endgate to unlatch and power open when the exterior pickup box endgate control switch is pressed.

For vehicles with the optional passive keyless entry system, the keyless entry control module monitors the proximity of the keyless entry transmitter. If the exterior pickup box endgate control switch is pressed and the keyless entry transmitter is within range, the keyless entry control module will send a serial data message to the rear gate module indicating the presence of the keyless entry transmitter and the rear gate module will permit the endgate to unlatch and power open. If the doors are locked and the keyless entry transmitter is not within range, the rear gate module will ignore the signal from the exterior pickup box endgate control switch.

## Manual Endgate Operation

The endgate can be manually closed from the full-open position when the endgate is lifted in a continuous motion. If the endgate motion is stopped between the full-open and half-closed positions, the lift to close feature can engage and power close the endgate. If the touch pad is pressed during power operation, the endgate will stop and allow manual operation. The endgate must be held after stopping, or it will continue to open

## Tailgate Release Unavailable Driver Information Center Message

### Power Endgate Functions Disabled Without Setting DTCs

The driver information center displays Tailgate Release Unavailable when a thermal inhibit occurs in the latch or drive unit or the position count is out of range.

The power endgate functions will be restored by performing the following actions:

- Closing the endgate which will reset the position counts
- Closing the endgate and removing the F20DL 30A fuse for greater than 5 minutes

### Power Endgate Functions Disabled With DTCs Current

The driver information center displays Tailgate Release Unavailable when the rear gate module control module detects a malfunction in the power endgate system and the system is disabled.

# Endgate Description and Operation (QT5 Without MultiPro Tailgate)

## Endgate Release System Components

- Body control module (BCM)
- Pickup box endgate control switch-interior (Part of the instrument panel multifunction switch)
- Pickup box endgate control switch-exterior
- Pickup box endgate unlatch actuator
- Pickup box endgate unlatch relay

## Endgate Release Operation (Without MutiPro Tailgate Option)

### Interior Endgate Release Switch

The body control module monitors the voltage level of the endgate unlatch signal circuit so that when the switch is pressed contacts within the switch closes providing a ground path for the endgate unlatch signal circuit, the voltage within the signal circuit is pulled low, the body control module will detect the voltage drop and if the passenger doors are unlocked, will energize the pickup box endgate unlatch relay.

### Exterior Endgate Release Switch

The body control module monitors the status of the vehicle doors, if the doors are locked the body control module will ignore the request from the exterior pickup box endgate control switch. If the passenger doors have been commanded to unlock, pressing the exterior pickup box endgate control switch will close contacts within the switch and provide a ground path for the endgate unlatch signal circuit, the body control module will detect the voltage drop and will energize the pickup box endgate unlatch relay.

If the vehicle has been equipped with the passive keyless entry system and the keyless entry transmitter is within 3 feet (1 meter) of the endgate, pressing the exterior pickup box endgate control switch will also function in the same manner but without unlocking the passenger doors. Refer to *Keyless Entry System Description and Operation on page 8-19* for more information on the passive keyless entry system.

### Pickup Box Endgate Unlatch actuator

When body control module receives a endgate release command from the exterior pickup box endgate control switch, the body control module applies brief pulse of voltage to the pickup box endgate unlatch relay control circuit, which energizes the coil side of the relay. The switch side of the pickup box endgate unlatch relay then momentarily closes, supplying a brief pulse of battery positive voltage to the pickup box endgate unlatch actuator. The pickup box endgate unlatch actuator is continuously grounded and when it receives the voltage pulse, it will become energized and the latch will activate releasing the endgate so that it may be manually lowered to an open position.

# Endgate Description and Operation (QT5 With MultiPro Tailgate)

## Endgate Release System Components

- Body control module (BCM)
- Pickup box endgate control switch-interior (Part of the instrument panel multifunction switch)
- Pickup box endgate control switch-exterior
- Left pickup box endgate latch
- Right pickup box endgate latch
- Left pickup box auxiliary endgate latch
- Right pickup box auxiliary endgate latch
- Left pickup box endgate latch relay
- Right pickup box endgate latch relay

- Left pickup box auxiliary endgate latch relay
- Right pickup box auxiliary endgate latch relay

## Endgate Release Operation (With MutiPro Tailgate Option)

### Interior Endgate Release Switch

The body control module monitors the voltage level of the endgate unlatch signal circuit so that when the switch is pressed contacts within the switch closes providing a ground path for the endgate unlatch signal circuit, the voltage within the signal circuit is pulled low, the body control module will detect the voltage drop and if the passenger doors are unlocked, will energize the left pickup box endgate latch relay and right pickup box endgate latch relay.

### Exterior Endgate Release Switch

The body control module monitors the status of the vehicle doors, if the doors are locked the body control module will ignore the request from the exterior pickup box endgate control switch. If the passenger doors have been commanded to unlock, pressing the appropriate exterior pickup box endgate control switch will close contacts within the switch and provide a ground path for the major or minor endgate unlatch signal circuit, the body control module will detect the voltage drop and will energize the appropriate pickup box endgate latch relays.

If the vehicle has been equipped with the passive keyless entry system and the keyless entry transmitter is within 3 feet (1 meter) of the endgate, pressing the exterior pickup box endgate control switch will also function in the same manner but without unlocking the passenger doors. Refer to *Keyless Entry System Description and Operation on page 8-19* for more information on the passive keyless entry system.

### Major Pickup Box Endgate

**Note:** The auxiliary pickup box endgate must be in the latched position before commanding the major pickup box endgate to release. The body control module will disable the major pickup box endgate release function if the auxiliary pickup box endgate is open or ajar.

When body control module receives a major endgate release command from the exterior pickup box endgate control switch, the body control module applies brief pulse of voltage to the left and right pickup box endgate latch relay control circuits, which energizes the coil side of the relays. The switch side of the left and right pickup box endgate latch relay then momentarily closes, supplying a brief pulse of battery positive voltage to the left and right pickup box endgate latches. The left and right pickup box endgate latches will become energized and the latches will activate releasing the major endgate so that it may be manually lowered to an open position.

### Minor Pickup Box Endgate

When body control module receives a major endgate release command from the exterior pickup box endgate control switch, the body control module applies brief pulse of voltage to the left and right pickup box auxiliary endgate latch relay control circuits, which energizes the coil side of the relays. The switch side of the left and right pickup box auxiliary endgate latch relay then momentarily closes, supplying a brief pulse of battery positive voltage to the left and right pickup box auxiliary endgate latches. The left and right pickup box auxiliary endgate latches will become energized and the latches will activate releasing the minor endgate so that it may be manually lowered to an open position.

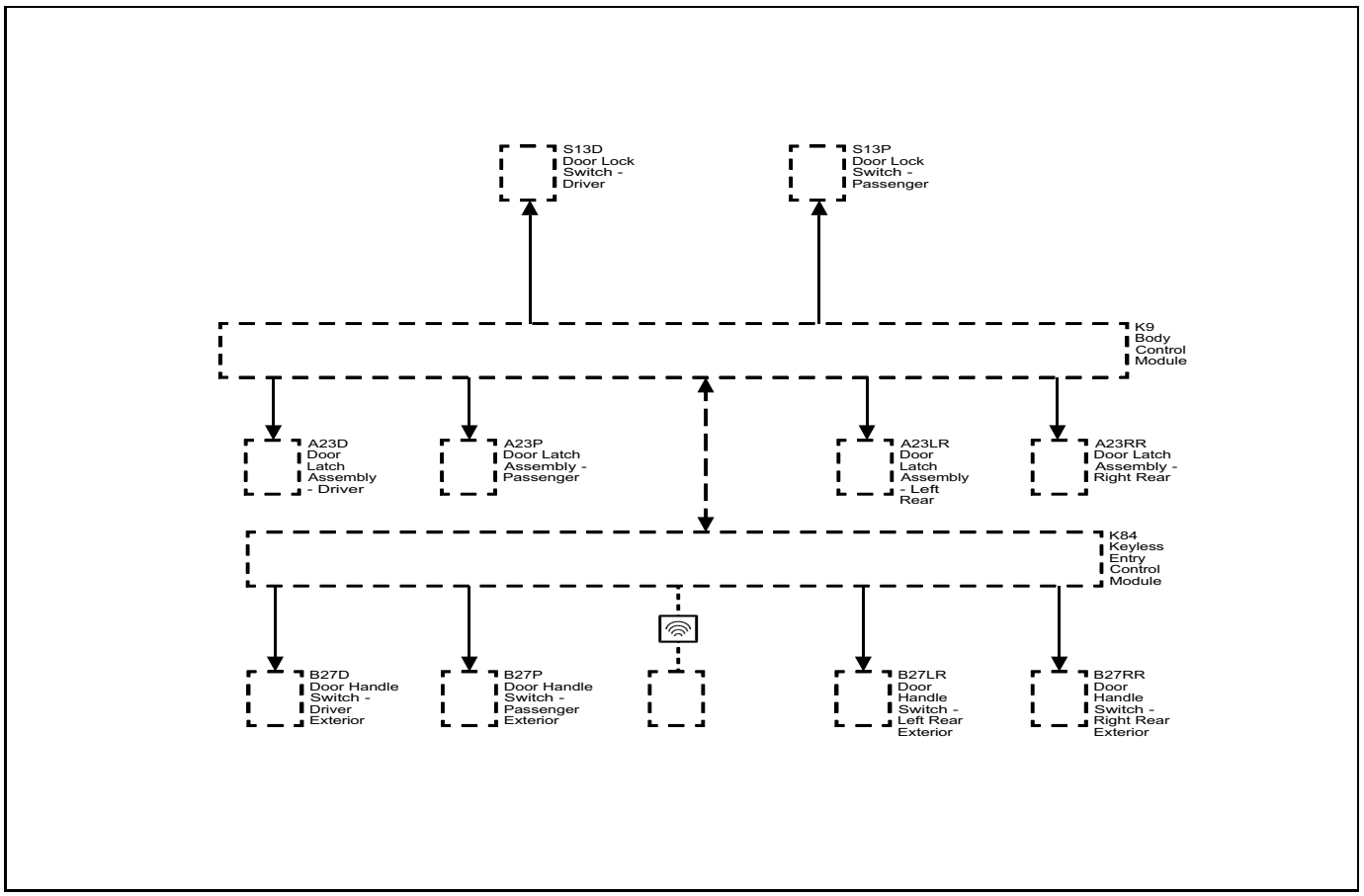
## Power Door Locks Description and Operation

### Door Lock System Components

The power door lock system consists of the following components:

- Driver door lock switch
- Passenger door lock switch
- Key cylinder switch
- Body control module (BCM)
- Driver door latch
- Passenger door latch
- Left rear door latch
- Right rear door latch
- Exterior door handle switches
- Keyless entry control module

## Power Door Locks Block Diagram




3270435

## Door Lock and Unlock Operation

When the driver or passenger door lock switch is activated in the lock or unlock position, the BCM will receive a ground signal on either the door lock switch lock or unlock signal circuits.

The BCM, upon receipt of a lock switch lock or unlock signal, will supply battery voltage to the door lock actuator lock or unlock control circuits. Since the opposite side of the lock actuator is connected to ground through the other lock actuator control circuit, the doors will then lock or unlock as commanded.

The following three circuits are used to operate the lock:

- Driver door unlock
- Passenger door unlock
- All door lock

The driver door lock actuator is isolated so it can be unlocked by itself using the keyless entry transmitter.

## Key Cylinder Switch

The driver window switch monitors the voltage level of the driver door lock motor status signal circuit. When the key is inserted into the driver door key cylinder and turned to the Lock position, a switch within the driver door latch closes causing the voltage to drop within the driver door lock motor status signal circuit. The driver window switch will detect the drop in voltage and will send a serial data message to the BCM commanding all the doors to Lock.

The driver key cylinder switch is used by the customer for programming the keyless entry transmitters, The driver window/outside rearview mirror switch monitors the voltage level of the key switch unlock signal circuit and when it detects a reprogramming request, it will send a serial data message to the body control module.

## Passive Door Lock/Unlock Operation

The exterior door handle switch signal circuits provide inputs to the keyless entry control module when the exterior door handle switches are activated. These inputs allow the keyless entry control module to detect a door lock or a door unlock request. The keyless entry control module provides a 12 V signal to each exterior door handle switch via the door handle switch signal circuits. When a door handle switch is pressed, the switch closes and the voltage signal within the signal circuit is pulled to ground. The keyless entry control module will detect the voltage drop and a low frequency antenna will transmit a challenge to the keyless entry transmitter. If the challenge is met, the keyless entry transmitter will respond and the keyless entry control module will send a serial data message to the body control module to command the door(s) to be locked or unlocked

# BLANK

# Section 3

# Brakes

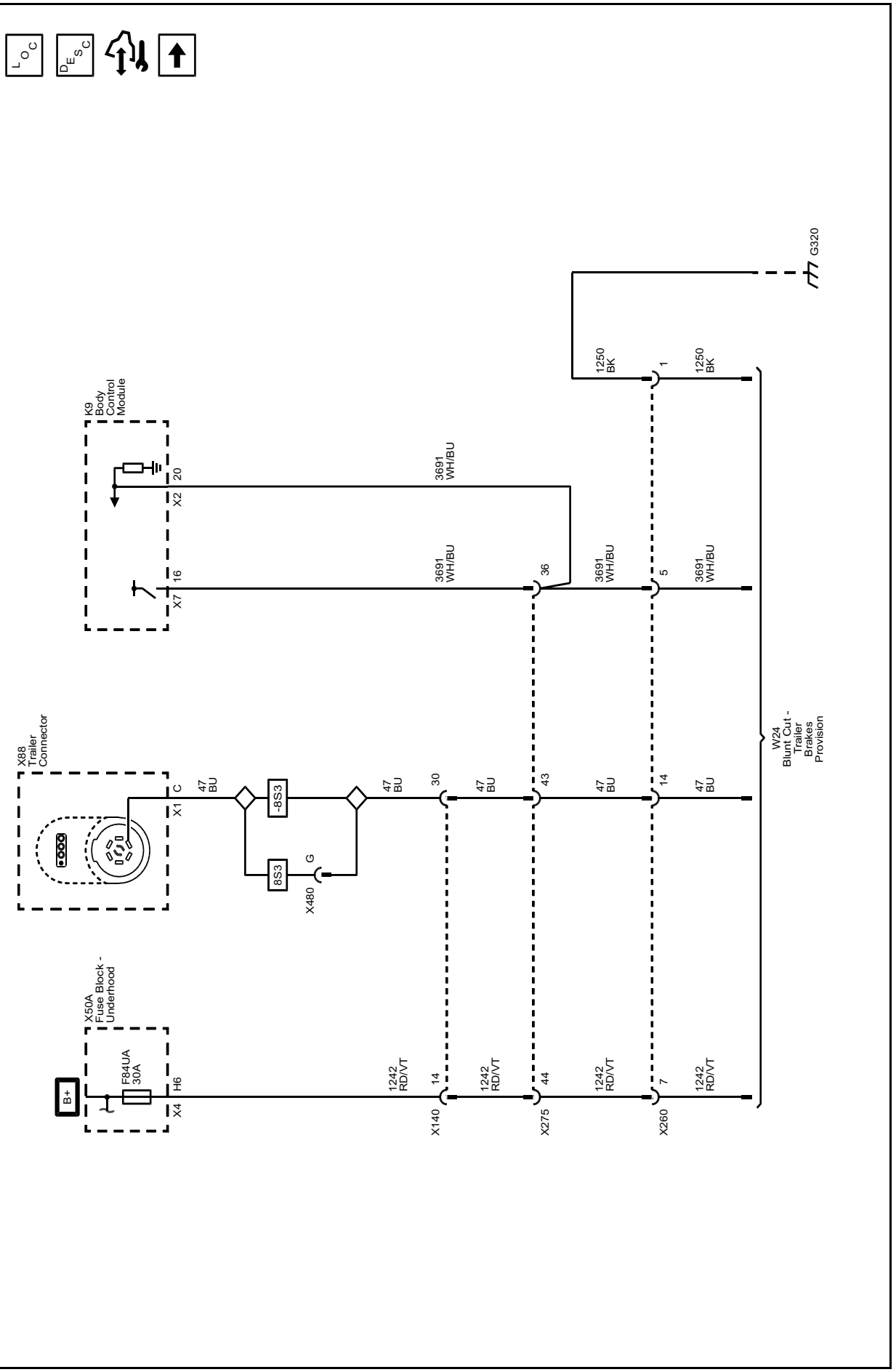
**Trailer Brake Controls** . . . . . 3-3
**Schematic and Routing Diagrams** . . . . . 3-3
Trailer Brake Control Schematics . . . . . 3-4
**Description and Operation** . . . . . 3-6
Trailer Brake Controls Description and Operation . . . . . 3-6

**BLANK**

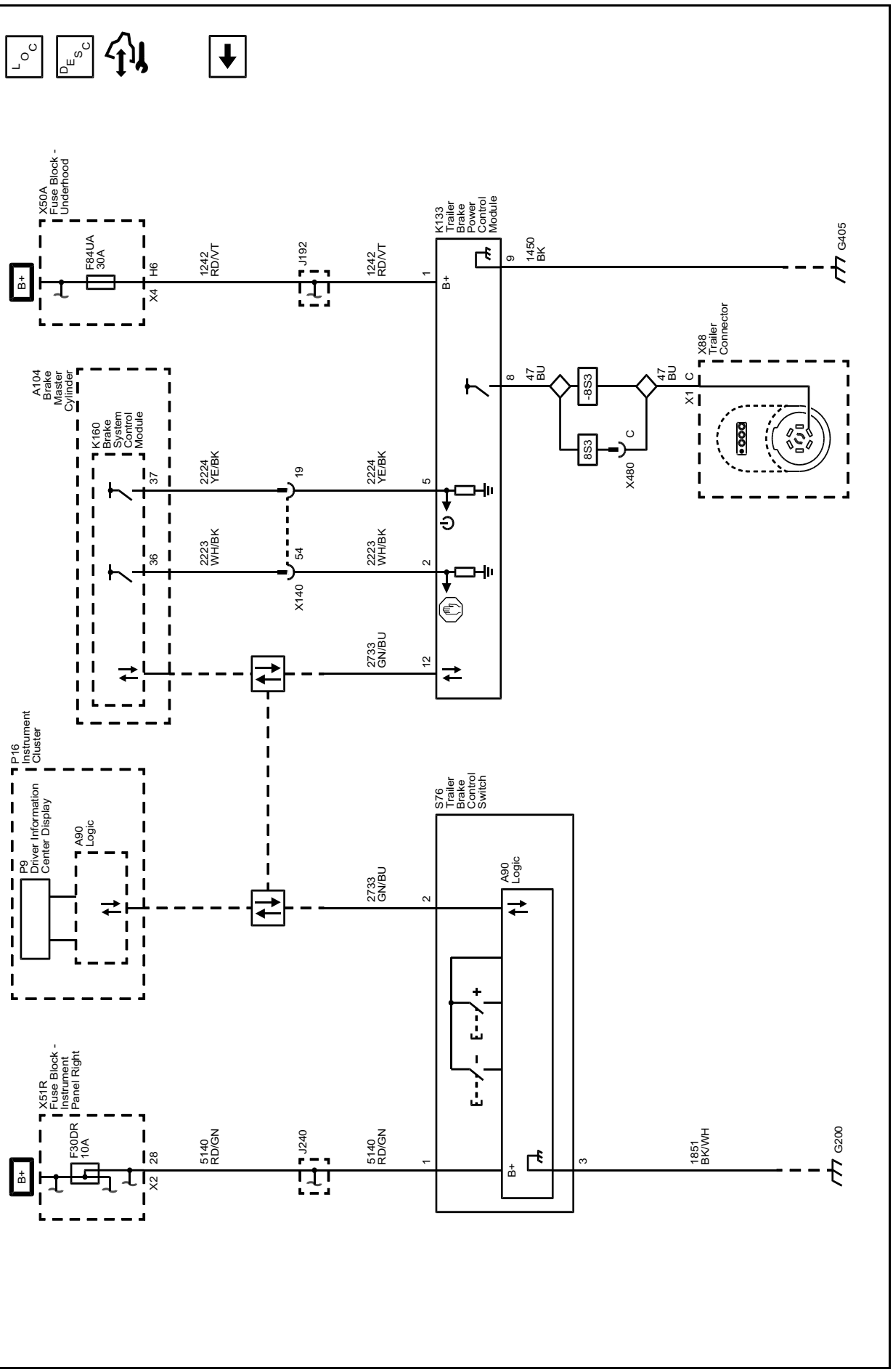
# Trailer Brake Controls

## Schematic and Routing Diagrams

## Trailer Brake Control Schematics (Trailer Brake ((Z82/8S3)-JL1))



## Trailer Brake Control Schematics (Trailer Brake (JL1))



# Description and Operation

## Trailer Brake Controls Description and Operation

A trailer brake control system is used to control the amount of trailer braking power that is made available to trailers with brakes that require a controlled electrical output signal for actuation.

The power output to the trailer brakes is based on both the amount of braking being applied by the vehicle's brake system and on the type of trailer brakes detected.

**The Trailer Brake Control System is compatible with two types of Trailer Brake Systems as listed below:**

1. **Electric Brakes** A controlled electrical output signal energizes an electric-magnet/lever arm assembly that directly actuates the brake mechanism. The GDS name for this system is "Electromagnetic Brakes".
2. **Electric Over Hydraulic Brakes** A controlled electrical output signal energizes a remote, trailer mounted hydraulic pump to build brake pressure in a closed hydraulic system on the trailer. The hydraulic fluid pressure actuates the brake mechanism. The GDS name for this system is "Electrohydraulic Brakes".

**Trailer Brake Output Versus Trailer Brake Type**

- The trailer brake system characterizes the trailer brakes as either Electric Brake or Electric Over Hydraulic Brake automatically. This characterization may be affected by the number, type, and age of the trailer brake magnets, as well as any other devices installed on the trailer brakes (i.e. adapters for Electric Over Hydraulic brake functionality).
- The trailer brake system is fully operational with either characterization.
- Some features of the trailer brake system may be different based on the trailer brake type characterization. An example of this is at zero speed, where pressing the service brake pedal will produce output when the trailer brakes are characterized as Electric Brakes, but not when characterized as Electric Over Hydraulic Brakes.
- Sliding the manual trailer brake apply lever will produce output at zero speed for either characterization.

The user gain allows the driver to adjust the amount of trailer brake output to match the trailer load and road surface. The controller determines the desired trailer brake output and provides a control signal to the K133 Trailer Brake Power Control Module (TBPM). The K133 Trailer Brake Power Control Module amplifies the signal and provides the output required to activate the Electric or Electric Over Hydraulic trailer brakes.

The trailer brake control can support up to a maximum of four axles with electric trailer brakes (8 brake magnets).

Connecting a trailer that is not compatible with the trailer brake system may result in reduced or complete loss of trailer braking. There may be an increase in stopping distance or trailer instability which could result in personal injury or damage to the vehicle, trailer or other property. An aftermarket controller may be available for use with trailers with surge or air trailer brake systems.

To determine the type of brakes on your trailer and the availability of controllers, check with your trailer manufacturer or dealer. Do not power up an aftermarket controller with the factory brake controller at the same time.

**The vehicle is equipped with the following trailer braking components:**

- K160 Brake System Control Module
- K133 Trailer Brake Power Control Module
- S76 Trailer Brake Control Switch
- Manual Trailer Brake Apply
- Trailer Gain Adjustment
- Trailer Brake Driver Information Center Display

### Brake System Control Module

The K160 Brake System Control Module (BSCM) is a serviceable GMLAN module. The brake system control module sends the low power commanded duty cycle signal to the trailer brake power control module. The trailer brake power control module amplifies the signal and provides an output that is required to drive the trailer brakes.

### Trailer Brake Power Control Module

The K133 Trailer Brake Power Control Module (TBPM) is a solid state power switching module that supplies power to the trailer brakes at the input command duty cycle. Diagnostic messages are sent from the TBPM to the BSCM on a dedicated LIN bus.

### Trailer Brake Control Panel

The S76 Trailer Brake Control Switch contains the trailer gain and manual apply switches. It is located in the vehicle center stack. Refer to the owner's manual for more information on the location. The control panel and switches allows you to adjust the amount of output, referred to as trailer gain, available to the Electric or Electric Over Hydraulic brakes. It also allows you to manually apply the trailer brakes. The trailer brake control switch is used along with the trailer brake display page on the driver information center to adjust and display power output to the trailer brakes.

### Manual Trailer Brake Apply

The manual trailer brake apply lever is located on the S76 Trailer Brake Control Switch and is used to apply the trailer's Electric or Electric Over Hydraulic brakes independent of the vehicle's brakes. This lever is used in the trailer gain adjustment procedure to properly adjust the power output to the trailer brakes.

Sliding the lever to the left will apply only the trailer brakes. The power output to the trailer is indicated in the trailer brake display page in the Driver Information Center (DIC). If the vehicle's service brakes are applied while using the manual trailer brake apply lever, the trailer output power will be the greater of the two.

The trailer and the vehicle's brake lamps will come on when either the vehicle's braking or manual trailer brakes are applied.

## Trailer Gain Adjustment

Trailer gain should be set for a specific trailering condition and must be adjusted any time vehicle loading, trailer loading or road surface conditions change. It is important to re-adjust trailer gain any time the tow vehicle, trailer loading or road surface conditions change or it you notice trailer wheel lock-up at any time while you are towing.

Setting the trailer gain properly is needed for the best trailer stopping performance. A trailer that is over-gained may result in locked trailer brakes. A trailer that is under-gained may result in not enough trailer braking. Both of these conditions may result in poor stopping and stability of the vehicle and trailer.

**Trailer Gain Adjustment Procedure**

- Adjust trailer gain in 0.5 step increments up to 10 gain setting by using the gain adjustment +/− buttons on the trailer brake control panel switch. Pressing and holding a gain button will cause the trailer gain to continuously increment or decrement. To turn the output to the trailer off, set the gain to zero.
- Drive the tow vehicle and trailer combination on a level surface representative of the towing condition and free of traffic at approximately 32–40 km/h (20–25 mph) and fully apply the manual trailer brake apply lever mechanism located on the trailer brake control panel switch. Adjusting the trailer gain at slower speeds may result in an incorrect gain setting.
- Adjust the trailer gain to just below the threshold of trailer wheel lock-up . Trailer wheel lock-up may not occur if towing a heavily loaded trailer. In this case, adjust the trailer gain to the highest allowable setting for the towing condition.

## Hill Start Assist

The hill start assist allows the driver to launch the vehicle without a roll back when the driver is moving their foot from the brake pedal to the accelerator pedal. Refer to the hill start assist system in the anti-lock brake system description and operation document for more information.

## Trailer Sway Control

The trailer sway control can detect the vehicle yaw instability, caused by an attached trailer. Refer to the trailer sway control system in the anti-lock brake system description and operation document for more information.

## Driver Information Center Indicators and Messages

The following indicators are used to inform the driver of several different conditions:

**Trailer Connected**

This message will be briefly displayed when a trailer with Electric or Electric Over Hydraulic brakes is first connected to the vehicle. This message will automatically turn off in about ten seconds. The driver can also acknowledge this message before it automatically turns off.

**Check Trailer Wiring**

This message will be displayed if:

- The system detects that a trailer with Electric or Electric Over Hydraulic brakes is connected to the vehicle and then the trailer harness becomes disconnected from the vehicle.
- The trailer connection is recognized initially and then a disconnect occurs while the vehicle is stationary. This message will automatically turn off in about thirty seconds. This message will also turn off if the driver acknowledges this message off or if the trailer harness is reconnected.
- A disconnect of the trailer wiring harness occurs while the vehicle is moving. The Check Trailer Wiring message will continue until the ignition is turned off. The message will also turn off if the driver acknowledges this message off or it the trailer harness is re-connected or repairs are completed.
- There is an electrical fault in the wiring to the electric trailer brakes. The Check Trailer Wiring message will continue as long as there is an electrical fault in the trailer wiring. This message will also turn off if the driver acknowledges this message off.
- A poor connection at the 7–way connector may cause the Check Trailer Wiring message. Some aftermarket 7–way trailer side connector adapters or plugs may cause deformation or excessive wear to the vehicle’s trailer terminals. It is recommended that you use an OEM or Pollak heavy duty 7–way trailer side connector adapter.

## Service Trailer Brake System

This message will be displayed when there is a problem with the trailer brake control system. The trailer brake system may not be fully functional, or may not be functioning at all. The trailer brake system is designed to provide trailer braking, if possible, even when faults prevent it from being fully functional. This reduced functionality includes:

1. Providing trailer braking when the master cylinder pressure or brake pedal switch are faulted.
2. Providing trailer braking when hill start assist and trailer sway control communication is faulted.
3. Providing trailer braking when certain manual trailer brake apply lever faults are present.

These conditions should be repaired to allow the trailer brake system to be fully functional.

## Trailer Gain and Output Display

This display menu can be accessed by scrolling through the DIC menu, or any time the trailer gain +/− button is depressed, or the manual trailer brake apply lever is actuated. The trailer output is displayed from 0 to full output and indicates the output power provided to the trailer brakes, relative to the gain setting.

After the electrical connection is made to a trailer equipped with electric brakes or electric over hydraulic brakes, the TRAILER CONNECTED message will be displayed momentarily on the DIC. The Trailer Brake Display Page can be selected on the DIC showing TRAILER GAIN and OUTPUT, after all vehicle related service messages are acknowledged by the driver.

Depending on which instrument panel cluster is in the vehicle, the DIC may display dashed lines, a greyed out display, or it may be blank signifying a disconnected trailer or a trailer brake fault condition.

## System Fault Detection Scan Tool Parameters

The scan tool has three parameters available that will help determine if a trailer brake system fault is located in the vehicle or in the trailer. The parameters associated with this diagnostic ability are listed below:

- Number of Trailer Brake Circuit Faults
- Number of Trailer Circuit Faults Suspected
- Trailer Circuit Faults Suspected/Trailer Brake Circuit Faults Ratio

The following table represents the area of the trailer brake system on the vehicle and on the customer's trailer that may be at fault based on a ratio of where a fault is detected. The ratios given in the table are the result of the Trailer Circuit Faults Suspected parameter divided by the Trailer Brake Circuit Faults Ratio parameter. The judgements are a guide as to where the majority of the faults are found, in the vehicle versus in the trailer.

### Trailer Circuit Faults Suspected/Trailer Brake Circuit Faults Ratio

| Ratio | Judgement |
|---|---|
| 0% | Check vehicle |
| 10% | Check vehicle |
| 20% | Check vehicle |
| 30% | Faults found in both the vehicle and the trailer. Refer to PIT 5509 and PIT 5311 for additional information on possible intermittent faults. |
| 40% | |
| 50% | |
| 60% | |
| 70% | |
| 80% | Check trailer |
| 90% | Check trailer |
| 100% | Check trailer |

# Section 4

# Driver Information and Entertainment

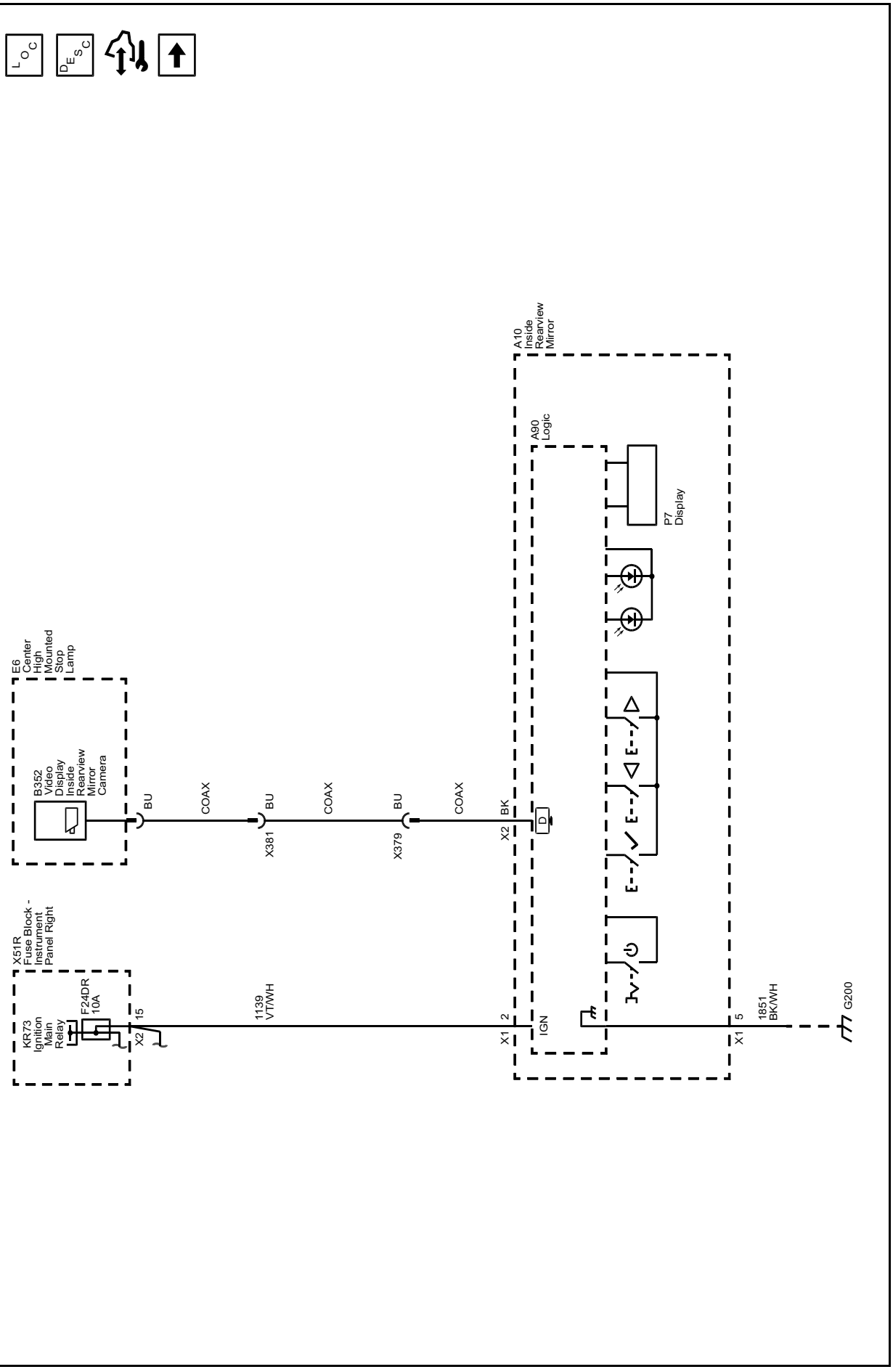
**Image Display Cameras** . . . . . 4-3
**Schematic and Routing Diagrams** . . . . . 4-3
Image Display Camera Schematics . . . . . 4-4
**Description and Operation** . . . . . 4-10
Rearview Camera Full Display Mirror Description and Operation . . . . . 4-10
Rear Vision Camera Description and Operation (UVC) . . . . . 4-10
Rear Vision Camera Description and Operation (UVB) . . . . . 4-10
Surround Vision Camera Description and Operation (UV2) . . . . . 4-10
Surround Vision Camera Description and Operation (Trailer Vision System (UVI/UVN/UVS)) . . . . . 4-12

# BLANK

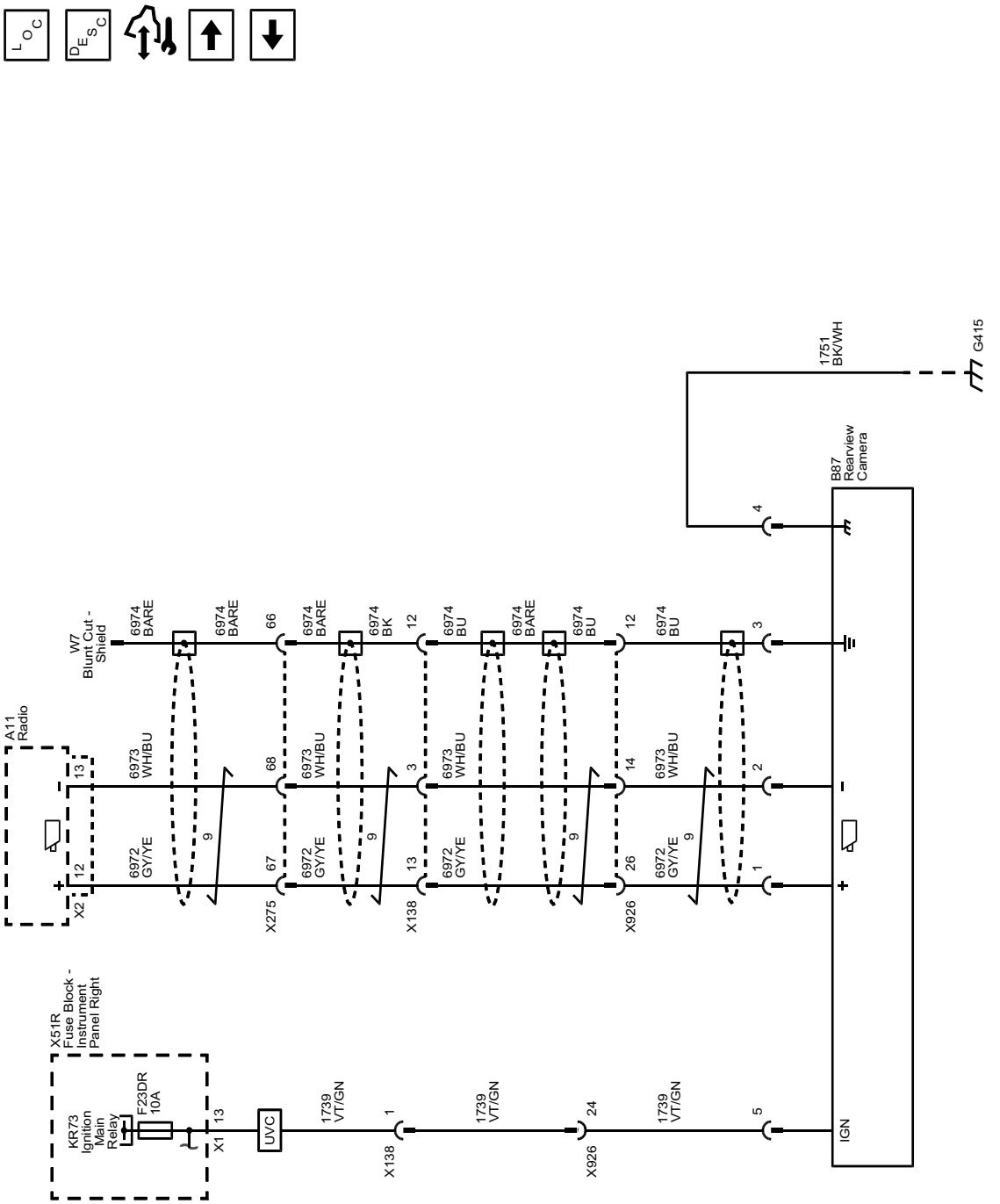
# Image Display Cameras

## Schematic and Routing Diagrams

## Image Display Camera Schematics (Rearview Camera (DRZ))

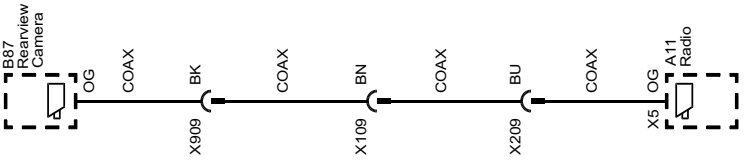


## Image Display Camera Schematics (Rearview Camera (UVC))



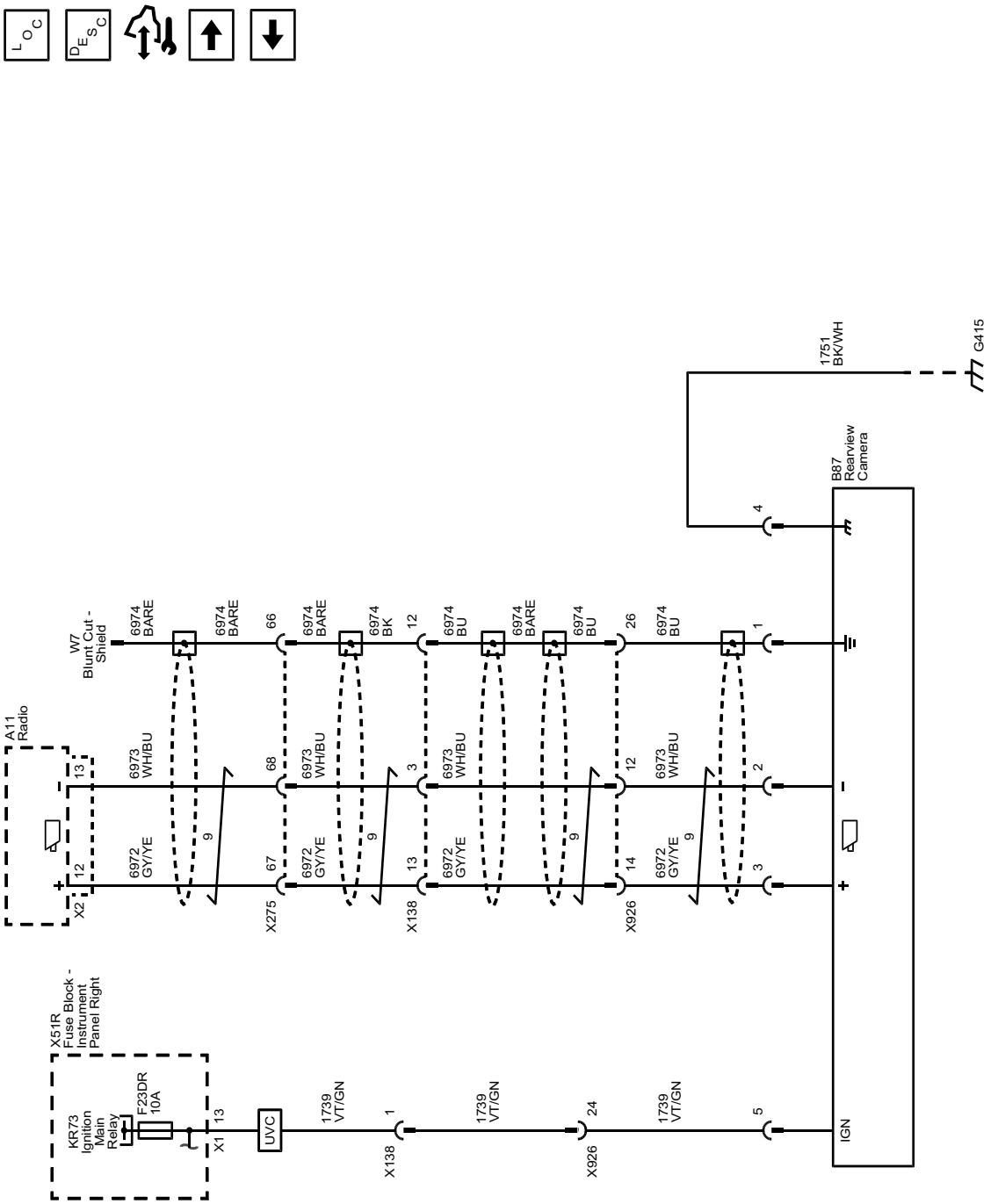
## Image Display Camera Schematics (Rearview Camera (UVB))



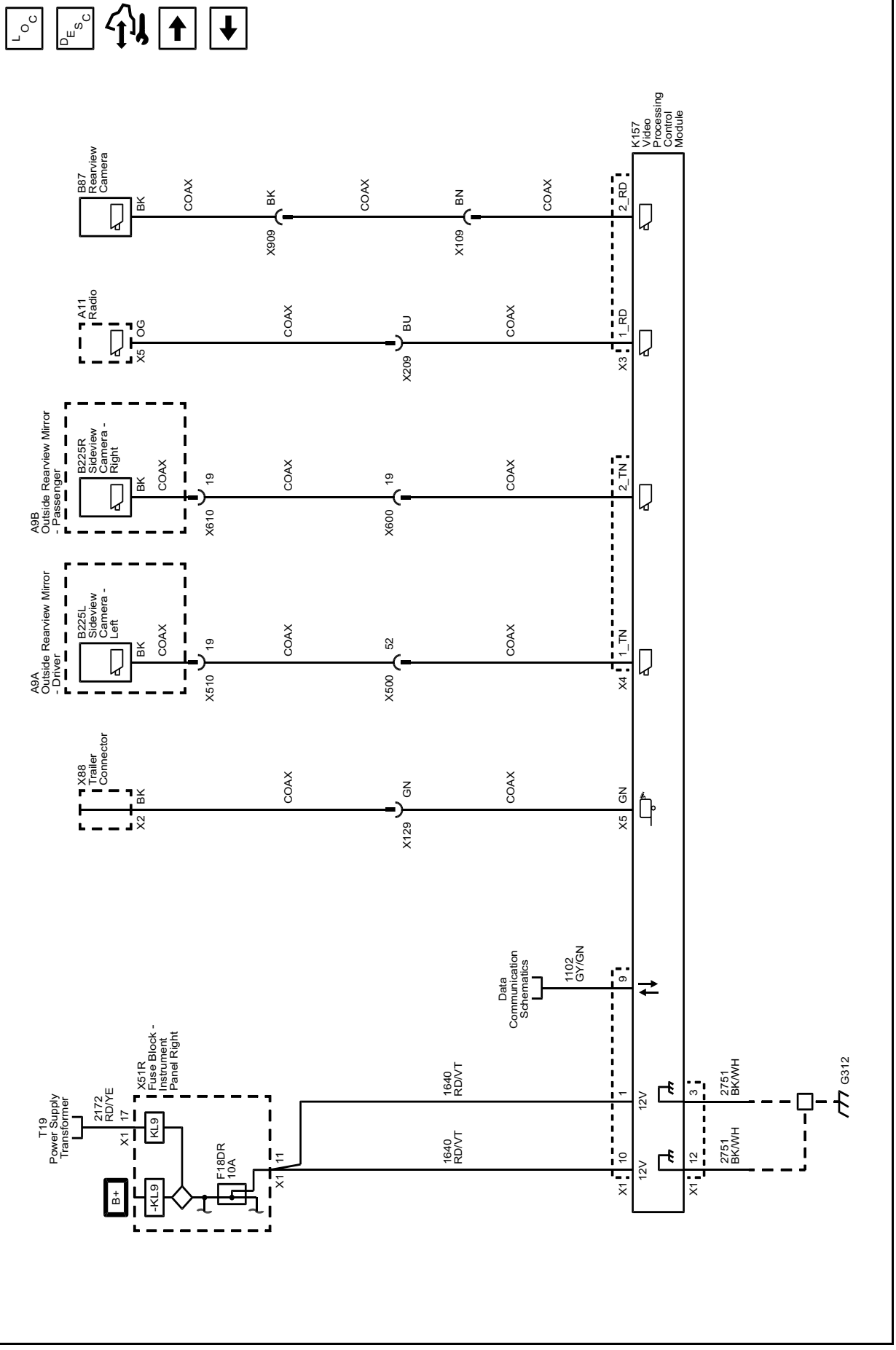



5255903

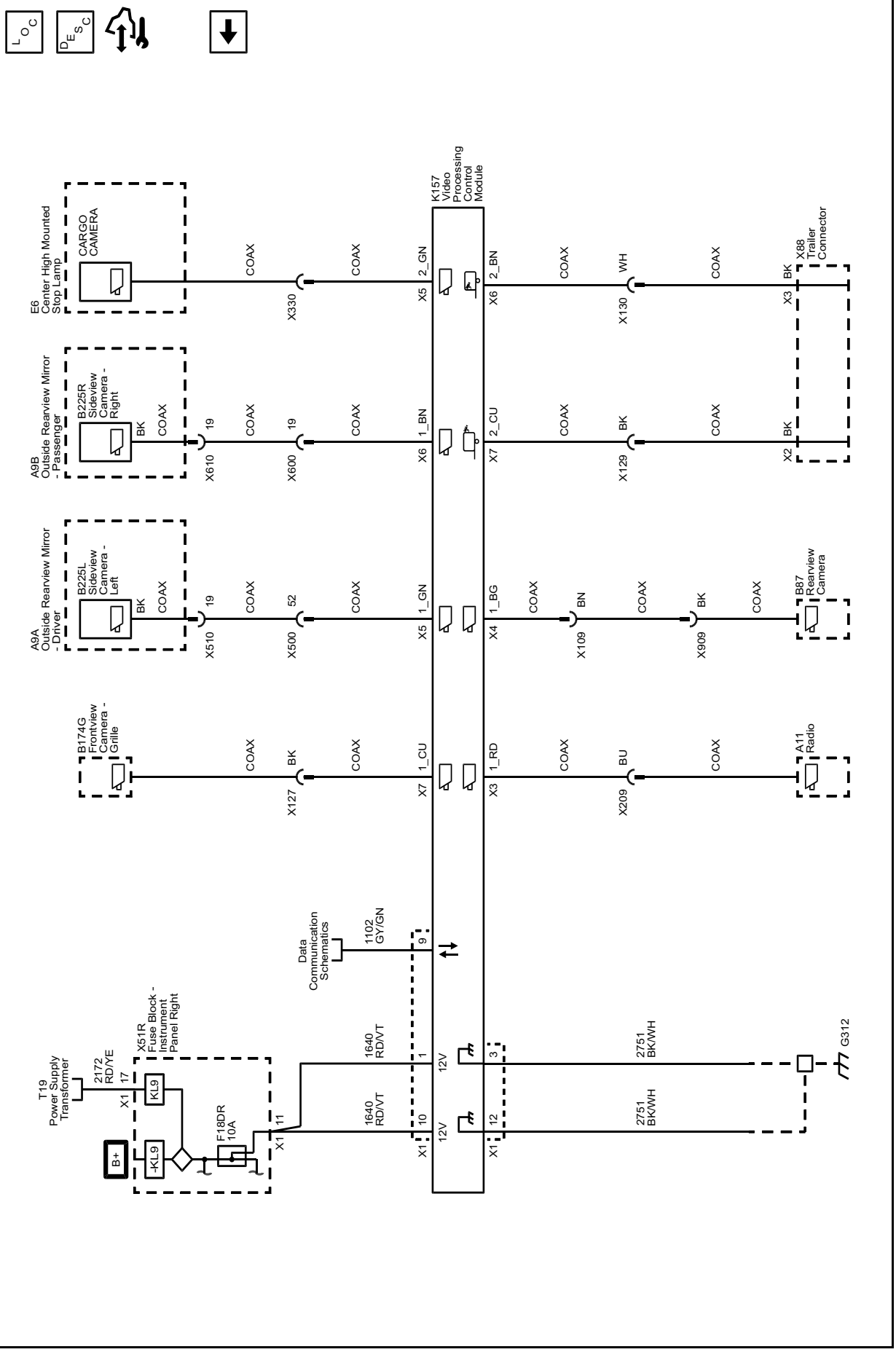
## Image Display Camera Schematics (Rearview Camera (5N5))



## Image Display Camera Schematics (270 Degree Vision (UVI))



## Image Display Camera Schematics (360 Degree Vision (UVS))



# Description and Operation

## Rearview Camera Full Display Mirror Description and Operation

If equipped, full display mirror provides a wider field of view than normally seen from the inside rearview mirror to assist when driving and changing lanes. When the tab under the inside rearview mirror is pulled rearward, a view of the area behind the vehicle displays on the mirror. The inside rearview camera full display mirror is connected to the outside rearview camera via a shielded coaxial cable.

When the tab under the inside rearview mirror is pulled rearward, a view of the area behind the vehicle displays on the mirror.

Adjust the rearview mirror for a clear view of the area behind the vehicle before turning on full display mirror. Use the three buttons on the bottom of the mirror to adjust the brightness, zoom, and tilt of the display. Make sure the light sensor is not covered when adjusting the brightness.

The inside rearview camera full display mirror may not work properly or display a clear image if:.

- It is dark.
- The sun or the beam of headlamps are shining directly into the camera lens.
- Ice, snow, mud, or anything else builds up on the camera lens. Clean the lens, rinse it with water, and wipe it with a soft cloth.

When the mirror detects that the camera is not sending a valid video signal, it “blue screens” with a “no video” decal for 3 seconds, then reverts back to the mirror.

## Rear Vision Camera Description and Operation (UVC)

### Rear Vision Camera System Operation

The rear vision camera system consists of a video camera located at the rear of the vehicle and the Rado.

When the transmission is placed into REVERSE, a signal indicates to the Radio that the vehicle is in reverse and image display is requested. The rear vision camera receives ignition voltage and a constant ground to power the camera. Video signal + and video signal – circuits carry the video image from the rear vision camera to the radio. Additionally, the video signal circuits are shielded to prevent any interference which may lead to a loss of video signal resolution and a degraded video image. The shield is provided a ground path by the rear vision camera.

The following conditions may cause a degraded rear vision camera image:

- Ice, snow, or mud has built up on the rear vision camera
- Dark conditions
- Extreme light conditions, such as glare from the sun or the headlights of another vehicle
- Damage to the rear of the vehicle
- Extreme high temperatures or extreme temperature changes

If a malfunction is detected in the system, Service Rear Vision Camera may be displayed on the Info Display Module as an indicator to the customer that a problem exists that requires service.

## Rear Vision Camera Description and Operation (UVB)

### Rear Vision Camera System Operation

The rear vision camera system consists of a video camera located at the rear of the vehicle and the Rado.

When the transmission is placed into REVERSE, a signal is sent to the Radio indicating that camera operation is requested. The rearview camera sends video information to the radio through a coax cable. The coax cable also provides power from the Radio to the rearview camera.

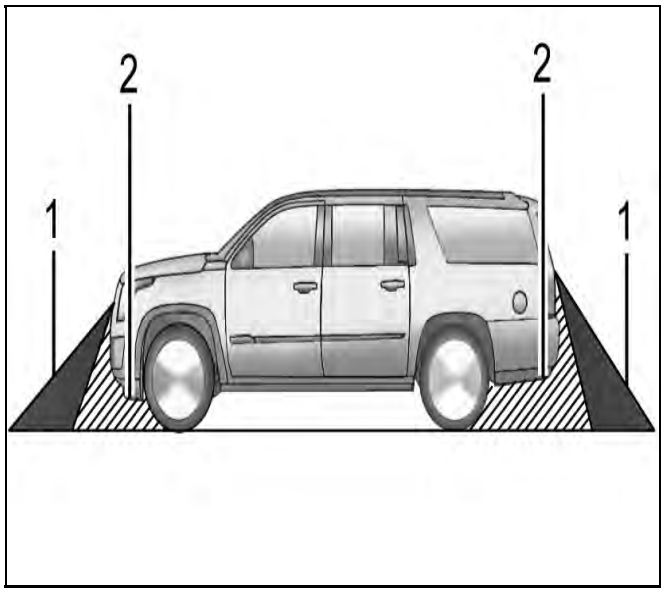
The following conditions may cause a degraded rear vision camera image:

- Ice, snow, or mud has built up on the rear vision camera
- Dark conditions
- Extreme light conditions, such as glare from the sun or the headlights of another vehicle
- Damage to the rear of the vehicle
- Extreme high temperatures or extreme temperature changes

If a malfunction is detected in the system, Service Rear Vision Camera may be displayed on the Info Display Module as an indicator to the customer that a problem exists that requires service.

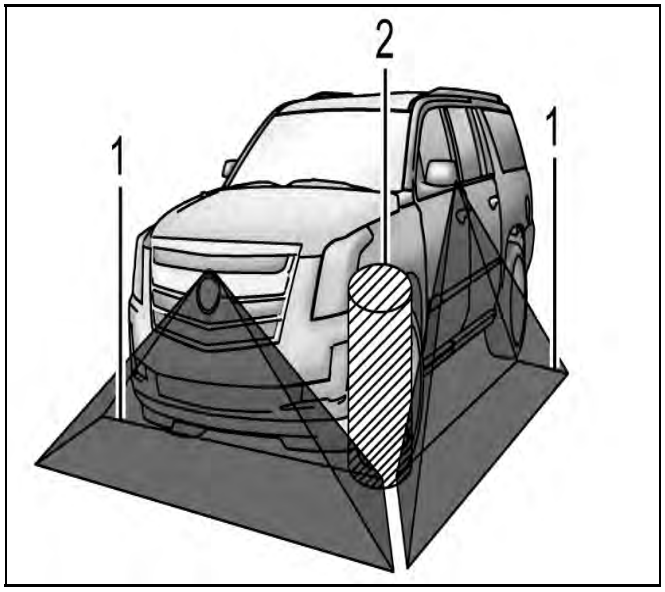
## Surround Vision Camera Description and Operation (UV2)

***Warning: The Surround Vision cameras have blind spots and will not display all objects near the corners of the vehicle. Folding outside mirrors that are out of position may not display surround view correctly. Always check around the vehicle when parking or backing.***




4291164

1. View Displayed by the Surround Vision Camera
2. Area Not Shown




4291749

1. View Displayed by the Surround Vision Camera
2. Area Not Shown

The surround vision camera system consists of the following components:

- B87 Rearview Camera
- B174G Frontview Camera – Grille
- K157 Video Processing Control Module
- A11 Radio **OR** K74 Human Machine Interface Module
- B225L Sideview Camera – Left
- B225R Sideview Camera – Right
- X20 Memory Card Receptacle (with XVR)

When the vehicle is traveling at speeds slower than 6 mph (10kph) the video processing control module will power up the cameras and send a video signal to the radio or human machine interface module.

The following conditions may cause a degraded surround vision camera image:

- Ice, snow, or mud has built up on the rear vision camera
- Dark conditions
- Extreme light conditions, such as glare from the sun or the headlights of another vehicle
- Damage to the rear of the vehicle
- Extreme high temperatures or extreme temperature changes

Surround Vision displays an overhead view of the area surrounding the vehicle, along with the front or rear camera views in the center stack. The front camera is in the grille or near the front emblem, the side cameras are on the bottom of the outside rearview mirrors, and the rear vision camera is above the license plate.

**Note:** Images from the Sideview Cameras are only displayed when both front doors are properly closed.

### Features of the Surround Vision System

- Rear camera (B87 Rearview Camera) view alongside overhead view is displayed in reverse
- Front camera (B174G Frontview Camera – Grille) view alongside overhead view is displayed after shifting out of reverse to Neutral or Drive
- Will display front view when front park assist object is within trigger range calibration value (30 cm (12 in) in a forward gear
- Image is removed from display when vehicle speed exceeds speed calibration (10kph/6 mph) or button press / screen touch

### System Operation

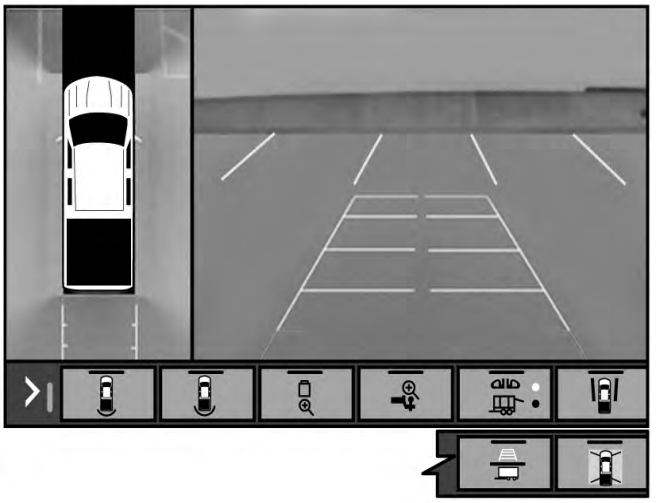
The video processing control module is connected to each camera via a shielded coaxial cable. The coaxial cable provides power for the camera and also carries the video image from the cameras to the video processing control module for processing. The video processing control module will then send the processed image output to infotainment system via another coaxial cable.

The video processing control module receives CAN information from Rear Park Assist object detection module and Steering Wheel angle from body control module during Reverse. A warning triangle may display during the 360 surround view screen if Rear Parking Assist has detected an object during a reverse. This triangle changes from amber to red and increases in size the closer the object. Also a dynamic guideline is displayed in Reverse to show the projected path of the vehicle.

If equipped, the video processing control module system may have a memory card receptacle (with XVR) located in the trunk. The memory card receptacle interfaces with the video processing control module via a USB cable. The memory card receptacle also receives fused battery voltage and ground from the video processing control module. The video processing control module uses the memory card as a mass storage device, similar to a USB storage device.

# Surround Vision Camera Description and Operation (Trailer Vision System (UVI/UVN/UVS))

***Warning: The Surround Vision cameras have blind spots and will not display all objects near the corners of the vehicle. Folding outside mirrors that are out of position may not display surround view correctly. Always check around the vehicle when parking or backing.***



5147466

The Surround Vision- Trailer Vision camera systems consists of the following components:

**UVI (4 channel)**

- K157 Video Processing Control Module
- A11 Radio
- P17 Info Display Module
- B87 Rearview Camera
- B225L Sideview Camera – Left
- B225R Sideview Camera – Right
- Trailer Camera (if customer installed)

**UVI with UVN (4 channel)**

- K157 Video Processing Control Module
- A11 Radio
- P17 Info Display Module
- B87 Rearview Camera
- B87CA Rearview Driver Information Camera-Cargo Area
- Trailer Rearview Camera (if customer installed)
- Trailer Interior Camera (if customer installed)

**UVS with UVN (8 channel)**

- K157 Video Processing Control Module
- A11 Radio
- P17 Info Display Module
- B87 Rearview Camera
- B225L Sideview Camera – Left
- B225R Sideview Camera – Right
- B174G Frontview Camera – Grille
- B87CA Rearview Driver Information Camera-Cargo Area
- Trailer Rearview Camera (if customer installed)
- Trailer Interior Camera (if customer installed)

**Features of the Surround Vision– Trailer Vision System**

- Rear camera (B87 Rearview Camera) alongside overhead view is displayed in reverse
- Trailer Rearview Camera (if equipped) and Trailer Interior Camera (if equipped) view are displayed when selected via the Trailering application on the Infotainment screen. These cameras can also be configured to create a Transparent Trailer View when configured accordingly.
- Cargo Bed Camera view (if equipped) is displayed when selected via the Trailering application on the Infotainment screen.
- Image is removed from display when vehicle speed exceeds speed calibration (10kph/6 mph) or button press / screen touch
- Hitch View (when selected) displays a rear view camera image with a single guideline, which aids in aligning the truck to the trailer. If the driver shifts into PARK while in Hitch View, the parking brake is engaged to keep the vehicle from rocking when the driver gets out of the vehicle to hitch the trailer.
- Surround Vision displays an overhead view of the area surrounding the vehicle, along with the rear camera views in the center stack. The side cameras are on the bottom of the outside rearview mirrors, and the rear vision camera is above the license plate, and a rearview trailer camera can be mounted on the rear of a trailer.

  **Note:** Images from the Sideview Cameras are only displayed when both front doors are properly closed.

**System Operation**

The video processing control module is connected to each camera via a shielded coaxial cable. The coaxial cable provides power for the camera and also carries the video image from the cameras to the video processing control module for processing. The video processing control module will then send the processed image output to infotainment system via another coaxial cable.

The video processing control module receives CAN information from Rear Park Assist object detection module and Steering Wheel angle from body control module during Reverse. A warning triangle may display during the surround view screen if Rear Parking Assist has detected an object during a reverse. This triangle changes from amber to red and increases in size the closer the object. Also a dynamic guideline is displayed in Reverse to show the projected path of the vehicle.

When the vehicle is traveling at speeds slower than 6 mph (10kph) the video processing control module will power up the cameras and send a video signal to the radio.

The following conditions may cause a degraded surround vision camera image:

- Ice, snow, or mud has built up on any camera
- Dark conditions
- Extreme light conditions, such as glare from the sun or the headlights of another vehicle
- Body damage to the vehicle
- Extreme high temperatures or extreme temperature changes

# BLANK

# Section 5

# Engine/Propulsion

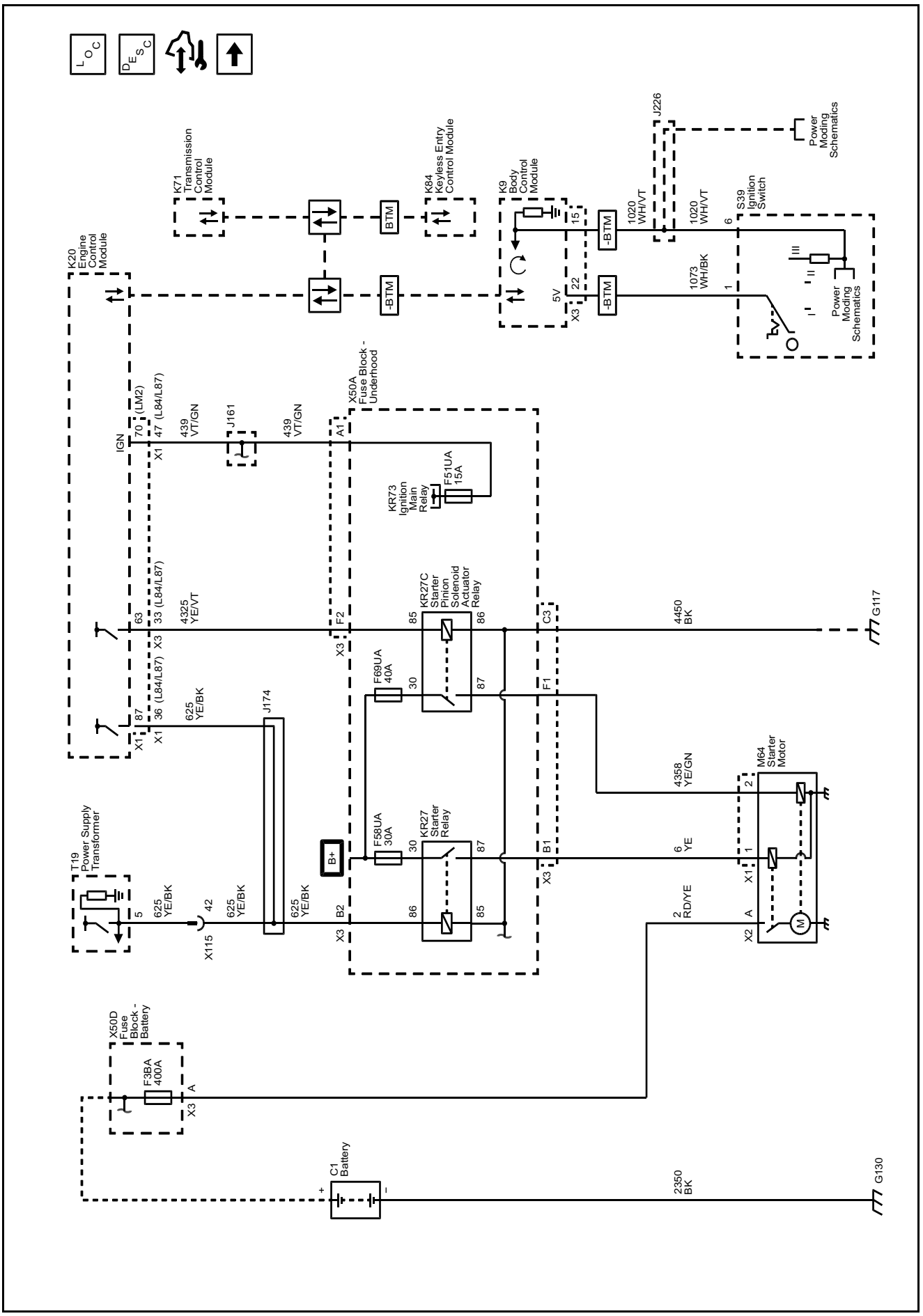
**12 V Starting and Charging** . . . . . 5-3
**Schematic and Routing Diagrams** . . . . . 5-3
Starting and Charging Schematics . . . . . 5-4
**Description and Operation** . . . . . 5-11
Battery Description and Operation . . . . . 5-11
Charging System Description and Operation . . . 5-11
Electrical Power Management Description and Operation . . . . . 5-15
Load Shed System Description and Operation . . . . . 5-18
Starting System Description and Operation . . . . 5-19
Stop/Start System Description and Operation (KL9) . . . . . 5-21

BLANK

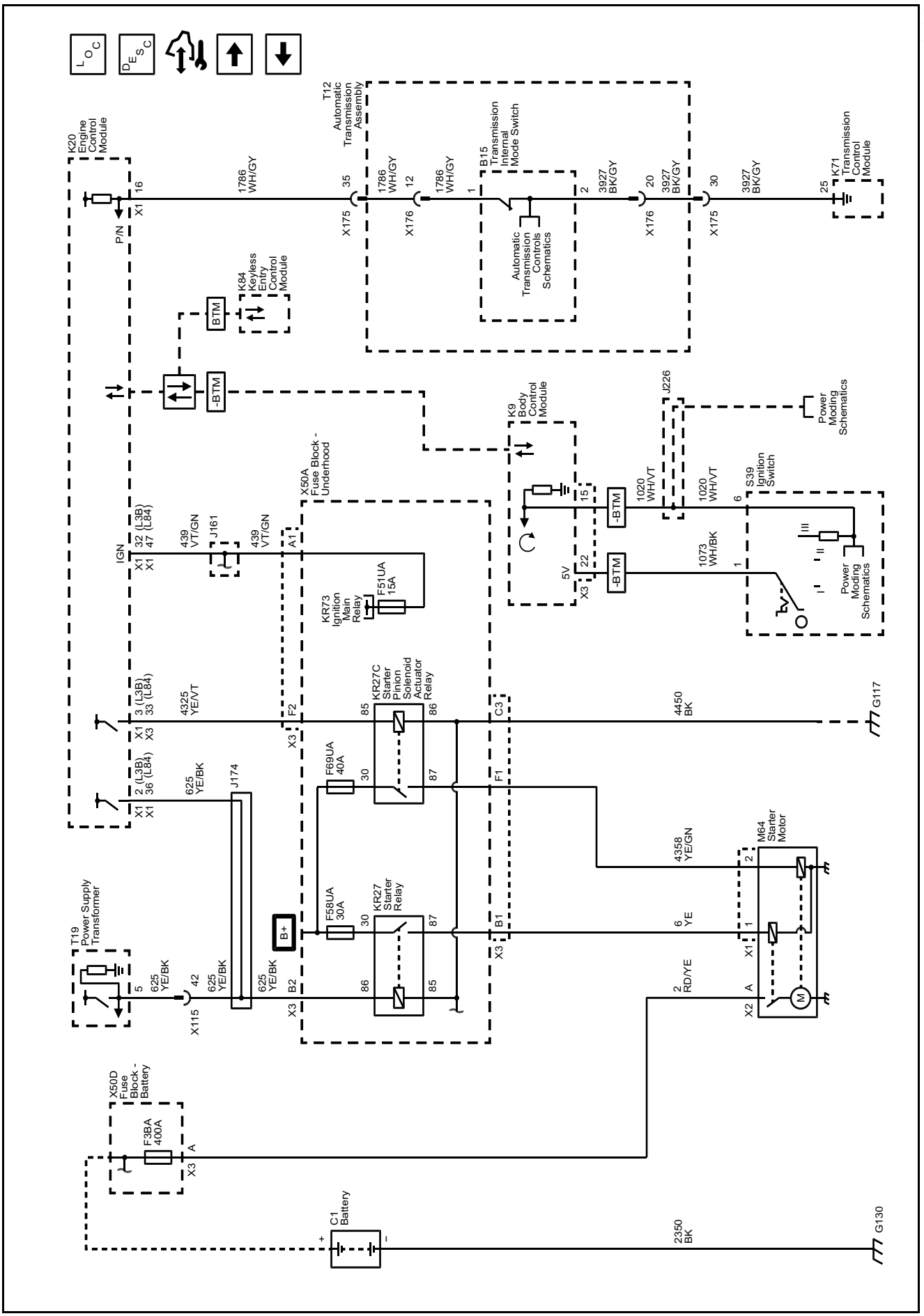
# 12 V Starting and Charging

## Schematic and Routing Diagrams

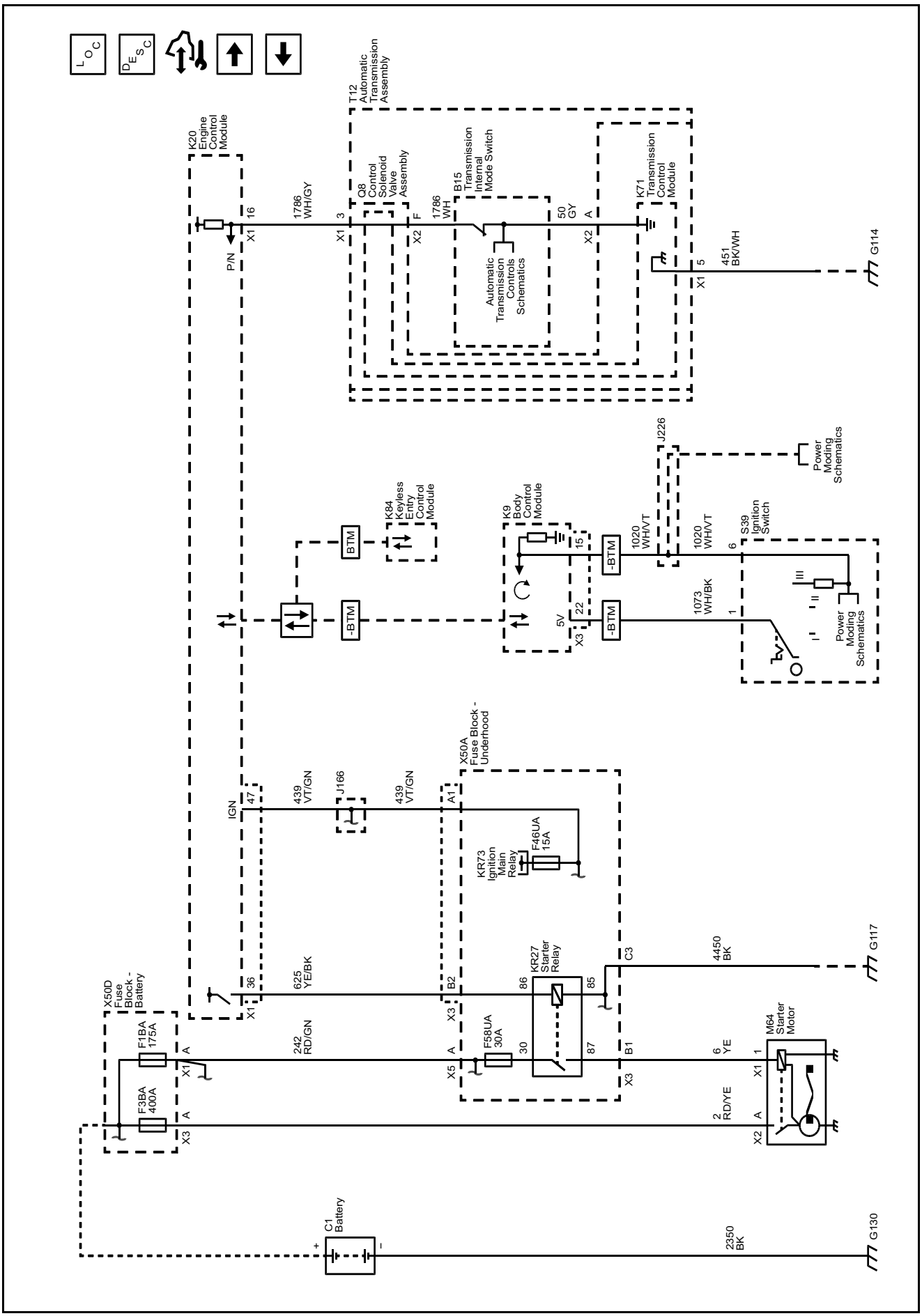
## Starting and Charging Schematics (Starting (MQB))



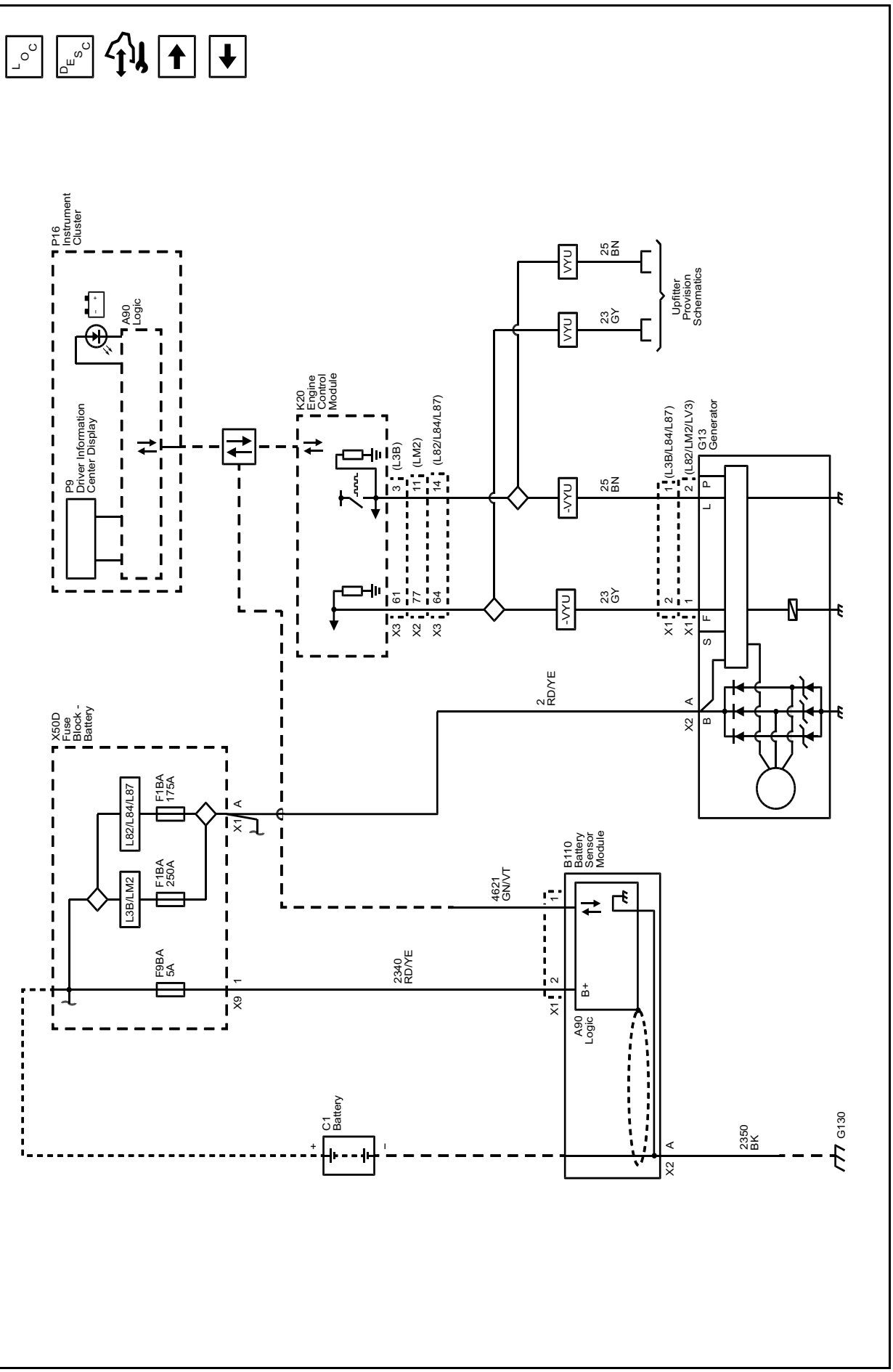
## Starting and Charging Schematics (Starting (MQE))



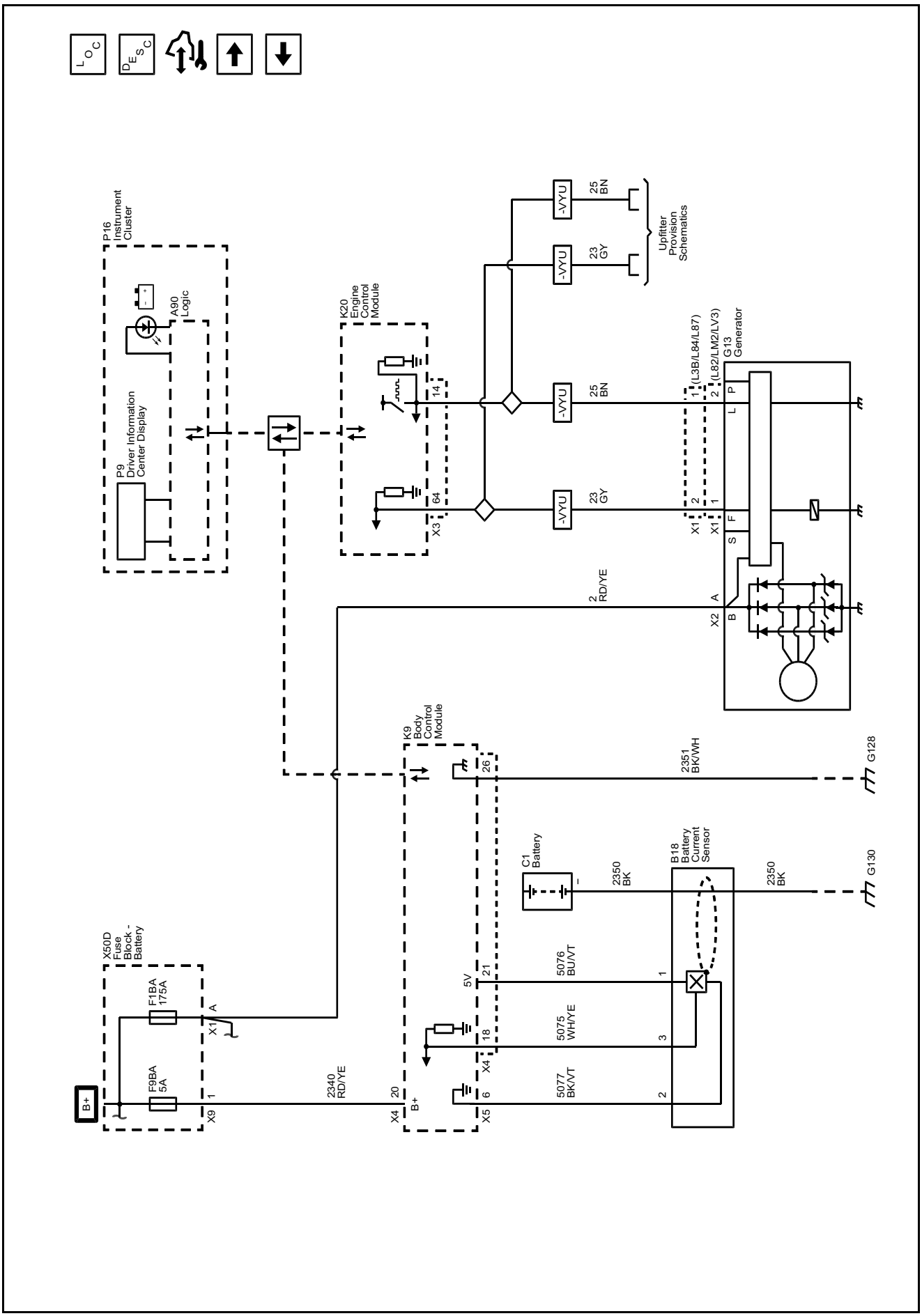
## Starting and Charging Schematics (Starting (MYC))



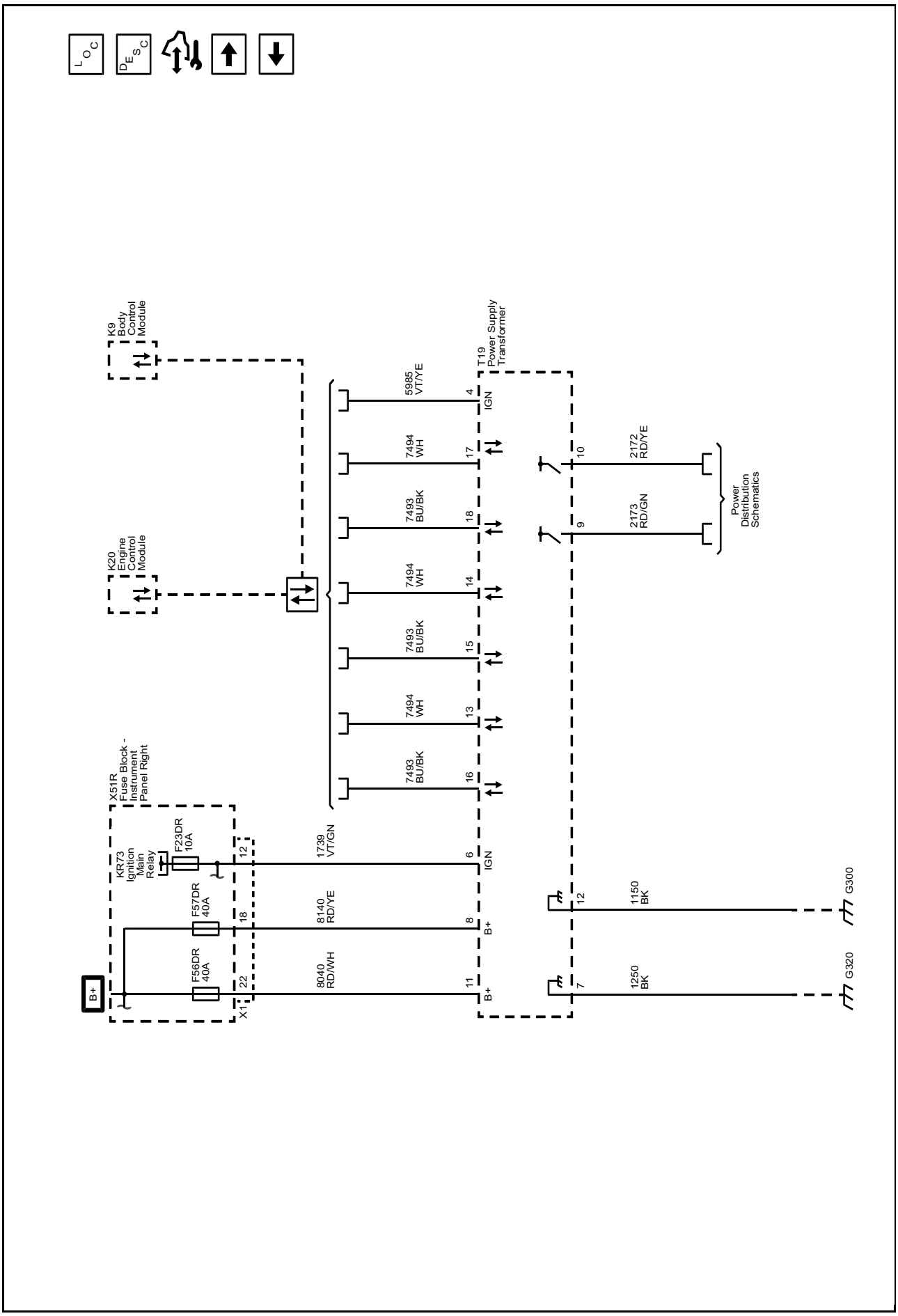
## Starting and Charging Schematics (Charging (KL9))



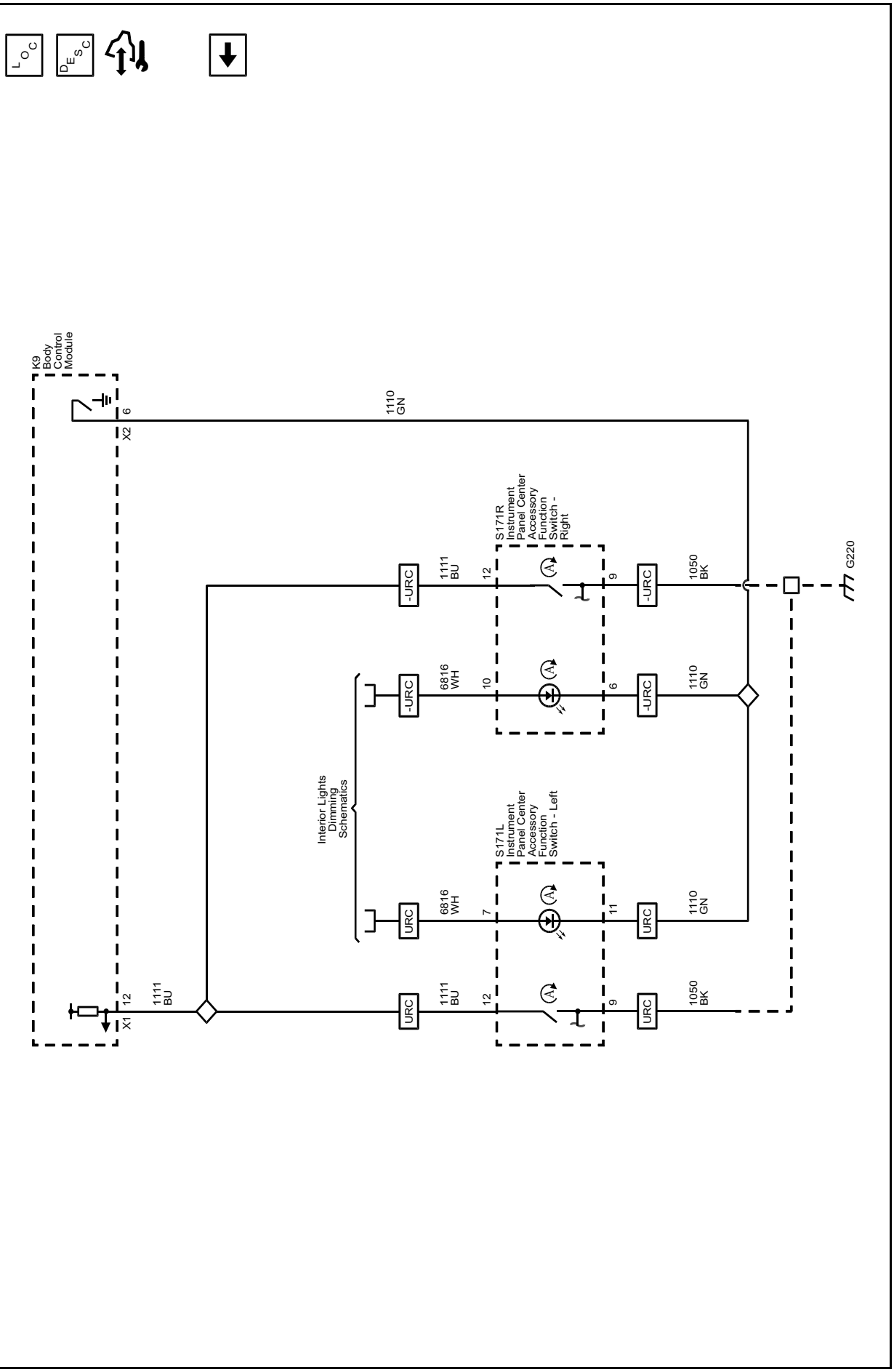
## Starting and Charging Schematics (Charging (-KL9))



## Starting and Charging Schematics (Power Supply Transformer Power, Ground, Serial Data, and Subsystem References (KL9))



## Starting and Charging Schematics (Stop/Start Controls (KL9))



# Description and Operation

## Battery Description and Operation

***Warning: Batteries produce explosive gases, contain corrosive acid, and supply levels of electrical current high enough to cause burns. Therefore, to reduce the risk of personal injury when working near a battery:***

- ***Always shield your eyes and avoid leaning over the battery whenever possible.***
- ***Do not expose the battery to open flames or sparks.***
- ***Do not allow the battery electrolyte to contact the eyes or the skin. Flush immediately and thoroughly any contacted areas with water and get medical help.***
- ***Follow each step of the jump starting procedure in order.***
- ***Treat both the booster and the discharged batteries carefully when using the jumper cables.***

Batteries that are no longer wanted must be disposed of by an approved battery recycler and must never be thrown in the trash or sent to a landfill.

Batteries that are not part of the vehicle itself, not the battery under the hood, must only be transported on public streets for business purposes via approved hazardous material transportation procedures.

Battery storage, charging and testing facilities in repair shops must meet various requirements for ventilation, safety equipment, material segregation, etc.

The maintenance free battery is standard. There are no vent plugs in the cover. The battery is completely sealed except for 2 small vent holes in the side. These vent holes allow the small amount of gas that is produced in the battery to escape.

The battery has 3 functions as a major source of energy:

- Engine cranking
- Voltage stabilizer
- Alternate source of energy with generator overload

### Battery Low Start Vehicle Message

The body control module (BCM) monitors battery positive voltage to determine battery state of charge. If one or more of the BCM battery positive voltage terminals measure less than approximately 11.6V compared to the BCM ground circuits, this message will display and four chimes may sound. Start the vehicle immediately. If the vehicle is not started and the battery continues to discharge, the climate controls, heated seats, and audio systems will shut off and the vehicle may require a jump start. These systems will function again after the vehicle is started.

### Battery Ratings

A battery has 2 ratings:

- Cold cranking amperage
- Amperage hours

When a battery is replaced use a battery with similar ratings. See battery specification label on the original battery.

### Amperage Hours

The amperage hour rating tells you how much amperage is available when discharged evenly over a 20 hour period. The amperage hour rating is cumulative, so in order to know how many constant amperage the battery will output for 20 h, you have to divide the amperage hour rating by 20. Example: If a battery has an amperage hour rating of 74, dividing by 20 = 3.75. Such a battery can carry a 3.75 A load for 20 hours before dropping to 10.5 V. (10.5 V is the fully discharged level, at which point the battery needs to be recharged.) A battery with an amperage hour rating of 55 will carry a 2.75 A load for 20 hours before dropping to 10.5 V.

### Cold Cranking Amperage

The cold cranking amperage is an indication of the ability of the battery to crank the engine at cold temperatures. The cold cranking amperage rating is the minimum amperage the battery must maintain for 30 seconds at −18°C (0°F) while maintaining at least 7.2 V. See battery label for the cold cranking amperage rating of this battery.

## Charging System Description and Operation

### Electrical Power Management Overview

The electrical power management system is designed to monitor and control the charging system and send diagnostic messages to alert the driver of possible problems with the battery and generator. This electrical power management system primarily utilizes existing on-board computer capability to maximize the effectiveness of the generator, to manage the load, improve battery state-of-charge and life, and minimize the system's impact on fuel economy. The electrical power management system performs 3 functions:

- Monitor the battery voltage and estimate the battery condition
- Take corrective actions by boosting idle speeds, and adjusting the regulated voltage
- Perform diagnostics and driver notification

The battery condition is estimated during ignition/vehicle off and during ignition/vehicle on. During ignition/vehicle off the state-of-charge of the battery is determined by measuring the open-circuit voltage. The state-of-charge is a function of the acid concentration and the internal resistance of the battery, and is estimated by reading the battery open circuit voltage when the battery has been at rest for several hours.

Any time the ignition/vehicle is on, the vehicle algorithm continuously estimates battery state-of-charge based on adjusted net amp hours, battery capacity, initial state-of-charge, and calculated temperature.

While the engine is running, the battery degree of discharge is primarily determined by the integrated battery current sensor, to obtain net amp hours.

In addition, the electrical power management function is designed to perform regulated voltage control to improve battery state-of-charge, battery life, and fuel economy. This is accomplished by using knowledge of the battery state-of-charge and temperature to set the charging voltage to an optimum battery voltage level for recharging without detriment to battery life.

## Charging System Components

### Generator

The engine drive belt drives the generator. When the rotor is spun, it induces an alternating current (AC) into the stator windings. The AC voltage is then sent through a series of diodes for rectification. The rectified voltage has been converted into a direct current (DC) for use by the vehicles electrical system to maintain electrical loads and the battery charge. The voltage regulator integral to the generator controls the output of the generator; It is not serviceable. The voltage regulator controls the amount of current provided to the rotor. If the generator has field control circuit fault, the generator defaults to an output voltage of 13.8 V.

The generator is serviced as a complete assembly. If there is a diagnosed fault in the generator, it must be replaced as an assembly.

### Generator Pulley

The pulley drives the Generator via the engine drive belt. There are 2 types of pulleys:

1. Conventional solid Pulley which is bolted to the Generator stator shaft. This Pulley can be serviced separately.

2. One Way Clutch Pulley or Overrunning Alternator Decoupler Pulley allows the Generator to spin freely when the engine rapidly slows down on sudden deceleration. This part is not serviceable and the Generator needs to be replaced as an assembly.

### Body Control Module (BCM)

The BCM communicates with the Engine Control Module (ECM) and the instrument cluster for electrical power management operation. The BCM determines the output of the generator and sends the information to the ECM for control of the generator turn on signal circuit. It monitors the generator field duty cycle signal circuit information sent from the ECM for control of the generator. It monitors the battery current sensor, the battery positive voltage circuit, and estimates battery temperature to determine battery state of charge. The BCM also performs idle boost.

### Battery Current Sensor (if applicable)

The Battery Current Sensor is a serviceable component that is connected to the negative battery cable at the battery. The battery current sensor is a 3-wire hall effect current sensor. The battery current sensor monitors the battery current. It directly inputs to the BCM. It creates a 5 volt Pulse Width Modulation (PWM) signal of 128 Hz with a duty cycle of 0–100%. Normal duty cycle is between 5–95%. Between 0–5% and 95–100% are for diagnostic purposes.

### Battery Sensor Module (if applicable)

The BCM monitors the Battery Sensor Module for battery state of current, state of health, and battery charge via serial data. If the battery is determined to be in poor state of health or having a low state of charge, the BCM will not allow the ECM to perform an auto-stop.

### Engine Control Module (ECM)

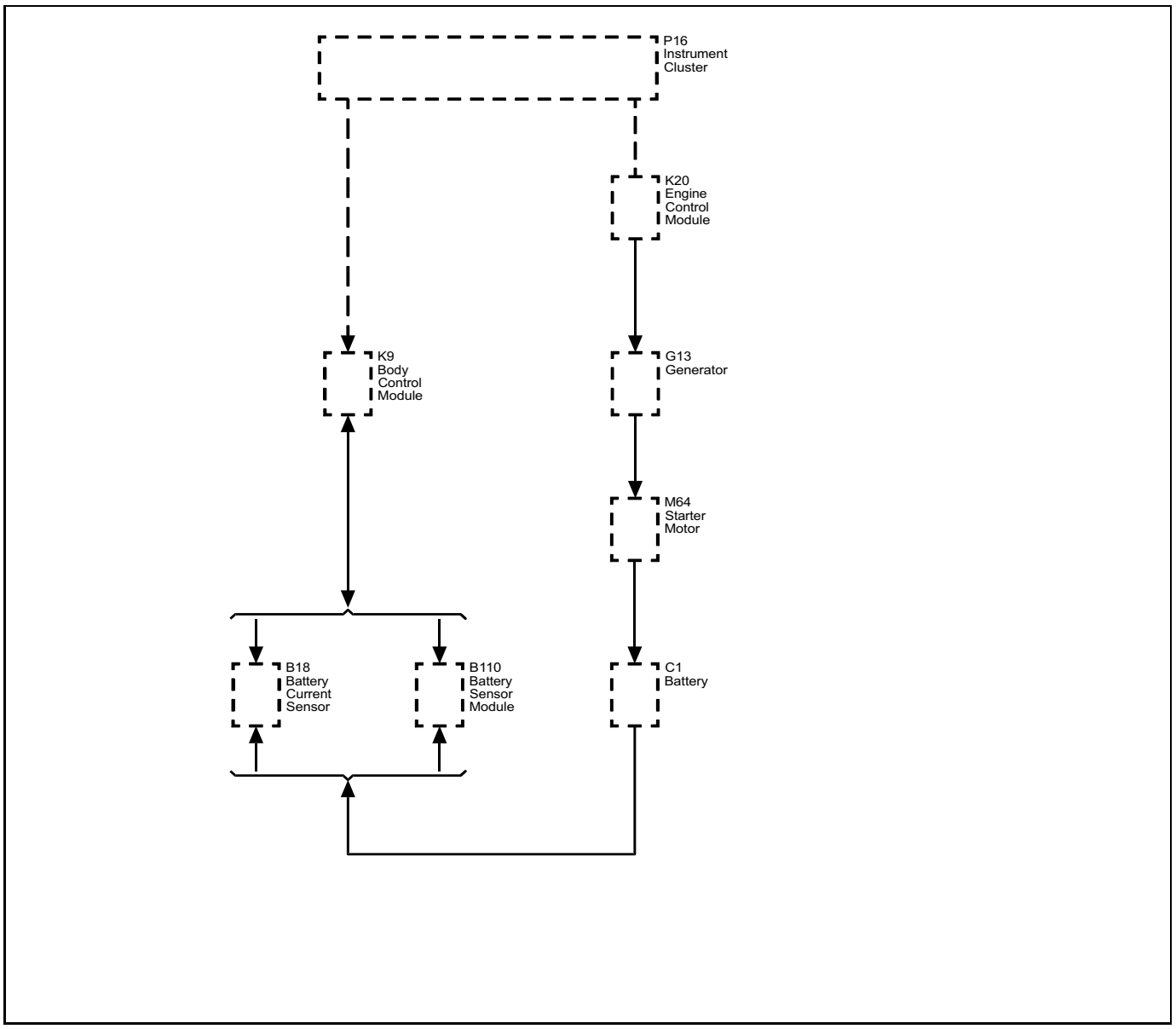
When the engine is running, the generator turn-on signal is sent to the generator from the ECM, turning on the regulator. The generator's voltage regulator controls current to the rotor, thereby controlling the output voltage. The rotor current is proportional to the electrical pulse width supplied by the regulator. When the engine is started, the regulator senses generator rotation by detecting AC voltage at the stator through an internal wire. Once the engine is running, the regulator varies the field current by controlling the pulse width. This regulates the generator output voltage for proper battery charging and electrical system operation. The generator field duty terminal is connected internally to the voltage regulator and externally to the ECM. When the voltage regulator detects a charging system problem, it grounds this circuit to signal the ECM that a problem exists. The ECM monitors the generator field duty cycle signal circuit, and receives control decisions based on information from the BCM.

### Instrument Cluster

As a means of displaying the charging system functions, some vehicles may be equipped with a voltmeter gauge on the instrument cluster and/or a system voltage display in the driver information center. These will indicate the current vehicle system voltage.

The instrument cluster also provides customer notification if there is a concern with the charging system. There are two means of notification: a charge indicator on the instrument cluster and/or a service system message displayed on the Driver Information Center (DIC) if equipped.

## Charging System Block Diagram




3603724

## Charging System Operation

The purpose of the charging system is to maintain the battery charge and vehicle loads. There are 6 modes of operation and they include:

- Battery Sulfation Mode
- Charge Mode
- Fuel Economy Mode
- Head lamp Mode
- Start Up Mode
- Voltage Reduction Mode

The ECM Controls the Generator through the generator turn–on signal circuit, also known as the Generator L-terminal. The ECM monitors the generator performance though the Generator field duty cycle signal circuit, also known as the generator F-terminal.

The Generator turn–on signal (Generator L-terminal) is a Pulse Width Modulation (PWM) signal of 128 Hz with a duty cycle of 0–100%. Normal duty cycle is between 5–95%. 0–5% and 95–100% are for diagnostic purposes, with 0–5% monitoring for an open circuit and 95–100% monitoring for a short to ground at a fixed 13.8 V. The following table shows the commanded duty cycle and output voltage of the Generator:

| Commanded Duty Cycle | Generator Output Voltage (+/- .25 V) |
|---|---|
| 0–5% | 13.8 V |
| 10% | 11 V |
| 20% | 11.56 V |
| 30% | 12.13 V |
| 40% | 12.69 V |
| 50% | 13.25 V |
| 60% | 13.81 V |
| 70% | 14.38 V |
| 80% | 14.94 V |

| Commanded Duty Cycle | Generator Output Voltage (+/- .25 V) |
|---|---|
| 90% | 15.5 V |
| 95–100% | 13.8 V |

The Generator provides a PWM feedback signal of the Generator voltage output through the Generator field duty cycle signal circuit to the ECM. This information is sent to the Body Control Module (BCM). The Generator field duty cycle signal (Generator F-terminal) is a PWM signal of 60–460 Hz with a duty cycle of 0–100%. Normal duty cycle is between 5–100%. 0–5% is reserved for diagnostic purposes.

As the charging systems works to maintain the battery charge and manage vehicle electrical loads, it is normal for the voltmeter gauge on the instrument cluster or the system voltage displayed in the DIC to fluctuate or change. This does not indicate a malfunction. Depending on the battery state of charge and the vehicle electrical load, these values may be anywhere from 12.5 V to 15.5 V.

## Charging System Modes

### Battery Sulfation Mode

The BCM will enter this mode when the interpreted Generator output voltage is less than 13.2 V for 45 minutes. When this condition exists the BCM will enter Charge Mode for 2–3 minutes. The BCM will then determine which mode to enter depending on voltage requirements.

### Charge Mode

The BCM will enter Charge Mode when ever one of the following conditions are met:

- Windshield wipers are ON for more than 3 s.
- Climate Control Voltage Boost Mode Request is true, as sensed by the HVAC control module via serial data. High speed cooling fan, rear defogger, and HVAC high speed blower operation can cause the BCM to enter the Charge Mode.
- The estimated battery temperature is less than 0° C (32°F).
- Battery State of Charge is less than 80%.
- Vehicle speed is greater than 145 km/h (90 mph)
- A current sensor malfunction exists.
- System voltage is determined to be below 12.56 V

When any one of these conditions is met, the system will set targeted generator output voltage to a charging voltage between 13.9–15.5 V, depending on the battery state of charge and estimated battery temperature.

### Fuel Economy Mode

The BCM will enter Fuel Economy Mode when the estimated battery temperature is at least 0°C (32°F) but less than or equal to 80°C (176°F), the calculated battery current is less than 15 A and greater than −8 A, and the battery state-of-charge is greater than or equal to 80%. Its targeted generator output voltage is the open circuit voltage of the battery and can be between 12.5–13.1 V. When fuel economy mode is active, the generator is not charging, only maintaining open circuit battery voltage. The BCM will exit this mode and enter Charge Mode when any of the conditions described above are present.

### Headlamp Mode

The BCM will enter Headlamp Mode when ever the head lamps are ON (high or low beams). Voltage will be regulated between 13.9–14.5 V.

### Start Up Mode

When the engine is started the BCM sets a targeted generator output voltage of 14.5 V for 30 s.

### Tow/Haul Mode (if applicable)

Pressing the Tow/Haul Mode button located on the center stack, the vehicle system voltage is raised and the remote (non-vehicle) battery will be charged. Having the headlamps on will raise the system voltage and if the Tow/Haul button is applied it will not serve any purpose. The voltage is regulated between 13.9-14.5 V.

## Instrument Cluster Operation

### Charge Indicator Operation

The instrument cluster illuminates the charge indicator and displays a warning message in the driver information center if equipped, when the one or more of the following occurs:

- The ECM detects that the generator output is less than 11 V or greater than 16 V. The instrument cluster receives a serial data message from the ECM requesting illumination.
- The instrument cluster determines that the system voltage is less than 11 V or greater than 16 V for more than 30 s. The instrument cluster receives a serial data message from the BCM indicating there is a system voltage range concern.
- The instrument cluster performs the displays test at the start of each ignition cycle. The indicator illuminates for approximately 3 s.

### Driver Information Center Message: BATTERY NOT CHARGING SERVICE CHARGING SYSTEM or SERVICE BATTERY CHARGING SYSTEM

The BCM and the ECM will send a serial data message to the driver information center for the BATTERY NOT CHARGING SERVICE CHARGING SYSTEM or SERVICE BATTERY CHARGING SYSTEM message to be displayed. It is displayed when a charging system DTC is a current DTC. The message is turned off when the conditions for clearing the DTC have been met.

### Voltmeter Gauge and/or System Voltage Display (if equipped)

As a means of displaying the charging system functions, some vehicles may be equipped with a voltmeter gauge on the instrument cluster and/or a system voltage display in the driver information center. These will indicate the current vehicle system voltage.

As the charging systems works to maintain the battery charge and manage vehicle electrical loads, it is normal for the voltmeter gauge on the instrument cluster or the system voltage display in the driver information center to fluctuate or change. This does not indicate a

malfunction. Depending on the battery state of charge and the vehicle electrical load, these values may be anywhere from 12.5 V to 15.5 V.

# Electrical Power Management Description and Operation

## Electrical Power Management

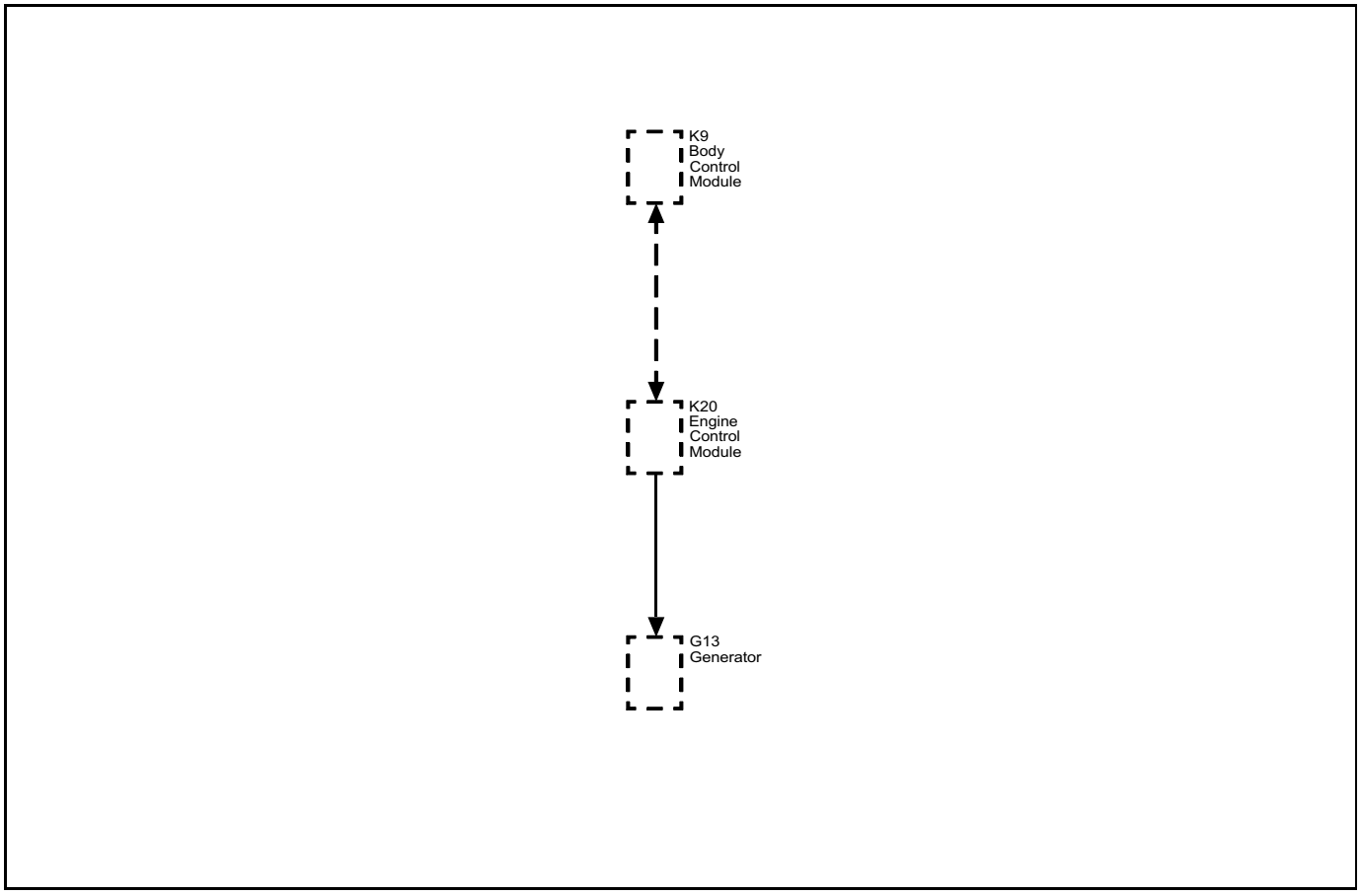
The electrical power management is used to monitor and control the charging system and alert the driver of possible problems within the charging system. The electrical power management system makes the most efficient use of the generator output, improves the battery state-of-charge, extends battery life, and manages system electrical loads.

The load shed operation is a means of reducing electrical loads during a low voltage or low battery state-of-charge condition.

The idle boost operation is a means of improving generator performance during a low voltage or low battery state-of-charge condition.

Each electrical power management function, either idle boost or load shed, is activated in incremental steps. For example, idle boost 1 must be active before idle boost 2 can be active. The criteria used by the body control module (BCM) to regulate electrical power management are outlined below:

### Electrical Power Management Block Diagram




3621782

## Idle Boost and Load Shed With Current Sensor

| Function | Battery Temperature Calculation | Battery Voltage Calculation | Amp-Hour Calculation | Action Taken |
|---|---|---|---|---|
| Idle Boost 1 Start | Less Than −15°C (5°F) | Less Than 13 V | — | First level Idle boost requested |
| Idle Boost 1 Start | — | — | Battery has a net loss greater than 0.6 Ah | First level Idle boost requested |
| Idle Boost 1 Start | — | Less Than 11 V | — | First level Idle boost requested |
| Idle Boost 1 End | Greater Than −10°C (14°F) | Greater Than 12 V | Battery has a net loss less than 0.2 Ah | First level Idle boost request cancelled |
| Idle Boost 2 Start | — | — | Battery has a net loss greater than 1.6 Ah | Second level Idle boost requested |
| Idle Boost 2 Start | — | Less Than 11 V | — | Second level Idle boost requested |
| Idle Boost 2 End | — | Greater Than 12 V | Battery has a net loss less than 0.8 Ah | Second level Idle boost request cancelled |
| Load Shed 1 Start | — | — | Battery has a net loss of 4 Ah | Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 20% of their cycle |
| Load Shed 1 Start | — | Less Than 11 V | — | Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 20% of their cycle |
| Load Shed 1 End | — | Greater Than 12 V | Battery has a net loss of less than 2 Ah | Clear Load Shed 1 |
| Idle Boost 3 Start | — | — | Battery has a net loss of 10 Ah | Third level Idle boost requested |
| Idle Boost 3 Start | — | Less Than 11 V | — | Third level Idle boost requested |
| Idle Boost 3 End | — | Greater Than 12 V | Battery has a net loss of less than 6.0 Ah | Third level Idle boost request cancelled |
| Load Shed 2 Start | — | — | Battery has a net loss greater than 12 Ah | Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC |
| Load Shed 2 Start | — | Less Than 11 V | — | Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC |
| Load Shed 2 End | — | Greater Than 12 V | Battery has a net loss of less than 8 Ah | Clear Load Shed 2 |
| Load Shed 3 Start | — | Less Than 11.9 V | Battery has a net loss greater than 20 Ah | Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 100% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC |

## Idle Boost and Load Shed With Current Sensor (cont'd)

| Function | Battery Temperature Calculation | Battery Voltage Calculation | Amp-Hour Calculation | Action Taken |
|---|---|---|---|---|
| Load Shed 3 Start | — | Less Than 11 V | — | Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 100% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC |
| Load Shed 3 End | — | Greater Than 12.6 V | Battery has a net loss of less than 13 Ah | Clear Load Shed 3 |

## Idle Boost and Load Shed Without Current Sensor (based on battery voltage)

| Function | Battery Temperature Calculation | Battery Voltage Calculation | Action Taken |
|---|---|---|---|
| Idle Boost 1 Start | Less Than −15°C (5°F) | Less Than 13 V | First level Idle boost requested |
| Idle Boost 1 Start | — | Less Than 12.6 V | First level Idle boost requested |
| Idle Boost 1 End | Greater Than −15°C (5°F) | — | First level Idle boost request cancelled |
| Idle Boost 1 End | — | Greater Than 13 V | First level Idle boost request cancelled |
| Idle Boost 2 Start | — | Less Than 12.4 V | Second level Idle boost requested |
| Idle Boost 2 End | — | Greater Than 12.5 V | Second level Idle boost request cancelled |
| Load Shed 1 Start | — | Less Than 12.3 V | Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 20% of their cycle |
| Load Shed 1 End | — | Greater Than 12.4 V | Clear Load Shed 1 |
| Idle Boost 3 Start | — | Less Than 10 V | Third level Idle boost requested |
| Idle Boost 3 End | — | Greater Than 12.3 V | Third level Idle boost request cancelled |
| Load Shed 2 Start | — | Less Than 12.1 V | Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC |
| Load Shed 2 End | — | Greater Than 12.2 V | Clear Load Shed 2 |
| Load Shed 3 Start | — | Less Than 11.9 V | Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 100% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC |
| Load Shed 3 End | — | Greater Than 12.0 V | Clear Load Shed 3 |

# Load Shed System Description and Operation

## Electrical Power Management

The electrical power management is used to monitor and control the charging system and alert the driver of possible problems within the charging system. The electrical power management system makes the most efficient use of the generator output, improves the battery state-of-charge, extends battery life, and manages system electrical loads.

The load shed operation is a means of reducing electrical loads during a low voltage or low battery state-of-charge condition.

The idle boost operation is a means of improving generator performance during a low voltage or low battery state-of-charge condition.

Each electrical power management function, either idle boost or load shed, is discrete. No two functions are active at the same time. Idle boost is activated in incremental steps, idle boost 1 must be active before idle boost 2 can be active. The criteria used by the body control module (BCM) to regulate electrical power management are outlined below:

| Function | Battery Temperature Calculation | Battery Voltage Calculation | Amp-Hour Calculation | Action Taken |
|---|---|---|---|---|
| Idle Boost 1 Start | Less Than −15°C (5°F) | Less Than 13 V | — | First level Idle boost requested |
| Idle Boost 1 Start | — | — | Battery has a net loss greater than 0.6 AH | First level Idle boost requested |
| Idle Boost 1 Start | — | Less Than 10.9 V | — | First level Idle boost requested |
| Idle Boost 1 End | Greater Than −15°C (5°F) | Greater Than −12 V | Battery has a net loss less than 0.2 AH | First level Idle boost request cancelled |
| Load Shed 1 Start | — | — | Battery has a net loss of 4 AH | Rear Defrost, Heated Mirrors, Heated Seats cycled OFF for 20% of their cycle |
| Load Shed 1 Start | — | Less Than 10.9 V | — | Rear Defrost, Heated Mirrors, Heated Seats cycled OFF for 20% of their cycle |
| Load Shed 1 End | — | Greater Than 12 V | Battery has a net loss of less than 2 AH | Clear Load Shed 1 |
| Idle Boost 2 Start | — | — | Battery has a net loss greater than 1.6 AH | Second level Idle boost requested |
| Idle Boost 2 Start | — | Less Than 10.9 V | — | Second level Idle boost requested |
| Idle Boost 2 End | — | Greater Than 12 V | Battery has a net loss less than 0.8 AH | Second level Idle boost request cancelled |
| Idle Boost 3 Start | — | — | Battery has a net loss of 10.0 AH | Third level Idle boost requested |
| Idle Boost 3 Start | — | Less Than 10.9 V | — | Third level Idle boost requested |
| Idle Boost 3 End | — | Greater Than 12 V | Battery has a net loss of less than 6.0 AH | Third level Idle boost request cancelled |
| Load Shed 2 Start | — | Less Than 10.9 V | Battery has a net loss greater than 12 AH | Rear Defrost, Heated Mirrors, Heated Seats cycled OFF for 50% of their cycle. The |

| Function | Battery Temperature Calculation | Battery Voltage Calculation | Amp-Hour Calculation | Action Taken |
|---|---|---|---|---|
| | | | | BATTERY SAVER ACTIVE message will be displayed on the DIC |
| Load Shed 2 Start | — | Less Than 10.9 V | — | Rear Defrost, Heated Mirrors, Heated Seats cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC |
| Load Shed 2 End | — | Greater Than 12.6 V | Battery has a net loss of less than 10.5 AH | Clear Load Shed 2 |
| Load Shed 3 Start | — | Less Than 11.9 V | Battery has a net loss greater than 20 AH | Rear Defrost, Heated Mirrors, Heated Seats cycled OFF for 100% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC |
| Load Shed 3 End | — | Greater Than 12.6 V | Battery has a net loss of less than 15 AH | Clear Load Shed 3 |

# Starting System Description and Operation

## Starter Motor Operation (Without KL9)

The starter motors are non-repairable. They have pole pieces that are arranged around the armature. Both solenoid windings are energized. The pull-in winding circuit is completed to the ground through the starter motor. The windings work together magnetically to pull and hold in the plunger. The plunger moves the shift lever. This action causes the starter drive assembly to rotate on the armature shaft spline as it engages with the flywheel ring gear on the engine. Moving at the same time, the plunger also closes the solenoid switch contacts in the starter solenoid. Full battery voltage is applied directly to the starter motor and it cranks the engine.

As soon as the solenoid switch contacts close, current stops flowing thorough the pull-in winding because battery voltage is applied to both ends of the windings. The hold-in winding remains energized. Its magnetic field is strong enough to hold the plunger, shift lever, starter drive assembly, and solenoid switch contacts in place to continue cranking the engine. When the engine starts, pinion overrun protects the armature from excessive speed until the switch is opened.

When the crank signal is removed, the starter relay opens and battery voltage is removed from the starter solenoid S terminal. Current flows from the motor contacts through both windings to the ground at the end of the hold-in winding. However, the direction of the current flow through the pull-in winding is now opposite the direction of the current flow when the winding was first energized.

The magnetic fields of the pull-in and hold-in windings now oppose one another. This action of the windings, along with the help of the return spring, causes the starter drive assembly to disengage and the solenoid switch contacts to open simultaneously. As soon as the contacts open, the starter circuit is turned off.

## Enhanced Starter Motor Operation (KL9)

The Engine Stop/Start system in GM vehicles automatically turns off the engine when the vehicle comes to a stop under certain driving conditions, and can quickly restart the engine in about 0.3 seconds when commanded to do so.

In order to smoothly restart the engine as quickly as possible while managing the greater number of engine starts, the Stop/Start system uses an enhanced starter motor that operates differently from a conventional starter motor. It has a high performance electric motor and a stronger pinion engagement mechanism than a conventional starter. It also has independent control of the pinion and motor.

The enhanced starter motor continues using the typical pinion engagement mechanism with a starter solenoid that drives the pinion gear to engage or disengage the flywheel of the engine. When engaged, the starter motor can rotate the engine flywheel and, in turn, the crankshaft.

On the enhanced starter of a Stop/Start system the operation is done in two separate functions inside the solenoid, Starter Motor and Pinion Actuator. Each function controlled individually by the ECM. There are two separate relays to control the two separate parts of the enhanced solenoid:

- KR27 Starter Motor Relay
- KR27C Starter Pinion Actuator Relay

The two individually-controlled relays allow for smooth engagement of the pinion gear into the flywheel with minimum noise and wear.

When the vehicle is coming to a stop, just before the engine stops rotating (at approximately 50 RPM) during stop/start operation, the ECM energizes the Starter Pinion Solenoid Actuator Relay to easily push the pinion gear into the flywheel gear without gear clash. (Fig. 8) When the engine stops rotating during Stop/Start operation (Auto Stop mode), the starter pinion gear is fully engaged, ready for the starter motor to become energized to quickly start the engine again.

A secondary need for the starter pinion to be driven into the flywheel gear before the engine stops rotating is to address quickly changing demands on the engine. For example, when a driver is slowing nearly to a stop — and the Stop/Start system is preparing for Auto Stop mode — but suddenly decides to release the brake and accelerate

In this situation, the engine has already stopped rotating, or nearly so. A conventional starter cannot restart the engine until the engine has completely stopped. However, with the enhanced starter, the starter pinion gear is fully engaged and ready to begin rotating the engine even before it fully stops turning. Otherwise, the engine would actually have to stop rotating before the pinion can engage smoothly to begin a restart.

To prevent a lag in engine operation, the ECM uses predictive speed matching of the flywheel gear speed and the pinion gear speed to engage the pinion gear into the flywheel gear without gear clash before the engine fully stops. By predicting how long it takes the starter motor to spin up using an algorithm, the pinion gear speed can be matched to the flywheel gear speed. The result is an almost instant restart that is possible at extremely low engine speeds.

## Circuit Description

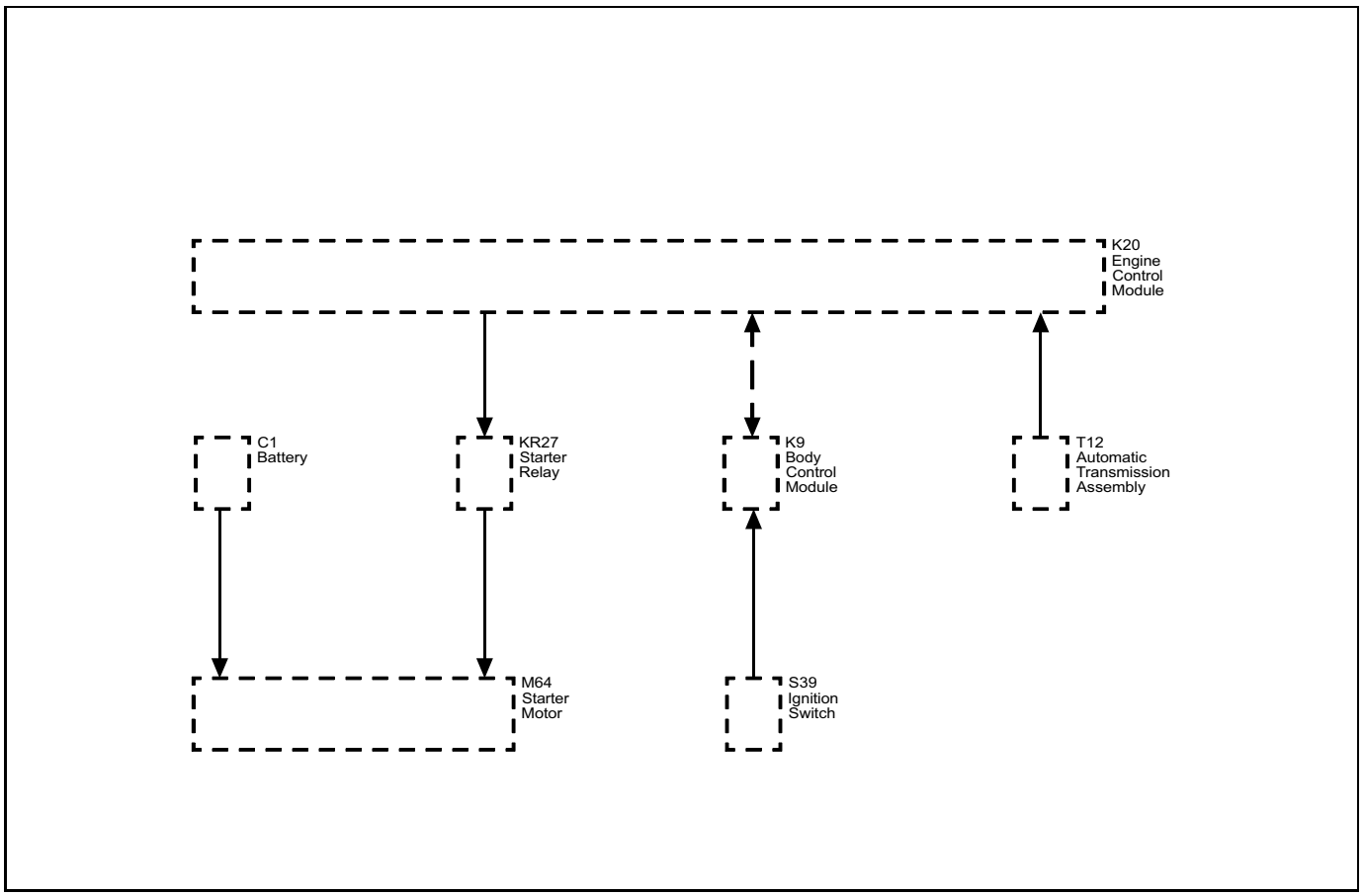
### Keyless Start

When the Ignition mode switch is placed in the crank position, a discrete signal is supplied to the body control module (BCM) notifying it that the ignition is in the crank position. The BCM then sends a serial data message to the engine control module (ECM) that crank has been requested. The ECM then verifies that the clutch is fully depressed or the automatic transmission is in Park/Neutral. If it is, the ECM then supplies 12 V to the control circuit of the starter relay. When this occurs, battery positive voltage is supplied through the switch side of the crank relay to the S terminal of the starter solenoid.

### Key Start

When the ignition switch is placed in the Start position, a discrete signal is supplied to the body control module (BCM) notifying it that the ignition is in the Start position. The BCM then sends a message to the engine control module (ECM) notifying it that CRANK has been requested. The ECM verifies that the transmission is in Park or Neutral. If it is, the ECM then supplies 12 V to the control circuit of the crank relay. When this occurs, battery positive voltage is supplied through the switch side of the crank relay to the S terminal of the starter solenoid.

### Starting System Block Diagram




3603725

## Stop/Start System Description and Operation (KL9)

The Stop/Start System is used to improve fuel efficiency in stop/start driving. The vehicle automatically shuts down the engine in appropriate conditions at a traffic light, for example, resulting in zero tail pipe emissions and saving fuel which otherwise is used idling the engine when stationary. The engine instantly restarts when the driver is ready to move away.

As soon as the driver prepares to move away (by releasing the brake pedal and/or depressing the accelerator pedal), the engine will start; it only takes the system around 0.3 s to start the engine.

To support the increased number of engine starts, the starter motor is upgraded with a high performance electric motor and a stronger pinion engagement mechanism with reduced noise levels.

Along with the upgraded starter motor, advanced battery technology is required to ensure the vehicles battery can handle the frequent charge and discharge cycles common with stop/start operation. There is an intelligent battery sensor connected to the battery which continually monitors the battery charge and healthy state. The engine control module (ECM) uses this information from the intelligent battery sensor to determine if the battery charge and health is sufficient for an Stop/Start condition.

The Stop/Start system can reduce fuel consumption and carbon dioxide ($CO_2$) emissions by up to 5% in mixed driving conditions. In an urban environment and in heavy traffic with frequent stops the savings may increase to as much as 10%.

There are also sophisticated controls in place to help ensure the Stop/Start System does not compromise the needs of either the driver or vehicle. For the engine to shutdown, the vehicle must be below 5 km/h (3 MPH), the selector lever in position D, and brake pedal depressed. To restart, the driver simply releases the brake pedal and the enhanced starter motor engages the engine. When the engine has been shut down by the Stop/Start System, a control indicator will be illuminated in the Driver Information Center (DIC). When the engine is restarted, the control indicator in the DIC extinguishes.

To ensure neither the needs of the driver or vehicle are compromised the engine will not shut down in the following circumstances:

- Ambient and coolant temperature correlation does not match specified values.
- Ambient temperature is less than −10°C (14°F)
- Battery temperature is less than 0°C (32°F) or greater than 55°C (131°F)
- Driver seat belt is not fastened and the drivers door is not fully closed (not applicable to vehicles in North America)
- HVAC system demand is high

- HVAC defrost has been selected
- Battery charge is low
- The learn procedure needs to be completed on the Battery Sensor Module

Likewise the engine will automatically restart if:

- Driver door opened and driver seat belt unbuckled (not applicable to vehicles in North America)
- Engine hood opened
- Battery charge is low
- HVAC demand increases
- Vehicle speed increases
- Brake booster vacuum has been reduced
- Engine coolant temperature is greater than 125°C (257°F)
- Economy mode turned OFF by driver
- Autostop time exceeded 2 min

When the Stop/Start System has shut down the engine, and the ambient temperature is below 15°C (59°F), the ECM will activate the Stop/Start auxiliary relay which controls the electric engine coolant pump motor to continually circulate the engine coolant through the engine while the engine is off. This is to ensure the engine and passenger compartment temperature is maintained while off. Once the Stop/Start System has restarted the engine, the ECM will turn off the electric coolant pump motor, thus allowing the engines internal coolant pump to circulate the engine coolant. The Stop/Start System is automatically activated each time the ignition switch is turned on, although there is an ECO Switch on the instrument panel to disable the system, if the driver so desires.

## Autostop Criteria

The ECM will send an Autostop state message to the body control module (BCM) and shut down the engine when all of the following criteria is met. The BCM will transmit the Autostop state message to the instrument cluster which will display the Autostop indicator in the tachometer display.

- Economy mode turned ON
- Initial minimum vehicle speed during drive cycle must be 19 km/h (12 MPH) or greater. Subsequent autostop minimum speed may vary from 2-10 km/h (1-6 MPH), depending on vehicle
- Ambient and engine coolant temperature correlation meets specified values.
- Ambient and transmission fluid temperature correlation meets specified values.
- Hood switch status is closed
- Driver door status is closed
- Driver seat belt status is buckled
- Brake booster vacuum is greater than 45 kPa (7 PSI)
- Transmission gear selector is in the Drive position
- Vehicle speed is less than 5 km/h (3 MPH)
- Engine speed is below 1 500 RPM
- Engine coolant temperature is less than 120°C (248°F)
- Ambient temperature is greater than −10°C (14°F)
- No A/C compressor request from HVAC (A/C or Defrost modes)
- Battery voltage greater than 12 V
- Battery state of charge greater than 75% (changes with state of health)

### Autostop Enable Ambient and Engine Coolant Temperature Table

| Ambient Temperature | Minimum Coolant Temperature | Autostop Enable |
|---|---|---|
| −10°C (14°F) | 60°C (140°F) | Yes |
| 0°C (32°F) | 50°C (122°F) | Yes |
| 6°C (43°F) | 40°C (104°F) | Yes |
| 12°C (54°F) | 30°C (86°F) | Yes |
| 20°C (68°F) | 18°C (64°F) | Yes |
| 30°C (86°F) | 18°C (64°F) | Yes |

## Autostart Criteria

The ECM will send an Autostart state message to the BCM. If all of the following conditions are true the ECM and BCM will restart the vehicle.

Driver Enabled Conditions that will engage Autostart:

- Driver removes pressure from the brake or depresses the accelerator pedal while the vehicle is in the forward Drive gear

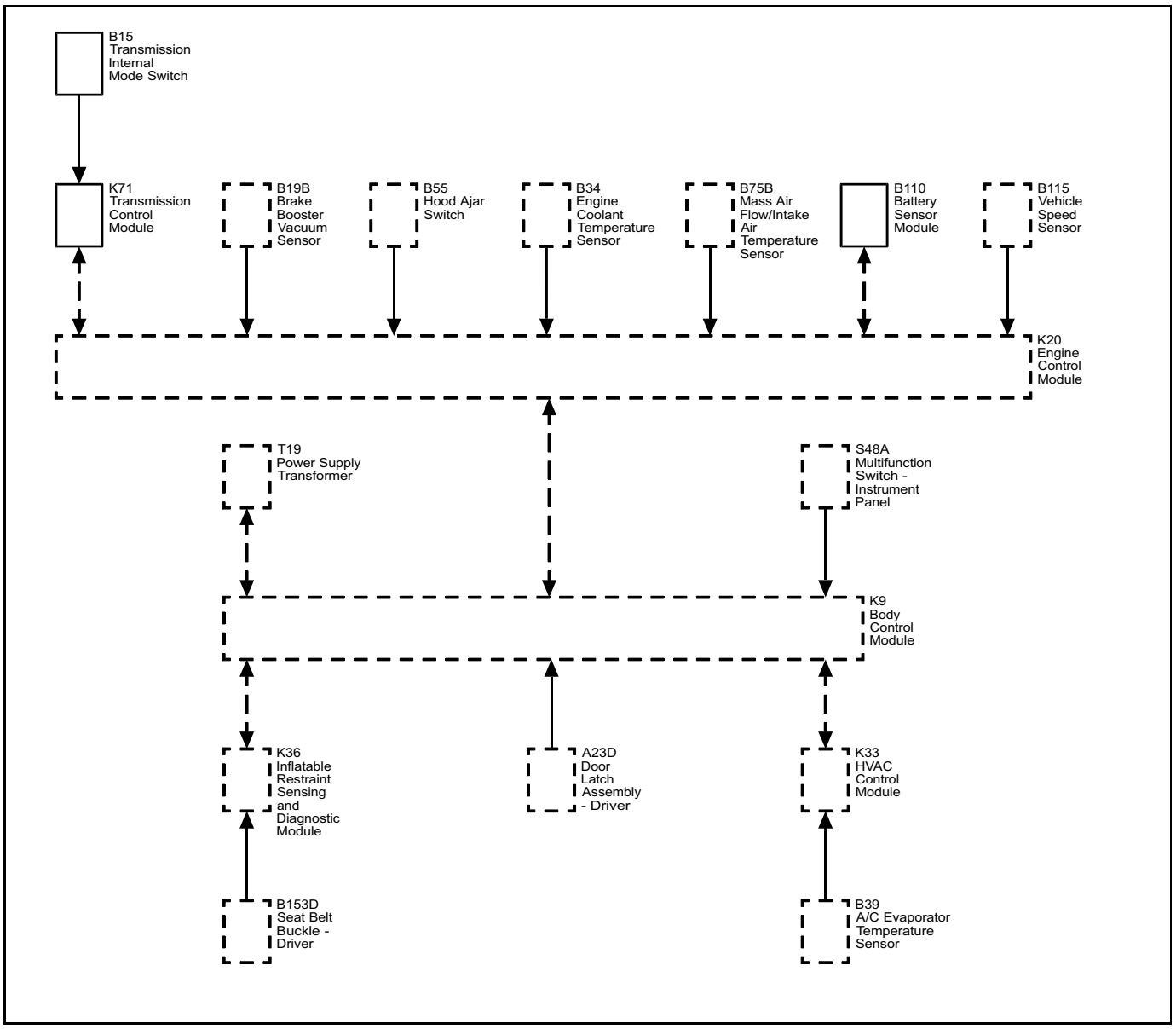
System Enabled Conditions that will engage Autostart

**Note:** If one or more of the following conditions occur, the system will force the engine to restart.

- Economy mode turned OFF
- Brake booster vacuum is less than 40 kPa (6 PSI)
- HVAC inside air temperature changes than 3°C (5°F) (with HVAC Automatic)
- A/C compressor request from HVAC (A/C or Defrost modes)
- Battery voltage less than 11 V,
- Battery state of charge is less than 73% (changes with state of health)
- Driver door status changes to open and driver seat belt status changes to unbuckled (not applicable to vehicles in North America)
- Hood switch status changes to open
- Autostop time exceeded 2 min

If the crank time exceeds 2 s, a manual ignition switch restart will be necessary.

## Start Stop Block Diagram




4148368

## System Components

### Engine Control Module (ECM)

The engine control module (ECM) monitors the inputs from the engine coolant temperature (ECT) sensor, vehicle speed sensor (VSS), hood ajar switch, brake booster vacuum sensor, the clutch pedal position sensor, the manual transmission neutral position switch and engine speed to determine Autostart and Autostop conditions. The ECM also controls the auxiliary coolant pump motor.

### Transmission Control Module (TCM)

The transmission control module monitors the inputs from the transmission neutral safety switch to determine the driver selected gear. This information is transmitted to the ECM via serial data to support the Auto Stop Start algorithm.

### Engine Coolant Temperature sensor

The ECT sensor is used to determine engine operating temperature.

### Intake Air Temperature Sensor

The ECM uses this sensor to monitor ambient air temperature. If too cold, the Autostop will not occur.

### Inside air temperature sensor

The HVAC control module monitors the passenger compartment temperature sensor to determine the temperature inside the passenger compartment. The HVAC control module sends this temperature reading to the ECM on the data communication circuit. The ECM uses this temperature values to determine if a restart is requires based on the temperature inside the passenger compartment.

**Vehicle speed sensor**

The vehicle speed sensor is used to determine vehicle speed. If vehicle speed is detected above a calculated value during an Autostop condition, the ECM will start the engine.

**Hood Ajar Switch**

If the hood switch is in the open position, the vehicle will not Autostop. If the hood is opened during Autostop, the vehicle will automatically restart.

**Brake Booster Vacuum Sensor**

The ECM monitors vacuum in order to ensure proper power assist for the brake pedal. If the ECM determines vacuum is too low, it will restart the engine.

**Brake Pedal Position Sensor & Accelerator Pedal Position Sensor**

The ECM monitors both the brake pedal position sensor and the accelerator pedal position sensor to determine the level of activation for each. While the accelerator pedal is in it's at rest position with no pressure applied by the operator, a partially depressed Brake pedal will cause the ECM to prepare the engine for an Autostop event. When the vehicle is in an auto stop event and the status of the brake pedal position sensor changes from meeting the autostop criteria to not meeting this criteria the engine will be restarted provided all of the other conditions to allow an autostart are met. If the Accelerator pedal is moved from its at rest position the vehicle will also enter an auto start event if all other conditions to support an autostart event, except for the brake pedal position, are met.

**Transmission Gear Shift Position Switch**

The transmission gear shift position switch is used to determine if the transmission is in the proper state to allow an auto stop/start event. The ECM will not allow Autostop until the brake is engaged, the transmission is in the forward gear position and then the vehicle slows to below the minimum speed required to allow and autostop while meeting all of the other minimum criteria to support an autostop event.

**Coolant Pump Motor**

The ECM will turn on the auxiliary coolant pump motor during Autostop to maintain engine operating temperature and also maintain HVAC temperature. Once the engine is running, the ECM will turn off the coolant pump motor.

**Body Control Module (BCM)**

The body control module (BCM) monitors the ECO switch in order to enable or disable the system. It is also the master of the low speed communication bus and transfers the appropriate messages to the instrument cluster and the HVAC.

**Intelligent Battery Sensor**

The ECM monitors the intelligent battery sensor for battery state of current, state of health, and battery charge via the data communication bus. If the battery is determined to be in poor state of health or having a low charge, the ECM will not allow Autostop to occur.

**ECO Switch**

The ECO switch can disable the Autostart system if desired.

**Power Supply Transformer**

The DC to DC converter monitors battery voltage and will maintain operating voltage to the radio, instrument cluster and instrument panel displays. The DC to DC converter will provide a boosted voltage to sensitive loads during Autostart to ensure proper operation of the driver informational displays.

**Driver Door Switch**

The BCM monitors the driver door switch at all times. The BCM will not allow Autostop if the door is ajar and will Autostart if the driver door is opened and the seat belt unbuckled during Autostop.

**Driver Seat Belt Switch**

The BCM monitors the driver seat belt switch at all times. The BCM will Autostart if the seat belt is unbuckled and the driver door opened during Autostop.

**Instrument Cluster**

In order to differentiate between a normal engine shut down (engine speed 0 RPM) and when the engine has been shut down by the Stop/Start System, the tachometer needle will rest at the Autostop indicator icon (500 RPM point) indicating the engine has been shut down by the Stop/Start System. Once the engine is restarted, or the ECO button has disengaged Autostop, the tachometer will function normally.

# Section 6

# HVAC

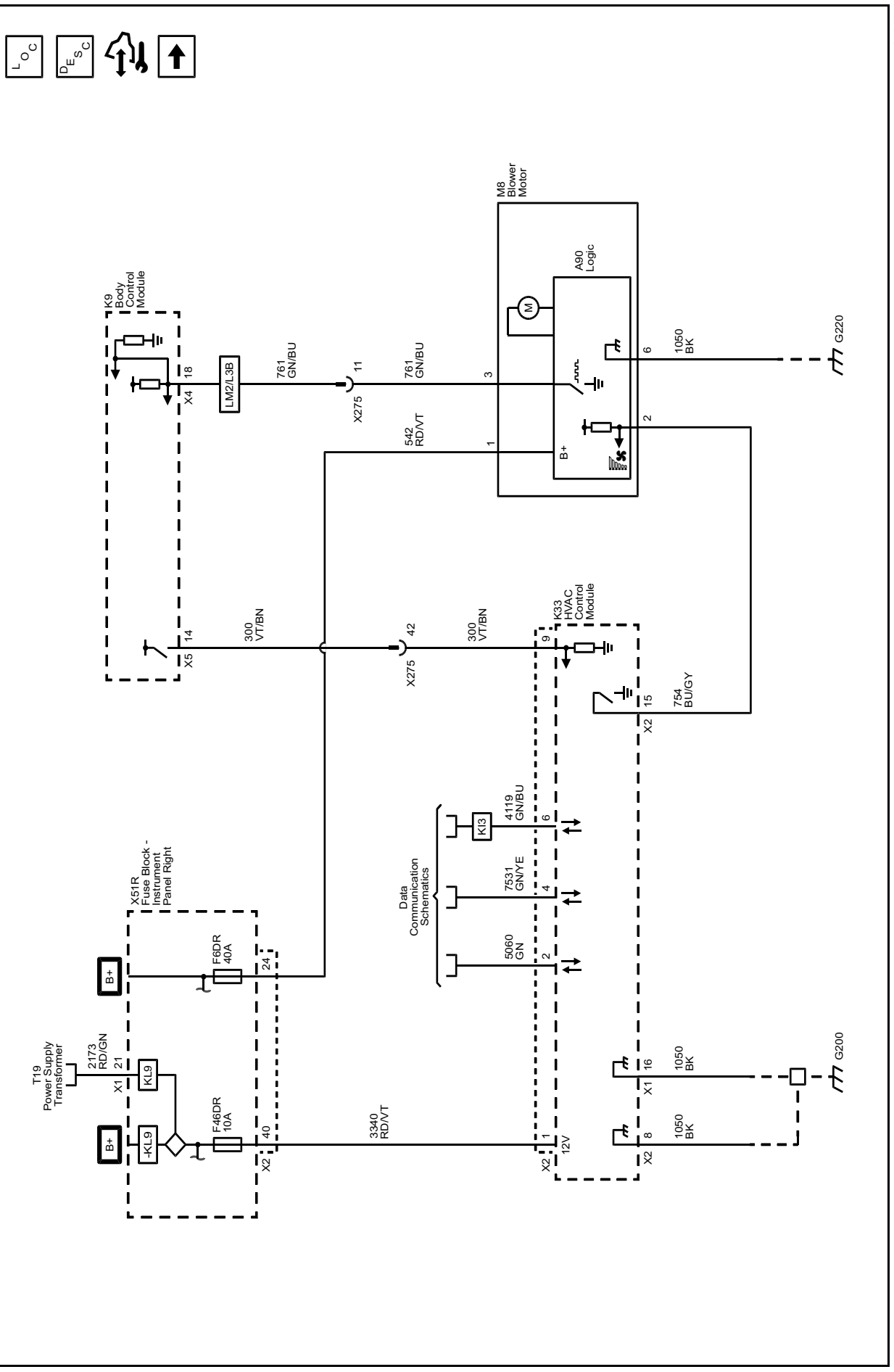
**HVAC - Automatic** . . . . . 6-3
**Schematic and Routing Diagrams** . . . . . 6-3
HVAC Schematics (CJ2) . . . . . 6-4
**Description and Operation** . . . . . 6-11
Automatic HVAC Description and Operation . . . . 6-11
**HVAC - Manual** . . . . . 6-15
**Schematic and Routing Diagrams** . . . . . 6-15
HVAC Schematics (C4P/C67) . . . . . 6-16
**Description and Operation** . . . . . 6-23
Manual HVAC Description and Operation . . . . . 6-23

BLANK

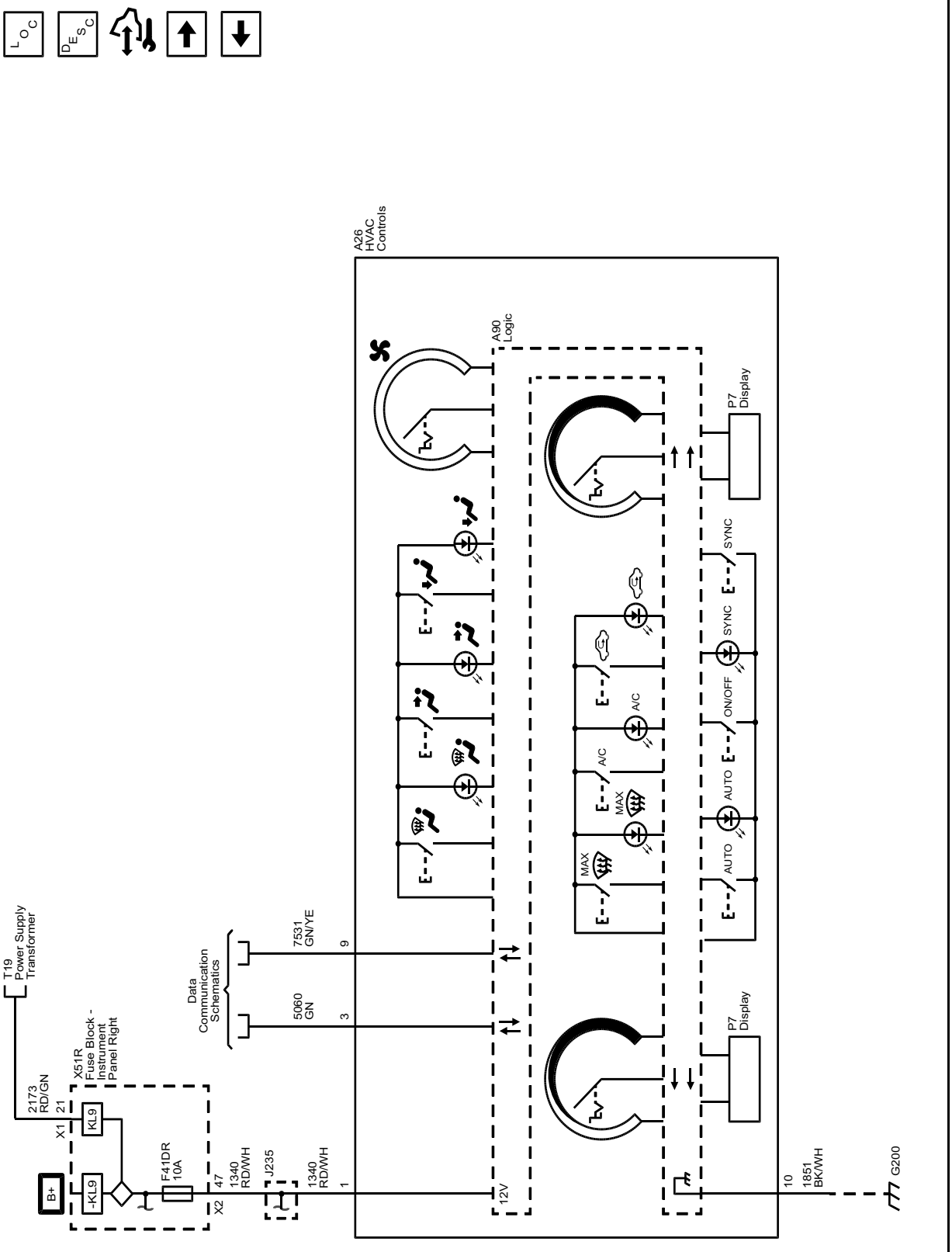
# HVAC - Automatic

## Schematic and Routing Diagrams

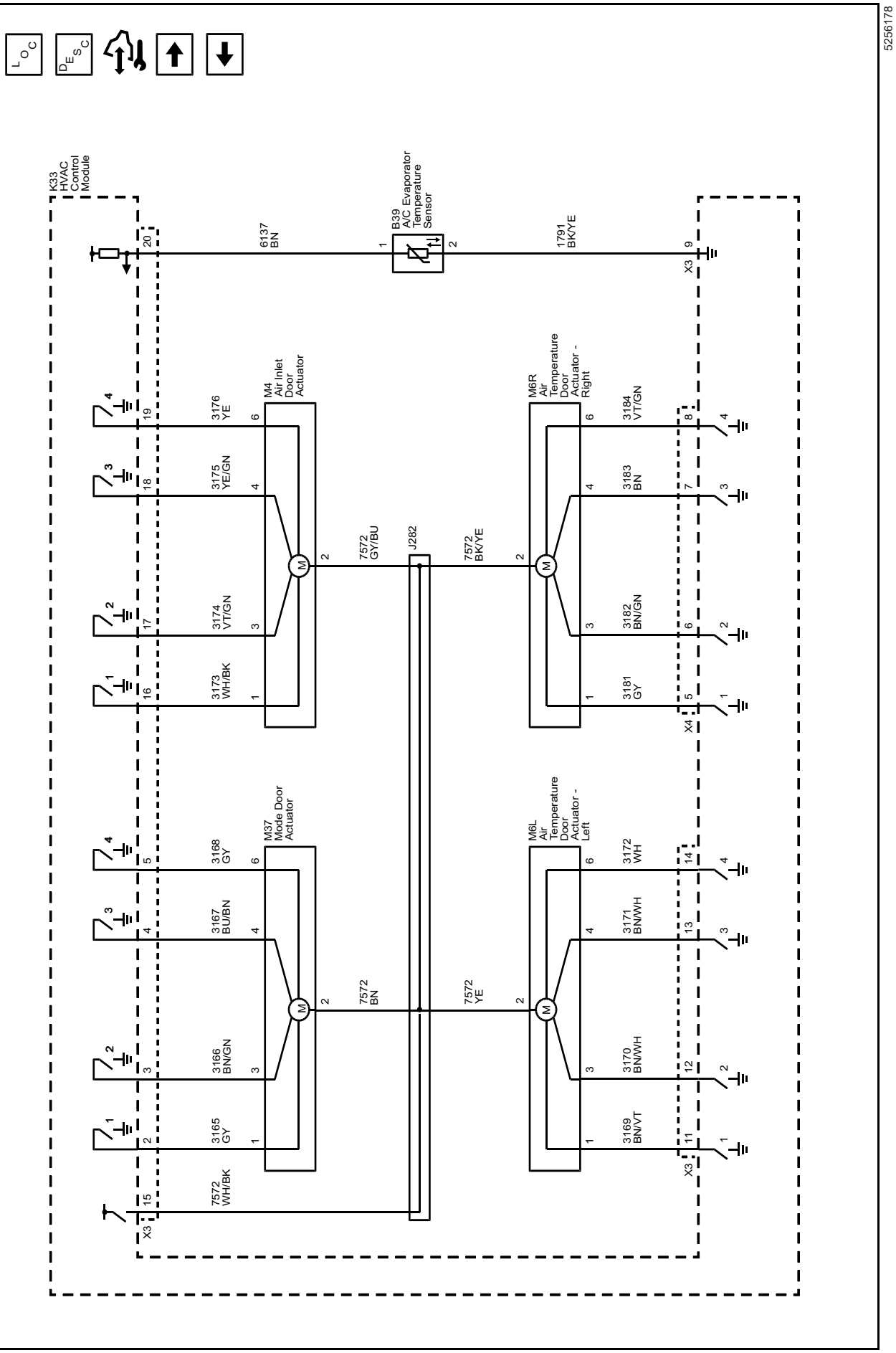
## HVAC Schematics (CJ2) (HVAC Module Power, Ground, Serial Data, and Blower Motor)



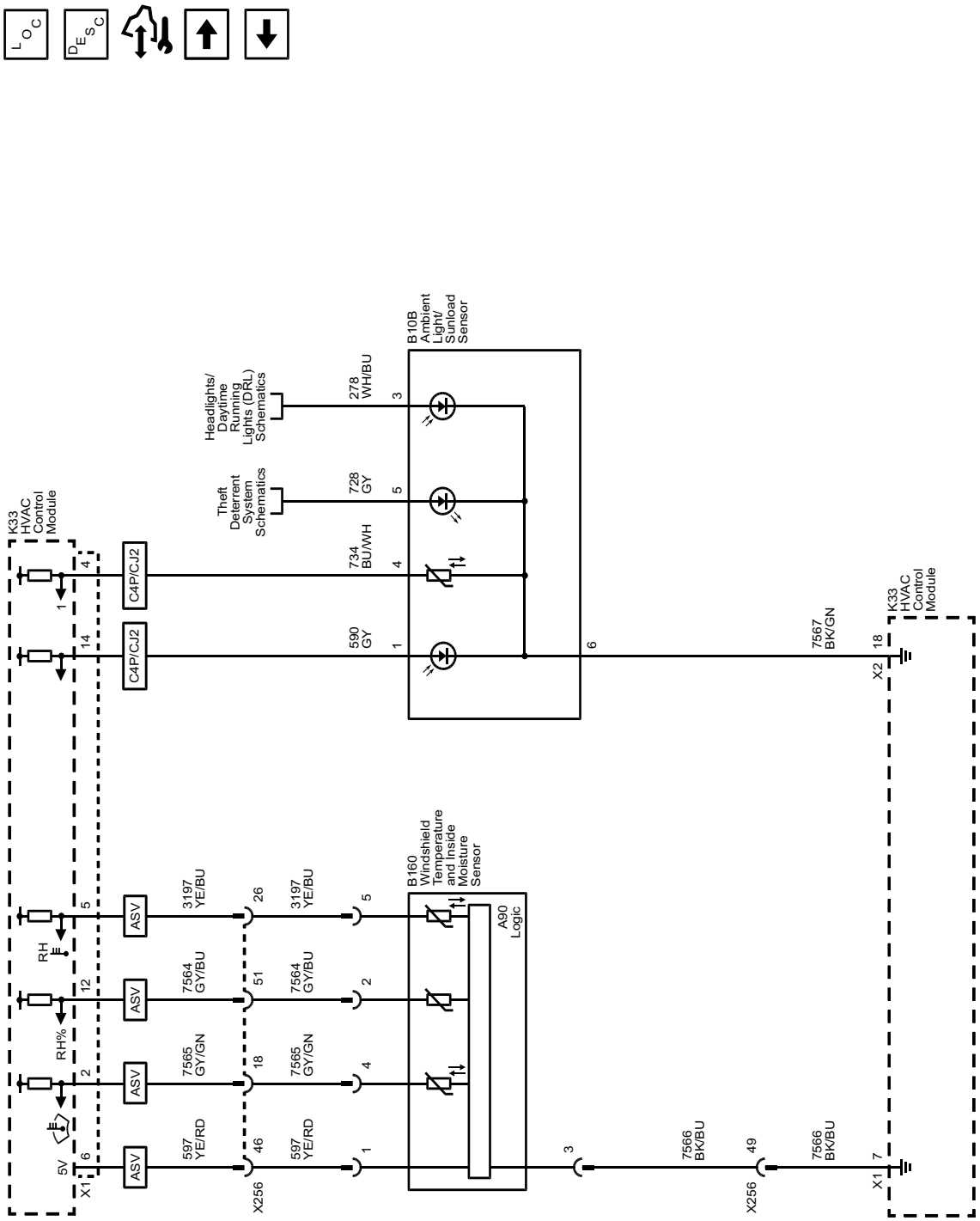
## HVAC Schematics (CJ2) (HVAC Controls)



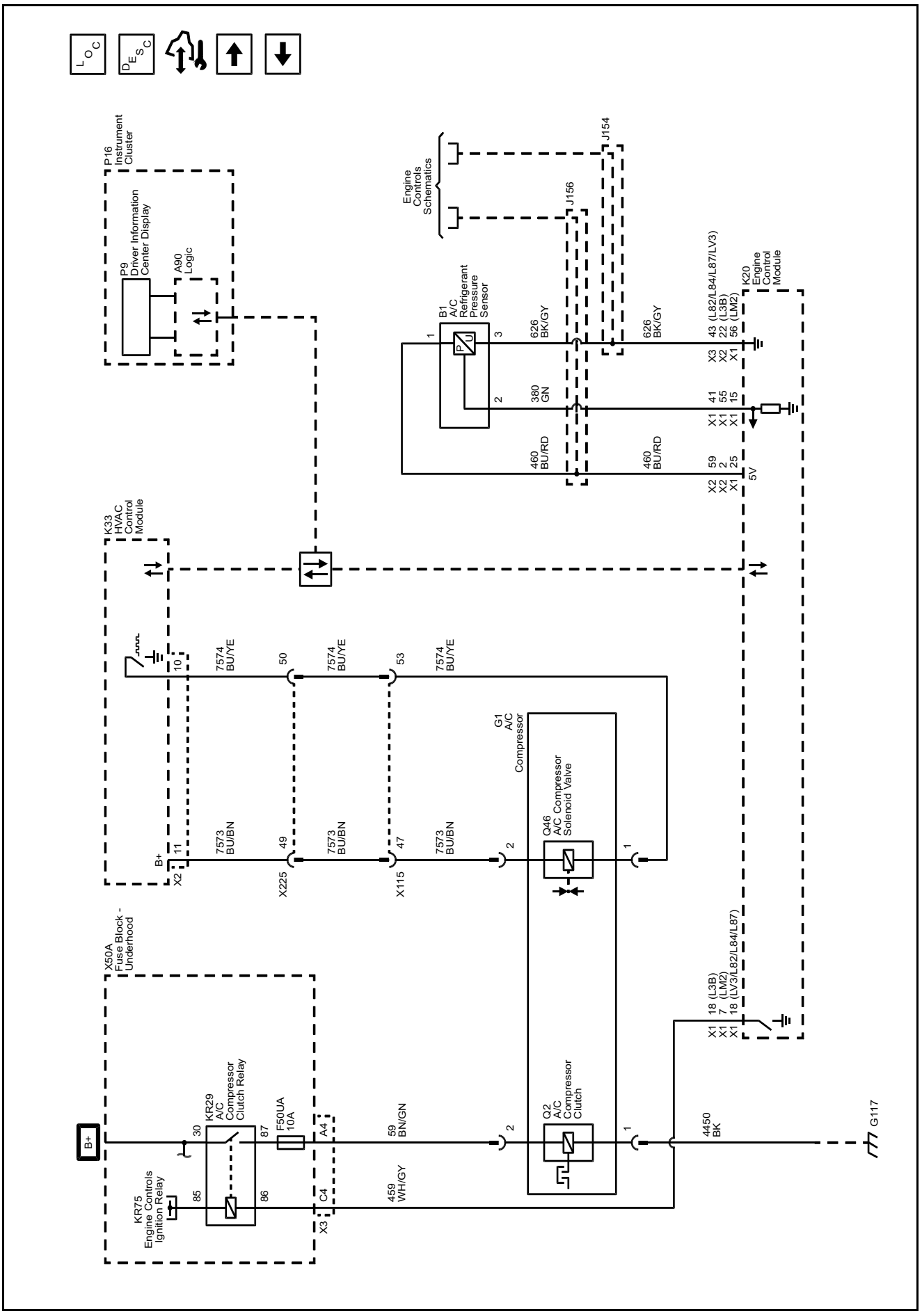
## HVAC Schematics (CJ2) (Temperature and Mode)



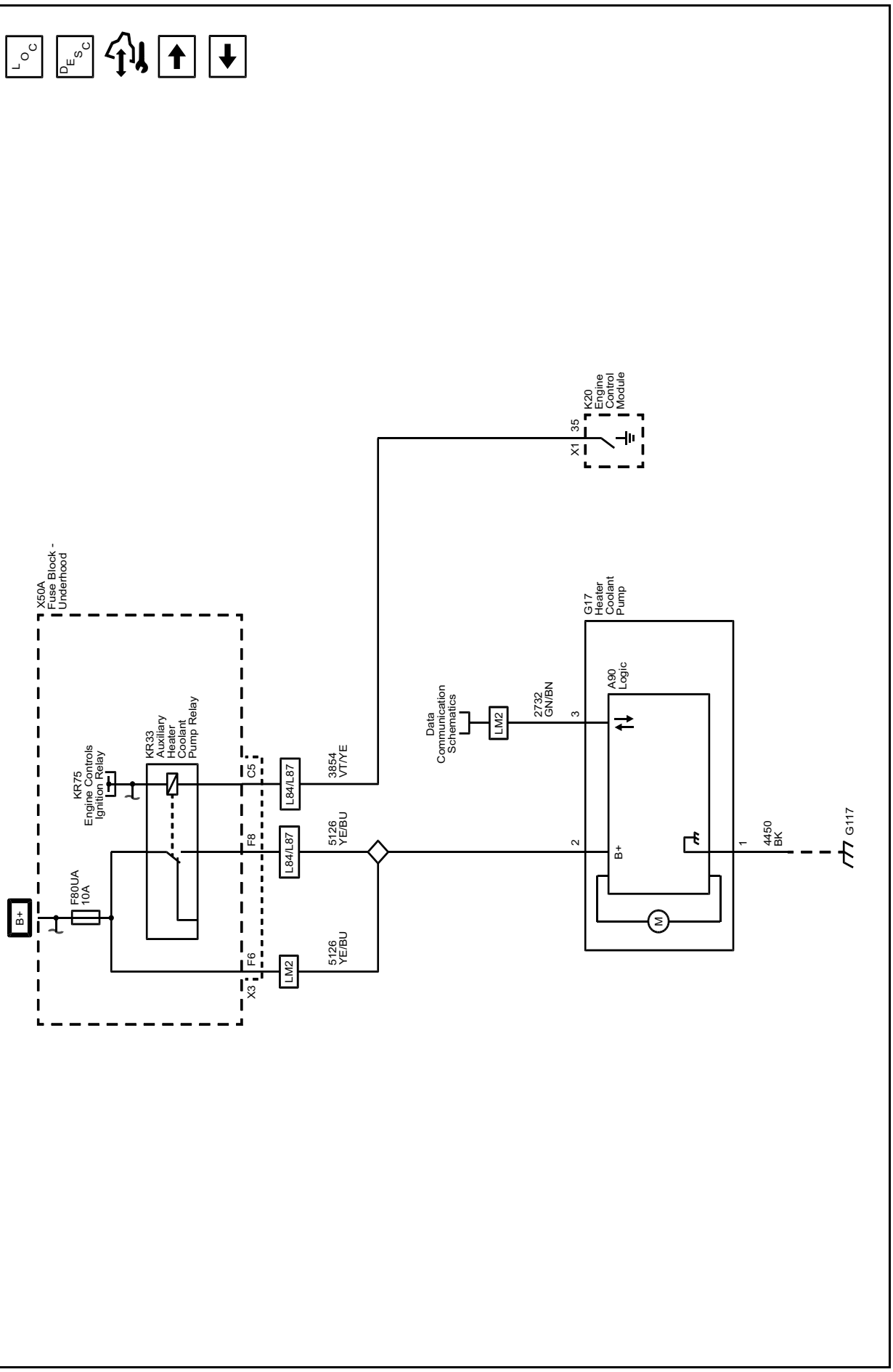
## HVAC Schematics (CJ2) (Windshield and Sunload Sensors (ASV/C4P/CJ2))



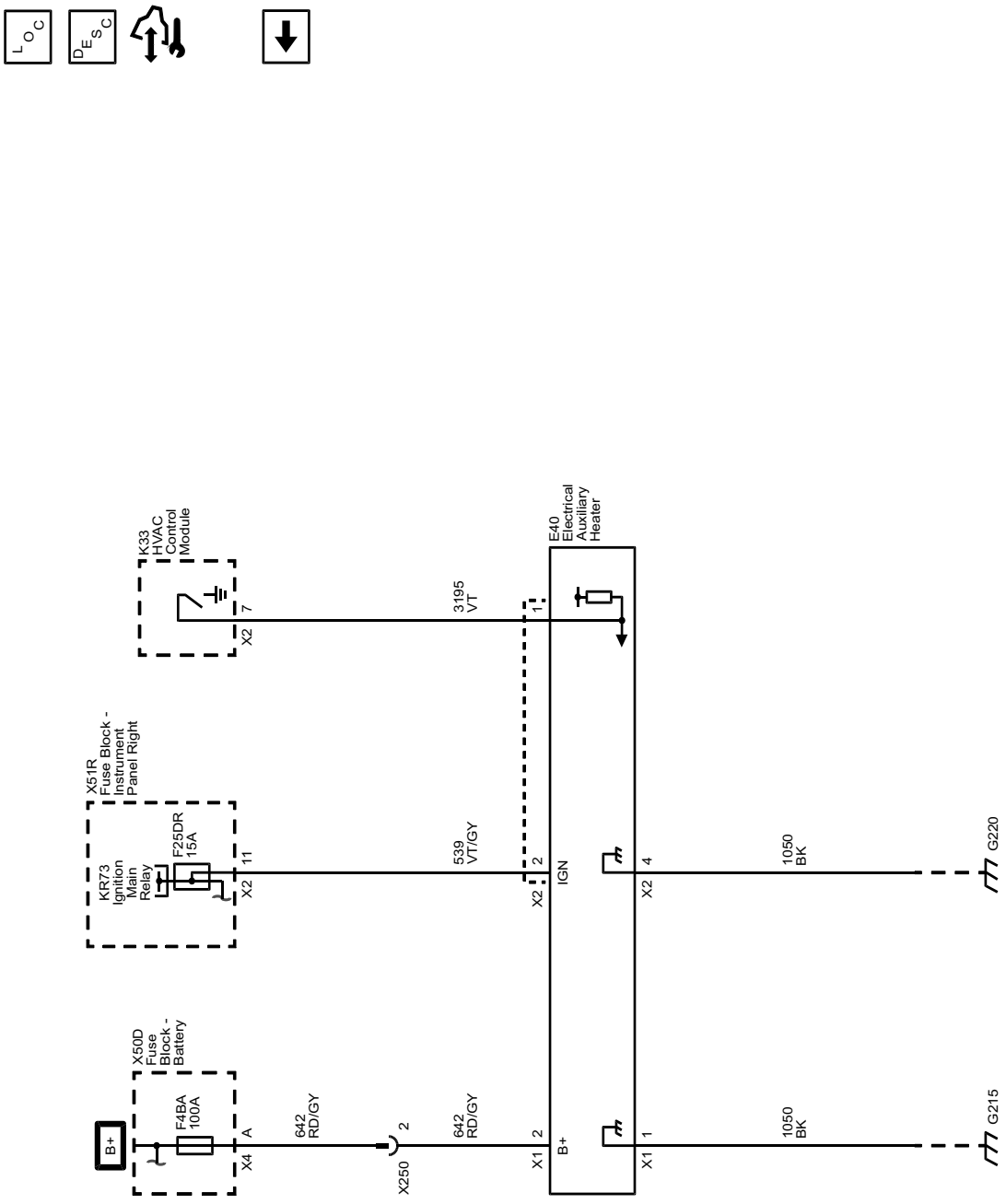
## HVAC Schematics (CJ2) (A/C Compressor Controls)



## HVAC Schematics (CJ2) (Heater Coolant Pump (KL9))



## HVAC Schematics (CJ2) (Auxiliary Heater (C32))



# Description and Operation

## Automatic HVAC Description and Operation

The air temperature and the air delivery description and operation are divided into eight areas:

- HVAC Control Components
- Air Speed
- Air Delivery
- Heating and A/C Operation
- Recirculation Operation
- Automatic Operation
- Engine Coolant and A/C System Refrigerant

## HVAC Control Components

### HVAC Controls

The HVAC controls contains all switches, buttons, and dials which are required to control the functions of the HVAC system and serve as interface between the operator and the HVAC control module. The selected values are passed to the HVAC control module via LIN-Bus.

### HVAC Control Module

The HVAC control module is a GMLAN device that interfaces between the operator and the HVAC system to maintain and control desired air temperature and air distribution settings. The battery positive voltage circuit provides power that the HVAC control module uses for keep alive memory. If the battery positive voltage circuit loses power, all HVAC DTCs and settings will be erased from keep alive memory. The body control module (BCM), which is the vehicle mode master, provides a device ON-Signal. The HVAC control module provides blower, air delivery mode and air temperature settings.

The HVAC control module supports the following features:

| Feature | Availability |
|---|---|
| Afterblow | Available if reprogrammed by the technician |
| Purge | Yes |
| Personalization | Yes |
| Actuator Calibration | Yes |

### Actuators

Doors in the HVAC case assembly are used to control air flow. The HVAC control module operates the doors through the use of actuators, with one actuator being used for each door. The system has the following air control doors and associated actuators: mode, temperature, right temperature (CJ2), and recirculation.

Each actuator used in the system is a 5-wire stepper motor. The HVAC control module supplies a 12 V reference voltage to the stepper motor and energizes the 4 stepper motor coils with a pulsed ground signal. The stepper motor moves the associated air control door into the calculated position in order to reach the selected position. The null point of the stepper motor will be calibrated, if the stepper motor is new. When the stepper motor is calibrated, the HVAC control module can drive the applicable coil to reach exactly the desired position of the air control door.

### Blower Motor and Control Module

The blower motor control module varies the speed of the blower motor by varying the voltage to the motor. A battery voltage circuit, ground circuit, and speed request signal circuit from the HVAC control module allow the blower motor control module to operate. The HVAC control module provides a low side pulse width modulation (PWM) signal to the blower motor control module to request a specific motor speed. The blower motor control module translates the PWM signal and drives the motor accordingly.

The blower motor control module has a signal wire used to output a speed signal. The signal is monitored by the BCM, and the value is sent to the ECM via serial data. The ECM monitors the blower motor speed to modify the total commanded engine coolant flow rate, which is a percentage of available coolant flow sent to the heater core for occupant comfort and windshield defrosting. When the HVAC Blower Speed is determined to be zero, the ECM disables the heater core coolant flow to optimize engine coolant flow for fuel economy and emissions.

### Evaporator Temperature Sensor

The evaporator temperature sensor is a 2-wire negative temperature co-efficient thermistor. The sensor operates within a temperature range of −40 to +85°C (−40 to +185°F). The sensor is installed at the evaporator and measures its temperature. If the temperature drops under 3°C (38°F), the compressor will be switched off in order to prevent evaporator icing.

### A/C Refrigerant Pressure Sensor

The A/C refrigerant pressure sensor is a 3-wire piezoelectric pressure transducer. A 5 V reference voltage, low reference, and signal circuits enable the sensor to operate. The A/C pressure signal can be between 0.2–4.8 V. When the A/C refrigerant pressure is low, the signal value is near 0 V. When the A/C refrigerant pressure is high, the signal value is near 5 V. The engine control module (ECM) converts the voltage signal to a pressure value. When pressure is too high or too low, the ECM will not allow the A/C compressor clutch to engage.

### A/C Compressor

The A/C compressor uses a conventional belt driven magnetic clutch to engage and mechanically turn the compressor. When the A/C switch is pressed, the HVAC control module sends an A/C request message to the ECM via serial data. If specific criteria is met, the ECM then grounds the A/C compressor clutch relay control circuit, which will switch the A/C compressor clutch relay. With the relay contacts closed, battery voltage is supplied to the permanently grounded A/C compressor clutch. The A/C compressor clutch will then be activated.

This A/C system utilizes a variable displacement solenoid valve to alter the amount of displacement created by the turning of the compressor. The HVAC control module provides both battery voltage and a pulse width modulated ground to the variable

displacement solenoid valve. When the A/C switch is pressed, the HVAC control module grounds the variable displacement solenoid using a (PWM) signal in order to determine the amount of compressor displacement. The performance of the A/C compressor is regulated based on cooling load.

**Ambient Light/Sunload Sensor**

The sunload sensor is connected to ground and to a 12 V clocked power supply through the HVAC control module. This clocked power supply is to power the sensor electronics and to work as a clock generator to the sunload sensor micro controller. The sensor uses a pulse signal for data identification and transferring the sun intensity measurement. At each positive transition from the clocked supply input, the sunload sensor micro controller will shift channels enabling new intensity measurement on the signal output to the HVAC control module. The signal voltage varies between 0–4 V.

The passenger compartment temperature sensor is a negative temperature co-efficient thermistor. A signal and low reference circuit enables the sensor to operate. As the air temperature increases, the sensor resistance decreases. The sensor signal varies between 0–5 V.

Bright or high intensity light causes the vehicles interior temperature to increase. The HVAC system compensates for the increased temperature by diverting additional cool air into the vehicle.

**Windshield Temperature and Inside Moisture Sensor**

The windshield temperature and inside moisture sensor includes the relative humidity sensor, windshield temperature sensor and humidity sensing element temperature sensor all in one assembly.

This sensor assembly provides information about:

- Relative humidity level at the windshield inside the vehicle
- Temperature of the windshield inside the vehicle
- Temperature of the humidity sensor element

## Air Speed

The blower control switch is part of the HVAC controls. The selected value of the blower switch position is sent to the HVAC control module via LIN-Bus. The HVAC control module provides a low side pulse width modulation (PWM) signal to the blower motor control module to request a specific motor speed. The blower motor translates the PWM signal and drives the motor accordingly.

**Afterblow**

Afterblow is a feature that dries the evaporator core by operating the blower motor after the engine is turned OFF. This reduces the amount of microbial growth that can create undesirable odors. The vehicle does not come equipped with the afterblow feature turned ON. If the afterblow feature is required due to an odor concern, it must be enabled using the scan tool Afterblow configuration function.

After the HVAC control module has been programmed for afterblow, the following conditions must be met for afterblow to operate:

- The engine has been turned OFF for at least 30 minutes.
- The ambient air temperature is at least 21°C (70°F).
- The A/C compressor operated for more than 2 minutes before shut down.
- The system voltage is at least 12 volts.

Once the above conditions have been met, the blower motor will perform the following sequence up to 5 times. This could last up to an hour:

1. The blower motor will be OFF for 7–11 minutes.
2. The blower motor will RUN for 25–30 seconds.

## Air Delivery

The HVAC control module controls the distribution of air by the use of recirculation and mode door actuator. The modes that may be selected are:

- Defrost
- Defog
- Panel
- Floor

The desired air distribution mode can be selected with the air distribution switches at the HVAC control. The HVAC control delivers the values to the HVAC control module via LIN-Bus. The HVAC control module controls the mode door actuator so that it drives the door to the calculated position. Depending on the position of the door, air is distributed through various ducts leading to the outlets in the dash. Turning the mode door to the defrost position, the HVAC control module will move the recirculation actuator to outside air, reducing window fogging. When defrost is selected, the blower motor will be activated, regardless of the coolant temperature. The HVAC control module enables a high volume of air delivered to the front defrost vents. A/C is available in all modes.

The rear window defogger does not affect the HVAC system.

## Heating and A/C Operation

The purpose of the heating and A/C system is to provide heated and cooled air to the interior of the vehicle. The A/C system will also remove humidity from the interior and reduce windshield fogging. Regardless of the temperature setting, the following can affect the rate that the HVAC system can achieve the desired temperature:

- Recirculation actuator setting
- Difference between inside and desired temperature
- Blower motor speed setting
- Mode setting

When the A/C switch is pressed, the HVAC controls sends a signal to the HVAC control module via LIN-Bus. The HVAC control module evaluates this signal and sends an A/C request signal to the ECM via CAN-Bus. The ECM checks all preconditions before releasing and if all conditions are met sends a release signal back to the HVAC control module. The ECM will

provide a ground for the A/C compressor relay enabling it to close its internal contacts to send battery voltage to the A/C compressor clutch coil. The A/C compressor clutch will be activated. The performance of the A/C compressor is regulated via a variable A/C compressor solenoid valve. The HVAC control module supplies battery voltage to the A/C compressor. When the A/C switch is pressed, the HVAC control module provides a pulse width modulation (PWM) signal to the A/C compressor solenoid valve in order to command the performance of the A/C compressor.

The following conditions must be met in order to activate the A/C compressor:

- Battery voltage is between 9–18 V
- Engine coolant temperature is less than 124°C (255°F)
- Engine speed is greater than 600 RPM
- Engine speed is less than 5 500 RPM
- A/C high side pressure is between 269–2 929 kPa (39–425 PSI)
- Throttle position is less than 100%
- Evaporator temperature is greater than 3°C (38°F)
- ECM does not detect immoderate torque load
- ECM does not detect insufficient idle quality
- The ambient temperature is above 1°C (34°F)

The sensor information is used by the ECM to determine the following:

- The A/C high side pressure
- An A/C system load on the engine
- An immoderate A/C high side pressure
- The heat load at the A/C condenser

The air streams into the passenger compartment through the heater core and the evaporator core. The air temperature actuator drives the mixed air door to direct the airflow. If the interior temperature should be increased, the mixed air door is put into the position in which more air streams through the heater core. If the interior temperature should be decreased, the mixed air door is put into the position in which more air streams through the evaporator core.

## Recirculation Operation

The recirculation switch is integrated into the HVAC control. The selected recirculation setting is sent to the HVAC control module via LIN-Bus. The HVAC control module controls the air intake using the recirculation actuator. In recirculation mode the recirculation door is positioned to block outside air from entering and circulate the air within the vehicle. In outside air mode the recirculation door is positioned to route outside air into the vehicle.

Recirculation is only available if the defrost mode is not active. When the defrost mode is active, the recirculation actuator positions the recirculation door so that outside air is circulated to the windshield to reduce fogging.

In automatic mode the values of the sensors are used as inputs for the HVAC control module to calculate the fog risk on passenger compartment side of the windshield. The A/C compressor and the defrost mode may activated to prevent or remove fog on the passenger compartment side of the windshield.

## Automatic Operation

In automatic operation, the HVAC control module maintains the comfort level inside of the vehicle by controlling the A/C compressor clutch, the blower motor, the air temperature actuators, mode actuator and recirculation actuator.

To put the HVAC system in automatic mode, the following is required:

1. The auto switch must be activated.
2. The air temperature switch must not be in either the full hot or full cold position.

Once the desired temperature is reached, the blower motor, mode, recirculation and temperature actuators automatically adjust to maintain the temperature selected. The HVAC control module performs the following functions to maintain the desired air temperature:

- Monitors the following sensors:
  - Ambient air temperature sensor
  - Ambient light/sunload sensor
  - Windshield temperature and inside moisture sensor
- Regulate the blower motor speed
- Position the air temperature actuators
- Position the mode door actuator
- Position the recirculation actuator
- Request A/C operation
- Control of the A/C compressor

When the warmest position is selected in automatic operation the blower speed will increase gradually until the vehicle reaches normal operating temperature. When normal operating temperature is reached the blower stays on high speed and the air temperature actuators stays in the full heat position.

When the coldest position is selected in automatic operation the blower stays on high and the air temperature actuators stay in full cold position. The mode actuator remains in the panel position and the recirculation actuator will remain in the recirculation position.

Under cold ambient temperatures, the automatic HVAC system provides heat in the most efficient manner. The operator can select an extreme temperature setting but the system will not warm the vehicle any faster. Under warm ambient temperatures, the automatic HVAC system also provides air conditioning in the most efficient manner. Selecting an extreme cool temperature will not cool the vehicle any faster.

## Electric Auxiliary Heater (C32)

Some models are equipped with an auxiliary electric heater to assist in warming the passenger compartment when the engine coolant has not sufficiently warmed to operating temperature. The heater is a 12 V positive temperature coefficient heating element located in the HVAC case just downstream of the traditional heater core. The HVAC control module will activate it when the outside temperature is less than approximately 8°C (46°F), the engine coolant temperature is less than approximately 75°C (167°F), and the temperature blend door is commanded to the full hot position.

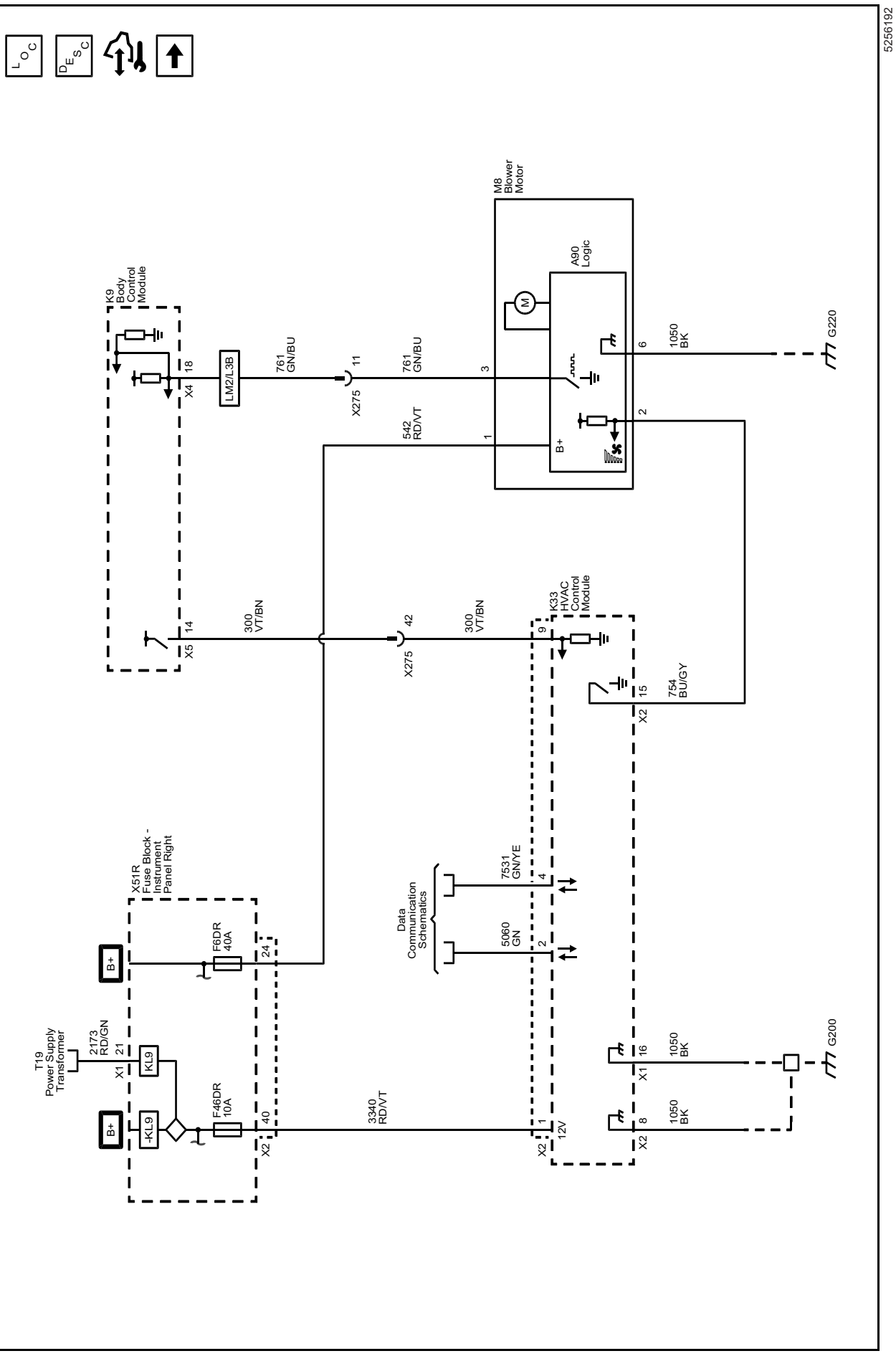
## Engine Coolant and A/C System Refrigerant

For information on engine coolant, coolant flow, A/C refrigerant, and the A/C refrigerant cycle, refer to Heating and Air Conditioning System Description and Operation.

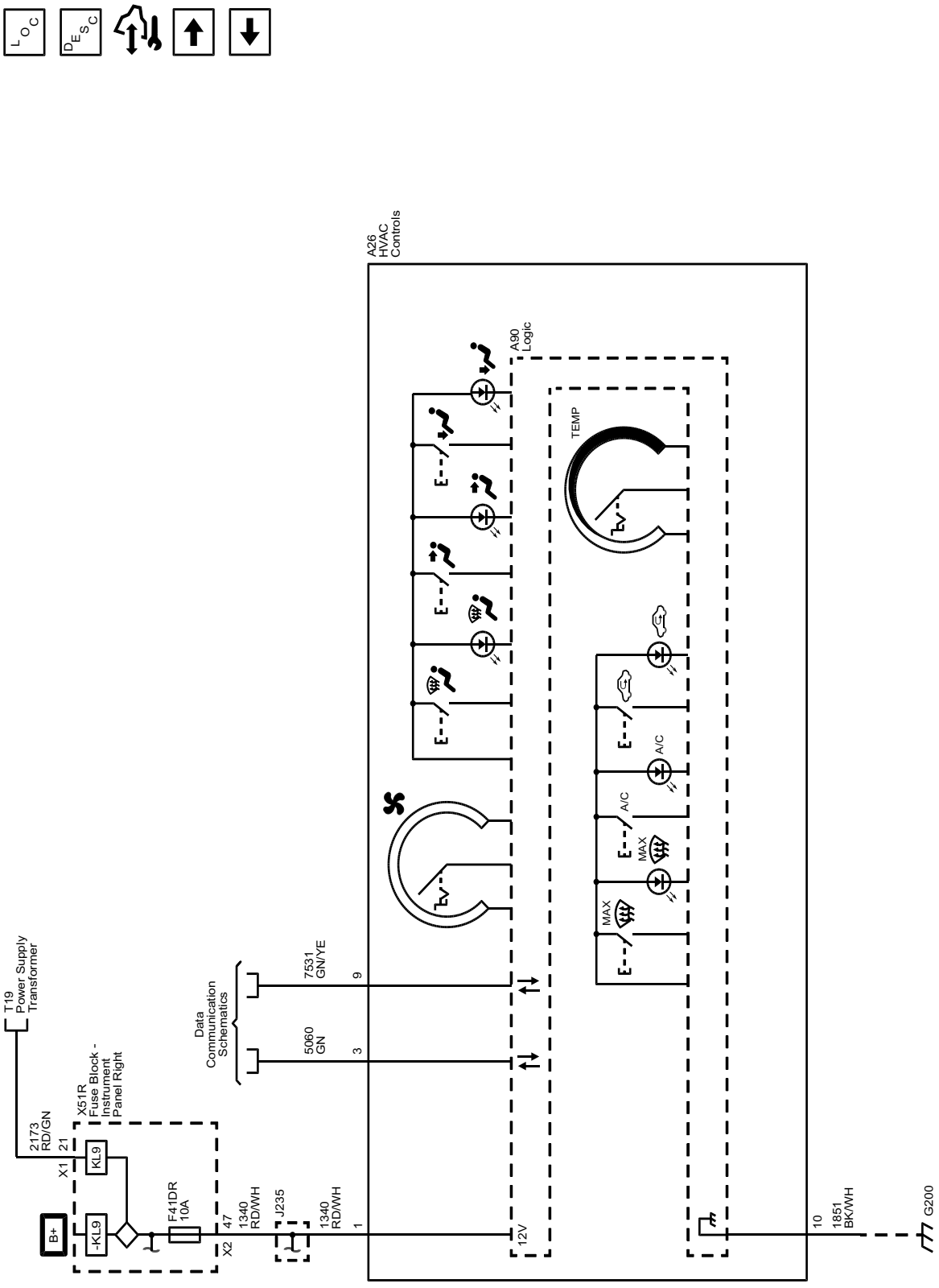
# HVAC - Manual

## Schematic and Routing Diagrams

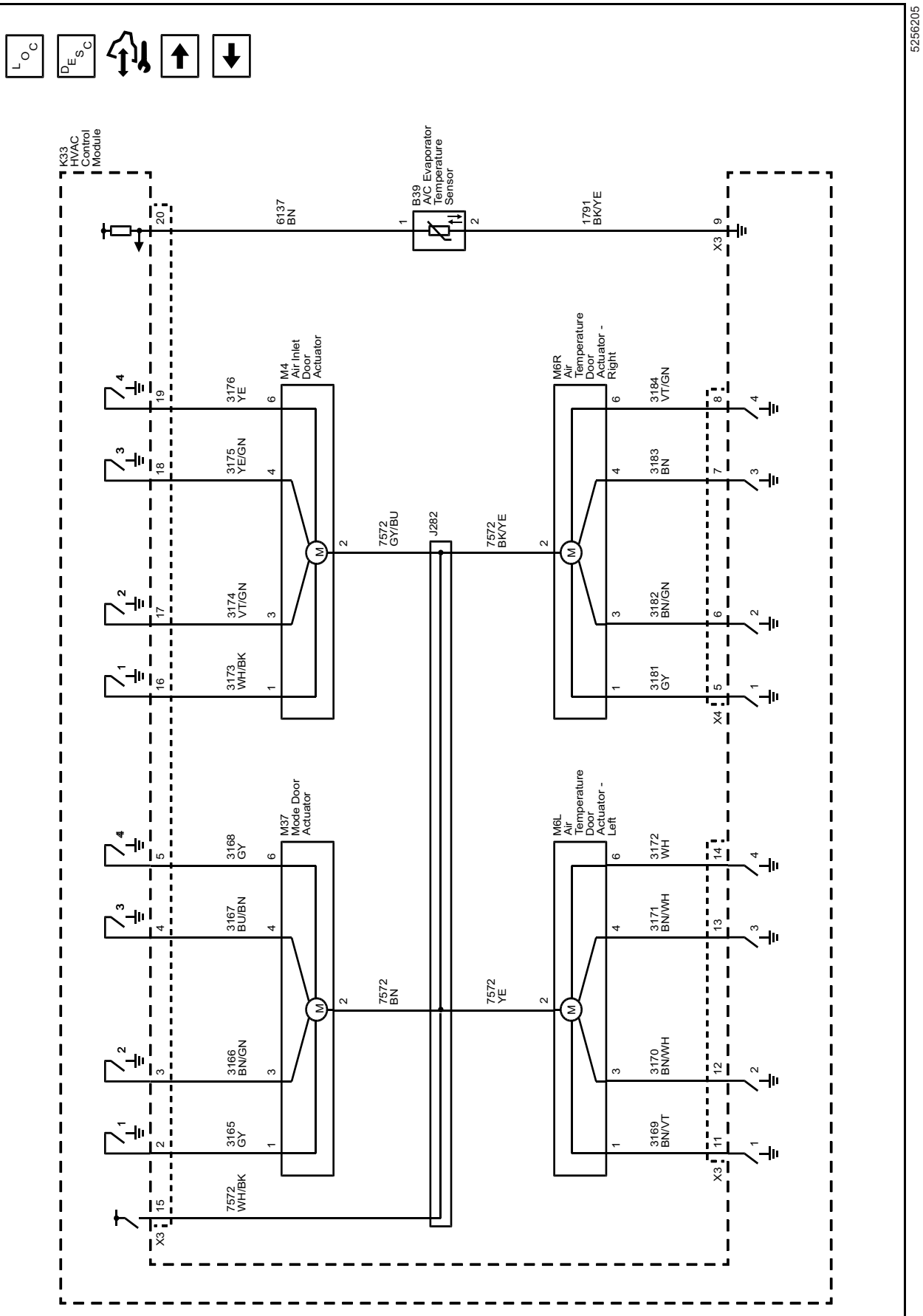
## HVAC Schematics (C4P/C67) (HVAC Module Power, Ground, Serial Data, and Blower Motor)



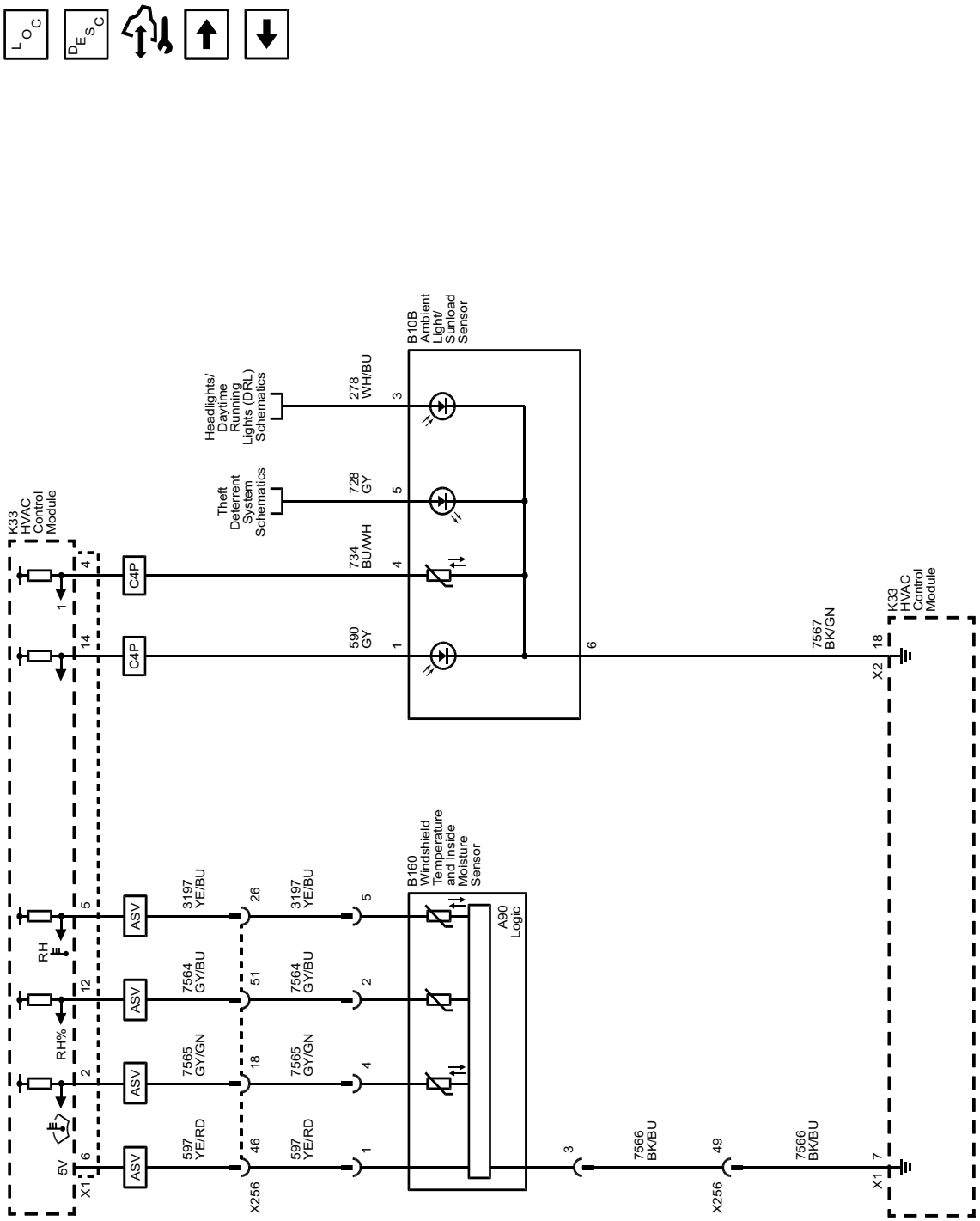
## HVAC Schematics (C4P/C67) (HVAC Controls)



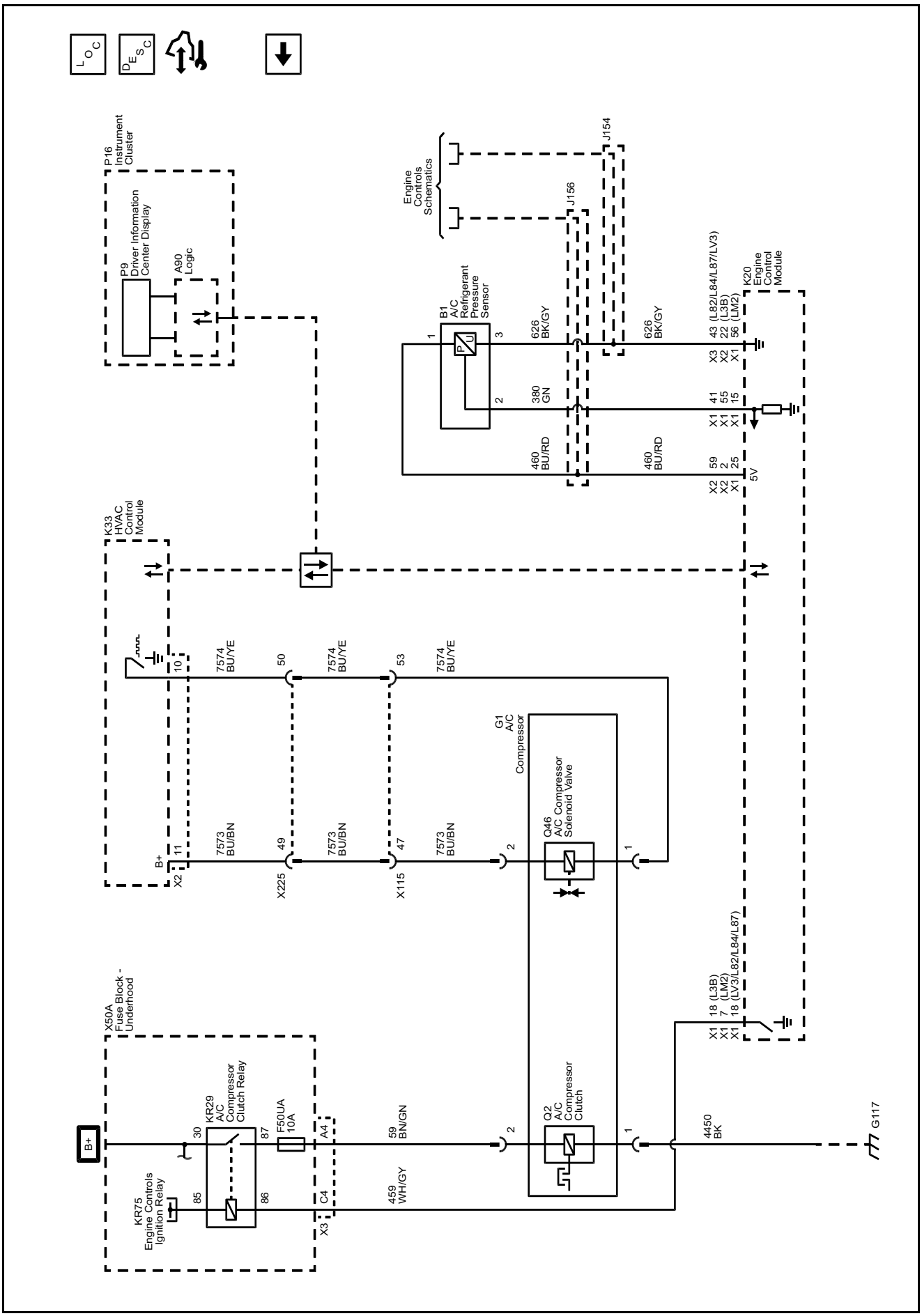
## HVAC Schematics (C4P/C67) (Temperature and Mode)



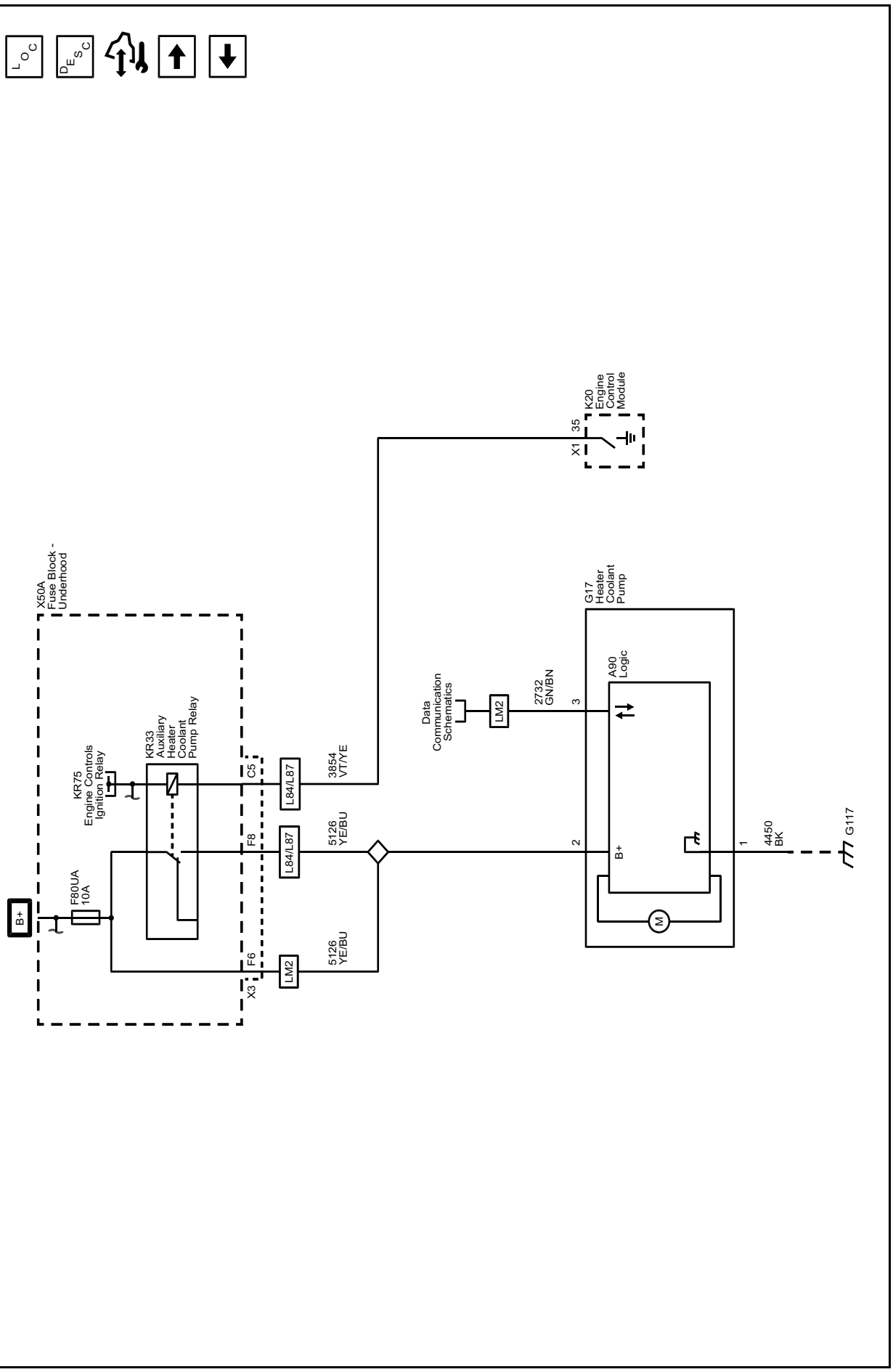
## HVAC Schematics (C4P/C67) (Windshield and Sunload Sensors (ASV/C4P))



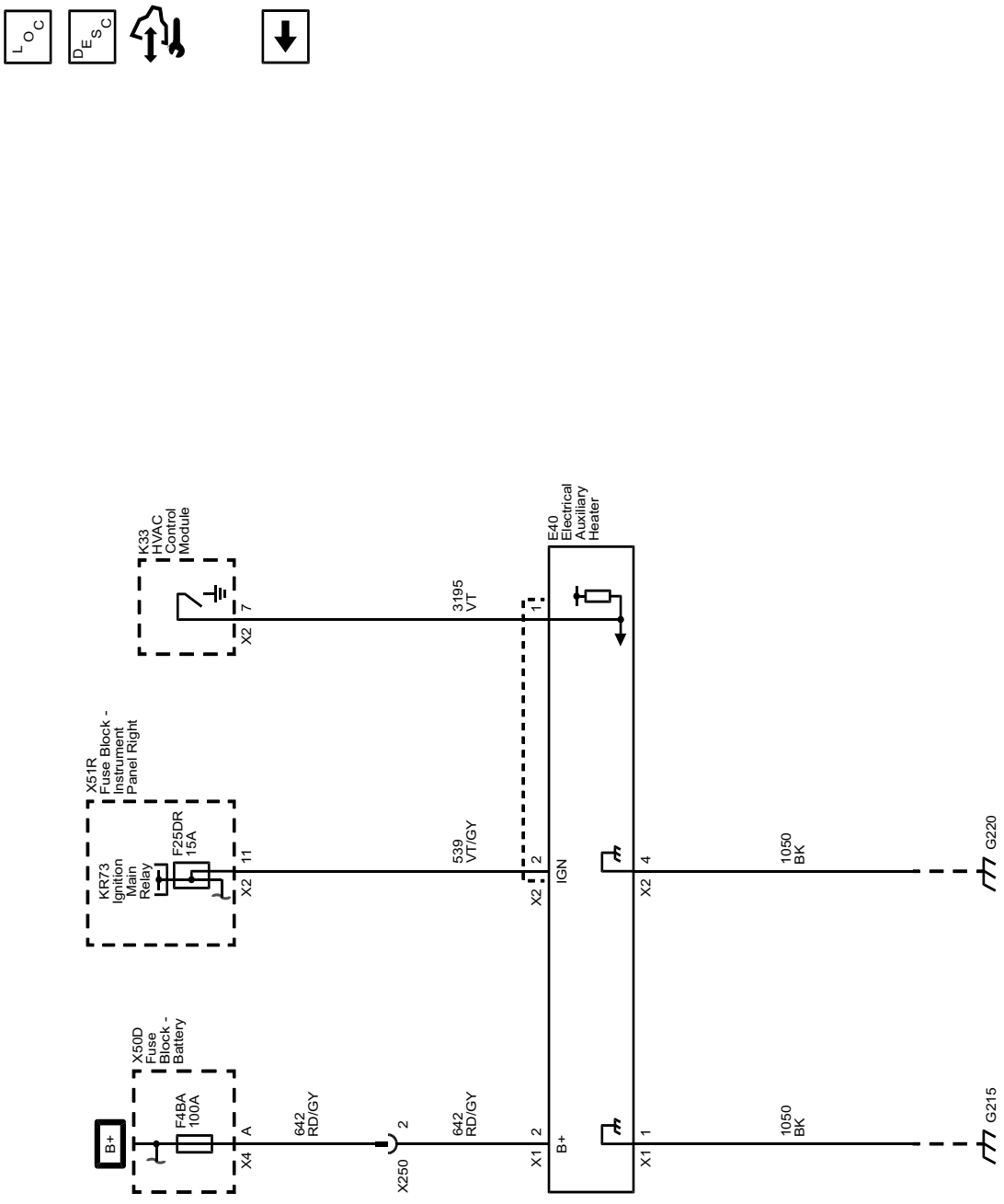
## HVAC Schematics (C4P/C67) (A/C Compressor Controls)



## HVAC Schematics (C4P/C67) (Heater Coolant Pump (KL9))



## HVAC Schematics (C4P/C67) (Auxiliary Heater (C32))




5256214

# Description and Operation

## Manual HVAC Description and Operation

The air temperature and the air delivery description and operation are divided into seven areas:

- HVAC Control Components
- Air Speed
- Air Delivery
- Heating and A/C Operation
- Recirculation Operation
- Engine Coolant and A/C System Refrigerant

## HVAC Control Components

### HVAC Controls

The HVAC controls contains all switches, buttons, and dials which are required to control the functions of the HVAC system and serve as interface between the operator and the HVAC control module. The selected values are passed to the HVAC control module via LIN-Bus.

### HVAC Control Module

The HVAC control module is a GMLAN device that interfaces between the operator and the HVAC system to maintain and control desired air temperature and air distribution settings. The battery positive voltage circuit provides power that the HVAC control module uses for keep alive memory. If the battery positive voltage circuit loses power, all HVAC DTCs and settings will be erased from keep alive memory. The body control module (BCM), which is the vehicle mode master, provides a device ON-Signal. The HVAC control module provides blower, air delivery mode and air temperature settings.

The HVAC control module supports the following features:

| Feature | Availability |
|---|---|
| Afterblow | Yes |
| Personalization | Yes |
| Actuator Calibration | Yes |

### Actuators

Doors in the HVAC case assembly are used to control air flow. The HVAC control module operates the doors through the use of actuators, with one actuator being used for each door. The system has the following air control doors and associated actuators: mode, temperature, and recirculation.

Each actuator used in the system is a 5-wire stepper motor. The HVAC control module supplies a 12 V reference voltage to the stepper motor and energizes the 4 stepper motor coils with a pulsed ground signal. The stepper motor moves the associated air control door into the calculated position in order to reach the selected position. The null point of the stepper motor will be calibrated, if the stepper motor is new. When the stepper motor is calibrated, the HVAC control module can drive the applicable coil to reach exactly the desired position of the air control door.

### Blower Motor and Control Module

The blower motor control module varies the speed of the blower motor by varying the voltage to the motor. A battery voltage circuit, ground circuit, and speed request signal circuit from the HVAC control module allow the blower motor control module to operate. The HVAC control module provides a low side pulse width modulation (PWM) signal to the blower motor control module to request a specific motor speed. The blower motor control module translates the PWM signal and drives the motor accordingly.

The blower motor control module has a signal wire used to output a speed signal. The signal is monitored by the BCM, and the value is sent to the ECM via serial data. The ECM monitors the blower motor speed to modify the total commanded engine coolant flow rate, which is a percentage of available coolant flow sent to the heater core for occupant comfort and windshield defrosting. When the HVAC Blower Speed is determined to be zero, the ECM disables the heater core coolant flow to optimize engine coolant flow for fuel economy and emissions.

### Evaporator Temperature Sensor

The evaporator temperature sensor is a 2-wire negative temperature co-efficient thermistor. The sensor operates within a temperature range of −40 to +85°C (−40 to +185°F). The sensor is installed at the evaporator and measures its temperature. If the temperature drops under 3°C (38°F), the compressor will be switched off in order to prevent evaporator icing.

### A/C Refrigerant Pressure Sensor

The A/C refrigerant pressure sensor is a 3-wire piezoelectric pressure transducer. A 5 V reference voltage, low reference, and signal circuits enable the sensor to operate. The A/C pressure signal can be between 0.2–4.8 V. When the A/C refrigerant pressure is low, the signal value is near 0 V. When the A/C refrigerant pressure is high, the signal value is near 5 V. The engine control module (ECM) converts the voltage signal to a pressure value. When pressure is too high or too low, the ECM will not allow the A/C compressor clutch to engage.

### A/C Compressor

The A/C compressor uses a conventional belt driven magnetic clutch to engage and mechanically turn the compressor. When the A/C switch is pressed, the HVAC control module sends an A/C request message to the ECM via serial data. If specific criteria is met, the ECM then grounds the A/C compressor clutch relay control circuit, which will switch the A/C compressor clutch relay. With the relay contacts closed, battery voltage is supplied to the permanently grounded A/C compressor clutch. The A/C compressor clutch will then be activated.

This A/C system utilizes a variable displacement solenoid valve to alter the amount of displacement created by the turning of the compressor. The HVAC control module provides both battery voltage and a pulse width modulated ground to the variable displacement solenoid valve. When the A/C switch is pressed, the HVAC control module grounds the variable displacement solenoid using a (PWM) signal in

order to determine the amount of compressor displacement. The performance of the A/C compressor is regulated based on cooling load.

## Air Speed

The blower control switch is part of the HVAC controls. The selected value of the blower switch position is sent to the HVAC control module via LIN-Bus. The HVAC control module provides a low side pulse width modulation (PWM) signal to the blower motor control module to request a specific motor speed. The blower motor translates the PWM signal and drives the motor accordingly.

### Afterblow

Afterblow is a feature that dries the evaporator core by operating the blower motor after the engine is turned OFF. This reduces the amount of microbial growth that can create undesirable odors. The vehicle does not come equipped with the afterblow feature turned ON. If the afterblow feature is required due to an odor concern, it must be enabled using the scan tool Afterblow configuration function.

After the HVAC control module has been programmed for afterblow, the following conditions must be met for afterblow to operate:

- The engine has been turned OFF for at least 30 minutes.
- The ambient air temperature is at least 21°C (70°F).
- The A/C compressor operated for more than 2 minutes before shut down.
- The system voltage is at least 12 volts.

Once the above conditions have been met, the blower motor will perform the following sequence up to 5 times. This could last up to an hour:

1. The blower motor will be OFF for 7–11 minutes.
2. The blower motor will RUN for 25–30 seconds.

## Air Delivery

The HVAC control module controls the distribution of air by the use of recirculation and mode actuator. The modes that may be selected are:

- Defrost
- Defog
- Panel
- Floor

The desired air distribution mode can be selected with the air distribution switches at the HVAC controls. The HVAC controls delivers the values to the HVAC control module via LIN-Bus. The HVAC control module controls the air distribution actuator so that it drives the door to the calculated position. Depending on the position of the door, air is distributed through various ducts leading to the outlets in the dash. Turning the mode door to the defrost position, the HVAC control module will move the recirculation actuator to outside air, reducing window fogging. When defrost is selected, the blower motor will be activated, regardless of the coolant temperature. The HVAC control module enables a high volume of air delivered to the front defrost vents. A/C is available in all modes.

The rear window defogger does not affect the HVAC system.

## Heating and A/C Operation

The purpose of the heating and A/C system is to provide heated and cooled air to the interior of the vehicle. The A/C system will also remove humidity from the interior and reduce windshield fogging. Regardless of the temperature setting, the following can affect the rate that the HVAC system can achieve the desired temperature:

- Recirculation actuator setting
- Difference between inside and desired temperature
- Blower motor speed setting
- Mode setting

When the A/C switch is pressed, the HVAC controls sends a signal to the HVAC control module via LIN-Bus. The HVAC control module evaluates this signal and sends an A/C request signal to the ECM via CAN-Bus. The ECM checks all preconditions before releasing and if all conditions are met sends a release signal back to the HVAC control module. The ECM will provide a ground for the A/C compressor relay enabling it to close its internal contacts to send battery voltage to the A/C compressor clutch coil. The A/C compressor clutch will be activated. The performance of the A/C compressor is regulated via a variable A/C compressor solenoid valve. The HVAC control module supplies battery voltage to the A/C compressor. When the A/C switch is pressed, the HVAC control module provides a pulse width modulation (PWM) signal to the A/C compressor solenoid valve in order to command the performance of the A/C compressor.

The following conditions must be met in order to activate the A/C compressor:

- Battery voltage is between 9–18 V
- Engine coolant temperature is less than 124°C (255°F)
- Engine speed is greater than 600 RPM
- Engine speed is less than 5 500 RPM
- A/C high side pressure is between 269–2 929 kPa (39–425 PSI)
- Throttle position is less than 100%
- Evaporator temperature is greater than 3°C (38°F)
- ECM does not detect immoderate torque load
- ECM does not detect insufficient idle quality
- The ambient temperature is above 1°C (34°F)

The sensor information is used by the ECM to determine the following:

- The A/C high side pressure
- An A/C system load on the engine
- An immoderate A/C high side pressure
- The heat load at the A/C condenser

The air streams into the passenger compartment through the heater core and the evaporator core. The air temperature actuator drives the mixed air door to induce the airflow. If the interior temperature should be increased, the mixed air door is put into the position in which more air streams through the heater core. If the

interior temperature should be decreased, the mixed air door is put into the position in which more air streams through the evaporator core.

## Recirculation Operation

The recirculation switch is integrated into the HVAC control. The selected recirculation setting is sent to the HVAC control module via LIN-Bus. The HVAC control module controls the air intake using the recirculation actuator. In recirculation mode the recirculation door is positioned to block outside air from entering and circulate the air within the vehicle. In outside air mode the recirculation door is positioned to route outside air into the vehicle.

Recirculation is only available if the defrost mode is not active. When the defrost mode is active, the recirculation actuator positions the recirculation door so that outside air is circulated to the windshield to reduce fogging.

## Electric Auxiliary Heater

Some models are equipped with an auxiliary electric heater to assist in warming the passenger compartment when the engine coolant has not sufficiently warmed to operating temperature. The heater is a 12 V positive temperature coefficient heating element located in the HVAC case just downstream of the traditional heater core. The HVAC control module will activate it when the outside temperature is less than approximately 8°C (46°F), the engine coolant temperature is less than approximately 75°C (167°F), and the temperature blend door is commanded to the full hot position.

## Engine Coolant and A/C System Refrigerant

For information on engine coolant, coolant flow, A/C refrigerant, and the A/C refrigerant cycle, refer to Heating and Air Conditioning System Description and Operation.

# BLANK

# Section 7

# Power and Signal Distribution

**Data Communications** ..... 7-3
**Schematic and Routing Diagrams** ..... 7-3
Data Communication Schematics ..... 7-4
Body Control System Schematics ..... 7-20
**Description and Operation** ..... 7-24
Data Link Communications Description and Operation ..... 7-24

**Electrical Component and Inline Harness Connector End Views** ..... 7-29
**Visual Identification** ..... 7-29
Electrical Center Identification Views ..... 7-29
Component Connector End Views ..... 7-86
Inline Harness Connector End Views ..... 7-476

**Power Outlets** ..... 7-673
**Schematic and Routing Diagrams** ..... 7-673
Cigar Lighter/Power Outlet Schematics ..... 7-674
**Description and Operation** ..... 7-681
Mobile Device Wireless Charger Description and Operation ..... 7-681
Power Outlets Description and Operation ..... 7-682

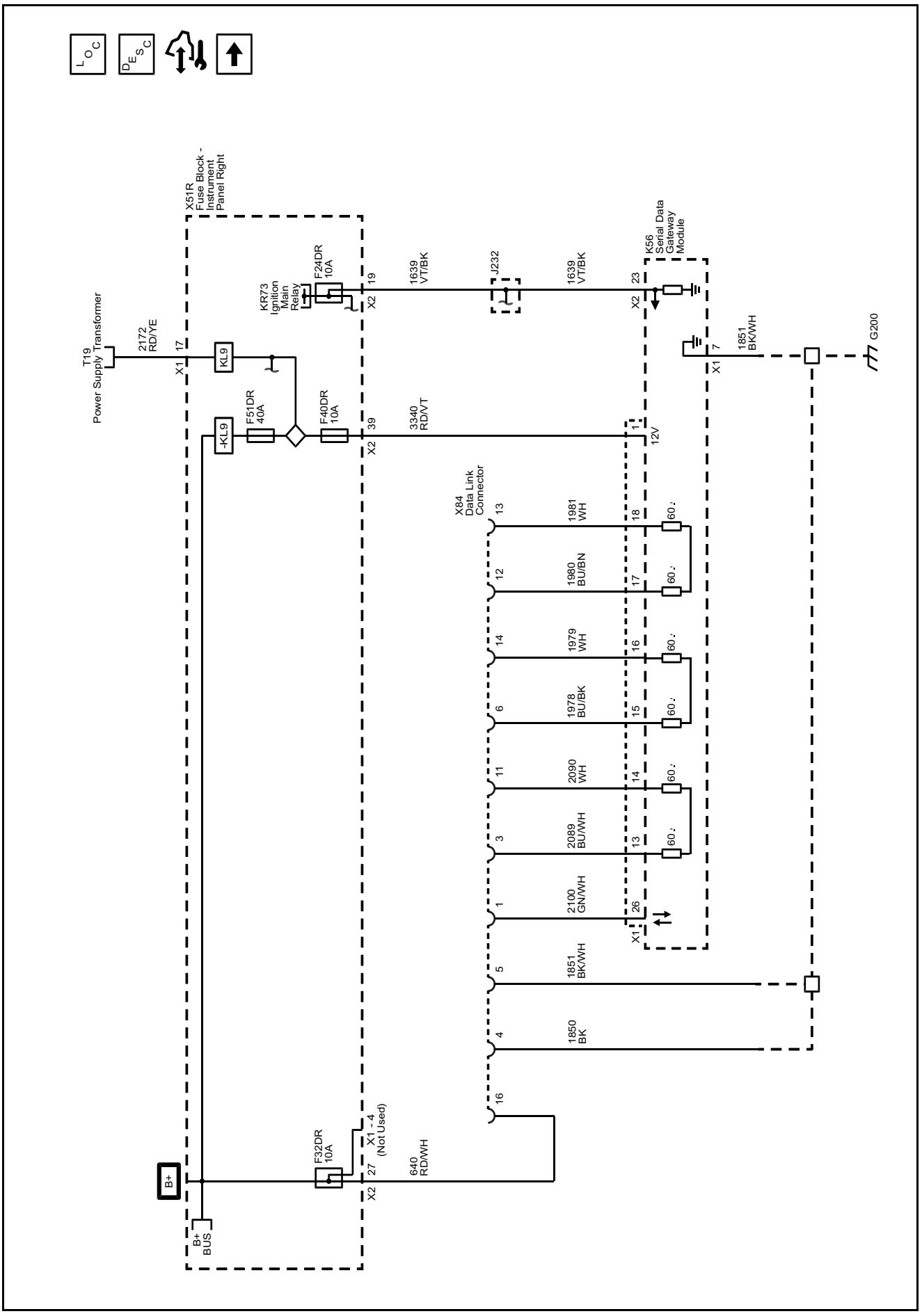
**Wiring Systems and Power Management** ..... 7-684
**Schematic and Routing Diagrams** ..... 7-684
Power Distribution Schematics ..... 7-685
Power Moding Schematics ..... 7-715
Ignition Lock Schematics ..... 7-720
Ground Distribution Schematics ..... 7-721
Upfitter Provision Schematics ..... 7-740
Trailer Connector/Provision Schematics ..... 7-747
**Description and Operation** ..... 7-750
Power Mode Description and Operation (Without BTM and/or ATH/ATS) ..... 7-750
Power Mode Description and Operation (BTM and/or ATH/ATS) ..... 7-752
Retained Accessory Power Description and Operation ..... 7-755
Trailering Description and Operation ..... 7-756

BLANK

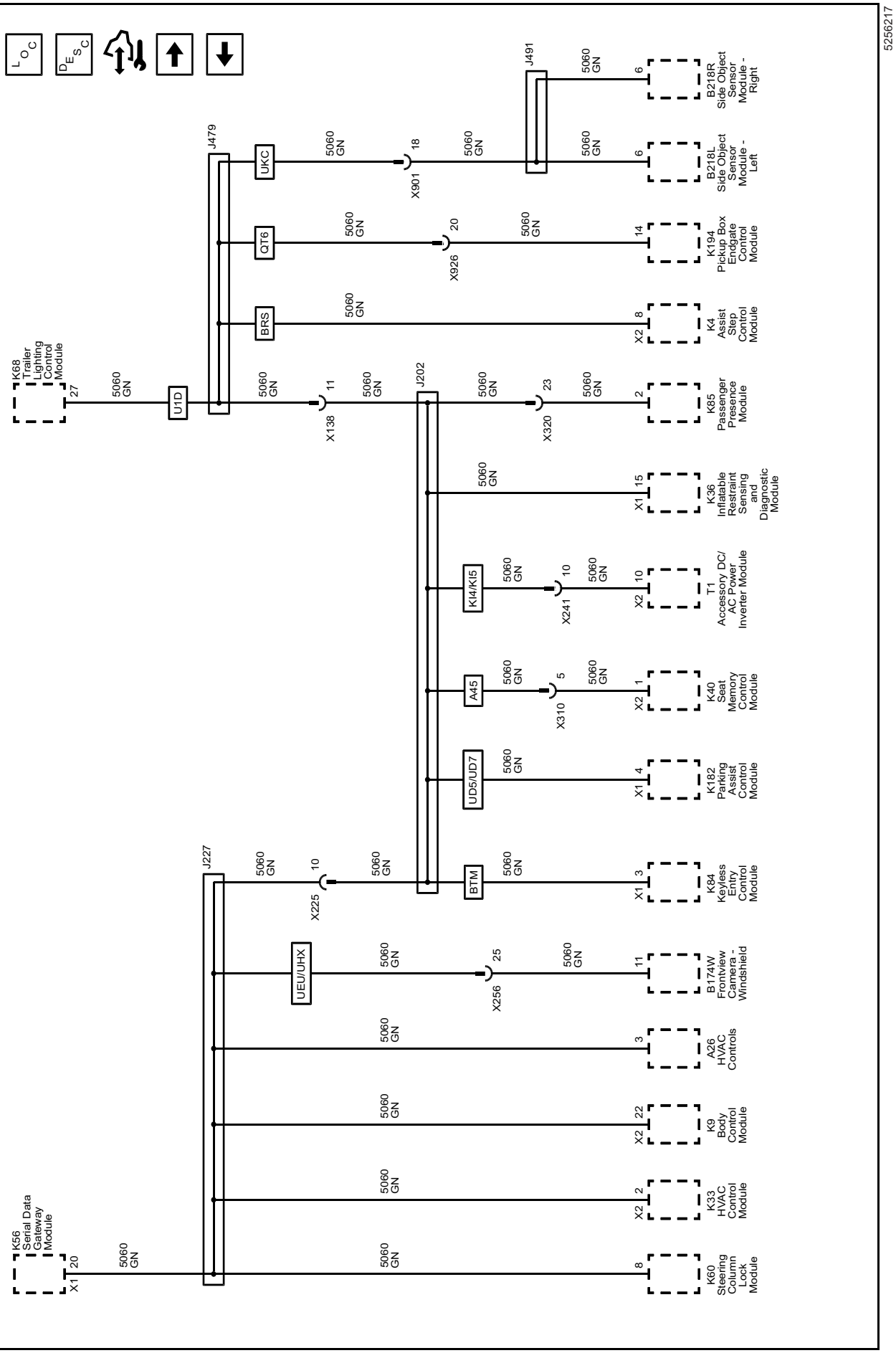
# Data Communications

## Schematic and Routing Diagrams

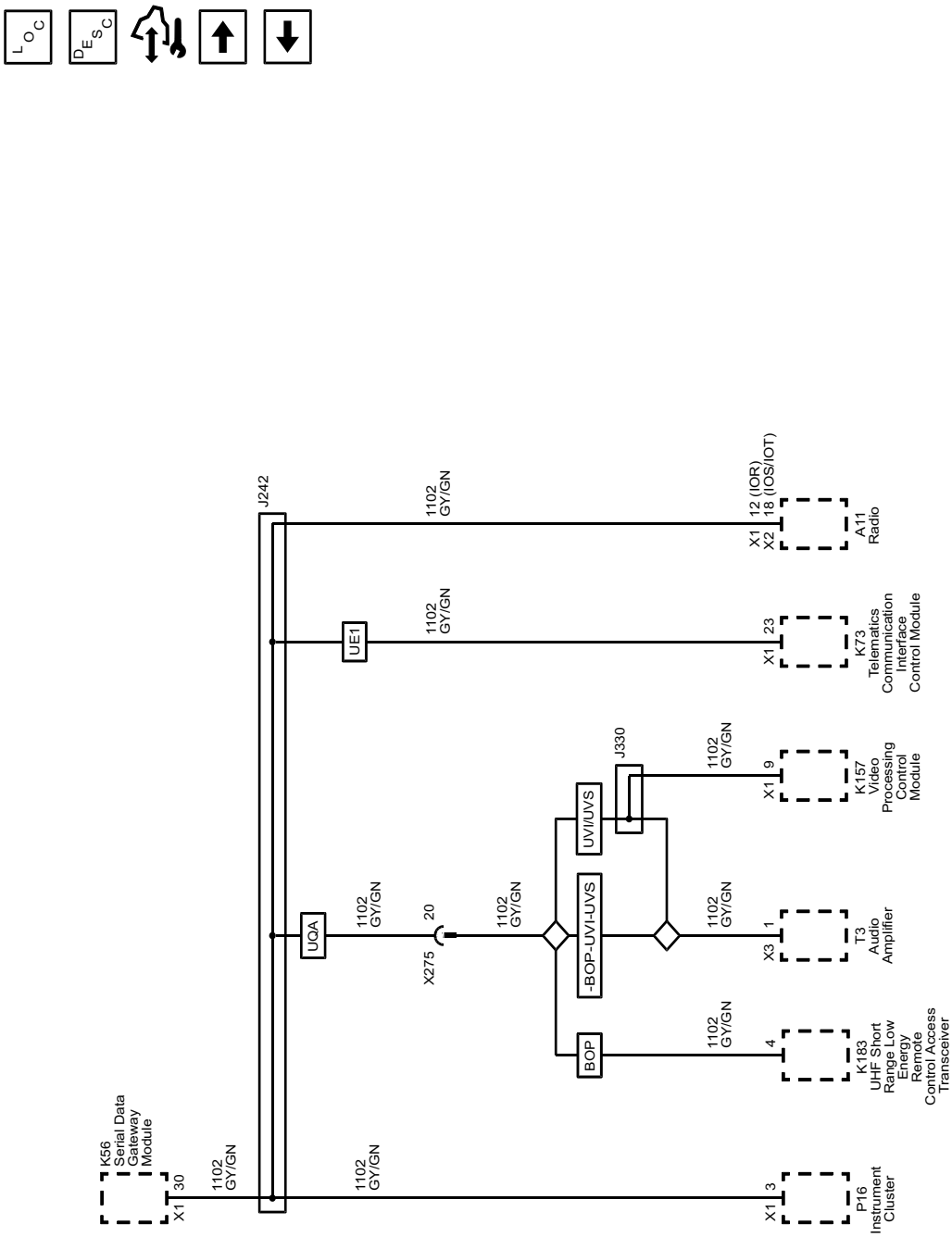
## Data Communication Schematics (Data Link Connector and Serial Data Gateway Module Power and Ground)



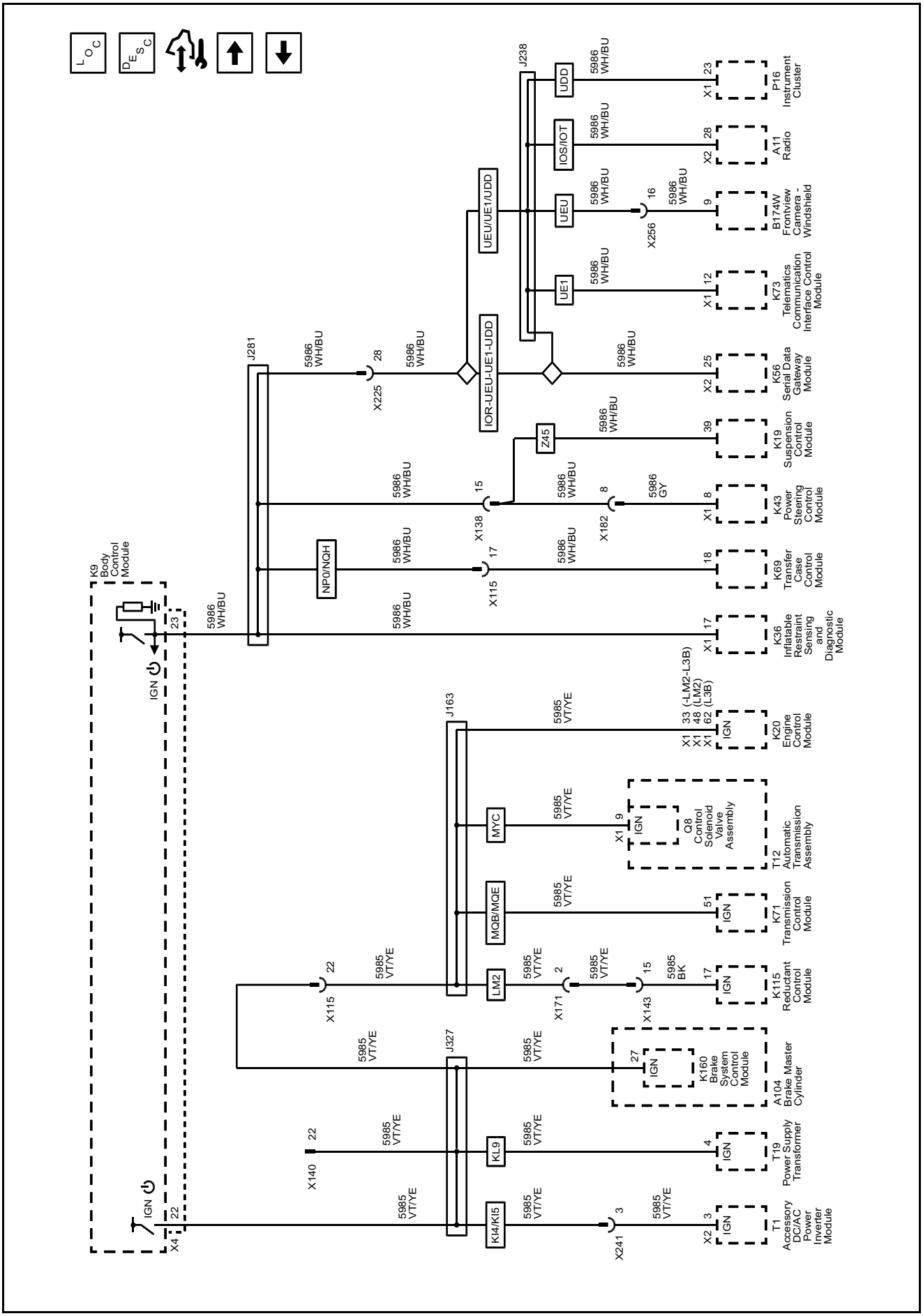
## Data Communication Schematics (Low Speed GMLAN)



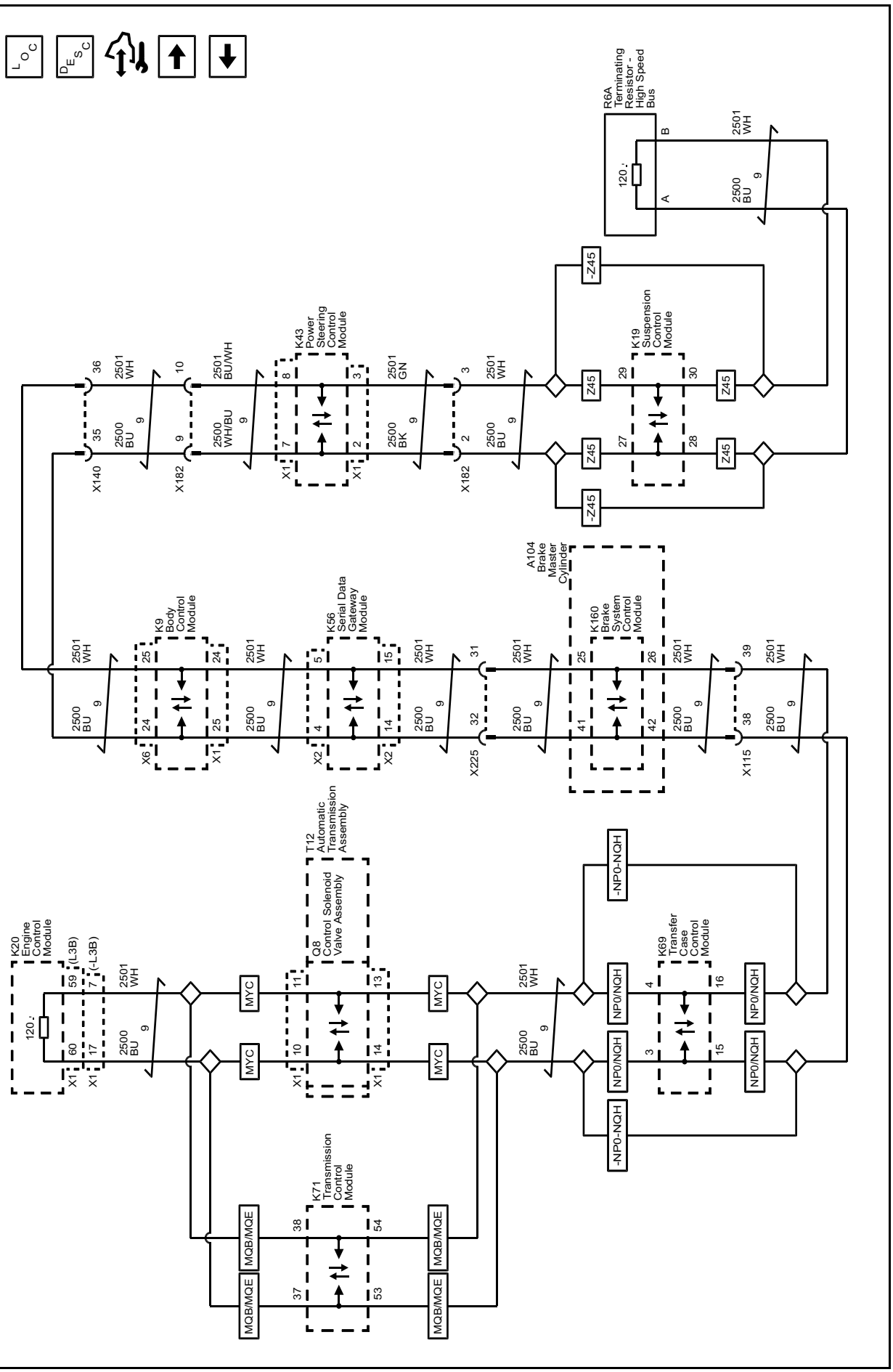
## Data Communication Schematics (Gateway Isolated Low Speed GMLAN)



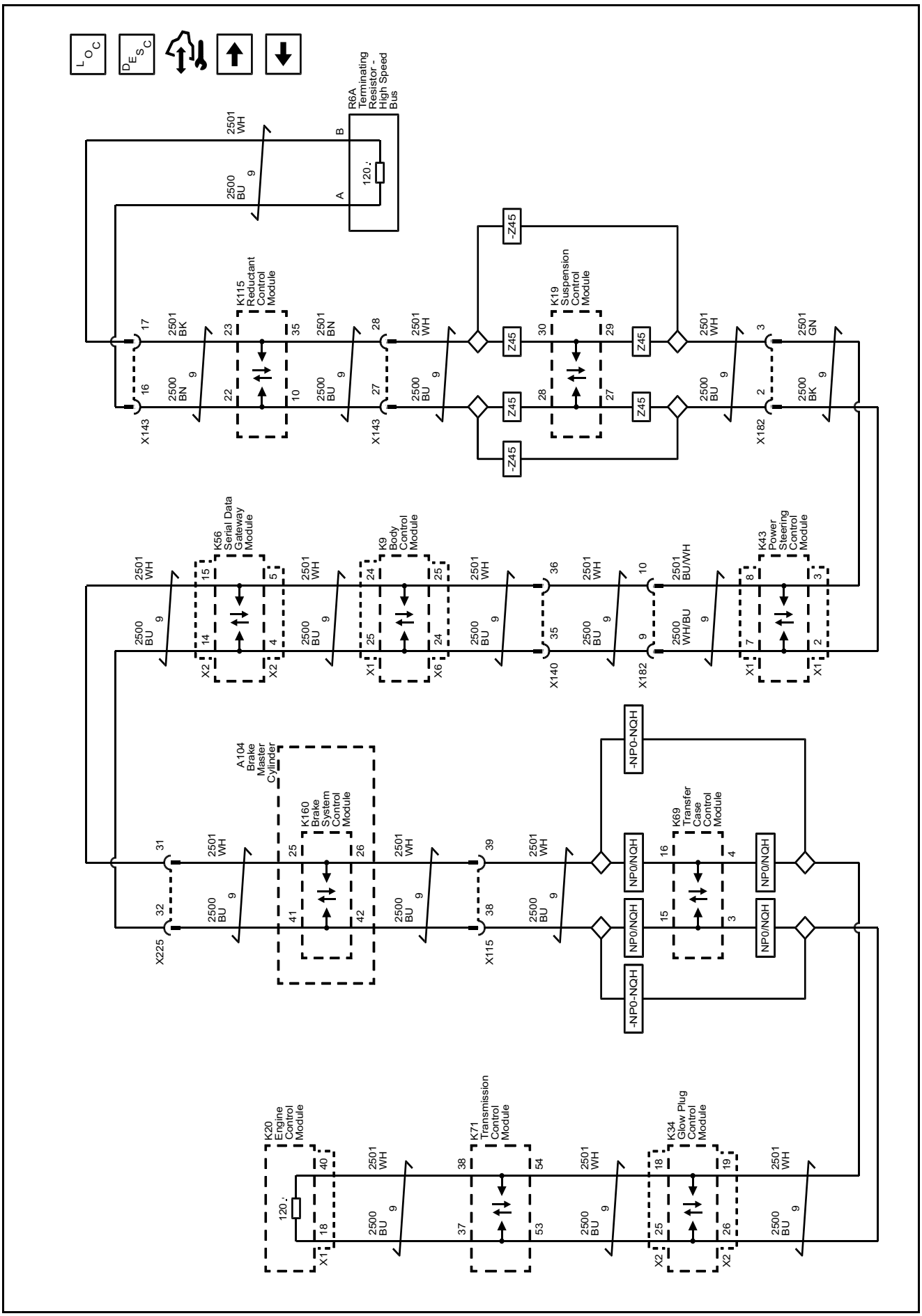
## Data Communication Schematics (Communications Enable - High Speed GMLAN)



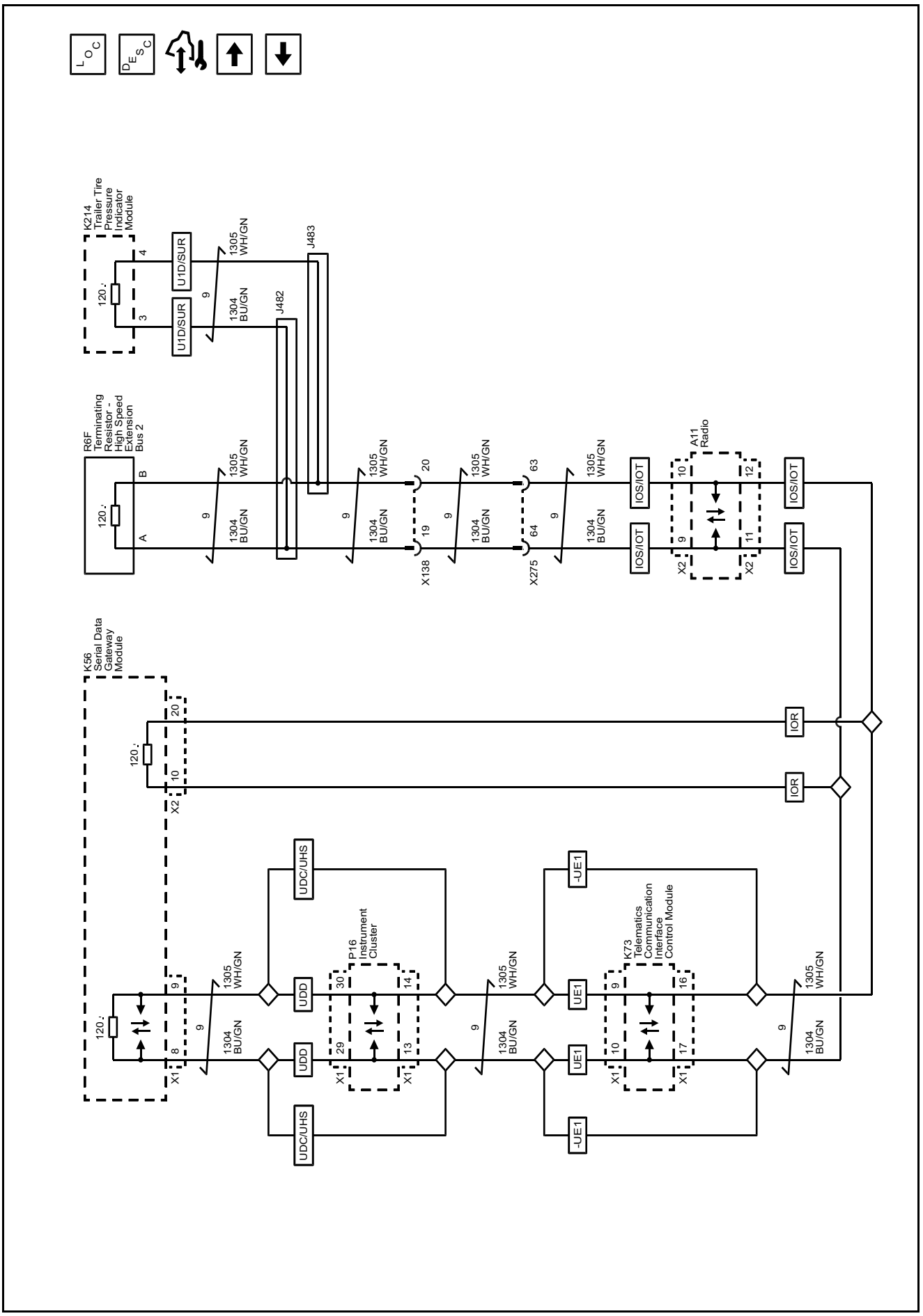
## Data Communication Schematics (High Speed GMLAN (-LM2))



## Data Communication Schematics (High Speed GMLAN (LM2))

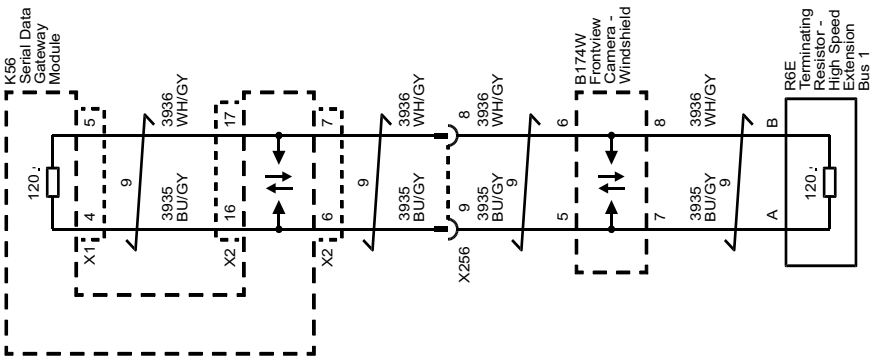


## Data Communication Schematics (Gateway Isolated High Speed GMLAN)



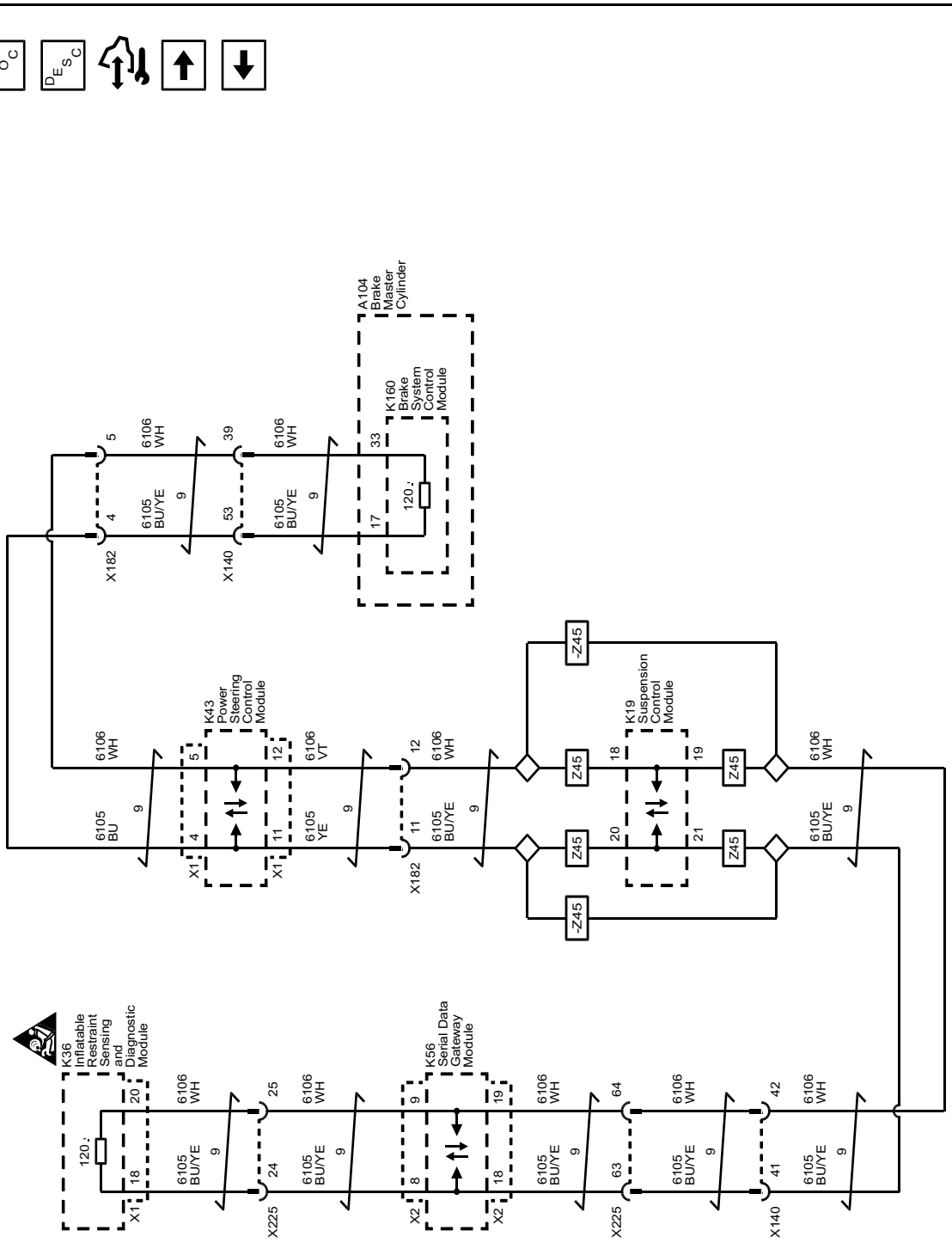
## Data Communication Schematics (Gateway Expansion High Speed GMLAN (UEU/UHX))



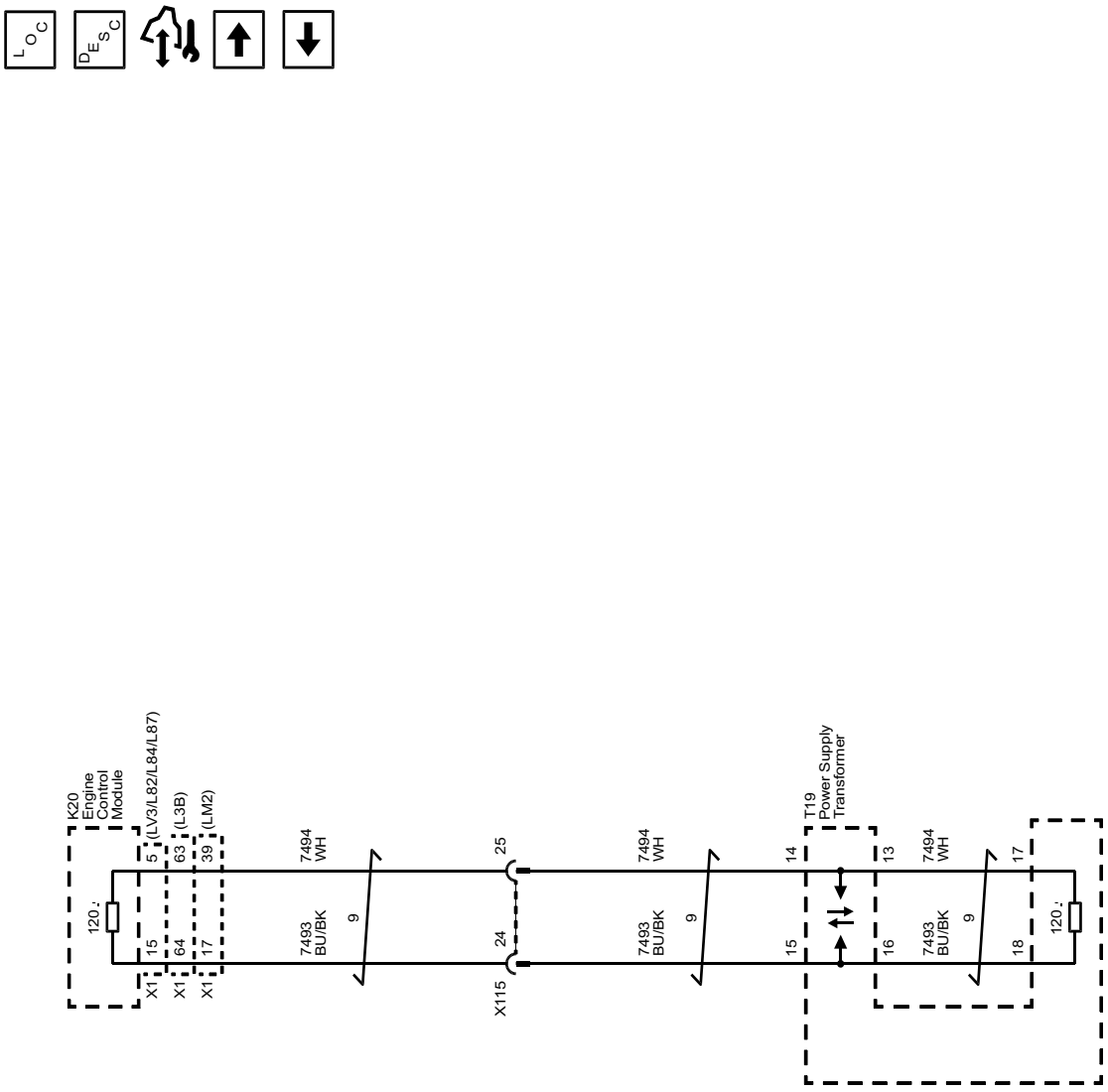



5256232

## Data Communication Schematics (Chassis High Speed GMLAN)

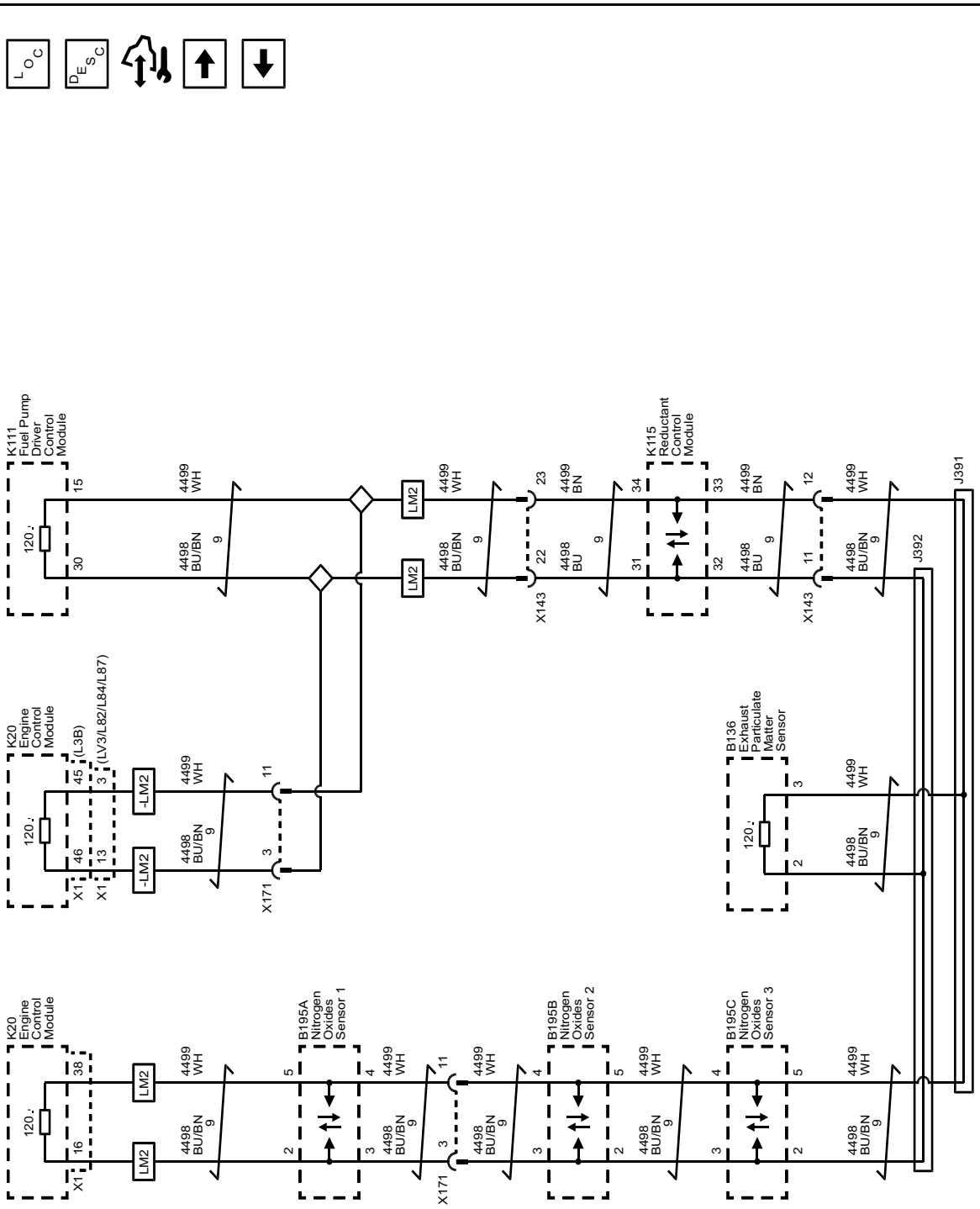


## Data Communication Schematics (Powertrain High Speed GMLAN (KL9))



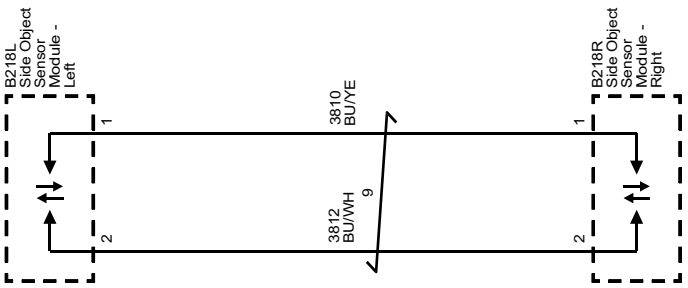

5256234

## Data Communication Schematics (Powertrain Sensor High Speed GMLAN)



## Data Communication Schematics (Object High Speed GMLAN (UKC))

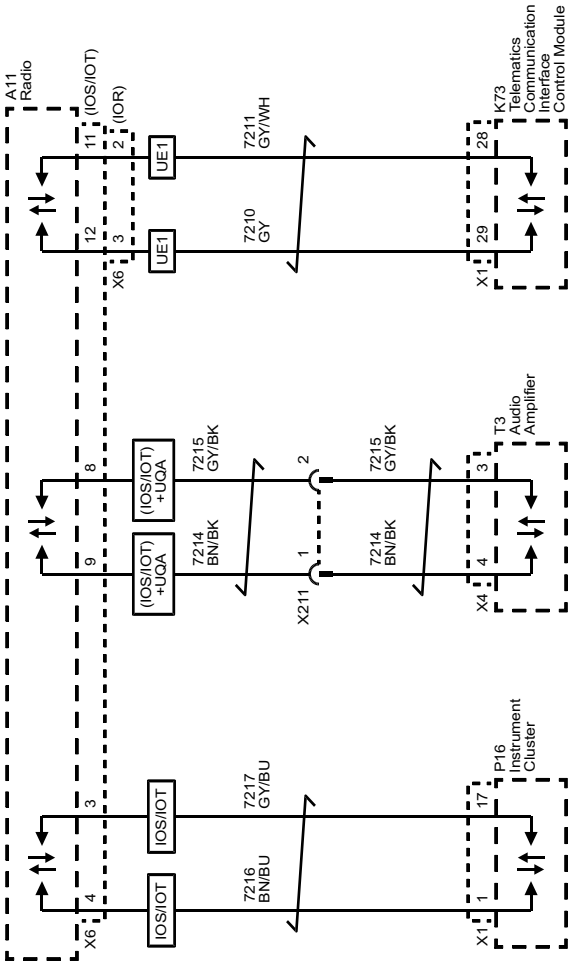





5256236

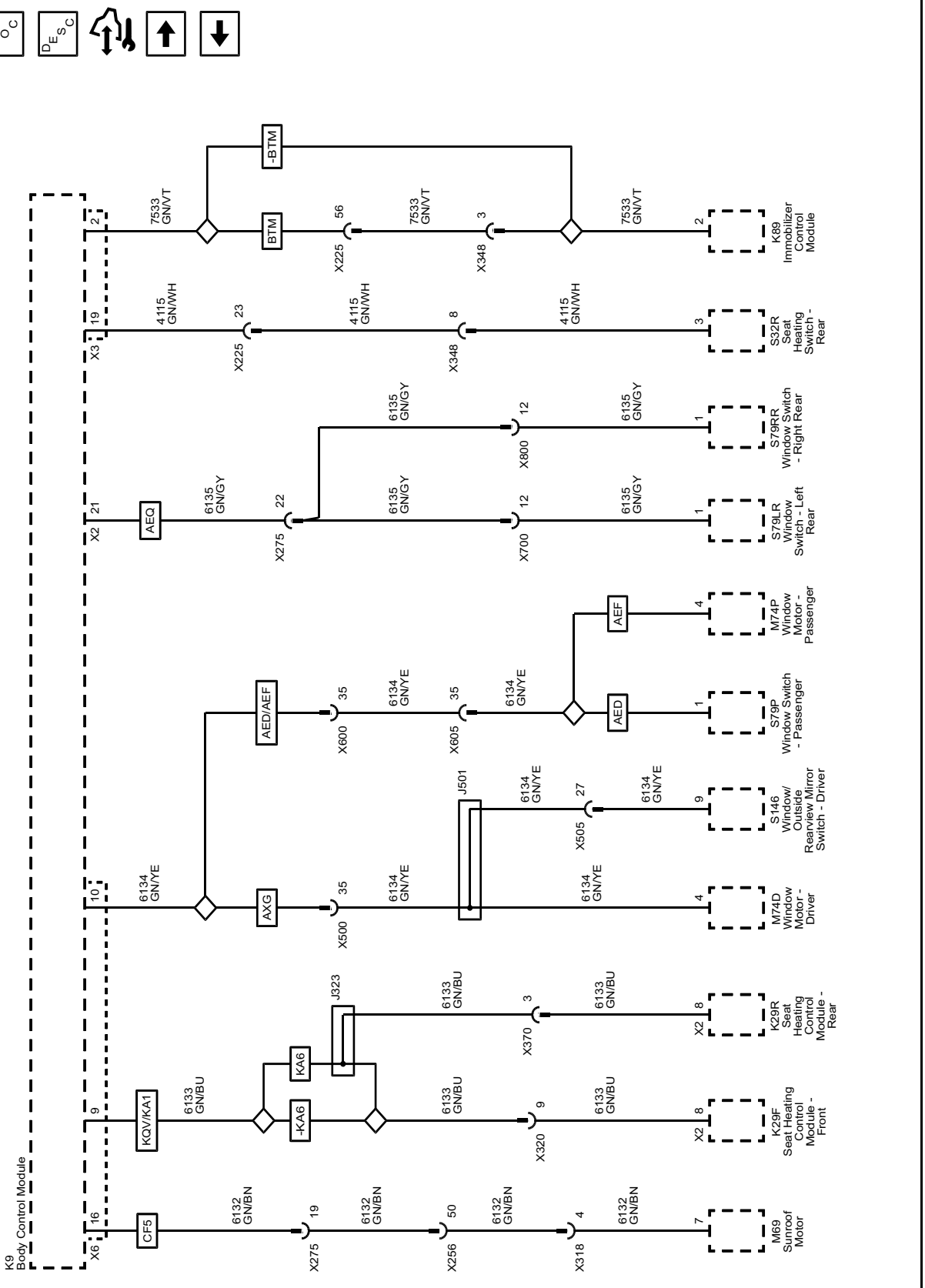
## Data Communication Schematics (Ethernet Bus)





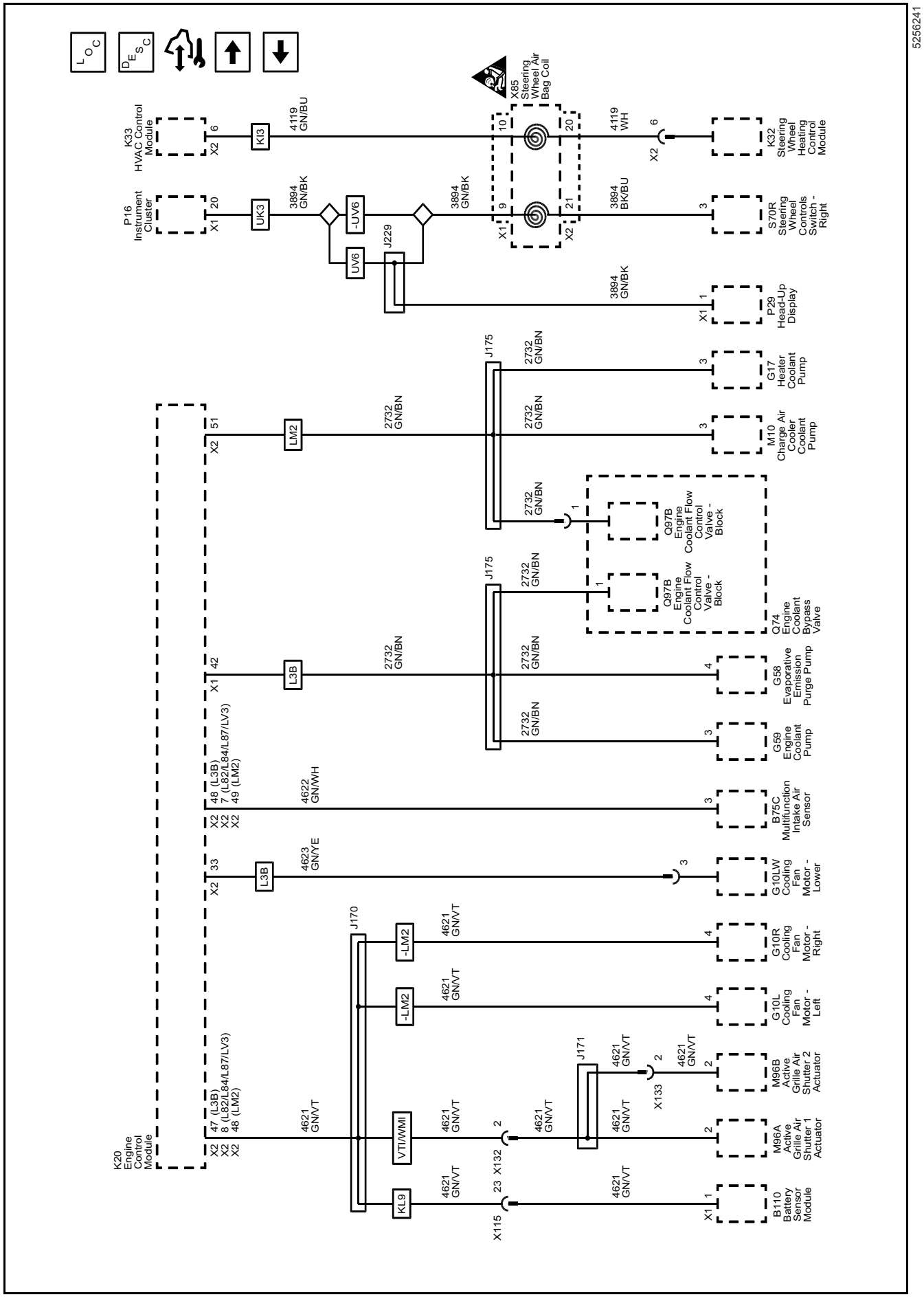

5256237

## Data Communication Schematics (Local Interconnect Network (1 of 3))

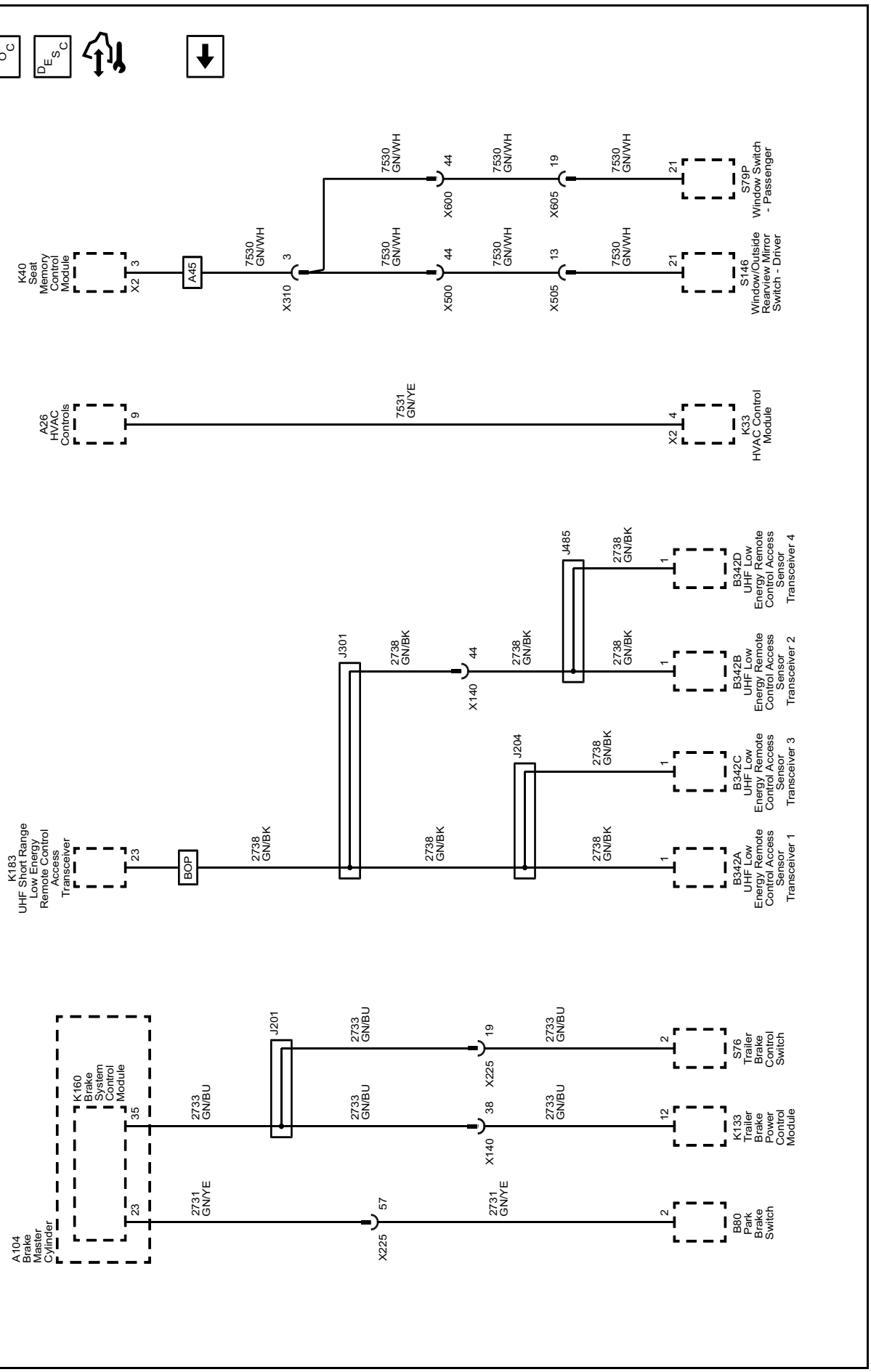



5256240

## Data Communication Schematics (Local Interconnect Network (2 of 3))

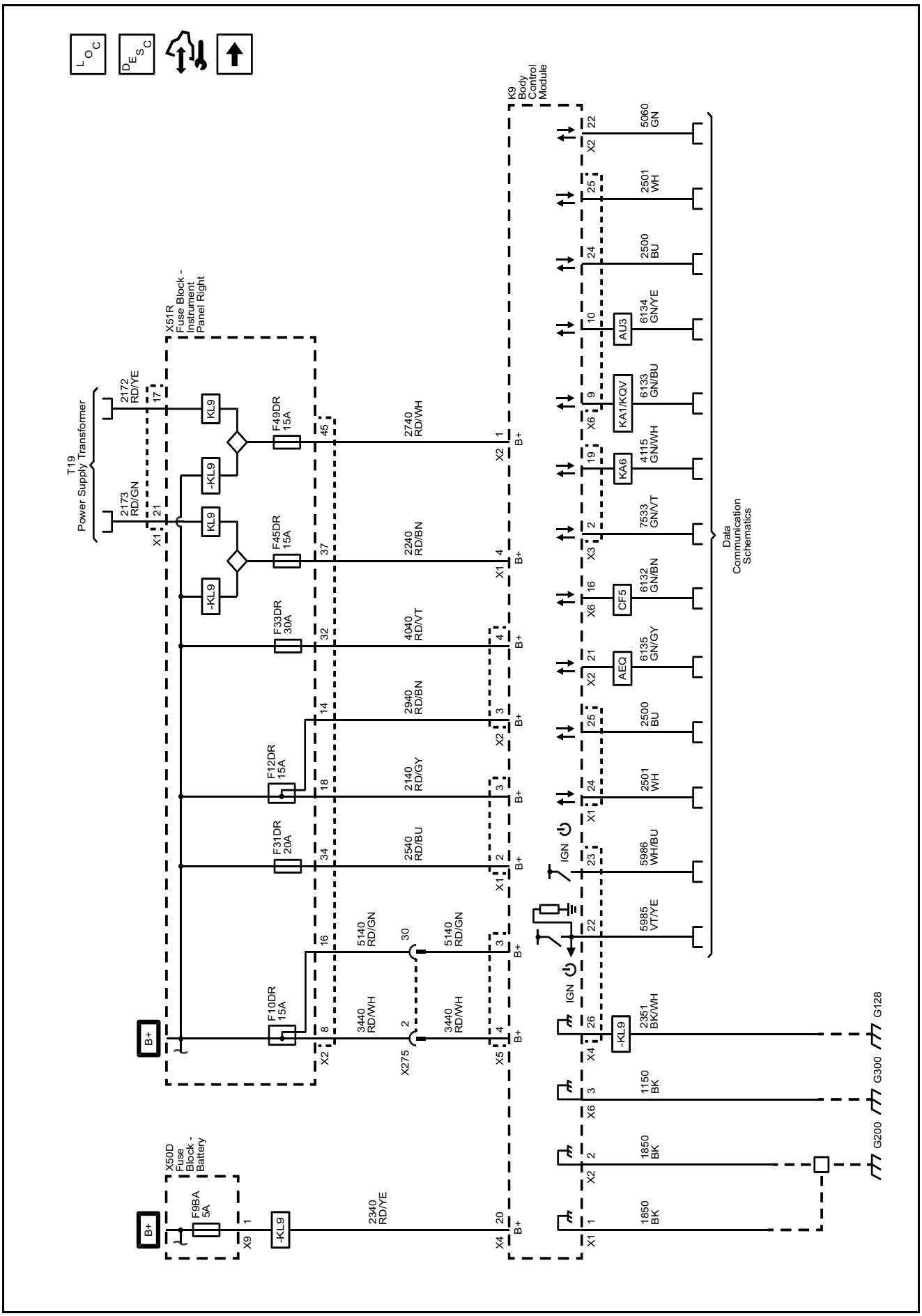


## Data Communication Schematics (Local Interconnect Network (3 of 3))



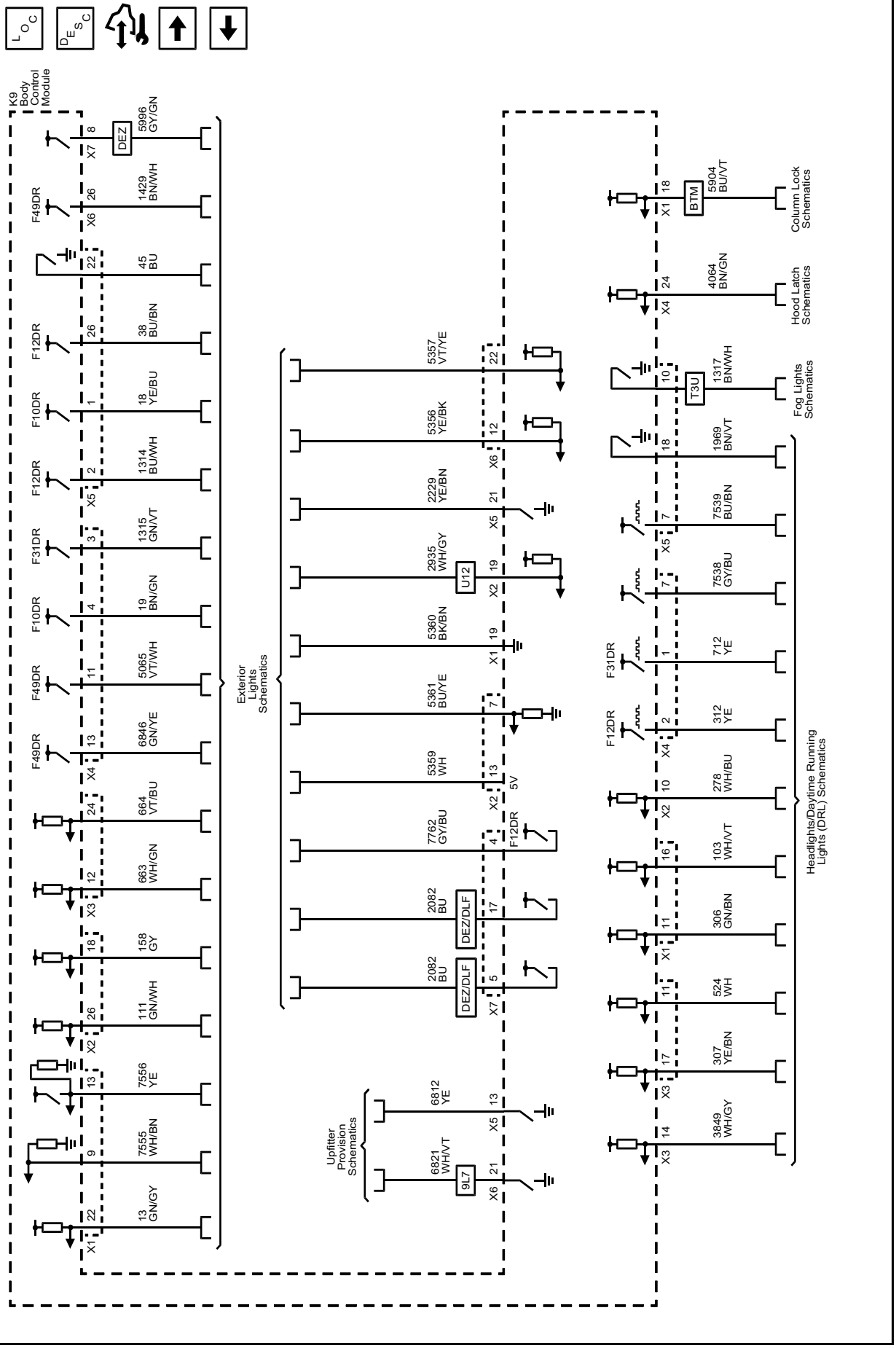

5256242

## Body Control System Schematics (Module Power, Ground and Serial Data)

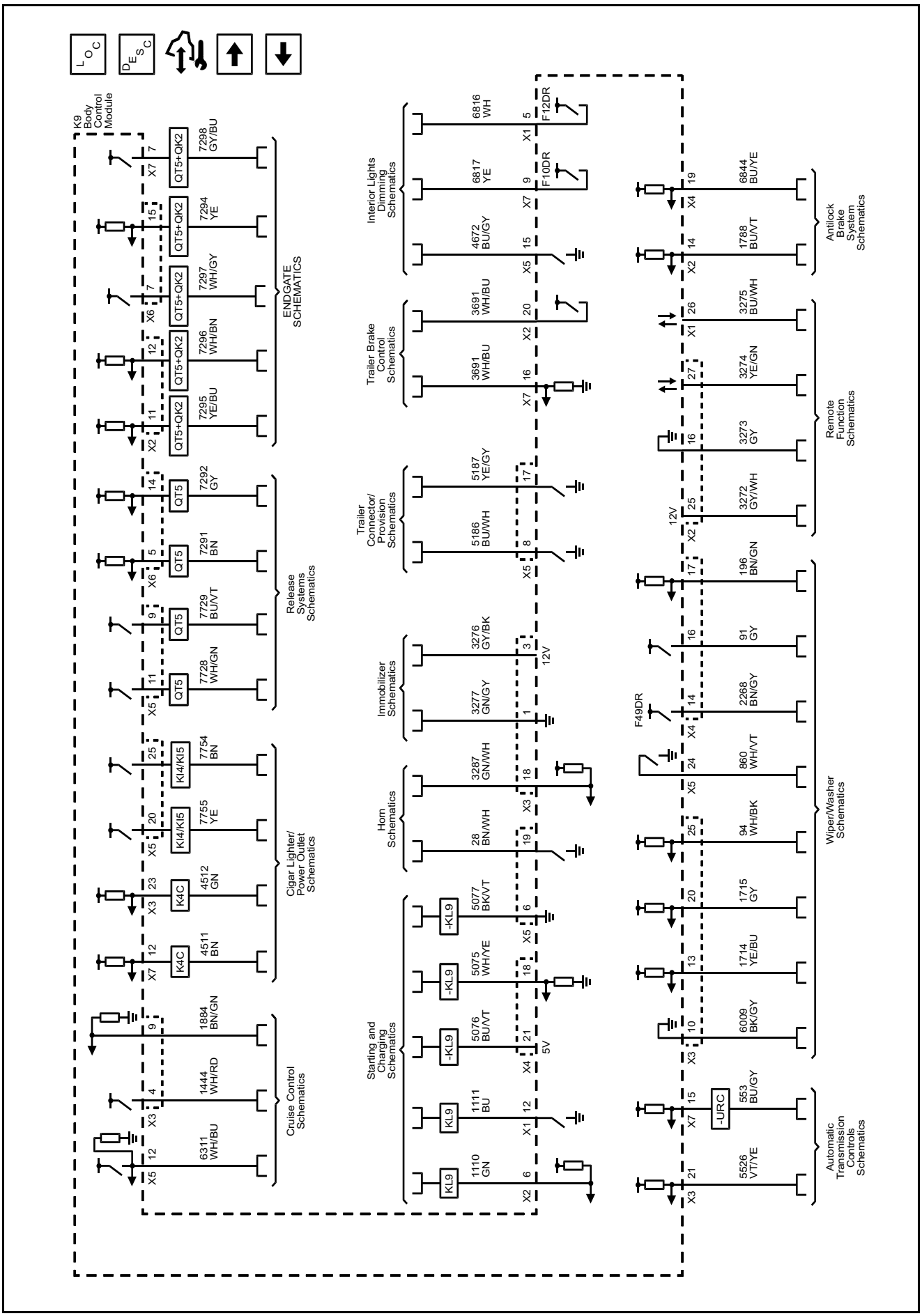



5256243

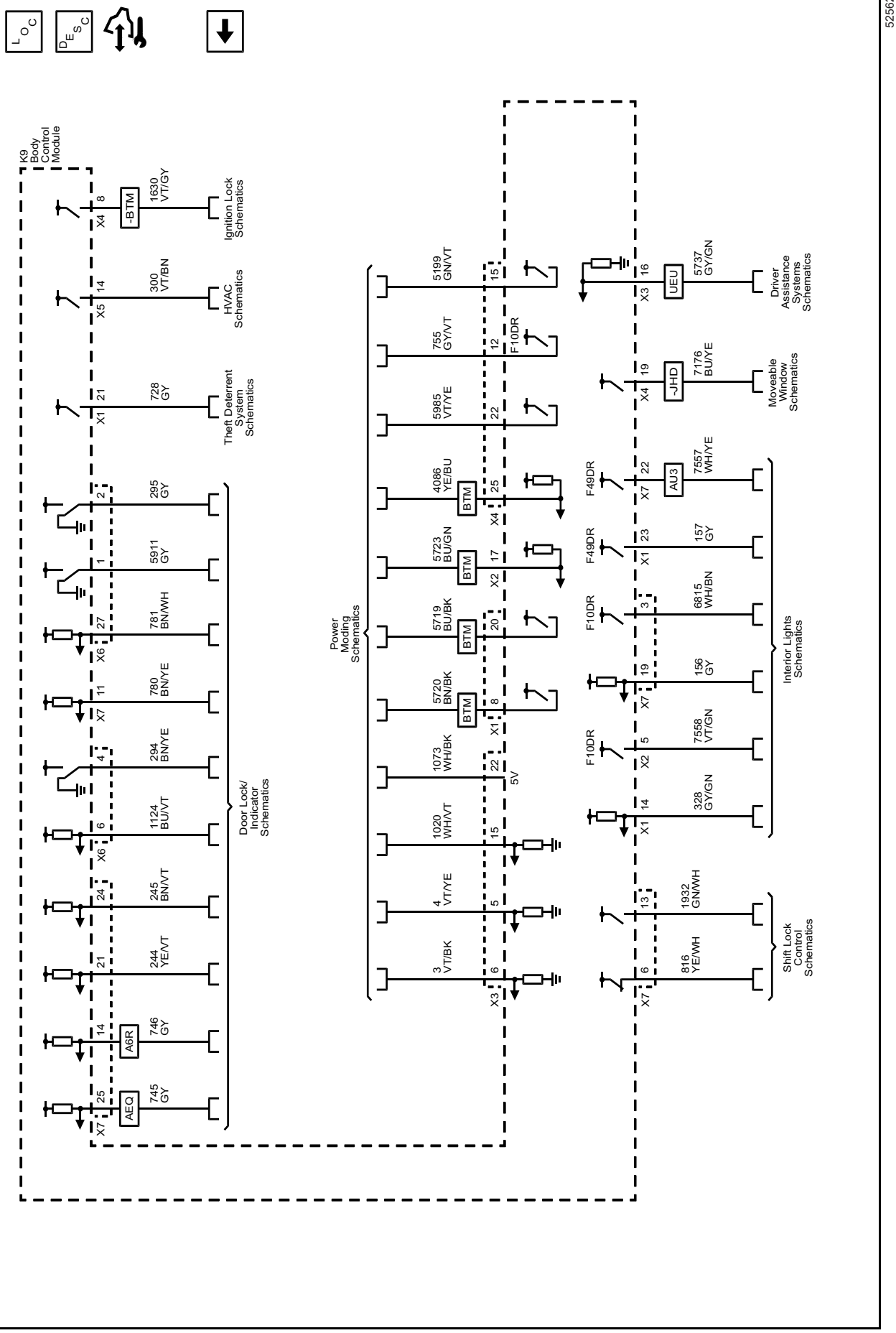
## Body Control System Schematics (Subsystem References (1 of 3))



## Body Control System Schematics (Subsystem References (2 of 3))



## Body Control System Schematics (Subsystem References (3 of 3))




5256247

# Description and Operation

## Data Link Communications Description and Operation

**Note:** This is an overview of different serial data buses used by GM devices to communicate with each others. Use *Data Communication Schematics on page 7-4* to find out which serial data buses are configured for a specific vehicle.

## Data Link Communications Overview

There are many components in a vehicle that rely on information from other sources, transmit information to other sources, or both. Serial data communication networks provide a reliable, cost effective, way for various components of the vehicle to “talk” to one another and share information.

GM uses a number of different communication buses to insure the timely and efficient exchange of information between devices. When compared to each other, some of these buses are different in nature as far as speed, signal characteristics, and behavior. An example of this is the High Speed GMLAN and Low Speed GMLAN Buses.

On the other hand, when other buses are compared to each other they have similar characteristics and simply operate in parallel. In this case they are used to group together components which have high interaction. Examples are the High Speed GMLAN, Powertrain Expansion, and Chassis Expansion Buses. This allows them to communicate with each other on a bus with reduced message congestion insuring faster and the more timely exchange of information than if all vehicle devices were on a single bus.

The majority of information that exists within a given network generally stays local; however some information will have to be shared on other networks. Control modules designated as Gateway’s perform the function of transferring information between the various buses. A Gateway module is connected to at least 2 buses and will interact with each network according to its message strategy and transmission models.

GMLAN provides the capability for a receiving device to monitor message transmissions from other devices in order to determine if messages of interest are not being received. The primary purpose is to allow reasonable default values to be substituted for the information no longer being received. Additionally, a device may set a Diagnostic Trouble Code (DTC) to indicate that the device it is expecting information from is no longer communicating. A lost communication DTC typically is set in devices other than the device with a communication failure.

## K9 Body Control Module (BCM)

The K9 Body Control Module has discrete input and output terminals to control the vehicle's body functions. The K9 Body Control Module is wired to the High Speed GMLAN Bus, Low Speed GMLAN Bus and multiple Local Interconnect Network (LIN) Buses and acts as a gateway between them. The various K9 Body Control Module input and output circuits are illustrated in the corresponding functional areas on the K9 Body Control Module electrical schematics. Refer to the *Body Control System Schematics on page 7-20* for more detailed information.

### Power Mode Master

The K9 Body Control Module functions as the power mode master. The ignition switch is a low current switch with multiple discrete ignition switch signals to the power mode master for determining the power mode that will be sent over the serial data circuits to the other devices that need this information; the power mode master will activate relays and other direct outputs of the power mode master as needed. Refer to *Power Mode Description and Operation (Without BTM and/or ATH/ATS) on page 7-750* or *Power Mode Description and Operation (BTM and/or ATH/ATS) on page 7-752* for a complete description of power mode functions.

### Gateway

The K9 Body Control Module functions as a gateway or translator. The purpose of the gateway is to translate serial data messages between the High Speed GMLAN Bus and the Low Speed GMLAN Bus for communication between the various devices. The gateway will interact with each network according to that network's transmission protocol. All communication between the K9 Body Control Module and a scan tool is done through the primary High Speed GMLAN Bus.

## K56 Serial Data Gateway Module (Gen 3)

**Note:** The Data Bus Diagnostic Tool will not work with vehicles equipped with K56 Serial Data Gateway Module gen 3.

This vehicle is equipped with a K56 Serial Data Gateway Module gen 3. The K56 Serial Data Gateway Module is used to handle communications between multiple GMLAN buses and functions as a gateway to isolate the secure networks from the unsecured networks. It was created to mitigate bus loading to support cyber security and new active/advanced safety features (if equipped). The K56 Serial Data Gateway Module is used as a frame-to-frame gateway for all functional messages. Communication between the K56 Serial Data Gateway Module and a scan tool is done through the primary High Speed GMLAN bus. When the K56 Serial Data Gateway Module is not communicating, the scan tool can not communicate with the vehicle.

The K56 Serial Data Gateway Module has two microprocessors within the electronic control unit. Each microprocessor is diagnosed/programmed independently via the scan tool because the two microprocessors do not talk internally. Each of these processors are responsible for managing the traffic for specific communication buses on the vehicle. The two particular buses that they will manage are high speed and low speed. If communication does not exist or the particular micros have not been programmed, control modules won’t be able to communicate with or through the K56 Serial Data Gateway Module.

**Low speed Microprocessor**

- The low speed microprocessor is programmable via the X84 Data Link Connector (DLC) terminal 1. This low speed bus between the X84 Data Link Connector and the K56 Serial Data Gateway Module is called the Low Speed DLC Bus.
- The low speed microprocessor is capable of gating signals between the Low Speed DLC, the primary Low Speed GMLAN, and the Gateway Isolated Low Speed GMLAN Buses.
- The low speed microprocessor is also capable of gating signals between the Object High Speed DLC Bus (DLC terminals 3 & 11) and the Object High Speed GMLAN Bus.

**High speed Microprocessor**

- The high speed micro is programmable via the X84 Data Link Connector (DLC) terminals 6 & 14. This high speed bus between the X84 Data Link Connector and the K56 Serial Data Gateway Module is called High Speed DLC Bus.
- The high speed micro is capable of gating signals between the High Speed DLC, the primary High Speed GMLAN, the Gateway Expansion High Speed GMLAN, and the Gateway Isolated High Speed GMLAN Buses.
- The high speed micro is also capable of gating signals between the Chassis High Speed DLC Bus (DLC terminals 12 & 13) and the Chassis High Speed GMLAN Bus.

## High Speed GMLAN Bus (Circuits 2500 & 2501)

**Note:** Continuity check cannot be performed between the X84 Data Link Connector and control modules on the primary High Speed GMLAN Bus.

A primary High Speed GMLAN Bus is used where data needs to be exchanged at a high enough rate to minimize the delay between the occurrence of a change in sensor value and the reception of this information by a control device using the information to adjust vehicle system performance.

The primary High Speed GMLAN serial data network consists of two twisted wires. One signal circuit is identified as GMLAN-High and the other signal circuit is identified as GMLAN-Low. At each end of the data bus there is a 120 Ω termination resistor between the GMLAN-High and GMLAN-Low circuits.

Data symbols (1's and 0's) are transmitted sequentially at a rate of 500 Kbit/s. The data to be transmitted over the bus is represented by the voltage difference between the GMLAN-High signal voltage and the GMLAN-Low signal voltage.

When the two wire bus is at rest the GMLAN-High and GMLAN-Low signal circuits are not being driven and this represents a logic "1". In this state both signal circuits are at the same voltage of 2.5 V. The differential voltage is approximately 0 V.

When a logic "0" is to be transmitted, the GMLAN-High signal circuit is driven higher to about 3.5 V and the GMLAN-Low circuit is driven lower to about 1.5 V. The differential voltage becomes approximately 2.0 (+/- 0.5) V.

## High Speed DLC Bus (Circuits 1978 & 1979)

Between the X84 Data Link Connector (DLC) terminals 6 & 14 and the K56 Serial Data Gateway Module terminals 15 X1 & 16 X1, there is a high speed bus called the High Speed DLC Bus. The High Speed DLC Bus is similar to the primary High Speed GMLAN Bus. Between the GMLAN-High and GMLAN-Low circuits, there is a 120 Ω termination resistor internal to the K56 Serial Data Gateway Module. There is no terminating resistor at the DLC.

The K56 Serial Data Gateway Module uses its high speed microprocessor to gate signals between the High Speed DLC, the primary High Speed GMLAN, the Gateway Expansion High Speed GMLAN, and the Gateway Isolated High Speed GMLAN Buses.

## Chassis High Speed GMLAN Bus (Circuits 6105 & 6106) (if equipped)

**Note:** Continuity check cannot be performed between the X84 Data Link Connector and control modules on the Chassis High Speed GMLAN Bus.

The Chassis High Speed GMLAN Bus (or Chassis Expansion Bus) is basically a copy of the High Speed GMLAN Bus except that its use is reserved for chassis components. This implementation splits message congestion between two parallel buses helping to insure timely message transmission and reception. Sometimes communication is required between the Chassis High Speed GMLAN Bus and the primary High Speed GMLAN Bus. This is accomplished by using the K17 Electronic Brake Control Module as the Gateway module. Since the Chassis High Speed GMLAN Bus and primary High Speed GMLAN Bus operate in the same manner, the diagnostics for each are similar.

## Chassis High Speed DLC Bus (Circuits 1980 & 1981)

Between the X84 Data Link Connector (DLC) terminals 12 & 13 and the K56 Serial Data Gateway Module terminals 17 X1 & 18 X1, there is a high speed bus called the Chassis High Speed DLC Bus. The Chassis High Speed DLC Bus is similar to the Chassis High Speed GMLAN Bus. Between the GMLAN-High and GMLAN-Low circuits, there is a 120 Ω termination resistor internal to the K56 Serial Data Gateway Module. There is no terminating resistor at the DLC.

The K56 Serial Data Gateway Module uses its high speed microprocessor to gate signals between the Chassis High Speed DLC Bus and the Chassis High Speed GMLAN Bus.

## Powertrain High Speed GMLAN Bus (Circuits 7493 & 7494) (if equipped)

**Note:** Continuity check cannot be performed between the X84 Data Link Connector and control modules on the Powertrain High Speed GMLAN Bus.

The Powertrain High Speed GMLAN Bus (or Powertrain Expansion Bus) is basically a copy of the High Speed GMLAN Bus except that its use is reserved for Powertrain components. The bus is optional based upon feature content. Sometimes communication is required between the Powertrain High Speed GMLAN

Bus and the primary High Speed GMLAN Bus. This is accomplished by using the K20 Engine Control Module as the Gateway module. Since the Powertrain High Speed GMLAN Bus and the primary High Speed GMLAN Bus operate in the same manner, the diagnostics for each are similar.

## Powertrain Sensor High Speed GMLAN Bus (Circuits 4498 & 4499) (if equipped)

**Note:** Continuity check cannot be performed between the X84 Data Link Connector and control modules on the Powertrain Sensor High Speed GMLAN Bus.

The Powertrain Sensor High Speed GMLAN Bus is basically a copy of the primary High Speed GMLAN Bus except that its use is reserved for Powertrain components. The bus is optional based upon feature content. Sometimes communication is required between the Powertrain Sensor High Speed GMLAN Bus and the primary High Speed GMLAN Bus. This is accomplished by using the K20 Engine Control Module as the Gateway module. Since the Powertrain Sensor High Speed GMLAN Bus and the primary High Speed GMLAN Bus operate in the same manner, the diagnostics for each are similar.

## Object High Speed GMLAN Bus (Circuits 3811 & 3813) (if equipped)

**Note:** Continuity check cannot be performed between the X84 Data Link Connector and control modules on the Object High Speed GMLAN Bus.

The Object High Speed GMLAN Bus is basically a copy of the High Speed GMLAN Bus except that its use is reserved for the enhanced safety system. This implementation is used to isolate the heavy communication among the enhanced safety system devices from the other vehicle buses, reducing congestion. The K124 Active Safety Control Module is connected to the Object High Speed GMLAN Bus as well as the primary High Speed GMLAN Bus, the Chassis High Speed GMLAN Bus, and the Low Speed GMLAN Bus. The K124 Active Safety Control Module acts as a Gateway module for all required communication between the Object High Speed GMLAN Bus devices and devices on these other vehicle buses. The Object High Speed GMLAN Bus operates in the same manner as the Chassis High Speed GMLAN and primary High Speed GMLAN buses and so the diagnostics are similar. The Object High Speed GMLAN Bus is physically partitioned into a Front Object Bus and a Rear Object Bus with each partition having its own communication enable circuit to activate the partition, but functional operation of both is identical. The Front Object Bus standard devices are the K124 Active Safety Control Module, the K109 Frontview Camera Module (or B174W Frontview Camera – Windshield), and the B233B Radar Sensor Module – Long Range. The Front Object Bus optional devices are the B233LF Radar Sensor Module – Short Range Left Front and the B233RF Radar Sensor Module – Short Range Right Front. The Rear Object Bus is optional and when present will have the K124 Active Safety Control Module, B233LR Radar Sensor Module – Short Range Left Rear, and B233RR Radar Sensor Module – Short Range Right Rear on the bus. All Object High Speed GMLAN Bus components are powered by the K124 Active Safety Control Module via the communication enable circuits, except the K109 Frontview Camera Module (or B174W Frontview Camera – Windshield) which is powered directly by battery.

## Object High Speed DLC Bus (Circuits 2089 & 2090)

Between the X84 Data Link Connector (DLC) terminals 3 & 11 and the K56 Serial Data Gateway Module terminals 13 X1 & 14 X1, there is a high speed bus called the Object High Speed DLC Bus. The Object High Speed DLC Bus is similar to the Object High Speed GMLAN Bus. Between the GMLAN-High and GMLAN-Low circuits, there is a 120 Ω termination resistor internal to the K56 Serial Data Gateway Module. There is no terminating resistor at the DLC.

The K56 Serial Data Gateway Module uses its low speed microprocessor to gate signals between the Object High Speed DLC Bus and the Object High Speed GMLAN Bus.

## Gateway Isolated High Speed GMLAN Bus (Circuits 1304 & 1305)

**Note:** Continuity check cannot be performed between the X84 Data Link Connector (or control modules on the primary High Speed GMLAN Bus) and control modules on the Gateway Isolated High Speed GMLAN Bus.

The Gateway Isolated High Speed GMLAN Bus is an extension of the primary High Speed GMLAN Bus except it is separated from the primary High Speed GMLAN Bus by the K56 Serial Data Gateway Module for cybersecurity protection. The K56 Serial Data Gateway Module verifies data messages being transmitted from the control modules on the Gateway Isolated High Speed GMLAN Bus back to the primary High Speed GMLAN Bus are good with valid transmitter messages. This bus does not terminate to the X84 Data Link Connector.

The Gateway Isolated High Speed GMLAN Bus consists of two twisted wires. One signal circuit is identified as GMLAN-High and the other signal circuit is identified as GMLAN-Low. At each end of the data bus there is a 120 Ω termination resistor between the GMLAN-High and GMLAN-Low circuits.

## Gateway Expansion High Speed GMLAN Bus (Circuits 3935 & 3936)

**Note:** Continuity check cannot be performed between the X84 Data Link Connector (or control modules on the primary High Speed GMLAN Bus) and control modules on the Gateway Expansion High Speed GMLAN Bus.

The Gateway Expansion High Speed GMLAN Bus is not cybersecurity protected and does not terminate at the X84 Data Link Connector. This expansion bus is created to alleviate the throughput on the primary High Speed GMLAN Bus.

The Gateway Expansion High Speed GMLAN Bus consists of two twisted wires. One signal circuit is identified as GMLAN-High and the other signal circuit is identified as GMLAN-Low. At each end of the data bus there is a 120 Ω termination resistor between the GMLAN-High and GMLAN-Low circuits.

## Ethernet Bus (if equipped)

At the core of the infotainment system is the Radio Ethernet Audio Video Bridging switch which communicates directly to each contributing Infotainment module terminator. The Ethernet harness consists of twisted pair wires from point to point. Each device on the Ethernet infotainment system sends/receives data at 100 Mbit/s to/from a specified port at the A11 Radio. The Radio/Ethernet will also be used to program USB software update files to the devices connected to the Ethernet ports.

The A11 Radio is the Ethernet master. The Radio communicates with other devices and systems in the vehicle via GMLAN and LIN buses. Diagnostic Trouble Codes will be read on GMLAN to diagnose Ethernet, LIN and system faults. GMLAN will also be used for programming calibrations.

## Media Oriented Systems Transport (MOST) Bus (Circuits 3997 & 3998) (if equipped)

The MOST Infotainment network is a dedicated high speed multimedia streaming data bus independent from GMLAN. The MOST Bus will be configured in a physical hardwired loop with each device within the bus sends and receives data on an assigned MOST addresses in a set order. Each device on the MOST Bus will be required to have twisted pair copper wires (2 transmit TX, 2 receive RX, and 1 electronic control line which is a 12 V wakeup signal line). The A11 Radio is the MOST Master and will monitor the bus for vehicle configuration, Infotainment data messages and errors on the bus. The MOST initialization consists of a short 100 ms low voltage pulse on the electronic control line (or MOST control line) connected to all devices contained on the MOST ring. This wakeup message once received by each device, will first respond with a generic device response. Once these initial responses on the MOST Bus are reported successfully without error to the A11 Radio, the second data request will record the MOST device addresses, their functionality requirements and capabilities within. The A11 Radio will learn this information and also record the address node sequence on the MOST Bus at this point. This node address list will now be stored within the A11 Radio as the MOST Bus configuration (called “Last Working MOST ID of Node 1 – 9” on scan tool data display).

When MOST receive, transmit, or control line faults are detected, transmit/receive messages will not received as expected from the wakeup request. The A11 Radio and the K74 Human Machine Interface Control Module will then perform diagnostics to isolate these MOST faults. If the MOST control line is shorted low to 0 V for excess amount of time, the A11 Radio will set a U2098 DTC and K74 Human Machine Interface Control Module will set a U0029 02 DTC. At this point the MOST Bus will be unable to communicate until the shorted MOST control line is repaired.

Once the shorted MOST control line diagnostics pass, the A11 Radio will attempt to resend the initial short pulse attempts up to 3 times on the MOST control line. If the expected responses are not received, the A11 Radio continues into a failure mode setting a U0028 DTC and will continue on to send one 300 ms long pulse, which will enable the furthest upstream transmitting device to become the surrogate MOST Master in this MOST fault/diagnostic mode. When the A11 Radio receives this new MOST Master identity, the surrogate MOST master device can be identified based on scan tool data parameter “Surrogate MOST Master Node Upstream Position”. The scan tool should be used to determine the MOST Bus configuration and direction by utilizing the “Last Working MOST ID of Node 1 – 9” parameters from the A11 Radio data display. When a fault is present, it will indicate the newly enabled “Surrogate MOST Master Node Upstream Position” from the A11 Radio. This will assist in determining where the MOST bus/control is at fault. The MOST device upstream from the surrogate MOST master device, transmit, receive, or control lines will be the suspect areas for diagnostics at this point. These faults can be associated with any of the MOST transmit, receive, or control line twisted copper wires or possibly an internal device fault.

The K74 Human Machine Interface Control Module will set a U0029 00 DTC when it diagnoses a MOST bus not communicating properly after one attempt. When the DTC U0029 00 is set by the K74 Human Machine Interface Control Module without the corresponding DTC U0028 from the A11 Radio, it will be an indication of an intermittent wiring/device condition.

## FlexRay Bus (if equipped)

The FlexRay Bus is developed for safety related applications and higher data rate in real time application. The communication is time triggered. The FlexRay serial data network consists of two unshielded twisted wires to connect FlexRay nodes together. A FlexRay node is a device connected to a FlexRay Bus.

The FlexRay serial data network features 2 communication channels: channel A and channel B. Each channel may be operated at a data rate of up to 10 Mbit/s. FlexRay nodes can be connected to either both channels or a single channel. Each FlexRay channel consists of multiple branches. Each branch is a private bus. At each end of a branch, there is a 100 Ω terminating resistor connected between the pair of FlexRay serial data circuits. The terminating resistors can be external or internal to a FlexRay device.

The second FlexRay channel can be used as a redundant channel for fault toleration or to increase data rate of up to 20 Mbit/s. The dual channel configuration consists of two independent data channels for fault-tolerance. When one channel fails, the communication can still continue with reduced bandwidth.

## Low Speed GMLAN Bus (Circuit 5060)

**Note:** Continuity check cannot be performed between the X84 Data Link Connector and control modules on the Low Speed GMLAN Bus.

Low Speed GMLAN Bus is used in applications where a high data rate is not required which allows for the use of less complex components. It is typically used for operator controlled functions where the response time requirements are slower than those required for dynamic vehicle control.

The Low Speed GMLAN Serial Data Network consists of a single wire, ground referenced bus with high side voltage drive. During on road vehicle operation data symbols (1's and 0's) are transmitted sequentially at the normal rate of 33.3 Kbit/s. For component programming only, a special high speed data mode of 83.3 Kbit/s may be used.

Unlike the high speed dual wire networks, the single wire low speed network does not use terminating resistors at either end of the network.

The data symbols to be transmitted over the bus are represented by different voltage signals on the bus. When the Low Speed GMLAN Bus is at rest and is not being driven, there is a low signal voltage of approximately 0.2 V. This represents a logic "1". When a logic "0" is to be transmitted, the signal voltage is driven higher to around 4.0 V or higher.

## Low Speed DLC Bus (Circuit 2100)

Between the X84 Data Link Connector (DLC) terminal 1 and the K56 Serial Data Gateway Module terminal 26 X1, there is a low speed bus called the Low Speed DLC Bus. The Low Speed DLC Bus is similar to the primary Low Speed GMLAN Bus.

The K56 Serial Data Gateway Module uses its low speed microprocessor to gate signals between the Low Speed DLC, the primary Low Speed GMLAN, and the Gateway Isolated Low Speed GMLAN Buses.

## Gateway Isolated Low Speed GMLAN Bus (Circuit 1102)

**Note:** Continuity check cannot be performed between the X84 Data Link Connector (or control modules on the primary Low Speed GMLAN Bus) and control modules on the Gateway Isolated Low Speed GMLAN Bus.

The Gateway Isolated Low Speed GMLAN Bus is an extension of the primary Low Speed GMLAN Bus except it is separated from the primary Low Speed GMLAN Bus by the K56 Serial Data Gateway Module for cybersecurity protection. The K56 Serial Data Gateway Module verifies data messages being transmitted from the control modules on the Gateway Isolated Low Speed GMLAN Bus back to the primary Low Speed GMLAN Bus are good with valid transmitter messages. This bus does not terminate to the X84 Data Link Connector.

## Local Interconnect Network (LIN) Bus

The Local Interconnect Network (LIN) Bus consists of a single wire with a transmission rate of 10.417 Kbit/s. This bus is used to exchange information between a master control module and other smart devices which provide supporting functionality. This type of configuration does not require the capacity or speed of either a High Speed GMLAN Bus or Low Speed GMLAN Bus and is thus relatively simpler.

The data symbols (1's and 0's) to be transmitted are represented by different voltage levels on the communication bus. When the LIN Bus is at rest and is not being driven, the signal is in a high voltage state of approximately Vbatt. This represents a logic "1". When a logic "0" is to be transmitted, the signal voltage is driven low to about ground (0.0 V).

## Communication Enable Circuit Description

Devices on High Speed GMLAN Bus enable or disable communication based on the voltage level of the Serial Data Communication Enable circuit or Accessory Wakeup Serial Data circuit. When the circuit voltage is high (around 12 V), communications are enabled. When the circuit is low, communications are disabled.

## X84 Data Link Connector (DLC)

The X84 Data Link Connector is a standardized 16-cavity connector. Connector design and location is dictated by an industry wide standard, and is required to provide the following:

- Terminal 1: Low Speed GMLAN Serial Data #3 terminal (Low Speed DLC Bus)
- Terminal 3: High Speed GMLAN Serial Data (+)(13) terminal (Object High Speed DLC Bus)
- Terminal 4: Scan tool power ground terminal
- Terminal 5: Common signal ground terminal
- Terminal 6: High Speed GMLAN Serial Data (+)(11) terminal (High Speed DLC Bus)
- Terminal 11: High Speed GMLAN Serial Data (-)(13) terminal (Object High Speed DLC Bus)
- Terminal 12: High Speed GMLAN Serial Data (+)(12) terminal (Chassis High Speed DLC Bus)
- Terminal 13: High Speed GMLAN Serial Data (-)(12) terminal (Chassis High Speed DLC Bus)
- Terminal 14: High Speed GMLAN Serial Data (-)(11) terminal (High Speed DLC Bus)
- Terminal 16: Scan tool power, battery positive voltage terminal

## Serial Data Reference

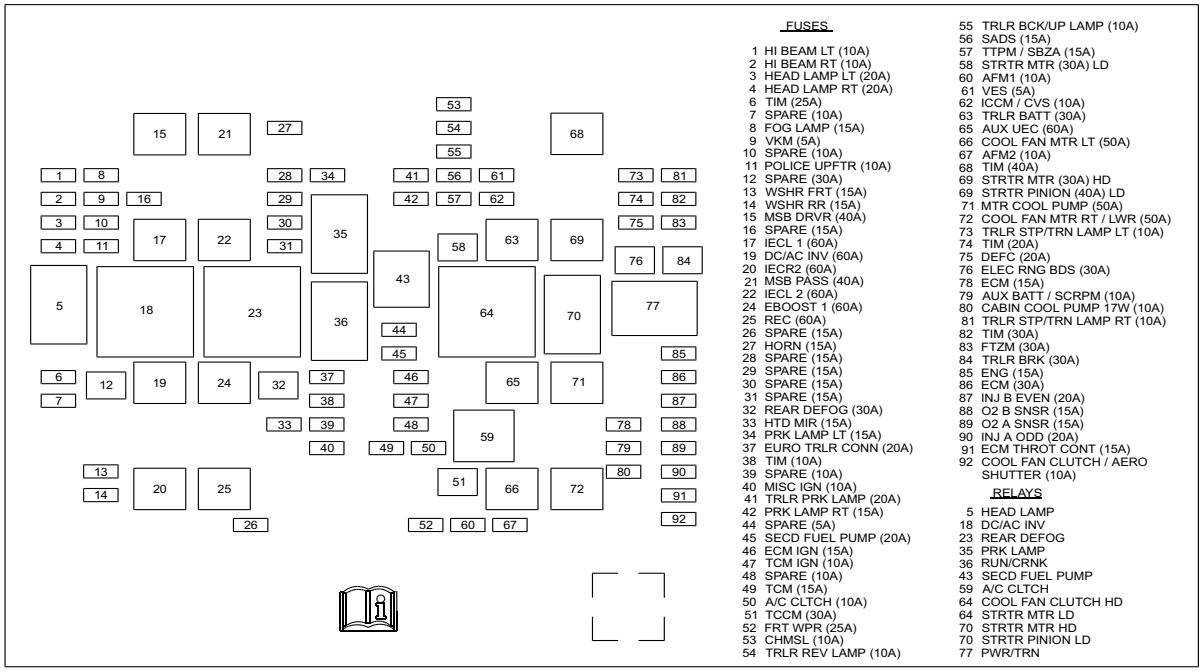
The scan tool communicates over the various buses on the vehicle. When a scan tool is installed on a vehicle, the scan tool will try to communicate with every device that could be optioned into the vehicle. If an option is not installed on the vehicle, the scan tool will display No Comm (or Not Connected) for that optional device. In order to avert misdiagnoses of No Communication with a specific device, refer to Data Link References for a list of devices and the buses they communicate with. Use schematics and specific vehicle build RPO codes to determine optional devices.

# Electrical Component and Inline Harness Connector End Views

## Visual Identification

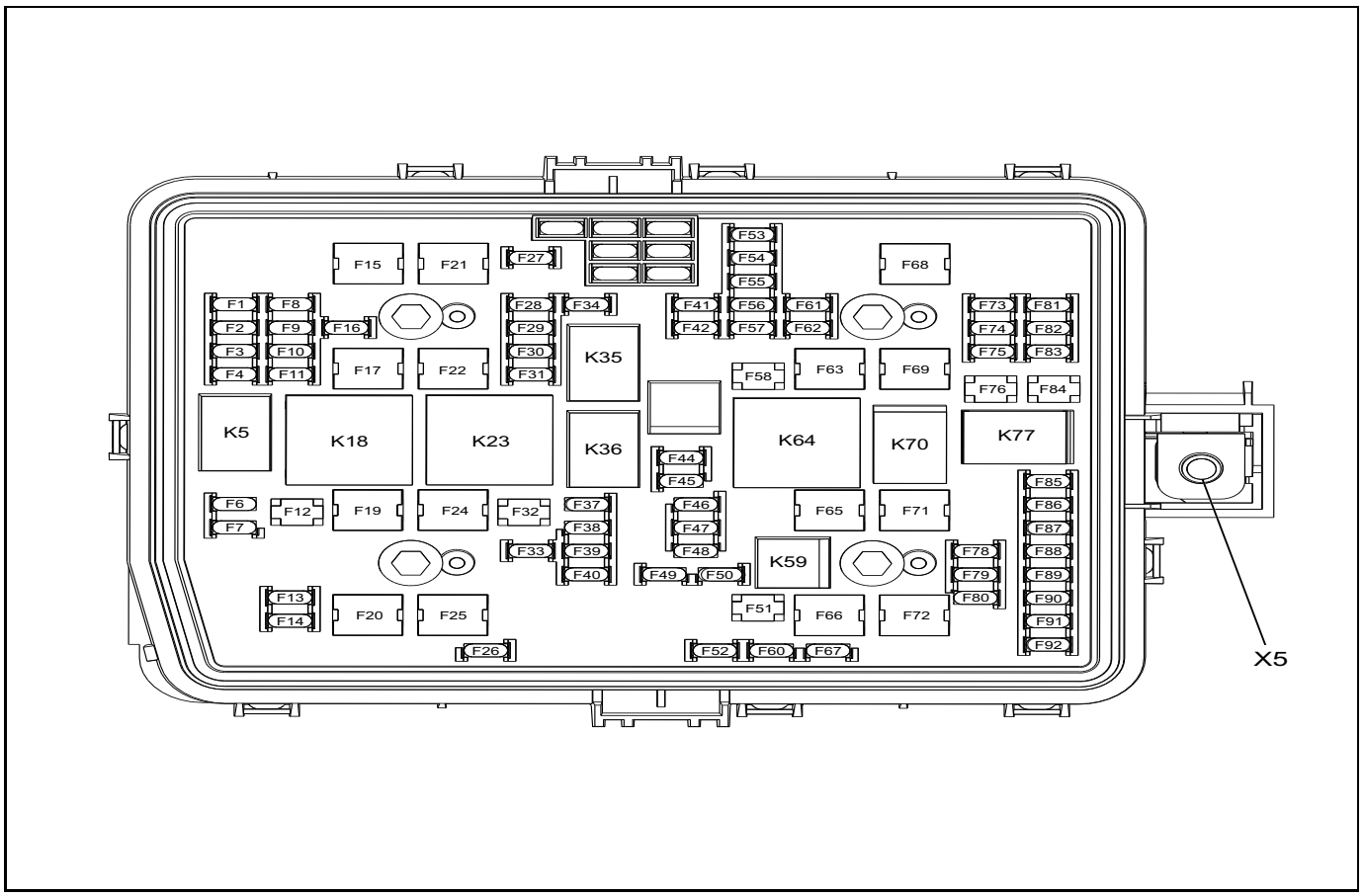
### Electrical Center Identification Views

#### X50A Fuse Block - Underhood Label




5044140

## X50A Fuse Block - Underhood Top View




5041384

## Usage Table

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| **Fuses** | | | | |
| F1 | HI BEAM LT | F1UA | 10A | • E13LA Headlamp Assembly - Left |
| F2 | HI BEAM RT | F2UA | 10A | • E13RA Headlamp Assembly - Right |
| F3 | HEAD LAMP LT | F3UA | 20A | • E13LA Headlamp Assembly - Left |
| F4 | HEAD LAMP RT | F4UA | 20A | • E13RA Headlamp Assembly - Right |
| F6 | TIM | F6UA | 25A | • Not Used |
| F7 | SPARE | F7UA | 10A | • Not Used |
| F8 | FOG LAMP | F8UA | 15A | • E29LF Fog Lamp - Left Front (T3U)<br>• E29RF Fog Lamp - Right Front (T3U) |
| F9 | VKM | F9UA | 5A | • Not Used |
| F10 | SPARE | F10UA | 10A | • Not Used |
| F11 | POLICE UPFTR | F11UA | 10A | • Not Used |
| F12 | SPARE | F12UA | 30A | • Not Used |
| F13 | WSHR FRT | F13UA | 15A | • G24 Windshield Washer Pump |
| F14 | WSHR RR | F14UA | 15A | • Not Used |
| F15 | MSB DRVR | F15UA | 40A | • Not Used |
| F16 | SPARE | F16UA | 15A | • Not Used |
| F17 | IECL 1 | F17UA | 60A | • X51L Fuse Block - Instrument Panel Left (KA1/QT5) |

## Usage Table (cont'd)

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| F19 | DC/AC INV | F19UA | 60A | • T1 Accessory DC/AC Power Inverter Module (KI4/KI5) |
| F20 | IECR2 | F20UA | 60A | • X51R Fuse Block - Instrument Panel Right |
| F21 | MSB PASS | F21UA | 40A | • Not Used |
| F22 | IECL 2 | F22UA | 60A | • X51L Fuse Block - Instrument Panel Left (BTM/A48) |
| F24 | EBOOST 1 | F24UA | 60A | • K17 Electronic Brake Control Module<br>• X140 |
| F25 | REC | F25UA | 60A | • Not Used |
| F26 | SPARE | F26UA | 15A | • Not Used |
| F27 | HORN | F27UA | 15A | • P12 Horn |
| F28 | SPARE | F28UA | 15A | • Not Used |
| F29 | SPARE | F29UA | 15A | • Not Used |
| F30 | SPARE | F30UA | 15A | • Not Used |
| F31 | SPARE | F31UA | 15A | • Not Used |
| F32 | REAR DEFOG | F32UA | 30A | • E18 Rear Defogger Grid |
| F33 | HTD MIR | F33UA | 15A | • E17D Outside Rearview Mirror Glass - Driver (DLF/DEZ)<br>• E17P Outisde Rearview Mirror Glass - Passenger (DLF/DEZ) |
| F34 | PRK LAMP LT | F34UA | 15A | • E13LA Headlamp Assembly - Left<br>• E42L Tail Lamp Assembly - Left |
| F37 | EURO TRLR CONN | F37UA | 20A | • Not Used |
| F38 | TIM | F38UA | 10A | • Not Used |
| F39 | SPARE | F39UA | 10A | • Not Used |
| F40 | MISC IGN | F40UA | 10A | • X51B Fuse Block - Instrument Panel Auxiliary |
| F41 | TRLR PRK LAMP | F41UA | 20A | • X88 Trailer Connector (Z82-U1D) |
| F42 | PRK LAMP RT | F42UA | 15A | • E13RA Headlamp Assembly - Right<br>• E42R Tail Lamp Assembly - Right |
| F44 | SPARE | F44UA | 5A | • Not Used |
| F45 | SECO FUEL PUMP | F45UA | 20A | • Not Used |
| F46 | ECM IGN | F46UA | 15A | • K20 Engine Control Module<br>• K34 Glow Plug Control Module (LM2)<br>• K68 Trailer Lighting Control Module (U1D)<br>• K111 Fuel Pump Driver Control Module<br>• K115 Reductant Control Module (LM2)<br>• K160 Brake System Control Module |
| F47 | TCM IGN | F47UA | 10A | • M26 Front Axle Engagement Actuator (NP0/NQH)<br>• K71 Transmission Control Module (MQB/MQE)<br>• Q8 Control Solenoid Valve Assembly (MYC) |
| F48 | SPARE | F48UA | 10A | • Not Used |
| F49 | TCM IGN | F49UA | 15A | • T12 Automatic Transmission Assembly (MQB) |
| F50 | A/C CLTCH | F50UA | 10A | • Q2 A/C Compressor Clutch |
| F51 | TCCM | F51UA | 30A | • K69 Transfer Case Control Module (NP0/NQH) |
| F52 | FRT WPR | F52UA | 25A | • KR12B Windshield Wiper Relay<br>• KR12C Windshield Wiper Speed Control Relay |

## Usage Table (cont'd)

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| F53 | CHMSL | F53UA | 10A | • E6 Center High Mounted Stop Lamp |
| F54 | TRLR REV LAMP | F54UA | 10A | • A10 Inside Rearview Mirror (DD8/DRZ)<br>• A11 Radio<br>• E42L Tail Lamp Assembly - Left<br>• E42R Tail Lamp Assembly - Right |
| F55 | TRLR BCK/ UP LAMP | F55UA | 10A | • X88 Trailer Connector (Z82-U1D) |
| F56 | SADS | F56UA | 15A | • K19 Suspension Control Module (Z45) |
| F57 | TTPM/SBZA | F57UA | 15A | • B218L Side Object Sensor Module - Left (UKC)<br>• B218R Side Object Sensor Module - Right (UKC)<br>• K214 Trailer Tire Pressure Indicator Module (PTT) |
| F58 | STRTR MTR | F58UA | 30A | • KR27 Starter Relay |
| F60 | AFM1 | F60UA | 10A | • K20 Engine Control Module (L82/L84/L87) |
| F61 | VES | F61UA | 5A | • Not Used |
| F62 | ICCM/CVS | F62UA | 10A | • Q13 Evaporative Emission Vent Solenoid Valve (-LM2) |
| F63 | TRLR BATT | F63UA | 30A | • X88 Trailer Connector |
| F65 | AUX UEC | F65UA | 60A | • X50B Fuse Block - Underhood Auxiliary (LM2) |
| F66 | COOL FAN MTR LT | F66UA | 50A | • G10L Cooling Fan Motor - Left |
| F67 | AFM2 | F67UA | 10A | • K20 Engine Control Module (L82/L84/L87) |
| F68 | TIM | F68UA | 40A | • Not Used |
| F69 | STRTR PINION | F69UA | 40A | • KR27C Starter Pinion Solenoid Actuator Relay |
| F71 | MTR COOL PUMP | F71UA | 50A | • G10R Cooling Fan Motor - Right (L3B) |
| F72 | COOL FAN MTR RT/LWR | F72UA | 50A | • G10R Cooling Fan Motor - Right (L92/L84/L87/LV3)<br>• G10B Cooling Fan Motor - Lower (L3B/LM2) |
| F73 | TRLR STP/TRN LAMP LT | F73UA | 10A | • X88 Trailer Connector (Z82-U1D) |
| F74 | TIM | F74UA | 20A | • K101 Trailer Interface Control Module (LM2) |
| F75 | DEFC | F75UA | 20A | • K115 Reductant Control Module (LM2) |
| F76 | ELEC RNG BOS | F76UA | 30A | • K4 Assist Step Control Module (BRS) |
| F78 | ECM | F78UA | 15A | • K20 Engine Control Module |
| F79 | AUX BATT/ SCRPM | F79UA | 10A | • Not Used |
| F80 | CABIN COOL PUMP 17W | F80UA | 10A | • G17 Heater Coolant Pump (LM2)<br>• KR33 Auxiliary Heater Coolant Pump Relay (L84/L87) |
| F81 | TRLR STP/TRN LAMP RT | F81UA | 10A | • X88 Trailer Connector (Z82-U1D) |
| F82 | TIM | F82UA | 30A | • K68 Trailer Lighting Control Module (U1D) |
| F83 | FTZM | F83UA | 30A | • K111 Fuel Pump Driver Control Module |
| F84 | TRLR BRK | F84UA | 30A | • K133 Trailer Brake Power Control Module (JL1)<br>• W24 Blunt Cut - Trailer Brakes Provision |
| F85 | ENG | F85UA | 15A | • B75C Multifunction Intake Air Sensor (L3B/LM2/LV3)<br>• K20 Engine Control Module (L3B)<br>• Q97 Engine Coolant Flow Control Valve (L3B) |
| F86 | ECM | F86UA | 30A | • K20 Engine Control Module |

## Usage Table (cont'd)

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| F87 | INJ B EVEN | F87UA | 20A | • K20 Engine Control Module<br>• T8B Ignition Coil 2 (L82/L84/L87/LV3)<br>• T8D Ignition Coil 4 (L82/L84/L87/LV3)<br>• T8F Ignition Coil 6 (L82/L84/L87/LV3)<br>• T8H Ignition Coil 8 (L82/L84/L87) |
| F88 | O2 B SNSR | F88UA | 15A | • B52B Heated Oxygen Sensor 2 (L3B)<br>• B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (L82/L84/L87)<br>• B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (L82/L84/L87)<br>• B75C Multifunction Intake Air Sensor (L82/L84/L87)<br>• B198 Fuel Composition Sensor (FHS)<br>• K20 Engine Control Module (L82/L84/L87/LV3)<br>• KR23A Fuel Pump Relay (LM2) |
| F89 | O2 A SNSR | F89UA | 15A | • B52A Heated Oxygen Sensor 1 (L3B)<br>• B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L82/L84/L87/LV3)<br>• B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (LV3)<br>• B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L82/L84/L87/LV3)<br>• B52F Heated Oxygen Sensor Bank 2 Sensor 2 (LV3)<br>• G58 Evaporative Emission Purge Pump (L3B)<br>• M129A Intake Camshaft Porfile Actuator 1 (L3B)<br>• M129B Intake Camshaft Profile Actuator 2 (L3B)<br>• M129C Intake Camshaft Profile Actuator 3 (L3B)<br>• M129D Intake Camshaft Profile Actuator 4 (L3B)<br>• M130A Exhaust Camshaft Profile Actuator 1 (L3B)<br>• M130B Exhaust Camshaft Profile Actuator 2 (L3B)<br>• Q12 Evaporative Emission Purge Solenoid Valve (-LM2)<br>• Q40 Turbocharger Bypass Solenoid Valve (L3B)<br>• Q43 Valve Lifter Oil Manifold Assembly (LV3)<br>• Q44 Engine Oil Pressure Control Solenoid Valve (L82/L84/L87/LV3)<br>• Q97B Engine Coolant Flow Control Valve - Block (LM2) |
| F90 | INJ A ODD | F90UA | 20A | • K20 Engine Control Module<br>• T8A Ignition Coil 1<br>• T8B Ignition Coil 2 (L3B)<br>• T8C Ignition Coil 3<br>• T8D Ignition Coil 4 (L3B)<br>• T8E Ignition Coil 5 (-L3B)<br>• T8G Ignition Coil 7 (-L3B-LV3) |
| F91 | ECM THROT CONT | F91UA | 15A | • K20 Engine Control Module (L82/L84/L87/LV3) |
| F92 | COOL FAN CLUTCH/AERO SHUTTER | F92UA | 10A | • M96A Active Grille Air Shutter 1 Actuator<br>• M96B Active Grille Air Shutter 2 Actuator (WMI) |
| **Relays** | | | | |
| K5 | HEAD LAMP | KR50 Headlamp Relay | — | • F3UA<br>• F4UA |
| K18 | DC/AC INV | KR80 Accessory Relay | — | • F19UA (KI4/KI5) |

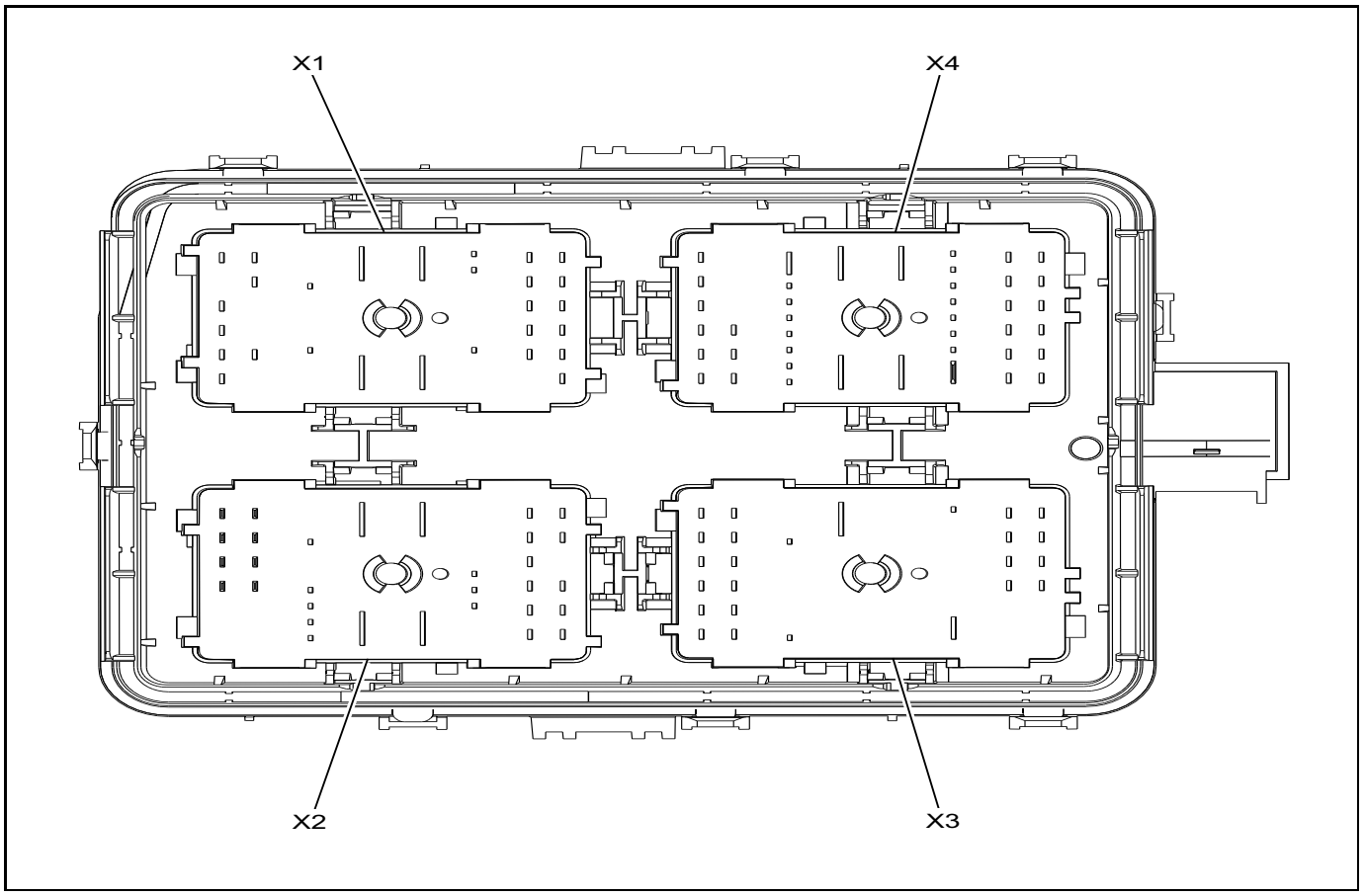
## Usage Table (cont'd)

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| K23 | REAR DEFOG | KR5 Rear Defogger Relay | — | • F32UA<br>• F33UA |
| K35 | PRK LAMP | KR53 Park Lamps Relay | — | • F34UA<br>• F41UA<br>• F42UA |
| K36 | RUN/CRNK | KR73 Ignition Main Relay | — | • F37UA<br>• F38UA<br>• F39UA<br>• F40UA<br>• F44UA<br>• F46UA<br>• F47UA<br>• F48UA |
| K43 | SECD FUEL PUMP | — | — | • Not Used |
| K59 | A/C CLTCH | KR29 A/C Compressor Clutch Relay | — | • F50UA |
| K64 | STRTR MTR LD | KR27 Starter Motor | — | • M64 Starter Motor |
| K70 | STRTR PINION LD | KR27C Starter Pinion Solenoid Actuator Relay | — | • M64 Starter Motor (KL9) |
| K77 | PWR/TRN | KR75 Engine Controls Ignition Relay | — | • F60UA<br>• F67UA<br>• F85UA<br>• F86UA<br>• F87UA<br>• F88UA<br>• F89UA<br>• F90UA<br>• F91UA<br>• F92UA<br>• KR29 A/C Compressor Clutch Relay<br>• KR33 Auxiliary Heater Coolant Pump Relay |
| **Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block.** | | | | |
| — | — | KR3 Horn Relay | — | • F27UA |
| — | — | KR6 Rear Window Washer Pump Relay | — | • F14UA |
| — | — | KR11 Windshield Washer Pump Relay | — | • F13UA |
| — | — | KR12B Windshield Wiper Relay | — | • M75 Windshield Wiper Motor |
| — | — | KR12C Windshield Wiper Speed Control Relay | — | • M75 Windshield Wiper Motor |
| — | — | KR33 Auxiliary Heater Coolant Pump | — | • G17 Heater Coolant Pump (KL9) |
| — | — | KR46 Front Fog Lamp Relay | — | • F8UA |
| — | — | KR48 Headlamp High Beam Relay | — | • F1UA<br>• F2UA |

## Usage Table (cont'd)

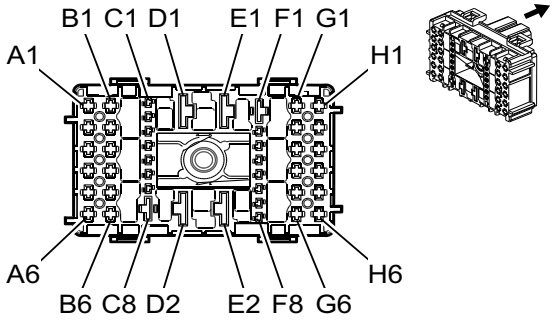
| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| — | — | KR53 Park Lamps Relay | — | • F34UA<br>• F41UA<br>• F42UA |
| — | — | KR59 Stop Lamp Relay | — | • F53UA |
| — | — | KR61 Trailer Backup Lamps Relay | — | • F54UA<br>• F55UA |
| — | — | KR63L Trailer Stop/Turn Signal Lamp Relay - Left | — | • F73UA |
| — | — | KR63R Trailer Stop/Turn Signal Lamp Relay - Right | — | • F81UA |

## X50A Fuse Block - Underhood Bottom View




5041382

## X50A Fuse Block - Underhood X1 (Crew Cab/Extended Cab)




4994109

### Connector Part Information

Harness Type: Body
OEM Connector: 33384590
Service Connector: 19370824
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series (BU)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | Not Required | J-35616-22 (RD) | No Tool Required | Not Available | Not Available | Not Available | Not Available |

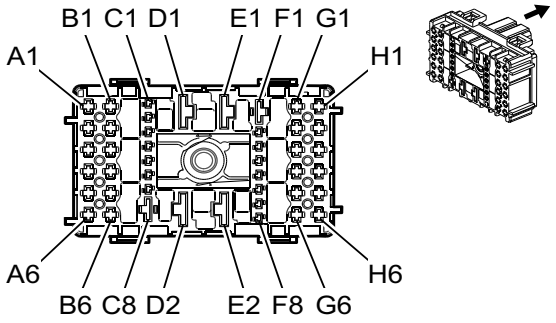
### X50A Fuse Block - Underhood X1 (Crew Cab/Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A1 - A2 | — | — | — | Not Occupied | — | — |
| A3 | 0.5 | YE/BN | 2229 | Left Headlamp Relay Control | II | — |
| A4 | 0.5 | BK | 250 | Ground | II | — |
| A5 - B4 | — | — | — | Not Occupied | — | — |
| B5 | 0.5 | GY/VT | 228 | Windshield Washer Pump Control | II | — |
| B6 - C2 | — | — | — | Not Occupied | — | — |
| C3 | 0.35 | WH/GN | 4628 | DC/AC Inverter Relay Control | I | — |
| C4 - C6 | — | — | — | Not Occupied | — | — |
| C7 | 0.35 | BN/GY | 2268 | Windshield Washer Relay Control | I | — |
| C8 | — | — | — | Not Occupied | — | — |
| D1 | 10 | BN/BK | 4629 | DC/AC Inverter Control | III | — |
| D2 | 10<br>6 | RD/WH<br>RD/WH | 342<br>342 | Battery Positive Voltage<br>Battery Positive Voltage | III<br>III | CREW CAB<br>EXTENDED CAB |
| E1 | 10 | RD/YE | 442 | Battery Positive Voltage | III | — |
| E2 - F1 | — | — | — | Not Occupied | — | — |
| F2 | 0.5 | BN/VT | 193 | Rear Defog Relay Control | I | — |
| F3 - F5 | — | — | — | Not Occupied | — | — |

## X50A Fuse Block - Underhood X1 (Crew Cab/Extended Cab) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| F6 | 0.35 | WH/VT | 860 | Front Windshield Wiper Switch High Signal | I | — |
| F7 - G1 | — | — | — | Not Occupied | — | — |
| G2 | 2.5 | BN/VT | 293 | Rear Defog Element Control | II | — |
| G3 | 0.5 | BN/YE | 2267 | Mirror Heating Element Control | II | — |
| G4 | 0.35 | GN/VT | 5199 | Run/Crank Relay Coil Control | II | — |
| G5 | 2 | BK | 150 | Ground | II | — |
| G6 | 0.35 | GY | 91 | Windshield Wiper Motor Relay Coil Control | II | — |
| H1 - H3 | — | — | — | Not Occupied | — | — |
| H4 | 0.35 | VT/WH | 239 | Run/Crank Ignition 1 Voltage | II | — |
| H5 | 2 | WH | 92 | Windshield Wiper Motor High Speed Control | II | — |
| H6 | 2 | YE/BN | 95 | Windshield Wiper Motor Low Speed Control | II | — |

## X50A Fuse Block - Underhood X1 (Regular Cab)




4994109

### Connector Part Information

Harness Type: Body
OEM Connector: 33384590
Service Connector: 19370824
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series (BU)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | Not Required | J-35616-22 (RD) | No Tool Required | Not Available | Not Available | Not Available | Not Available |

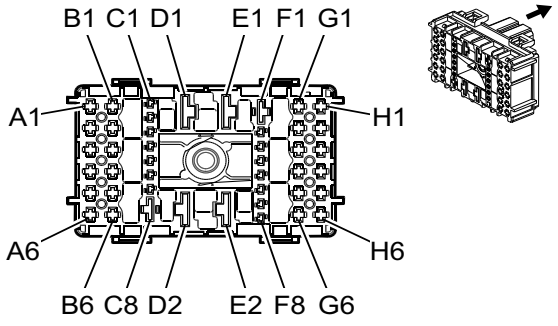
## X50A Fuse Block - Underhood X1 (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A1 - A2 | — | — | — | Not Occupied | — | — |

## X50A Fuse Block - Underhood X1 (Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A3 | 0.5 | YE/BN | 2229 | Left Headlamp Relay Control | II | — |
| A4 | 0.5 | BK | 250 | Ground | II | — |
| A5 - B4 | — | — | — | Not Occupied | — | — |
| B5 | 0.5 | GY/VT | 228 | Windshield Washer Pump Control | II | — |
| B6 - C2 | — | — | — | Not Occupied | — | — |
| C3 | 0.35 | WH/L-GN | 4628 | DC/AC Inverter Relay Control | I | — |
| C4 - C6 | — | — | — | Not Occupied | — | — |
| C7 | 0.35 | BN/GY | 2268 | Windshield Washer Relay Control | I | — |
| C8 | — | — | — | Not Occupied | — | — |
| D1 | 10 | BN/BK | 4629 | DC/AC Inverter Control | III | — |
| D2 | 10 | RD/WH | 342 | Battery Positive Voltage | III | — |
| E1 | 10 | RD/YE | 442 | Battery Positive Voltage | III | — |
| E2 - F1 | — | — | — | Not Occupied | — | — |
| F2 | 0.5 | BN/VT | 193 | Rear Defog Relay Control | I | — |
| F3 - F5 | — | — | — | Not Occupied | — | — |
| F6 | 0.35 | WH/VT | 860 | Front Windshield Wiper Switch High Signal | I | — |
| F7 - G1 | — | — | — | Not Occupied | — | — |
| G2 | 2.5 | BN/VT | 293 | Rear Defog Element Control | II | — |
| G3 | 0.5 | BN/YE | 2267 | Mirror Heating Element Control | II | — |
| G4 | 0.35 | L-GN/VT | 5199 | Run/Crank Relay Coil Control | II | — |
| G5 | 2 | BK | 150 | Ground | II | — |
| G6 | 0.35 | GY | 91 | Windshield Wiper Motor Relay Coil Control | II | — |
| H1 - H3 | — | — | — | Not Occupied | — | — |
| H4 | 0.35 | VT/WH | 239 | Run/Crank Ignition 1 Voltage | II | — |
| H5 | 2 | WH | 92 | Windshield Wiper Motor High Speed Control | II | — |
| H6 | 2 | YE/BN | 95 | Windshield Wiper Motor Low Speed Control | II | — |

## X50A Fuse Block - Underhood X2 (Crew Cab/Extended Cab)




4994132

### Connector Part Information

Harness Type: Body
OEM Connector: 33384594

Service Connector: 19371174
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series (GN)

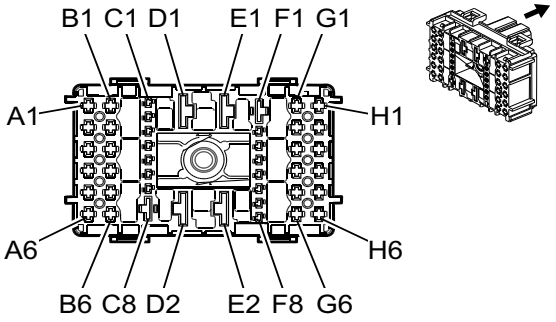
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | Not Required | J-35616-22 (RD) | No Tool Required | Not Available | Not Available | Not Available | Not Available |

## X50A Fuse Block - Underhood X2 (Crew Cab/Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A1 - A2 | — | — | — | Not Occupied | — | — |
| A3 | 0.75 | WH | 711 | Left Headlamp High Beam Control | II | — |
| A4 | 0.75 | WH | 311 | Right Headlamp High Beam Control | II | — |
| A5 | 0.75 | YE | 2227 | Left Headlamp Control | II | — |
| A6 | 0.75 | YE/GY | 2226 | Right Headlamp Control | II | — |
| B1 - B2 | — | — | — | Not Occupied | — | — |
| B3 | 0.5 | BN/VT | 2234 | Front Fog Lamp Control | II | — |
| B4 - B6 | — | — | — | Not Occupied | — | — |
| C1 | 0.5 | BU/WH | 5186 | Left Trailer Turn Signal Lamp Control | I | — |
| C2 | 0.5 | YE/GY | 5187 | Right Trailer Turn Signal Lamp Control | I | — |
| C3 | 0.5 | BN/WH | 1317 | Fog Lamp Relay Control | I | — |
| C4 | 0.35 | BN/VT | 1969 | Headlamp High Beam Relay Control | I | — |
| C5 - D1 | — | — | — | Not Occupied | — | — |
| D2 | 10 | RD/GY | 2042 | Battery Positive Voltage | III | — |
| E1 | — | — | — | Not Occupied | — | — |
| E2 | 10 | RD/VT | 2142 | Battery Positive Voltage | III | — |
| F1 | — | — | — | Not Occupied | — | — |
| F2 | 0.5 | VT/WH | 5065 | Stop Lamp Relay Coil Control | III | U1D |
| F3 | 0.35 | BU/BN | 38 | Backup Lamp Relay Control | I | — |
| F4 | 0.35 | BN/WH | 28 | Horn Relay Control | I | — |
| F5 - F8 | — | — | — | Not Occupied | — | — |
| G1 | 0.75 | BN/GY | 29 | Horn Control | II | — |
| G2 | 0.35 | GN/WH | 24 | Backup Lamp Control | II | — |
| G3 - H2 | — | — | — | Not Occupied | — | — |
| H3 | 0.5 | VT/GY | 709 | Left Park Lamp Control | II | — |
| H4 | — | — | — | Not Occupied | — | — |
| H5 | 0.5 | GY/BN | 309 | Right Park Lamp Control | II | — |
| H6 | 0.35 | BU | 45 | Park Lamp Relay Control | II | — |

## X50A Fuse Block - Underhood X2 (Regular Cab)




4994132

### Connector Part Information

Harness Type: Body
OEM Connector: 33384594
Service Connector: 19371174
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series (GN)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | Not Required | J-35616-22 (RD) | No Tool Required | Not Available | Not Available | Not Available | Not Available |

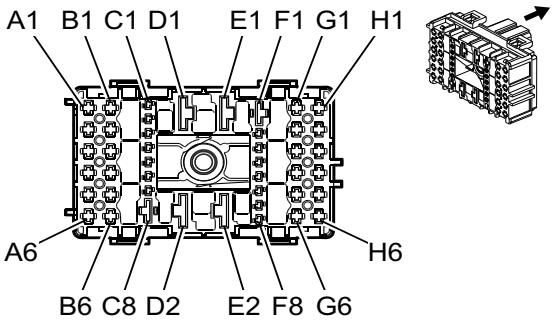
## X50A Fuse Block - Underhood X2 (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A1 - A2 | — | — | — | Not Occupied | — | — |
| A3 | 0.75 | WH | 711 | Left Headlamp High Beam Control | II | — |
| A4 | 0.75 | WH | 311 | Right Headlamp High Beam Control | II | — |
| A5 | 0.75 | YE | 2227 | Left Headlamp Control | II | — |
| A6 | 0.75 | YE/GY | 2226 | Right Headlamp Control | II | — |
| B1 - B2 | — | — | — | Not Occupied | — | — |
| B3 | 0.5 | BN/VT | 2234 | Front Fog Lamp Control | II | — |
| B4 - B6 | — | — | — | Not Occupied | — | — |
| C1 | 0.5 | BU/WH | 5186 | Left Trailer Turn Signal Lamp Control | I | — |
| C2 | 0.5 | YE/GY | 5187 | Right Trailer Turn Signal Lamp Control | I | — |
| C3 | 0.5 | BN/WH | 1317 | Fog Lamp Relay Control | I | — |
| C4 | 0.35 | BN/VT | 1969 | Headlamp High Beam Relay Control | I | — |
| C5 - D1 | — | — | — | Not Occupied | — | — |
| D2 | 10 | RD/GY | 2042 | Battery Positive Voltage | III | — |
| E1 | — | — | — | Not Occupied | — | — |
| E2 | 10 | RD/VT | 2142 | Battery Positive Voltage | III | — |
| F1 | — | — | — | Not Occupied | — | — |
| F2 | 0.35 | VT/WH | 5065 | Stop Lamp Relay Coil Control | I | REGULAR CAB |

## X50A Fuse Block - Underhood X2 (Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| | 0.5 | VT/WH | 5065 | Stop Lamp Relay Coil Control | | U1D |
| F3 | 0.35 | BU/BN | 38 | Backup Lamp Relay Control | I | — |
| F4 | 0.35 | BN/WH | 28 | Horn Relay Control | I | — |
| F5 - F8 | — | — | — | Not Occupied | — | — |
| G1 | 0.75 | BN/GY | 29 | Horn Control | II | — |
| G2 | 0.35 | GN/WH | 24 | Backup Lamp Control | II | — |
| G3 - G6 | — | — | — | Not Occupied | — | — |
| H1 | 0.35 | VT/GY | 1054 | Stop Lamp Control | II | — |
| H2 | 0.5 | VT/GY | 709 | Left Park Lamp Control | II | — |
| H3 | 0.5 | VT/GY | 709 | Left Park Lamp Control | II | — |
| H4 | — | — | — | Not Occupied | — | — |
| H5 | 0.5 | GY/BN | 309 | Right Park Lamp Control | II | — |
| H6 | 0.35 | BU | 45 | Park Lamp Relay Control | II | — |

## X50A Fuse Block - Underhood X3 (L3B)




4992608

### Connector Part Information

Harness Type: Engine
OEM Connector: 33384584
Service Connector: 19371176
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series (GY)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13579915 | J-35616-40 (BU) | J-38125-556 | Not Available | Not Available | Not Available | Not Available |
| II | 13582285 | J-35616-35 (VT) | J-38125-557 | 1241388-1 | Lear 17 | 2 | 4 |
| III | 13582285 | J-35616-35 (VT) | J-38125-557 | 1241388-1 | Lear 17 | E | C |
| IV | 13582286 | J-35616-35 (VT) | J-38125-557 | 1241390-1 | Lear 17 | F | D |
| V | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

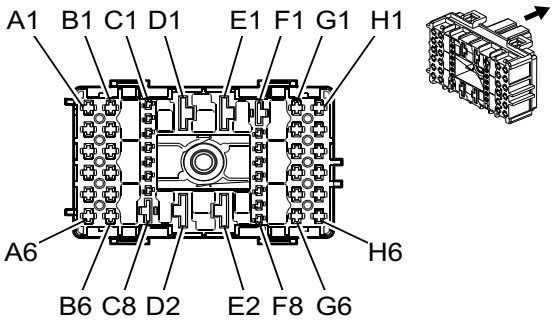
## Terminal Part Information (cont'd)

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| VI | Not Required | J-35616-22 (RD) | No Tool Required | Not Available | Not Available | Not Available | Not Available |

## X50A Fuse Block - Underhood X3 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A1 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | III | — |
| A2 | 0.5 | VT/BK | 2139 | Run/Crank Ignition 1 Voltage | III | — |
| | 0.5 | VT/BK | 2139 | Run/Crank Ignition 1 Voltage | VI | NP0/NQH |
| A3 | — | — | — | Not Occupied | — | — |
| A4 | 0.5 | BN/GN | 59 | A/C Compressor Clutch Control | III | — |
| A5 - A6 | — | — | — | Not Occupied | — | — |
| B1 | 2.5 | YE | 6 | Starter Solenoid Crank Ignition Voltage | IV | — |
| B2 | 0.5 | YE/BK | 625 | Starter Enable Relay Control | III | — |
| B3 - B5 | — | — | — | Not Occupied | — | — |
| B6 | 3 | RD/GY | 1342 | Battery Positive Voltage | IV | — |
| C1 - C2 | — | — | — | Not Occupied | — | — |
| C3 | 0.5 | BK | 4450 | Ground | V | — |
| C4 | 0.5 | WH/GY | 459 | A/C Compressor Clutch Relay Control | V | — |
| C5 - D1 | — | — | — | Not Occupied | — | — |
| D2 | 10 | RD/WH | 342 | Battery Positive Voltage | VI | — |
| E1 | 10 | RD | 642 | Battery Positive Voltage | VI | — |
| E2 | 10 | RD/VT | 842 | Battery Positive Voltage | VI | — |
| F1 | 2.5 | YE/GN | 4358 | Starter Pinion Solenoid Voltage | I | — |
| F2 | 0.5 | YE/VT | 4325 | Starter Pinion Solenoid Relay Control | V | — |
| F3 | 0.5 | RD/BN | 440 | Battery Positive Voltage | V | — |
| F4 | 0.5 | YE | 5991 | Powertrain Relay Coil Control | V | — |
| F5 - F6 | — | — | — | Not Occupied | — | — |
| F7 | 0.5 | VT/BU | 5705 | Powertrain Main Relay Fused Control 6 | V | — |
| F8 | — | — | — | Not Occupied | — | — |
| G1 | 0.5 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | III | — |
| G2 - G3 | — | — | — | Not Occupied | — | — |
| G4 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | III | — |
| G5 | 1 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | II | — |
| G6 | — | — | — | Not Occupied | — | — |
| H1 | 2 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | IV | — |
| H2 | 2 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | IV | — |
| H3 | 0.5 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | III | — |
| H4 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | III | — |
| H5 - H6 | — | — | — | Not Occupied | — | — |

## X50A Fuse Block - Underhood X3 (L82)




4992608

### Connector Part Information

Harness Type: Engine
OEM Connector: 33384584
Service Connector: 19371176
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series (GY)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13582286 | J-35616-35 (VT) | J-38125-557 | 1241390-1 | Lear 17 | F | D |
| II | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IV | Not Required | J-35616-22 (RD) | No Tool Required | Not Available | Not Available | Not Available | Not Available |

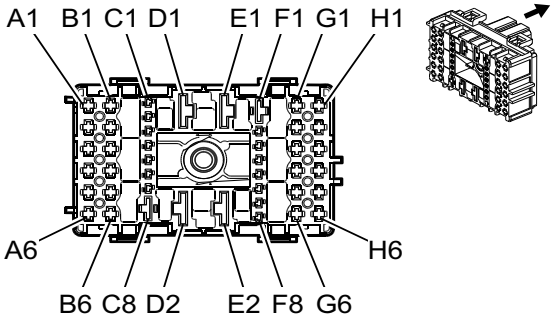
### X50A Fuse Block - Underhood X3 (L82)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A1 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | III | — |
| A2 | 0.5<br>0.5<br>0.5 | VT/BK<br>WH/GY<br>WH/GY | 2139<br>2139<br>2139 | Run/Crank Ignition 1 Voltage<br>Run/Crank Ignition 1 Voltage<br>Run/Crank Ignition 1 Voltage | III<br>IV | MQB/MQE<br>MYC<br>NP0/NQH |
| A3 | — | — | — | Not Occupied | — | — |
| A4 | 0.5 | BN/GN | 59 | A/C Compressor Clutch Control | III | — |
| A5 - A6 | — | — | — | Not Occupied | — | — |
| B1 | 2.5 | YE | 6 | Starter Solenoid Crank Ignition Voltage | I | — |
| B2 | 0.5 | YE/BK | 625 | Starter Enable Relay Control | III | — |
| B3 - B5 | — | — | — | Not Occupied | — | — |
| B6 | 3 | RD/GY | 1342 | Battery Positive Voltage | I | — |
| C1 - C2 | — | — | — | Not Occupied | — | — |
| C3 | 1 | BK | 4450 | Ground | II | — |
| C4 | 0.5 | WH/GY | 459 | A/C Compressor Clutch Relay Control | II | — |
| C5 | 0.5 | VT/YE | 3854 | Cabin Heater Coolant Motor Control | II | — |
| C6 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |

## X50A Fuse Block - Underhood X3 (L82) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| C7 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |
| C8 - D1 | — | — | — | Not Occupied | — | — |
| D2 | 10 | RD/WH | 342 | Battery Positive Voltage | IV | — |
| E1 | — | — | — | Not Occupied | — | — |
| E2 | 10 | RD/GY | 642 | Battery Positive Voltage | IV | — |
| F1 | — | — | — | Not Occupied | — | — |
| F2 | 0.5 | YE/VT | 4325 | Starter Pinion Solenoid Relay Control | II | — |
| F3 | 0.5 | RD/BN | 440 | Battery Positive Voltage | II | — |
| F4 | 0.5 | YE | 5991 | Powertrain Relay Coil Control | II | — |
| F5 - F6 | — | — | — | Not Occupied | — | — |
| F7 | 0.5 | VT/BU | 5705 | Powertrain Main Relay Fused Control 6 | II | — |
| F8 - G1 | — | — | — | Not Occupied | — | — |
| G2 | 0.75 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | III | — |
| G3 | — | — | — | Not Occupied | — | — |
| G4 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | III | — |
| G5 | 1 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | III | — |
| G6 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | III | — |
| H1 | 2 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | I | — |
| H2 | 1 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | III | — |
| H3 | 0.5 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | III | — |
| H4 - H5 | — | — | — | Not Occupied | — | — |
| H6 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | III | — |

## X50A Fuse Block - Underhood X3 (L84/L87)




4992608

### Connector Part Information

Harness Type: Engine
OEM Connector: 33384584
Service Connector: 19371176
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series (GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13579915 | J-35616-40 (BU) | J-38125-556 | Not Available | Not Available | Not Available | Not Available |
| II | 13582286 | J-35616-35 (VT) | J-38125-557 | 1241390-1 | Lear 17 | F | D |
| III | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IV | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| V | Not Required | J-35616-22 (RD) | No Tool Required | Not Available | Not Available | Not Available | Not Available |

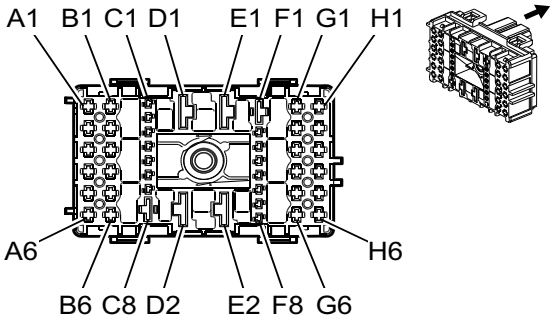
## X50A Fuse Block - Underhood X3 (L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A1 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | IV | — |
| A2 | 0.5 | VT/BK | 2139 | Run/Crank Ignition 1 Voltage | IV | — |
| | 0.5 | VT/BK | 2139 | Run/Crank Ignition 1 Voltage | V | NP0/NQH |
| A3 | — | — | — | Not Occupied | — | — |
| A4 | 0.5 | BN/GN | 59 | A/C Compressor Clutch Control | IV | — |
| A5 | 0.75 | RD/VT | 7940 | Battery Positive Voltage | IV | — |
| A6 | — | — | — | Not Occupied | — | — |
| B1 | 2.5 | YE | 6 | Starter Solenoid Crank Ignition Voltage | II | — |
| B2 | 0.5 | YE/BK | 625 | Starter Enable Relay Control | IV | — |
| B3 - B5 | — | — | — | Not Occupied | — | — |
| B6 | 3 | RD/GY | 1342 | Battery Positive Voltage | II | — |
| C1 - C2 | — | — | — | Not Occupied | — | — |
| C3 | 1 | BK | 4450 | Ground | III | — |
| C4 | 0.5 | WH/GY | 459 | A/C Compressor Clutch Relay Control | III | — |
| C5 | 0.5 | VT/YE | 3854 | Cabin Heater Coolant Motor Control | III | — |
| C6 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | III | — |
| C7 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | III | — |
| C8 - D1 | — | — | — | Not Occupied | — | — |
| D2 | 10 | RD/WH | 342 | Battery Positive Voltage | V | — |
| E1 | — | — | — | Not Occupied | — | — |
| E2 | 10 | RD/GY | 642 | Battery Positive Voltage | V | — |
| F1 | 2.5 | YE/GN | 4358 | Starter Pinion Solenoid Voltage | I | — |
| F2 | 0.5 | YE/VT | 4325 | Starter Pinion Solenoid Relay Control | III | — |
| F3 | 0.5 | RD/BN | 440 | Battery Positive Voltage | III | — |
| F4 | 0.5 | YE | 5991 | Powertrain Relay Coil Control | III | — |
| F5 - F6 | — | — | — | Not Occupied | — | — |
| F7 | 0.5 | VT/BU | 5705 | Powertrain Main Relay Fused Control 6 | III | — |
| F8 | 0.5 | YE/BU | 5126 | After Boil Heater Pump Control | III | — |
| G1 | — | — | — | Not Occupied | — | — |
| G2 | 0.75 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | IV | — |
| G3 | — | — | — | Not Occupied | — | — |
| G4 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | IV | — |
| G5 | 1 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | IV | — |

## X50A Fuse Block - Underhood X3 (L84/L87) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| G6 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | IV | — |
| H1 | 2 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |
| H2 | 1 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | IV | — |
| H3 | 0.5 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | IV | — |
| H4 - H5 | — | — | — | Not Occupied | — | — |
| H6 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | IV | — |

## X50A Fuse Block - Underhood X3 (LM2)




4992608

### Connector Part Information

Harness Type: Engine
OEM Connector: 33384584
Service Connector: 19371176
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series (GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13582285 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 13582285 | J-35616-35 (VT) | J-38125-557 | 1241388-1 | Lear 17 | E | C |
| III | 13582286 | J-35616-35 (VT) | J-38125-557 | 1241390-1 | Lear 17 | F | D |
| IV | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| V | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VI | Not Required | J-35616-22 (RD) | No Tool Required | Not Available | Not Available | Not Available | Not Available |

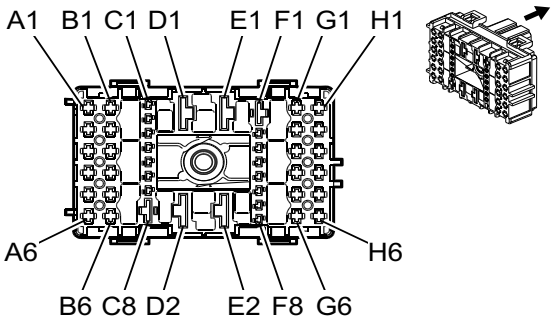
## X50A Fuse Block - Underhood X3 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A1 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | II | — |

## X50A Fuse Block - Underhood X3 (LM2) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A2 | 0.5 | VT/BK | 2139 | Run/Crank Ignition 1 Voltage | V | — |
| | 0.5 | VT/BK | 2139 | Run/Crank Ignition 1 Voltage | VI | NP0/NQH |
| A3 | — | — | — | Not Occupied | — | — |
| A4 | 0.5 | BN/GN | 59 | A/C Compressor Clutch Control | II | — |
| A5 | 0.75 | RD/VT | 7940 | Battery Positive Voltage | II | — |
| A6 | — | — | — | Not Occupied | — | — |
| B1 | 2.5 | YE | 6 | Starter Solenoid Crank Ignition Voltage | III | — |
| B2 | 0.5 | YE/BK | 625 | Starter Enable Relay Control | II | — |
| B3 - B5 | — | — | — | Not Occupied | — | — |
| B6 | 3 | RD/GY | 1342 | Battery Positive Voltage | III | — |
| C1 - C2 | — | — | — | Not Occupied | — | — |
| C3 | 0.5 | BK | 4450 | Ground | IV | — |
| C4 | 0.5 | WH/GY | 459 | A/C Compressor Clutch Relay Control | IV | — |
| C5 - C8 | — | — | — | Not Occupied | — | — |
| D1 | 5 | RD/VT | 4040 | Battery Positive Voltage | VI | — |
| D2 | 10 | RD/WH | 342 | Battery Positive Voltage | VI | — |
| E1 - F2 | — | — | — | Not Occupied | — | — |
| F3 | 0.75 | RD/BN | 440 | Battery Positive Voltage | IV | — |
| F4 | 0.5 | YE | 5991 | Powertrain Relay Coil Control | IV | — |
| F5 | — | — | — | Not Occupied | — | — |
| F6 | 0.5 | YE/BU | 5126 | After Boil Heater Pump Control | IV | — |
| F7 | 0.5 | VT/BU | 5705 | Powertrain Main Relay Fused Control 6 | IV | — |
| F8 | — | — | — | Not Occupied | — | — |
| G1 | 0.5 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | II | — |
| G2 | — | — | — | Not Occupied | — | — |
| G3 | 2.5 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | III | — |
| G4 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | II | — |
| G5 - G6 | — | — | — | Not Occupied | — | — |
| H1 | 2.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | III | — |
| H2 - H4 | — | — | — | Not Occupied | — | — |
| H5 | 4 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | I | — |
| H6 | — | — | — | Not Occupied | — | — |

## X50A Fuse Block - Underhood X3 (LV3)




4992608

### Connector Part Information

Harness Type: Engine
OEM Connector: Not Available
Service Connector: 19371176
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series (GY)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13582285 | J-35616-35 (VT) | J-38125-557 | 1241388-1 | Lear 17 | 2 | 4 |
| II | 13582285 | J-35616-35 (VT) | J-38125-557 | 1241388-1 | Lear 17 | E | C |
| III | 13582286 | J-35616-35 (VT) | J-38125-557 | 1241390-1 | Lear 17 | C | A |
| IV | 13582286 | J-35616-35 (VT) | J-38125-557 | 1241390-1 | Lear 17 | F | D |
| V | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VI | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VII | Not Required | J-35616-22 (RD) | No Tool Required | Not Available | Not Available | Not Available | Not Available |

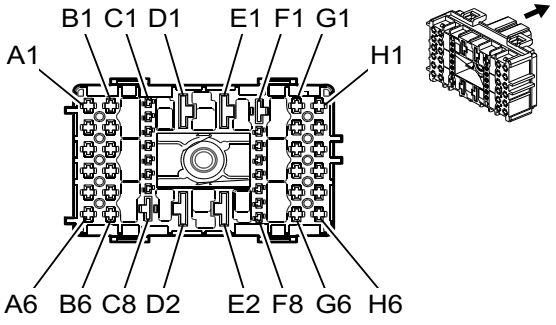
### X50A Fuse Block - Underhood X3 (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A1 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | II | — |
| A2 | 0.5 | VT/BK | 2139 | Run/Crank Ignition 1 Voltage | VI | — |
| | 0.5 | VT/BK | 2139 | Run/Crank Ignition 1 Voltage | VII | NP0/NQH |
| A3 | — | — | — | Not Occupied | — | — |
| A4 | 0.5 | BN/GN | 59 | A/C Compressor Clutch Control | II | — |
| A5 - A6 | — | — | — | Not Occupied | — | — |
| B1 | 2.5 | YE | 6 | Starter Solenoid Crank Ignition Voltage | IV | — |
| B2 | 0.5 | YE/BK | 625 | Starter Enable Relay Control | II | — |
| B3 - B5 | — | — | — | Not Occupied | — | — |
| B6 | 3 | RD/GY | 1342 | Battery Positive Voltage | IV | — |
| C1 - C2 | — | — | — | Not Occupied | — | — |

## X50A Fuse Block - Underhood X3 (LV3) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| C3 | 0.5 | BK | 4450 | Ground | V | — |
| C4 | 0.5 | WH/GY | 459 | A/C Compressor Clutch Relay Control | V | — |
| C5 - D1 | — | — | — | Not Occupied | — | — |
| D2 | 10 | RD/WH | 342 | Battery Positive Voltage | VII | — |
| E1 | — | — | — | Not Occupied | — | — |
| E2 | 10 | RD/GY | 642 | Battery Positive Voltage | VII | — |
| F1 - F3 | — | — | — | Not Occupied | — | — |
| F4 | 0.5 | YE | 5991 | Powertrain Relay Coil Control | V | — |
| F5 - F8 | — | — | — | Not Occupied | — | — |
| G1 | 0.5 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | II | — |
| G2 - G3 | — | — | — | Not Occupied | — | — |
| G4 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | II | — |
| G5 | 1 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | III | — |
| G6 - H1 | — | — | — | Not Occupied | — | — |
| H2 | 1 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | I | — |
| H3 | 0.5 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | II | — |
| H4 - H5 | — | — | — | Not Occupied | — | — |
| H6 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | VI | — |

## X50A Fuse Block - Underhood X4




4993031

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33384574
Service Connector: 19371188
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13582286 | J-35616-35 (VT) | J-38125-557 | 1241390-1 | Lear 17 | F | D |
| II | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

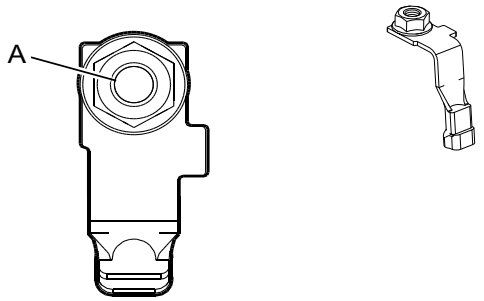
## Terminal Part Information (cont'd)

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| III | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X50A Fuse Block - Underhood X4

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A1 | — | — | — | Not Occupied | — | — |
| A2 | 0.75 | VT/GY | 709 | Left Park Lamp Control | III | — |
| A3 | 1.5 | GY/BN | 2109 | Trailer Park Lamp Control | III | — |
| A4 | 0.75 | GY/BN | 309 | Right Park Lamp Control | III | — |
| A5 - A6 | — | — | — | Not Occupied | — | — |
| B1 | 0.5 | GN/WH | 24 | Backup Lamp Control | III | — |
| B2 | 0.75 | WH/GN | 1624 | Trailer Backup Lamp Control | III | — |
| B3 | 2 | RD/GN | 2440 | Battery Positive Voltage | I | — |
| B4 | 0.5 | RD/GN | 1840 | Battery Positive Voltage | III | — |
| B5 - C6 | — | — | — | Not Occupied | — | — |
| C7 | 0.5 | RD/WH | 2040 | Battery Positive Voltage | II | — |
| C8 - D1 | — | — | — | Not Occupied | — | — |
| D2 | 4 | RD/GN | 742 | Battery Positive Voltage | III | — |
| E1 - G2 | — | — | — | Not Occupied | — | — |
| G3 | 0.75 | YE/BU | 318 | Left Rear Trailer Stop/Turn Lamp Control | III | — |
| G4 | 2 | RD/YE | 5840 | Battery Positive Voltage | III | — |
| G5 | 1 | RD/WH | 3440 | Battery Positive Voltage | III | — |
| G6 | 2.5 | RD/YE | 1142 | Battery Positive Voltage | III | — |
| H1 - H2 | — | — | — | Not Occupied | — | — |
| H3 | 0.75 | GN/VT | 1619 | Right Rear Trailer Stop/Turn Lamp Control | III | — |
| H4 | 2 | RD/VT | 5640 | Battery Positive Voltage | III | — |
| H5 | 2.5 | RD/VT | 1940 | Battery Positive Voltage | III | — |
| H6 | 2.5 | RD/VT | 1242 | Battery Positive Voltage | III | — |

## X50A Fuse Block - Underhood X5




4249176

### Connector Part Information

Harness Type: Generator
OEM Connector: 84386513
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

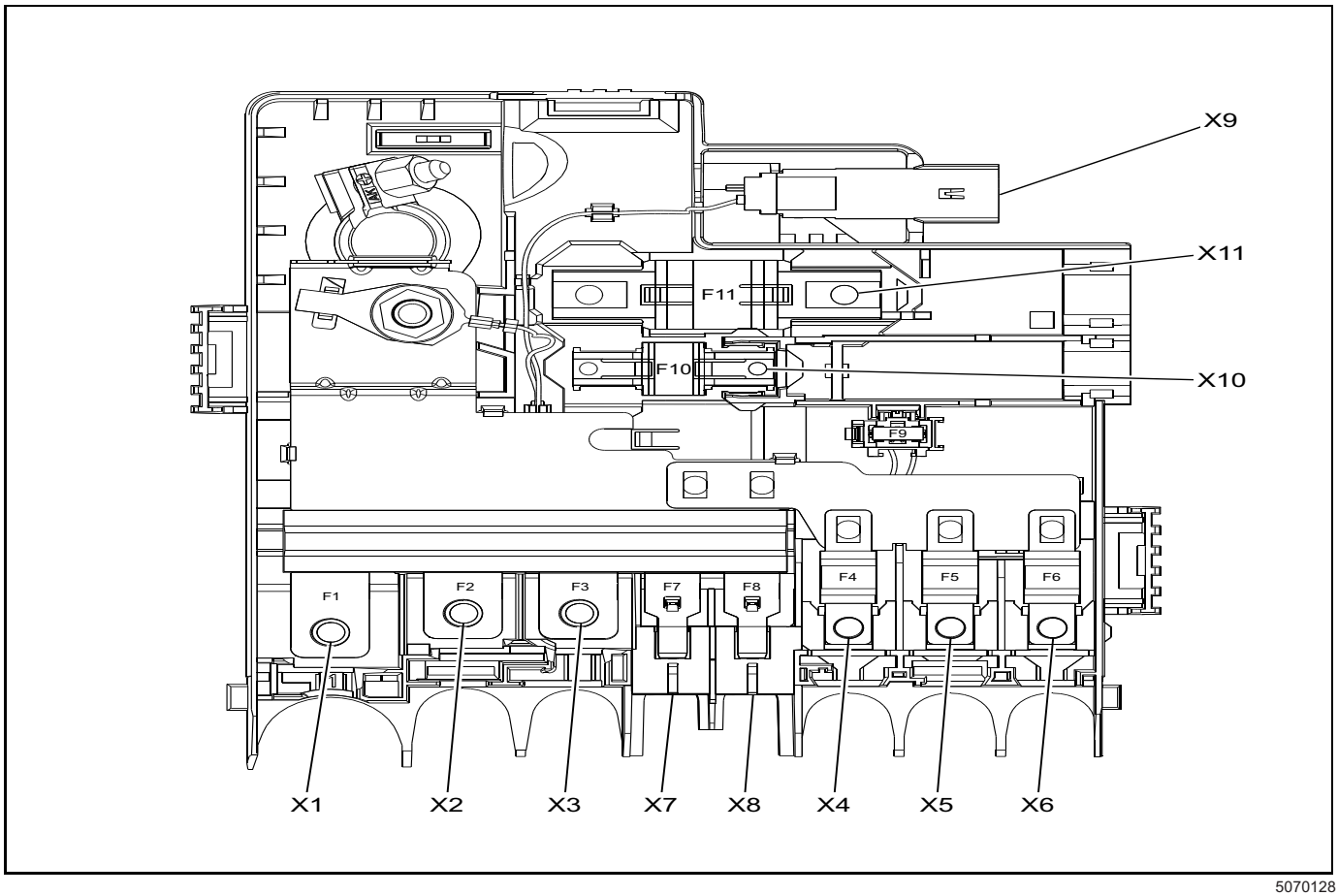
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X50A Fuse Block - Underhood X5

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | — | RD/GN | 242 | Battery Positive Voltage | I | — |

## X50D Fuse Block - Battery Top View

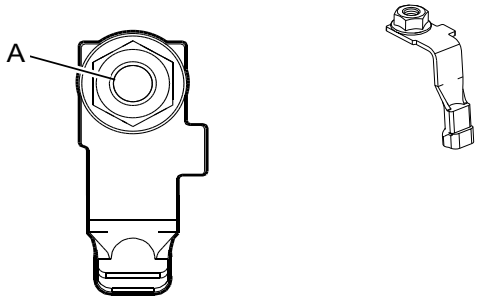



5070128

## Usage Table

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| **Fuses** | | | | |
| F1 | — | F1BA | 175A (LV3/ L82/L84/ L87) 250A (L3B/LM2) | • G13 Generator<br>• X50A Fuse Block - Underhood |
| F2 | — | F2BA | 175A | • K43 Power Steering Control Module |
| F3 | — | F3BA | 400A | • M64 Starter Motor |
| F4 | — | F4BA | 100A | • E40 Electrical Auxiliary Heater (C32) |
| F5 | — | F5BA | 80A | • K34 Glow Plug Control Module (LM2) |
| F6 | — | F6BA | 80A | • G59 Engine Coolant Pump (L3B)<br>• G10R Cooling Fan Motor - Right (LM2) |
| F7 | — | F7BA | 60A | • X51R Fuse Block - Instrument Panel Right |
| F8 | — | F8BA | 60A | • K160 Brake System Control Module |
| F9 | — | F9BA | 5A | • B110 Battery Sensor Module (KL9)<br>• K9 Body Control Module (-KL9) |
| F10 | — | F10BA | 60A | • X51B Fuse Block - Instrument Panel Auxiliary (LM2) |
| F11 | — | F11BA | — | — |

## X50D Fuse Block - Battery X1




4249176

### Connector Part Information

Harness Type: Generator
OEM Connector: 84386516
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F

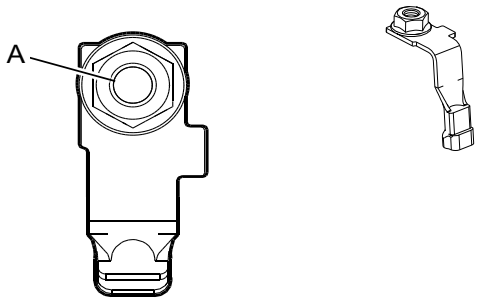
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | Not Available | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X50D Fuse Block - Battery X1

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 35 | RD/YE | 2 | Battery Positive Voltage | I | — |
| | 35 | RD/GN | 242 | Battery Positive Voltage | | — |

## X50D Fuse Block - Battery X2




4249176

### Connector Part Information

Harness Type: Power Steering
OEM Connector: 84386514
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Ring Terminal

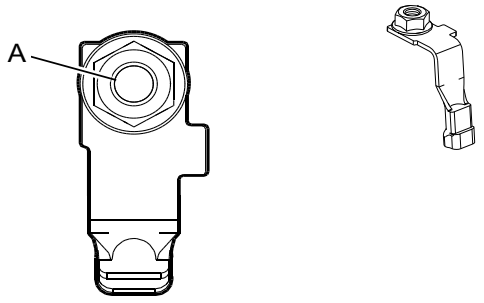
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X50D Fuse Block - Battery X2

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 25 | RD/VT | 3542 | Battery Positive Voltage | I | — |

## X50D Fuse Block - Battery X3




4249176

### Connector Part Information

Harness Type: Starter Motor
OEM Connector: 84386515
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Ring Terminal

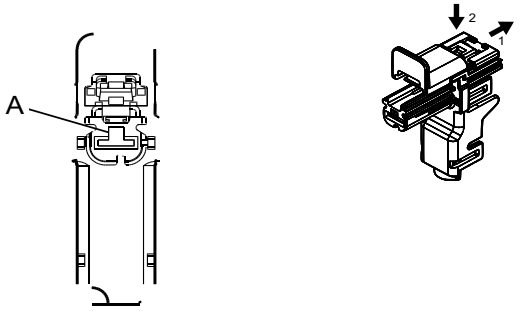
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X50D Fuse Block - Battery X3

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 35 | RD/YE | 2 | Battery Positive Voltage | I | — |

## X50D Fuse Block - Battery X4 (C32)




4994183

### Connector Part Information

Harness Type: Body
OEM Connector: 33297578
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 6.3 Series (BK)

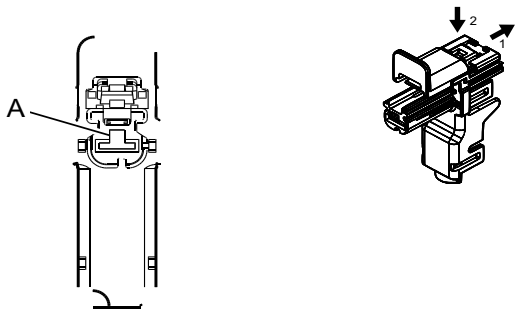
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X50D Fuse Block - Battery X4 (C32)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 12 | RD/GY | 642 | Battery Positive Voltage | I | — |

## X50D Fuse Block - Battery X5 (LM2)




4994171

### Connector Part Information

Harness Type: Glow Plug
OEM Connector: 33297579
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 6.3 Series (BU)

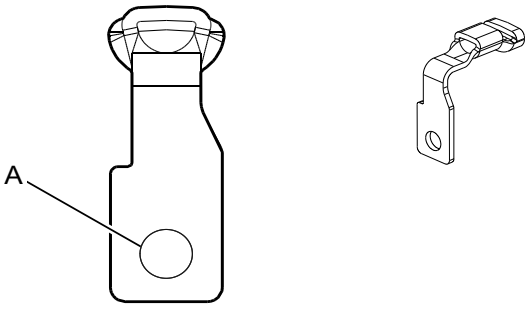
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X50D Fuse Block - Battery X5 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 12 | RD/VT | 842 | Battery Positive Voltage | I | — |

## X50D Fuse Block - Battery X6 (L3B)




4994507

### Connector Part Information

Harness Type: Engine
OEM Connector: 35085183
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

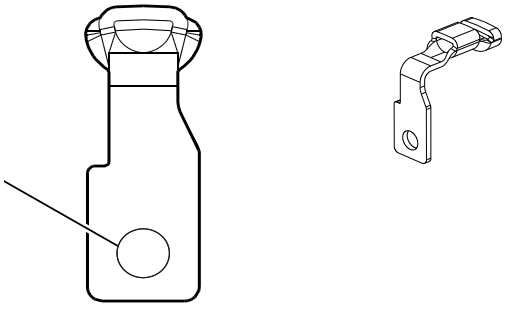
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### X50D Fuse Block - Battery X6 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 10 | RD/BN | 440 | Battery Positive Voltage | I | — |

## X50D Fuse Block - Battery X6 (LM2)



4994507

### Connector Part Information

Harness Type: Engine
OEM Connector: 35085183
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Ring Terminal

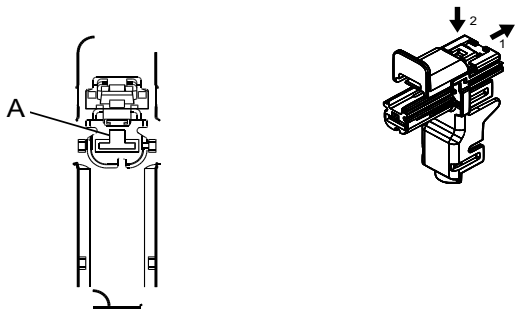
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X50D Fuse Block - Battery X6 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 8 | RD | 642 | Battery Positive Voltage | I | — |

## X50D Fuse Block - Battery X7




4994183

### Connector Part Information

Harness Type: Body
OEM Connector: 33297578
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 6.3 Series (BK)

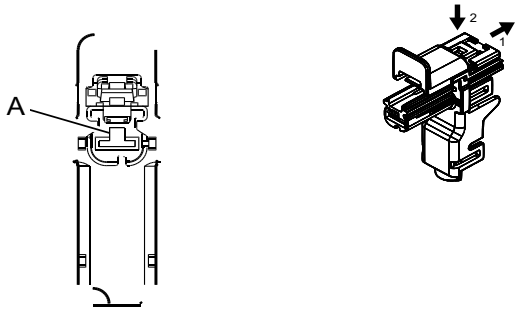
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X50D Fuse Block - Battery X7

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 5 | RD/GY | 142 | Battery Positive Voltage | I | — |

## X50D Fuse Block - Battery X8




4994171

### Connector Part Information

Harness Type: Body
OEM Connector: 33297579
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 6.3 Series (BU)

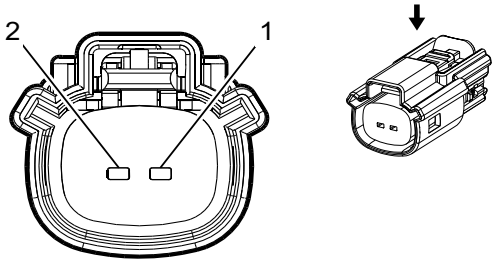
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X50D Fuse Block - Battery X8

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 6 | RD/VT | 1640 | Battery Positive Voltage | I | — |

## X50D Fuse Block - Battery X9




2474713

### Connector Part Information

Harness Type: Body
OEM Connector: 13782480
Service Connector: 13577534
Description: 2-Way F 150 MX Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X50D Fuse Block - Battery X9

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | RD/YE | 2340 | Battery Positive Voltage | I | — |
| 2 | — | — | — | Not Occupied | — | — |

# X50D Fuse Block - Battery X10

—

## Connector Part Information

Harness Type: Auxiliary Instrument Panel
OEM Connector: 13624367
Service Connector: Service by Cable Assembly — See Part Catalog
Description: —

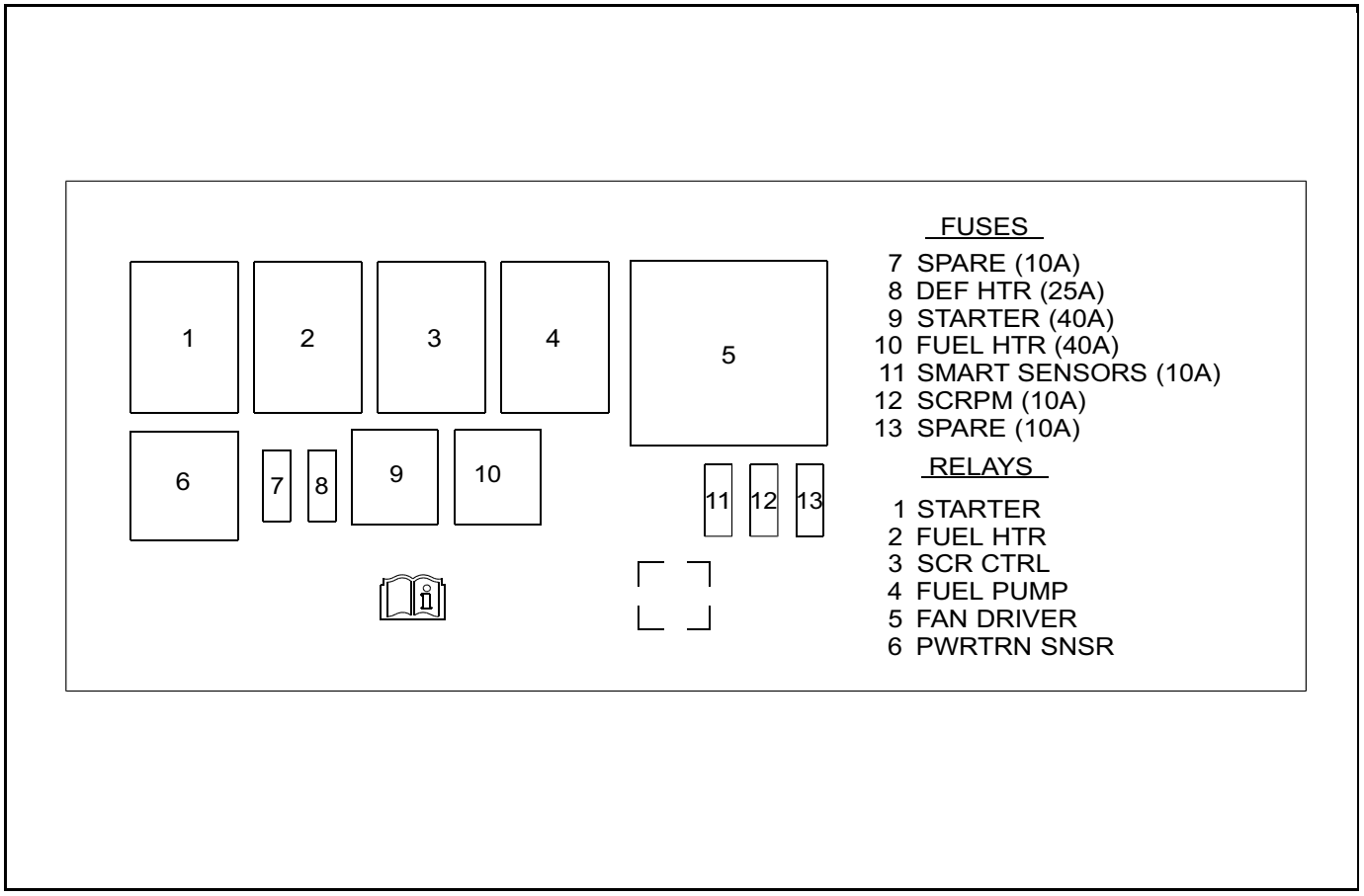
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X50D Fuse Block - Battery X10

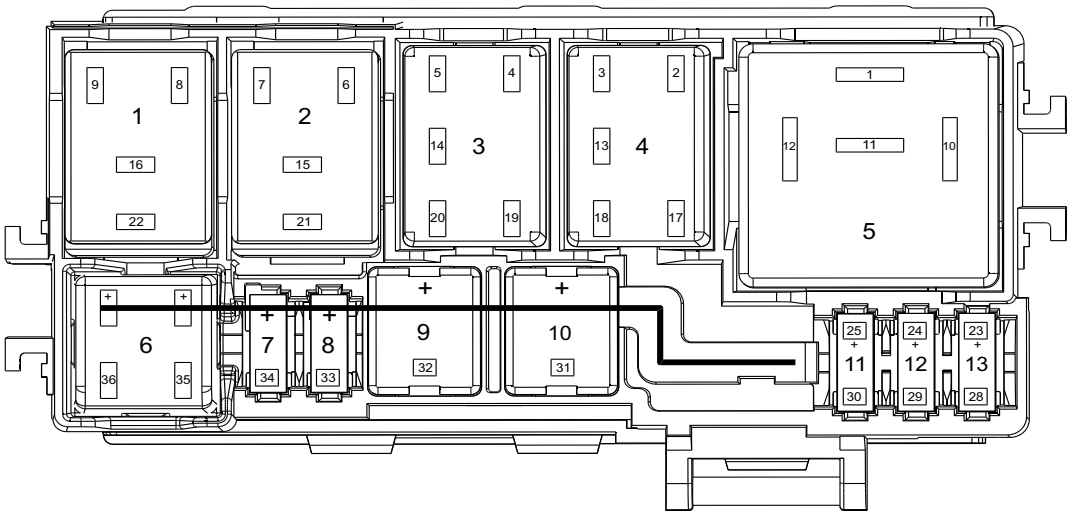
| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 5 | RD/BU | 42 | Battery Positive Voltage | I | — |

## X50B Fuse Block - Underhood Auxiliary Label (LM2)




5118008

## X50B Fuse Block - Underhood Auxiliary Top View (LM2)




5118010

### Usage Table

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| **Fuses** | | | | |
| 7 | SPARE | F7UB | — | • KR121B Reductant Control Module Relay 2 |
| 8 | DEF HTR | F8UB | 25A | • Not Used |
| 9 | STARTER | F9UB | 40A | • KR121A Reductant Control Module Relay 1<br>• F13UB |
| 10 | FUEL HTR | F10UB | 40A | • KR22 Fuel Heater Relay |
| 11 | SMART SENSORS | F11UB | 10A | • B136 Exhaust Particulate Sensor<br>• B195A Nitrogen Oxides Sensor 1<br>• B195B Nitrogen Oxides Sensor 2<br>• B195C Nitrogen Oxides Sensor 3 |
| 12 | SCRPM | F12UB | 10A | • K111 Fuel Pump Driver Control Module<br>• K115 Reductant Control Module |
| 13 | SPARE | F13UB | — | • KR18 Charge Air Cooler Coolant Pump Relay |
| **Relays** | | | | |
| 1 | STARTER | KR121A Reductant Control Module Relay 1 | — | • K115 Reductant Control Module |
| 2 | FUEL HTR | KR22 Fuel Heater Relay | — | • E11A Fuel Heater/Water in Fuel Sensor |

## Usage Table (cont'd)

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| 3 | SCR CTRL | KR18 Charge Air Cooler Coolant Pump Relay | — | • M10 Charge Air Cooler Coolant Pump |
| 4 | FUEL PUMP | KR121B Reductant Control Module Relay 2 | — | • F11UB<br>• F12UB |
| 5 | FAN DRIVER | — | — | • Not Used |
| 6 | PWRTRN SNSR | — | — | • Not Used |

# X50B Fuse Block - Underhood Auxiliary

—

## Connector Part Information

Harness Type: Engine
OEM Connector: 35096237
Service Connector: Service by Component Assembly - See Part Catalog
Description: —

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13327158 | J-35616-42 (RD) | J-38125-215A | Not Required | Not Required | Not Required | Not Required |
| II | 13327178 | J-35616-43 (RD) | J-38125-215A | Not Required | Not Required | Not Required | Not Required |
| III | 13575770 | J-35616-43 (RD) | J-38125-215A | Not Required | Not Required | Not Required | Not Required |
| IV | 13582244 | J-35616-42 (RD) | J-38125-215A | Not Required | Not Required | Not Required | Not Required |
| V | 19119592 | J-35616-4A (PU) | J-38125-557 | Not Required | Not Required | Not Required | Not Required |
| VI | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Required | Not Required | Not Required | Not Required |
| VII | Not Required | J-35616-22 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X50B Fuse Block - Underhood Auxiliary

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 2 | 0.5 | GN/BU | 3889 | DEF Power Module Relay Control | V | — |
| 3 | 0.5 | RD/BU | 4540 | Battery Positive Voltage | V | — |
| 4 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | V | — |
| 5 | 1 | RD/GN | 40 | Battery Positive Voltage | V | — |
| 6 | 0.5 | GY/BN | 7071 | Heater Fuel Control | I | — |
| 7 | 2.5 | VT/GN | 355 | Fuel Filter Heater Voltage | IV | — |
| 8 | 0.5 | GN/BU | 3889 | DEF Power Module Relay Control | I | — |
| 9 | 0.5 | BK | 4450 | Ground | I | — |
| 15 | 2.5 | VT/GN | 355 | Fuel Filter Heater Voltage | IV | — |
| 16 | 2.5 | BU | 3921 | DEF Heater Supply 1 | IV | — |
| 17 | 1.5 | GN/BU | 9999 | — | V | — |
| 18 | 0.5 | BK | 4450 | Ground | V | — |
| 19 | 1 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | V | — |
| 20 | 0.5 | BK | 4450 | Ground | V | — |
| 21 | 2.5 | VT/GN | 355 | Fuel Filter Heater Voltage | IV | — |
| 22 | 2.5 | BU | 3921 | DEF Heater Supply 1 | IV | — |
| 23 | 2.5 | RD/GN | 40 | Battery Positive Voltage | V | — |
| 24 | 1.5 | GN/GY | 9999 | — | VI | — |
| 25 | 1.5 | GN/GY | 9999 | — | V | — |
| 26 | 10 | RD/VT | 4040 | Battery Positive Voltage | VII | — |
| 28 | 1 | RD/GN | 40 | Battery Positive Voltage | V | — |

## X50B Fuse Block - Underhood Auxiliary (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 29 | 0.5 | VT/GN | 4320 | Powertrain Sensor Bus Enable | V | — |
| 30 | 2.5 | VT/BU | 3674 | NOx Sensor 1 Control | VI | — |
| 31 | 2.5 | VT/GN | 355 | Fuel Filter Heater Voltage | II | — |
| 32 | 2.5<br>2.5 | BU<br>RD/GN | 3921<br>40 | DEF Heater Supply 1<br>Battery Positive Voltage | III<br>VII | —<br>— |
| 34 | 0.5 | RD/BU | 4540 | Battery Positive Voltage | V | — |

# X54 Fuse Block - Snow Plow (VYU)

—

## Connector Part Information

Harness Type: Snow Plow Jumper
OEM Connector: 33391084
Service Connector: Service by Harness - See Part Catalog
Description: Fuse Holder

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | Not Available | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X54 Fuse Block - Snow Plow (VYU)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| B4 | — | BN | 25 | Charge Indicator Control | I | — |
| B6 | — | BN | 9026 | — | I | — |
| C4 | — | WH/BU | 9030 | — | I | — |
| C5 | — | BN | 25 | Charge Indicator Control | I | — |

# X55SP Fuse Holder - Snow Plow (VYU)

—

## Connector Part Information

Harness Type: Snow Plow Jumper
OEM Connector: 33391084
Service Connector: Service by Harness - See Part Catalog
Description: Fuse Holder

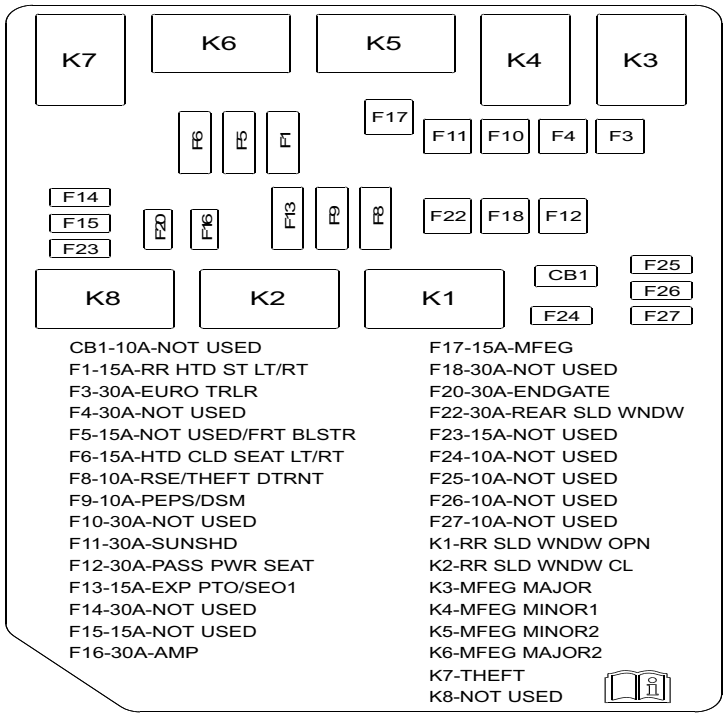
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X55SP Fuse Holder - Snow Plow (VYU)

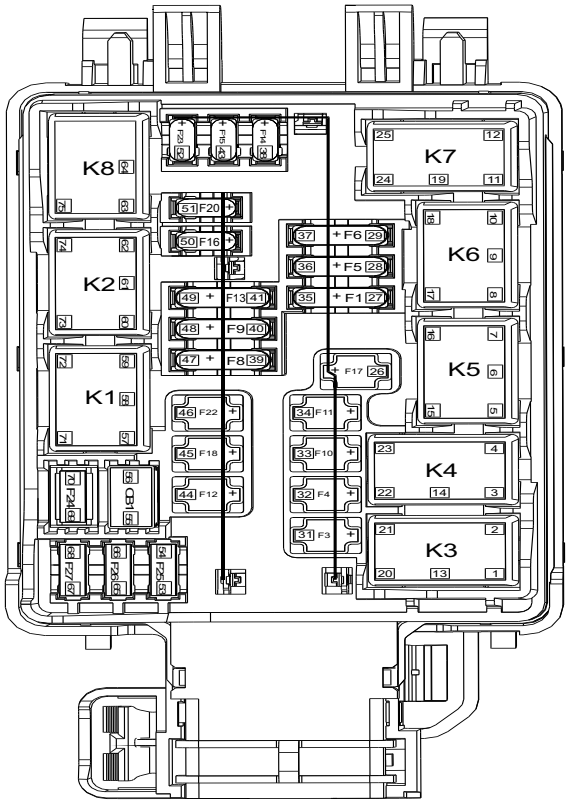
| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 1 | OG | 9026 | — | I | — |
| B | 1 | OG | 9028 | — | I | — |

## X51L Fuse Block - Instrument Panel Left Label




5085578

## X51L Fuse Block - Instrument Panel Left Top View




5041380

### Usage Table

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| **Fuses** | | | | |
| F1 | Rear heated seats left/right | F1DL | 15A | • K29R Seat Heating Control Module - Rear (KA6) |
| F3 | Euro trailer | F3DL | 30A | • Not Used |
| F4 | — | F4DL | 30A | • Not Used |
| F5 | Front Bolster | F5DL | 15A | • Not Used |
| F6 | Heated and cooled seats left/right | F6DL | 15A | • K29F Seat Heating Control Module - Front (KA1) |
| F8 | Rear seat entertainment/ Theft detterent | F8DL | — | — |
| F9 | Passive entry/ Passive start/ Driver seat module | F9DL | 10A | • K84 Keyless Entry Control Module (BTM) |
| F10 | — | F10DL | 30A | • Not Used |
| F11 | Sunshade | F11DL | 30A | • Not Used |
| F12 | Passenger power seat | F12DL | 30A | • Not Used |
| F13 | Export power take off/Special equipment option 1 | F13DL | 15A | • Not Used |
| F14 | — | F14DL | 30A | • Not Used |

## Usage Table (cont'd)

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| F15 | — | F15DL | 15A | • Not Used |
| F16 | AMP | F16DL | 30A | • T3 Audio Amplifier (UQA) |
| F17 | MFEG | F17DL | 15A | • KR191L Pickup Box Endgate Latch Relay - Left (QT5)<br>• KR192L Pickup Box Auxiliary Endgate Latch Relay - Left (QK2+QT5) |
| F18 | — | F18DL | 30A | • Not Used |
| F20 | Endgate | F20DL | 30A | • K194 Pickup Box Endgate Control Module (QT6) |
| F22 | Rear sliding window | F22DL | 30A | • KR8A Sliding Rear Window Close Relay (A48)<br>• KR8B Sliding Rear Window Open Relay (A48) |
| F23 | — | F23DL | 15A | • Not Used |
| F24 | — | F24DL | 10A | • Not Used |
| F25 | — | F25DL | 10A | • Not Used |
| F26 | — | F26DL | 10A | • Not Used |
| F27 | — | F27DL | 10A | • Not Used |
| **Circuit Breakers** | | | | |
| CB1 | — | CB1DL | 10A | • Not Used |
| **Relays** | | | | |
| K1 | Rear sliding window open | KR8B | — | • M63 Sliding Rear Window Motor (A48) |
| K2 | Rear sliding window close | KR8A | — | • M63 Sliding Rear Window Motor (A48) |
| K3 | MFEG major 1 | MFEG1A | — | • A99L Pickup Box Endgate Latch - Left (QK2)<br>• A99R Pickup Box Endgate Latch - Right (QK2)<br>• Pickup Box Endgate Latch (QK1) |
| K4 | MFEG minor 1 | MFEG1B | — | • A99L Pickup Box Endgate Latch - Left (QK2)<br>• A99R Pickup Box Endgate Latch - Right (QK2)<br>• Pickup Box Endgate Latch (QK1) |
| K5 | MFEG minor 2 | MFEG2B | — | • A100L Pickup Box Auxiliary Endgate Latch - Left (QK2)<br>• A100R Pickup Box Auxiliary Endgate Latch - Right (QK2) |
| K6 | MFEG major 2 | MFEG2A | — | • A100L Pickup Box Auxiliary Endgate Latch - Left (QK2)<br>• A100R Pickup Box Auxiliary Endgate Latch - Right (QK2) |
| K7 | Anti-theft | — | — | — |
| K8 | — | — | — | — |

# X51L Fuse Block - Instrument Panel Left Bottom View

—

## Connector Part Information

Harness Type: Body
OEM Connector: 33333390
Service Connector: Service by Component Assembly - See Part Catalog
Description: —

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13575574 | J-35616-5 (PU) | J-38125-215A | Not Required | Not Required | Not Required | Not Required |
| II | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | J-35616-22 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

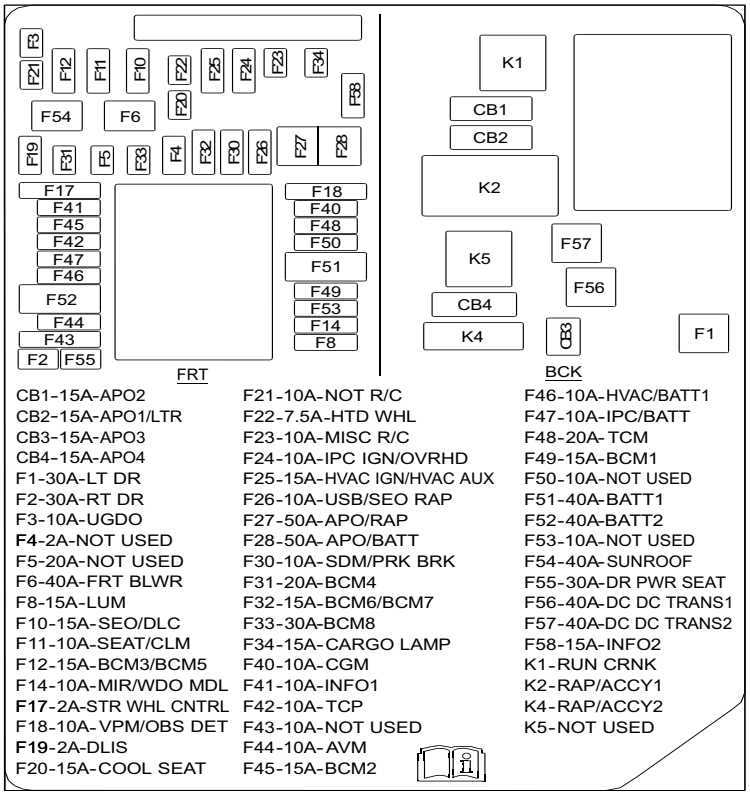
## X51L Fuse Block - Instrument Panel Left Bottom View

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | WH/GN | 7728 | Major Endgate High Relay Control | II | — |
| 2 | 0.5 | GN | 1299 | Major Endgate Motor Supply Voltage | II | — |
| 3 | 0.35 | WH/GY | 7297 | Minor Endgate High Relay Control | II | — |
| 4 | 0.5 | VT | 7725 | Minor Endgate Motor Supply Voltage | II | — |
| 5 | 0.5 | BK | 1150 | Ground | II | — |
| 6 | 0.5 | BN/YE | 7727 | Minor Endgate Motor Common | II | — |
| 7 | 0.35 | GY/BU | 7298 | Minor Endgate Low Relay Control | II | — |
| 8 | 0.5<br>0.5 | BK<br>BK | 1150<br>1150 | Ground<br>Ground | II | —<br>QT5 |
| 9 | 0.5 | BN/VT | 7731 | Major Endgate Motor Common | II | — |
| 10 | 0.35 | BU/VT | 7729 | Major Endgate Low Relay Control | II | — |
| 13 | 0.5 | BN/VT | 7731 | Major Endgate Motor Common | II | — |
| 14 | 0.5 | BN/YE | 7727 | Minor Endgate Motor Common | II | — |
| 15 | 0.5<br>0.5 | BK<br>BK | 1150<br>1150 | Ground<br>Ground | II | —<br>QK2+QT5 |
| 16 | 0.5 | BN/BK | 7726 | Minor Endgate Motor Return | II | — |
| 17 | 0.5<br>0.5 | BK<br>BK | 1150<br>1150 | Ground<br>Ground | II | —<br>QT5 |
| 18 | 0.5 | YE/BK | 7730 | Major Endgate Motor Return | II | — |
| 20 | 0.5 | RD/BU | 7640 | Battery Positive Voltage | II | — |
| 21 | 0.5 | BK | 1150 | Ground | II | — |
| 22 | 0.5 | RD/BU | 7640 | Battery Positive Voltage | II | — |
| 23 | 0.5<br>0.5 | BK<br>BK | 1150<br>1150 | Ground<br>Ground | II | —<br>— |
| 26 | 0.5<br>0.5 | RD/BU<br>RD/BU | 7640<br>7640 | Battery Positive Voltage<br>Battery Positive Voltage | I<br>II | —<br>QK2+QT5 |
| 27 | 0.5 | RD/YE | 240 | Battery Positive Voltage | II | KA6 |
| 29 | 0.5 | RD/GN | 5140 | Battery Positive Voltage | II | — |

## X51L Fuse Block - Instrument Panel Left Bottom View (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 30 | 10 | RD/GY | 2042 | Battery Positive Voltage | III | — |
| 35 | 0.5 | RD/VT | 340 | Battery Positive Voltage | II | KA6 |
| 37 | 0.5 | RD | 6140 | Battery Positive Voltage | II | — |
| 40 | 0.5 | RD/YE | 4340 | Battery Positive Voltage | II | — |
| 42 | 10 | RD/VT | 2142 | Battery Positive Voltage | III | — |
| 44 | 2.5 | RD/BN | 1440 | Battery Positive Voltage | I | — |
| 46 | 2.5 | RD/VT | 3340 | Battery Positive Voltage | I | A48 |
| 50 | 2.5 | RD/YE | 3740 | Battery Positive Voltage | II | UQA |
| 51 | 2.5 | RD/GY | 7040 | Battery Positive Voltage | II | QT6 |
| 57 | 2.5 | RD/VT | 3340 | Battery Positive Voltage | II | A48 |
| 58 | 2.5 | BK | 1150 | Ground | II | A48 |
| 59 | 0.5 | BK | 1150 | Ground | II | A48 |
| 60 | 2.5 | RD/VT | 3340 | Battery Positive Voltage | II | A48 |
| 61 | 2.5 | BK | 1150 | Ground | II | A48 |
| 62 | 0.5 | BK | 1150 | Ground | II | A48 |
| 71 | 0.35 | YE/VT | 6191 | Power Sliding Window Switch Open Signal | II | A48 |
| 72 | 2.5 | GY/GN | 5441 | Endgate Window Regulator Down Signal | II | A48 |
| 73 | 0.35 | WH | 6192 | Power Sliding Window Switch Close Signal | II | A48 |
| 74 | 2.5 | YE/BU | 5442 | Endgate Window Regulator Up Signal | II | A48 |

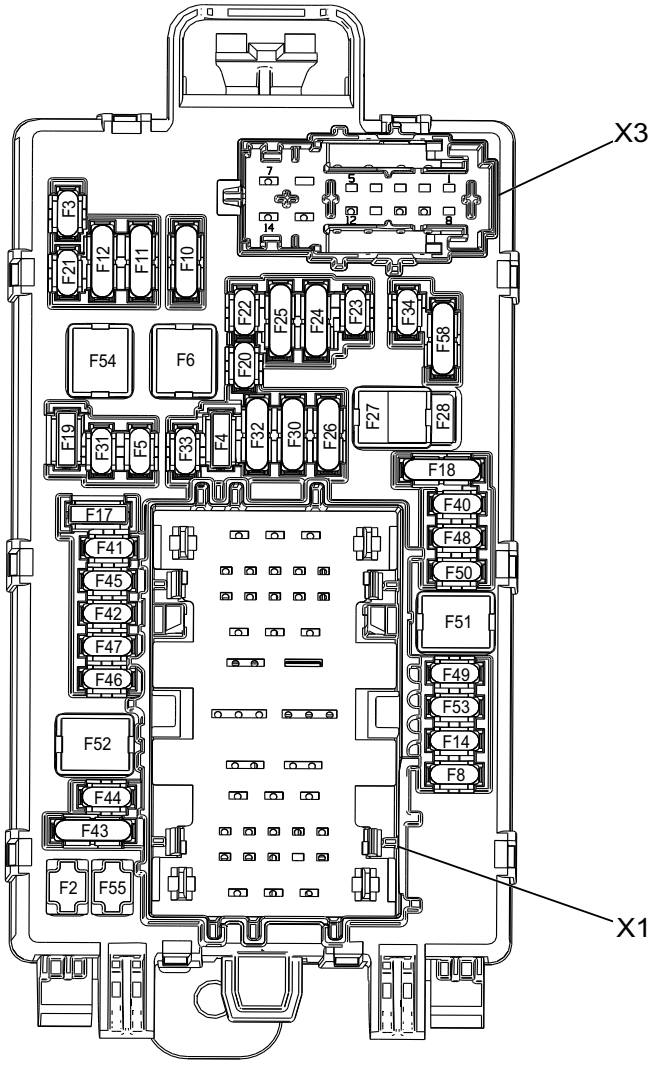
## X51R Fuse Block - Instrument Panel Right Label




CB1-15A-APO2
CB2-15A-APO1/LTR
CB3-15A-APO3
CB4-15A-APO4
F1-30A-LT DR
F2-30A-RT DR
F3-10A-UGDO
F4-2A-NOT USED
F5-20A-NOT USED
F6-40A-FRT BLWR
F8-15A-LUM
F10-15A-SEO/DLC
F11-10A-SEAT/CLM
F12-15A-BCM3/BCM5
F14-10A-MIR/WDO MDL
F17-2A-STR WHL CNTRL
F18-10A-VPM/OBS DET
F19-2A-DLIS
F20-15A-COOL SEAT
F21-10A-NOT R/C
F22-7.5A-HTD WHL
F23-10A-MISC R/C
F24-10A-IPC IGN/OVRHD
F25-15A-HVAC IGN/HVAC AUX
F26-10A-USB/SEO RAP
F27-50A-APO/RAP
F28-50A-APO/BATT
F30-10A-SDM/PRK BRK
F31-20A-BCM4
F32-15A-BCM6/BCM7
F33-30A-BCM8
F34-15A-CARGO LAMP
F40-10A-CGM
F41-10A-INFO1
F42-10A-TCP
F43-10A-NOT USED
F44-10A-AVM
F45-15A-BCM2
F46-10A-HVAC/BATT1
F47-10A-IPC/BATT
F48-20A-TCM
F49-15A-BCM1
F50-10A-NOT USED
F51-40A-BATT1
F52-40A-BATT2
F53-10A-NOT USED
F54-40A-SUNROOF
F55-30A-DR PWR SEAT
F56-40A-DC DC TRANS1
F57-40A-DC DC TRANS2
F58-15A-INFO2
K1-RUN CRNK
K2-RAP/ACCY1
K4-RAP/ACCY2
K5-NOT USED

5041372

## X51R Fuse Block - Instrument Panel Right Top View




5041376

## Usage Table

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| **Fuses** | | | | |
| F2 | RT DR | F2DR | 30A | • M74P Window Motor - Passenger (AEF)<br>• S79P Window Switch - Passenger (AED/AEF)<br>• S79RR Window Switch - Right Rear (AEQ) |
| F3 | UGDO | F3DR | 10A | • A98 Front Overhead Console Assembly<br>• E37B Dome/Reading Lamps - 2nd Row (Extended Cab/Crew Cab) |
| F4 | NOT USED | F4DR | 2A | — |
| F5 | NOT USED | F5DR | 20A | — |
| F6 | FRT BLWR | F6DR | 40A | • M8 Blower Motor |
| F8 | LUM | F8DR | 15A | • S65D Seat Lumbar Support Switch - Driver (A2X)<br>• S65P Seat Lumbar Support Switch - Passenger (A7K) |

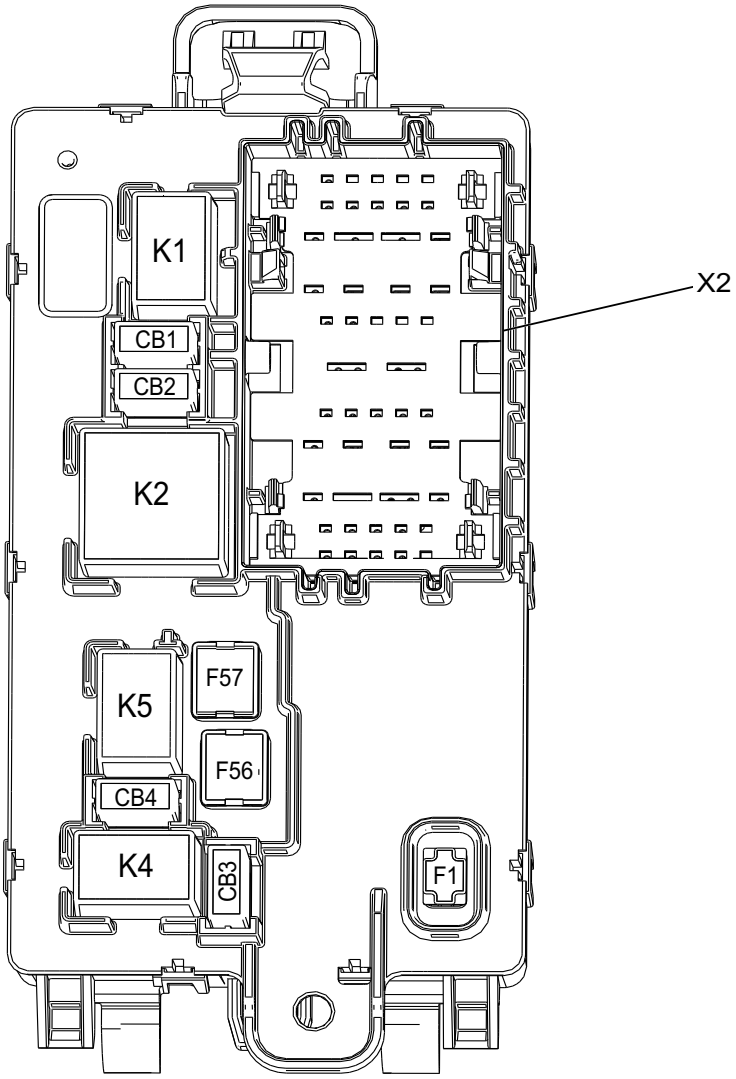
## Usage Table (cont'd)

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| F10 | SEO/DLC | F10DR | 15A | • K9 Body Control Module |
| F11 | SEAT/CLM | F11DR | 10A | • F19DR (-BTM)<br>• K40 Seat Memory Control Module (A45)<br>• K60 Steering Column Lock Module (BTM) |
| F12 | BCM3/BCM5 | F12DR | 15A | • K9 Body Control Module |
| F14 | MIR/WDO MDL | F14DR | 10A | • S146 Window/Outside Rearview Mirror Switch - Driver (AXG) |
| F17 | STR WHL CNTRL | F17DR | 2A | • S70L Steering Wheel Controls Switch - Left (K34)<br>• S70R Steering Wheel Controls Switch - Right (K34) |
| F18 | VPM/OBS DET | F18DR | 10A | • B174W Frontview Camera - Windshield (UEU/UHX)<br>• K157 Video Processing Control Module (UVI/UV2)<br>• K182 Parking Assist Control Module (UD5/UD7) |
| F19 | DLIS | F19DR | 2A | • S39 Ignition Switch (-BTM) |
| F20 | COOL SEAT | F20DR | 15A | • M73A Seat Blower Motor - Driver Back (KQV)<br>• M73B Seat Blower Motor - Passenger Back (KQV)<br>• M73C Seat Blower Motor - Driver Cushion (KQV)<br>• M73D Seat Blower Motor - Passenger Cushion (KQV) |
| F21 | NOT R/C | F21DR | 10A | • K60 Steering Colmn Lock Module (BTM) |
| F22 | HTD WHL | F22DR | 7.5A | • K32 Steering Wheel Heating Control Module (KI3) |
| F23 | MISC R/C | F23DR | 10A | • B87 Rearview Camera (UVC)<br>• T19 Power Supply Transformer (KL9) |
| F24 | IPC IGN/OVRHD | F24DR | 10A | • A10 Inside Rearview Mirror (DD8/DRZ)<br>• A98 Front Overhead Console Assembly<br>• K56 Serial Data Gateway Module<br>• P16 Instrument Cluster<br>• P43 Collision Alert Indicators ((UHX/UEU)-UV6) |
| F25 | HVAC IGN/ HVAC AUX | F25DR | 15A | • E40 Electrical Auxiliary Heater (C32) |
| F26 | USB/SEO RAP | F26DR | 10A | • A98 Front Overhead Console Assembly<br>• K34 Glow Plug Control Module (LM2)<br>• T22 Mobile Device Wireless Charger Module (K4C)<br>• X92B USB Receptacle - Rear Seat (AZ3)<br>• X92C USB Receptacle - Center Console Rear (D07)<br>• X260 |
| F27 | APO/RAP | F27DR | 50A | • CB1DR<br>• CB2DR |
| F28 | APO/BATT | F28DR | 50A | • CB1DR<br>• CB2DR |
| F30 | SDM/PRK BRK | F30DR | 10A | • B80 Park Brake Switch<br>• K85 Passenger Presence Module<br>• K36 Inflatable Restraint Sensing and Diagnostic Module<br>• S76 Trailer Brake Control Switch (JL1) |
| F31 | BCM4 | F31DR | 20A | • K9 Body Control Module |
| F32 | BCM6/BCM7 | F32DR | 10A | • X84 Data Link Connector |
| F33 | BCM8 | F33DR | 30A | • K9 Body Control Module |
| F34 | CARGO LAMP | F34DR | 15A | • E2A Marker Lamp - Endgate (QT5/QT6)<br>• E6 Center High Mounted Stop Lamp<br>• S30 Headlamp Switch (QT5/QT6) |

## Usage Table (cont'd)

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| F40 | CGM | F40DR | 10A | • K56 Serial Data Gateway Module |
| F41 | INFO1 | F41DR | 10A | • A26 HVAC Controls<br>• P17 Info Display Module (IOS/IOT/(IOR+UIJ))<br>• P29 Head-Up Display (UV6)<br>• S32R Seat Heating Switch - Rear (KA6)<br>• X83 Auxiliary Audio Input<br>• X92 USB Receptacle |
| F42 | TCP | F42DR | 10A | • K73 Telematics Communication Interface Control Module (UE1) |
| F43 | NOT USED | F43DR | 10A | — |
| F44 | AVM | F44DR | 10A | • Q80L Engine Mount Solenoid Valve - Left (L3B/LM2)<br>• Q80R Engine Mount Solenoid Valve - Right (L3B/LM2) |
| F45 | BCM2 | F45DR | 15A | • K9 Body Control Module |
| F46 | HVAC/BATT1 | F46DR | 10A | • K33 HVAC Control Module |
| F47 | IPC/BATT | F47DR | 10A | • P16 Instrument Cluster |
| F48 | TCM | F48DR | 20A | • K71 Transmission Control Module (MQB/MQE)<br>• Q8 Control Solenoid Valve Assembly (MYC) |
| F49 | BCM1 | F49DR | 15A | • K9 Body Control Module |
| F50 | NOT USED | F50DR | 10A | — |
| F51 | BATT1 | F51DR | 40A | • F18DR (-KL9)<br>• F40DR (-KL9)<br>• F48DR (-KL9)<br>• F49DR (-KL9)<br>• F58DR (-KL9) |
| F52 | BATT2 | F52DR | 40A | • F17DR (-KL9)<br>• F41DR (-KL9)<br>• F42DR (-KL9)<br>• F44DR (-KL9)<br>• F45DR (-KL9)<br>• F46DR (-KL9)<br>• F47DR (-KL9) |
| F53 | NOT USED | F53DR | 10A | — |
| F54 | SUNROOF | F54DR | 40A | • M69 Sunroof Motor (CF5) |
| F55 | DR PWR SEAT | F55DR | 30A | • S64D Seat Adjuster Switch - Driver (A2X-A45)<br>• K40 Seat Memory Control Module (A45) |
| F58 | INFO2 | F58DR | 15A | • A11 Radio |

## X51R Fuse Block - Instrument Panel Right Bottom View




5041378

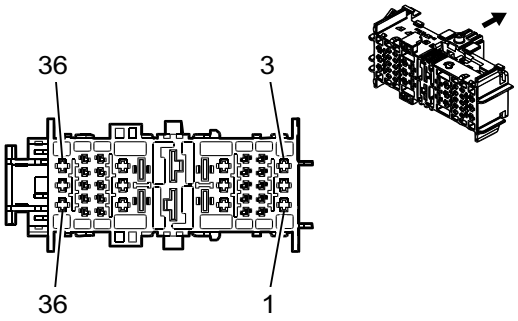
### Usage Table

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| **Circuit Breakers** | | | | |
| CB1 | APO2 | CB1DR | 15A | • X80G Accessory Power Receptacle - Instrument Panel |
| CB2 | APO1/LTR | CB2DR | 15A | • X80L Accessory Power Receptacle - Center Console Rear (D07)<br>• X80M Accessory Power Receptacle - Rear Seat (AZ3) |
| CB3 | APO3 | CB3DR | 15A | — |
| CB4 | APO4 | CB4DR | 15A | — |
| **Fuses** | | | | |
| F1 | LT DR | F1DR | 30A | • M74D Window Motor - Driver (AXG)<br>• S79LR Window Switch - Left Rear (AEQ) |

## Usage Table (cont'd)

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| F56 | DC DC TRANS1 | F56DR | 40A | • T19 Power Supply Transformer (KL9) |
| F57 | DC DC TRANS2 | F57DR | 40A | • T19 Power Supply Transformer (KL9) |
| **Relays** | | | | |
| K1 | RUN CRANK | KR73 Ignition Main Relay | — | • F20DR<br>• F21DR<br>• F22DR<br>• F23DR<br>• F24DR<br>• F25DR |
| K2 | RAP/ACCY1 | KR76A Retained Accessory Power Relay 1 | — | • F26DR<br>• F27DR |
| K4 | RAP/ACCY2 | KR76B Retained Accessory Power Relay 2 | — | • CB3DR<br>• CB4DR |
| K5 | NOT USED | — | — | — |

## X51R Fuse Block - Instrument Panel Right X1 (Regular Cab)




4994712

### Connector Part Information

Harness Type: Body
OEM Connector: 33371909
Service Connector: 19371181
Description: 38-Way F 1.5, 2.8, 6.3 CTS Series (BU)

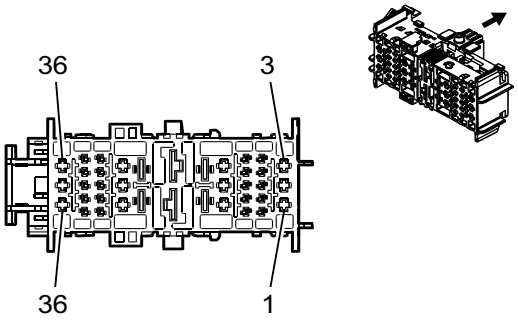
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | 19370816 | J-35616-42 (RD) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IV | 19371175 | J-35616-2A (GY) | J-38125-11A | Not Available | Not Available | Not Available | Not Available |
| V | Not Required | J-35616-42 (RD) | No Tool Required | Not Available | Not Available | Not Available | Not Available |

## X51R Fuse Block - Instrument Panel Right X1 (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | Not Occupied | — | — |
| 3 | 1 | RD/L-GN | 1840 | Battery Positive Voltage | II | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | RD/L-GN | 4440 | Battery Positive Voltage | IV | — |
| 6 | 0.35 | VT/YE | 143 | Accessory Ignition Voltage | I | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.35<br>0.35<br>0.35 | VT<br>VT/YE<br>VT/YE | 4601<br>43<br>43 | Retained Accessory Power Fused Control<br>Accessory Ignition Voltage<br>Accessory Ignition Voltage | IV<br>IV<br>I | K4C<br>LM2<br>LM2/L5P |
| 9 | 0.35 | RD/GN | 3140 | Battery Positive Voltage | I | — |
| 10 | 0.35<br>0.35 | GY/GN<br>GY/VT | 4083<br>755 | RAP Relay 2 Coil Control<br>RAP Relay Coil Control | I<br>I | BTM<br>-BTM |
| 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.5 | VT/GN | 1739 | Run/Crank Ignition 1 Voltage | IV | — |
| 13 | 0.5 | VT/GN | 1739 | Run/Crank Ignition 1 Voltage | IV | — |
| 14 | 0.35 | RD/BN | 1140 | Battery Positive Voltage | II | — |
| 15 | 0.35 | GN/VT | 5199 | Run/Crank Relay Coil Control | II | — |
| 16 | 1.5 | RD/WH | 1040 | Battery Positive Voltage | II | — |
| 17 | 2.5 | RD/YE | 2172 | 12V Regulated Supply Voltage 1 | III | — |
| 18 | 2.5 | RD/YE | 8140 | Battery Positive Voltage | III | — |
| 19 | 10 | RD/GY | 142 | Battery Positive Voltage | V | — |
| 20 | 10 | RD/WH | 342 | Battery Positive Voltage | V | — |
| 21 | 2.5 | RD/GN | 2173 | 12V Regulated Supply Voltage 2 | III | — |
| 22 | 2.5 | RD/WH | 8040 | Battery Positive Voltage | III | — |
| 23 | — | — | — | Not Occupied | — | — |
| 24 | 2.5 | RD/BU | 1842 | Battery Positive Voltage | II | — |
| 25 | 2.5 | RD/WH | 1340 | Battery Positive Voltage | II | — |
| 26 | — | — | — | Not Occupied | — | — |
| 27 | 0.35 | RD/GN | 40 | Battery Positive Voltage | I | — |
| 28 | — | — | — | Not Occupied | — | — |
| 29 | 0.35 | RD/VT | 1940 | Battery Positive Voltage | I | — |
| 30 | 0.75 | RD/YE | 8840 | Battery Positive Voltage | IV | — |
| 31 | — | — | — | Not Occupied | — | — |
| 32 | 0.35 | BN/WH | 1429 | Standing Lamp Relay Control | I | — |
| 33 - 35 | — | — | — | Not Occupied | — | — |
| 36 | 2.5 | RD/YE | 5040 | Battery Positive Voltage | II | — |
| 37 - 38 | — | — | — | Not Occupied | — | — |

## X51R Fuse Block - Instrument Panel Right X1 (Extended Cab/Crew Cab)




4994712

### Connector Part Information

Harness Type: Body
OEM Connector: 33371909
Service Connector: 19371181
Description: 38-Way F 1.5, 2.8, 6.3 CTS Series (BU)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | 19370816 | J-35616-42 (RD) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IV | 19371175 | J-35616-2A (GY) | J-38125-11A | Not Available | Not Available | Not Available | Not Available |
| V | Not Required | J-35616-42 (RD) | No Tool Required | Not Available | Not Available | Not Available | Not Available |

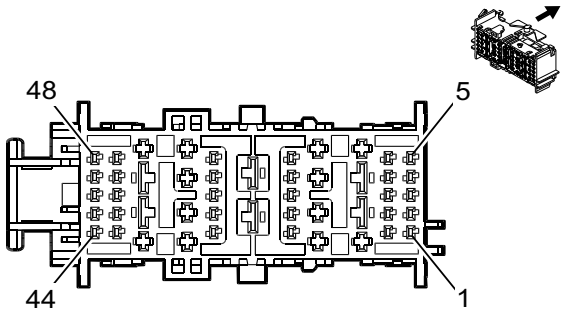
### X51R Fuse Block - Instrument Panel Right X1 (Extended Cab/Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/WH | 4939 | Run/Crank Ignition 1 Voltage | II | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 1 | RD/GN | 1840 | Battery Positive Voltage | II | — |
| 4 | 0.5 | RD/WH | 3440 | Battery Positive Voltage | IV | — |
| 5 | 0.5 | RD/GN | 4440 | Battery Positive Voltage | IV | — |
| | 0.5 | RD/GN | 4440 | Battery Positive Voltage | V | — |
| 6 | 0.35 | VT/YE | 143 | Accessory Ignition Voltage | I | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.35 | VT/YE | 43 | Accessory Ignition Voltage | IV | K4C |
| | 0.35 | VT | 4601 | Retained Accessory Power Fused Control | V | K4C |
| | 0.35 | VT/YE | 43 | Accessory Ignition Voltage | I | -K4C |
| 9 | 0.35 | RD/GN | 3140 | Battery Positive Voltage | I | — |
| 10 | 0.35 | GY/GN | 4083 | RAP Relay 2 Coil Control | I | CREW CAB |
| | 0.35 | GY/VT | 755 | RAP Relay Coil Control | I | EXTENDED CAB |
| 11 | 0.35 | RD/VT | 1640 | Battery Positive Voltage | IV | — |

## X51R Fuse Block - Instrument Panel Right X1 (Extended Cab/Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 12 | 0.5 | VT/GN | 1739 | Run/Crank Ignition 1 Voltage | IV | — |
| 13 | 0.5 | VT/GN | 1739 | Run/Crank Ignition 1 Voltage | IV | — |
| 14 | 0.35 | RD/BN | 1140 | Battery Positive Voltage | II | — |
| 15 | 0.35 | GN/VT | 5199 | Run/Crank Relay Coil Control | II | — |
| 16 | 1.5 | RD/WH | 1040 | Battery Positive Voltage | II | — |
| 17 | 2.5 | RD/YE | 2172 | 12V Regulated Supply Voltage 1 | III | — |
| 18 | 2.5 | RD/YE | 8140 | Battery Positive Voltage | III | — |
| 19 | 10 | RD/GY | 142 | Battery Positive Voltage | V | — |
| 20 | 10 | RD/WH | 342 | Battery Positive Voltage | V | — |
| 21 | 2.5 | RD/GN | 2173 | 12V Regulated Supply Voltage 2 | III | — |
| 22 | 2.5 | RD/WH | 8040 | Battery Positive Voltage | III | — |
| 23 | 2.5 | RD/BU | 1842 | Battery Positive Voltage | II | — |
| 24 | 2.5 | RD/BU | 1842 | Battery Positive Voltage | II | — |
| 25 | 2.5 | RD/WH | 1340 | Battery Positive Voltage | II | — |
| 26 | — | — | — | Not Occupied | — | — |
| 27 | 0.35 | RD/GN | 40 | Battery Positive Voltage | I | — |
| 28 | — | — | — | Not Occupied | — | — |
| 29 | 0.35 | RD/VT | 1940 | Battery Positive Voltage | I | — |
| 30 | 0.75 | RD/YE | 8840 | Battery Positive Voltage | IV | — |
| 31 | — | — | — | Not Occupied | — | — |
| 32 | 0.35 | BN/WH | 1429 | Standing Lamp Relay Control | I | — |
| 33 - 35 | — | — | — | Not Occupied | — | — |
| 36 | 2.5 | RD/YE | 5040 | Battery Positive Voltage | II | — |
| 37 | 2.5 | RD/WH | 1340 | Battery Positive Voltage | II | — |
| 38 | — | — | — | Not Occupied | — | — |

## X51R Fuse Block - Instrument Panel Right X2




4997272

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33371910
Service Connector: 19371180
Description: 48-Way F 1.5, 2.8, 6.3 CTS Series (GN)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13579915 | J-35616-40 (BU) | J-38125-556 | Not Available | Not Available | Not Available | Not Available |
| II | 13579921 | J-35616-40 (BU) | J-38125-556 | 1241406-1 | Lear 17 | F | 1 |
| III | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IV | 19332366 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| V | 19370816 | J-35616-42 (RD) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VI | 19371175 | J-35616-2A (GY) | J-38125-11A | Not Available | Not Available | Not Available | Not Available |

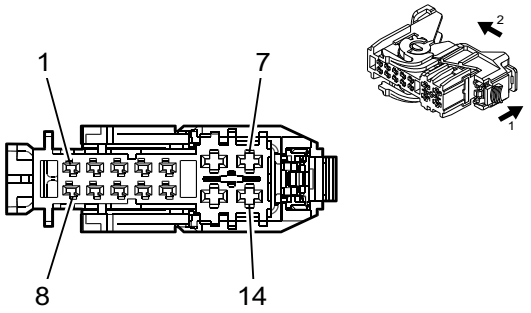
## X51R Fuse Block - Instrument Panel Right X2

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK | 1050 | Ground | VI | — |
| 2 - 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.75 | RD/YE | 2340 | Battery Positive Voltage | VI | — |
| 7 | 0.75 | RD/YE | 2340 | Battery Positive Voltage | VI | — |
| 8 | 0.5 | RD/WH | 3440 | Battery Positive Voltage | VI | — |
| 9 | 0.5 | RD/GY | 4140 | Battery Positive Voltage | III | BTM |
| | 0.35 | RD/GY | 4140 | Battery Positive Voltage | VI | -BTM |
| 10 | 0.35 | BU/VT | 807 | OFF /Accessory Ignition Voltage | III | — |
| 11 | 0.5 | VT/GY | 539 | Run/Crank Ignition 1 Voltage | IV | — |
| 12 - 13 | — | — | — | Not Occupied | — | — |
| 14 | 0.5 | RD/BN | 2940 | Battery Positive Voltage | IV | — |
| 15 | 0.5 | VT/WH | 1139 | Run/Crank Ignition 1 Voltage | IV | — |
| | 0.5 | VT/WH | 1139 | Run/Crank Ignition 1 Voltage | VI | DD8/DRZ |
| 16 | 0.5 | RD/GN | 5140 | Battery Positive Voltage | IV | — |
| 17 | — | — | — | Not Occupied | — | — |
| 18 | 0.5 | RD/GY | 2140 | Battery Positive Voltage | IV | — |
| 19 | 0.35 | VT/BK | 1639 | Run/Crank Ignition 1 Voltage | III | — |
| 20 - 23 | — | — | — | Not Occupied | — | — |
| 24 | 4 | RD/VT | 542 | Battery Positive Voltage | II | — |
| 25 | 2.5 | RD/GN | 3140 | Battery Positive Voltage | I | — |
| 26 | — | — | — | Not Occupied | — | — |
| 27 | 0.5 | RD/WH | 640 | Battery Positive Voltage | VI | — |
| 28 | 0.35 | RD/GN | 5140 | Battery Positive Voltage | III | — |
| 29 | 0.35 | RD/BU | 540 | Battery Positive Voltage | III | — |
| 30 | 0.35 | RD/GY | 4140 | Battery Positive Voltage | III | — |
| 31 | 1.5 | RD/BN | 4240 | Battery Positive Voltage | IV | — |
| 32 | 2.5 | RD/VT | 4040 | Battery Positive Voltage | IV | — |
| 33 | — | — | — | Not Occupied | — | — |
| 34 | 1 | RD/BU | 2540 | Battery Positive Voltage | IV | — |
| 35 - 36 | — | — | — | Not Occupied | — | — |
| 37 | 0.75 | RD/BN | 2240 | Battery Positive Voltage | V | — |

## X51R Fuse Block - Instrument Panel Right X2 (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 38 | — | — | — | Not Occupied | — | — |
| 39 | 0.35 | RD/VT | 3340 | Battery Positive Voltage | III | — |
| 40 | 0.35 | RD/VT | 3340 | Battery Positive Voltage | III | — |
| 41 | 0.35 | RD/YE | 3040 | Battery Positive Voltage | III | — |
| 42 | 0.5 | RD/BU | 3240 | Battery Positive Voltage | VI | — |
| 43 - 44 | — | — | — | Not Occupied | — | — |
| 45 | 0.5 | RD/WH | 2740 | Battery Positive Voltage | VI | — |
| 46 | 0.35 | RD/GY | 2840 | Battery Positive Voltage | III | — |
| 47 | 0.35 | RD/WH | 1340 | Battery Positive Voltage | III | — |
| 48 | — | — | — | Not Occupied | — | — |

## X51R Fuse Block - Instrument Panel Right X3 (Extended Cab/Crew Cab)




4992260

### Connector Part Information

Harness Type: Headliner
OEM Connector: 33297528
Service Connector: 13513732
Description: 14-Way F 150, 280 CTS Series, Sealed (GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19119592 | J-35616-4A (PU) | J-38125-557 | Not Available | Not Available | Not Available | Not Available |
| II | 19332365 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | 19371175 | J-35616-2A (GY) | J-38125-11A | Not Available | Not Available | Not Available | Not Available |

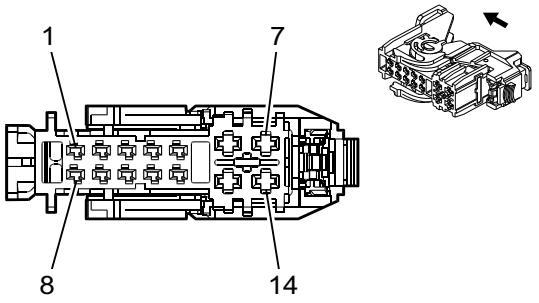
## X51R Fuse Block - Instrument Panel Right X3 (Extended Cab/Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.5 | WH/VT | 1430 | Exterior Courtesy Lamp Control | III | QT5/QT6 |
| | 0.35 | WH/VT | 1430 | Exterior Courtesy Lamp Control | III | -QT5-QT6 |

## X51R Fuse Block - Instrument Panel Right X3 (Extended Cab/Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 10 | 0.35 | VT/YE | 43 | Accessory Ignition Voltage | II | — |
| 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.35 | RD/GN | 3140 | Battery Positive Voltage | II | — |
| 13 | — | — | — | Not Occupied | — | — |
| 14 | 0.35 | VT/WH | 1139 | Run/Crank Ignition 1 Voltage | I | (DD8/DRZ)-UEU |

## X51R Fuse Block - Instrument Panel Right X3 (Regular Cab)




5190115

### Connector Part Information

Harness Type: Headliner
OEM Connector: 33377074
Service Connector: 13525315
Description: 14-Way F 1.5, 2.8 MCP Series (GY)

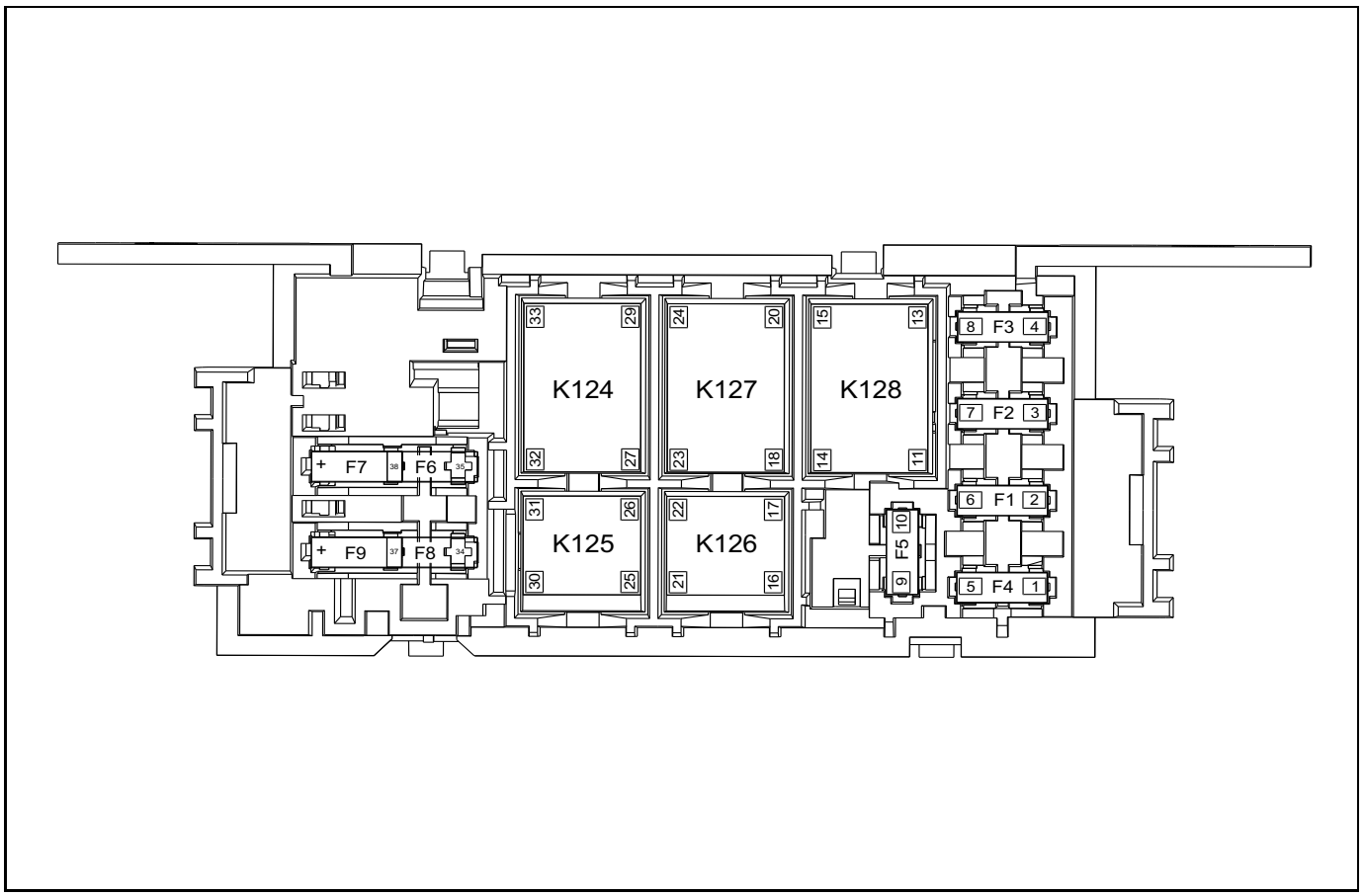
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19119592 | J-35616-4A (PU) | J-38125-557 | Not Available | Not Available | Not Available | Not Available |
| II | 19371175 | J-35616-2A (GY) | J-38125-11A | Not Available | Not Available | Not Available | Not Available |

## X51R Fuse Block - Instrument Panel Right X3 (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.35 | RD/YE | 240 | Battery Positive Voltage | I | — |
| 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.35 | WH/VT | 1430 | Exterior Courtesy Lamp Control | II | QT5 |
| | 0.5 | WH/VT | 1430 | Exterior Courtesy Lamp Control | II | QT6 |
| 10 - 13 | — | — | — | Not Occupied | — | — |
| 14 | 0.35 | VT/WH | 1139 | Run/Crank Ignition 1 Voltage | I | — |

## X51B Fuse Block - Instrument Panel Auxiliary Top View




5245414

## Usage Table

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| **Fuses** | | | | |
| F1 | — | F1DA | 30A | • W25 Blunt Cut - Configurable Provision |
| F2 | — | F2DA | 20A | • W25 Blunt Cut - Configurable Provision |
| F3 | — | F3DA | 20A | • W25 Blunt Cut - Configurable Provision |
| F4 | — | F4DA | 30A | • W25 Blunt Cut - Configurable Provision |
| F5 | — | F5DA | 30A | • W25 Blunt Cut - Configurable Provision |
| F6 | — | F6DA | 5A | • KR161A Configurable Provision Relay 1<br>• KR161B Configurable Provision Relay 2 |
| F7 | — | F7DA | 5A | • KR161A Configurable Provision Relay 1<br>• KR161B Configurable Provision Relay 2 |
| F8 | — | F8DA | 5A | • KR58 Roof Beacon Relay<br>• KR161C Configurable Provision Relay 3<br>• KR161D Configurable Provision Relay 4 |
| F9 | — | F9DA | 5A | • KR58 Roof Beacon Relay<br>• KR161C Configurable Provision Relay 3<br>• KR161D Configurable Provision Relay 4 |
| **Relays** | | | | |
| K128 | — | KR58 Roof Beacon Relay | — | • F5DA |

## Usage Table (cont'd)

| No. | Device Label Name | Device Assigned Name | Rating | Description |
|---|---|---|---|---|
| K124 | — | KR161A Configurable Provision Relay 1 | — | • F1DA |
| K125 | — | KR161B Configurable Provision Relay 2 | — | • F2DA |
| K126 | — | KR161C Configurable Provision Relay 3 | — | • F3DA |
| K127 | — | KR161D Configurable Provision Relay 4 | — | • F4DA |

# X51B Fuse Block - Instrument Panel Auxiliary

—

## Connector Part Information

Harness Type: Auxiliary Instrument Panel
OEM Connector: 33323307
Service Connector: Service by Harness - See Part Catalog
Description: Wire Entry Fuse Block

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-22 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X51B Fuse Block - Instrument Panel Auxiliary

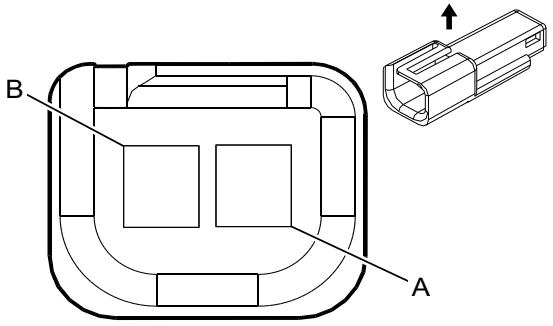
| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | YE/BN | 968 | Auxiliary 4 Control | II | — |
| 2 | 2.5 | BU | 965 | Auxiliary 1 Control | II | — |
| 3 | 2.5 | GY/BK | 966 | Auxiliary 2 Control | II | — |
| 4 | 2.5 | BN/WH | 967 | Auxiliary 3 Control | II | — |
| 5 | 2.5 | OG/WH | 968 | Auxiliary 4 Control | II | — |
| 6 | 2.5 | BU | 965 | Auxiliary 1 Control | II | — |
| 7 | 2.5 | GY/BK | 966 | Auxiliary 2 Control | II | — |
| 8 | 2.5 | BN/WH | 967 | Auxiliary 3 Control | II | — |
| 9 | 2.5 | GN/BU | 5989 | Emergency Lamp Relay Contact Control | II | — |
| 10 | 2.5 | GN/BU | 5989 | Emergency Lamp Relay Contact Control | II | — |
| 11 | 2.5 | GN/BU | 5989 | Emergency Lamp Relay Contact Control | II | — |
| 13 | 0.35 | BU | 903 | Battery Positive Voltage | II | — |
| 14 | 0.5 | WH/BK | 5990 | Emergency Lamp Switch Signal | II | — |
| 15 | 2.5 | RD/BU | 42 | Battery Positive Voltage | II | — |
| 16 | 2.5 | RD/BU | 42 | Battery Positive Voltage | II | — |
| 17 | 0.35 | BK | 963 | Auxiliary 3 Switch Signal | II | — |
| 18 | 2.5 | OG/WH | 968 | Auxiliary 4 Control | II | — |
| 20 | 0.35 | BU | 903 | Battery Positive Voltage | II | — |
| 21 | 0.35 | BU | 903 | Battery Positive Voltage | II | — |
| 22 | 2.5 | BN/WH | 967 | Auxiliary 3 Control | II | — |
| 23 | 0.35 | BK | 964 | Auxiliary 4 Switch Signal | II | — |
| 24 | 2.5 | RD/BU | 42 | Battery Positive Voltage | II | — |
| 25 | 2.5 | RD/BU | 42 | Battery Positive Voltage | II | — |
| 26 | 0.35 | BK | 962 | Auxiliary 2 Switch Signal | II | — |
| 27 | 2.5 | BU | 965 | Auxiliary 1 Control | II | — |
| 29 | 0.35 | RD/BU | 42 | Battery Positive Voltage | II | — |
| 30 | 0.35 | RD/BU | 42 | Battery Positive Voltage | II | — |
| 31 | 2.5 | GY/BK | 966 | Auxiliary 2 Control | II | — |
| 32 | 0.35 | BK | 961 | Auxiliary 1 Switch Signal | II | — |

### X51B Fuse Block - Instrument Panel Auxiliary (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 33 | 2.5 | RD/BU | 42 | Battery Positive Voltage | II | — |
| 34 | 0.5 | VT/GN | 39 | Run/Crank Ignition 1 Voltage | II | — |
| 35 | 0.5 | VT/GN | 39 | Run/Crank Ignition 1 Voltage | II | — |
| 36 | 5 | RD/BU | 42 | Battery Positive Voltage | I | — |
| 37 | 0.35 | BU | 903 | Battery Positive Voltage | II | — |
| 38 | 0.35 | RD/BU | 42 | Battery Positive Voltage | II | — |
| 39 | 2.5 | RD/BU | 42 | Battery Positive Voltage | II | — |
| 40 | 2.5 | RD/BU | 42 | Battery Positive Voltage | II | — |
| 41 | 2.5 | RD/BU | 42 | Battery Positive Voltage | II | — |
| 42 | 2.5 | RD/BU | 42 | Battery Positive Voltage | II | — |
| 43 | 2.5 | RD/BU | 42 | Battery Positive Voltage | II | — |

## Component Connector End Views

### A3L Sunshade - Left




35441

#### Connector Part Information

Harness Type: Headliner
OEM Connector: 12047663
Service Connector: 13584278
Description: 2-Way M 150 Metri-Pack Series (BK)

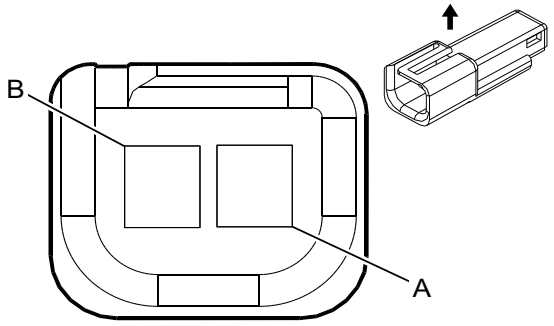
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-3 (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### A3L Sunshade - Left

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 0.5 | WH/BN | 6815 | Inadvertent Power Control | I | — |
| B | 0.5 | BK | 1050 | Ground | I | — |

## A3R Sunshade - Right




35441

### Connector Part Information

Harness Type: Headliner
OEM Connector: 12047663
Service Connector: 13584278
Description: 2-Way M 150 Metri-Pack Series (BK)

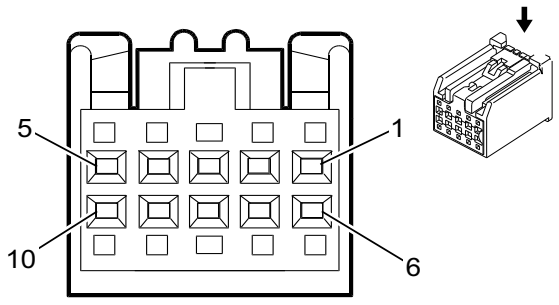
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-3 (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## A3R Sunshade - Right

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 0.5 | WH/BN | 6815 | Inadvertent Power Control | I | — |
| B | 0.5 | BK | 1050 | Ground | I | — |

## A10 Inside Rearview Mirror X1 (DD8/DRZ)




2180211

### Connector Part Information

Harness Type: Headliner
OEM Connector: 13815336
Service Connector: 13577390
Description: 10-Way F 0.64 Kaizen Series (BK)

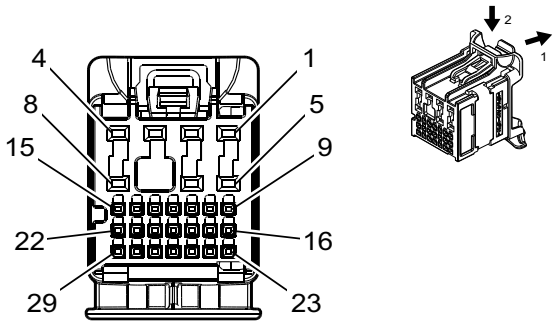
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13575867 | J-35616-64B (LT BU) | J-38125-215A | SAIT-A03T-M064 | Yazaki 14 | P | P |

## A10 Inside Rearview Mirror X1 (DD8/DRZ)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GN/WH | 24 | Backup Lamp Control | I | — |
| 2 | 0.35 | VT/WH | 1139 | Run/Crank Ignition 1 Voltage | I | — |
| 3 - 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.35 | BK/WH | 1851 | Signal Ground | I | — |
| 6 - 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.35 | BK/YE | 1691 | Automatic Day/Night Mirror Low Reference | I | — |
| 9 | 0.35 | YE/WH | 1690 | Automatic Day/Night Mirror Signal | I | — |
| 10 | — | — | — | Not Occupied | — | — |

## A11 Radio X1 (IOR)




4584346

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33303653
Service Connector: 13506123
Description: 29-Way F 0.5 NANO, 1.2 MCON Series Sealed (GN)

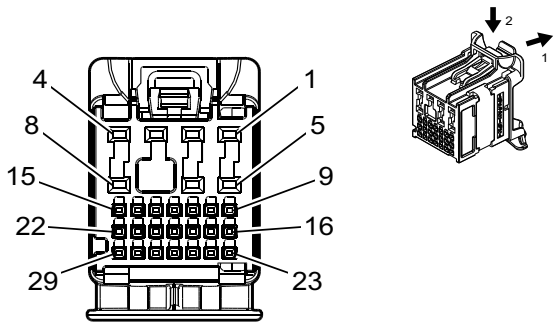
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19370262 | EL-35616-58 (BK) | EL-38125-58 | Not Available | Not Available | Not Available | Not Available |
| II | 19370818 | J-35616-16 (LT GN) | J-38125-559 | Not Available | Not Available | Not Available | Not Available |
| III | 19371240 | J-35616-16 (LT GN) | J-38125-559 | Not Available | Not Available | Not Available | Not Available |

## A11 Radio X1 (IOR)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | RD/YE | 2340 | Battery Positive Voltage | II | — |
| 2 | 0.75 | RD/YE | 2340 | Battery Positive Voltage | II | — |
| 3 | 0.75 | BK/WH | 2751 | Signal Ground | II | — |
| 4 | 0.35 | BU/RD | 2807 | Radio Keypad Voltage Reference | III | — |
| 5 | 0.35 | BK/GN | 2804 | Radio Display Backlight Low Reference | III | — |
| 6 | 0.75 | BK/WH | 2751 | Signal Ground | II | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | GN/BK | 116 | Left Rear Speaker Signal (-) | III | — |
| 9 | 0.35 | GY/BU | 2803 | Radio Display Touch Interrupt Request Signal | I | — |
| 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | GN/WH | 24 | Backup Lamp Control | I | — |
| 12 | 0.35 | GY/GN | 1102 | Low Speed GMLAN Serial Data #2 | I | — |
| 13 - 14 | — | — | — | Not Occupied | — | — |
| 15 | 0.35 | BU/GY | 2808 | Radio Keypad Dimming Control | I | — |
| 16 - 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.35 | GY/VT | 3363 | Navigation Display Dimming Control | I | — |
| 22 | 0.35 | BU/GN | 2813 | Radio Display Backlight Dimming Control | I | — |
| 23 | 0.35 | VT/BU | 6091 | Crankshaft Position Sensor Replicated Signal | I | — |
| 24 | 0.35 | BN/WH | 2809 | Radio Keypad Power Signal | I | — |
| 25 | 0.35 | VT/WH | 2810 | Radio Keypad Button Signal | I | — |
| 26 | 0.35 | BU | 4315 | Radio Volume Up Signal | I | — |
| 27 | 0.35 | GY/BN | 4314 | Radio Volume Down Signal | I | — |
| 28 - 29 | — | — | — | Not Occupied | — | — |

## A11 Radio X1 (IOS/IOT)




4496253

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33303954
Service Connector: 13506123
Description: 29-Way F 0.5 NANO, 1.2 MCON Series Sealed (BK)

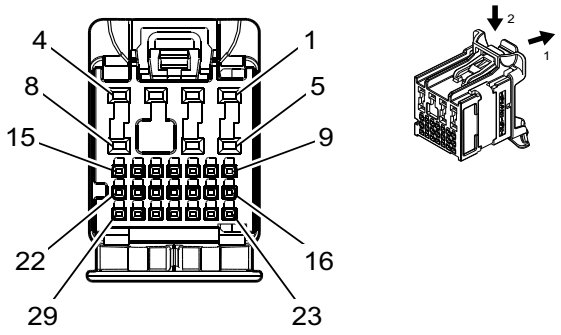
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19370262 | EL-35616-58 (BK) | EL-38125-58 | Not Available | Not Available | Not Available | Not Available |
| II | 19370818 | J-35616-16 (LT GN) | J-38125-559 | Not Available | Not Available | Not Available | Not Available |
| III | 19371240 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IV | 19371240 | J-35616-16 (LT GN) | J-38125-559 | Not Available | Not Available | Not Available | Not Available |

## A11 Radio X1 (IOS/IOT)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | RD/YE | 2340 | Battery Positive Voltage | II | — |
| 2 | 0.75 | RD/YE | 2340 | Battery Positive Voltage | II | — |
| 3 | 1 | BK/WH | 2751 | Signal Ground | III | — |
| 4 - 5 | — | — | — | Not Occupied | — | — |
| 6 | 1 | BK/WH | 2751 | Signal Ground | III | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | GN/BK | 116 | Left Rear Speaker Signal (-) | IV | — |
| 9 | 0.35<br>0.35 | GY/YE<br>BU | 5149<br>655 | Voice Recognition Audio Signal<br>Cellular Telephone Microphone Signal | I<br>I | (IOS/IOT)+UE1<br>(IOS/IOT)-UE1 |
| 10 | 0.35<br>0.35 | BK/GY<br>BK/BN | 5152<br>654 | Voice Recognition Audio Low Reference<br>Cellular Telephone Microphone Low Reference | I<br>I | (IOS/IO )+UE1<br>(IOS/IOT)-UE1 |
| 11 | 0.35 | VT/YE | 7043 | Microphone (+) Signal | I | — |
| 12 | 0.35 | BU/BK | 7044 | Microphone (-) Low Reference | I | — |
| 13 - 29 | — | — | — | Not Occupied | — | — |

## A11 Radio X2 (IOR)




4584398

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33303654
Service Connector: 13506123
Description: 29-Way F 0.5 NANO, 1.2 MCON Series Sealed (GY)

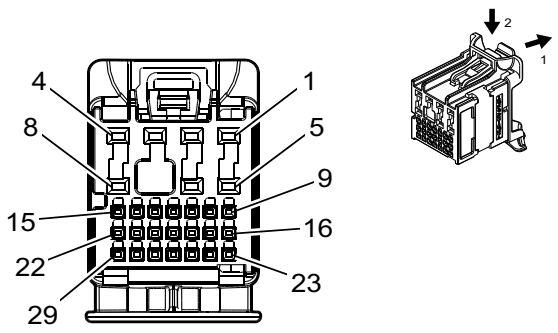
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | EL-35616-58 (BK) | EL-38125-58 | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-559 | Not Available | Not Available | Not Available | Not Available |

## A11 Radio X2 (IOR)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN | 199 | Left Rear Speaker Control (+) | II | — |
| 2 | 0.75 | BU | 201 | Left Front Speaker Control (+) 1 | II | — |
| 3 | 0.75 | YE | 200 | Right Front Speaker Control (+) 1 | II | — |
| 4 | 0.5 | BU/BK | 115 | Right Rear Speaker Signal (-) | II | — |
| 5 | 0.75 | BN/BU | 118 | Left Front Speaker Signal (-) 1 | II | — |
| 6 | 0.75 | YE/BK | 117 | Right Front Speaker Signal (-) 1 | II | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | WH | 46 | Right Rear Speaker Control (+) | II | — |
| 9 | 0.35<br>0.35 | BK/GY<br>BK/BN | 5152<br>654 | Voice Recognition Audio Low Reference<br>Cellular Telephone Microphone Low Reference | I<br>I | IOR+UE1<br>IOR-UE1 |
| 10 | 0.35<br>0.35 | GY/YE<br>BU | 5149<br>655 | Voice Recognition Audio Signal<br>Cellular Telephone Microphone Signal | I<br>I | IOR+UE1<br>IOR-UE1 |
| 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.35 | GY/YE | 6972 | Camera Signal 2 + | I | — |
| 13 | 0.35 | WH/BU | 6973 | Camera Signal 2 | I | — |
| 14 - 29 | — | — | — | Not Occupied | — | — |

## A11 Radio X2 (IOS/IOT)




4578560

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33303967
Service Connector: 84655160
Description: 29-Way F 0.5 NANO, 1.2 MCON Series Sealed (GY)

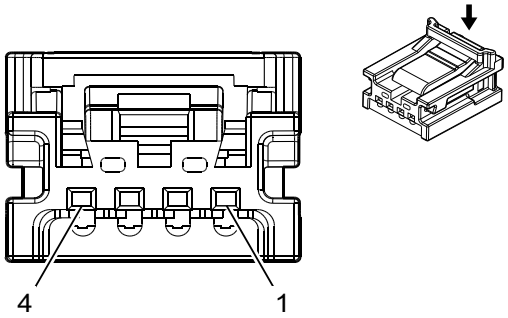
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | EL-35616-58 (BK) | EL-38125-58 | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-559 | Not Available | Not Available | Not Available | Not Available |

## A11 Radio X2 (IOS/IOT)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN | 199 | Left Rear Speaker Control (+) | II | — |
| 2 | 0.75 | BU | 201 | Left Front Speaker Control (+) 1 | II | — |
| 3 | 0.75 | YE/BK | 117 | Right Front Speaker Signal (-) 1 | II | — |
| 4 | 0.5 | BU/BK | 115 | Right Rear Speaker Signal (-) | II | — |
| 5 | 0.75 | BN/BU | 118 | Left Front Speaker Signal (-) 1 | II | — |
| 6 | 0.75 | YE | 200 | Right Front Speaker Control (+) 1 | II | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | WH | 46 | Right Rear Speaker Control (+) | II | — |
| 9 | 0.35 | BU/GN | 1304 | High Speed GMLAN Serial Data (+)9 | I | — |
| 10 | 0.35 | WH/GN | 1305 | High Speed GMLAN Serial Data (-)9 | I | — |
| 11 | 0.35 | BU/GN | 1304 | High Speed GMLAN Serial Data (+)9 | I | — |
| 12 | 0.35 | WH/GN | 1305 | High Speed GMLAN Serial Data (-)9 | I | — |
| 13 | 0.35 | GN/WH | 24 | Backup Lamp Control | I | — |
| 14 - 17 | — | — | — | Not Occupied | — | — |
| 18 | 0.35 | GY/GN | 1102 | Low Speed GMLAN Serial Data #2 | I | — |
| 19 - 27 | — | — | — | Not Occupied | — | — |
| 28 | 0.35 | WH/BU | 5986 | Serial Data Communication Enable | I | — |
| 29 | — | — | — | Not Occupied | — | — |

## A11 Radio X6 (IOR)




4215060

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33228283
Service Connector: 19354840
Description: 4-Way F Mini 50 Series (BK)

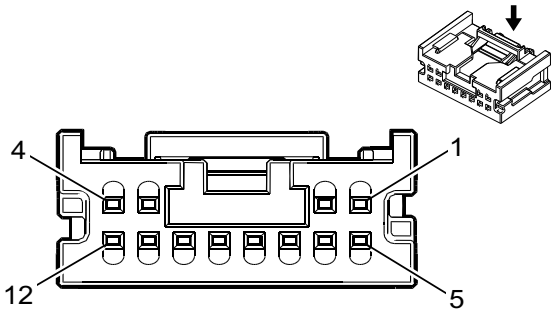
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | EL-35616-58 (BK) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## A11 Radio X6 (IOR)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | — | — | — | Not Occupied | — | — |
| 2 | 0.35 | GY/WH | 7211 | Ethernet Bus 4 (+) | I | — |
| 3 | 0.35 | GY | 7210 | Ethernet Bus 4 (-) | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## A11 Radio X6 (IOS/IOT)




3824362

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33235297
Service Connector: 13507121
Description: 12-Way F Mini 50 Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | EL-35616-58 (BK) | EL-38125-58 | Not Available | Not Available | Not Available | Not Available |

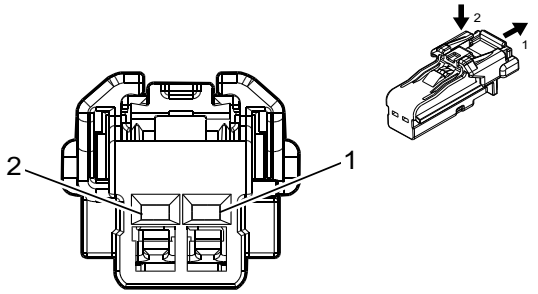
## A11 Radio X6 (IOS/IOT)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | GY/BU | 7217 | Ethernet Bus 7 (+) | I | — |
| 4 | 0.35 | BN/BU | 7216 | Ethernet Bus 7 (-) | I | — |
| 5 - 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.35 | GY/BK | 7215 | Ethernet Bus 6 (+) | I | — |
| 9 | 0.35 | BN/BK | 7214 | Ethernet Bus 6 (-) | I | — |

## A11 Radio X6 (IOS/IOT) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | GY/WH | 7211 | Ethernet Bus 4 (+) | I | — |
| 12 | 0.35 | GY | 7210 | Ethernet Bus 4 (-) | I | — |

## A14D Seat Lumbar Support Pump - Driver (A2X-A45)




4115691

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 6098-8431
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Series (BK)

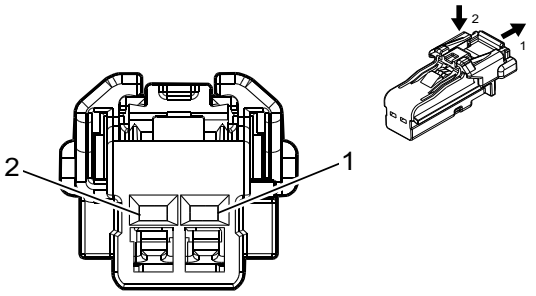
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## A14D Seat Lumbar Support Pump - Driver (A2X-A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BU | 611 | Driver Power Seat Lumbar Motor Forward Control | I | — |
| 2 | 0.75 | VT | 610 | Driver Power Seat Lumbar Motor Rearward Control | I | — |

## A14P Seat Lumbar Support Pump - Passenger (A7K)




4115691

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 6098-8431
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Series (BK)

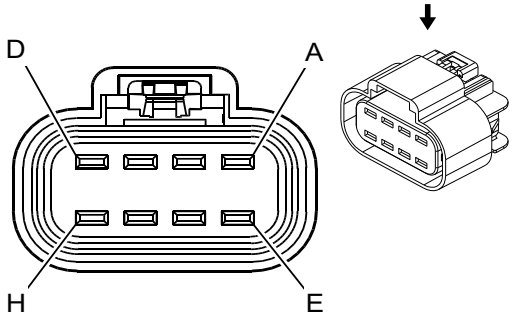
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### A14P Seat Lumbar Support Pump - Passenger (A7K)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BU | 211 | Passenger Power Seat Lumbar Motor Forward Control | I | — |
| 2 | 0.75 | VT | 210 | Passenger Power Seat Lumbar Motor Rearward Control | I | — |

## A16 Transfer Case Motor (NP0/NQH)




646372

### Connector Part Information

Harness Type: Engine
OEM Connector: 13538370

Service Connector: 19369184
Description: 8-Way F 280 GT Series, Sealed (BK)

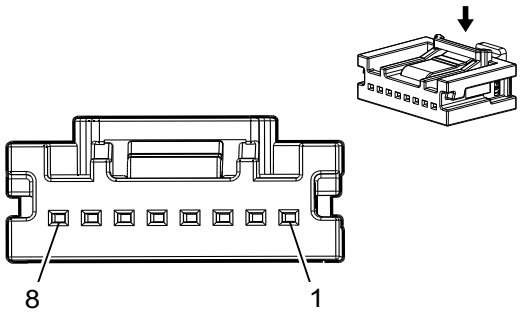
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## A16 Transfer Case Motor (NP0/NQH)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 3 | YE/GY | 1552 | Transfer Case Motor Clockwise Control | I | — |
| B | 0.75 | BK | 952 | — | I | — |
| C | 0.75 | YE/BN | 1569 | Transfer Case Lock Solenoid Control | I | — |
| D | 3 | YE/VT | 1553 | Transfer Case Motor Counter Clockwise Control | I | — |
| E | 0.5 | YE | 7474 | Incremental Encoder Direction Signal | I | — |
| F | 0.5 | BU/GY | 7473 | Incremental Encoder Impulse Signal | I | — |
| G | 0.5 | WH/GN | 7475 | Incremental Encoder Sensor 8V Reference | I | — |
| H | 0.5 | VT | 7476 | Incremental Encoder Sensor Low Reference | I | — |

## A22 Radio Controls (IOR)




4017639

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33227522
Service Connector: 19354223
Description: 8-Way F Mini 50 Series (BK)

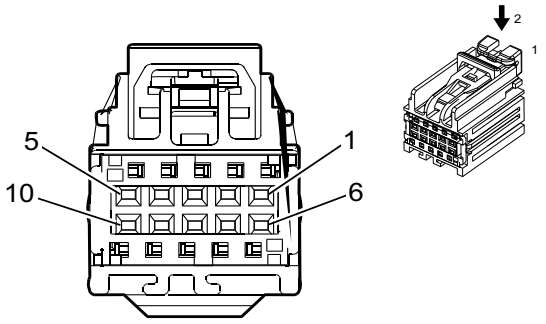
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | EL-35616-58 (BK) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## A22 Radio Controls (IOR)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BU/RD | 2807 | Radio Keypad Voltage Reference | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | BN/WH | 2809 | Radio Keypad Power Signal | I | — |
| 4 | 0.35 | BK/YE | 2806 | Radio Keypad Low Reference | I | — |
| 5 | 0.35 | BU/GY | 2808 | Radio Keypad Dimming Control | I | — |
| 6 | 0.35 | VT/WH | 2810 | Radio Keypad Button Signal | I | — |
| 7 | 0.35 | BU | 4315 | Radio Volume Up Signal | I | — |
| 8 | 0.35 | GY/BN | 4314 | Radio Volume Down Signal | I | — |

## A23D Door Latch Assembly - Driver (AU3)




4622549

### Connector Part Information

Harness Type: Driver Door
OEM Connector: 33320811
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 YESC Kaizen Series (GN)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

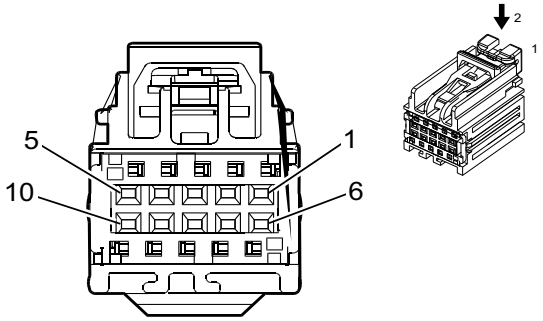
## A23D Door Latch Assembly - Driver (AU3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5<br>0.5 | GY<br>PK | 745<br>745 | Left Front Door Ajar Switch Signal<br>Left Front Door Ajar Switch Signal | I<br>I | A6Q<br>AXG |
| 2 | 0.5 | WH/YE | 3574 | Driver Door Open Switch Signal | I | — |
| 3 | 0.75 | BK | 1150 | Ground | I | — |
| 4 | 0.35 | WH/VT | 3270 | Driver Door Lock Motor Status Signal | I | — |
| 5 | 0.5 | BU/VT | 1124 | Door Lock Key Switch Unlock Signal | I | — |
| 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.75 | GY | 5911 | Door Lock Actuator Lock Control 2 | I | — |

## A23D Door Latch Assembly - Driver (AU3) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 8 | 0.75 | BN/YE | 294 | Door Lock Actuator Unlock Control | I | — |
| 9 - 10 | — | — | — | Not Occupied | — | — |

## A23LR Door Latch Assembly - Left Rear (AU3+(Extended Cab/Crew Cab))




4622549

### Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 33320811
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 YESC Kaizen Series (GN)

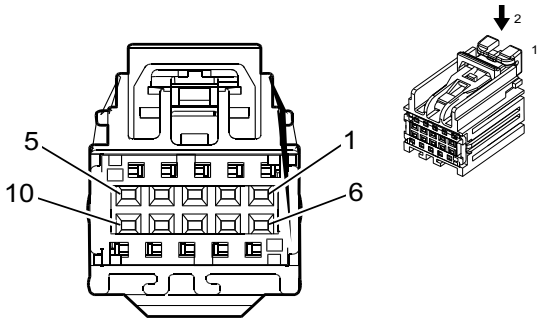
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## A23LR Door Latch Assembly - Left Rear (AU3+(Extended Cab/Crew Cab))

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5<br>0.5 | GY<br>GN | 747<br>747 | Left Rear Door Ajar Switch Signal<br>Left Rear Door Ajar Switch Signal | I<br>I | AEQ +CREW CAB<br>EXTENDED CAB |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.75 | BK | 1150 | Ground | I | — |
| 4 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.75 | GY | 295 | Door Lock Actuator Lock Control | I | — |
| 8 | 0.75 | BN/YE | 294 | Door Lock Actuator Unlock Control | I | — |
| 9 - 10 | — | — | — | Not Occupied | — | — |

## A23P Door Latch Assembly - Passenger (AU3)




4622549

### Connector Part Information

Harness Type: Passenger Door
OEM Connector: 33320811
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 YESC Kaizen Series (GN)

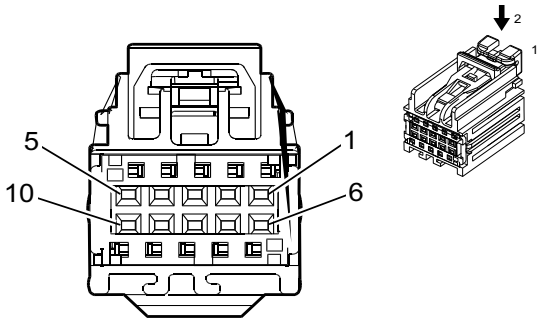
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### A23P Door Latch Assembly - Passenger (AU3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.75 | BK | 1250 | Ground | I | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | GY | 746 | Right Front Door Ajar Switch Signal | I | — |
| 6 - 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.75 | BN/YE | 294 | Door Lock Actuator Unlock Control | I | — |
| 9 | 0.75 | GY | 295 | Door Lock Actuator Lock Control | I | — |
| 10 | — | — | — | Not Occupied | — | — |

## A23RR Door Latch Assembly - Right Rear (AU3+(Extended Cab/Crew Cab))




4622549

### Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 33320811
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 YESC Kaizen Series (GN)

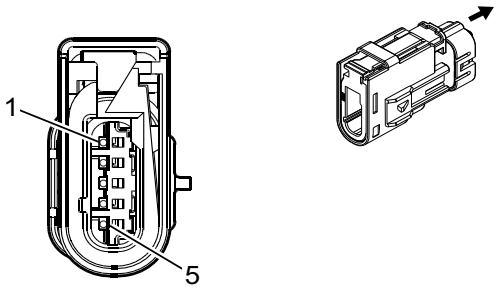
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## A23RR Door Latch Assembly - Right Rear (AU3+(Extended Cab/Crew Cab))

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.75 | BK | 1250 | Ground | I | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | GN | 748 | Right Rear Door Ajar Switch Signal | I | — |
| 6 - 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.75 | BN/YE | 294 | Door Lock Actuator Unlock Control | I | — |
| 9 | 0.75 | GY | 295 | Door Lock Actuator Lock Control | I | — |
| 10 | — | — | — | Not Occupied | — | — |

## A24D Door Handle Assembly - Driver Exterior (BTM)




4808321

### Connector Part Information

Harness Type: Driver Door
OEM Connector: 35028909
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed (NA)

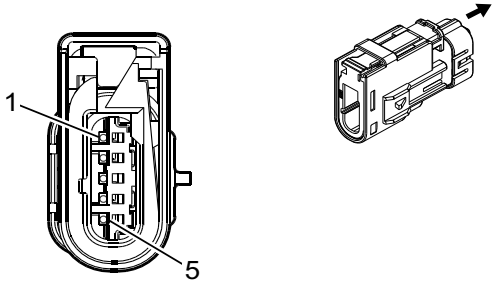
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### A24D Door Handle Assembly - Driver Exterior (BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/WH | 3570 | Driver Door Handle Switch Signal | I | — |
| 2 | 0.5 | VT | 3560 | Passive Entry Driver Door Antenna Signal Hi | I | — |
| 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.5 | VT/GY | 3561 | Passive Entry Driver Door Antenna Signal Lo | I | — |
| 5 | 0.75 | BK | 1150 | Ground | I | — |

## A24LR Door Handle Assembly - Left Rear Exterior (BTM+(Extended Cab/Crew Cab))




4808325

### Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 35028907
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed (BK)

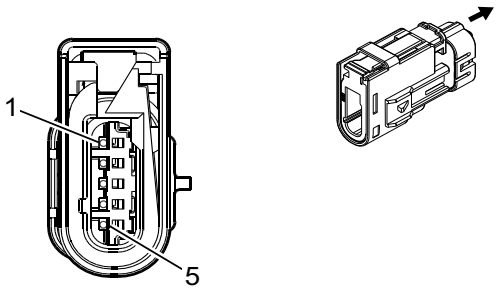
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### A24LR Door Handle Assembly - Left Rear Exterior (BTM+(Extended Cab/Crew Cab))

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | PK | 6157 | Left Rear Door Handle Switch Signal | I | — |
| 2 - 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.75 | BK | 1150 | Ground | I | — |

### A24P Door Handle Assembly - Passenger Exterior (BTM)




4808321

### Connector Part Information

Harness Type: Passenger Door
OEM Connector: 35028909
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed (NA)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

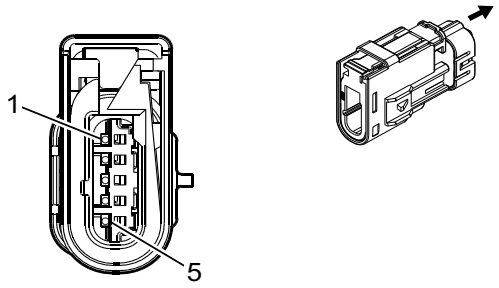
### A24P Door Handle Assembly - Passenger Exterior (BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/WH | 3571 | Passenger Door Handle Switch Signal | I | — |

## A24P Door Handle Assembly - Passenger Exterior (BTM) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 2 | 0.5 | GN/YE | 3562 | Passive Entry Passenger Door Antenna Signal Hi | I | — |
| 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.5 | GN/BK | 3563 | Passive Entry Passenger Door Antenna Signal Lo | I | — |
| 5 | 0.75 | BK | 1250 | Ground | I | — |

## A24RR Door Handle Assembly - Right Rear Exterior (BTM+(Extended Cab/Crew Cab))




4808325

### Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 35028907
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed (BK)

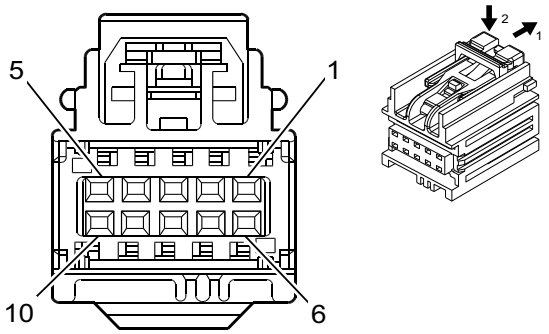
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## A24RR Door Handle Assembly - Right Rear Exterior (BTM+(Extended Cab/Crew Cab))

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/GY | 6158 | Right Rear Door Handle Switch Signal | I | — |
| 2 - 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.75 | BK | 1250 | Ground | I | — |

## A26 HVAC Controls




4822741

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33353271
Service Connector: 13509648
Description: 10-Way F 0.64 YESC Kaizen Series (BK)

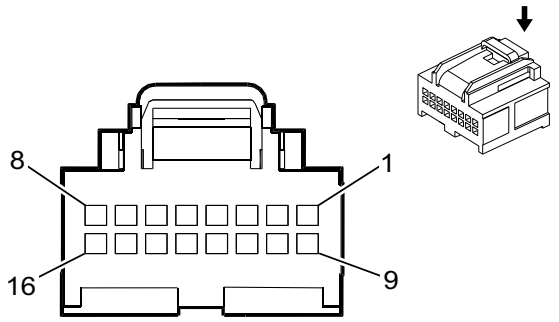
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-64B (LT BU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-64B (LT BU) | J-38125-215A | SAIT-A03T-M064 | Yazaki 14 | P | P |

## A26 HVAC Controls

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | RD/WH | 1340 | Battery Positive Voltage | II | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | II | — |
| 4 - 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.35 | GN/YE | 7531 | Local Interconnect Network Serial Data Bus 9 | I | — |
| 10 | 0.5 | BK/WH | 1851 | Signal Ground | II | — |

## A98 Front Overhead Console Assembly X1




4223153

### Connector Part Information

Harness Type: Headliner
OEM Connector: 33104225
Service Connector: 13519739
Description: 16-Way F 0.64 OCS Series (GY)

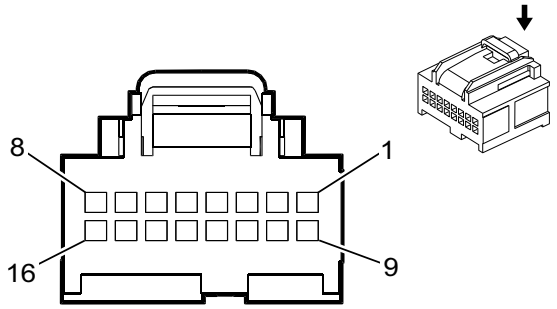
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-64B (LT BU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## A98 Front Overhead Console Assembly X1

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GY | 157 | Interior Lamp Control | I | — |
| 2 | 0.5 | WH/BN | 6815 | Inadvertent Power Control | I | — |
| 3 | 0.35 | WH | 6816 | Indicator Dimming Control | I | — |
| 4 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 5 | 0.35 | BK | 1050 | Ground | I | — |
| 6 | 0.35 | BU | 2307 | Passenger Air Bag On Indicator Control | I | — |
| 7 | 0.35 | GN | 2308 | Passenger Air Bag Off Indicator Control | I | — |
| 8 | 0.35 | VT/WH | 1139 | Run/Crank Ignition 1 Voltage | I | — |
| 9 | 0.35 | VT/WH | 5234 | Passenger Seat Belt Indicator Control | I | — |
| 10 | 0.35 | GY | 156 | Courtesy Lamp Switch Signal | I | — |
| 11 | 0.35 | GY/GN | 328 | Interior Lamp Defeat Switch Signal | I | — |
| 12 | 0.35 | BK/WH | 1851 | Signal Ground | I | — |
| 13 | 0.35 | BU/GY | 4672 | Dome Lamp Off Indicator Control | I | — |
| 14 | 0.35 | VT/GN | 7558 | LED Ambient Lighting Control 2 | I | — |
| 15 - 16 | — | — | — | Not Occupied | — | — |

## A98 Front Overhead Console Assembly X2




3240102

### Connector Part Information

Harness Type: Headliner
OEM Connector: 33104224
Service Connector: 13519738
Description: 16-Way F 0.64 OCS Series (BK)

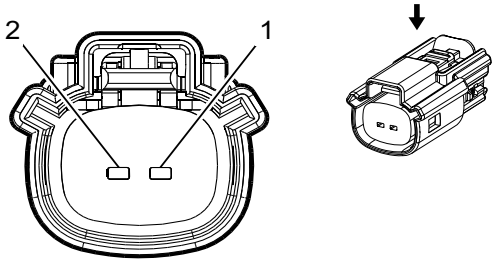
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-64B (LT BU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## A98 Front Overhead Console Assembly X2

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE/VT | 2516 | Keypad Green LED Control | I | — |
| 2 | 0.35 | BN/WH | 2517 | Keypad Red LED Control | I | — |
| 3 | 0.35 | GN/WH | 2514 | Keypad Signal | I | — |
| 4 | 0.35 | GN/BK | 2515 | Keypad Control | I | — |
| 5 | 0.35 | YE/VT | 6191 | Power Sliding Window Switch Open Signal | I | — |
| 6 | 0.35 | WH | 6192 | Power Sliding Window Switch Close Signal | I | — |
| 7 | 0.35 | VT/YE | 43 | Accessory Ignition Voltage | I | — |
| 8 | 0.35 | RD/YE | 240 | Battery Positive Voltage | I | — |
| 9 | 0.35 | BU/VT | 5027 | Sunroof Switch Data 1 Signal | I | — |
| 10 | 0.35 | WH/GN | 3031 | Sunroof Vent Switch Signal | I | — |
| 11 | 0.35 | BK/GY | 128 | Sunroof Switch Low Reference | I | — |
| 12 - 16 | — | — | — | Not Occupied | — | — |

## A99L Pickup Box Endgate Latch - Left (QK2)




2474713

### Connector Part Information

Harness Type: Endgate
OEM Connector: 13782480
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series, Sealed (BK)

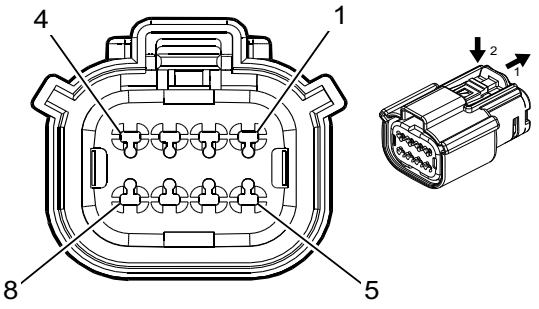
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## A99L Pickup Box Endgate Latch - Left (QK2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN | 1299 | Major Endgate Motor Supply Voltage | I | — |
| 2 | 0.5 | YE/BK | 7730 | Major Endgate Motor Return | I | — |

## A99L Pickup Box Endgate Latch - Left (QT6)




4846407

### Connector Part Information

Harness Type: Endgate
OEM Connector: 35037827
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 150 MX Series, Sealed (BK)

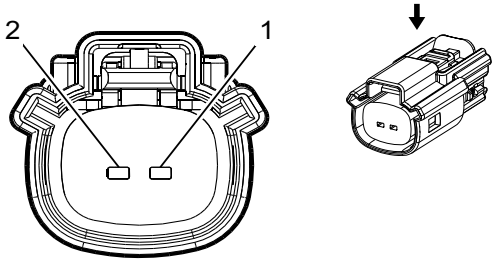
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## A99L Pickup Box Endgate Latch - Left (QT6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | — | — | — | Not Occupied | — | — |
| 2 | 0.5 | GY/VT | 4678 | Rear Closure Ajar Switch Signal 1 | I | — |
| 3 | 0.35 | BU/BK | 4665 | Rear Closure Ajar Switch Signal 2 | I | — |
| 4 | 0.5 | BK/VT | 4656 | Rear Closure Object Sensor Low Reference | I | — |
| 5 | 1 | BN | 4681 | Rear Closure Cinch Latch Motor Open Control | I | — |
| 6 | 1 | BU/GY | 4682 | Rear Closure Cinch Latch Motor Close Control | I | — |
| 7 | 0.35 | GN/BK | 4659 | Rear Closure Open | I | — |
| 8 | 0.5 | PK/BK | 4668 | Rear Closure Ajar Switch Signal 3 | I | — |

## A99R Pickup Box Endgate Latch - Right (QK2)




2474713

### Connector Part Information

Harness Type: Endgate
OEM Connector: 13782480
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series, Sealed (BK)

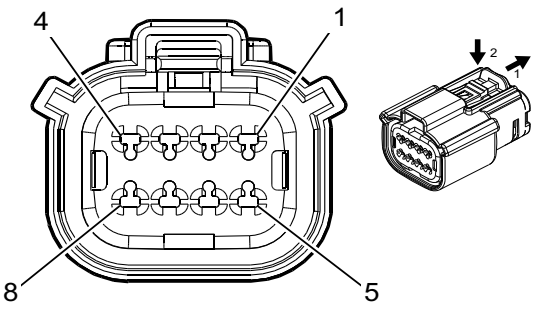
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## A99R Pickup Box Endgate Latch - Right (QK2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN | 1299 | Major Endgate Motor Supply Voltage | I | — |
| 2 | 0.5 | YE/BK | 7730 | Major Endgate Motor Return | I | — |

## A99R Pickup Box Endgate Latch - Right (QT6)




4846407

### Connector Part Information

Harness Type: Endgate
OEM Connector: 35037827
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 150 MX Series, Sealed (BK)

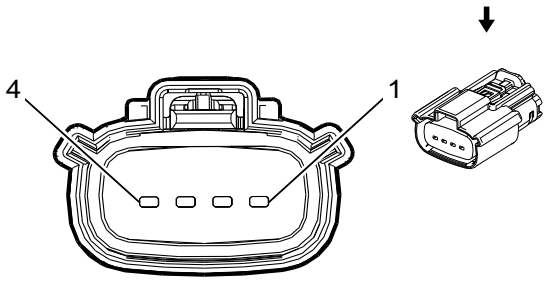
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### A99R Pickup Box Endgate Latch - Right (QT6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/BK | 1575 | Rear Closure Sensor Low Reference 2 | I | — |
| 2 | 0.35 | YE/RD | 7734 | Rear Closure Latch 2 Rachet Status | I | — |
| 3 | 0.5 | VT | 7736 | Rear Closure Latch 2 Unlatch Status | I | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | WH | 7735 | Rear Closure Latch 2 Pawl Status | I | — |
| 6 | 0.35 | OG | 7733 | Rear Closure Latch 2 Sector Status | I | — |
| 7 | 1 | PK | 1499 | Rear Closure Cinch Latch Motor 2 Cinch Control | I | — |
| 8 | 1 | BU | 1509 | Rear Closure Cinch Latch Motor 2 Release Control | I | — |

## A100L Pickup Box Auxiliary Endgate Latch - Left (QK2/QT5)




2474747

### Connector Part Information

Harness Type: Endgate
OEM Connector: 13815807
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 150 MX Series, Sealed (BK)

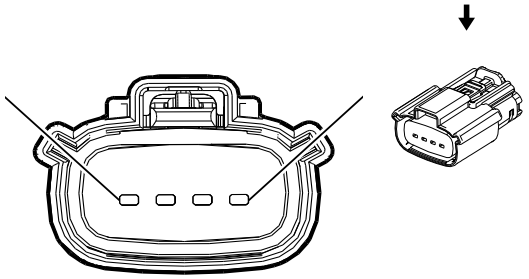
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### A100L Pickup Box Auxiliary Endgate Latch - Left (QK2/QT5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/BU | 7295 | Left Minor Endgate Ajar Signal | I | — |
| 2 | 0.75 | BK | 1450 | Ground | I | — |
| 3 | 0.5 | BN/BK | 7726 | Minor Endgate Motor Return | I | — |
| 4 | 0.5 | VT | 7725 | Minor Endgate Motor Supply Voltage | I | — |

## A100R Pickup Box Auxiliary Endgate Latch - Right (QK2/QT5)



2474747

### Connector Part Information

Harness Type: Endgate
OEM Connector: 13815807
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 150 MX Series, Sealed (BK)

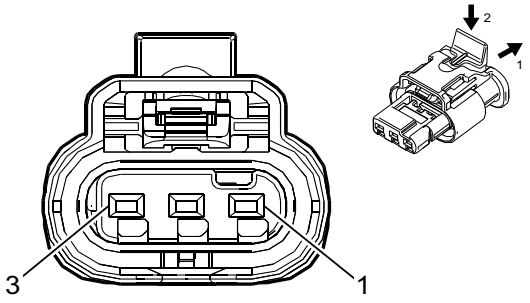
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## A100R Pickup Box Auxiliary Endgate Latch - Right (QK2/QT5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/BK | 7726 | Minor Endgate Motor Return | I | — |
| 2 | 0.5 | VT | 7725 | Minor Endgate Motor Supply Voltage | I | — |
| 3 | 0.35 | WH/BN | 7296 | Right Minor Endgate Ajar Signal | I | — |
| 4 | 0.75 | BK | 1450 | Ground | I | — |

## B1 A/C Refrigerant Pressure Sensor




4249125

### Connector Part Information

Harness Type: Engine
OEM Connector: 33176362
Service Connector: 19366844
Description: 3-Way F 1.2 MCP Series, Sealed (BN)

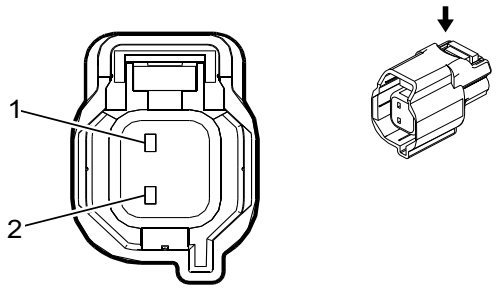
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B1 A/C Refrigerant Pressure Sensor

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 2 | 0.5 | GN | 380 | A/C Refrigerant Pressure Sensor Signal | I | — |
| 3 | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | I | — |

## B5LF Wheel Speed Sensor - Left Front




2900396

### Connector Part Information

Harness Type: Chassis
OEM Connector: 15503634
Service Connector: 19366856
Description: 2-Way F 1.5 Series (L-GY)

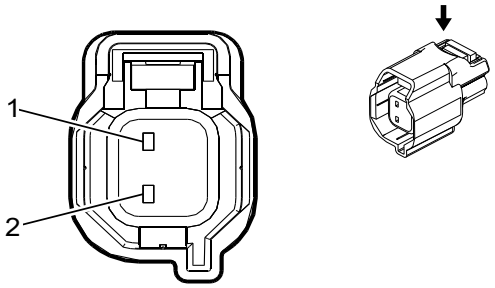
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B5LF Wheel Speed Sensor - Left Front

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/WH | 7064 | Wheel Speed Sensor Control Left Front | I | — |
| 2 | 0.5 | GY | 830 | Wheel Speed Sensor Signal Left Front | I | — |

## B5LR Wheel Speed Sensor - Left Rear




2900396

### Connector Part Information

Harness Type: Chassis
OEM Connector: 15503634
Service Connector: 19366856
Description: 2-Way F 1.5 Series (L-GY)

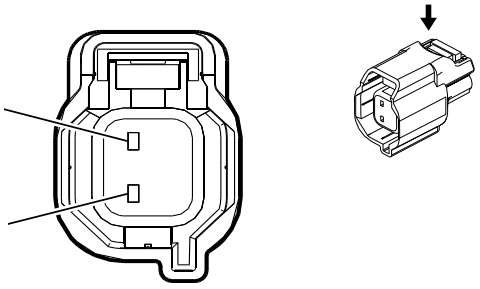
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B5LR Wheel Speed Sensor - Left Rear

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/BK | 7127 | Wheel Speed Sensor Control Left Rear | I | — |
| 2 | 0.5 | BU | 884 | Wheel Speed Sensor Signal Left Rear | I | — |

## B5RF Wheel Speed Sensor - Right Front



2900396

### Connector Part Information

Harness Type: Chassis
OEM Connector: 15503634
Service Connector: 19366856
Description: 2-Way F 1.5 Series (L-GY)

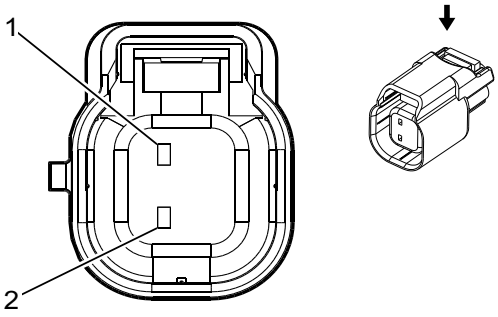
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B5RF Wheel Speed Sensor - Right Front

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/BN | 7065 | Wheel Speed Sensor Control Right Front | I | — |
| 2 | 0.5 | YE | 872 | Wheel Speed Sensor Signal Right Front | I | — |

## B5RR Wheel Speed Sensor - Right Rear




4115616

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33122852
Service Connector: 19366860
Description: 2-Way F 1.5 Series, Sealed (BK)

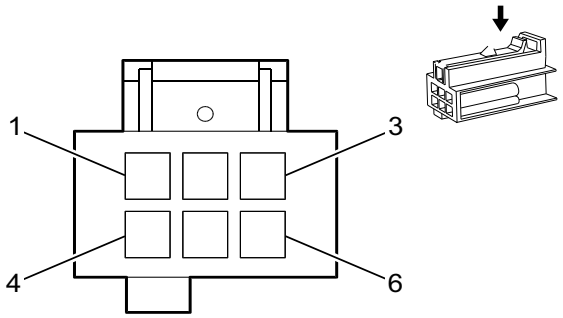
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B5RR Wheel Speed Sensor - Right Rear

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/YE | 7128 | Wheel Speed Sensor Control Right Rear | I | — |
| 2 | 0.5 | VT | 882 | Wheel Speed Sensor Signal Right Rear | I | — |

## B10B Ambient Light/Sunload Sensor




2282896

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15338980
Service Connector: 19333315
Description: 6-Way F 0.64 Micro-Quadlock Series (BK)

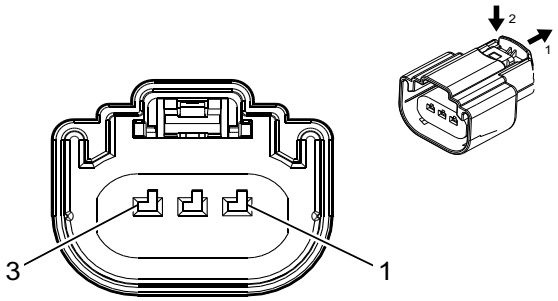
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B10B Ambient Light/Sunload Sensor

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GY | 590 | Solar Sensor Driver Signal | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | WH/BU | 278 | Ambient Light Sensor Signal | I | — |
| 4 | 0.35 | BU/WH | 734 | Inside Air Temperature Sensor Signal | I | — |
| 5 | 0.35 | GY | 728 | Security Indicator Control | I | — |
| 6 | 0.35 | BK/GN | 7567 | Solar Sensor Low Reference | I | — |

## B18 Battery Current Sensor (-KL9)




4569745

### Connector Part Information

Harness Type: Body
OEM Connector: 33343869
Service Connector: 19179750
Description: 3-Way F 150 MX Series, Sealed (BK)

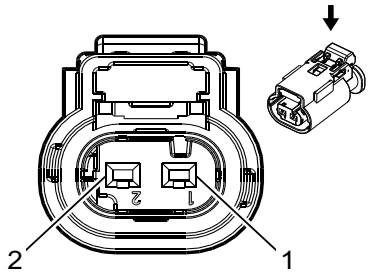
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B18 Battery Current Sensor (-KL9)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BU/VT | 5076 | Current Sensor Control | I | — |
| 2 | 0.35 | BK/VT | 5077 | Current Sensor Low Reference | I | — |
| 3 | 0.35 | WH/YE | 5075 | Current Sensor Signal | I | — |

## B20 Brake Fluid Level Switch




2717066

### Connector Part Information

Harness Type: Body
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

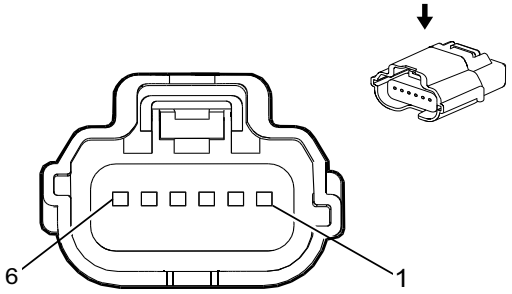
### B20 Brake Fluid Level Switch

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/GY | 333 | Brake Fluid Level Sensor Signal | I | — |

## B20 Brake Fluid Level Switch (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 2 | 0.5 | BK | 150 | Ground | I | — |
| | 0.75 | BK | 150 | Ground | I | — |
| | 0.5 | BK | 150 | Ground | I | J61 |

## B22 Brake Pedal Position Sensor (Crew Cab)




3270302

### Connector Part Information

Harness Type: Body
OEM Connector: 13893502
Service Connector: 84683650
Description: 6-Way F 64 Series, Sealed (NA)

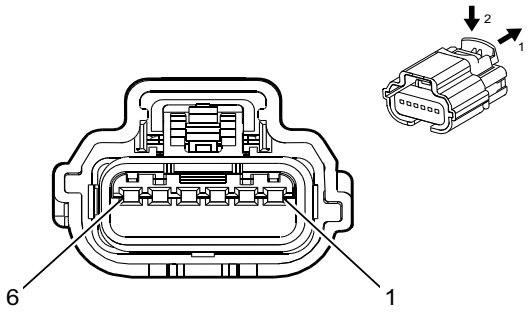
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B22 Brake Pedal Position Sensor (Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BK/BN | 5360 | Brake Apply Sensor Low Reference | I | — |
| 2 | 0.35 | WH | 5359 | Brake Apply Sensor Control | I | — |
| 3 | 0.35 | BU/YE | 5361 | Brake Apply Sensor Signal | I | — |
| 4 | 0.35 | WH/GN | 5380 | Brake Position Sensor Signal | I | — |
| 5 | 0.35 | BK/YE | 5382 | Brake Position Sensor Low Reference | I | — |
| 6 | 0.35 | WH/RD | 5381 | Brake Position Sensor 5V Reference | I | — |

## B22 Brake Pedal Position Sensor (Extended Cab)




4773396

### Connector Part Information

Harness Type: Body
OEM Connector: 35199160
Service Connector: 84683650
Description: 6-Way F 64 Series, Sealed (NA)

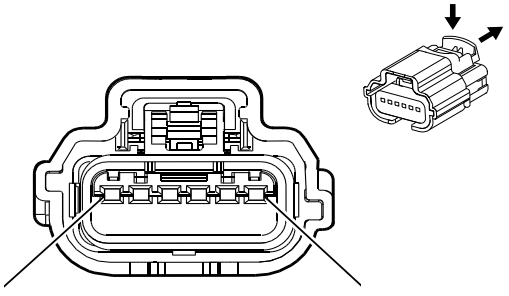
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B22 Brake Pedal Position Sensor (Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BK/BN | 5360 | Brake Apply Sensor Low Reference | I | — |
| 2 | 0.35 | WH | 5359 | Brake Apply Sensor Control | I | — |
| 3 | 0.35 | BU/YE | 5361 | Brake Apply Sensor Signal | I | — |
| 4 | 0.35 | WH/GN | 5380 | Brake Position Sensor Signal | I | — |
| 5 | 0.35 | BK/YE | 5382 | Brake Position Sensor Low Reference | I | — |
| 6 | 0.35 | WH/RD | 5381 | Brake Position Sensor 5V Reference | I | — |

## B22 Brake Pedal Position Sensor (Regular Cab)



4773396

### Connector Part Information

Harness Type: Body
OEM Connector: 35199160
Service Connector: 84683650
Description: 6-Way F 64 Series, Sealed (NA)

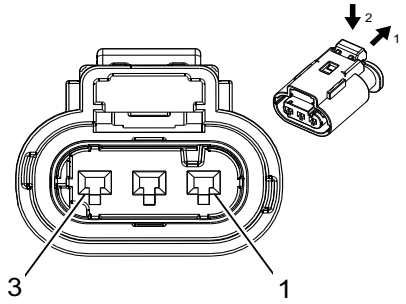
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B22 Brake Pedal Position Sensor (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BK/BN | 5360 | Brake Apply Sensor Low Reference | I | — |
| 2 | 0.35 | WH | 5359 | Brake Apply Sensor Control | I | — |
| 3 | 0.35 | BU/YE | 5361 | Brake Apply Sensor Signal | I | — |
| 4 | 0.35 | WH/GN | 5380 | Brake Position Sensor Signal | I | — |
| 5 | 0.35 | BK/YE | 5382 | Brake Position Sensor Low Reference | I | — |
| 6 | 0.35 | WH/RD | 5381 | Brake Position Sensor 5V Reference | I | — |

## B23 Camshaft Position Sensor (L82/L84/LV3)




2717069

### Connector Part Information

Harness Type: Camshaft Position Sensor Jumper
OEM Connector: 13763990
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

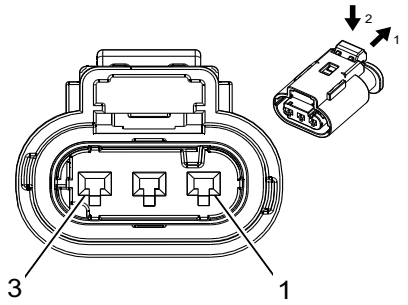
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B23 Camshaft Position Sensor (L82/L84/LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/BU | 5300 | Camshaft Position Intake Sensor Control 1 | I | — |
| 2 | 0.5 | BK/GN | 5301 | Camshaft Position Intake Sensor Low Reference 1 | I | — |
| 3 | 0.5 | YE/VT | 5275 | Camshaft Position Intake Sensor 1 | I | — |

## B23 Camshaft Position Sensor (L87)




2717069

### Connector Part Information

Harness Type: Camshaft Position Sensor Jumper
OEM Connector: 13763990
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

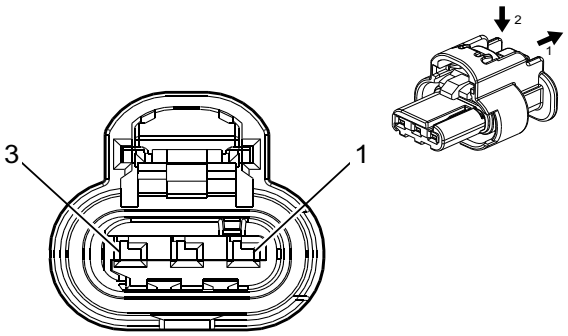
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B23 Camshaft Position Sensor (L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/BU | 5300 | Camshaft Position Intake Sensor Control 1 | I | — |
| 2 | 0.5 | BK/GN | 5301 | Camshaft Position Intake Sensor Low Reference 1 | I | — |
| 3 | 0.5 | YE/VT | 5275 | Camshaft Position Intake Sensor 1 | I | — |

## B23 Camshaft Position Sensor (LM2)




4581126

### Connector Part Information

Harness Type: Engine
OEM Connector: 33358800
Service Connector: 19366844
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

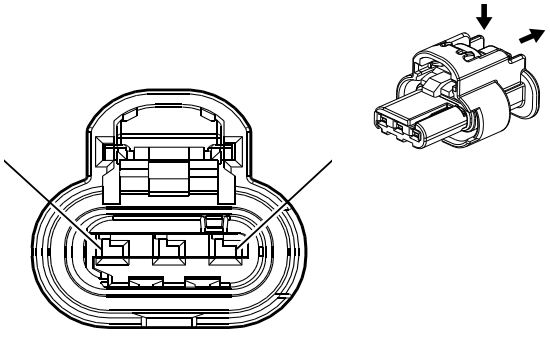
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B23 Camshaft Position Sensor (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/YE | 5297 | Camshaft Position Exhaust Sensor Control 1 | I | — |
| 2 | 0.5 | BK/GY | 5296 | Camshaft Position Exhaust Sensor Low Reference 1 | I | — |
| 3 | 0.5 | VT/BK | 5273 | Camshaft Position Exhaust Sensor 1 | I | — |

## B23E Camshaft Position Sensor - Exhaust (L3B)



4581126

### Connector Part Information

Harness Type: Engine
OEM Connector: 33358800

Service Connector: 19366844
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

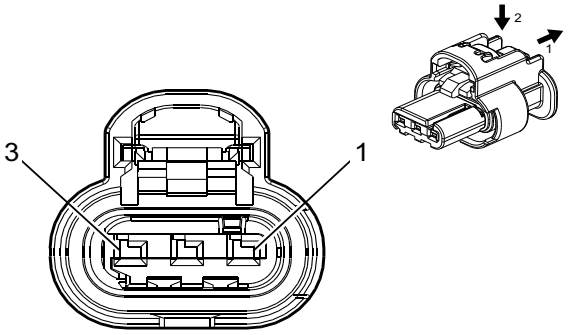
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B23E Camshaft Position Sensor - Exhaust (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/YE | 5297 | Camshaft Position Exhaust Sensor Control 1 | I | — |
| 2 | 0.5 | BK/GY | 5296 | Camshaft Position Exhaust Sensor Low Reference 1 | I | — |
| 3 | 0.5 | VT/BK | 5273 | Camshaft Position Exhaust Sensor 1 | I | — |

### B23F Camshaft Position Sensor - Intake (L3B)




4581126

### Connector Part Information

Harness Type: Engine
OEM Connector: 33358800
Service Connector: 19366844
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

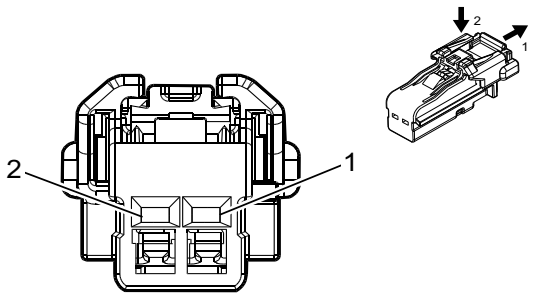
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B23F Camshaft Position Sensor - Intake (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/BU | 5300 | Camshaft Position Intake Sensor Control 1 | I | — |
| 2 | 0.5 | BK/GN | 5301 | Camshaft Position Intake Sensor Low Reference 1 | I | — |
| 3 | 0.5 | YE/VT | 5275 | Camshaft Position Intake Sensor 1 | I | — |

## B24LF Mobile Telephone Microphone - Left Front (UE1)




4115691

### Connector Part Information

Harness Type: Headliner
OEM Connector: 33189235
Service Connector: 19352066
Description: 2-Way F 1.2 Series (BK)

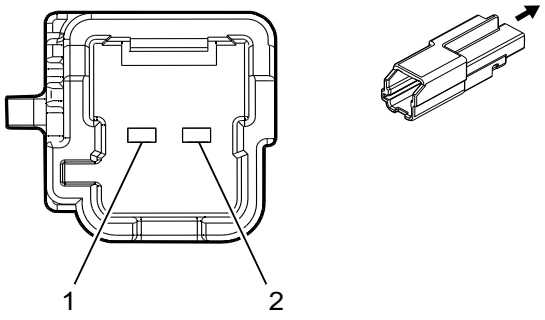
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B24LF Mobile Telephone Microphone - Left Front (UE1)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BK/BN | 654 | Cellular Telephone Microphone Low Reference | I | — |
| 2 | 0.35 | BU | 655 | Cellular Telephone Microphone Signal | I | — |

## B24RF Mobile Telephone Microphone - Right Front (IOS/IOT)




4116495

### Connector Part Information

Harness Type: Headliner
OEM Connector: 33251047

Service Connector: 19332377
Description: 2-Way M 1.2 Series (GY)

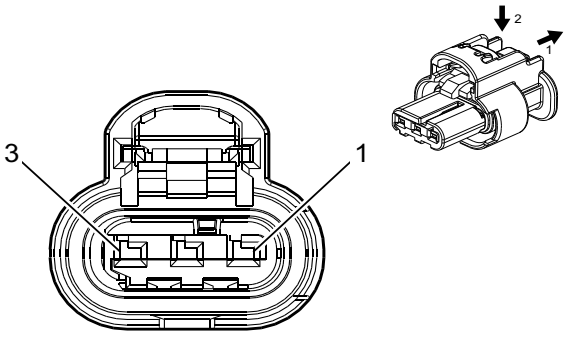
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-13 (BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B24RF Mobile Telephone Microphone - Right Front (IOS/IOT)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BU/BK | 7044 | Microphone (-) Low Reference | I | — |
| 2 | 0.35 | VT/YE | 7043 | Microphone (+) Signal | I | — |

### B26 Crankshaft Position Sensor (L3B)




4778903

#### Connector Part Information

Harness Type: Engine
OEM Connector: 33358808
Service Connector: 19369810
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

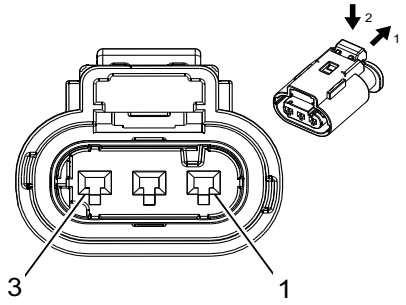
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B26 Crankshaft Position Sensor (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/BU | 6270 | Crankshaft 60X Sensor 5V Reference | I | — |
| 2 | 0.5 | BK/VT | 6272 | Crankshaft 60X Sensor Low Reference | I | — |
| 3 | 0.5 | GN | 6271 | Crankshaft 60X Sensor Signal | I | — |

## B26 Crankshaft Position Sensor (L82)




2717069

### Connector Part Information

Harness Type: Engine
OEM Connector: 13763990
Service Connector: 84601390
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

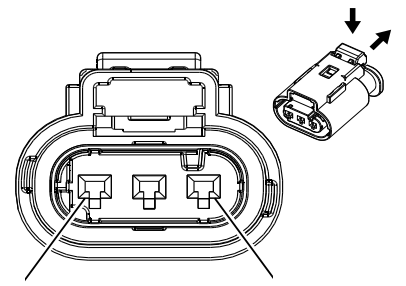
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B26 Crankshaft Position Sensor (L82)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN | 6271 | Crankshaft 60X Sensor Signal | I | L82 |
| | 0.5 | GN | 6271 | Crankshaft 60X Sensor Signal | I | LV3 |
| 2 | 0.5 | BK/VT | 6272 | Crankshaft 60X Sensor Low Reference | I | L82 |
| | 0.5 | BK/VT | 6272 | Crankshaft 60X Sensor Low Reference | I | LV3 |
| 3 | 0.5 | VT/BU | 6270 | Crankshaft 60X Sensor 5V Reference | I | L82 |
| | 0.5 | VT/BU | 6270 | Crankshaft 60X Sensor 5V Reference | I | LV3 |

## B26 Crankshaft Position Sensor (L84/L87)



2717069

### Connector Part Information

Harness Type: Engine
OEM Connector: 13763990
Service Connector: 84601390
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

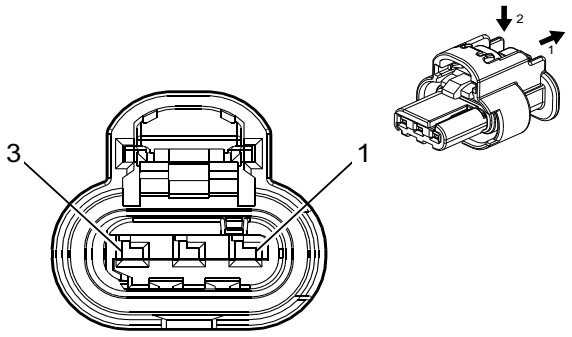
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B26 Crankshaft Position Sensor (L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN | 6271 | Crankshaft 60X Sensor Signal | I | — |
| 2 | 0.5 | BK/VT | 6272 | Crankshaft 60X Sensor Low Reference | I | — |
| 3 | 0.5 | VT/BU | 6270 | Crankshaft 60X Sensor 5V Reference | I | — |

### B26 Crankshaft Position Sensor (LM2)




4581126

### Connector Part Information

Harness Type: Engine
OEM Connector: 33358800
Service Connector: 19366844
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

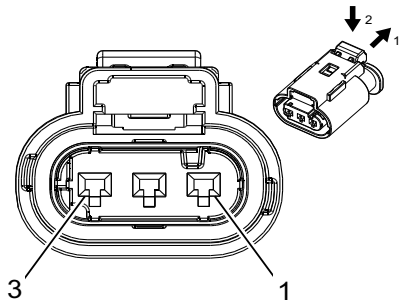
### B26 Crankshaft Position Sensor (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/BU | 6270 | Crankshaft 60X Sensor 5V Reference | I | — |

## B26 Crankshaft Position Sensor (LM2) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 2 | 0.5 | BK/VT | 6272 | Crankshaft 60X Sensor Low Reference | I | — |
| 3 | 0.5 | GN | 6271 | Crankshaft 60X Sensor Signal | I | — |

## B26 Crankshaft Position Sensor (LV3)




2717069

### Connector Part Information

Harness Type: Engine
OEM Connector: 13763990
Service Connector: 84601390
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

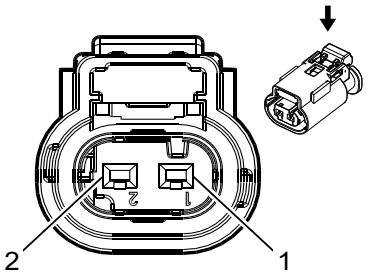
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B26 Crankshaft Position Sensor (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN | 6271 | Crankshaft 60X Sensor Signal | I | — |
| 2 | 0.5 | BK/VT | 6272 | Crankshaft 60X Sensor Low Reference | I | — |
| 3 | 0.5 | VT/BU | 6270 | Crankshaft 60X Sensor 5V Reference | I | — |

## B34 Engine Coolant Temperature Sensor (LV3)




2717066

### Connector Part Information

Harness Type: Engine
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

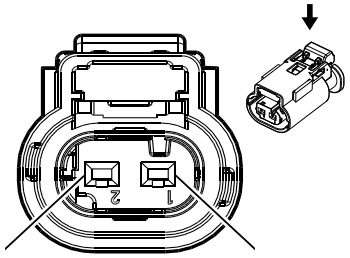
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B34 Engine Coolant Temperature Sensor (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 2 | 0.5 | BU | 410 | Engine Coolant Temperature Sensor Signal | I | — |

## B34A Engine Coolant Temperature Sensor 1 (L3B)



2717066

### Connector Part Information

Harness Type: Engine
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

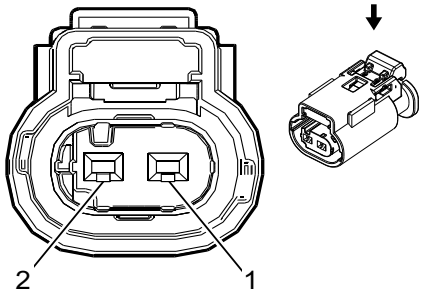
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B34A Engine Coolant Temperature Sensor 1 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/BU | 2408 | Engine Inlet Coolant Temperature Signal | I | — |
| 2 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |

## B34A Engine Coolant Temperature Sensor 1 (LM2)




2830969

### Connector Part Information

Harness Type: Engine
OEM Connector: 13840071
Service Connector: 13587321
Description: 2-Way F 1.2 Multilock Series, Sealed (D-GY)

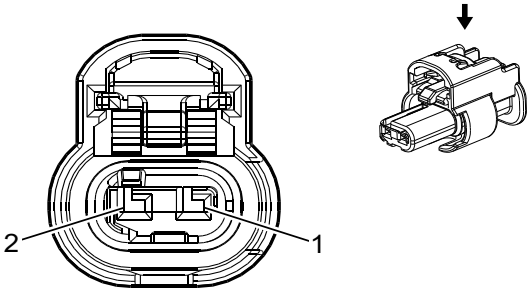
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B34A Engine Coolant Temperature Sensor 1 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/BU | 2408 | Engine Inlet Coolant Temperature Signal | I | — |
| 2 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |

## B34B Engine Coolant Temperature Sensor 2 (L3B)




4690744

### Connector Part Information

Harness Type: Engine
OEM Connector: 33375932
Service Connector: 19366871
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

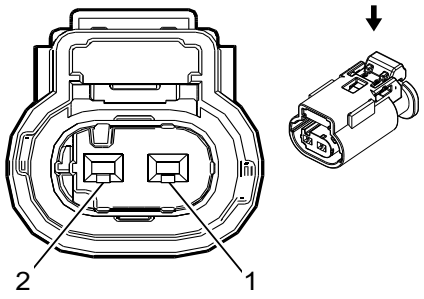
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B34B Engine Coolant Temperature Sensor 2 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT | 2988 | Engine Outlet Coolant Temperature Signal | I | — |
| 2 | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | I | — |

## B34B Engine Coolant Temperature Sensor 2 (LM2)




2830969

### Connector Part Information

Harness Type: Coolant Temperature Jumper
OEM Connector: 10010339
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed (D-GY)

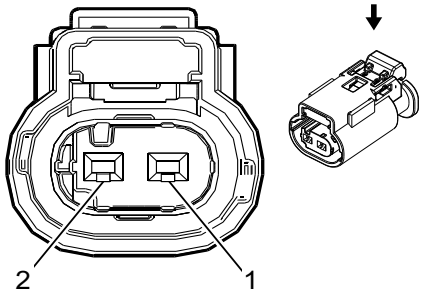
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B34B Engine Coolant Temperature Sensor 2 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT | 2988 | Engine Outlet Coolant Temperature Signal | I | — |
| 2 | 0.5 | BK/GN | 581 | Throttle Actuator Control Open | I | — |

## B34C Engine Coolant Temperature Sensor 3 (L3B)




2830969

### Connector Part Information

Harness Type: Engine
OEM Connector: 13840071
Service Connector: 13587321
Description: 2-Way F 1.2 Multilock Series, Sealed (D-GY)

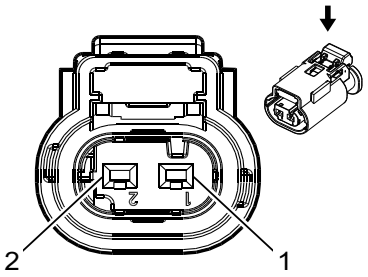
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B34C Engine Coolant Temperature Sensor 3 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/GY | 4644 | Heater Core Inlet Temperature Signal | I | — |
| 2 | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | I | — |

## B34C Engine Coolant Temperature Sensor 3 (LM2)




2717066

### Connector Part Information

Harness Type: Engine
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

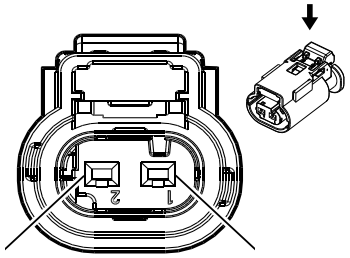
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B34C Engine Coolant Temperature Sensor 3 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/GY | 4644 | Heater Core Inlet Temperature Signal | I | — |
| 2 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |

## B34D Engine Coolant Temperature Sensor 4 (L3B)




2717066

### Connector Part Information

Harness Type: Engine
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

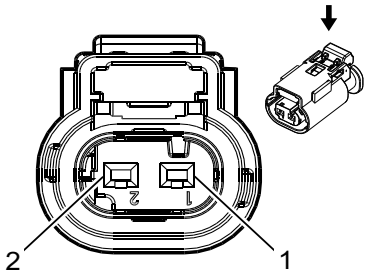
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B34D Engine Coolant Temperature Sensor 4 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN | 4645 | Heater Core Outlet Temperature Signal | I | L3B |
| 2 | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | I | LM2 |

## B34D Engine Coolant Temperature Sensor 4 (LM2)




2717066

### Connector Part Information

Harness Type: Engine
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

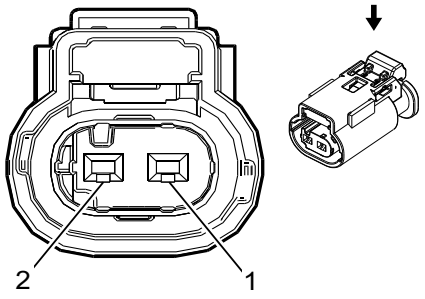
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B34D Engine Coolant Temperature Sensor 4 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN | 4645 | Heater Core Outlet Temperature Signal | I | LM2 |
| 2 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | L3B |

## B34E Engine Coolant Temperature Sensor 5 (L3B)




2830969

### Connector Part Information

Harness Type: Engine
OEM Connector: 13840071
Service Connector: 13587321
Description: 2-Way F 1.2 Multilock Series, Sealed (D-GY)

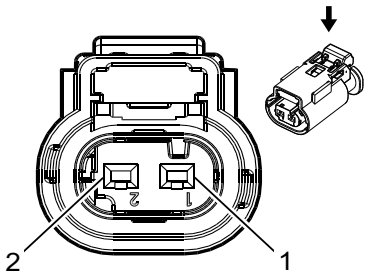
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B34E Engine Coolant Temperature Sensor 5 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN | 906 | — | I | — |
| 2 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |

## B34E Engine Coolant Temperature Sensor 5 (LM2)




2717066

### Connector Part Information

Harness Type: Engine
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

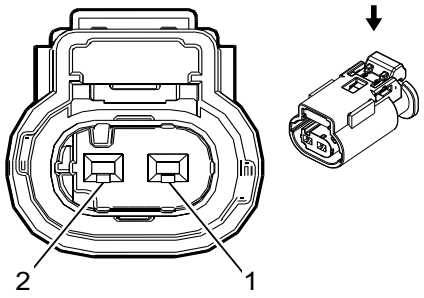
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B34E Engine Coolant Temperature Sensor 5 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 2 | 0.5 | BU/BK | 1422 | Engine Water Charge Air Coolant Temperature Signal | I | — |

## B34F Engine Coolant Temperature Sensor 6 (L3B)




2830969

### Connector Part Information

Harness Type: Engine
OEM Connector: 13840071
Service Connector: 13587321
Description: 2-Way F 1.2 Multilock Series, Sealed (D-GY)

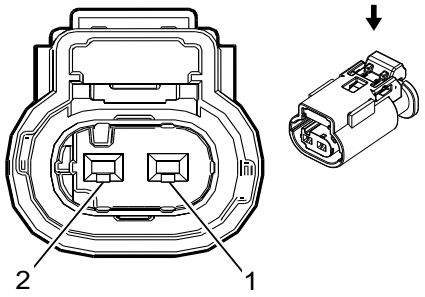
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B34F Engine Coolant Temperature Sensor 6 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/VT | 2404 | Engine Block Coolant Temperature Signal | I | — |
| 2 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |

## B34F Engine Coolant Temperature Sensor 6 (LM2)




2830969

### Connector Part Information

Harness Type: Coolant Temperature Jumper
OEM Connector: 10010339
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed (D-GY)

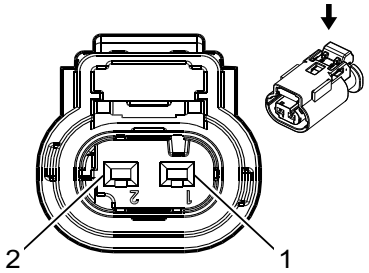
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B34F Engine Coolant Temperature Sensor 6 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU | 907 | — | I | — |
| | 0.5 | GY/VT | 2404 | Engine Block Coolant Temperature Signal | I | LM2 |
| 2 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |
| | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | LM2 |

## B35 Engine Oil Level Switch (L3B/L82/L84/L87/LV3)




2717066

### Connector Part Information

Harness Type: Engine
OEM Connector: 13735326

Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

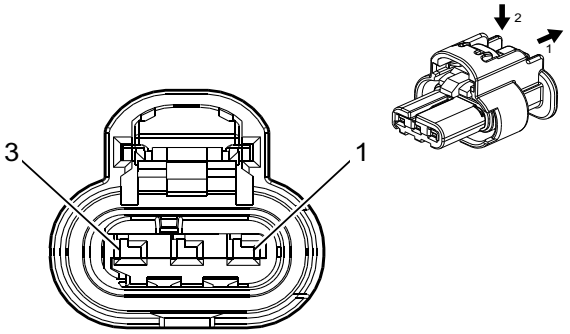
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B35 Engine Oil Level Switch (L3B/L82/L84/L87/LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/WH | 451 | Signal Ground | I | L82/L84/L87 |
| | 1 | BK/WH | 451 | Signal Ground | I | LV3 |
| 2 | 0.5 | BN/GN | 1174 | Oil Level Switch Signal | I | L82/L84/L87 |
| | 0.5 | BN/GN | 1174 | Oil Level Switch Signal | I | LV3 |

### B36 Engine Oil Temperature Sensor (L3B/LM2)




4994602

#### Connector Part Information

Harness Type: Engine
OEM Connector: 33358809
Service Connector: 19371199
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

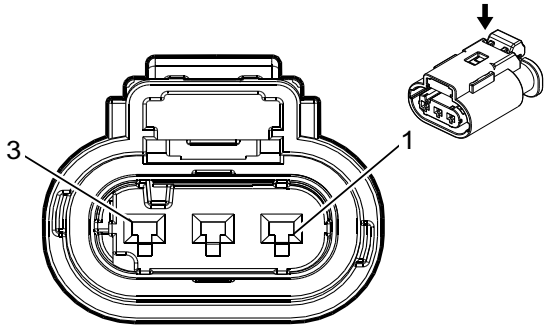
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B36 Engine Oil Temperature Sensor (L3B/LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | I | — |
| 2 | 0.5 | BN/BU | 357 | Oil Temperature Sensor Signal | I | — |
| 3 | 0.5 | VT | 7485 | Oil Temperature Sensor Signal | I | — |

## B37B Engine Oil Pressure Sensor (L3B)




3240107

### Connector Part Information

Harness Type: Engine
OEM Connector: 13889776
Service Connector: 19301717
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

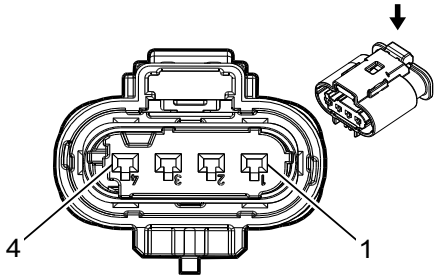
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B37B Engine Oil Pressure Sensor (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/BN | 331 | Oil Pressure Sensor Signal | I | — |
| 2 | 0.75 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 3 | 0.75 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |

## B37B Engine Oil Pressure Sensor (L82/L84/L87)




2717079

### Connector Part Information

Harness Type: Engine
OEM Connector: 13815341
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

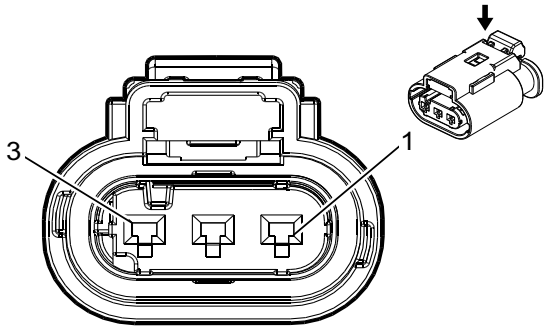
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B37B Engine Oil Pressure Sensor (L82/L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 2 | 0.5 | YE/BN | 331 | Oil Pressure Sensor Signal | I | — |
| 3 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |
| 4 | 0.5 | BN/BU | 357 | Oil Temperature Sensor Signal | I | — |

### B37B Engine Oil Pressure Sensor (LM2)




3240107

### Connector Part Information

Harness Type: Engine
OEM Connector: 13889776
Service Connector: 19301717
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

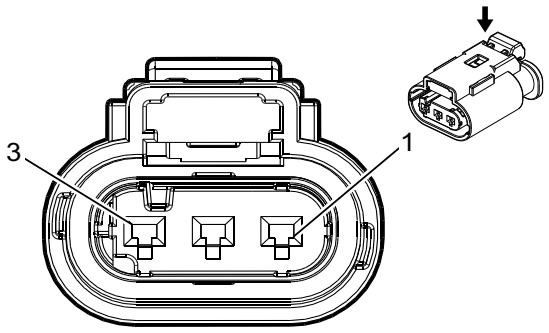
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B37B Engine Oil Pressure Sensor (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/BN | 331 | Oil Pressure Sensor Signal | I | — |
| 2 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 3 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |

## B37B Engine Oil Pressure Sensor (LV3)




3240107

### Connector Part Information

Harness Type: Engine
OEM Connector: 13889776
Service Connector: 19301717
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

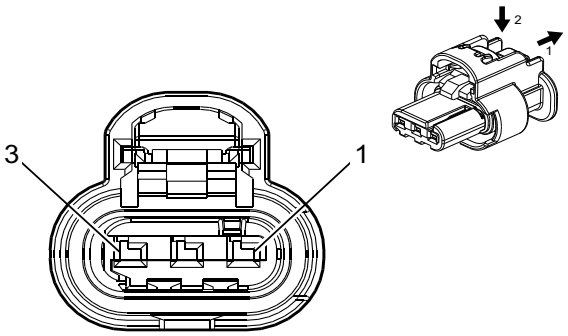
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B37B Engine Oil Pressure Sensor (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/BN | 331 | Oil Pressure Sensor Signal | I | — |
| 2 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 3 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |

## B47 Fuel Pressure Sensor




4581126

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33358800
Service Connector: 19366844
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

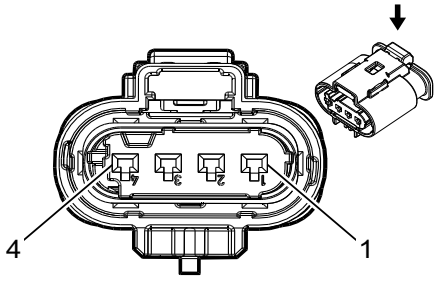
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B47 Fuel Pressure Sensor

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/RD | 7445 | Fuel Line Pressure Sensor 5V Reference | I | — |
| 2 | 0.5 | BK/YE | 7447 | Fuel Line Pressure Sensor Low Reference | I | — |
| 3 | 0.5 | BU/WH | 7446 | Fuel Line Pressure Sensor Signal | I | — |

## B47B Fuel Rail Pressure Sensor (LM2)




2717079

### Connector Part Information

Harness Type: Engine
OEM Connector: 13815341

Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

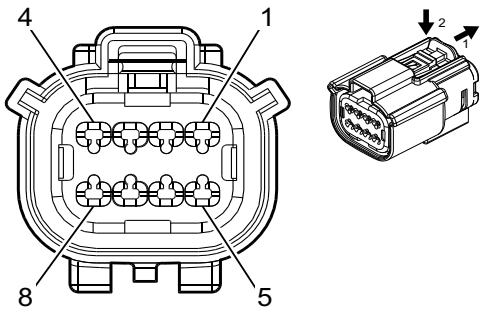
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B47B Fuel Rail Pressure Sensor (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/RD | 2917 | Fuel Rail Pressure Sensor 5V Reference | I | — |
| 2 | 0.5 | BN/YE | 2161 | Fuel Rail Pressure Sensor 2 Signal | I | — |
| 3 | 0.5 | BK/GN | 2919 | Fuel Rail Pressure Sensor Low Reference | I | — |
| 4 | 0.5 | BU/WH | 2918 | Fuel Rail Pressure Sensor Signal | I | — |

### B52A Heated Oxygen Sensor 1 (L3B)




4846403

#### Connector Part Information

Harness Type: Engine
OEM Connector: 35037828
Service Connector: 19369368
Description: 8-Way F 150 MX Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

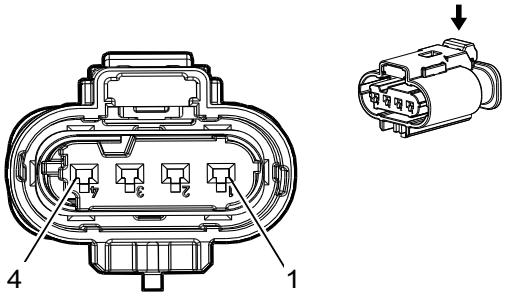
### B52A Heated Oxygen Sensor 1 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BN | 6934 | Heated Oxygen Sensor Ground | I | — |
| 2 | 0.75 | YE/GY | 6936 | Heated Oxygen Sensor Collector Signal | I | — |
| 3 | 0.75 | BN/WH | 6933 | Heated Oxygen Sensor Current Pump Signal | I | — |

## B52A Heated Oxygen Sensor 1 (L3B) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | — |
| 6 | 0.75 | GY/WH | 3113 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1 | I | — |
| 7 | 0.75 | GN | 6935 | Heated Oxygen Sensor Current Adjust Signal | I | — |
| 8 | — | — | — | Not Occupied | — | — |

## B52B Heated Oxygen Sensor 2 (L3B)




4036496

### Connector Part Information

Harness Type: Engine
OEM Connector: 15532689
Service Connector: 19330904
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

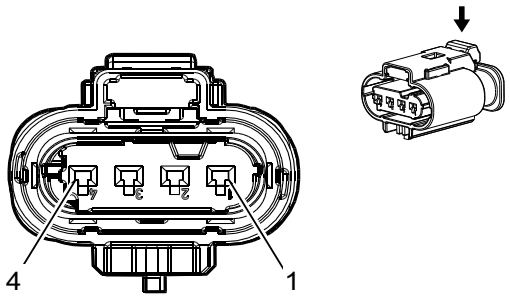
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B52B Heated Oxygen Sensor 2 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | GY/WH | 3122 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2 | I | — |
| 2 | 0.5 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | I | — |
| 3 | 0.75 | WH/YE | 3121 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 2 | I | — |
| 4 | 0.75 | VT/BU | 3120 | Heated Oxygen Sensor High Signal Bank 1 Sensor 2 | I | — |

## B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L82/L84/L87)




4381050

### Connector Part Information

Harness Type: Engine
OEM Connector: 33253021
Service Connector: 19354075
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

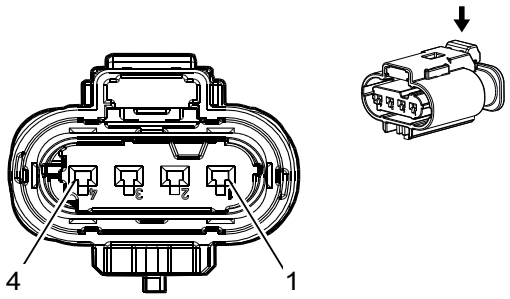
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L82/L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/WH | 3113 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1 | I | L82/L84/L87 |
| | 0.5 | GY/WH | 3113 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1 | I | LV3 |
| 2 | 0.75 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | L82/L84/L87 |
| | 0.75 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | LV3 |
| 3 | 0.5 | WH/BK | 3111 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 1 | I | L82/L84/L87 |
| | 0.5 | WH/BK | 3111 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 1 | I | LV3 |
| 4 | 0.5 | VT/GY | 3110 | Heated Oxygen Sensor High Signal Bank 1 Sensor 1 | I | L82/L84/L87 |
| | 0.5 | VT/GY | 3110 | Heated Oxygen Sensor High Signal Bank 1 Sensor 1 | I | LV3 |

## B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (LV3)




4381050

### Connector Part Information

Harness Type: Engine
OEM Connector: 33253021
Service Connector: 19354075
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

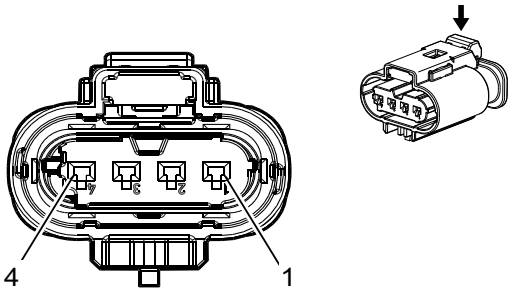
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/WH | 3113 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1 | I | LV3 |
| 2 | 0.75 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | LV3 |
| 3 | 0.5 | WH/BK | 3111 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 1 | I | LV3 |
| 4 | 0.5 | VT/GY | 3110 | Heated Oxygen Sensor High Signal Bank 1 Sensor 1 | I | LV3 |

## B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (L82/L84/L87)




4036370

### Connector Part Information

Harness Type: Engine
OEM Connector: 15532690
Service Connector: 19330920
Description: 4-Way F 1.2 Multilock Series, Sealed (GY)

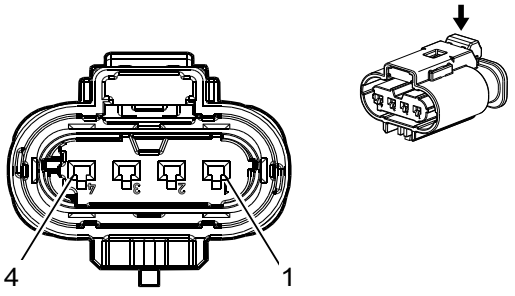
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (L82/L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/WH | 3122 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2 | I | L82/L84/L87 |
| | 0.5 | GY/WH | 3122 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2 | I | LV3 |
| 2 | 0.75 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | I | L82/L84/L87 |
| | 0.75 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | I | LV3 |
| 3 | 0.5 | WH/YE | 3121 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 2 | I | L82/L84/L87 |
| | 0.5 | WH/YE | 3121 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 2 | I | LV3 |
| 4 | 0.5 | VT/BU | 3120 | Heated Oxygen Sensor High Signal Bank 1 Sensor 2 | I | L82/L84/L87 |
| | 0.5 | VT/BU | 3120 | Heated Oxygen Sensor High Signal Bank 1 Sensor 2 | I | LV3 |

## B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (LV3)




4036370

### Connector Part Information

Harness Type: Engine
OEM Connector: 15532690
Service Connector: 19330920
Description: 4-Way F 1.2 Multilock Series, Sealed (GY)

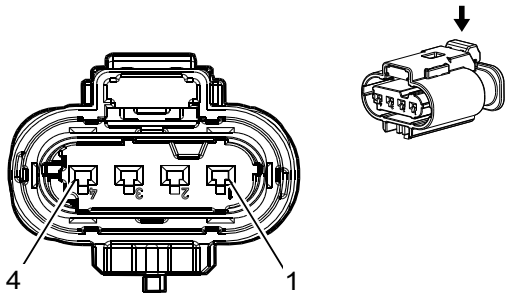
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/WH | 3122 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2 | I | L82/L84/L87 |
| 2 | 0.75 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | I | L82/L84/L87 |
| 3 | 0.5 | WH/YE | 3121 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 2 | I | L82/L84/L87 |
| 4 | 0.5 | VT/BU | 3120 | Heated Oxygen Sensor High Signal Bank 1 Sensor 2 | I | L82/L84/L87 |

## B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L82/L84/L87)




4381050

### Connector Part Information

Harness Type: Engine
OEM Connector: 33253021
Service Connector: 19354075
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

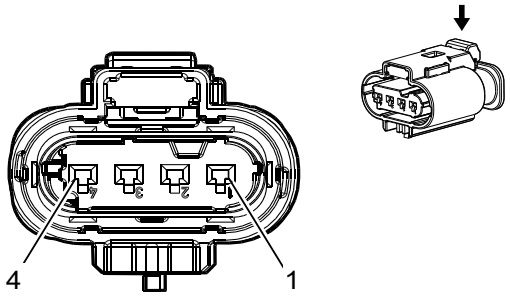
## B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L82/L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/YE | 3212 | Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1 | I | L82/L84/L87 |
| | 0.5 | GN/YE | 3212 | Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1 | I | LV3 |

## B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L82/L84/L87) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 2 | 0.75 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | L82/L84/L87 |
| | 0.75 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | LV3 |
| 3 | 0.5 | YE/WH | 3211 | Heated Oxygen Sensor Low Signal Bank 2 Sensor 1 | I | L82/L84/L87 |
| | 0.5 | YE/WH | 3211 | Heated Oxygen Sensor Low Signal Bank 2 Sensor 1 | I | LV3 |
| 4 | 0.5 | VT/WH | 3210 | Heated Oxygen Sensor High Signal Bank 2 Sensor 1 | I | L82/L84/L87 |
| | 0.5 | VT/WH | 3210 | Heated Oxygen Sensor High Signal Bank 2 Sensor 1 | I | LV3 |

## B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (LV3)




4381050

### Connector Part Information

Harness Type: Engine
OEM Connector: 33253021
Service Connector: 19354075
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

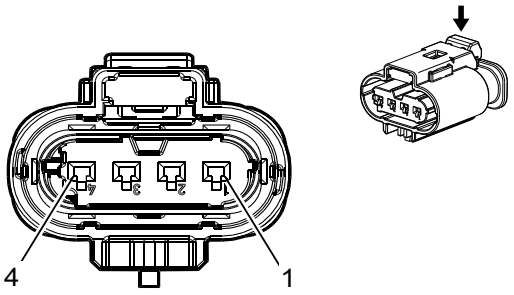
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/YE | 3212 | Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1 | I | L82/L84/L87 |
| 2 | 0.75 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | L82/L84/L87 |
| 3 | 0.5 | YE/WH | 3211 | Heated Oxygen Sensor Low Signal Bank 2 Sensor 1 | I | L82/L84/L87 |
| 4 | 0.5 | VT/WH | 3210 | Heated Oxygen Sensor High Signal Bank 2 Sensor 1 | I | L82/L84/L87 |

## B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (L82/L84/L87)




4036370

### Connector Part Information

Harness Type: Engine
OEM Connector: 15532690
Service Connector: 19330920
Description: 4-Way F 1.2 Multilock Series, Sealed (GY)

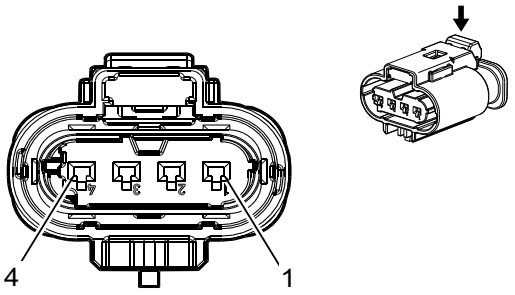
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (L82/L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/BN | 3223 | Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2 | I | L82/L84 |
| | 0.5 | WH/BN | 3223 | Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2 | I | LV3 |
| 2 | 0.75 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | I | L82/L84 |
| | 0.75 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | I | LV3 |
| 3 | 0.5 | YE/BU | 3221 | Heated Oxygen Sensor Low Signal Bank 2 Sensor 2 | I | L82/L84 |
| | 0.5 | YE/BU | 3221 | Heated Oxygen Sensor Low Signal Bank 2 Sensor 2 | I | LV3 |
| 4 | 0.5 | VT/GN | 3220 | Heated Oxygen Sensor High Signal Bank 2 Sensor 2 | I | L82/L84 |
| | 0.5 | VT/GN | 3220 | Heated Oxygen Sensor High Signal Bank 2 Sensor 2 | I | LV3 |

## B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (LV3)




4036370

### Connector Part Information

Harness Type: Engine
OEM Connector: 15532690
Service Connector: 19330920
Description: 4-Way F 1.2 Multilock Series, Sealed (GY)

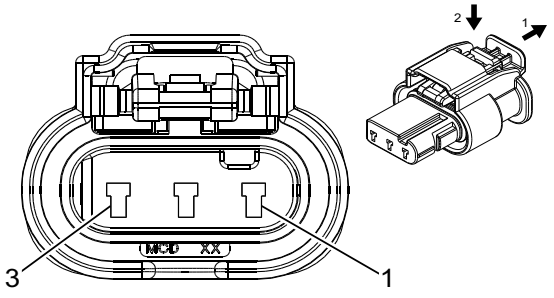
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/BN | 3223 | Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2 | I | L82/L84 |
| 2 | 0.75 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | I | L82/L84 |
| 3 | 0.5 | YE/BU | 3221 | Heated Oxygen Sensor Low Signal Bank 2 Sensor 2 | I | L82/L84 |
| 4 | 0.5 | VT/GN | 3220 | Heated Oxygen Sensor High Signal Bank 2 Sensor 2 | I | L82/L84 |

## B55 Engine Hood Switch




4421568

### Connector Part Information

Harness Type: Body
OEM Connector: 33320864
Service Connector: 19368220
Description: 3-Way F 1.2 MCON-LL Series, Sealed (BK)

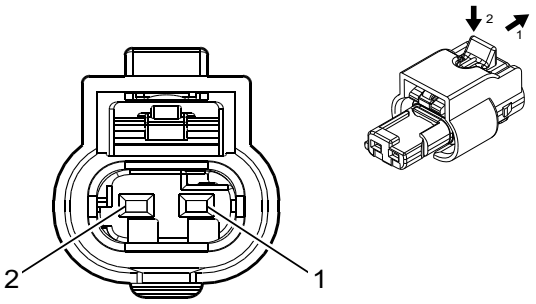
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B55 Engine Hood Switch

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE | 4063 | Hood Status A Signal | I | — |
| 2 | 0.35 | BN/GN | 4064 | Hood Status B Signal | I | — |
| 3 | 0.35 | BK | 150 | Ground | I | — |
| | 0.75 | BK | 150 | Ground | I | — |

## B59L Front Impact Sensor - Left




4975834

### Connector Part Information

Harness Type: Body
OEM Connector: 33299485
Service Connector: 19371203
Description: 2-Way F 1.2 MCON-CB Series, Sealed (BK)

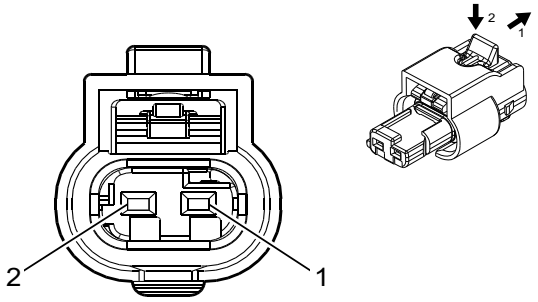
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B59L Front Impact Sensor - Left

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/YE | 354 | Left Front Discriminating Sensor Signal | I | — |
| 2 | 0.5 | BK/OG | 5045 | Left Front Discriminating Sensor Low Reference | I | — |

## B59R Front Impact Sensor - Right




4975834

### Connector Part Information

Harness Type: Body
OEM Connector: 33299485
Service Connector: 19371203
Description: 2-Way F 1.2 MCON-CB Series, Sealed (BK)

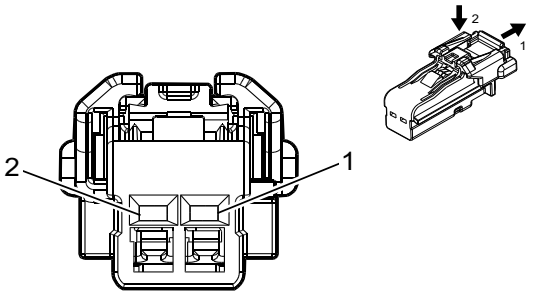
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B59R Front Impact Sensor - Right

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/GN | 1409 | Right Front Discriminating Sensor Signal | I | — |
| 2 | 0.5 | BK/OG | 5600 | Right Front Discriminating Sensor Low Reference | I | — |

## B61P Seat Belt Tension Sensor - Passenger (Crew Cab)




4115691

### Connector Part Information

Harness Type: Body
OEM Connector: 33189235
Service Connector: 19352066
Description: 2-Way F 1.2 Series (BK)

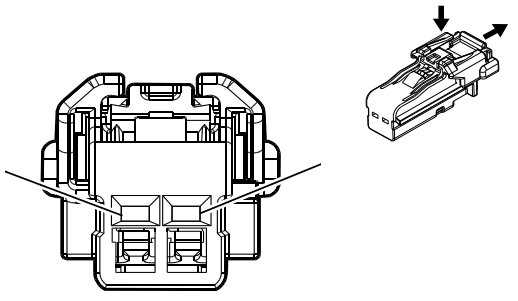
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B61P Seat Belt Tension Sensor - Passenger (Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/OG | 3946 | Automatic Locking Retractor Switch Low Reference | I | — |
| 2 | 0.5 | OG/BN | 3947 | Automatic Locking Retractor Switch Signal | I | — |

## B61P Seat Belt Tension Sensor - Passenger (Extended Cab)



4115691

### Connector Part Information

Harness Type: Body
OEM Connector: 35026312

Service Connector: 19352066
Description: 2-Way F 1.2 Series (BK)

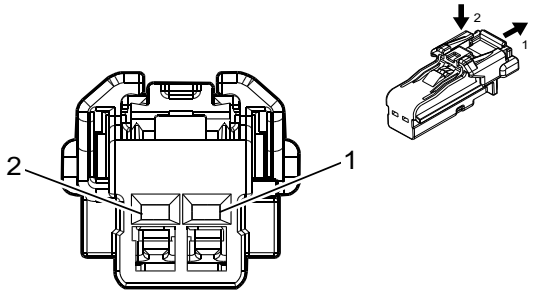
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B61P Seat Belt Tension Sensor - Passenger (Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/OG | 3946 | Automatic Locking Retractor Switch Low Reference | I | — |
| 2 | 0.5 | OG/BN | 3947 | Automatic Locking Retractor Switch Signal | I | — |

### B61P Seat Belt Tension Sensor - Passenger (Regular Cab)




4115691

### Connector Part Information

Harness Type: Body
OEM Connector: 33189235
Service Connector: 19352066
Description: 2-Way F 1.2 Series (BK)

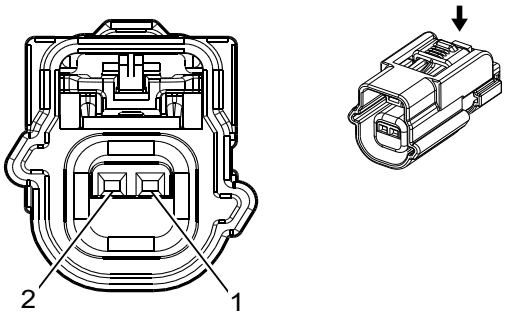
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B61P Seat Belt Tension Sensor - Passenger (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/OG | 3946 | Automatic Locking Retractor Switch Low Reference | I | — |
| 2 | 0.5 | OG/BN | 3947 | Automatic Locking Retractor Switch Signal | I | — |

## B63LF Side Impact Sensor - Left Front




3931604

### Connector Part Information

Harness Type: Driver Door
OEM Connector: 33503704
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Series, Sealed

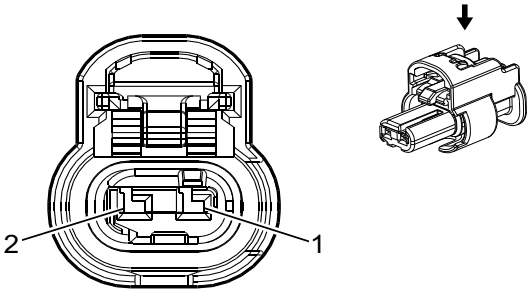
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B63LF Side Impact Sensor - Left Front

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | OG/GN | 2132 | Left Front Side Impact Sensing Module Signal | I | — |
| 2 | 0.75 | BK/OG | 6628 | Left Front Side Impact Sensing Module Low Reference | I | — |

## B63LR Side Impact Sensor - Left Rear




4649903

### Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 33327048

Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

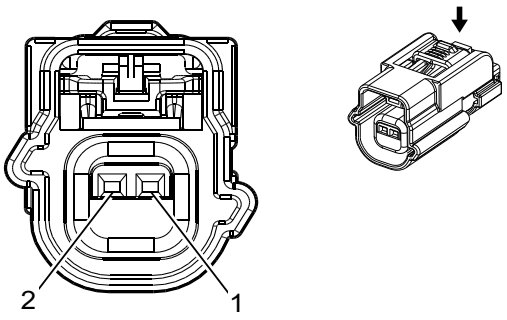
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B63LR Side Impact Sensor - Left Rear

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/BU | 6622 | Left Rear Side Impact Sensing Module Signal | I | — |
| 2 | 0.5 | BK/OG | 6623 | Left Rear Side Impact Sensing Module Low Reference | I | — |

### B63RF Side Impact Sensor - Right Front




3931604

## Connector Part Information

Harness Type: Passenger Door
OEM Connector: 33503704
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Series, Sealed

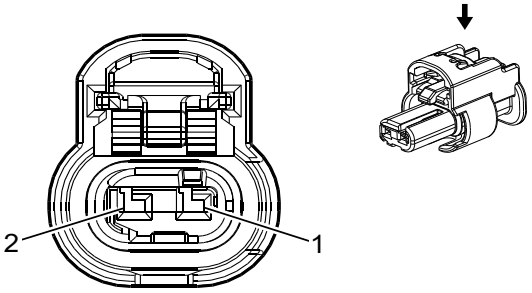
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B63RF Side Impact Sensor - Right Front

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BN/OG | 2134 | Right Front Side Impact Sensing Module Signal | I | — |
| 2 | 0.75 | BK/OG | 6629 | Right Front Side Impact Sensing Module Low Reference | I | — |

## B63RR Side Impact Sensor - Right Rear




4649903

### Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 33327048
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

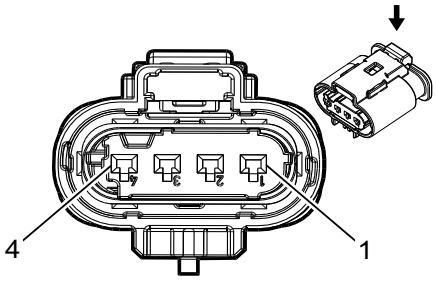
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B63RR Side Impact Sensor - Right Rear

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/VT | 6626 | Right Rear Side Impact Sensing Module Signal | I | — |
| 2 | 0.5 | BK/OG | 6627 | Right Rear Side Impact Sensing Module Low Reference | I | — |

## B65 Intake Manifold Pressure and Air Temperature Sensor




2717079

### Connector Part Information

Harness Type: Engine
OEM Connector: 13815341

Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

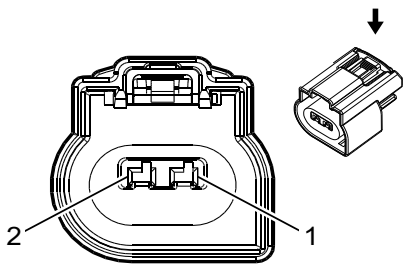
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B65 Intake Manifold Pressure and Air Temperature Sensor

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/BU | 6118 | Manifold Air Temperature Sensor Signal | I | — |
| 2 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |
| 3 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |
| 4 | 0.5 | GN/WH | 432 | Manifold Absolute Pressure Sensor Signal | I | — |

## B68A Knock Sensor 1 (L82/L84/L87/LV3)




2717073

### Connector Part Information

Harness Type: Engine
OEM Connector: 13814755
Service Connector: 19301207
Description: 2-Way F 150 MX Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

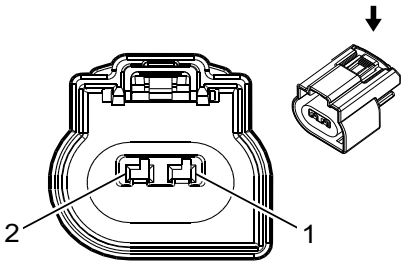
### B68A Knock Sensor 1 (L82/L84/L87/LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK/YE | 1716 | Knock Sensor Low Reference 1 | I | — |
| | 0.75 | VT/GY | 496 | Knock Sensor Signal 1 | I | — |
| 2 | 0.75 | BK/YE | 1716 | Knock Sensor Low Reference 1 | I | — |

## B68A Knock Sensor 1 (L82/L84/L87/LV3) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| | 0.75 | VT/GY | 496 | Knock Sensor Signal 1 | I | — |

## B68B Knock Sensor 2 (L82/L84/L87/LV3)




2717073

### Connector Part Information

Harness Type: Engine
OEM Connector: 13814755
Service Connector: 19301207
Description: 2-Way F 150 MX Series, Sealed (BK)

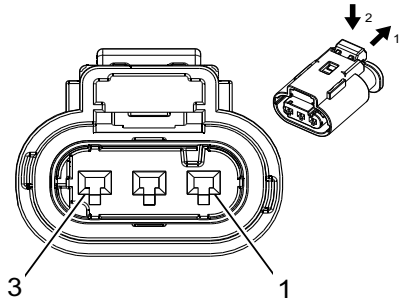
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B68B Knock Sensor 2 (L82/L84/L87/LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | WH/GY | 1876 | Knock Sensor Signal 2 | I | L3B |
| | 0.75 | BK/GY | 2303 | Knock Sensor Low Reference 2 | I | L82/L84/L87 |
| | 0.75 | BK/GY | 2303 | Knock Sensor Low Reference 2 | I | LV3 |
| 2 | 0.75 | BK/GY | 2303 | Knock Sensor Low Reference 2 | I | L3B |
| | 0.75 | WH/GY | 1876 | Knock Sensor Signal 2 | I | L82/L84/L87 |
| | 0.75 | WH/GY | 1876 | Knock Sensor Signal 2 | I | LV3 |

## B74 Manifold Absolute Pressure Sensor (L3B)




2717069

### Connector Part Information

Harness Type: Engine
OEM Connector: 13763990
Service Connector: 84601390
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

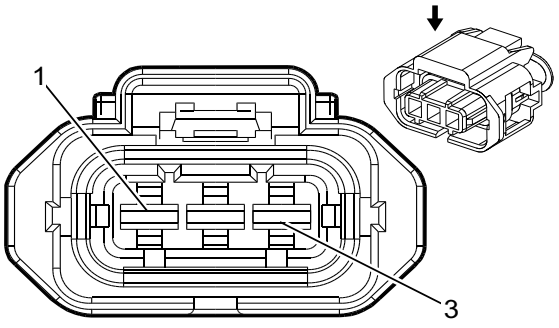
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B74 Manifold Absolute Pressure Sensor (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 2 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 3 | 0.5 | YE | 3054 | Turbo Intake Pressure Sensor Signal Bank 1 | I | — |

## B74 Manifold Absolute Pressure Sensor (L82)




1914850

### Connector Part Information

Harness Type: Engine
OEM Connector: 15397338

Service Connector: 13585845
Description: 3-Way F 2.8 Junior Power Timer Series, Sealed (BK)

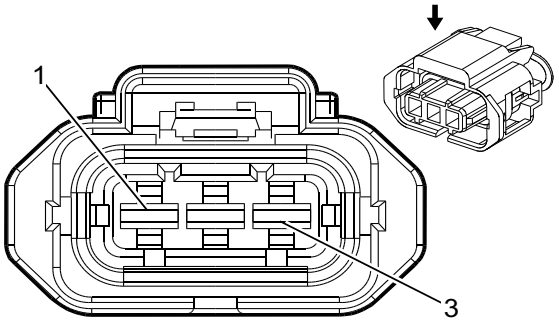
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B74 Manifold Absolute Pressure Sensor (L82)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/RD | 2704 | Manifold Absolute Pressure Sensor 5V Reference | I | — |
| 2 | 0.5 | BK/GN | 469 | Manifold Absolute Pressure Sensor Low Reference | I | — |
| 3 | 0.5 | GN/WH | 432 | Manifold Absolute Pressure Sensor Signal | I | — |

### B74 Manifold Absolute Pressure Sensor (L84/L87)




1914850

### Connector Part Information

Harness Type: Engine
OEM Connector: 15397338
Service Connector: 13585845
Description: 3-Way F 2.8 Junior Power Timer Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

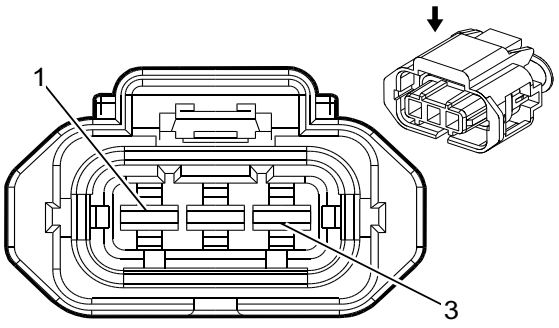
### B74 Manifold Absolute Pressure Sensor (L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/RD | 2704 | Manifold Absolute Pressure Sensor 5V Reference | I | — |
| 2 | 0.5 | BK/GN | 469 | Manifold Absolute Pressure Sensor Low Reference | I | — |

## B74 Manifold Absolute Pressure Sensor (L84/L87) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 3 | 0.5 | GN/WH | 432 | Manifold Absolute Pressure Sensor Signal | I | — |

## B74 Manifold Absolute Pressure Sensor (LV3)




1914850

### Connector Part Information

Harness Type: Engine
OEM Connector: 15397338
Service Connector: 13585845
Description: 3-Way F 2.8 Junior Power Timer Series, Sealed (BK)

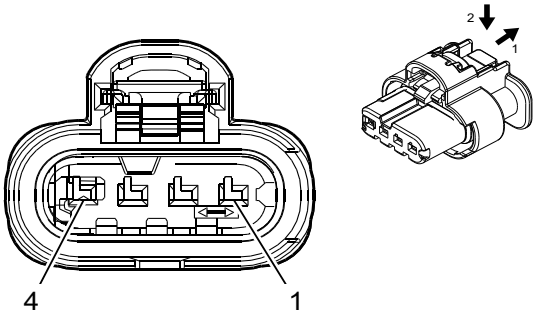
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B74 Manifold Absolute Pressure Sensor (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/RD | 2704 | Manifold Absolute Pressure Sensor 5V Reference | I | — |
| 2 | 0.5 | BK/GN | 469 | Manifold Absolute Pressure Sensor Low Reference | I | — |
| 3 | 0.5 | GN/WH | 432 | Manifold Absolute Pressure Sensor Signal | I | — |

## B75C Multifunction Intake Air Sensor




4934614

### Connector Part Information

Harness Type: Engine
OEM Connector: 33367416
Service Connector: 19371196
Description: 4-Way F 1.2 MCON-CB Series, Sealed (BK)

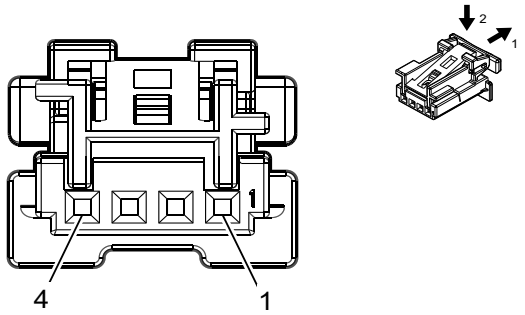
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B75C Multifunction Intake Air Sensor

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | I | — |
| 2 | 0.5 | GN/WH | 492 | Mass Air Flow Sensor Signal | I | — |
| 3 | 0.5 | GN/WH | 4622 | Local Interconnect Network Serial Data Bus 22 | I | — |
| 4 | 0.5 | BK/WH | 451 | Signal Ground | I | L3B |
| | 1 | BK/WH | 451 | Signal Ground | I | LM2 |
| | 0.75 | BK/WH | 451 | Signal Ground | I | LV3 |

## B80 Park Brake Switch




4997407

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35082250
Service Connector: 19371192
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

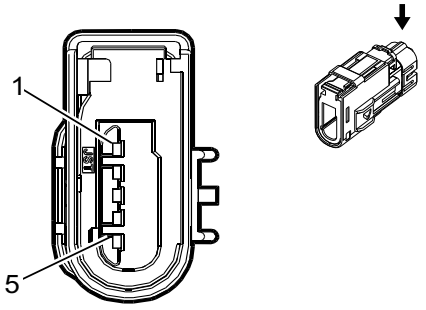
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B80 Park Brake Switch

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | RD/GN | 5140 | Battery Positive Voltage | I | — |
| 2 | 0.35 | GN/YE | 2731 | Local Interconnect Network Bus 31 | I | — |
| 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.35 | BK | 1850 | Ground | I | — |

## B87 Rearview Camera (5N5)




3277922

### Connector Part Information

Harness Type: Rearview Camera Jumper
OEM Connector: 13934096
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed (L-GY)

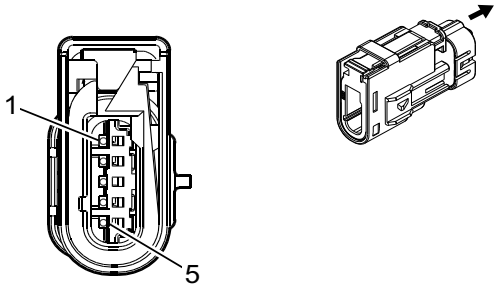
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-13 (BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B87 Rearview Camera (5N5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BU | 6974 | Camera Low Reference | I | — |
| 2 | 0.5 | WH/BU | 6973 | Camera Signal 2 | II | — |
| 3 | 0.5 | GY/YE | 6972 | Camera Signal 2 + | II | — |
| 4 | 0.5 | BK/WH | 1751 | Signal Ground | II | — |
| 5 | 0.5 | VT/GN | 1739 | Run/Crank Ignition 1 Voltage | II | — |

## B87 Rearview Camera (UVC)




4808321

### Connector Part Information

Harness Type: Endgate
OEM Connector: 35028910
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed (GY)

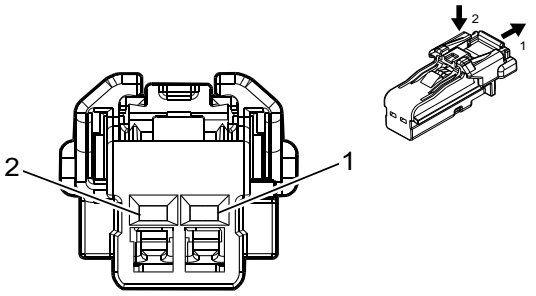
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-13 (BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B87 Rearview Camera (UVC)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/YE | 6972 | Camera Signal 2 + | II | — |
| 2 | 0.5 | WH/BU | 6973 | Camera Signal 2 | II | — |
| 3 | 0.35 | BU | 6974 | Camera Low Reference | I | — |
| 4 | 0.5 | BK/WH | 1751 | Signal Ground | II | — |
| 5 | 0.5 | VT/GN | 1739 | Run/Crank Ignition 1 Voltage | II | — |

## B88D Seat Belt Switch - Driver




4115691

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 6098-8431
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Series (BK)

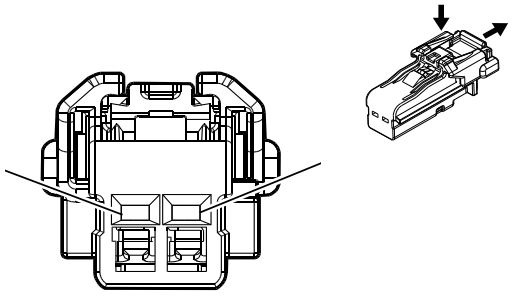
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B88D Seat Belt Switch - Driver

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/OG | 1363 | Driver Seat Belt Switch Low Reference | I | — |
| 2 | 0.35 | OG/BN | 238 | Driver Seat Belt Switch Signal | I | — |

## B88P Seat Belt Switch - Passenger



4115691

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 6098-8431
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Series (BK)

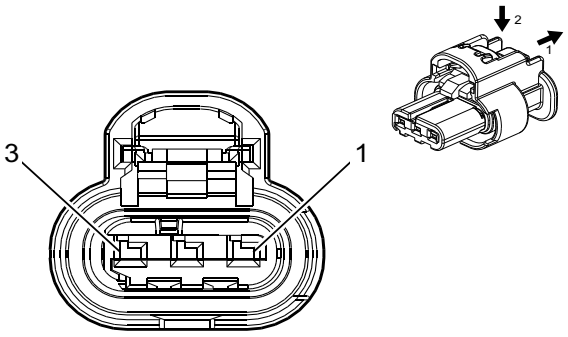
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B88P Seat Belt Switch - Passenger

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/OG | 1361 | Passenger Seat Belt Switch Low Reference | I | — |
| 2 | 0.35 | OG/VT | 1362 | Passenger Seat Belt Switch Signal | I | — |

## B96 Cylinder Head Temperature Sensor (LM2)




4994602

### Connector Part Information

Harness Type: Engine
OEM Connector: 33358809
Service Connector: 19371199
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

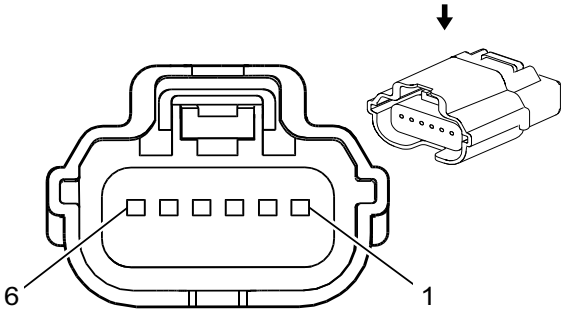
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B96 Cylinder Head Temperature Sensor (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | I | — |
| 2 | 0.5 | GN/YE | 37 | Engine Metal Temperature Sensor Signal | I | — |
| 3 | 0.5 | BN/YE | 1372 | Engine Metal Temperature Sensor Signal (2) | I | — |

## B107 Accelerator Pedal Position Sensor (Crew Cab)




1974974

### Connector Part Information

Harness Type: Body
OEM Connector: 13835162
Service Connector: 19356496
Description: 6-Way F 0.64 Series, Sealed (BK)

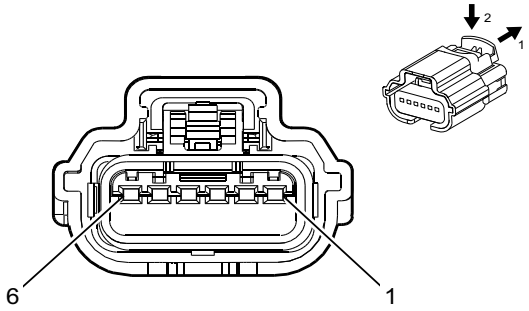
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B107 Accelerator Pedal Position Sensor (Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | WH/RD | 1164 | Accelerator Pedal Position 5V Reference 1 | I | — |
| 2 | 0.35 | YE/WH | 1161 | Accelerator Pedal Position Signal 1 | I | — |
| 3 | 0.35 | BK/BU | 1271 | Accelerator Pedal Position Low Reference 1 | I | — |
| 4 | 0.35 | BK/VT | 1272 | Accelerator Pedal Position Low Reference 2 | I | — |
| 5 | 0.35 | GN/WH | 1162 | Accelerator Pedal Position Signal 2 | I | — |
| 6 | 0.35 | BN/RD | 1274 | Accelerator Pedal Position 5V Reference 2 | I | — |

## B107 Accelerator Pedal Position Sensor (Extended Cab)




5157678

### Connector Part Information

Harness Type: Body
OEM Connector: 35199156
Service Connector: 19356496
Description: 6-Way F 64 Series, Sealed (BK)

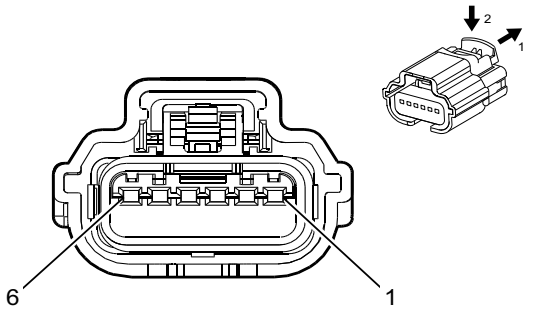
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B107 Accelerator Pedal Position Sensor (Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | WH/RD | 1164 | Accelerator Pedal Position 5V Reference 1 | I | — |
| 2 | 0.35 | YE/WH | 1161 | Accelerator Pedal Position Signal 1 | I | — |
| 3 | 0.35 | BK/BU | 1271 | Accelerator Pedal Position Low Reference 1 | I | — |
| 4 | 0.35 | BK/VT | 1272 | Accelerator Pedal Position Low Reference 2 | I | — |
| 5 | 0.35 | GN/WH | 1162 | Accelerator Pedal Position Signal 2 | I | — |
| 6 | 0.35 | BN/RD | 1274 | Accelerator Pedal Position 5V Reference 2 | I | — |

## B107 Accelerator Pedal Position Sensor (Regular Cab)




5157678

### Connector Part Information

Harness Type: Body
OEM Connector: 35199156
Service Connector: 19356496
Description: 6-Way F 64 Series, Sealed (BK)

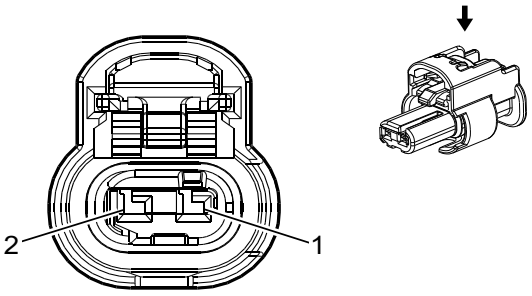
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B107 Accelerator Pedal Position Sensor (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | WH/RD | 1164 | Accelerator Pedal Position 5V Reference 1 | I | — |
| 2 | 0.35 | YE/WH | 1161 | Accelerator Pedal Position Signal 1 | I | — |
| 3 | 0.35 | BK/BU | 1271 | Accelerator Pedal Position Low Reference 1 | I | — |
| 4 | 0.35 | BK/VT | 1272 | Accelerator Pedal Position Low Reference 2 | I | — |
| 5 | 0.35 | GN/WH | 1162 | Accelerator Pedal Position Signal 2 | I | — |
| 6 | 0.35 | BN/RD | 1274 | Accelerator Pedal Position 5V Reference 2 | I | — |

## B110 Battery Sensor Module X1




4649903

### Connector Part Information

Harness Type: Body
OEM Connector: 33327048
Service Connector: 19366858
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

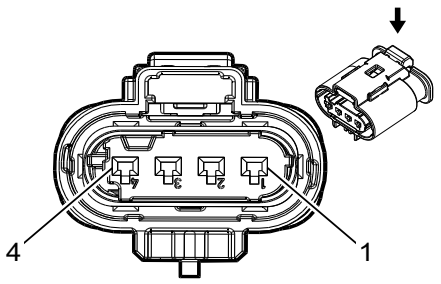
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B110 Battery Sensor Module X1

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/VT | 4621 | Local Interconnect Network Serial Data Bus 21 | I | — |
| 2 | 0.75 | RD/YE | 2340 | Battery Positive Voltage | I | — |

## B111B Turbocharger Boost/Intake Air Temperature Sensor




2717079

### Connector Part Information

Harness Type: Engine
OEM Connector: 13815341
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

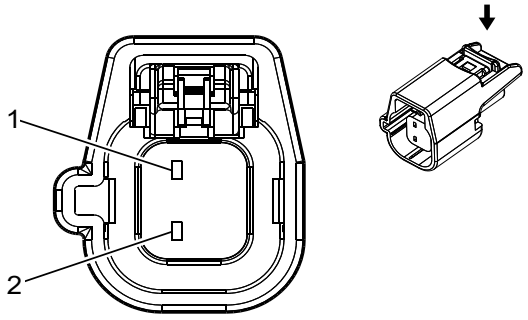
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B111B Turbocharger Boost/Intake Air Temperature Sensor

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN | 7348 | Induction Air Temperature Sensor 2 Signal | I | — |
| 2 | 0.5 | GY/RD | 2704 | Manifold Absolute Pressure Sensor 5V Reference | I | — |
| 3 | 0.5 | BK/GN | 469 | Manifold Absolute Pressure Sensor Low Reference | I | — |
| 4 | 0.5 | GN/WH | 432 | Manifold Absolute Pressure Sensor Signal | I | — |

## B118B Windshield Washer Fluid Level Switch (Crew Cab)




3958652

### Connector Part Information

Harness Type: Body
OEM Connector: 33113086
Service Connector: 13593220
Description: 2-Way F 1.5 Series (L-GY)

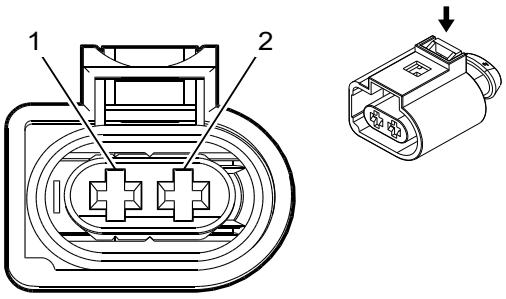
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B118B Windshield Washer Fluid Level Switch (Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | VT | 185 | Low Washer Fluid Indicator Control | I | — |
| 2 | 0.35 | BK | 150 | Ground | I | — |

### B118B Windshield Washer Fluid Level Switch (Extended Cab)




2474738

### Connector Part Information

Harness Type: Body
OEM Connector: 10863916
Service Connector: 19368727
Description: 2-Way F 2.8 MDK5 Series, Sealed (BK)

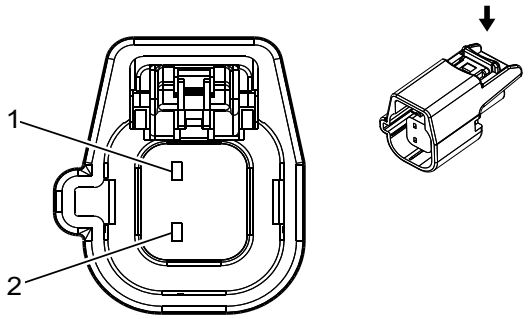
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B118B Windshield Washer Fluid Level Switch (Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/VT | 228 | Windshield Washer Pump Control | I | — |
| 2 | 0.75 | BK | 150 | Ground | I | — |

## B118B Windshield Washer Fluid Level Switch (Regular Cab)




3958652

### Connector Part Information

Harness Type: Body
OEM Connector: 33113086
Service Connector: 13593220
Description: 2-Way F 1.5 Series (L-GY)

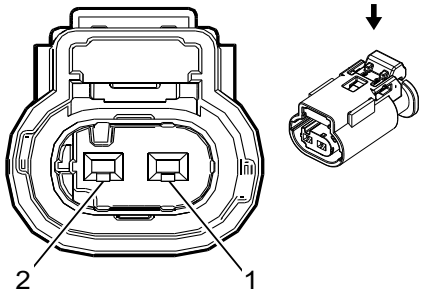
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B118B Windshield Washer Fluid Level Switch (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | VT | 185 | Low Washer Fluid Indicator Control | I | — |
| 2 | 0.35 | BK | 150 | Ground | I | — |

## B130A Exhaust Gas Recirculation Temperature Sensor 1 (LM2)




2830969

### Connector Part Information

Harness Type: Engine
OEM Connector: 13840071

Service Connector: 13587321
Description: 2-Way F 1.2 Multilock Series, Sealed (D-GY)

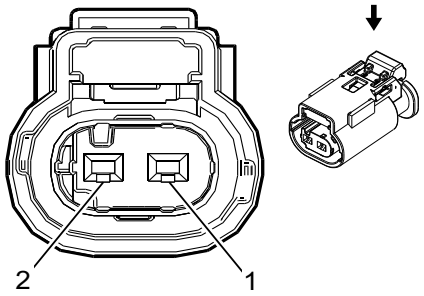
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B130A Exhaust Gas Recirculation Temperature Sensor 1 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU/WH | 5277 | Exhaust Gas Temperature Sensor 1 | I | — |
| 2 | 0.5 | BK/BN | 6782 | Exhaust Gas Temperature Sensor 1 Low Reference | I | — |

### B130AH Exhaust Gas Recirculation Temperature Sensor 1 - High Pressure (LM2)




2830969

### Connector Part Information

Harness Type: Engine
OEM Connector: 13840071
Service Connector: 13587321
Description: 2-Way F 1.2 Multilock Series, Sealed (D-GY)

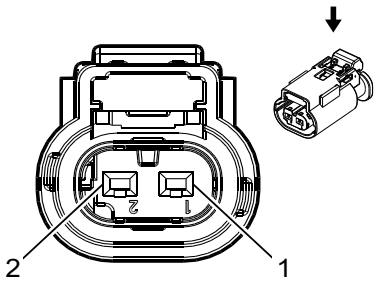
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B130AH Exhaust Gas Recirculation Temperature Sensor 1 - High Pressure (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/GN | 3236 | Exhaust Gas Recirculation Temperature Sensor 2 Signal | I | — |
| 2 | 0.5 | BK/YE | 6275 | Exhaust Gas Recirculation Temperature Sensor 2 Low Reference | I | — |

## B130B Exhaust Gas Recirculation Temperature Sensor 2 (LM2)




2717037

### Connector Part Information

Harness Type: Engine
OEM Connector: 13735325
Service Connector: 13587325
Description: 2-Way F 1.2 Multilock Series, Sealed (L-GY)

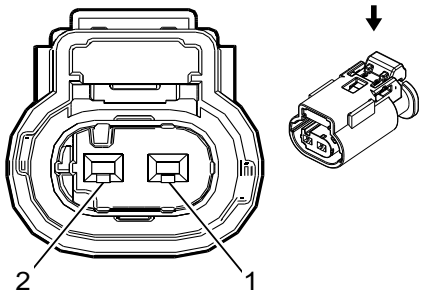
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B130B Exhaust Gas Recirculation Temperature Sensor 2 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU/GN | 5377 | Exhaust Gas Temperature Sensor 2 | I | — |
| 2 | 0.5 | BK/BU | 6783 | Exhaust Gas Temperature Sensor 2 Low Reference | I | — |

## B130BH Exhaust Gas Recirculation Temperature Sensor 2 - High Pressure (LM2)




2830969

### Connector Part Information

Harness Type: Engine
OEM Connector: 13840071

Service Connector: 13587321
Description: 2-Way F 1.2 Multilock Series, Sealed (D-GY)

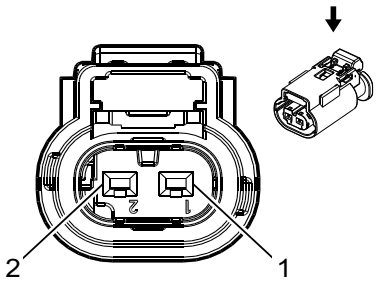
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B130BH Exhaust Gas Recirculation Temperature Sensor 2 - High Pressure (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/GY | 3234 | Exhaust Gas Recirculation Temperature Sensor 3 Signal | I | — |
| 2 | 0.5 | BK/GN | 3235 | Exhaust Gas Recirculation Temperature Sensor 3 Low Reference | I | — |

### B130C Exhaust Gas Recirculation Temperature Sensor 3 (LM2)




2717037

### Connector Part Information

Harness Type: Engine
OEM Connector: 13735325
Service Connector: 13587325
Description: 2-Way F 1.2 Multilock Series, Sealed (L-GY)

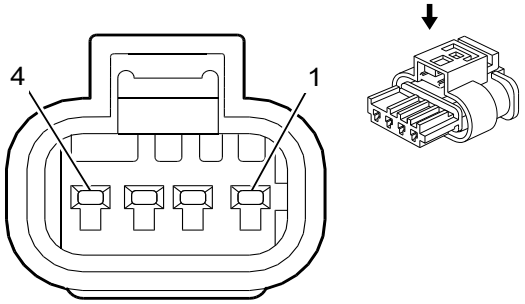
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B130C Exhaust Gas Recirculation Temperature Sensor 3 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/GN | 5378 | Exhaust Gas Temperature Sensor 3 | I | — |
| 2 | 0.5 | BK/GN | 3657 | Exhaust Gas Temperature Sensor 3 Low Reference | I | — |

## B136 Exhaust Particulate Matter Sensor (LM2)




2487928

### Connector Part Information

Harness Type: Chassis
OEM Connector: 13781047
Service Connector: 13581092
Description: 4-Way F 1.2 Series, Sealed (BK)

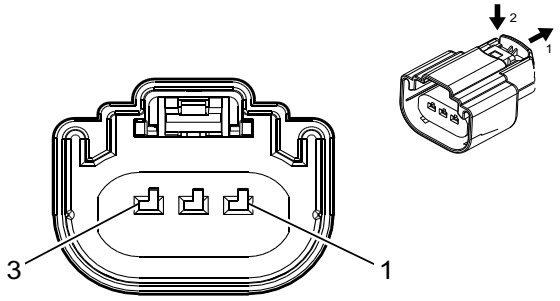
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B136 Exhaust Particulate Matter Sensor (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK/WH | 1651 | Signal Ground | I | — |
| 2 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | I | — |
| 3 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | I | — |
| 4 | 0.75 | VT/BU | 3674 | NOx Sensor 1 Control | I | — |

## B139 Transfer Case 2WD/4WD Actuator Position Sensor (NP0/NQH)




4569745

### Connector Part Information

Harness Type: Engine
OEM Connector: 33343869
Service Connector: 19179750
Description: 3-Way F 150 MX Series, Sealed (BK)

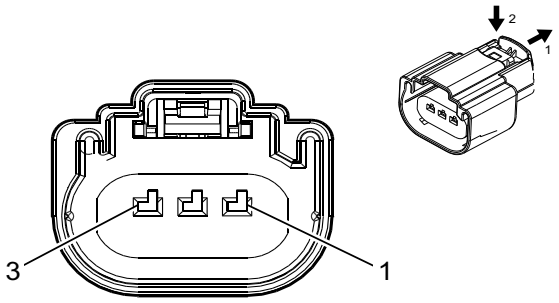
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B139 Transfer Case 2WD/4WD Actuator Position Sensor (NP0/NQH)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/RD | 7477 | Rotary Position Sensor 5V Reference | I | — |
| 2 | 0.5 | WH/GN | 7479 | Rotary Position Sensor Signal | I | — |
| 3 | 0.5 | YE/BK | 7478 | Rotary Position Sensor Low Reference | I | — |

### B150 Fuel Tank Pressure Sensor




4589538

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33343864
Service Connector: 84569854
Description: 3-Way F 150 MX Series, Sealed (GY)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

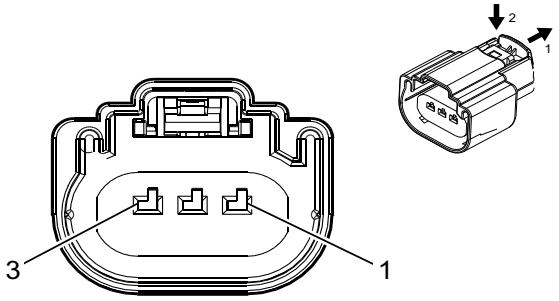
### B150 Fuel Tank Pressure Sensor

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU/WH | 890 | Fuel Tank Pressure Sensor Signal | I | — |

## B150 Fuel Tank Pressure Sensor (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 2 | 0.5 | BK/BN | 6284 | Fuel Tank Vapor Pressure Sensor Low Reference | I | — |
| 3 | 0.5 | YE/RD | 2709 | Fuel Tank Pressure Sensor 5V Reference | I | — |

## B152LF Suspension Position Sensor - Left Front (Z45)




4589538

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33343864
Service Connector: 84569854
Description: 3-Way F 150 MX Series, Sealed (GY)

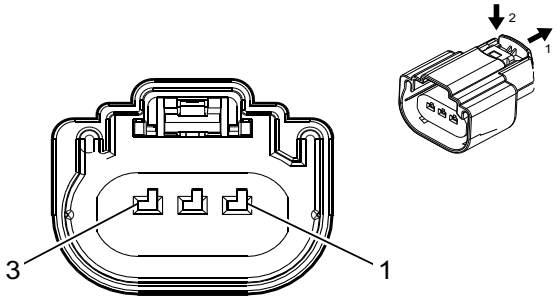
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B152LF Suspension Position Sensor - Left Front (Z45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU/RD | 1205 | Left Front Strut Position Sensor 5V Reference | I | — |
| 2 | 0.5 | BK/BU | 1206 | Left Front Strut Position Sensor Low Reference | I | — |
| 3 | 0.5 | BN/WH | 1207 | Left Front Strut Position Sensor Signal | I | — |

## B152LR Suspension Position Sensor - Left Rear (Z45)




4589538

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33343864
Service Connector: 84569854
Description: 3-Way F 150 MX Series, Sealed (GY)

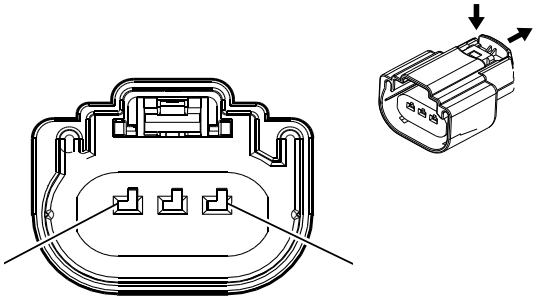
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B152LR Suspension Position Sensor - Left Rear (Z45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/RD | 1208 | Left Rear Strut Position Sensor 5V Reference | I | — |
| 2 | 0.5 | BK/GN | 1209 | Left Rear Strut Position Sensor Low Reference | I | — |
| 3 | 0.5 | GN/WH | 1210 | Left Rear Strut Position Sensor Signal | I | — |

## B152RF Suspension Position Sensor - Right Front (Z45)



4589538

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33343864

Service Connector: 84569854
Description: 3-Way F 150 MX Series, Sealed (GY)

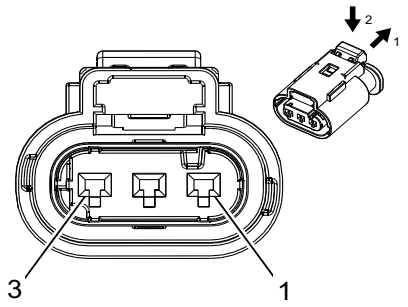
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B152RF Suspension Position Sensor - Right Front (Z45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/RD | 1211 | Right Front Strut Position Sensor 5V Reference | I | — |
| 2 | 0.5 | BK/GY | 1212 | Right Front Strut Position Sensor Low Reference | I | — |
| 3 | 2 | YE/WH | 1213 | Right Front Strut Position Sensor Signal | I | — |

### B154 Diesel Particulate Filter Exhaust Differential Pressure Sensor (LM2)




2717069

### Connector Part Information

Harness Type: Engine
OEM Connector: 13763990
Service Connector: 84601390
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

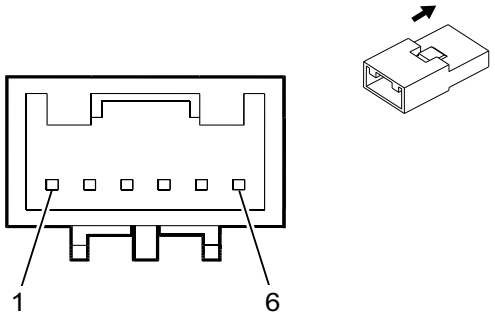
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B154 Diesel Particulate Filter Exhaust Differential Pressure Sensor (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |
| 2 | 0.5 | BU | 6053 | Exhaust Pressure Sensor Signal 1 | I | — |
| 3 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |

## B160 Windshield Temperature and Inside Moisture Sensor (ASV)




2839920

### Connector Part Information

Harness Type: Headliner
OEM Connector: 13770074
Service Connector: 19299681
Description: 6-Way M 0.64 Kaizen Series (BK)

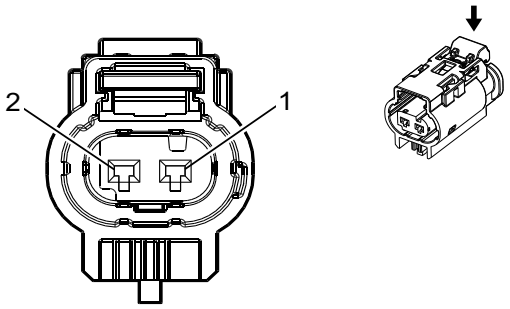
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-65B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B160 Windshield Temperature and Inside Moisture Sensor (ASV)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE/RD | 597 | 5V Reference | I | — |
| 2 | 0.35 | GY/BU | 7564 | Humidity Sensor Signal | I | — |
| 3 | 0.35 | BK/BU | 7566 | Humidity/Windscreen Temp Sensor Low Reference | I | — |
| 4 | 0.35 | GY/GN | 7565 | Windscreen Temp Sensor Signal | I | — |
| 5 | 0.35 | YE/BU | 3197 | Humidity Temperature Sensor Signal | I | — |
| 6 | — | — | — | Not Occupied | — | — |

## B172LF Brake Pad Wear Sensor - Left Front




3747581

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33226772
Service Connector: 84769085
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

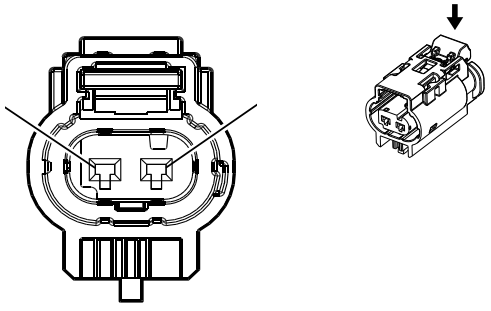
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B172LF Brake Pad Wear Sensor - Left Front

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH | 1612 | Brake Lining Wear Sensor Signal Left Front | I | — |
| 2 | 0.75 | BK/WH | 1751 | Signal Ground | I | — |

## B172LR Brake Pad Wear Sensor - Left Rear



3747581

### Connector Part Information

Harness Type: Rear Axle
OEM Connector: 10094234
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

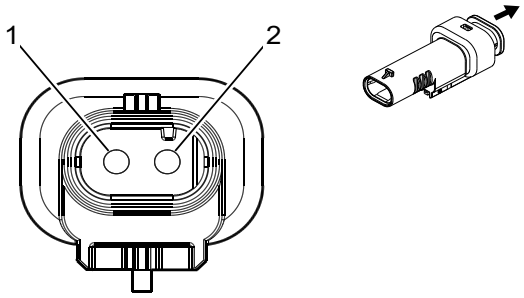
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B172LR Brake Pad Wear Sensor - Left Rear

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | GN/YE | 1616 | Brake Lining Wear Sensor Signal Rear | I | — |
| 2 | 0.75 | BK | 2050 | Ground | I | — |

## B172RR Brake Pad Wear Sensor - Right Rear




4992757

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33356666
Service Connector: 19371200
Description: 2-Way M 1.2 MLK Series, Sealed (GY)

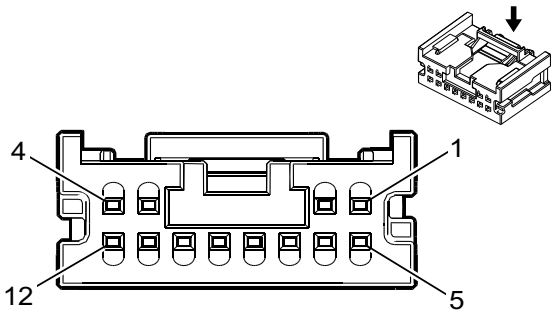
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B172RR Brake Pad Wear Sensor - Right Rear

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/YE | 1616 | Brake Lining Wear Sensor Signal Rear | I | — |
| 2 | 0.5 | BK/WH | 1751 | Signal Ground | I | — |

## B174W Frontview Camera - Windshield (UEU)




3824362

### Connector Part Information

Harness Type: Headliner
OEM Connector: 33235297
Service Connector: 13507121
Description: 12-Way F Mini 50 Series (BK)

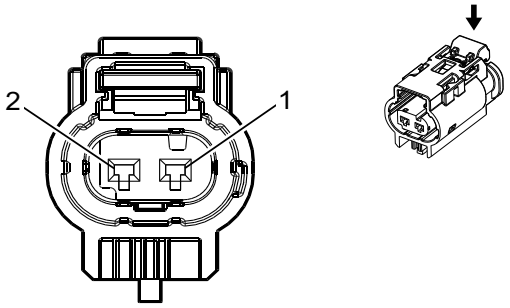
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | EL-35616-58 (BK) | EL-38125-58 | Not Available | Not Available | Not Available | Not Available |

### B174W Frontview Camera - Windshield (UEU)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BK/WH | 1851 | Signal Ground | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | RD/GN | 3140 | Battery Positive Voltage | I | — |
| 4 | 0.35 | WH | 3152 | Lane Departure Warning Indicator Control | I | — |
| 5 | 0.35 | BU/GY | 3935 | High Speed GMLAN Serial Data (+) 8 | I | — |
| 6 | 0.35 | WH/GY | 3936 | High Speed GMLAN Serial Data (-) 8 | I | — |
| 7 | 0.35 | BU/GY | 3935 | High Speed GMLAN Serial Data (+) 8 | I | — |
| 8 | 0.35 | WH/GY | 3936 | High Speed GMLAN Serial Data (-) 8 | I | — |
| 9 | 0.35 | WH/BU | 5986 | Serial Data Communication Enable | I | — |
| 10 | 0.35 | GY/WH | 3153 | Lane Departure Warning Disable Switch Signal | I | — |
| 11 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 12 | — | — | — | Not Occupied | — | — |

## B193A Charge Air Cooler Inlet Temperature Sensor (LM2)




3747581

### Connector Part Information

Harness Type: Engine
OEM Connector: 33226772
Service Connector: 84769085
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

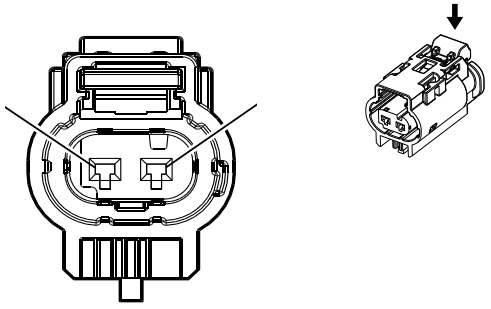
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B193A Charge Air Cooler Inlet Temperature Sensor (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN | 3683 | Charge Air Cooler Inlet Temperature Sensor Signal | I | — |
| 2 | 0.5 | YE/BK | 3682 | Charge Air Cooler Inlet Temperature Sensor Low Reference | I | — |

## B193B Charge Air Cooler Outlet Temperature Sensor (LM2)



3747581

### Connector Part Information

Harness Type: Engine
OEM Connector: 33226772

Service Connector: 84769085
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

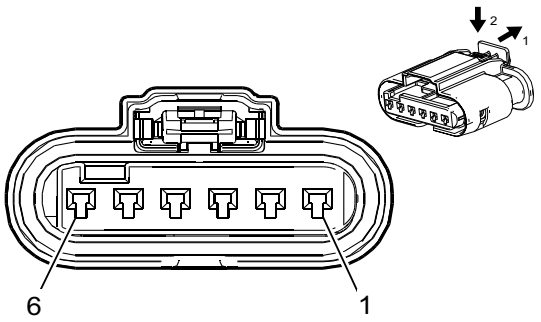
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B193B Charge Air Cooler Outlet Temperature Sensor (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN | 3681 | Charge Air Cooler Outlet Temperature Sensor Signal | I | — |
| 2 | 0.5 | YE/BU | 3680 | Charge Air Cooler Outlet Temperature Sensor Low Reference | I | — |

## B195A Nitrogen Oxides Sensor 1 (LM2)




3960142

### Connector Part Information

Harness Type: Engine
OEM Connector: 33230495
Service Connector: 19368560
Description: 6-Way F 1.2 MCON-LL Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

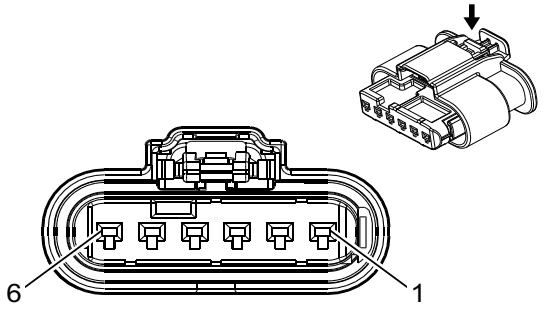
## B195A Nitrogen Oxides Sensor 1 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/BU | 3674 | NOx Sensor 1 Control | I | — |
| 2 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | I | — |
| 3 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | I | — |
| 4 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | I | — |

## B195A Nitrogen Oxides Sensor 1 (LM2) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 5 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | I | — |
| 6 | 0.5 | BK/WH | 451 | Signal Ground | I | — |

## B195B Nitrogen Oxides Sensor 2 (LM2)




4455148

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33226735
Service Connector: 19368561
Description: 6-Way F 1.2 MCON-LL Series, Sealed (GY)

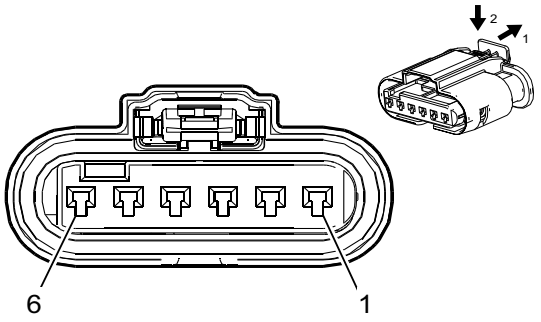
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B195B Nitrogen Oxides Sensor 2 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/BU | 3674 | NOx Sensor 1 Control | I | — |
| 2 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | I | — |
| 3 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | I | — |
| 4 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | I | — |
| 5 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | I | — |
| 6 | 0.5 | BK/WH | 1651 | Signal Ground | I | — |

## B195C Nitrogen Oxides Sensor 3 (LM2)




3960142

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33230495
Service Connector: 19368560
Description: 6-Way F 1.2 MCON-LL Series, Sealed (BK)

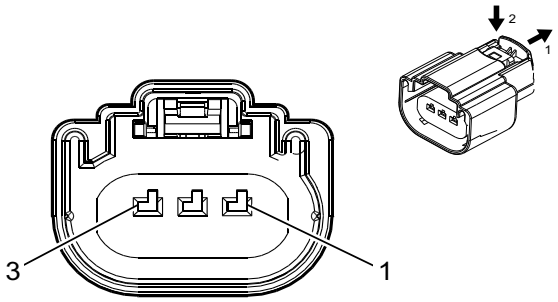
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B195C Nitrogen Oxides Sensor 3 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/BU | 3674 | NOx Sensor 1 Control | I | — |
| 2 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | I | — |
| 3 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | I | — |
| 4 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | I | — |
| 5 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | I | — |
| 6 | 0.5 | BK/WH | 1651 | Signal Ground | I | — |

## B198 Fuel Composition Sensor (FHS)




4829227

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33362826
Service Connector: 19371197
Description: 3-Way F 150 MX Series, Sealed (GY)

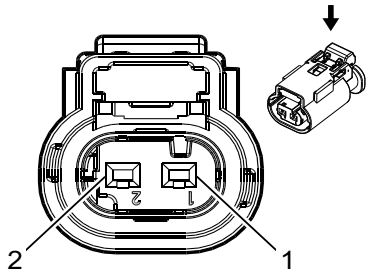
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B198 Fuel Composition Sensor (FHS)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | I | — |
| 2 | 0.5 | BK/WH | 451 | Signal Ground | I | — |
| 3 | 0.5 | WH | 1579 | Fuel Temperature/Composition Signal | I | — |

## B203 Radiator Coolant Temperature Sensor (L3B/LM2)




2717066

### Connector Part Information

Harness Type: Engine
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

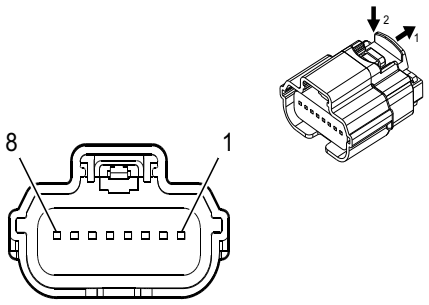
### B203 Radiator Coolant Temperature Sensor (L3B/LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/BK | 3000 | Coolant Temperature Sensor 2 Signal | I | L3B |

## B203 Radiator Coolant Temperature Sensor (L3B/LM2) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| | 0.5 | YE/BK | 3000 | Coolant Temperature Sensor 2 Signal | I | LM2 |
| 2 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | L3B |
| | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | I | LM2 |

## B218L Side Object Sensor Module - Left (UKC)




4708234

### Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 33204059
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 64 Series, Sealed (BK)

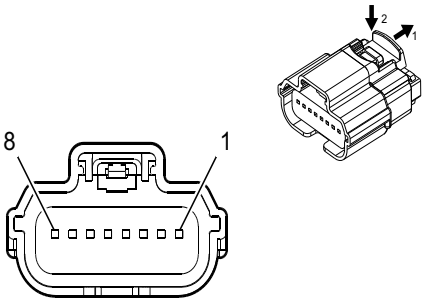
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B218L Side Object Sensor Module - Left (UKC)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU/YE | 3810 | High Speed GMLAN Serial Data (-) 5 | I | — |
| 2 | 0.5 | BU/WH | 3812 | High Speed GMLAN Serial Data (+) 5 | I | — |
| 3 | 0.5 | BK/WH | 1751 | Signal Ground | I | — |
| 4 - 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.5 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 7 | 0.35 | GY/YE | 1760 | Left Side Object Detection LED Control | I | — |
| 8 | 0.5 | RD/GN | 1840 | Battery Positive Voltage | I | — |

## B218R Side Object Sensor Module - Right (UKC)




4708234

### Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 33204059
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 64 Series, Sealed (BK)

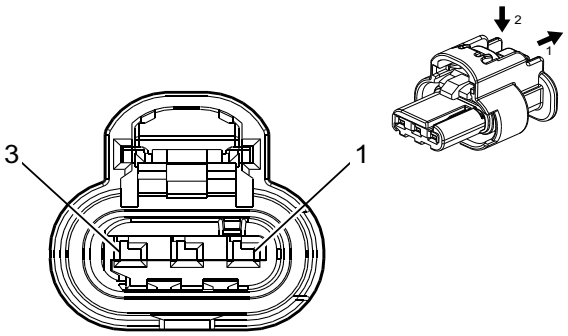
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B218R Side Object Sensor Module - Right (UKC)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU/YE | 3810 | High Speed GMLAN Serial Data (-) 5 | I | — |
| 2 | 0.5 | BU/WH | 3812 | High Speed GMLAN Serial Data (+) 5 | I | — |
| 3 | 0.5 | BK/WH | 1751 | Signal Ground | I | — |
| 4 - 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.5 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 7 | 0.35 | GY | 1761 | Right Side Object Detection LED Control | I | — |
| 8 | 0.5 | RD/GN | 1840 | Battery Positive Voltage | I | — |

## B306A Parking Assist Sensor - Front Left Outer (UD5)




4581126

### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

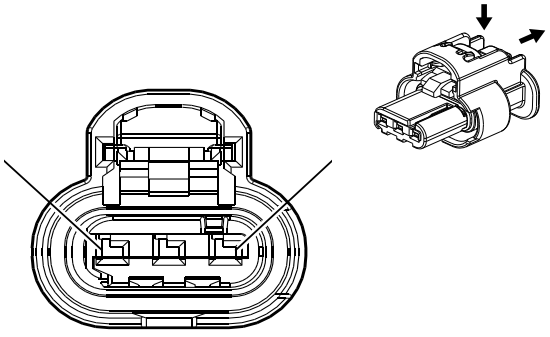
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B306A Parking Assist Sensor - Front Left Outer (UD5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/VT | 5213 | Front Parking Left/Right/Mid Sensor | I | — |
| 2 | 0.5 | VT/WH | 5215 | Front Parking Left Corner Sensor | I | — |
| 3 | 0.5 | BK/BU | 5214 | Front Parking Sensor Low Reference | I | — |

## B306B Parking Assist Sensor - Front Left Middle (UD5)



4581126

### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 33358800

Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

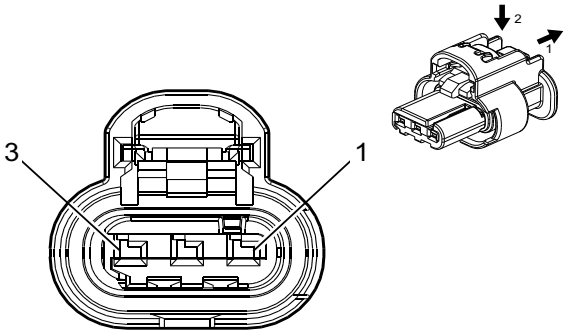
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B306B Parking Assist Sensor - Front Left Middle (UD5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/VT | 5213 | Front Parking Left/Right/Mid Sensor | I | — |
| 2 | 0.5 | YE/GY | 5216 | Front Parking Left Mid Sensor | I | — |
| 3 | 0.5 | BK/BU | 5214 | Front Parking Sensor Low Reference | I | — |

### B306C Parking Assist Sensor - Front Right Middle (UD5)




4581126

#### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

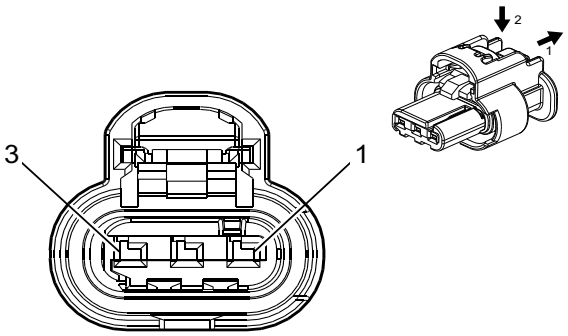
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B306C Parking Assist Sensor - Front Right Middle (UD5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/VT | 5213 | Front Parking Left/Right/Mid Sensor | I | — |
| 2 | 0.5 | VT/GY | 5218 | Front Parking Right Mid Sensor | I | — |
| 3 | 0.5 | BK/BU | 5214 | Front Parking Sensor Low Reference | I | — |

## B306D Parking Assist Sensor - Front Right Outer (UD5)




4581126

### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

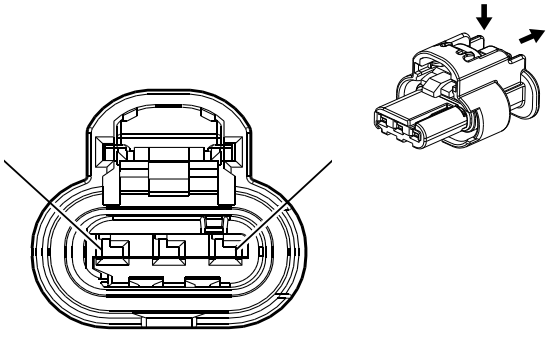
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B306D Parking Assist Sensor - Front Right Outer (UD5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/VT | 5213 | Front Parking Left/Right/Mid Sensor | I | — |
| 2 | 0.5 | WH/GY | 5217 | Front Parking Right Corner Sensor | I | — |
| 3 | 0.5 | BK/BU | 5214 | Front Parking Sensor Low Reference | I | — |

## B306E Parking Assist Sensor - Rear Left Outer (UD5/UD7)



4581126

### Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 33358800

Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

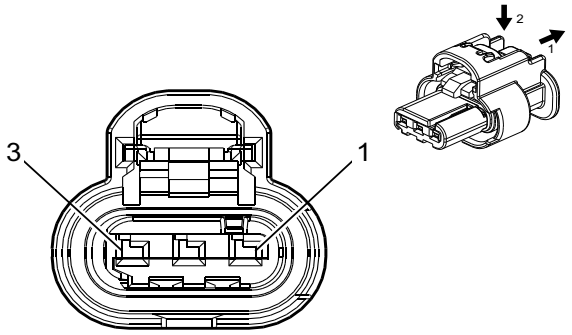
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B306E Parking Assist Sensor - Rear Left Outer (UD5/UD7)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/WH | 2374 | Object Sensor Control | I | — |
| 2 | 0.5 | YE | 2375 | Left Rear Corner Object Sensor Signal | I | — |
| 3 | 0.5 | BK/GY | 2379 | Object Sensor Low Reference | I | — |

### B306F Parking Assist Sensor - Rear Left Middle (UD5/UD7)




4581126

## Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

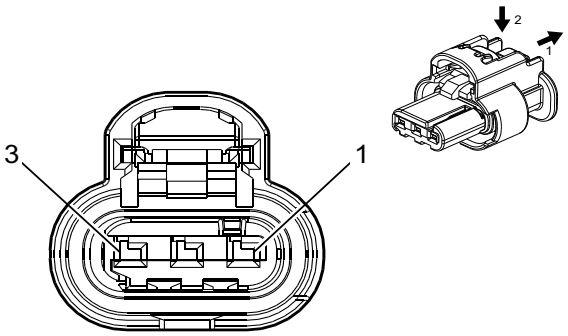
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B306F Parking Assist Sensor - Rear Left Middle (UD5/UD7)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/WH | 2374 | Object Sensor Control | I | — |
| 2 | 0.5 | YE/BU | 2376 | Left Rear Middle Object Sensor Signal | I | — |
| 3 | 0.5 | BK/GY | 2379 | Object Sensor Low Reference | I | — |

## B306G Parking Assist Sensor - Rear Right Middle (UD5/UD7)




4581126

### Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

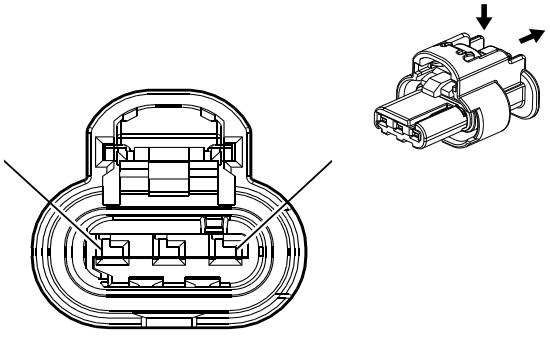
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B306G Parking Assist Sensor - Rear Right Middle (UD5/UD7)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/WH | 2374 | Object Sensor Control | I | — |
| 2 | 0.5 | YE/WH | 2377 | Right Rear Middle Object Sensor Signal | I | — |
| 3 | 0.5 | BK/GY | 2379 | Object Sensor Low Reference | I | — |

## B306H Parking Assist Sensor - Rear Right Outer (UD5/UD7)



4581126

### Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 33358800

Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

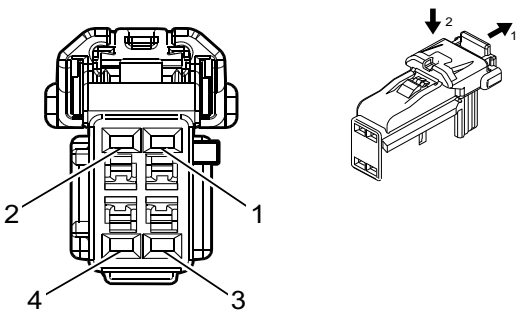
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B306H Parking Assist Sensor - Rear Right Outer (UD5/UD7)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/WH | 2374 | Object Sensor Control | I | — |
| 2 | 0.5 | YE/VT | 2378 | Right Rear Corner Object Sensor Signal | I | — |
| 3 | 0.5 | BK/GY | 2379 | Object Sensor Low Reference | I | — |

### B316 Transmission Park Valve Position Switch




4872683

## Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35029308
Service Connector: 19369633
Description: 4-Way F 1.2 Series (BK)

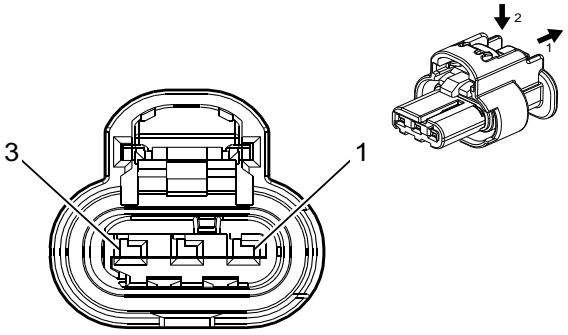
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B316 Transmission Park Valve Position Switch

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE/WH | 816 | Brake Transmission Shift Interlock Solenoid Control | I | — |
| 2 | 0.35 | BK | 1850 | Ground | I | — |
| 3 | 0.35 | GN/WH | 1932 | Shift Select Switch Park Signal | I | — |
| 4 | 0.35 | BK | 1850 | Ground | I | — |

## B321 Crankcase Pressure Sensor (LM2)




4778903

### Connector Part Information

Harness Type: Engine
OEM Connector: 33358808
Service Connector: 19369810
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

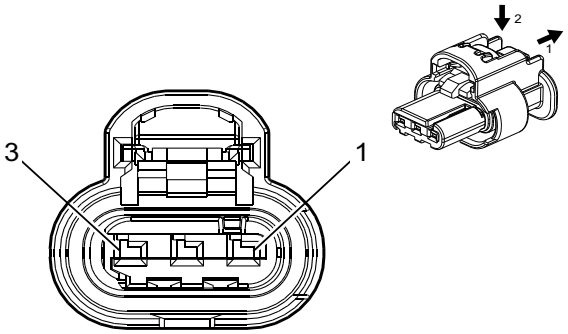
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B321 Crankcase Pressure Sensor (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | LM2 |
| 2 | 0.5 | YE/GY | 3926 | Crankcase Differential Pressure Sensor Signal | I | LM2 |
| 3 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | LM2 |

## B338A Intake Camshaft Profile Sleeve Position Sensor 1 (L3B)




4581126

### Connector Part Information

Harness Type: Engine
OEM Connector: 33358800
Service Connector: 19366844
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

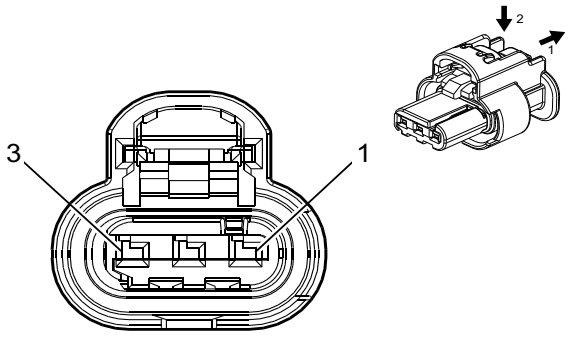
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B338A Intake Camshaft Profile Sleeve Position Sensor 1 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |
| 2 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |
| 3 | 0.5 | VT/WH | 3744 | Camshaft Intake Lobe Axial Position Signal (1) | I | — |

### B338B Intake Camshaft Profile Sleeve Position Sensor 2 (L3B)




4581126

### Connector Part Information

Harness Type: Engine
OEM Connector: 33358800
Service Connector: 19366844
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

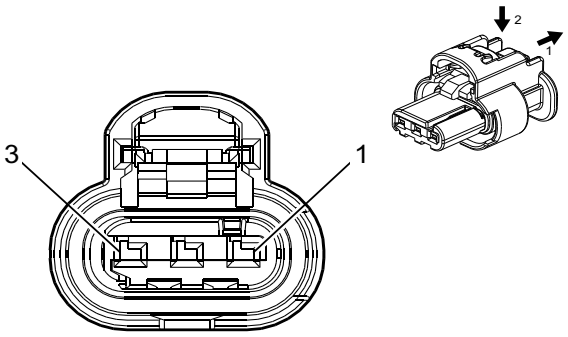
### B338B Intake Camshaft Profile Sleeve Position Sensor 2 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |

## B338B Intake Camshaft Profile Sleeve Position Sensor 2 (L3B) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 2 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |
| 3 | 0.5 | VT/GN | 3745 | Camshaft Intake Lobe Axial Position Signal (2) | I | — |

## B339A Exhaust Camshaft Profile Sleeve Position Sensor 1 (L3B)




4581126

### Connector Part Information

Harness Type: Engine
OEM Connector: 33358800
Service Connector: 19366844
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

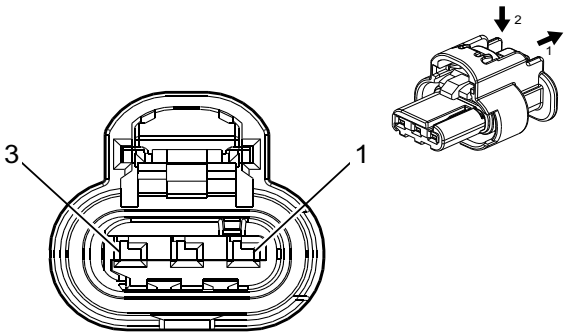
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B339A Exhaust Camshaft Profile Sleeve Position Sensor 1 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |
| 2 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |
| 3 | 0.5 | YE/WH | 3746 | Camshaft Exhaust Lobe Axial Position Signal (1) | I | — |

## B339B Exhaust Camshaft Profile Sleeve Position Sensor 2 (L3B)




4581126

### Connector Part Information

Harness Type: Engine
OEM Connector: 33358800
Service Connector: 19366844
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

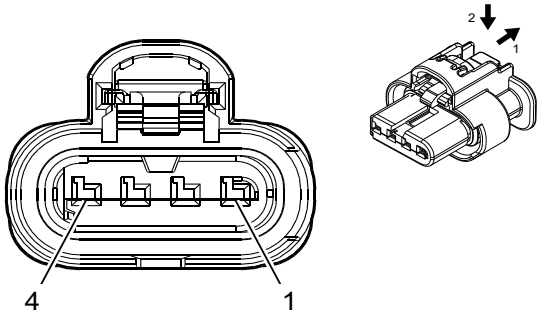
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B339B Exhaust Camshaft Profile Sleeve Position Sensor 2 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |
| 2 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |
| 3 | 0.5 | YE/GN | 3747 | Camshaft Exhaust Lobe Axial Position Signal (2) | I | — |

## B342A UHF Low Energy Remote Control Access Sensor Transceiver 1 (BOP)




4973942

### Connector Part Information

Harness Type: Body
OEM Connector: 35075013

Service Connector: 19370713
Description: 4-Way F 1.2 MCON-CB Series, Sealed (GY)

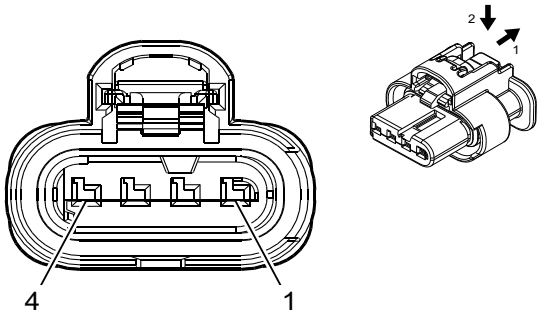
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B342A UHF Low Energy Remote Control Access Sensor Transceiver 1 (BOP)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/BK | 2738 | Virtual Key Module Local Interconnect Network 1 | I | — |
| 2 | 0.5 | RD/YE | 2340 | Battery Positive Voltage | I | — |
| 3 | 0.5 | BK/WH | 1151 | Signal Ground | I | — |
| 4 | — | — | — | Not Occupied | — | — |

### B342B UHF Low Energy Remote Control Access Sensor Transceiver 2 (BOP)




4900699

### Connector Part Information

Harness Type: Chassis
OEM Connector: 35151760
Service Connector: 84769084
Description: 4-Way F 1.2 MCON-CB Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

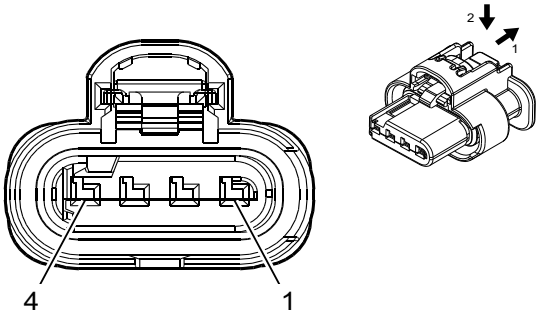
### B342B UHF Low Energy Remote Control Access Sensor Transceiver 2 (BOP)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/BK | 2738 | Virtual Key Module Local Interconnect Network 1 | I | — |
| 2 | 0.5 | RD/YE | 2340 | Battery Positive Voltage | I | — |

## B342B UHF Low Energy Remote Control Access Sensor Transceiver 2 (BOP) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 3 | 0.5 | BK/WH | 1751 | Signal Ground | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## B342C UHF Low Energy Remote Control Access Sensor Transceiver 3 (BOP)




4210809

### Connector Part Information

Harness Type: Body
OEM Connector: 33390897
Service Connector: 19367009
Description: 4-Way F 1.2 MCON-CB Series, Sealed (BK)

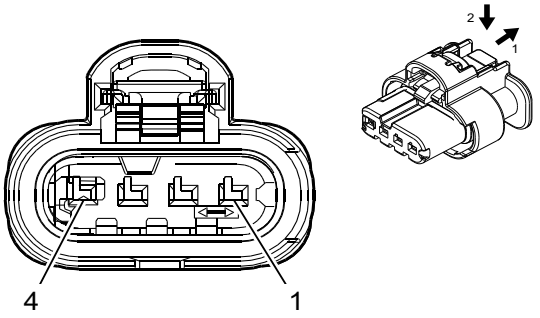
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B342C UHF Low Energy Remote Control Access Sensor Transceiver 3 (BOP)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/BK | 2738 | Virtual Key Module Local Interconnect Network 1 | I | — |
| 2 | 0.5 | RD/YE | 2340 | Battery Positive Voltage | I | — |
| 3 | 0.5 | BK/WH | 1151 | Signal Ground | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## B342D UHF Low Energy Remote Control Access Sensor Transceiver 4 (BOP)




4934614

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33367416
Service Connector: 19371196
Description: 4-Way F 1.2 MCON-CB Series, Sealed (BK)

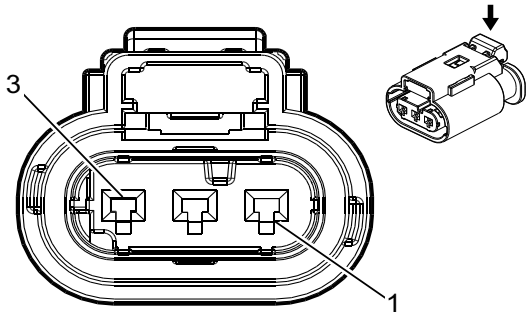
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## B342D UHF Low Energy Remote Control Access Sensor Transceiver 4 (BOP)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/BK | 2738 | Virtual Key Module Local Interconnect Network 1 | I | — |
| 2 | 0.5 | RD/YE | 2340 | Battery Positive Voltage | I | — |
| 3 | 0.5 | BK/WH | 1751 | Signal Ground | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## B345R Exhaust Pressure Differential Sensor - Exhaust Gas Recirculation (LM2)




2687961

### Connector Part Information

Harness Type: Engine
OEM Connector: 13863839
Service Connector: 13422451
Description: 3-Way F 1.2 Multilock Series, Sealed (NA)

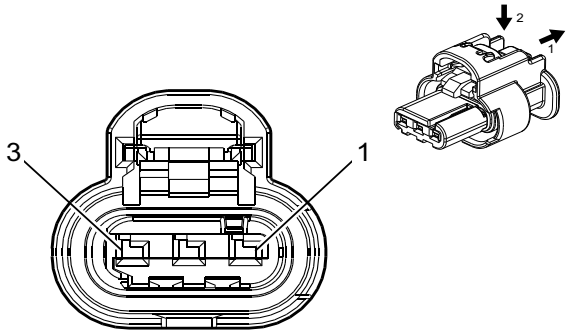
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### B345R Exhaust Pressure Differential Sensor - Exhaust Gas Recirculation (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |
| 2 | 0.5 | VT/GY | 7246 | Exhaust Gas Recirculation Differential Pressure Signal | I | — |
| 3 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |

## E6 Center High Mounted Stop Lamp (Extended Cab/Crew Cab)




4581126

### Connector Part Information

Harness Type: Center High Mounted Stop Lamp
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

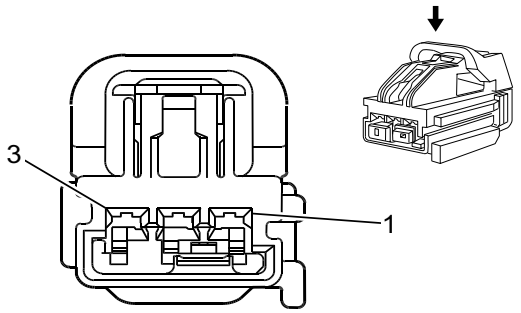
### E6 Center High Mounted Stop Lamp (Extended Cab/Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | WH/VT | 1430 | Exterior Courtesy Lamp Control | I | — |

## E6 Center High Mounted Stop Lamp (Extended Cab/Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 2 | 0.35 | VT/WH | 5065 | Stop Lamp Relay Coil Control | I | — |
| 3 | 0.35 | BK | 1050 | Ground | I | — |

## E6 Center High Mounted Stop Lamp (Regular Cab)




1787799

### Connector Part Information

Harness Type: Headliner
OEM Connector: 10847008
Service Connector: 19149536
Description: 3-Way F 1.5 Kaizen Series (L-GY)

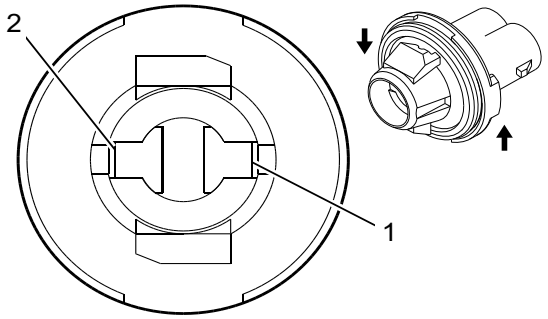
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E6 Center High Mounted Stop Lamp (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | WH/VT | 1430 | Exterior Courtesy Lamp Control | I | — |
| 2 | 0.5 | VT/GY | 1054 | Stop Lamp Control | I | — |
| 3 | 0.35 | BK | 1050 | Ground | I | — |

## E7L License Plate Lamp - Left (E63)




5153536

### Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 15324946
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Lamp Socket Wedge Base, Type W-2 (D-GY)

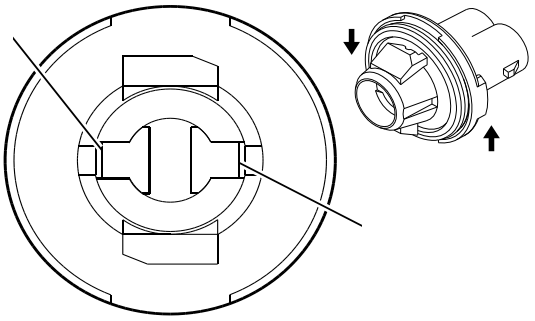
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### E7L License Plate Lamp - Left (E63)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/YE | 6846 | Rear License Lamp Control | I | — |
| 2 | 0.5 | BK | 1450 | Ground | I | — |

## E7R License Plate Lamp - Right (E63)



5153536

### Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 15324946
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Lamp Socket Wedge Base, Type W-2 (D-GY)

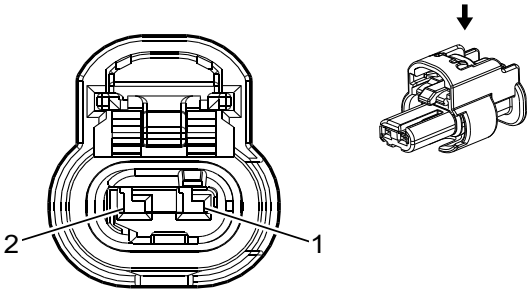
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E7R License Plate Lamp - Right (E63)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/YE | 6846 | Rear License Lamp Control | I | — |
| 2 | 0.5 | BK | 1450 | Ground | I | — |

## E8L Liftgate Courtesy Lamp (QT5/QT6)




4649903

### Connector Part Information

Harness Type: Endgate
OEM Connector: 33327048
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

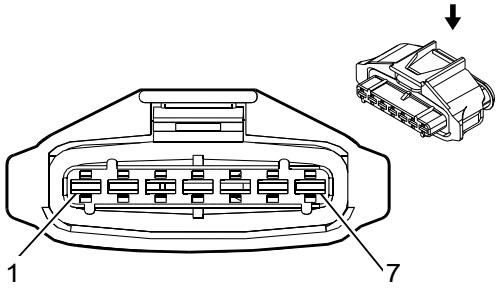
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E8L Liftgate Courtesy Lamp (QT5/QT6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/VT | 1430 | Exterior Courtesy Lamp Control | I | — |
| 2 | 0.75 | BK | 1450 | Ground | I | — |

## E11A Fuel Heater/Water in Fuel Sensor (LM2)




2537256

### Connector Part Information

Harness Type: Chassis
OEM Connector: 10774827
Service Connector: 19354080
Description: 7-Way F 2.8 Junior Power Timer Series, Sealed (BK)

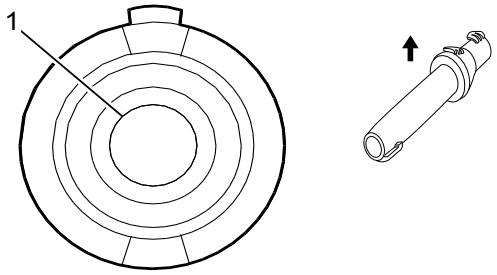
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### E11A Fuel Heater/Water in Fuel Sensor (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | BK | 1750 | Ground | I | — |
| 2 | 2.5 | VT/GN | 355 | Fuel Filter Heater Voltage | I | — |
| 3 | 0.5 | WH/RD | 6862 | Water In Fuel Sensor 5V Reference | I | — |
| 4 | 0.5 | BK/BU | 6863 | Water In Fuel Sensor Low Reference | I | — |
| 5 | 0.5 | BU/YE | 6861 | Water In Fuel Sensor Signal | I | — |
| 6 | 0.5 | BN/VT | 455 | Fuel Filter Temperature Signal | I | — |
| 7 | 0.5 | BK/VT | 412 | Fuel Filter Temperature Sensor Low Reference | I | — |

## E12A Glow Plug 1 (LM2)




2231591

### Connector Part Information

Harness Type: Glow Plug Jumper
OEM Connector: 284818-1
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way F 4.0 Series (BK)

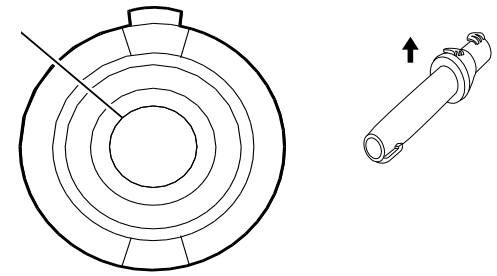
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### E12A Glow Plug 1 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | GY/RD | 1581 | Glow Plug Control 1 | I | — |

## E12B Glow Plug 2 (LM2)



2231591

### Connector Part Information

Harness Type: Glow Plug Jumper
OEM Connector: 284818-1
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way F 4.0 Series (BK)

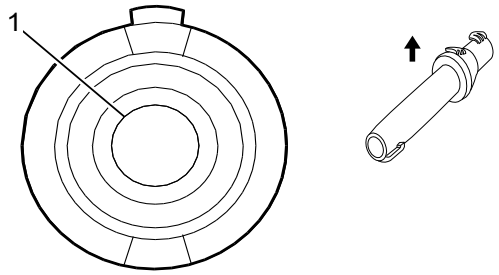
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E12B Glow Plug 2 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | GY/BK | 1582 | Glow Plug Control 2 | I | — |

## E12C Glow Plug 3 (LM2)




2231591

### Connector Part Information

Harness Type: Glow Plug Jumper
OEM Connector: 284818-1
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way F 4.0 Series (BK)

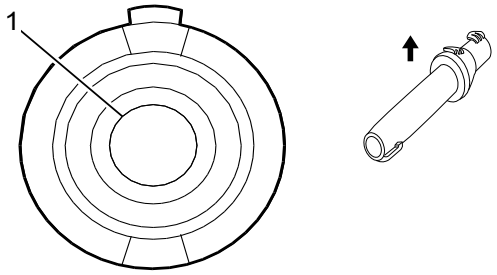
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E12C Glow Plug 3 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | GY/GN | 1583 | Glow Plug Control 3 | I | — |

## E12D Glow Plug 4 (LM2)




2231591

### Connector Part Information

Harness Type: Glow Plug Jumper
OEM Connector: 284818-1
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way F 4.0 Series (BK)

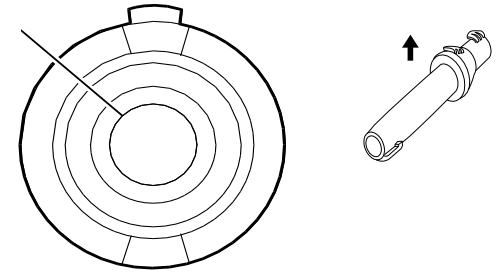
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### E12D Glow Plug 4 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | GY/YE | 1584 | Glow Plug Control 4 | I | — |

## E12E Glow Plug 5 (LM2)



2231591

### Connector Part Information

Harness Type: Glow Plug Jumper
OEM Connector: 284818-1
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way F 4.0 Series (BK)

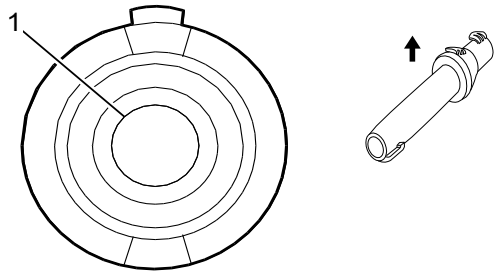
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E12E Glow Plug 5 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | GY/WH | 1585 | Glow Plug Control 5 | I | — |

## E12F Glow Plug 6 (LM2)




2231591

### Connector Part Information

Harness Type: Glow Plug Jumper
OEM Connector: 284818-1
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way F 4.0 Series (BK)

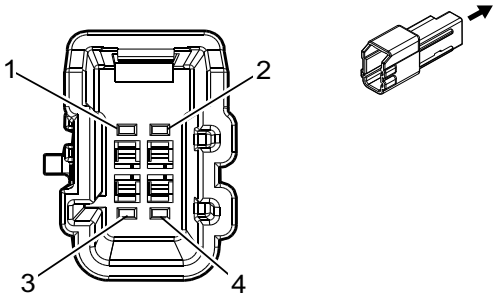
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E12F Glow Plug 6 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | GY | 1586 | Glow Plug Control 6 | I | — |

## E14A Seat Heating Element - Driver Back (KA1)




4293695

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 6098-7781
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (GY)

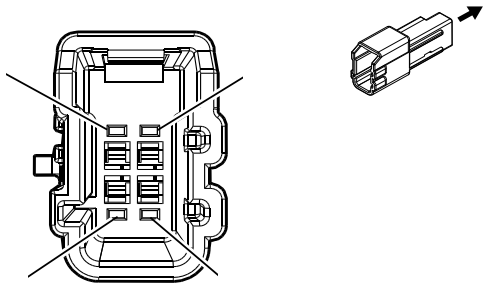
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-13 (BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### E14A Seat Heating Element - Driver Back (KA1)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BN | 2432 | Driver Heated Back Element Control | I | — |
| 2 | 0.5 | BU | 2425 | Driver Heated Back NTC Signal | I | — |
| 3 | 0.5 | BK/VT | 2426 | Driver Heated Back NTC Low Reference | I | — |
| 4 | 0.75 | BN/BK | 2078 | Driver Heated Seat Element Low Reference | I | — |

## E14B Seat Heating Element - Driver Cushion (KA1)



4293695

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 6098-7781
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (GY)

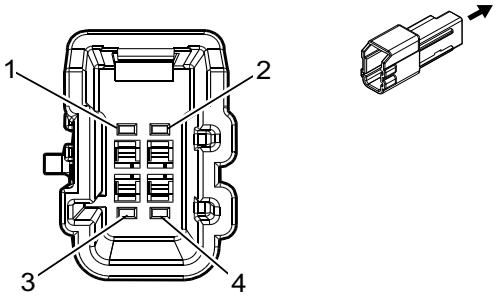
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-13 (BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E14B Seat Heating Element - Driver Cushion (KA1)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | VT/WH | 4939 | Run/Crank Ignition 1 Voltage | I | — |
| 2 | 0.5 | GN/VT | 5906 | Driver Seat Vent Motor Control 1 | I | — |
| 3 | 0.75 | BK | 1150 | Ground | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## E14C Seat Heating Element - Passenger Back (KA1)




4293695

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 6098-7781
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (GY)

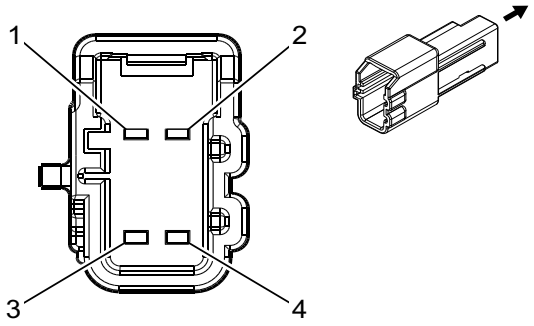
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-13 (BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E14C Seat Heating Element - Passenger Back (KA1)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | WH/BN | 2481 | Passenger Heated Back Element Control | I | — |
| 2 | 0.5 | WH/BU | 2436 | Passenger Heated Back NTC Signal | I | — |
| 3 | 0.5 | BK/GN | 2482 | Passenger Heated Back NTC Low Reference | I | — |
| 4 | 0.75 | GY/BK | 2480 | Passenger Heated Seat Element Low Reference | I | — |

## E14D Seat Heating Element - Passenger Cushion (KA1)




4210503

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 6098-7779
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (BK)

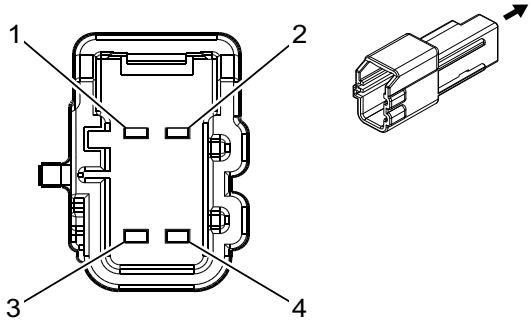
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-13 (BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E14D Seat Heating Element - Passenger Cushion (KA1)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BN/BU | 2479 | Passenger Heated Seat Element Control | I | — |
| 2 | 0.5 | WH/GY | 2434 | Passenger Heated Seat NTC Signal | I | — |
| 3 | 0.5 | BK/GY | 2435 | Passenger Heated Seat NTC Low Reference | I | — |
| 4 | 0.75 | GY/BK | 2480 | Passenger Heated Seat Element Low Reference | I | — |

## E14F Seat Heating Element - Left Rear Cushion (KA6)




4210503

### Connector Part Information

Harness Type: Left Rear Seat
OEM Connector: 6098-7779
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (BK)

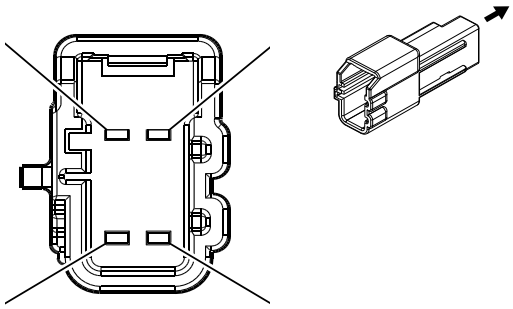
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-13 (BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### E14F Seat Heating Element - Left Rear Cushion (KA6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | GY | 2294 | Left Rear Heated Seat Cushion Element Control | I | — |
| 2 | 0.75 | WH/BU | 7047 | Left Rear Cushion NTC Signal | I | — |
| 3 | 0.75 | BU/WH | 7048 | Left Rear Cushion NTC Low Reference | I | — |
| 4 | 0.75 | BN/BK | 2295 | Left Rear Heated Seat Cushion Element Low Reference | I | — |

## E14H Seat Heating Element - Right Rear Cushion (KA6)



4210503

### Connector Part Information

Harness Type: Left Rear Seat
OEM Connector: 6098-7779
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (BK)

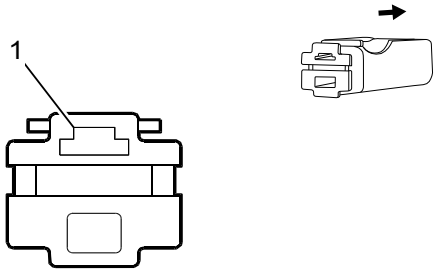
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-13 (BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E14H Seat Heating Element - Right Rear Cushion (KA6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | GN/BN | 2296 | Right Rear Heated Seat Cushion Element Control | I | — |
| 2 | 0.75 | YE/WH | 7053 | Right Rear Cushion NTC Signal | I | — |
| 3 | 0.75 | WH/BK | 7054 | Right Rear Cushion NTC Low Reference | I | — |
| 4 | 0.75 | GN/BK | 2297 | Right Rear Heated Seat Cushion Element Low Reference | I | — |

## E18 Rear Defogger Grid X1




1413086

### Connector Part Information

Harness Type: Body
OEM Connector: 13511619
Service Connector: 19367647
Description: 1-Way F 250 Series (BK)

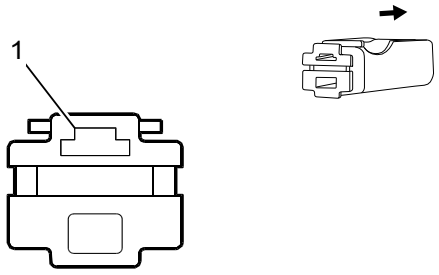
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E18 Rear Defogger Grid X1

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | BN/VT | 293 | Rear Defog Element Control | I | — |

## E18 Rear Defogger Grid X2




1413086

### Connector Part Information

Harness Type: Body
OEM Connector: 13511619
Service Connector: 19367647
Description: 1-Way F 250 Series (BK)

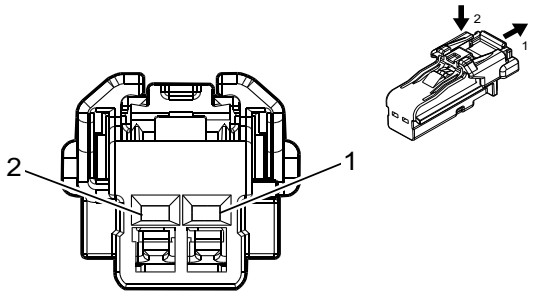
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E18 Rear Defogger Grid X2

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | BK | 1350 | Ground | I | — |

## E28 Center Console Compartment Lamp (D07)




4115691

### Connector Part Information

Harness Type: Floor Console
OEM Connector: 35026312
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Series (BK)

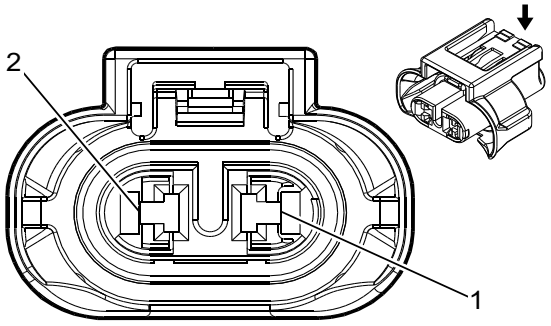
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### E28 Center Console Compartment Lamp (D07)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK | 1250 | Ground | I | — |
| 2 | 0.5 | WH/BN | 6815 | Inadvertent Power Control | I | — |

## E29LF Fog Lamp - Left Front (T3U)




3404058

### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 13818129
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 APEX Series, Sealed (BK)

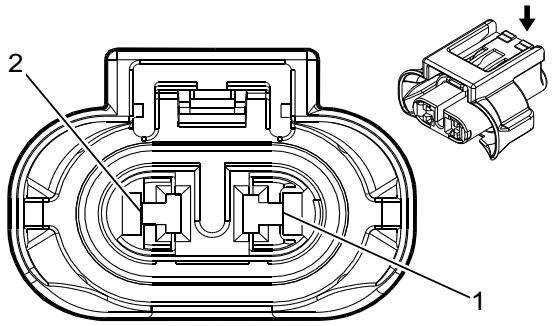
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### E29LF Fog Lamp - Left Front (T3U)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/VT | 2234 | Front Fog Lamp Control | I | — |
| 2 | 0.5 | BK | 150 | Ground | I | — |

### E29RF Fog Lamp - Right Front (T3U)




3404058

#### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 13818129
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 APEX Series, Sealed (BK)

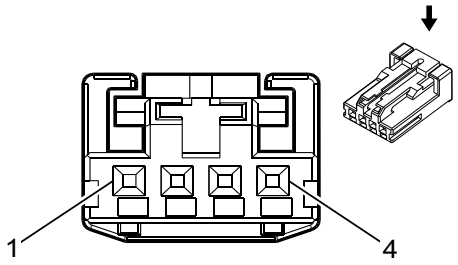
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### E29RF Fog Lamp - Right Front (T3U)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/VT | 2234 | Front Fog Lamp Control | I | — |
| 2 | 0.5 | BK | 250 | Ground | I | — |

## E37B Dome/Reading Lamps - 2nd Row (Extended Cab/Crew Cab)




2717162

### Connector Part Information

Harness Type: Headliner
OEM Connector: 13969166
Service Connector: 13587297
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

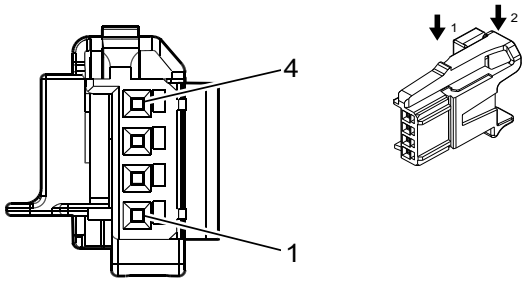
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E37B Dome/Reading Lamps - 2nd Row (Extended Cab/Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | RD/YE | 240 | Battery Positive Voltage | I | — |
| 2 | 0.35 | GY | 157 | Interior Lamp Control | I | — |
| 3 | 0.5 | BK | 1050 | Ground | I | — |
| 4 | 0.5 | WH/BN | 6815 | Inadvertent Power Control | I | — |

## E40 Electrical Auxiliary Heater X2 (C32)




5191926

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33358011
Service Connector: 84724190
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

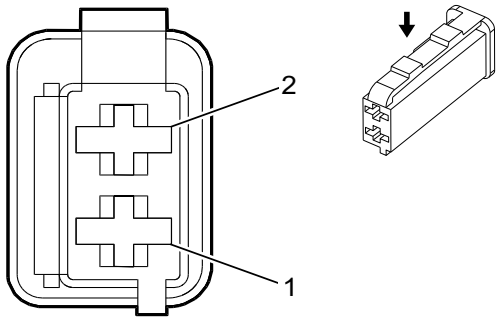
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E40 Electrical Auxiliary Heater X2 (C32)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | VT | 3195 | Auxiliary Heater Control | I | — |
| 2 | 0.5 | VT/GY | 539 | Run/Crank Ignition 1 Voltage | I | — |
| 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.5 | BK | 1050 | Ground | I | — |

## E63D Flood Lamp - Driver Door Handle (AU3)




2339593

### Connector Part Information

Harness Type: Driver Door Trim
OEM Connector: 13670097
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.6 Timer Series (BK)

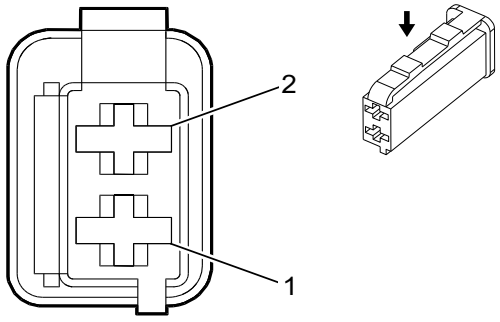
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E63D Flood Lamp - Driver Door Handle (AU3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | WH/YE | 7557 | LED Ambient Lighting Control 1 | I | — |
| 2 | 0.35 | BK | 1150 | Ground | I | — |

## E63P Flood Lamp - Passenger Door Handle (AU3)




2339593

### Connector Part Information

Harness Type: Passenger Door Trim
OEM Connector: 13670097
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.6 Timer Series (BK)

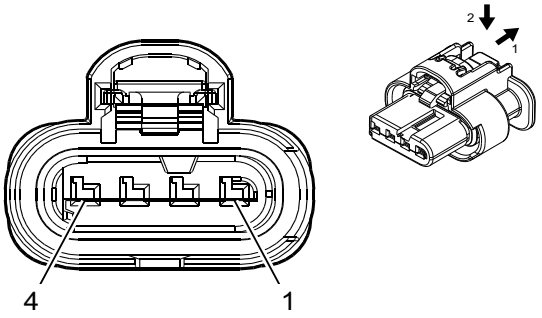
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## E63P Flood Lamp - Passenger Door Handle (AU3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | WH/YE | 7557 | LED Ambient Lighting Control 1 | I | — |
| 2 | 0.75 | BK | 1250 | Ground | I | — |

## F101 Passenger Instrument Panel Air Bag




4900699

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35053710
Service Connector: 19371193
Description: 4-Way F 1.2 MCON-CB Series, Sealed (YE)

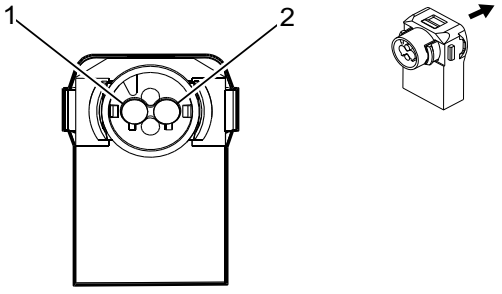
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### F101 Passenger Instrument Panel Air Bag

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE/OG | 3025 | Passenger IP Module Stage 1 High Control | I | — |
| 2 | 0.35 | OG/WH | 3024 | Passenger IP Module Stage 1 Low Control | I | — |
| 3 | 0.35 | GY/OG | 3027 | Passenger IP Module Stage 2 High Control | I | — |
| 4 | 0.35 | OG/VT | 3026 | Passenger IP Module Stage 2 Low Control | I | — |

## F105L Roof Rail Air Bag - Left




4679778

### Connector Part Information

Harness Type: Body
OEM Connector: 33345783
Service Connector: 19355491
Description: 2-Way F ABX-5 Series (GY with YE Cover)

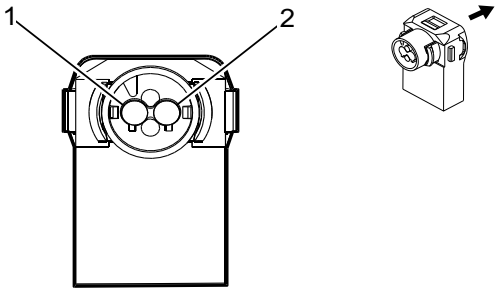
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### F105L Roof Rail Air Bag - Left

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/GN | 5019 | Left Front Head Curtain Module High Control | I | — |
| 2 | 0.5 | VT/OG | 5020 | Left Front Head Curtain Module Low Control | I | — |

### F105R Roof Rail Air Bag - Right (Extended Cab)




4679778

### Connector Part Information

Harness Type: Body
OEM Connector: 33345783
Service Connector: 19355491
Description: 2-Way F ABX-5 Series (GY with YE Cover)

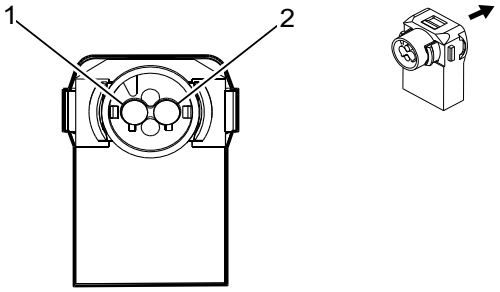
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### F105R Roof Rail Air Bag - Right (Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/GY | 5021 | Right Front Head Curtain Module High Control | I | — |
| 2 | 0.5 | WH/OG | 5022 | Right Front Head Curtain Module Low Control | I | — |

## F105R Roof Rail Air Bag - Right (Regular Cab)




4679778

### Connector Part Information

Harness Type: Body
OEM Connector: 33345773
Service Connector: 19355491
Description: 2-Way F ABX-5 Series (GY with YE Cover)

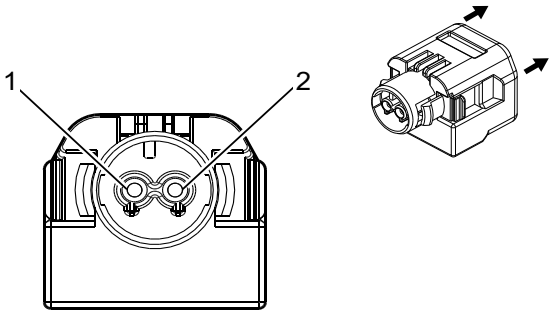
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### F105R Roof Rail Air Bag - Right (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/GY | 5021 | Right Front Head Curtain Module High Control | I | — |
| 2 | 0.5 | WH/OG | 5022 | Right Front Head Curtain Module Low Control | I | — |

## F106D Seat Side Air Bag - Driver (A2S)




4772226

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 1-1802367-1

Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.0 Series (PK with YE Cover)

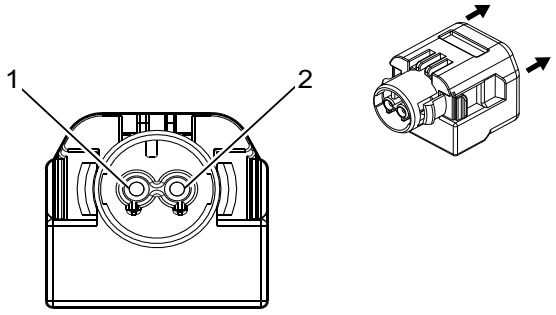
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### F106D Seat Side Air Bag - Driver (A2S)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/BU | 3068 | Driver Side Impact Module High Control | I | — |
| 2 | 0.5 | BK/OG | 3069 | Driver Side Impact Module Low Control | I | — |

### F106D Seat Side Air Bag - Driver (A2X)




4772226

## Connector Part Information

Harness Type: Driver Seat
OEM Connector: 1801935-1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.0 Series (PK with YE Cover)

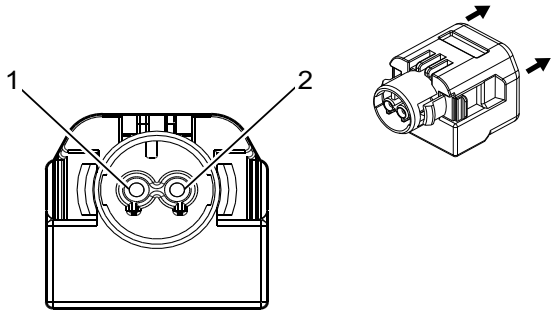
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### F106D Seat Side Air Bag - Driver (A2X)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/BU | 3068 | Driver Side Impact Module High Control | I | — |
| 2 | 0.5 | BK/OG | 3069 | Driver Side Impact Module Low Control | I | — |

## F106P Seat Side Air Bag - Passenger




4772226

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 1801935-1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.0 Series (PK with YE Cover)

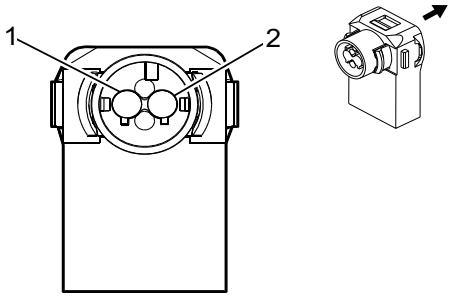
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### F106P Seat Side Air Bag - Passenger

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/GY | 3066 | Passenger Side Impact Module High Control | I | — |
| 2 | 0.5 | BU/OG | 3067 | Passenger Side Impact Module Low Control | I | — |

## F112D Seat Belt Retractor Pretensioner - Driver (Extended Cab)




4241364

### Connector Part Information

Harness Type: Body
OEM Connector: 33345778
Service Connector: 19355490
Description: 2-Way F ABX-5 Series (PU with YE Cover)

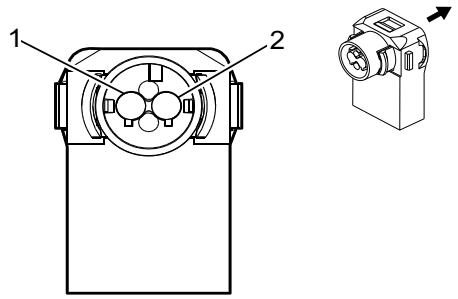
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## F112D Seat Belt Retractor Pretensioner - Driver (Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/WH | 3477 | Driver Seat Belt Retractor Pretensioner High Control | I | — |
| 2 | 0.5 | GY/OG | 3478 | Driver Seat Belt Retractor Pretensioner Low Control | I | — |

## F112D Seat Belt Retractor Pretensioner - Driver (Regular Cab)




4241364

### Connector Part Information

Harness Type: Body
OEM Connector: 33345778
Service Connector: 19355490
Description: 2-Way F ABX-5 Series (PU with YE Cover)

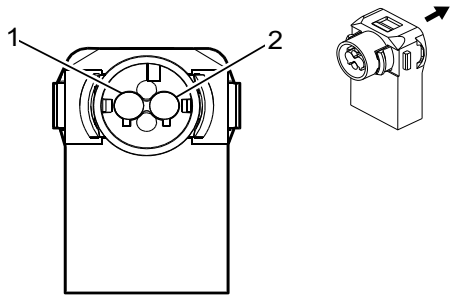
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## F112D Seat Belt Retractor Pretensioner - Driver (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/WH | 3477 | Driver Seat Belt Retractor Pretensioner High Control | I | — |
| 2 | 0.5 | GY/OG | 3478 | Driver Seat Belt Retractor Pretensioner Low Control | I | — |

## F112P Seat Belt Retractor Pretensioner - Passenger




4241364

### Connector Part Information

Harness Type: Body
OEM Connector: 33345778
Service Connector: 19355490
Description: 2-Way F ABX-5 Series (PU with YE Cover)

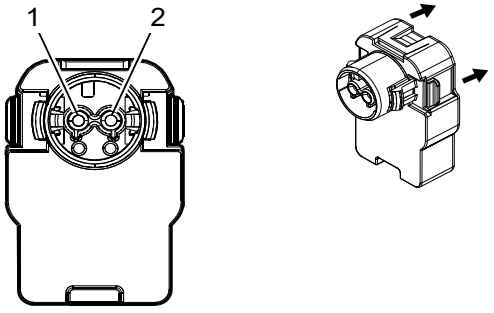
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### F112P Seat Belt Retractor Pretensioner - Passenger

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/GN | 3475 | Passenger Seat Belt Retractor Pretensioner High Control | I | — |
| 2 | 0.5 | WH/OG | 3476 | Passenger Seat Belt Retractor Pretensioner Low Control | I | — |

## F113D Seat Belt Anchor Pretensioner - Driver (Crew Cab)




4823732

### Connector Part Information

Harness Type: Body
OEM Connector: 1-1801930-1

Service Connector: 13598467
Description: 2-Way F 1.0 Series (PK with YE Cover)

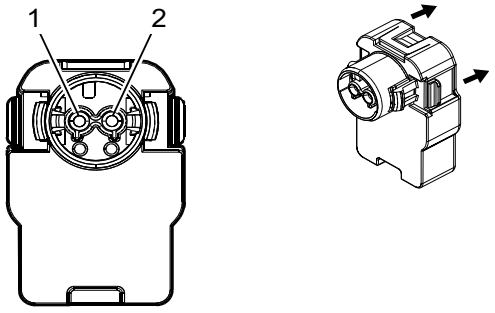
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## F113D Seat Belt Anchor Pretensioner - Driver (Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/YE | 3481 | Driver Seat Belt Anchor Pretensioner High Control | I | — |
| 2 | 0.5 | YE/OG | 3482 | Driver Seat Belt Anchor Pretensioner Low Control | I | — |

## F113D Seat Belt Anchor Pretensioner - Driver (Extended Cab)




4823732

### Connector Part Information

Harness Type: Body
OEM Connector: 1-1801930-1
Service Connector: 13598467
Description: 2-Way F 1.0 Series (PK with YE Cover)

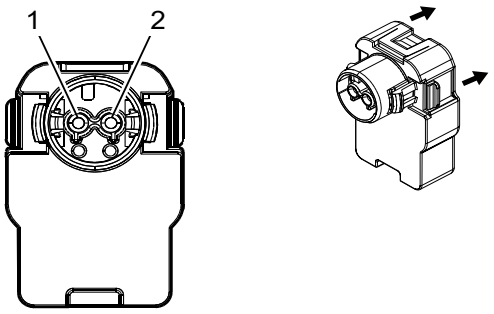
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## F113D Seat Belt Anchor Pretensioner - Driver (Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/YE | 3481 | Driver Seat Belt Anchor Pretensioner High Control | I | — |
| 2 | 0.5 | YE/OG | 3482 | Driver Seat Belt Anchor Pretensioner Low Control | I | — |

## F113D Seat Belt Anchor Pretensioner - Driver (Regular Cab)




4823732

### Connector Part Information

Harness Type: Body
OEM Connector: 1-1801930-1
Service Connector: 13598467
Description: 2-Way F 1.0 Series (PK with YE Cover)

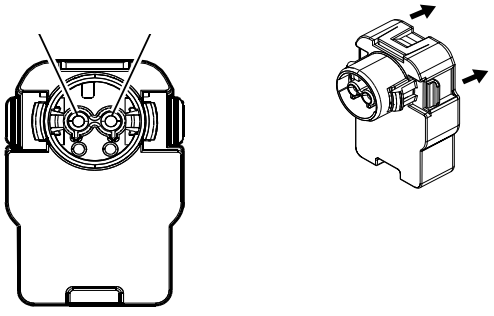
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### F113D Seat Belt Anchor Pretensioner - Driver (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/YE | 3481 | Driver Seat Belt Anchor Pretensioner High Control | I | — |
| 2 | 0.5 | YE/OG | 3482 | Driver Seat Belt Anchor Pretensioner Low Control | I | — |

## F113P Seat Belt Anchor Pretensioner - Passenger (Crew Cab)



4823732

### Connector Part Information

Harness Type: Body
OEM Connector: 1-1801930-1
Service Connector: 13598467
Description: 2-Way F 1.0 Series (PK with YE Cover)

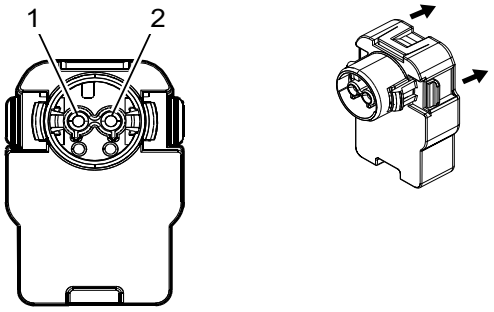
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## F113P Seat Belt Anchor Pretensioner - Passenger (Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/BN | 3479 | Passenger Seat Belt Anchor Pretensioner High Control | I | — |
| 2 | 0.5 | GY/OG | 3480 | Passenger Seat Belt Anchor Pretensioner Low Control | I | — |

## F113P Seat Belt Anchor Pretensioner - Passenger (Extended Cab)




4823732

### Connector Part Information

Harness Type: Body
OEM Connector: 1-1801930-1
Service Connector: 13598467
Description: 2-Way F 1.0 Series (PK with YE Cover)

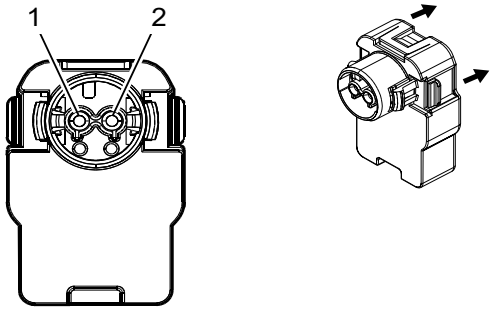
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## F113P Seat Belt Anchor Pretensioner - Passenger (Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/BN | 3479 | Passenger Seat Belt Anchor Pretensioner High Control | I | — |
| 2 | 0.5 | GY/OG | 3480 | Passenger Seat Belt Anchor Pretensioner Low Control | I | — |

## F113P Seat Belt Anchor Pretensioner - Passenger (Regular Cab)




4823732

### Connector Part Information

Harness Type: Body
OEM Connector: 1-1801930-1
Service Connector: 13598467
Description: 2-Way F 1.0 Series (PK with YE Cover)

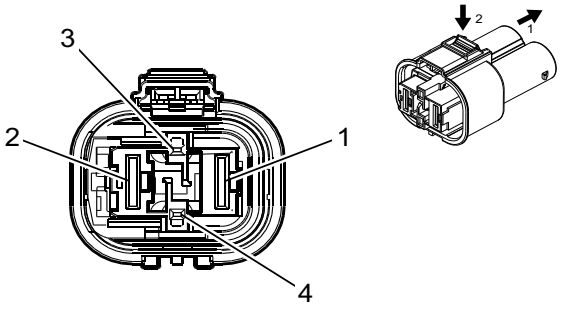
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## F113P Seat Belt Anchor Pretensioner - Passenger (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | OG/BN | 3479 | Passenger Seat Belt Anchor Pretensioner High Control | I | — |
| 2 | 0.5 | GY/OG | 3480 | Passenger Seat Belt Anchor Pretensioner Low Control | I | — |

## G10B Cooling Fan Motor - Lower (L3B)




4847569

### Connector Part Information

Harness Type: Engine
OEM Connector: 33376654
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.2, 9.5 MCON Series (BK)

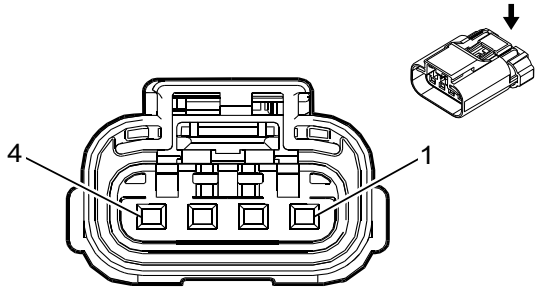
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-22 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## G10B Cooling Fan Motor - Lower (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 5 | RD/VT | 842 | Battery Positive Voltage | II | — |
| 2 | 5 | BK | 4450 | Ground | II | — |
| 3 | 0.5 | GN/YE | 4623 | Local Interconnect Network Serial Data Bus 23 | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## G10L Cooling Fan Motor - Left




4732789

### Connector Part Information

Harness Type: Engine
OEM Connector: 33234243
Service Connector: 84625007
Description: 4-Way F 2.8 APEX Series, Sealed (BK)

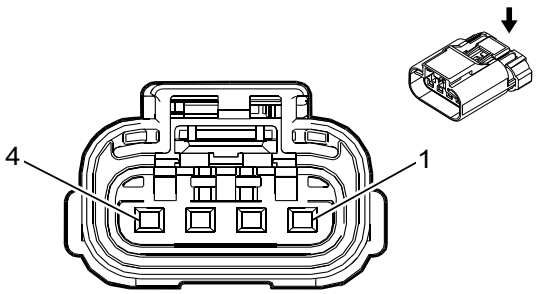
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## G10L Cooling Fan Motor - Left

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 5 | BK | 4450 | Ground | III | — |
| 2 | 5 | RD/WH | 342 | Battery Positive Voltage | III | — |
| 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.5 | BN/YE | 473 | High Speed Cooling Fan Relay Control | II | L3B |
| | 0.75 | GN/VT | 4621 | Local Interconnect Network Serial Data Bus 21 | II | L82/L84/L87 |
| | 0.75 | BN/YE | 473 | High Speed Cooling Fan Relay Control | I | LM2 |

## G10R Cooling Fan Motor - Right (L3B/L82/L84/L87/LV3)




4732789

### Connector Part Information

Harness Type: Engine
OEM Connector: 33234243
Service Connector: 84625007
Description: 4-Way F 2.8 APEX Series, Sealed (BK)

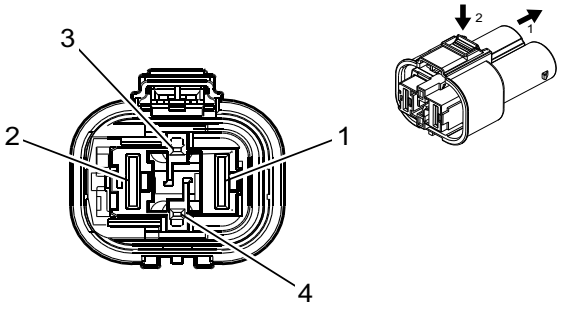
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| I | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## G10R Cooling Fan Motor - Right (L3B/L82/L84/L87/LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 5 | BK | 4450 | Ground | II | — |
| 2 | 5 | RD/GY | 642 | Battery Positive Voltage | II | — |
| 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.75 | GN/VT | 4621 | Local Interconnect Network Serial Data Bus 21 | I | — |
| | 0.75 | GN/VT | 4621 | Local Interconnect Network Serial Data Bus 21 | I | L82/L84/L87 |
| | 0.5 | BN/YE | 473 | High Speed Cooling Fan Relay Control | I | LM2 |

## G10R Cooling Fan Motor - Right (LM2)




5187743

### Connector Part Information

Harness Type: Engine
OEM Connector: 35194180
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.2, 9.5 MCON Series (GY)

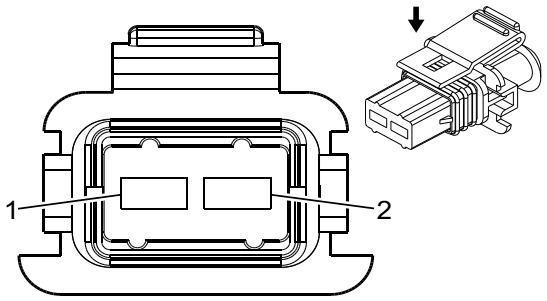
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-22 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## G10R Cooling Fan Motor - Right (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 10 | RD | 642 | Battery Positive Voltage | II | — |
| 2 | 8 | BK | 4450 | Ground | II | — |
| 3 | 0.5 | BN/YE | 473 | High Speed Cooling Fan Relay Control | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## G13 Generator X1 (VYU)




1522871

### Connector Part Information

Harness Type: Snow Plow Jumper
OEM Connector: 12186308
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Junior Power Timer Series, Sealed (BK)

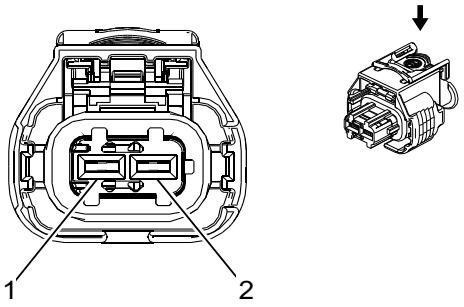
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## G13 Generator X1 (VYU)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN | 9025 | — | I | — |
| 2 | 0.5 | GY | 23 | Generator Field Duty Cycle Signal | I | — |

## G13 Generator X1 (-VYU)




2577394

### Connector Part Information

Harness Type: Engine
OEM Connector: 13930085
Service Connector: 13384371
Description: 2-Way F 2.8 Series, Sealed (BK)

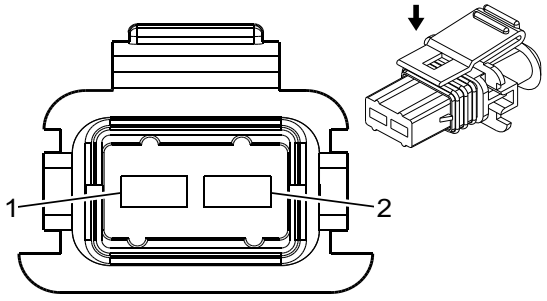
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### G13 Generator X1 (-VYU)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN | 25 | Charge Indicator Control | I | — |
| 2 | 0.5 | GY | 23 | Generator Field Duty Cycle Signal | I | — |

## G13E Generator - Auxiliary X1 (VYU)




1522871

### Connector Part Information

Harness Type: Snow Plow Jumper
OEM Connector: 12186308
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Junior Power Timer Series, Sealed (BK)

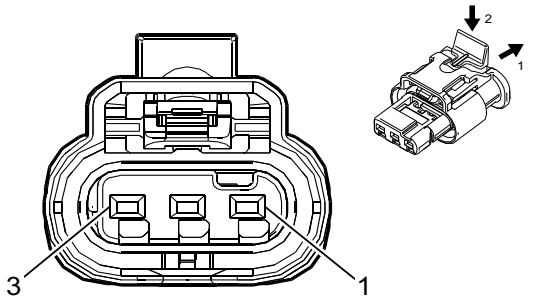
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## G13E Generator - Auxiliary X1 (VYU)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN | 9025 | — | I | — |
| 2 | — | — | — | Not Occupied | — | — |

## G17 Heater Coolant Pump (L84/L87/LM2)




4249125

### Connector Part Information

Harness Type: Engine
OEM Connector: 33176362
Service Connector: 19366844
Description: 3-Way F 1.2 MCP Series, Sealed (BN)

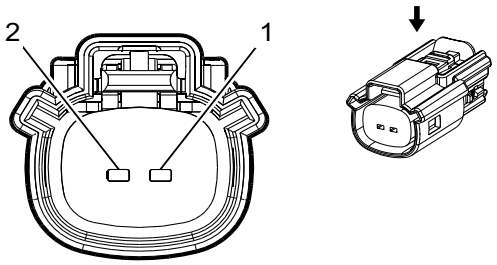
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## G17 Heater Coolant Pump (L84/L87/LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK | 4450 | Ground | I | — |
| | 1 | BK | 4450 | Ground | I | — |
| 2 | 0.5 | YE/BU | 5126 | After Boil Heater Pump Control | I | — |
| 3 | 0.5 | GN/BN | 2732 | Local Interconnect Network Bus 32 | I | — |

## G18 High Pressure Fuel Pump (L3B)




2474713

### Connector Part Information

Harness Type: Engine
OEM Connector: 13782480
Service Connector: 13577534
Description: 2-Way F 150 MX Series, Sealed (BK)

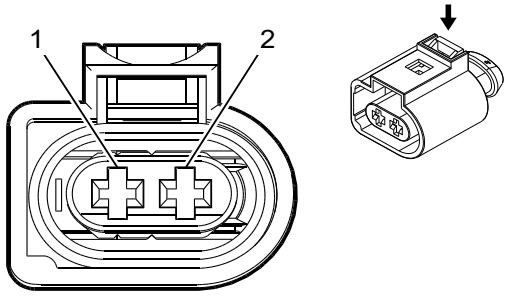
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### G18 High Pressure Fuel Pump (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | VT/BK | 7300 | High Pressure Fuel Pump Actuator Low - Control | I | — |
| 2 | 0.75 | YE | 7301 | High Pressure Fuel Pump Actuator High - Control | I | — |

## G24 Windshield Washer Pump (Crew Cab)




2474738

### Connector Part Information

Harness Type: Body
OEM Connector: 10863916

Service Connector: 19368727
Description: 2-Way F 2.8 MDK5 Series, Sealed (BK)

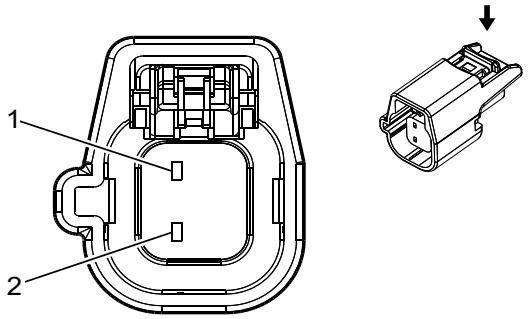
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### G24 Windshield Washer Pump (Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/VT | 228 | Windshield Washer Pump Control | I | — |
| 2 | 0.5 | BK | 150 | Ground | I | — |

### G24 Windshield Washer Pump (Extended Cab)




3958652

## Connector Part Information

Harness Type: Body
OEM Connector: 33113086
Service Connector: 13593220
Description: 2-Way F 1.5 Series (L-GY)

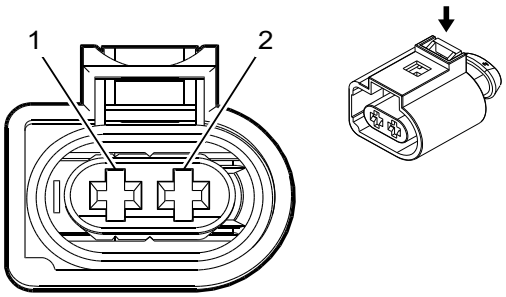
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### G24 Windshield Washer Pump (Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | VT | 185 | Low Washer Fluid Indicator Control | I | — |
| 2 | 0.75 | BK | 150 | Ground | I | — |

## G24 Windshield Washer Pump (Regular Cab)




2474738

### Connector Part Information

Harness Type: Body
OEM Connector: 10863916
Service Connector: 19368727
Description: 2-Way F 2.8 MDK5 Series, Sealed (BK)

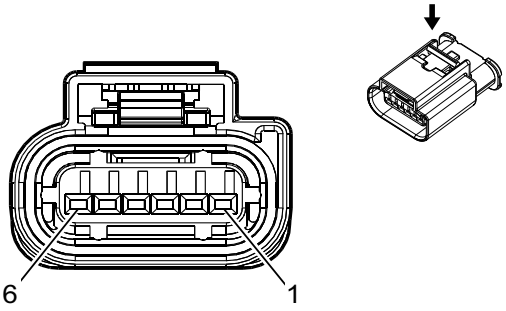
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### G24 Windshield Washer Pump (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/VT | 228 | Windshield Washer Pump Control | I | — |
| 2 | 0.5 | BK | 150 | Ground | I | — |

## G58 Evaporative Emission Purge Pump (L3B)




3747579

### Connector Part Information

Harness Type: Engine
OEM Connector: 33225994
Service Connector: 19354437
Description: 6-Way F 1.2 MCON Series, Sealed (BK)

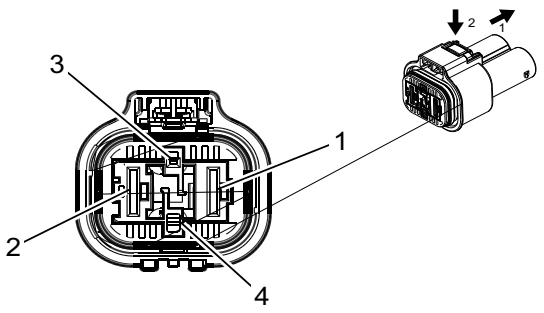
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## G58 Evaporative Emission Purge Pump (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/BU | 2447 | Evaporative Purge Pump Pressure Signal | I | — |
| 2 | 0.75 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 3 | 0.75 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 4 | 0.5 | GN/BN | 2732 | Local Interconnect Network Bus 32 | I | — |
| 5 | 0.5 | BK | 4450 | Ground | I | — |
| 6 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | — |

## G59 Engine Coolant Pump (L3B)




4994735

### Connector Part Information

Harness Type: Engine
OEM Connector: 33368755
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.2, 9.5 MCON Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-22 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

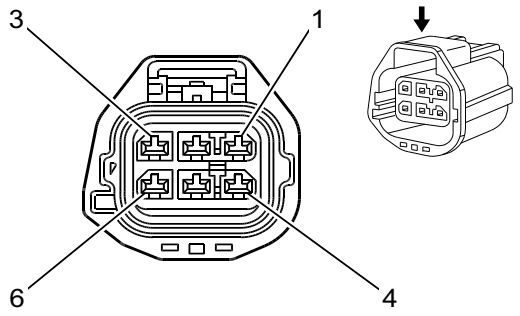
## G59 Engine Coolant Pump (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 10 | RD/BN | 440 | Battery Positive Voltage | II | — |
| 2 | 10 | BK | 4450 | Ground | II | — |

## G59 Engine Coolant Pump (L3B) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 3 | 0.5 | GN/BN | 2732 | Local Interconnect Network Bus 32 | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## K4 Assist Step Control Module X1 (BRS)




1420587

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33334914
Service Connector: 19368855
Description: 6-Way F 2.8 Series, Sealed (GY)

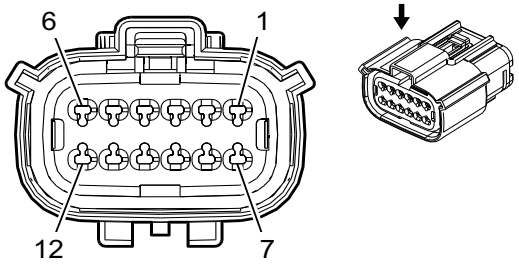
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## K4 Assist Step Control Module X1 (BRS)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2 | GN | 7469 | Articulating Running Boards Motor Right Control Retract | I | — |
| 2 | 2.5 | BK | 2150 | Ground | I | — |
| 3 | 2 | WH/BN | 7471 | Articulating Running Boards Motor Left Control Extend | I | — |
| 4 | 2 | BU | 7470 | Articulating Running Boards Motor Right Control Extend | I | — |
| 5 | 2.5 | RD/YE | 1142 | Battery Positive Voltage | I | — |
| 6 | 2 | GY | 7472 | Articulating Running Boards Motor Left Control Retract | I | — |

## K4 Assist Step Control Module X2 (BRS)




2424960

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33297566
Service Connector: 19352907
Description: 12-Way F 150 MX Series, Sealed (BK)

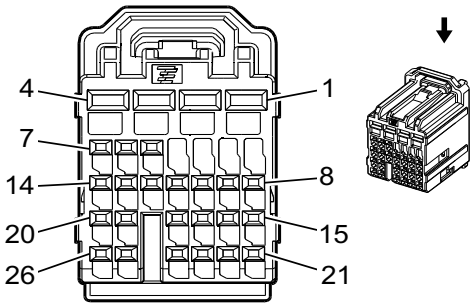
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

### K4 Assist Step Control Module X2 (BRS)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/RD | 7468 | Running Boards Motor Hall Sensor Left 5V Reference | I | — |
| 2 | 0.5 | GN/RD | 7464 | Running Boards Motor Hall Sensor Right 5V Reference | I | — |
| 3 | 0.5 | YE | 7467 | Running Boards Motor Hall Sensor Left Signal | I | — |
| 4 | 0.5 | VT | 7465 | Running Boards Motor Hall Sensor Right Signal | I | — |
| 5 | 0.5 | YE/BN | 7466 | Running Boards Motor Hall Sensor Left Low Reference | I | — |
| 6 | 0.5 | YE/BK | 7463 | Running Boards Motor Hall Sensor Right Low Reference | I | — |
| 7 | 0.5 | BK/BU | 685 | Articulating Running Board Kick Switch Return | I | — |
| 8 | 0.5 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.5 | BN/WH | 7462 | Running Boards Disable Signal | I | — |
| 11 | 0.5 | BU/GN | 4746 | Articulating Running Board Left Kick Switch Signal | I | — |
| 12 | 0.5 | WH | 4747 | Articulating Running Board Right Kick Switch Signal | I | — |

## K9 Body Control Module X1




2537268

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13824335
Service Connector: 13576031
Description: 26-Way F 0.64, 2.8 Series (NA)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4443 | Sumitomo 22 | E | A |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4444 | Sumitomo 22 | 2 | A |
| III | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4445 | Sumitomo 22 | F | D |
| IV | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

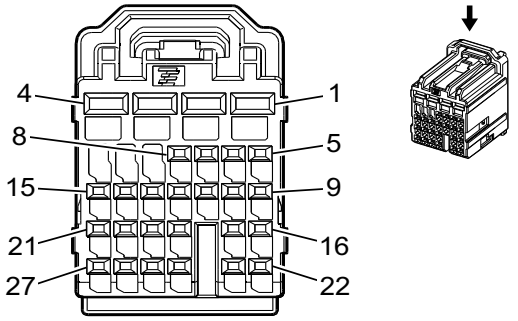
### K9 Body Control Module X1

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | BK | 1850 | Ground | III | — |
| 2 | 1 | RD/BU | 2540 | Battery Positive Voltage | II | — |
| 3 | 0.5 | RD/GY | 2140 | Battery Positive Voltage | I | — |
| 4 | 0.75 | RD/BN | 2240 | Battery Positive Voltage | II | — |
| 5 | 0.5 | WH | 6816 | Indicator Dimming Control | IV | — |
| 6 - 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.35 | BN/BK | 5720 | Ignition Mode Switch Accessory LED Signal | IV | — |
| 9 | 0.35 | WH/BN | 7555 | Lighting Control Switch Signal | IV | — |
| 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | GN/BN | 306 | Headlamp Switch Headlamps Off Signal Control | IV | — |
| 12 | 0.35 | GN | 1111 | Auto Stop Start Switch Signal | IV | — |
| 13 | 0.35 | YE | 7556 | Lighting Control Switch Reference | IV | — |
| 14 | 0.35 | GY/GN | 328 | Interior Lamp Defeat Switch Signal | IV | — |
| 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.35 | WH/VT | 103 | Headlamp Switch On Signal | IV | — |
| 17 | — | — | — | Not Occupied | — | — |

## K9 Body Control Module X1 (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 18 | 0.35 | BU/VT | 5904 | Steering Column Lock Status Signal | IV | — |
| 19 | 0.35 | BK/BN | 5360 | Brake Apply Sensor Low Reference | IV | — |
| 20 | 0.35 | BU/BK | 5719 | Ignition Mode Switch Start LED Signal | IV | — |
| 21 | 0.35 | GY | 728 | Security Indicator Control | IV | — |
| 22 | 0.35 | GN/GY | 13 | Headlamp Switch Park Lamp Signal | IV | — |
| 23 | 0.35 | GY | 157 | Interior Lamp Control | IV | — |
| 24 | 0.35 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | IV | — |
| 25 | 0.35 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | IV | — |
| 26 | 0.35 | BU/WH | 3275 | Remote Function Actuator Receive Signal | IV | — |

## K9 Body Control Module X2




2537269

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13824336
Service Connector: 13576032
Description: 27-Way F 0.64, 2.8 Series (BU)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4443 | Sumitomo 22 | E | A |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4445 | Sumitomo 22 | F | D |
| III | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

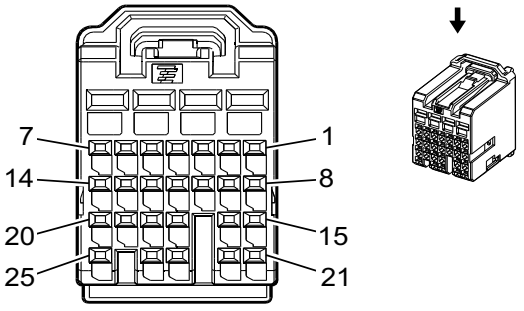
## K9 Body Control Module X2

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | RD/WH | 2740 | Battery Positive Voltage | I | — |
| 2 | 2.5 | BK | 1850 | Ground | II | — |
| 3 | 0.5 | RD/BN | 2940 | Battery Positive Voltage | I | — |

## K9 Body Control Module X2 (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 4 | 2.5 | RD/VT | 4040 | Battery Positive Voltage | II | — |
| 5 | 0.35 | VT/GN | 7558 | LED Ambient Lighting Control 2 | III | — |
| 6 | 0.35 | GN | 1110 | Auto Stop Start Indicator Control | III | — |
| 7 | 0.35 | BU/YE | 5361 | Brake Apply Sensor Signal | III | — |
| 8 - 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.35 | WH/BU | 278 | Ambient Light Sensor Signal | III | — |
| 11 | 0.35 | YE/BU | 7295 | Left Minor Endgate Ajar Signal | III | — |
| 12 | 0.35 | WH/BN | 7296 | Right Minor Endgate Ajar Signal | III | — |
| 13 | 0.35 | WH | 5359 | Brake Apply Sensor Control | III | — |
| 14 | 0.35 | BU/VT | 1788 | Traction Control Switch Signal 1 | III | — |
| 15 | 0.35 | GY/WH | 4630 | AC Power Outlet Switch Signal | III | — |
| 16 | 0.35 | GY | 3273 | Remote Function Actuator Low Reference | III | — |
| 17 | 0.35 | BU/GN | 5723 | Ignition Mode Switch Mode Voltage | III | — |
| 18 | 0.35 | GY | 158 | Cargo Lamp Switch Signal | III | — |
| 19 | 0.35 | WH/GY | 2935 | Task Lamp Switch Signal | III | — |
| 20 | 0.5 | WH/BU | 3691 | Trailer Brake Apply Signal | III | — |
| 21 | 0.5 | GN/GY | 6135 | Local Interconnect Network Serial Data Bus 4 | III | — |
| 22 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | III | — |
| 23 - 24 | — | — | — | Not Occupied | — | — |
| 25 | 0.35 | GY/WH | 3272 | Remote Function Actuator Control | III | — |
| 26 | 0.35 | GN/WH | 111 | Hazard Switch Signal | III | — |
| 27 | 0.35 | YE/GN | 3274 | Remote Function Actuator Transmit Signal | III | — |

## K9 Body Control Module X3




2537274

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13824337
Service Connector: 13576037
Description: 25-Way F 0.64, 2.8 Series (GN)

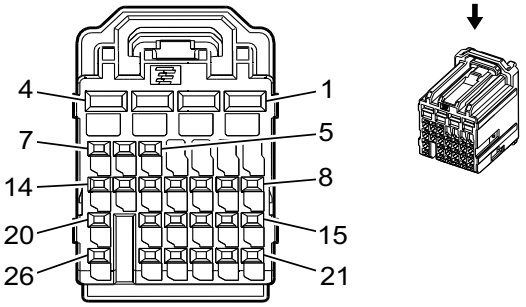
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K9 Body Control Module X3

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GN/GY | 3277 | Vehicle Anti-Theft System Immobilizer Low Reference | I | BTM |
| | 0.5 | GN/GY | 3277 | Vehicle Anti-Theft System Immobilizer Low Reference | I | -BTM |
| 2 | 0.35 | GN/VT | 7533 | Local Interconnect Network Serial Data Bus 11 | I | BTM |
| | 0.5 | GN/VT | 7533 | Local Interconnect Network Serial Data Bus 11 | I | -BTM |
| 3 | 0.35 | GY/BK | 3276 | Vehicle Anti-Theft System Immobilizer Control | I | BTM |
| | 0.5 | GY/BK | 3276 | Vehicle Anti-Theft System Immobilizer Control | I | -BTM |
| 4 | 0.35 | WH/RD | 1444 | 12V Reference | I | — |
| 5 | 0.35 | VT/YE | 4 | Accessory Ignition Voltage | I | — |
| 6 | 0.35 | VT/BK | 3 | Run/Crank Ignition 1 Voltage | I | — |
| 7 - 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.35 | BN/GN | 1884 | Cruise Control Set/Coast/Resume/Accelerate Switch Signal | I | — |
| 10 | 0.5 | BK/GY | 6009 | Windshield Wiper Switch Low Reference | I | — |
| 11 | 0.5 | WH | 524 | Headlamp Dimmer Switch High Beam Signal | I | — |
| 12 | 0.5 | WH/GN | 663 | Hazard Switch Left Turn Signal | I | — |
| 13 | 0.5 | YE/BU | 1714 | Windshield Wiper Switch Low Signal | I | — |
| 14 | 0.5 | WH/GY | 3849 | High Beam Auto On/Off Switch Signal | I | — |
| 15 | 0.35 | WH/VT | 1020 | Off/Run/Crank Ignition Voltage | I | — |
| 16 | 0.35 | GY/GN | 5737 | Adaptive Cruise Control Gap Up/Down Switch Signal | I | — |
| 17 | 0.5 | YE/BN | 307 | Headlamp Switch Flash To Pass Signal | I | — |
| 18 | 0.35 | GN/WH | 3287 | Horn Switch Signal | I | — |
| 19 | 0.35 | GN/WH | 4115 | Local Interconnect Network Serial Data Bus 15 | I | — |
| 20 | 0.5 | GY | 1715 | Windshield Wiper Switch High Signal | I | — |
| 21 | 0.5 | VT/YE | 5526 | Tap Up/Tap Down Switch Signal | I | — |
| 22 | 0.35 | WH/BK | 1073 | Ignition Key Resistor Signal | I | — |
| 23 | 0.35 | GN | 4512 | Wireless Charging System Charge Indicator Control | I | — |
| 24 | 0.5 | VT/BU | 664 | Hazard Switch Right Turn Signal | I | — |
| 25 | 0.35 | WH/BK | 94 | Windshield Washer Switch Signal | I | — |

## K9 Body Control Module X4




2537270

### Connector Part Information

Harness Type: Body
OEM Connector: 13826914
Service Connector: 13576033
Description: 26-Way F 0.64, 2.8 Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4443 | Sumitomo 22 | E | A |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4444 | Sumitomo 22 | 2 | A |
| III | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4444 | Sumitomo 22 | E | A |
| IV | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

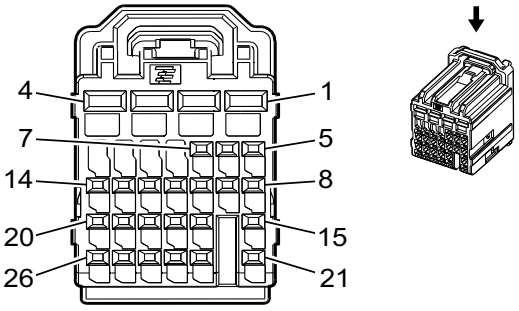
## K9 Body Control Module X4

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | YE | 712 | Left Headlamp Low Beam Control | II | — |
| 2 | 1 | YE | 312 | Right Headlamp Low Beam Control | II | — |
| 3 | 0.5 | GN/VT | 1315 | Right Front Turn Signal Lamp Control | III | — |
| | 0.35 | GN/VT | 1315 | Right Front Turn Signal Lamp Control | IV | DPO |
| | 0.5 | GN/VT | 1315 | Right Front Turn Signal Lamp Control | I | -DPO |
| 4 | 1 | BN/GN | 19 | Right Rear Stop/Turn Lamp Control | II | — |
| 5 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.35 | GY/BU | 7538 | Left Front DRL Control | IV | — |
| 8 | 0.35 | VT/GY | 1630 | Steering Column Key Cylinder Lock Solenoid Control | IV | — |
| 9 | 0.35 | WH/VT | 968 | — | IV | — |
| 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | VT/WH | 5065 | Stop Lamp Relay Coil Control | IV | — |
| 12 | 0.35 | GY/VT | 755 | RAP Relay Coil Control | IV | — |
| 13 | 0.35 | GN/YE | 6846 | Rear License Lamp Control | IV | — |
| 14 | 0.35 | BN/GY | 2268 | Windshield Washer Relay Control | IV | — |
| 15 | 0.35 | GN/VT | 5199 | Run/Crank Relay Coil Control | IV | — |

## K9 Body Control Module X4 (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 16 | 0.35 | GY | 91 | Windshield Wiper Motor Relay Coil Control | IV | — |
| 17 | 0.35 | BN/GN | 196 | Windshield Wiper Motor Park Switch Signal | IV | — |
| 18 | 0.35<br>0.35 | WH/YE<br>GN/BU | 5075<br>761 | Current Sensor Signal<br>Blower Speed Feedback Signal | IV<br>IV | —<br>— |
| 19 | 0.35 | BU/YE | 6844 | ABS/TCS Hill Descent Control Switch Signal | IV | — |
| 20 | 0.75 | RD/YE | 2340 | Battery Positive Voltage | IV | — |
| 21 | 0.35 | BU/VT | 5076 | Current Sensor Control | IV | — |
| 22 | 0.35 | VT/YE | 5985 | Accessory Wakeup Serial Data | IV | — |
| 23 | 0.35 | WH/BU | 5986 | Serial Data Communication Enable | IV | — |
| 24 | 0.35 | BN/GN | 4064 | Hood Status B Signal | IV | — |
| 25 | 0.35 | YE/BU | 4086 | Pushbutton Start Challenge Active Signal | IV | — |
| 26 | 0.75 | BK/WH | 2351 | Signal Ground | IV | — |

## K9 Body Control Module X5




2537271

### Connector Part Information

Harness Type: Body
OEM Connector: 13826916
Service Connector: 13576034
Description: 26-Way F 0.64, 2.8 Series (BN)

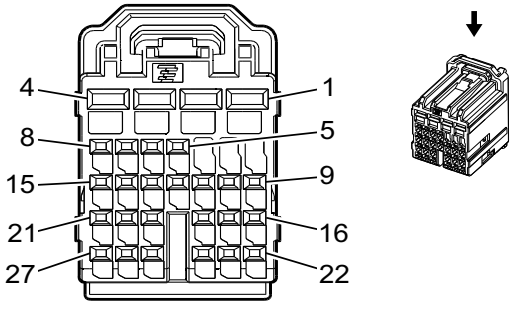
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4443 | Sumitomo 22 | E | A |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4444 | Sumitomo 22 | 2 | A |
| III | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4444 | Sumitomo 22 | E | A |
| IV | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K9 Body Control Module X5

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1 | YE/BU | 18 | Left Rear Stop/Turn Lamp Control | II | — |
| 2 | 0.5 | BU/WH | 1314 | Left Front Turn Signal Lamp Control | III | — |
| | 0.35 | BU/WH | 1314 | Left Front Turn Signal Lamp Control | IV | DPO |
| | 0.5 | BU/WH | 1314 | Left Front Turn Signal Lamp Control | I | -DPO |
| 3 | 0.5 | RD/GN | 5140 | Battery Positive Voltage | I | — |
| 4 | 0.5 | RD/WH | 3440 | Battery Positive Voltage | I | — |
| 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.35 | BK/VT | 5077 | Current Sensor Low Reference | IV | — |
| 7 | 0.35 | BU/BN | 7539 | Right Front DRL Control | IV | — |
| 8 | 0.5 | BU/WH | 5186 | Left Trailer Turn Signal Lamp Control | IV | — |
| 9 | 0.35 | BU/VT | 7729 | Major Endgate Low Relay Control | IV | — |
| 10 | 0.5 | BN/WH | 1317 | Fog Lamp Relay Control | IV | — |
| 11 | 0.35 | WH/GN | 7728 | Major Endgate High Relay Control | IV | — |
| 12 | 0.35 | WH/BU | 6311 | Cruise/ETC/TCC Brake Signal | IV | — |
| 13 | 0.35 | YE | 6812 | Out of Park Signal | IV | — |
| 14 | 0.35 | VT/BN | 300 | Run Ignition 3 Voltage | IV | — |
| 15 | 0.35 | BU/GY | 4672 | Dome Lamp Off Indicator Control | IV | — |
| 16 | — | — | — | Not Occupied | — | — |
| 17 | 0.5 | YE/GY | 5187 | Right Trailer Turn Signal Lamp Control | IV | — |
| 18 | 0.35 | BN/VT | 1969 | Headlamp High Beam Relay Control | IV | — |
| 19 | 0.35 | BN/WH | 28 | Horn Relay Control | IV | — |
| 20 | 0.35 | YE | 7755 | AC Power Outlet Status Indicator Control | IV | — |
| 21 | 0.5 | YE/BN | 2229 | Left Headlamp Relay Control | IV | — |
| 22 | 0.35 | BU | 45 | Park Lamp Relay Control | IV | — |
| 23 | — | — | — | Not Occupied | — | — |
| 24 | 0.35 | WH/VT | 860 | Front Windshield Wiper Switch High Signal | IV | — |
| 25 | 0.35 | BN | 7754 | AC Power Outlet Enable | IV | — |
| 26 | 0.35 | BU/BN | 38 | Backup Lamp Relay Control | IV | — |

## K9 Body Control Module X6




2537272

## Connector Part Information

Harness Type: Body
OEM Connector: 13826917
Service Connector: 13576035
Description: 27-Way F 0.64, 2.8 Series (PK)

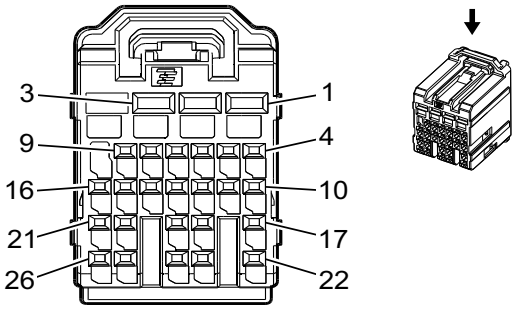
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4444 | Sumitomo 22 | 2 | A |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K9 Body Control Module X6

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | GY | 5911 | Door Lock Actuator Lock Control 2 | I | — |
| 2 | 0.75 | GY | 295 | Door Lock Actuator Lock Control | I | — |
| 3 | 1.5 | BK | 1150 | Ground | II | — |
| 4 | 0.75 | BN/YE | 294 | Door Lock Actuator Unlock Control | I | — |
| 5 | 0.35 | BN | 7291 | Major Endgate Release Switch Signal Interior | II | — |
| 6 | 0.35 | BU/VT | 1124 | Door Lock Key Switch Unlock Signal | II | — |
| 7 | 0.35 | WH/GY | 7297 | Minor Endgate High Relay Control | II | — |
| 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.35 | GN/BU | 6133 | Local Interconnect Network Serial Data Bus 2 | II | — |
| 10 | 0.35 | GN/YE | 6134 | Local Interconnect Network Serial Data Bus 3 | II | — |
| 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.35 | YE/BK | 5356 | Left Tail Lamp Outage Detection Signal | II | — |
| 13 | — | — | — | Not Occupied | — | — |
| 14 | 0.35 | GY | 7292 | Major Endgate Release Switch Signal Exterior | II | — |
| 15 | 0.35 | YE | 7294 | Minor Endgate Release Switch Discrete Signal Exterior | II | — |
| 16 | 0.5 | GN/BN | 6132 | Local Interconnect Network Serial Data Bus 1 | II | — |
| 17 - 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.35 | WH/VT | 6821 | Surveillance Switch Signal | II | — |
| 22 | 0.35 | VT/YE | 5357 | Right Tail Lamp Outage Detection Signal | II | — |
| 23 | — | — | — | Not Occupied | — | — |
| 24 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | II | — |
| 25 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | II | — |
| 26 | 0.35 | BN/WH | 1429 | Standing Lamp Relay Control | II | — |
| 27 | 0.35 | BN/WH | 781 | Driver Door Lock Switch Unlock Signal | II | — |

## K9 Body Control Module X7




2537273

### Connector Part Information

Harness Type: Body
OEM Connector: 13826915
Service Connector: 13576036
Description: 26-Way F 0.64, 2.8 Series (GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4443 | Sumitomo 22 | E | A |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 8100-4444 | Sumitomo 22 | E | A |
| III | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

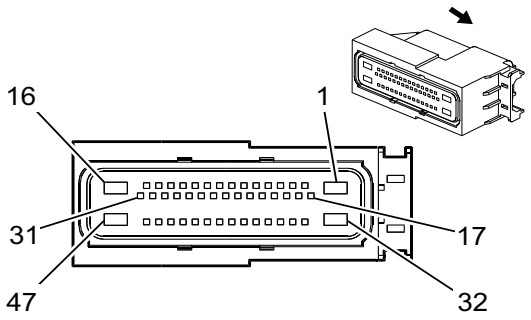
## K9 Body Control Module X7

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.5 | WH/BN | 6815 | Inadvertent Power Control | II | DH6 |
| | 0.5 | WH/BN | 6815 | Inadvertent Power Control | I | -DH6 |
| 4 | 0.5 | GY/BU | 7762 | Cargo Bed Lamp Control | III | — |
| 5 | 0.35 | BU | 2082 | Puddle Lamp Control | III | — |
| 6 | 0.35 | YE/WH | 816 | Brake Transmission Shift Interlock Solenoid Control | III | — |
| 7 | 0.35 | GY/BU | 7298 | Minor Endgate Low Relay Control | III | — |
| 8 | 0.35 | GY/GN | 5996 | Driver Outside Rear View Mirror Puddle Lamp Control | III | — |
| 9 | 0.35 | YE | 6817 | LED Backlight Dimming Control | III | — |
| 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | BN/YE | 780 | Driver Door Lock Switch Lock Signal | III | — |
| 12 | 0.35 | BN | 4511 | Wireless Charging System Fault Indicator Control | III | — |
| 13 | 0.35 | GN/WH | 1932 | Shift Select Switch Park Signal | III | — |
| 14 | 0.35 | GY | 746 | Right Front Door Ajar Switch Signal | III | A6R |
| | 0.35 | WH/BU | 3203 | Right Headlamp Bulb Outage Signal | III | AXG-A6Q |
| 15 | 0.35 | BU/GY | 553 | Shift Select Switch Performance Signal | III | — |

## K9 Body Control Module X7 (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 16 | 0.5 | WH/BU | 3691 | Trailer Brake Apply Signal | III | — |
| 17 | 0.35 | BU | 2082 | Puddle Lamp Control | III | — |
| 18 | — | — | — | Not Occupied | — | — |
| 19 | 0.35 | GY | 156 | Courtesy Lamp Switch Signal | III | — |
| 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.35 | YE/VT | 244 | Passenger Door Lock Switch Lock Control | III | — |
| 22 | 0.35 | WH/YE | 7557 | LED Ambient Lighting Control 1 | III | — |
| 23 | — | — | — | Not Occupied | — | — |
| 24 | 0.35 | BN/VT | 245 | Passenger Door Lock Switch Unlock Control | III | — |
| 25 | 0.35<br>0.35 | GY<br>BU/VT | 745<br>3204 | Left Front Door Ajar Switch Signal<br>Left Headlamp Bulb Outage Signal | III<br>III | A6R<br>AXG-A6Q |
| 26 | — | — | — | Not Occupied | — | — |

## K19 Suspension Control Module (Z45)




1858233

### Connector Part Information

Harness Type: Chassis
OEM Connector: 15491306
Service Connector: 19168025
Description: 47-Way F 0.64, 6.3 Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 15476168 | Delphi 5 | F | 3 |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | SAITS-A03T-M064 | Yazaki 14 | 9 | 9 |

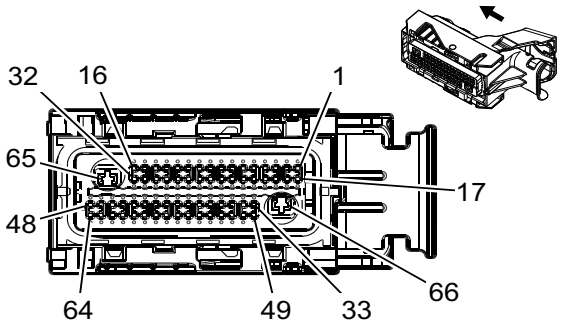
## K19 Suspension Control Module (Z45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2 | BK | 1750 | Ground | I | — |
| 2 | — | — | — | Not Occupied | — | — |

## K19 Suspension Control Module (Z45) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 3 | 0.5 | BK/BU | 1206 | Left Front Strut Position Sensor Low Reference | II | — |
| 4 | 0.5 | BK/GY | 1212 | Right Front Strut Position Sensor Low Reference | II | — |
| 5 | 0.5 | BK/GN | 1209 | Left Rear Strut Position Sensor Low Reference | II | — |
| 6 - 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.5 | BU/RD | 1205 | Left Front Strut Position Sensor 5V Reference | II | — |
| 11 | 0.5 | BN/RD | 1211 | Right Front Strut Position Sensor 5V Reference | II | — |
| 12 | 0.5 | YE/RD | 1208 | Left Rear Strut Position Sensor 5V Reference | II | — |
| 13 - 15 | — | — | — | Not Occupied | — | — |
| 16 | 2 | YE/WH | 1213 | Right Front Strut Position Sensor Signal | I | — |
| 17 | — | — | — | Not Occupied | — | — |
| 18 | 0.5 | WH | 6106 | High Speed GMLAN Serial Data (-) 2 | II | — |
| 19 | 0.5 | WH | 6106 | High Speed GMLAN Serial Data (-) 2 | II | — |
| 20 | 0.5 | BU/YE | 6105 | High Speed GMLAN Serial Data (+) 2 | II | — |
| 21 | 0.5 | BU/YE | 6105 | High Speed GMLAN Serial Data (+) 2 | II | — |
| 22 - 24 | — | — | — | Not Occupied | — | — |
| 25 | 0.5 | GN/WH | 1210 | Left Rear Strut Position Sensor Signal | II | — |
| 26 | — | — | — | Not Occupied | — | — |
| 27 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | II | — |
| 28 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | II | — |
| 29 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | II | — |
| 30 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | II | — |
| 31 | — | — | — | Not Occupied | — | — |
| 32 | 2 | RD/GN | 2440 | Battery Positive Voltage | I | — |
| 33 | 0.75 | GN/GY | 1119 | Right Rear Damping Servo Control | II | — |
| 34 | 0.75 | BN/GN | 1118 | Right Rear Damping Servo Control | II | — |
| 35 | 0.75 | BU/GY | 1114 | Left Rear Damping Servo Control | II | — |
| 36 | 0.75 | GN/VT | 1115 | Left Rear Damping Servo Control | II | — |
| 37 - 38 | — | — | — | Not Occupied | — | — |
| 39 | 0.5 | WH/BU | 5986 | Serial Data Communication Enable | II | — |
| 40 | — | — | — | Not Occupied | — | — |
| 41 | 0.5 | BN/WH | 1207 | Left Front Strut Position Sensor Signal | II | — |
| 42 | — | — | — | Not Occupied | — | — |
| 43 | 0.75 | GY/BU | 1113 | Left Front Damping Servo Control | II | — |
| 44 | 0.75 | BN/WH | 1107 | Left Front Damping Servo Control | II | — |
| 45 | 0.75 | BN/BU | 1116 | Right Front Damping Servo Control | II | — |
| 46 | 0.75 | GY/WH | 1117 | Right Front Damping Servo Control | II | — |
| 47 | — | — | — | Not Occupied | — | — |

## K20 Engine Control Module X1 (L3B)




4504420

### Connector Part Information

Harness Type: Engine
OEM Connector: 33303655
Service Connector: 19371186
Description: 66-Way F 0.64, 2.8 Series, Sealed (BK with BU Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 7116-4152-02 | Yazaki 9 | 2 | 5 |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

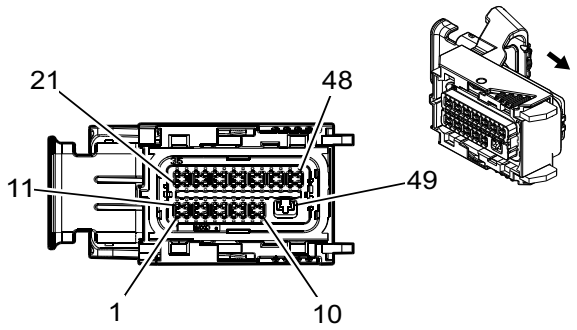
## K20 Engine Control Module X1 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE | 5991 | Powertrain Relay Coil Control | II | — |
| 2 | 0.5 | YE/BK | 625 | Starter Enable Relay Control | II | — |
| 3 | 0.5 | YE/VT | 4325 | Starter Pinion Solenoid Relay Control | II | — |
| 4 - 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.5 | VT/GY | 3615 | Step Cam A Control | II | — |
| 7 | 0.5 | GN/BK | 3616 | Step Cam B Control | II | — |
| 8 | 0.5 | BU | 3584 | Camshaft Stepper A Control | II | — |
| 9 | 0.5 | GN | 3585 | Camshaft Stepper B Control | II | — |
| 10 | 0.5 | YE/BU | 3587 | Camshaft Stepper D Control | II | — |
| 11 | 0.5 | GY | 3586 | Camshaft Stepper C Control | II | — |
| 12 | 0.5 | BU/WH | 3589 | Camshaft Stepper Position Sensor 1 Signal | II | — |
| 13 | 0.5 | GN/WH | 3592 | Camshaft Stepper Position Sensor 2 Signal | II | — |
| 14 | 0.5 | WH | 924 | — | II | — |
| 15 | 0.5 | WH/BU | 6311 | Cruise/ETC/TCC Brake Signal | II | — |
| 16 | 0.5 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | II | — |
| 17 | 0.75 | GN/GY | 465 | Fuel Pump Primary Relay Control | II | — |
| 18 | 0.5 | WH/GY | 459 | A/C Compressor Clutch Relay Control | II | — |
| 19 | 0.5 | BN/WH | 419 | Check Engine Indicator Control | II | — |
| 20 - 21 | — | — | — | Not Occupied | — | — |

## K20 Engine Control Module X1 (L3B) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 22 | 0.5 | BN/GN | 927 | — | II | — |
| 23 | 0.5 | BU | 926 | — | II | — |
| 24 | 0.5 | YE/VT | 6265 | Camshaft CAM W Signal | II | — |
| 25 | 0.5 | VT/BK | 6264 | Camshaft CAM X Signal | II | — |
| 26 | 0.5 | GY/BN | 6262 | Camshaft CAM Z Signal | II | — |
| 27 | 0.5 | GN/BN | 6261 | Camshaft CAM Z Control | II | — |
| 28 | 0.5 | BU/BK | 928 | — | II | — |
| 29 | 0.5 | BU | 932 | — | II | — |
| 30 | 0.5 | GY/BN | 933 | — | II | — |
| 31 | — | — | — | Not Occupied | — | — |
| 32 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | II | — |
| 33 | 0.5 | BK/BU | 1271 | Accelerator Pedal Position Low Reference 1 | II | — |
| 34 | 0.5 | YE/WH | 3746 | Camshaft Exhaust Lobe Axial Position Signal (1) | II | — |
| 35 | 0.5 | BK/VT | 1272 | Accelerator Pedal Position Low Reference 2 | II | — |
| 36 | 0.5 | YE/GN | 3747 | Camshaft Exhaust Lobe Axial Position Signal (2) | II | — |
| 37 | 0.5 | YE | 4063 | Hood Status A Signal | II | — |
| 38 | — | — | — | Not Occupied | — | — |
| 39 | 0.5 | YE/WH | 1161 | Accelerator Pedal Position Signal 1 | II | — |
| 40 - 41 | — | — | — | Not Occupied | — | — |
| 42 | 0.5 | GN/BN | 2732 | Local Interconnect Network Bus 32 | II | — |
| 43 - 44 | — | — | — | Not Occupied | — | — |
| 45 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | II | — |
| 46 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | II | — |
| 47 | 0.5 | GN/WH | 492 | Mass Air Flow Sensor Signal | II | — |
| 48 | 0.5 | RD/BN | 440 | Battery Positive Voltage | II | — |
| 49 | 0.5 | WH/RD | 1164 | Accelerator Pedal Position 5V Reference 1 | II | — |
| 50 | 0.5 | VT/WH | 3744 | Camshaft Intake Lobe Axial Position Signal (1) | II | — |
| 51 | 0.5 | BN/RD | 1274 | Accelerator Pedal Position 5V Reference 2 | II | — |
| 52 | 0.5 | VT/GN | 3745 | Camshaft Intake Lobe Axial Position Signal (2) | II | — |
| 53 | 0.5 | BU/GY | 636 | Outside Ambient Air Temperature Sensor Signal | II | — |
| 54 | 0.5 | BN | 4645 | Heater Core Outlet Temperature Signal | II | — |
| 55 | 0.5 | GN | 380 | A/C Refrigerant Pressure Sensor Signal | II | — |
| 56 | 0.5 | WH/GN | 5380 | Brake Position Sensor Signal | II | — |
| 57 | 0.5 | GN/WH | 1162 | Accelerator Pedal Position Signal 2 | II | — |
| 58 | — | — | — | Not Occupied | — | — |
| 59 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | II | — |
| 60 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | II | — |
| 61 | — | — | — | Not Occupied | — | — |
| 62 | 0.5 | VT/YE | 5985 | Accessory Wakeup Serial Data | II | — |
| 63 | 0.5 | WH | 7494 | High Speed GMLAN Serial Data (-)3 | II | — |
| 64 | 0.5 | BU/BK | 7493 | High Speed GMLAN Serial Data (+)3 | II | — |
| 65 | 2 | BK/WH | 451 | Signal Ground | I | — |
| 66 | 2 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | I | — |

## K20 Engine Control Module X2 (L3B)




4596458

### Connector Part Information

Harness Type: Engine
OEM Connector: 33303656
Service Connector: 19355678
Description: 49-Way F 0.64, 2.8 Series, Sealed (BK with BK Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 7116-4152-02 | Yazaki 9 | 2 | 5 |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

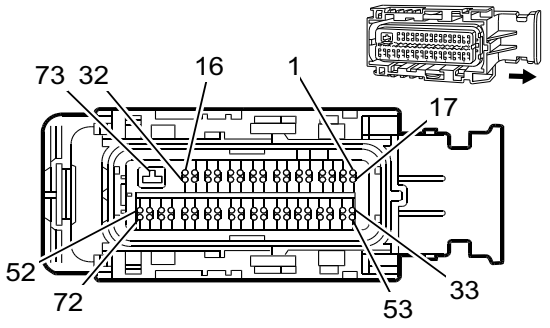
## K20 Engine Control Module X2 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/GN | 4320 | Powertrain Sensor Bus Enable | II | — |
| 2 | 1 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | II | — |
| 3 - 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | BN/BU | 2447 | Evaporative Purge Pump Pressure Signal | II | — |
| 6 - 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.75 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | II | — |
| 10 | 0.5 | BK/BU | 2979 | Coolant Diverter Valve Position Sensor Low Reference | II | — |
| 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | II | — |
| 13 - 14 | — | — | — | Not Occupied | — | — |
| 15 | 0.5 | GN/YE | 3337 | Transmission Internal Mode Switch Mode Control A | II | — |
| 16 | 0.5 | YE/BN | 331 | Oil Pressure Sensor Signal | II | — |
| 17 | 0.5 | WH/VT | 4108 | Driver Mode Switch Signal | II | — |
| 18 | — | — | — | Not Occupied | — | — |
| 19 | 0.5 | BU/WH | 2918 | Fuel Rail Pressure Sensor Signal | II | — |
| 20 | 0.5 | WH | 2590 | Turbo Charger Wastegate Motor Feedback Signal | II | — |
| 21 | — | — | — | Not Occupied | — | — |

## K20 Engine Control Module X2 (L3B) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 22 | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | II | — |
| 23 | 0.5 | VT | 7485 | Oil Temperature Sensor Signal | II | — |
| 24 | 0.5 | BN/BU | 357 | Oil Temperature Sensor Signal | II | — |
| 25 | 0.5 | YE | 3054 | Turbo Intake Pressure Sensor Signal Bank 1 | II | — |
| 26 - 28 | — | — | — | Not Occupied | — | — |
| 29 | 0.75 | YE/GY | 3926 | Crankcase Differential Pressure Sensor Signal | II | — |
| 30 | — | — | — | Not Occupied | — | — |
| 31 | 0.75 | YE/GY | 6936 | Heated Oxygen Sensor Collector Signal | II | — |
| 32 | 0.75 | BN | 6934 | Heated Oxygen Sensor Ground | II | — |
| 33 | 0.5 | GN/YE | 4623 | Local Interconnect Network Serial Data Bus 23 | II | — |
| 34 | 0.75 | GY/WH | 3113 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1 | II | — |
| 35 | — | — | — | Not Occupied | — | — |
| 36 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | II | — |
| 37 | 0.5 | YE/BK | 3000 | Coolant Temperature Sensor 2 Signal | II | — |
| 38 | 0.5 | BN/GY | 4644 | Heater Core Inlet Temperature Signal | II | — |
| 39 | — | — | — | Not Occupied | — | — |
| 40 | 0.5 | GY/VT | 2404 | Engine Block Coolant Temperature Signal | II | — |
| 41 - 44 | — | — | — | Not Occupied | — | — |
| 45 | 0.75 | GN | 6935 | Heated Oxygen Sensor Current Adjust Signal | II | — |
| 46 | 0.75 | BN/WH | 6933 | Heated Oxygen Sensor Current Pump Signal | II | — |
| 47 | 0.5 | GN/VT | 4621 | Local Interconnect Network Serial Data Bus 21 | II | — |
| 48 | 0.5 | GN/WH | 4622 | Local Interconnect Network Serial Data Bus 22 | II | — |
| 49 | 2 | BK/WH | 451 | Signal Ground | I | — |

## K20 Engine Control Module X3 (L3B)




1590596

### Connector Part Information

Harness Type: Engine
OEM Connector: 15497996
Service Connector: 88988372
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with GY Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1326030-8 | Lear 17 | A | 4 |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

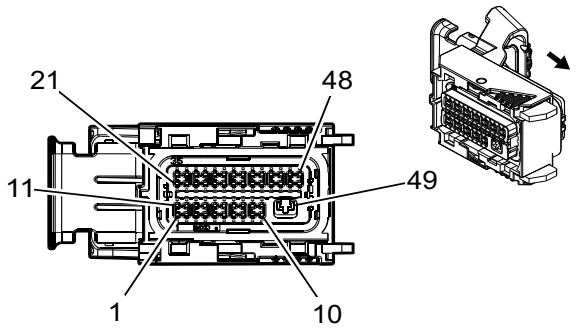
## K20 Engine Control Module X3 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | — | — | — | Not Occupied | — | — |
| 2 | 0.75 | GN | 3060 | Turbo Bypass Solenoid Control Bank 1 | II | — |
| 3 | 0.5 | BN | 25 | Charge Indicator Control | II | — |
| 4 | 0.5 | VT/BU | 6091 | Crankshaft Position Sensor Replicated Signal | II | — |
| 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.5 | VT/BU | 6270 | Crankshaft 60X Sensor 5V Reference | II | — |
| 7 | 0.5 | BN/RD | 2701 | Throttle Position Sensor 5V Reference | II | — |
| 8 | 0.5 | BU/WH | 7446 | Fuel Line Pressure Sensor Signal | II | — |
| 9 | 0.5 | GN/WH | 432 | Manifold Absolute Pressure Sensor Signal | II | — |
| 10 | 0.75 | VT/BU | 3120 | Heated Oxygen Sensor High Signal Bank 1 Sensor 2 | II | — |
| 11 | 0.75 | WH/YE | 3121 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 2 | II | — |
| 12 | 0.5 | VT/BN | 5284 | Camshaft Phaser Intake Solenoid 1 | II | — |
| 13 | 0.5 | GY/BU | 5282 | Camshaft Phaser Exhaust Solenoid 1 | II | — |
| 14 | 0.75 | BU | 2976 | Coolant Diverter Valve Actuator Control Low | II | — |
| 15 | 0.75 | WH/BN | 2591 | Turbo Charger Wastegate Motor Open Control | II | — |
| 16 | 0.75 | WH/BU | 2592 | Turbo Charger Wastegate Motor Close Control | II | — |
| 17 - 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.75 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | II | — |
| 22 | 0.5 | BK/VT | 6272 | Crankshaft 60X Sensor Low Reference | II | — |
| 23 | 0.5 | BK/BN | 2752 | Throttle Position Sensor Low Reference | II | — |
| 24 | 0.5 | YE/BU | 2408 | Engine Inlet Coolant Temperature Signal | II | — |
| 25 | 0.5 | VT | 2988 | Engine Outlet Coolant Temperature Signal | II | — |
| 26 | 0.5 | BN | 7348 | Induction Air Temperature Sensor 2 Signal | II | — |
| 27 | 0.5 | BN | 906 | — | II | — |
| 28 | 0.5 | BK/BN | 6753 | Cam Phaser W Low Reference | II | — |
| 29 | 0.5 | BK/VT | 6754 | Cam Phaser X Low Reference | II | — |
| 30 | 0.5 | YE | 581 | Throttle Actuator Control Open | II | — |
| 31 | 0.5 | BN/WH | 582 | Throttle Actuator Control Close | II | — |
| 32 | 0.75 | BU/BN | 2977 | Coolant Diverter Valve Actuator Control High | II | — |
| 33 | 0.5 | VT/GY | 496 | Knock Sensor Signal 1 | II | — |
| 34 | 0.5 | WH/GY | 1876 | Knock Sensor Signal 2 | II | — |
| 35 | 0.5 | BK/GN | 469 | Manifold Absolute Pressure Sensor Low Reference | II | — |
| 36 | 0.75 | GN/BU | 428 | EVAP Canister Purge Solenoid Control | II | — |
| 37 - 38 | — | — | — | Not Occupied | — | — |
| 39 | 0.5 | BK/GN | 5301 | Camshaft Position Intake Sensor Low Reference 1 | II | — |

## K20 Engine Control Module X3 (L3B) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 40 | 0.5 | BK/GY | 5296 | Camshaft Position Exhaust Sensor Low Reference 1 | II | — |
| 41 | — | — | — | Not Occupied | — | — |
| 42 | 0.5 | VT/BK | 5273 | Camshaft Position Exhaust Sensor 1 | II | — |
| 43 | 0.5 | GN | 6271 | Crankshaft 60X Sensor Signal | II | — |
| 44 | 0.5 | YE/BU | 2124 | Ignition Control 4 | II | — |
| 45 | 0.5 | BU/WH | 2122 | Ignition Control 2 | II | — |
| 46 | 0.5 | BK/BU | 2129 | Ignition Control Low Reference Bank 1 | II | — |
| 47 | 0.75 | GY/WH | 3122 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2 | II | — |
| 48 | 0.5 | BU/WH | 3630 | Throttle Position Sensor (SENT1) Signal | II | — |
| 49 | 0.75 | BU/WH | 4904 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4 | II | — |
| 50 | 0.75 | GY/BU | 4804 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 4 | II | — |
| 51 | 0.75 | BU/GY | 4902 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2 | II | — |
| 52 | 0.75 | BU | 4802 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 2 | II | — |
| 53 | 0.5 | BK/YE | 1716 | Knock Sensor Low Reference 1 | II | — |
| 54 | 0.5 | BK/GY | 2303 | Knock Sensor Low Reference 2 | II | — |
| 55 | 0.5 | GY/RD | 2704 | Manifold Absolute Pressure Sensor 5V Reference | II | — |
| 56 | 0.5 | YE/BN | 106 | Oil Pump Motor Control | II | — |
| 57 | 0.5 | BU | 179 | Oil Pump Command Signal | II | — |
| 58 | — | — | — | Not Occupied | — | — |
| 59 | 0.5 | GY/BU | 5300 | Camshaft Position Intake Sensor Control 1 | II | — |
| 60 | 0.5 | GY/YE | 5297 | Camshaft Position Exhaust Sensor Control 1 | II | — |
| 61 | 0.5 | GY | 23 | Generator Field Duty Cycle Signal | II | — |
| 62 | — | — | — | Not Occupied | — | — |
| 63 | 0.5 | YE/VT | 5275 | Camshaft Position Intake Sensor 1 | II | — |
| 64 | 0.5 | BU/VT | 2121 | Ignition Control 1 | II | — |
| 65 | 0.5 | GN/BU | 2123 | Ignition Control 3 | II | — |
| 66 | — | — | — | Not Occupied | — | — |
| 67 | 0.75 | VT/BK | 7300 | High Pressure Fuel Pump Actuator Low - Control | II | — |
| 68 | 0.75 | YE | 7301 | High Pressure Fuel Pump Actuator High - Control | II | — |
| 69 | 0.75 | BN/WH | 4901 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1 | II | — |
| 70 | 0.75 | BN | 4801 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 1 | II | — |
| 71 | 0.75 | GN/GY | 4903 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3 | II | — |
| 72 | 0.75 | GN | 4803 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 3 | II | — |
| 73 | 2 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | I | — |

## K20 Engine Control Module X1 (L82)




4596458

### Connector Part Information

Harness Type: Engine
OEM Connector: 33315785
Service Connector: 19368142
Description: 49-Way F 0.64, 2.8 Series, Sealed (BK with BU Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1326030-8 | Lear 17 | A | 4 |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

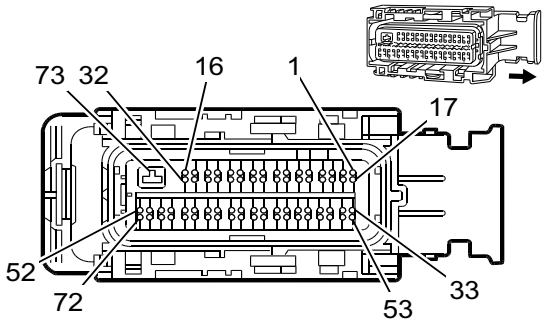
## K20 Engine Control Module X1 (L82)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/WH | 492 | Mass Air Flow Sensor Signal | II | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | II | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | WH | 7494 | High Speed GMLAN Serial Data (-)3 | II | — |
| 6 | 0.5 | WH/BU | 6311 | Cruise/ETC/TCC Brake Signal | II | — |
| 7 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | II | — |
| 8 | 0.5 | BN/WH | 419 | Check Engine Indicator Control | II | — |
| 9 | 0.5 | YE | 5991 | Powertrain Relay Coil Control | II | — |
| 10 | 0.5 | BN/YE | 473 | High Speed Cooling Fan Relay Control | II | — |
| 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.5 | BU/GY | 636 | Outside Ambient Air Temperature Sensor Signal | II | — |
| 13 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | II | — |
| 14 | 0.5 | WH/GN | 5380 | Brake Position Sensor Signal | II | — |
| 15 | 0.5 | BU/BK | 7493 | High Speed GMLAN Serial Data (+)3 | II | — |
| 16 | 0.5 | WH/GY | 1786 | Transmission Park/Neutral Signal 1 | II | — |
| 17 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | II | — |
| 18 | 0.5 | WH/GY | 459 | A/C Compressor Clutch Relay Control | II | — |
| 19 - 20 | — | — | — | Not Occupied | — | — |

## K20 Engine Control Module X1 (L82) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 21 | 0.5 | GN/BU | 428 | EVAP Canister Purge Solenoid Control | II | — |
| 22 | — | — | — | Not Occupied | — | — |
| 23 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | II | — |
| 24 | 0.5 | BK/BU | 1271 | Accelerator Pedal Position Low Reference 1 | II | — |
| 25 - 27 | — | — | — | Not Occupied | — | — |
| 28 | 0.5 | BN/GN | 1174 | Oil Level Switch Signal | II | — |
| 29 | — | — | — | Not Occupied | — | — |
| 30 | 0.5 | BK/VT | 1272 | Accelerator Pedal Position Low Reference 2 | II | — |
| 31 | — | — | — | Not Occupied | — | — |
| 32 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | II | — |
| 33 | 0.5 | VT/YE | 5985 | Accessory Wakeup Serial Data | II | — |
| 34 | 0.5 | RD/BN | 440 | Battery Positive Voltage | II | — |
| 35 | 0.5 | VT/YE | 3854 | Cabin Heater Coolant Motor Control | II | — |
| 36 | 0.5 | YE/BK | 625 | Starter Enable Relay Control | II | — |
| 37 | 0.5 | GN/GY | 465 | Fuel Pump Primary Relay Control | II | — |
| 38 | 0.5 | WH/RD | 1164 | Accelerator Pedal Position 5V Reference 1 | II | — |
| 39 | 0.5 | YE/WH | 1161 | Accelerator Pedal Position Signal 1 | II | — |
| 40 | 0.5 | YE/BN | 331 | Oil Pressure Sensor Signal | II | — |
| 41 | 0.5 | GN | 380 | A/C Refrigerant Pressure Sensor Signal | II | — |
| 42 | 0.5 | WH | 1579 | Fuel Temperature/Composition Signal | II | — |
| 43 | — | — | — | Not Occupied | — | — |
| 44 | 0.5 | GN/WH | 1162 | Accelerator Pedal Position Signal 2 | II | — |
| 45 | 0.5 | BN/RD | 1274 | Accelerator Pedal Position 5V Reference 2 | II | — |
| 46 | 0.5 | YE | 4063 | Hood Status A Signal | II | — |
| 47 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | II | — |
| 48 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |
| 49 | 2 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | I | — |

## K20 Engine Control Module X2 (L82)




1590596

### Connector Part Information

Harness Type: Engine
OEM Connector: 15499466

Service Connector: 88988931

Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with BK Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1326030-8 | Lear 17 | 4 | D |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

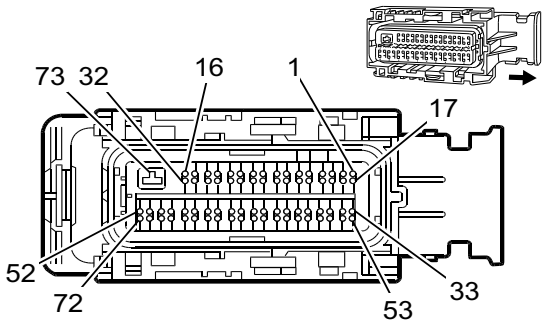
## K20 Engine Control Module X2 (L82)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/YE | 3212 | Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1 | II | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | II | — |
| 4 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.5 | GN/WH | 4622 | Local Interconnect Network Serial Data Bus 22 | II | — |
| 8 | 0.5 | GN/VT | 4621 | Local Interconnect Network Serial Data Bus 21 | II | — |
| 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.5 | VT/GY | 3110 | Heated Oxygen Sensor High Signal Bank 1 Sensor 1 | II | — |
| 11 | 0.5 | WH/BK | 3111 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 1 | II | — |
| 12 | 0.5 | YE/BU | 2124 | Ignition Control 4 | II | — |
| 13 | 0.5 | BN/BU | 2126 | Ignition Control 6 | II | — |
| 14 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |
| 15 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |
| 16 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |
| 17 | 0.5 | GY/WH | 3113 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1 | II | — |
| 18 - 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.5 | WH/BN | 2203 | Enhanced Driver Mode 2 Switch Signal | II | — |
| 22 - 25 | — | — | — | Not Occupied | — | — |
| 26 | 0.5 | VT/WH | 3210 | Heated Oxygen Sensor High Signal Bank 2 Sensor 1 | II | — |
| 27 | 0.5 | YE/WH | 3211 | Heated Oxygen Sensor Low Signal Bank 2 Sensor 1 | II | — |
| 28 | 0.5 | GN/BU | 2123 | Ignition Control 3 | II | — |
| 29 | 0.5 | BU/GY | 2125 | Ignition Control 5 | II | — |
| 30 | 0.5 | BK/GY | 2130 | Ignition Control Low Reference Bank 2 | II | — |
| 31 | 0.5 | BN | 5496 | Cylinder Shutoff Solenoid Control 6 | II | — |
| 32 | 0.5 | YE/BN | 2496 | Cylinder Shutoff Solenoid Enable (6) | II | — |
| 33 | 0.5 | WH/BN | 3223 | Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2 | II | — |
| 34 | — | — | — | Not Occupied | — | — |
| 35 | 0.5 | BU | 179 | Oil Pump Command Signal | II | — |
| 36 | 0.5 | YE/GN | 2494 | Cylinder Shutoff Solenoid Enable (4) | II | — |
| 37 | 0.75 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | II | — |

## K20 Engine Control Module X2 (L82) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 38 | — | — | — | Not Occupied | — | — |
| 39 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | II | — |
| 40 - 45 | — | — | — | Not Occupied | — | — |
| 46 | 0.5 | YE/BU | 3221 | Heated Oxygen Sensor Low Signal Bank 2 Sensor 2 | II | — |
| 47 | 0.5 | VT/GN | 3220 | Heated Oxygen Sensor High Signal Bank 2 Sensor 2 | II | — |
| 48 - 49 | — | — | — | Not Occupied | — | — |
| 50 | 0.75 | BK/GY | 2303 | Knock Sensor Low Reference 2 | II | — |
| 51 | 0.75 | BK/YE | 1716 | Knock Sensor Low Reference 1 | II | — |
| 52 | 0.5 | BN/WH | 582 | Throttle Actuator Control Close | II | — |
| 53 | 0.5 | GY/WH | 3122 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2 | II | — |
| 54 - 55 | — | — | — | Not Occupied | — | — |
| 56 | 0.5 | YE/BU | 5494 | Cylinder Shutoff Solenoid Control 4 | II | — |
| 57 - 58 | — | — | — | Not Occupied | — | — |
| 59 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | II | — |
| 60 - 65 | — | — | — | Not Occupied | — | — |
| 66 | 0.5 | WH/YE | 3121 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 2 | II | — |
| 67 | 0.5 | VT/BU | 3120 | Heated Oxygen Sensor High Signal Bank 1 Sensor 2 | II | — |
| 68 - 69 | — | — | — | Not Occupied | — | — |
| 70 | 0.75 | WH/GY | 1876 | Knock Sensor Signal 2 | II | — |
| 71 | 0.75 | VT/GY | 496 | Knock Sensor Signal 1 | II | — |
| 72 | 0.5 | YE | 581 | Throttle Actuator Control Open | II | — |
| 73 | 2.5 | BK/WH | 451 | Signal Ground | I | — |

## K20 Engine Control Module X3 (L82)




1590596

### Connector Part Information

Harness Type: Engine
OEM Connector: 15497996
Service Connector: 88988372
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with GY Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1326030-8 | Lear 17 | 4 | D |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

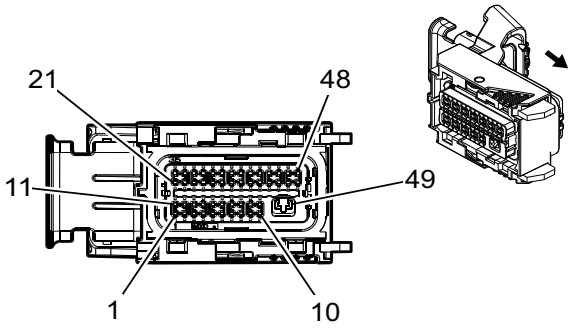
## K20 Engine Control Module X3 (L82)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH | 5497 | Cylinder Shutoff Solenoid Control 7 | II | — |
| 2 | 0.5 | GN/GY | 2497 | Cylinder Shutoff Solenoid Enable (7) | II | — |
| 3 - 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | VT/BN | 5284 | Camshaft Phaser Intake Solenoid 1 | II | — |
| 6 | 0.5 | VT/GN | 4320 | Powertrain Sensor Bus Enable | II | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | YE/VT | 5275 | Camshaft Position Intake Sensor 1 | II | — |
| 9 | 0.5 | GY/BU | 5300 | Camshaft Position Intake Sensor Control 1 | II | — |
| 10 | 0.5 | GN | 6271 | Crankshaft 60X Sensor Signal | II | — |
| 11 | 0.5 | VT/BU | 6091 | Crankshaft Position Sensor Replicated Signal | II | — |
| 12 | 0.5 | BU/WH | 2122 | Ignition Control 2 | II | — |
| 13 | 0.5 | VT/WH | 2128 | Ignition Control 8 | II | — |
| 14 | 0.5 | BN | 25 | Charge Indicator Control | II | — |
| 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.75 | YE | 7301 | High Pressure Fuel Pump Actuator High - Control | II | — |
| 17 - 18 | — | — | — | Not Occupied | — | — |
| 19 | 0.5 | BN/WH | 6354 | Output Speed High (Replicated TOS) Input Signal | II | — |
| 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.5 | BK/BN | 6753 | Cam Phaser W Low Reference | II | — |
| 22 - 23 | — | — | — | Not Occupied | — | — |
| 24 | 0.5 | BK/GN | 5301 | Camshaft Position Intake Sensor Low Reference 1 | II | — |
| 25 | 0.5 | VT/BU | 6270 | Crankshaft 60X Sensor 5V Reference | II | — |
| 26 | 0.5 | BK/VT | 6272 | Crankshaft 60X Sensor Low Reference | II | — |
| 27 | — | — | — | Not Occupied | — | — |
| 28 | 0.5 | GN/GY | 2127 | Ignition Control 7 | II | — |
| 29 | 0.5 | BU/VT | 2121 | Ignition Control 1 | II | — |
| 30 | 0.5 | BK/BU | 2129 | Ignition Control Low Reference Bank 1 | II | — |
| 31 | — | — | — | Not Occupied | — | — |
| 32 | 0.75 | VT/BK | 7300 | High Pressure Fuel Pump Actuator Low - Control | II | — |
| 33 | 0.5 | YE/VT | 4325 | Starter Pinion Solenoid Relay Control | II | — |
| 34 | 0.5 | WH/BU | 2491 | Cylinder Shutoff Solenoid Enable (1) | II | — |
| 35 | — | — | — | Not Occupied | — | — |
| 36 | 0.5 | BK/BN | 2752 | Throttle Position Sensor Low Reference | II | — |
| 37 | 0.5 | BK/GN | 469 | Manifold Absolute Pressure Sensor Low Reference | II | — |

## K20 Engine Control Module X3 (L82) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 38 - 39 | — | — | — | Not Occupied | — | — |
| 40 | 0.5 | BN/BU | 357 | Oil Temperature Sensor Signal | II | — |
| 41 - 42 | — | — | — | Not Occupied | — | — |
| 43 | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | II | — |
| 44 | 0.75 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | II | — |
| 45 | 0.75 | GN | 4803 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 3 | II | — |
| 46 | 0.75 | GY/BU | 4804 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 4 | II | — |
| 47 | 0.75 | WH/GN | 4805 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 5 | II | — |
| 48 | 0.75 | GN/VT | 4806 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 6 | II | — |
| 49 | 0.75 | BU | 4802 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 2 | II | — |
| 50 | 0.75 | YE/GY | 4807 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 7 | II | — |
| 51 | 0.75 | GY | 4808 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 8 | II | — |
| 52 | 0.75 | BN | 4801 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 1 | II | — |
| 53 | 0.5 | BU | 5491 | Cylinder Shutoff Solenoid Control 1 | II | — |
| 54 | — | — | — | Not Occupied | — | — |
| 55 | 0.5 | BN/RD | 2701 | Throttle Position Sensor 5V Reference | II | — |
| 56 | 0.5 | BU/WH | 3630 | Throttle Position Sensor (SENT1) Signal | II | — |
| 57 | 0.5 | GY/RD | 2704 | Manifold Absolute Pressure Sensor 5V Reference | II | — |
| 58 | 0.5 | GN/WH | 432 | Manifold Absolute Pressure Sensor Signal | II | — |
| 59 | — | — | — | Not Occupied | — | — |
| 60 | 0.5 | BU/WH | 7446 | Fuel Line Pressure Sensor Signal | II | — |
| 61 | 0.5 | BU | 410 | Engine Coolant Temperature Sensor Signal | II | — |
| 62 | — | — | — | Not Occupied | — | — |
| 63 | 0.5 | BU/WH | 2918 | Fuel Rail Pressure Sensor Signal | II | — |
| 64 | 0.5 | GY | 23 | Generator Field Duty Cycle Signal | II | — |
| 65 | 0.75 | GN/BK | 4903 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3 | II | — |
| 66 | 0.75 | BU/WH | 4904 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4 | II | — |
| 67 | 0.75 | GN/WH | 4905 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5 | II | — |
| 68 | 0.75 | VT | 4906 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6 | II | — |
| 69 | 0.75 | BN/GN | 4902 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2 | II | — |
| 70 | 0.75 | WH/YE | 4907 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 7 | II | — |
| 71 | 0.75 | WH/GN | 4908 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 8 | II | — |
| 72 | 0.75 | BN/WH | 4901 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1 | II | — |
| 73 | 2.5 | BK/WH | 451 | Signal Ground | I | — |

## K20 Engine Control Module X1 (L84/L87)




4596458

### Connector Part Information

Harness Type: Engine
OEM Connector: 33315785
Service Connector: 19368142
Description: 49-Way F 0.64, 2.8 Series, Sealed (BK with BU Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1326030-8 | Lear 17 | A | 4 |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

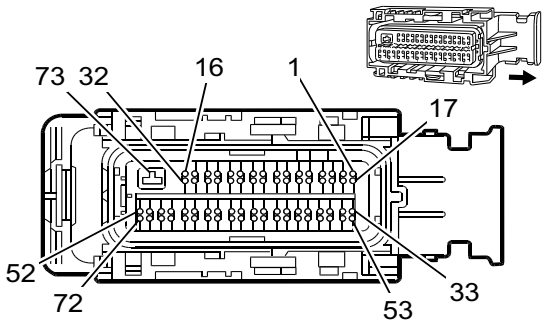
## K20 Engine Control Module X1 (L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/WH | 492 | Mass Air Flow Sensor Signal | II | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | II | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | WH | 7494 | High Speed GMLAN Serial Data (-)3 | II | — |
| 6 | 0.5 | WH/BU | 6311 | Cruise/ETC/TCC Brake Signal | II | — |
| 7 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | II | — |
| 8 | 0.5 | BN/WH | 419 | Check Engine Indicator Control | II | — |
| 9 | 0.5 | YE | 5991 | Powertrain Relay Coil Control | II | — |
| 10 - 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.5 | BU/GY | 636 | Outside Ambient Air Temperature Sensor Signal | II | — |
| 13 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | II | — |
| 14 | 0.5 | WH/GN | 5380 | Brake Position Sensor Signal | II | — |
| 15 | 0.5 | BU/BK | 7493 | High Speed GMLAN Serial Data (+)3 | II | — |
| 16 | — | — | — | Not Occupied | — | — |
| 17 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | II | — |
| 18 | 0.5 | WH/GY | 459 | A/C Compressor Clutch Relay Control | II | — |
| 19 - 20 | — | — | — | Not Occupied | — | — |

## K20 Engine Control Module X1 (L84/L87) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 21 | 0.5 | GN/BU | 428 | EVAP Canister Purge Solenoid Control | II | — |
| 22 | — | — | — | Not Occupied | — | — |
| 23 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | II | — |
| 24 | 0.5 | BK/BU | 1271 | Accelerator Pedal Position Low Reference 1 | II | — |
| 25 - 26 | — | — | — | Not Occupied | — | — |
| 27 | 0.5<br>0.5 | WH/BU<br>GN/YE | 5726<br>3337 | Ignition Mode Switch Mode Control Backup<br>Transmission Internal Mode Switch Mode Control A | II<br>II | MQB/MGM/MGU<br>MQE+L84 |
| 28 | 0.5 | BN/GN | 1174 | Oil Level Switch Signal | II | — |
| 29 | — | — | — | Not Occupied | — | — |
| 30 | 0.5 | BK/VT | 1272 | Accelerator Pedal Position Low Reference 2 | II | — |
| 31 | — | — | — | Not Occupied | — | — |
| 32 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | II | — |
| 33 | 0.5 | VT/YE | 5985 | Accessory Wakeup Serial Data | II | — |
| 34 | 0.5 | RD/BN | 440 | Battery Positive Voltage | II | — |
| 35 | 0.5 | VT/YE | 3854 | Cabin Heater Coolant Motor Control | II | — |
| 36 | 0.5 | YE/BK | 625 | Starter Enable Relay Control | II | — |
| 37 | 0.5 | GN/GY | 465 | Fuel Pump Primary Relay Control | II | — |
| 38 | 0.5 | WH/RD | 1164 | Accelerator Pedal Position 5V Reference 1 | II | — |
| 39 | 0.5 | YE/WH | 1161 | Accelerator Pedal Position Signal 1 | II | — |
| 40 | 0.5 | YE/BN | 331 | Oil Pressure Sensor Signal | II | — |
| 41 | 0.5 | GN | 380 | A/C Refrigerant Pressure Sensor Signal | II | — |
| 42 - 43 | — | — | — | Not Occupied | — | — |
| 44 | 0.5 | GN/WH | 1162 | Accelerator Pedal Position Signal 2 | II | — |
| 45 | 0.5 | BN/RD | 1274 | Accelerator Pedal Position 5V Reference 2 | II | — |
| 46 | 0.5 | YE | 4063 | Hood Status A Signal | II | — |
| 47 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | II | — |
| 48 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |
| 49 | 2 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | I | — |

## K20 Engine Control Module X2 (L84/L87)




1590596

## Connector Part Information

Harness Type: Engine
OEM Connector: 15499466
Service Connector: 88988931
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with BK Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1326030-8 | Lear 17 | 4 | D |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

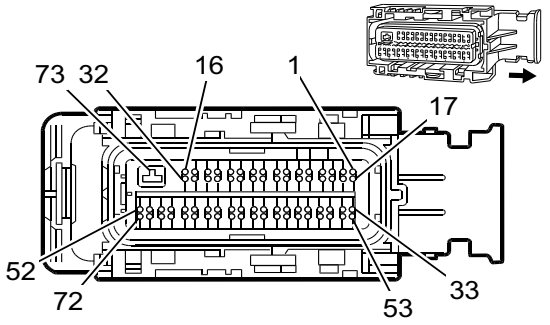
## K20 Engine Control Module X2 (L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/YE | 3212 | Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1 | II | — |
| 2 | 0.5 | GY | 5493 | Cylinder Shutoff Solenoid Control 3 | II | — |
| 3 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | II | — |
| 4 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.5 | GN/WH | 4622 | Local Interconnect Network Serial Data Bus 22 | II | — |
| 8 | 0.5 | GN/VT | 4621 | Local Interconnect Network Serial Data Bus 21 | II | — |
| 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.5 | VT/GY | 3110 | Heated Oxygen Sensor High Signal Bank 1 Sensor 1 | II | — |
| 11 | 0.5 | WH/BK | 3111 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 1 | II | — |
| 12 | 0.5 | YE/BU | 2124 | Ignition Control 4 | II | — |
| 13 | 0.5 | BN/BU | 2126 | Ignition Control 6 | II | — |
| 14 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |
| 15 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |
| 16 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |
| 17 | 0.5 | GY/WH | 3113 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1 | II | — |
| 18 | 0.5 | YE/GY | 2493 | Cylinder Shutoff Solenoid Enable (3) | II | — |
| 19 - 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.5 | WH/BN | 2203 | Enhanced Driver Mode 2 Switch Signal | II | — |
| 22 - 25 | — | — | — | Not Occupied | — | — |
| 26 | 0.5 | VT/WH | 3210 | Heated Oxygen Sensor High Signal Bank 2 Sensor 1 | II | — |
| 27 | 0.5 | YE/WH | 3211 | Heated Oxygen Sensor Low Signal Bank 2 Sensor 1 | II | — |
| 28 | 0.5 | GN/BU | 2123 | Ignition Control 3 | II | — |
| 29 | 0.5 | BU/GY | 2125 | Ignition Control 5 | II | — |
| 30 | 0.5 | BK/GY | 2130 | Ignition Control Low Reference Bank 2 | II | — |
| 31 | 0.5 | BN | 5496 | Cylinder Shutoff Solenoid Control 6 | II | — |
| 32 | 0.5 | YE/BN | 2496 | Cylinder Shutoff Solenoid Enable (6) | II | — |
| 33 | 0.5 | WH/BN | 3223 | Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2 | II | — |

## K20 Engine Control Module X2 (L84/L87) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 34 | — | — | — | Not Occupied | — | — |
| 35 | 0.5 | BU | 179 | Oil Pump Command Signal | II | — |
| 36 | 0.5 | YE/GN | 2494 | Cylinder Shutoff Solenoid Enable (4) | II | — |
| 37 | 0.75 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | II | — |
| 38 | — | — | — | Not Occupied | — | — |
| 39 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | II | — |
| 40 - 45 | — | — | — | Not Occupied | — | — |
| 46 | 0.5 | YE/BU | 3221 | Heated Oxygen Sensor Low Signal Bank 2 Sensor 2 | II | — |
| 47 | 0.5 | VT/GN | 3220 | Heated Oxygen Sensor High Signal Bank 2 Sensor 2 | II | — |
| 48 - 49 | — | — | — | Not Occupied | — | — |
| 50 | 0.75 | BK/GY | 2303 | Knock Sensor Low Reference 2 | II | — |
| 51 | 0.75 | BK/YE | 1716 | Knock Sensor Low Reference 1 | II | — |
| 52 | 0.5 | BN/WH | 582 | Throttle Actuator Control Close | II | — |
| 53 | 0.5 | GY/WH | 3122 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2 | II | — |
| 54 | 0.5 | VT | 5495 | Cylinder Shutoff Solenoid Control 5 | II | — |
| 55 | 0.5 | WH/VT | 2495 | Cylinder Shutoff Solenoid Enable (5) | II | — |
| 56 | 0.5 | YE/BU | 5494 | Cylinder Shutoff Solenoid Control 4 | II | — |
| 57 | 0.5 | GN | 5492 | Cylinder Shutoff Solenoid Control 2 | II | — |
| 58 | 0.5 | WH/GN | 2492 | Cylinder Shutoff Solenoid Enable (2) | II | — |
| 59 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | II | — |
| 60 - 65 | — | — | — | Not Occupied | — | — |
| 66 | 0.5 | WH/YE | 3121 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 2 | II | — |
| 67 | 0.5 | VT/BU | 3120 | Heated Oxygen Sensor High Signal Bank 1 Sensor 2 | II | — |
| 68 - 69 | — | — | — | Not Occupied | — | — |
| 70 | 0.75 | WH/GY | 1876 | Knock Sensor Signal 2 | II | — |
| 71 | 0.75 | VT/GY | 496 | Knock Sensor Signal 1 | II | — |
| 72 | 0.5 | YE | 581 | Throttle Actuator Control Open | II | — |
| 73 | 2.5 | BK/WH | 451 | Signal Ground | I | — |

## K20 Engine Control Module X3 (L84/L87)




1590596

### Connector Part Information

Harness Type: Engine
OEM Connector: 15497996
Service Connector: 88988372
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with GY Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1326030-8 | Lear 17 | 4 | D |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K20 Engine Control Module X3 (L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH | 5497 | Cylinder Shutoff Solenoid Control 7 | II | — |
| 2 | 0.5 | GN/GY | 2497 | Cylinder Shutoff Solenoid Enable (7) | II | — |
| 3 - 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | VT/BN | 5284 | Camshaft Phaser Intake Solenoid 1 | II | — |
| 6 | 0.5 | VT/GN | 4320 | Powertrain Sensor Bus Enable | II | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | YE/VT | 5275 | Camshaft Position Intake Sensor 1 | II | — |
| 9 | 0.5 | GY/BU | 5300 | Camshaft Position Intake Sensor Control 1 | II | — |
| 10 | 0.5 | GN | 6271 | Crankshaft 60X Sensor Signal | II | — |
| 11 | 0.5 | VT/BU | 6091 | Crankshaft Position Sensor Replicated Signal | II | — |
| 12 | 0.5 | BU/WH | 2122 | Ignition Control 2 | II | — |
| 13 | 0.5 | VT/WH | 2128 | Ignition Control 8 | II | — |
| 14 | 0.5 | BN | 25 | Charge Indicator Control | II | — |
| 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.75 | YE | 7301 | High Pressure Fuel Pump Actuator High - Control | II | — |
| 17 - 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.5 | BK/BN | 6753 | Cam Phaser W Low Reference | II | — |
| 22 - 23 | — | — | — | Not Occupied | — | — |

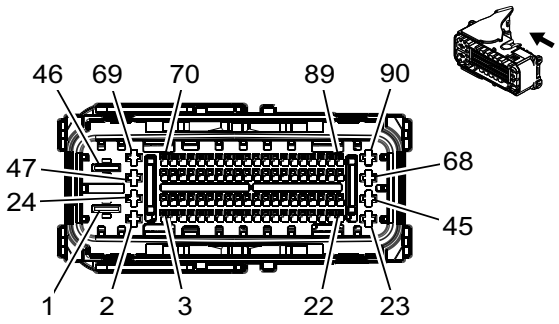
## K20 Engine Control Module X3 (L84/L87) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 24 | 0.5 | BK/GN | 5301 | Camshaft Position Intake Sensor Low Reference 1 | II | — |
| 25 | 0.5 | VT/BU | 6270 | Crankshaft 60X Sensor 5V Reference | II | — |
| 26 | 0.5 | BK/VT | 6272 | Crankshaft 60X Sensor Low Reference | II | — |
| 27 | — | — | — | Not Occupied | — | — |
| 28 | 0.5 | GN/GY | 2127 | Ignition Control 7 | II | — |
| 29 | 0.5 | BU/VT | 2121 | Ignition Control 1 | II | — |
| 30 | 0.5 | BK/BU | 2129 | Ignition Control Low Reference Bank 1 | II | — |
| 31 | — | — | — | Not Occupied | — | — |
| 32 | 0.75 | VT/BK | 7300 | High Pressure Fuel Pump Actuator Low - Control | II | — |
| 33 | 0.5 | YE/VT | 4325 | Starter Pinion Solenoid Relay Control | II | — |
| 34 | 0.5 | WH/BU | 2491 | Cylinder Shutoff Solenoid Enable (1) | II | — |
| 35 | 0.5 | WH/YE | 2498 | Cylinder Shutoff Solenoid Enable (8) | II | — |
| 36 | 0.5 | BK/BN | 2752 | Throttle Position Sensor Low Reference | II | — |
| 37 | 0.5 | BK/GN | 469 | Manifold Absolute Pressure Sensor Low Reference | II | — |
| 38 - 39 | — | — | — | Not Occupied | — | — |
| 40 | 0.5 | BN/BU | 357 | Oil Temperature Sensor Signal | II | — |
| 41 - 42 | — | — | — | Not Occupied | — | — |
| 43 | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | II | — |
| 44 | 0.75 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | II | — |
| 45 | 0.75 | GN | 4803 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 3 | II | — |
| 46 | 0.75 | GY/BU | 4804 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 4 | II | — |
| 47 | 0.75 | WH/GN | 4805 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 5 | II | — |
| 48 | 0.75 | GN/VT | 4806 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 6 | II | — |
| 49 | 0.75 | BU | 4802 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 2 | II | — |
| 50 | 0.75 | YE/GY | 4807 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 7 | II | — |
| 51 | 0.75 | GY | 4808 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 8 | II | — |
| 52 | 0.75 | BN | 4801 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 1 | II | — |
| 53 | 0.5 | BU | 5491 | Cylinder Shutoff Solenoid Control 1 | II | — |
| 54 | 0.5 | YE | 5498 | Cylinder Shutoff Solenoid Control 8 | II | — |
| 55 | 0.5 | BN/RD | 2701 | Throttle Position Sensor 5V Reference | II | — |
| 56 | 0.5 | BU/WH | 3630 | Throttle Position Sensor (SENT1) Signal | II | — |
| 57 | 0.5 | GY/RD | 2704 | Manifold Absolute Pressure Sensor 5V Reference | II | — |
| 58 | 0.5 | GN/WH | 432 | Manifold Absolute Pressure Sensor Signal | II | — |
| 59 | — | — | — | Not Occupied | — | — |
| 60 | 0.5 | BU/WH | 7446 | Fuel Line Pressure Sensor Signal | II | — |
| 61 | 0.5 | BU | 410 | Engine Coolant Temperature Sensor Signal | II | — |
| 62 | — | — | — | Not Occupied | — | — |

## K20 Engine Control Module X3 (L84/L87) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 63 | 0.5 | BU/WH | 2918 | Fuel Rail Pressure Sensor Signal | II | — |
| 64 | 0.5 | GY | 23 | Generator Field Duty Cycle Signal | II | — |
| 65 | 0.75 | GN/BK | 4903 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3 | II | — |
| 66 | 0.75 | BU/WH | 4904 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4 | II | — |
| 67 | 0.75 | GN/WH | 4905 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5 | II | — |
| 68 | 0.75 | VT | 4906 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6 | II | — |
| 69 | 0.75 | BN/GN | 4902 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2 | II | — |
| 70 | 0.75 | WH/YE | 4907 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 7 | II | — |
| 71 | 0.75 | WH/GN | 4908 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 8 | II | — |
| 72 | 0.75 | BN/WH | 4901 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1 | II | — |
| 73 | 2.5 | BK/WH | 451 | Signal Ground | I | — |

## K20 Engine Control Module X1 (LM2)




4997706

### Connector Part Information

Harness Type: Engine
OEM Connector: 35021651
Service Connector: 84628960
Description: 90-Way F 0.64 GEN-Y, 2.8, 6.3 MCP Series, Sealed (BU)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1-968857-3 | Lear 7 | C | 1 |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

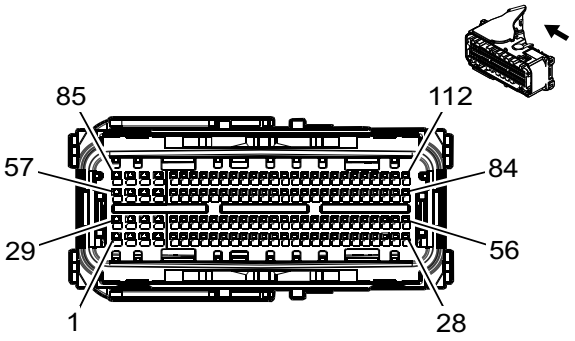
## K20 Engine Control Module X1 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 6 | BK/WH | 451 | Signal Ground | II | — |
| 2 | 0.75 | YE/VT | 7245 | High Pressure Fuel Pump Low Enable | II | — |
| 3 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | II | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | BN/BU | 4065 | Powertrain Mount Solenoid Control 1 | II | — |
| 6 | 0.5 | BN/YE | 473 | High Speed Cooling Fan Relay Control | II | — |
| 7 | 0.5 | WH/GY | 459 | A/C Compressor Clutch Relay Control | II | — |
| 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.5 | VT/GY | 7246 | Exhaust Gas Recirculation Differential Pressure Signal | II | — |
| 10 | 0.5 | YE/GY | 3926 | Crankcase Differential Pressure Sensor Signal | II | — |
| 11 - 14 | — | — | — | Not Occupied | — | — |
| 15 | 0.5 | GN | 380 | A/C Refrigerant Pressure Sensor Signal | II | — |
| 16 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | II | — |
| 17 | 0.5 | BU/BK | 7493 | High Speed GMLAN Serial Data (+)3 | II | — |
| 18 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | II | — |
| 19 | 0.75 | GY/BK | 1330 | Variable Geometry Turbocharger Position Sensor Motor Close Control | II | — |
| 20 | 0.75 | WH/VT | 5764 | Exhaust Gas Recirculation Valve Motor High Signal | II | — |
| 21 | 0.75 | WH/BN | 1313 | Variable Geometry Turbocharger Position Sensor Motor Open Control | II | — |
| 22 | 0.75 | VT/BK | 5746 | Exhaust Gas Recirculation Valve Motor Low Signal | II | — |
| 23 | 0.75 | RD/BN | 440 | Battery Positive Voltage | II | — |
| 24 | 1 | YE/VT | 2420 | Fuel High Pressure Pump Low Enable | II | — |
| 25 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | II | — |
| 26 | 0.5 | YE | 5991 | Powertrain Relay Coil Control | II | — |
| 27 | 0.5 | BN/WH | 419 | Check Engine Indicator Control | II | — |
| 28 | 0.5 | GN/BN | 507 | Wait To Start Indicator Control | II | — |
| 29 | — | — | — | Not Occupied | — | — |
| 30 | 0.5 | YE/BN | 331 | Oil Pressure Sensor Signal | II | — |
| 31 | 0.5 | WH/BN | 2203 | Enhanced Driver Mode 2 Switch Signal | II | — |
| 32 - 33 | — | — | — | Not Occupied | — | — |
| 34 | 0.5 | WH/BU | 6311 | Cruise/ETC/TCC Brake Signal | II | — |
| 35 - 36 | — | — | — | Not Occupied | — | — |
| 37 | 0.5 | WH/BU | 5726 | Ignition Mode Switch Mode Control Backup | II | — |
| 38 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | II | — |
| 39 | 0.5 | WH | 7494 | High Speed GMLAN Serial Data (-)3 | II | — |
| 40 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | II | — |
| 41 | — | — | — | Not Occupied | — | — |
| 42 | 0.75 | YE/BN | 1420 | Exhaust Restrictor Motor Open Control | II | — |
| 43 | — | — | — | Not Occupied | — | — |
| 44 | 0.75 | BN | 1421 | Exhaust Restrictor Motor Closed Control | II | — |
| 45 | — | — | — | Not Occupied | — | — |
| 46 | 4 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | II | — |
| 47 | 0.75 | GY/BN | 7244 | High Pressure Fuel Pump High Side Supply | II | — |

## K20 Engine Control Module X1 (LM2) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 48 | 0.5 | VT/YE | 5985 | Accessory Wakeup Serial Data | II | — |
| 49 | 0.5 | BK/VT | 1272 | Accelerator Pedal Position Low Reference 2 | II | — |
| 50 | 0.5 | GN/WH | 1162 | Accelerator Pedal Position Signal 2 | II | — |
| 51 | 0.5 | BN/RD | 1274 | Accelerator Pedal Position 5V Reference 2 | II | — |
| 52 | 0.5 | WH/GN | 5380 | Brake Position Sensor Signal | II | — |
| 53 | — | — | — | Not Occupied | — | — |
| 54 | 0.5 | YE | 4063 | Hood Status A Signal | II | — |
| 55 | — | — | — | Not Occupied | — | — |
| 56 | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | II | — |
| 57 | 0.5 | GY | 2973 | Coolant Flow Control Valve Position Signal | II | — |
| 58 | 0.5 | GN/GY | 7316 | Variable Swirl Valve PWM Control Signal | II | — |
| 59 - 60 | — | — | — | Not Occupied | — | — |
| 61 | 0.5 | GN/WH | 492 | Mass Air Flow Sensor Signal | II | — |
| 62 - 64 | — | — | — | Not Occupied | — | — |
| 65 | 0.5 | GN/BU | 3889 | DEF Power Module Relay Control | II | — |
| 66 | 0.75 | GY/BU | 2971 | Coolant Flow Control Actuator Control Low | II | — |
| 67 | — | — | — | Not Occupied | — | — |
| 68 | 2.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | I | — |
| 69 | 1 | GY/BN | 2419 | Fuel High Pressure Pump High Side Supply | II | — |
| 70 | 0.75 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | II | — |
| 71 | 0.5 | BK/BU | 1271 | Accelerator Pedal Position Low Reference 1 | II | — |
| 72 | 0.5 | YE/WH | 1161 | Accelerator Pedal Position Signal 1 | II | — |
| 73 | 0.5 | WH/RD | 1164 | Accelerator Pedal Position 5V Reference 1 | II | — |
| 74 | 0.5 | BU/GY | 636 | Outside Ambient Air Temperature Sensor Signal | II | — |
| 75 | 0.5 | VT | 7485 | Oil Temperature Sensor Signal | II | — |
| 76 | 0.5 | BN | 4645 | Heater Core Outlet Temperature Signal | II | — |
| 77 | — | — | — | Not Occupied | — | — |
| 78 | 0.5 | GY/VT | 2404 | Engine Block Coolant Temperature Signal | II | — |
| 79 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | II | — |
| 80 | — | — | — | Not Occupied | — | — |
| 81 | 0.5 | VT/YE | 5947 | Variable Nozzle Turbo Position Sensor Signal | II | — |
| 82 | 0.5 | BN/WH | 5763 | Exhaust Gas Recirculation Valve Sensor Signal | II | — |
| 83 | 0.5 | BU/GY | 2978 | Coolant Diverter Valve Position Signal | II | — |
| 84 | — | — | — | Not Occupied | — | — |
| 85 | 0.5 | BN/GN | 4305 | Exhaust Flapper Valve Control 1 | II | — |
| 86 | 0.5 | GN/GY | 465 | Fuel Pump Primary Relay Control | II | — |
| 87 | 0.5 | YE/BK | 625 | Starter Enable Relay Control | II | — |
| 88 | 0.75 | GY/BN | 2972 | Coolant Flow Control Actuator Control High | II | — |
| 89 | — | — | — | Not Occupied | — | — |
| 90 | 2.5 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | I | — |

## K20 Engine Control Module X2 (LM2)




4997563

### Connector Part Information

Harness Type: Engine
OEM Connector: 35021652
Service Connector: 84628959
Description: 112-Way F 0.64 GEN-Y, 1.2 MCON Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K20 Engine Control Module X2 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GN | 4803 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 3 | I | — |
| 2 | 1.5 | GY/BU | 4804 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 4 | I | — |
| 3 | 0.75 | BK/YE | 2834 | Fuel Rail Pressure Solenoid Low Reference | I | — |
| 4 | 0.75 | BU/WH | 2530 | Fuel Rail Pressure Solenoid Control | I | — |
| 5 | 0.5 | BK/VT | 6272 | Crankshaft 60X Sensor Low Reference | I | — |
| 6 | 0.5 | GN | 6271 | Crankshaft 60X Sensor Signal | I | — |
| 7 | 0.5 | VT/BU | 6270 | Crankshaft 60X Sensor 5V Reference | I | — |
| 8 | 0.5 | VT/BU | 6091 | Crankshaft Position Sensor Replicated Signal | I | — |
| 9 | 0.75 | BN | 3099 | DEF Dosing Valve High Control | I | — |
| 10 | 0.5 | BN/YE | 4066 | Powertrain Mount Solenoid Control 2 | I | — |
| 11 | 0.5 | BN | 25 | Charge Indicator Control | I | — |
| 12 | 0.5 | BN/BU | 357 | Oil Temperature Sensor Signal | I | — |
| 13 | 0.5 | YE/BU | 2408 | Engine Inlet Coolant Temperature Signal | I | — |
| 14 | 0.5 | VT | 2988 | Engine Outlet Coolant Temperature Signal | I | — |
| 15 | 0.5 | YE/BK | 3000 | Coolant Temperature Sensor 2 Signal | I | — |
| 16 | 0.5 | BN/GY | 4644 | Heater Core Inlet Temperature Signal | I | — |
| 17 | 0.5 | BN | 3681 | Charge Air Cooler Outlet Temperature Sensor Signal | I | — |
| 18 | 0.5 | YE/BU | 3680 | Charge Air Cooler Outlet Temperature Sensor Low Reference | I | — |

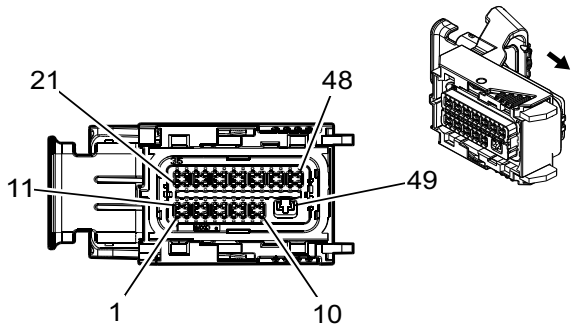
## K20 Engine Control Module X2 (LM2) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 19 - 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.5 | BN/YE | 1372 | Engine Metal Temperature Sensor Signal (2) | I | — |
| 22 | 0.5 | GY/BU | 6118 | Manifold Air Temperature Sensor Signal | I | — |
| 23 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 24 | — | — | — | Not Occupied | — | — |
| 25 | 0.5 | YE/GN | 3236 | Exhaust Gas Recirculation Temperature Sensor 2 Signal | I | — |
| 26 | 0.75 | BU/WH | 4014 | Low Pressure Exhaust Gas Recirculation Actuator Control Open | I | — |
| 27 | 0.75 | BU/BN | 2977 | Coolant Diverter Valve Actuator Control High | I | — |
| 28 | 0.75 | BU | 2976 | Coolant Diverter Valve Actuator Control Low | I | — |
| 29 | 1.5 | GN/GY | 4903 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3 | I | — |
| 30 | 1.5 | BU/WH | 4904 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4 | I | — |
| 31 | 0.75 | BU | 179 | Oil Pump Command Signal | I | — |
| 32 | 0.75 | YE/BN | 106 | Oil Pump Motor Control | I | — |
| 33 | 0.5 | BK/GY | 5296 | Camshaft Position Exhaust Sensor Low Reference 1 | I | — |
| 34 | 0.5 | VT/BK | 5273 | Camshaft Position Exhaust Sensor 1 | I | — |
| 35 | 0.5 | GY/YE | 5297 | Camshaft Position Exhaust Sensor Control 1 | I | — |
| 36 | — | — | — | Not Occupied | — | — |
| 37 | 0.75 | BN/WH | 3100 | DEF Dosing Valve Low Control | I | — |
| 38 | — | — | — | Not Occupied | — | — |
| 39 | 0.5 | GY/BN | 7071 | Heater Fuel Control | I | — |
| 40 - 45 | — | — | — | Not Occupied | — | — |
| 46 | 0.75 | BU/WH | 3630 | Throttle Position Sensor (SENT1) Signal | I | — |
| 47 | 0.5 | BU/GN | 4012 | Low Pressure Exhaust Gas Recirculation Actuator Position Signal | I | — |
| 48 | 0.5 | GN/VT | 4621 | Local Interconnect Network Serial Data Bus 21 | I | — |
| 49 | 0.5 | GN/WH | 4622 | Local Interconnect Network Serial Data Bus 22 | I | — |
| 50 | — | — | — | Not Occupied | — | — |
| 51 | 0.5 | GN/BN | 2732 | Local Interconnect Network Bus 32 | I | — |
| 52 | — | — | — | Not Occupied | — | — |
| 53 | 0.5 | BK/YE | 6275 | Exhaust Gas Recirculation Temperature Sensor 2 Low Reference | I | — |
| 54 | — | — | — | Not Occupied | — | — |
| 55 | 0.75 | BU/BN | 4013 | Low Pressure Exhaust Gas Recirculation Actuator Control Close | I | — |
| 56 | — | — | — | Not Occupied | — | — |
| 57 | 1.5 | VT/GY | 4906 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6 | I | — |
| 58 | 1.5 | BN/WH | 4901 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1 | I | — |
| 59 | 1.5 | GN/WH | 4905 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5 | I | — |
| 60 | 1.5 | BU/GY | 4902 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2 | I | — |
| 61 - 67 | — | — | — | Not Occupied | — | — |

## K20 Engine Control Module X2 (LM2) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 68 | 0.5 | BN/RD | 2917 | Fuel Rail Pressure Sensor 5V Reference | I | — |
| 69 | 0.5 | BK/GN | 2919 | Fuel Rail Pressure Sensor Low Reference | I | — |
| 70 | 0.5 | GN | 3683 | Charge Air Cooler Inlet Temperature Sensor Signal | I | — |
| 71 | 0.5 | YE/BK | 3682 | Charge Air Cooler Inlet Temperature Sensor Low Reference | I | — |
| 72 - 73 | — | — | — | Not Occupied | — | — |
| 74 | 0.5 | BK/BN | 6782 | Exhaust Gas Temperature Sensor 1 Low Reference | I | — |
| 75 | 0.5 | BU | 6053 | Exhaust Pressure Sensor Signal 1 | I | — |
| 76 | 0.5 | BK/GN | 3235 | Exhaust Gas Recirculation Temperature Sensor 3 Low Reference | I | — |
| 77 | 0.5 | GY | 23 | Generator Field Duty Cycle Signal | I | — |
| 78 | 0.5 | BU/BK | 1422 | Engine Water Charge Air Coolant Temperature Signal | I | — |
| 79 - 80 | — | — | — | Not Occupied | — | — |
| 81 | 0.5 | BK/GN | 3657 | Exhaust Gas Temperature Sensor 3 Low Reference | I | — |
| 82 - 83 | — | — | — | Not Occupied | — | — |
| 84 | 0.75 | BN/WH | 582 | Throttle Actuator Control Close | I | — |
| 85 | 1.5 | VT/GN | 4806 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 6 | I | — |
| 86 | 1.5 | BN | 4801 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 1 | I | — |
| 87 | 1.5 | BU | 4802 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 2 | I | — |
| 88 | 1.5 | WH/GN | 4805 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 5 | I | — |
| 89 - 95 | — | — | — | Not Occupied | — | — |
| 96 | 0.5 | BU/WH | 2918 | Fuel Rail Pressure Sensor Signal | I | — |
| 97 | 0.5 | BN/YE | 2161 | Fuel Rail Pressure Sensor 2 Signal | I | — |
| 98 - 100 | — | — | — | Not Occupied | — | — |
| 101 | 0.5 | GN/WH | 432 | Manifold Absolute Pressure Sensor Signal | I | — |
| 102 | 0.5 | BU/WH | 5277 | Exhaust Gas Temperature Sensor 1 | I | — |
| 103 | 0.5 | WH/GY | 3234 | Exhaust Gas Recirculation Temperature Sensor 3 Signal | I | — |
| 104 | 0.5 | BU/GN | 5377 | Exhaust Gas Temperature Sensor 2 | I | — |
| 105 | 0.5 | BK/BU | 6783 | Exhaust Gas Temperature Sensor 2 Low Reference | I | — |
| 106 | 0.5 | GN/YE | 37 | Engine Metal Temperature Sensor Signal | I | — |
| 107 - 108 | — | — | — | Not Occupied | — | — |
| 109 | 0.5 | GY/GN | 5378 | Exhaust Gas Temperature Sensor 3 | I | — |
| 110 | 0.75 | BK/BU | 1408 | Variable Swirl Valve Close Control | I | — |
| 111 | 0.75 | YE | 581 | Throttle Actuator Control Open | I | — |
| 112 | 0.75 | BK/GN | 1389 | Variable Swirl Valve Open Control | I | — |

## K20 Engine Control Module X1 (LV3)




4596458

### Connector Part Information

Harness Type: Engine
OEM Connector: 33315785
Service Connector: 19368142
Description: 49-Way F 0.64, 2.8 Series, Sealed (BK with BU Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1326030-8 | Lear 17 | A | 4 |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

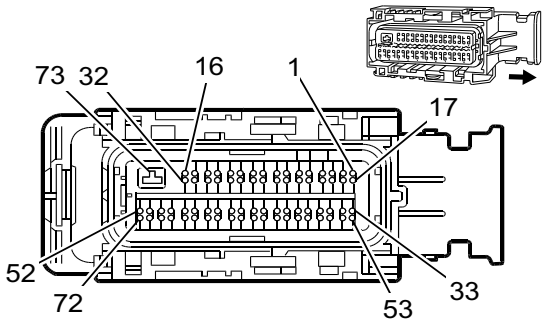
## K20 Engine Control Module X1 (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/WH | 492 | Mass Air Flow Sensor Signal | II | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | II | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | WH | 7494 | High Speed GMLAN Serial Data (-)3 | II | — |
| 6 | 0.5 | WH/BU | 6311 | Cruise/ETC/TCC Brake Signal | II | — |
| 7 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | II | — |
| 8 | 0.5 | BN/WH | 419 | Check Engine Indicator Control | II | — |
| 9 | 0.5 | YE | 5991 | Powertrain Relay Coil Control | II | — |
| 10 - 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.5 | BU/GY | 636 | Outside Ambient Air Temperature Sensor Signal | II | — |
| 13 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | II | — |
| 14 | 0.5 | WH/GN | 5380 | Brake Position Sensor Signal | II | — |
| 15 | 0.5 | BU/BK | 7493 | High Speed GMLAN Serial Data (+)3 | II | — |
| 16 | 0.5 | WH/GY | 1786 | Transmission Park/Neutral Signal 1 | II | — |
| 17 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | II | — |
| 18 | 0.5 | WH/GY | 459 | A/C Compressor Clutch Relay Control | II | — |
| 19 - 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.5 | GN/BU | 428 | EVAP Canister Purge Solenoid Control | II | — |

## K20 Engine Control Module X1 (LV3) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 22 | — | — | — | Not Occupied | — | — |
| 23 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | II | — |
| 24 | 0.5 | BK/BU | 1271 | Accelerator Pedal Position Low Reference 1 | II | — |
| 25 - 27 | — | — | — | Not Occupied | — | — |
| 28 | 0.5 | BN/GN | 1174 | Oil Level Switch Signal | II | — |
| 29 | — | — | — | Not Occupied | — | — |
| 30 | 0.5 | BK/VT | 1272 | Accelerator Pedal Position Low Reference 2 | II | — |
| 31 | — | — | — | Not Occupied | — | — |
| 32 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | II | — |
| 33 | 0.5 | VT/YE | 5985 | Accessory Wakeup Serial Data | II | — |
| 34 | 0.5 | RD/BN | 440 | Battery Positive Voltage | II | — |
| 35 | — | — | — | Not Occupied | — | — |
| 36 | 0.5 | YE/BK | 625 | Starter Enable Relay Control | II | — |
| 37 | 0.5 | GN/GY | 465 | Fuel Pump Primary Relay Control | II | — |
| 38 | 0.5 | WH/RD | 1164 | Accelerator Pedal Position 5V Reference 1 | II | — |
| 39 | 0.5 | YE/WH | 1161 | Accelerator Pedal Position Signal 1 | II | — |
| 40 | 0.5 | YE/BN | 331 | Oil Pressure Sensor Signal | II | — |
| 41 | 0.5 | GN | 380 | A/C Refrigerant Pressure Sensor Signal | II | — |
| 42 - 43 | — | — | — | Not Occupied | — | — |
| 44 | 0.5 | GN/WH | 1162 | Accelerator Pedal Position Signal 2 | II | — |
| 45 | 0.5 | BN/RD | 1274 | Accelerator Pedal Position 5V Reference 2 | II | — |
| 46 | 0.5 | YE | 4063 | Hood Status A Signal | II | — |
| 47 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | II | — |
| 48 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |
| 49 | 2 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | I | — |

## K20 Engine Control Module X2 (LV3)




1590596

### Connector Part Information

Harness Type: Engine
OEM Connector: 15499466
Service Connector: 88988931
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with BK Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1326030-8 | Lear 17 | 4 | D |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

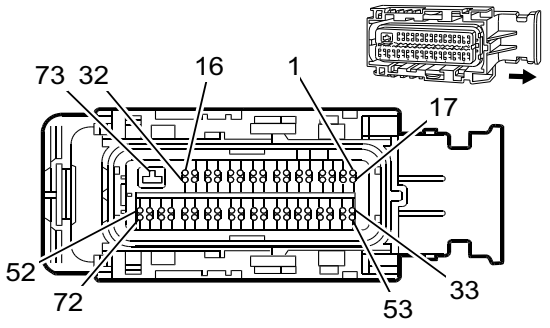
## K20 Engine Control Module X2 (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/YE | 3212 | Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1 | II | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | II | — |
| 4 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.5 | GN/WH | 4622 | Local Interconnect Network Serial Data Bus 22 | II | — |
| 8 - 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.5 | VT/GY | 3110 | Heated Oxygen Sensor High Signal Bank 1 Sensor 1 | II | — |
| 11 | 0.5 | WH/BK | 3111 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 1 | II | — |
| 12 | — | — | — | Not Occupied | — | — |
| 13 | 0.5 | GN/BU | 2123 | Ignition Control 3 | II | — |
| 14 - 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.5 | VT/BU | 5290 | Powertrain Main Relay Fused Supply 1 | II | — |
| 17 | 0.5 | GY/WH | 3113 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1 | II | — |
| 18 - 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.5 | WH/BN | 2203 | Enhanced Driver Mode 2 Switch Signal | II | — |
| 22 - 25 | — | — | — | Not Occupied | — | — |
| 26 | 0.5 | VT/WH | 3210 | Heated Oxygen Sensor High Signal Bank 2 Sensor 1 | II | — |
| 27 | 0.5 | YE/WH | 3211 | Heated Oxygen Sensor Low Signal Bank 2 Sensor 1 | II | — |
| 28 | — | — | — | Not Occupied | — | — |
| 29 | 0.5 | BU/WH | 2122 | Ignition Control 2 | II | — |
| 30 | 0.5 | BK/GY | 2130 | Ignition Control Low Reference Bank 2 | II | — |
| 31 - 32 | — | — | — | Not Occupied | — | — |
| 33 | 0.5 | WH/BN | 3223 | Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2 | II | — |
| 34 | — | — | — | Not Occupied | — | — |
| 35 | 0.5 | BU | 179 | Oil Pump Command Signal | II | — |
| 36 | — | — | — | Not Occupied | — | — |
| 37 | 0.5 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | II | — |
| 38 | — | — | — | Not Occupied | — | — |
| 39 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | II | — |
| 40 - 45 | — | — | — | Not Occupied | — | — |
| 46 | 0.5 | YE/BU | 3221 | Heated Oxygen Sensor Low Signal Bank 2 Sensor 2 | II | — |
| 47 | 0.5 | VT/GN | 3220 | Heated Oxygen Sensor High Signal Bank 2 Sensor 2 | II | — |

## K20 Engine Control Module X2 (LV3) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 48 - 49 | — | — | — | Not Occupied | — | — |
| 50 | 0.75 | BK/GY | 2303 | Knock Sensor Low Reference 2 | II | — |
| 51 | 0.75 | BK/YE | 1716 | Knock Sensor Low Reference 1 | II | — |
| 52 | 0.5 | BN/WH | 582 | Throttle Actuator Control Close | II | — |
| 53 | 0.5 | GY/WH | 3122 | Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2 | II | — |
| 54 - 58 | — | — | — | Not Occupied | — | — |
| 59 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | II | — |
| 60 - 65 | — | — | — | Not Occupied | — | — |
| 66 | 0.5 | WH/YE | 3121 | Heated Oxygen Sensor Low Signal Bank 1 Sensor 2 | II | — |
| 67 | 0.5 | VT/BU | 3120 | Heated Oxygen Sensor High Signal Bank 1 Sensor 2 | II | — |
| 68 - 69 | — | — | — | Not Occupied | — | — |
| 70 | 0.75 | WH/GY | 1876 | Knock Sensor Signal 2 | II | — |
| 71 | 0.75 | VT/GY | 496 | Knock Sensor Signal 1 | II | — |
| 72 | 0.5 | YE | 581 | Throttle Actuator Control Open | II | — |
| 73 | 2.5 | BK/WH | 451 | Signal Ground | I | — |

## K20 Engine Control Module X3 (LV3)




1590596

### Connector Part Information

Harness Type: Engine
OEM Connector: 15497996
Service Connector: 88988372
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with GY Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1326030-8 | Lear 17 | A | 4 |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

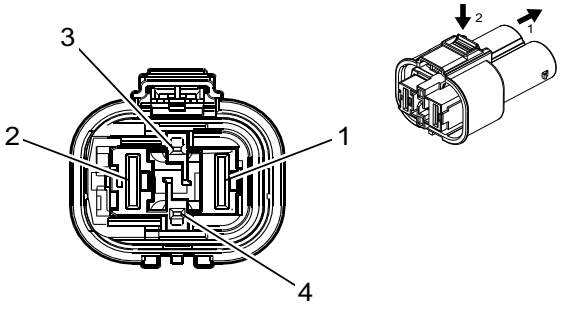
## K20 Engine Control Module X3 (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | VT/BN | 5284 | Camshaft Phaser Intake Solenoid 1 | II | — |
| 6 | 0.5 | VT/GN | 4320 | Powertrain Sensor Bus Enable | II | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | YE/VT | 5275 | Camshaft Position Intake Sensor 1 | II | — |
| 9 | 0.5 | GY/BU | 5300 | Camshaft Position Intake Sensor Control 1 | II | — |
| 10 | 0.5 | GN | 6271 | Crankshaft 60X Sensor Signal | II | — |
| 11 | 0.5 | VT/BU | 6091 | Crankshaft Position Sensor Replicated Signal | II | — |
| 12 | 0.5 | YE/BU | 2124 | Ignition Control 4 | II | — |
| 13 | 0.5 | BN/BU | 2126 | Ignition Control 6 | II | — |
| 14 | 0.5 | BN | 25 | Charge Indicator Control | II | — |
| 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.75 | YE | 7301 | High Pressure Fuel Pump Actuator High - Control | II | — |
| 17 - 18 | — | — | — | Not Occupied | — | — |
| 19 | 0.5 | BN/WH | 6354 | Output Speed High (Replicated TOS) Input Signal | II | — |
| 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.5 | BK/BN | 6753 | Cam Phaser W Low Reference | II | — |
| 22 - 23 | — | — | — | Not Occupied | — | — |
| 24 | 0.5 | BK/GN | 5301 | Camshaft Position Intake Sensor Low Reference 1 | II | — |
| 25 | 0.5 | VT/BU | 6270 | Crankshaft 60X Sensor 5V Reference | II | — |
| 26 | 0.5 | BK/VT | 6272 | Crankshaft 60X Sensor Low Reference | II | — |
| 27 | — | — | — | Not Occupied | — | — |
| 28 | 0.5 | BU/GY | 2125 | Ignition Control 5 | II | — |
| 29 | 0.5 | BU/VT | 2121 | Ignition Control 1 | II | — |
| 30 | 0.5 | BK/BU | 2129 | Ignition Control Low Reference Bank 1 | II | — |
| 31 | — | — | — | Not Occupied | — | — |
| 32 | 0.75 | VT/BK | 7300 | High Pressure Fuel Pump Actuator Low - Control | II | — |
| 33 - 35 | — | — | — | Not Occupied | — | — |
| 36 | 0.5 | BK/BN | 2752 | Throttle Position Sensor Low Reference | II | — |
| 37 | 0.5 | BK/GN | 469 | Manifold Absolute Pressure Sensor Low Reference | II | — |
| 38 - 42 | — | — | — | Not Occupied | — | — |
| 43 | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | II | — |
| 44 | 0.75 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | II | — |
| 45 - 46 | — | — | — | Not Occupied | — | — |
| 47 | 0.75 | BU | 4802 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 2 | II | — |
| 48 | 0.75 | GN | 4803 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 3 | II | — |
| 49 | 0.75 | GY/BU | 4804 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 4 | II | — |
| 50 | 0.75 | WH/GN | 4805 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 5 | II | — |

## K20 Engine Control Module X3 (LV3) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 51 | 0.75 | VT/GN | 4806 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 6 | II | — |
| 52 | 0.75 | BN | 4801 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 1 | II | — |
| 53 | 0.5 | BU | 5491 | Cylinder Shutoff Solenoid Control 1 | II | — |
| 54 | 0.5 | GN | 5492 | Cylinder Shutoff Solenoid Control 2 | II | — |
| 55 | 0.5 | BN/RD | 2701 | Throttle Position Sensor 5V Reference | II | — |
| 56 | 0.5 | BU/WH | 3630 | Throttle Position Sensor (SENT1) Signal | II | — |
| 57 | 0.5 | GY/RD | 2704 | Manifold Absolute Pressure Sensor 5V Reference | II | — |
| 58 | 0.5 | GN/WH | 432 | Manifold Absolute Pressure Sensor Signal | II | — |
| 59 | — | — | — | Not Occupied | — | — |
| 60 | 0.5 | BU/WH | 7446 | Fuel Line Pressure Sensor Signal | II | — |
| 61 | 0.5 | BU | 410 | Engine Coolant Temperature Sensor Signal | II | — |
| 62 | — | — | — | Not Occupied | — | — |
| 63 | 0.5 | BU/WH | 2918 | Fuel Rail Pressure Sensor Signal | II | — |
| 64 | 0.5 | GY | 23 | Generator Field Duty Cycle Signal | II | — |
| 65 - 66 | — | — | — | Not Occupied | — | — |
| 67 | 0.75 | BU/GY | 4902 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2 | II | — |
| 68 | 0.75 | GN/GY | 4903 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3 | II | — |
| 69 | 0.75 | BU/WH | 4904 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4 | II | — |
| 70 | 0.75 | GN/WH | 4905 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5 | II | — |
| 71 | 0.75 | VT/GY | 4906 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6 | II | — |
| 72 | 0.75 | BN/WH | 4901 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1 | II | — |
| 73 | 0.5 | BK/WH | 451 | Signal Ground | I | — |

## K22 Cooling Fan Control Module (LM2)




4847569

### Connector Part Information

Harness Type: Engine
OEM Connector: 33376654
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.2, 9.5 MCON Series (BK)

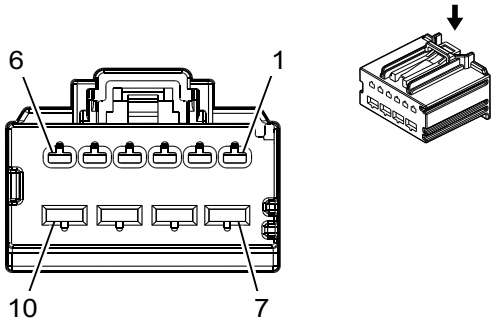
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## K22 Cooling Fan Control Module (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 5 | RD/VT | 842 | Battery Positive Voltage | I | — |
| 2 | 5 | BK | 4450 | Ground | I | — |
| 3 | 0.5 | BN/YE | 473 | High Speed Cooling Fan Relay Control | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## K29F Seat Heating Control Module - Front X1 (KA1)




3791446

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 31372-1000
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 Series (BK)

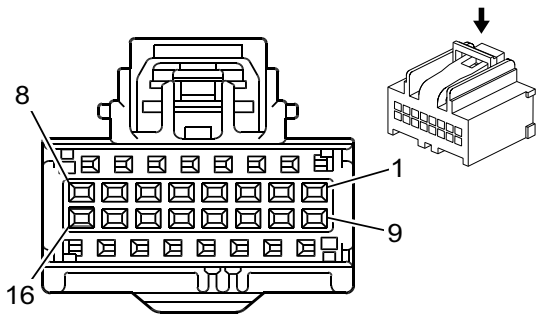
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## K29F Seat Heating Control Module - Front X1 (KA1)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | WH/BN | 2481 | Passenger Heated Back Element Control | I | — |
| 2 | 0.75 | BN/BU | 2479 | Passenger Heated Seat Element Control | I | — |
| 3 | 0.75 | GY/BK | 2480 | Passenger Heated Seat Element Low Reference | I | — |
| 4 | 0.75 | BN/BK | 2078 | Driver Heated Seat Element Low Reference | I | — |
| 5 | 0.75 | BN | 2432 | Driver Heated Back Element Control | I | — |
| 6 | 0.75 | BN/VT | 2077 | Driver Heated Seat Element Control | I | — |
| 7 | 0.75 | RD | 6140 | Battery Positive Voltage | I | — |
| 8 | 0.75 | BK | 1250 | Ground | I | — |
| 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.75 | RD/GN | 5140 | Battery Positive Voltage | I | — |

## K29F Seat Heating Control Module - Front X2 (KA1)




1653409

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 7283-9076-30
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 0.64 Kaizen Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

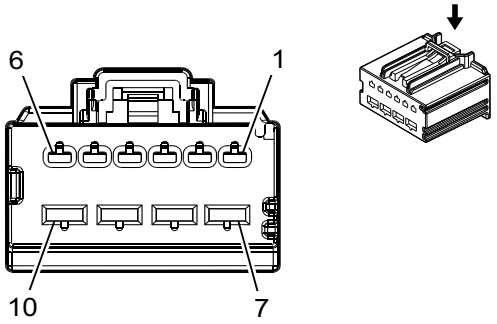
## K29F Seat Heating Control Module - Front X2 (KA1)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/YE | 2080 | Driver Heated Seat NTC Low Reference | I | — |
| 2 | 0.5 | BK/GY | 2435 | Passenger Heated Seat NTC Low Reference | I | — |
| 3 | 0.5 | BU | 2425 | Driver Heated Back NTC Signal | I | — |
| 4 | 0.5 | WH/BU | 2436 | Passenger Heated Back NTC Signal | I | — |
| 5 | 0.5 | WH/GY | 2434 | Passenger Heated Seat NTC Signal | I | — |

## K29F Seat Heating Control Module - Front X2 (KA1) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 6 | 0.5 | YE/GY | 2079 | Driver Heated Seat NTC Signal | I | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | GN/BU | 6133 | Local Interconnect Network Serial Data Bus 2 | I | — |
| 9 | 0.35 | GN/VT | 5906 | Driver Seat Vent Motor Control 1 | I | — |
| 10 | 0.5 | WH | 5908 | Passenger Seat Vent Motor Control 1 | I | — |
| 11 | 0.5 | BK/VT | 2426 | Driver Heated Back NTC Low Reference | I | — |
| 12 | 0.5 | BK/GN | 2482 | Passenger Heated Back NTC Low Reference | I | — |
| 13 - 16 | — | — | — | Not Occupied | — | — |

## K29F Seat Heating Control Module - Front X1 (KA1/KQV)




3791446

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 31372-1000
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

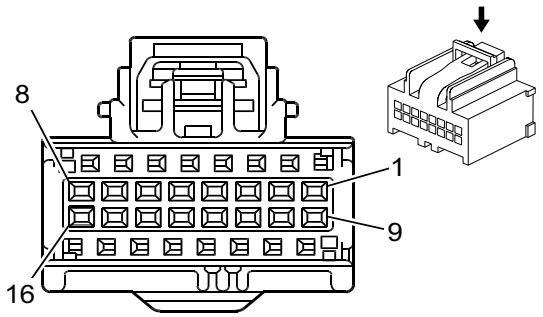
## K29F Seat Heating Control Module - Front X1 (KA1/KQV)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | WH/BN | 2481 | Passenger Heated Back Element Control | I | — |
| 2 | 0.75 | BN/BU | 2479 | Passenger Heated Seat Element Control | I | — |
| 3 | 0.75 | GY/BK | 2480 | Passenger Heated Seat Element Low Reference | I | — |
| 4 | 0.75 | BN/BK | 2078 | Driver Heated Seat Element Low Reference | I | — |
| 5 | 0.75 | BN | 2432 | Driver Heated Back Element Control | I | — |
| 6 | 0.75 | BN/VT | 2077 | Driver Heated Seat Element Control | I | — |
| 7 | 0.75 | RD | 6140 | Battery Positive Voltage | I | — |

## K29F Seat Heating Control Module - Front X1 (KA1/KQV) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 8 | 0.75 | BK | 1250 | Ground | I | — |
| 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.75 | RD/GN | 5140 | Battery Positive Voltage | I | — |

## K29F Seat Heating Control Module - Front X2 (KA1/KQV)




1653409

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 7283-9076-30
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 0.64 Kaizen Series (BK)

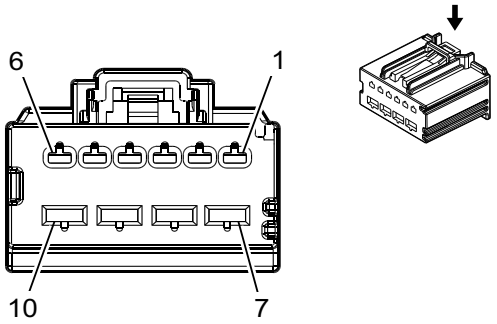
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## K29F Seat Heating Control Module - Front X2 (KA1/KQV)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/YE | 2080 | Driver Heated Seat NTC Low Reference | I | — |
| 2 | 0.5 | BK/GY | 2435 | Passenger Heated Seat NTC Low Reference | I | — |
| 3 | 0.5 | BU | 2425 | Driver Heated Back NTC Signal | I | — |
| 4 | 0.5 | WH/BU | 2436 | Passenger Heated Back NTC Signal | I | — |
| 5 | 0.5 | WH/GY | 2434 | Passenger Heated Seat NTC Signal | I | — |
| 6 | 0.5 | YE/GY | 2079 | Driver Heated Seat NTC Signal | I | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | GN/BU | 6133 | Local Interconnect Network Serial Data Bus 2 | I | — |
| 9 - 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.5 | BK/VT | 2426 | Driver Heated Back NTC Low Reference | I | — |
| 12 | 0.5 | BK/GN | 2482 | Passenger Heated Back NTC Low Reference | I | — |
| 13 - 16 | — | — | — | Not Occupied | — | — |

## K29R Seat Heating Control Module - Rear X1 (KA6)




3791446

### Connector Part Information

Harness Type: Left Rear Seat
OEM Connector: 31372-1000
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 Series (BK)

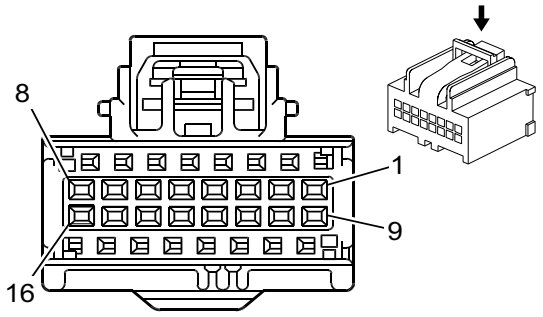
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### K29R Seat Heating Control Module - Rear X1 (KA6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | — | — | — | Not Occupied | — | — |
| 2 | 0.75 | GN/BN | 2296 | Right Rear Heated Seat Cushion Element Control | I | — |
| 3 | 0.75 | GN/BK | 2297 | Right Rear Heated Seat Cushion Element Low Reference | I | — |
| 4 | 0.75 | BN/BK | 2295 | Left Rear Heated Seat Cushion Element Low Reference | I | — |
| 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.75 | GY | 2294 | Left Rear Heated Seat Cushion Element Control | I | — |
| 7 | 0.75 | RD/YE | 240 | Battery Positive Voltage | I | — |
| 8 | 1 | BK | 1150 | Ground | I | — |
| 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.75 | RD/VT | 340 | Battery Positive Voltage | I | — |

## K29R Seat Heating Control Module - Rear X2 (KA6)




1653409

### Connector Part Information

Harness Type: Left Rear Seat
OEM Connector: 15136073
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 0.64 Kaizen Series (BK)

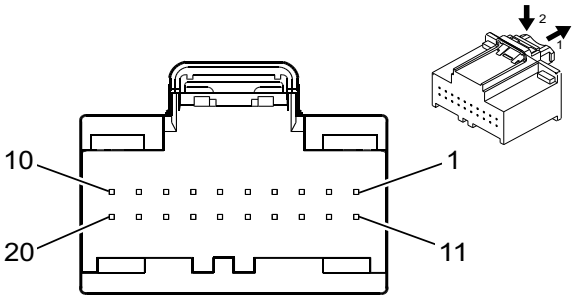
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## K29R Seat Heating Control Module - Rear X2 (KA6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BU/WH | 7048 | Left Rear Cushion NTC Low Reference | I | — |
| 2 | 0.75 | WH/BK | 7054 | Right Rear Cushion NTC Low Reference | I | — |
| 3 - 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.75 | YE/WH | 7053 | Right Rear Cushion NTC Signal | I | — |
| 6 | 0.75 | WH/BU | 7047 | Left Rear Cushion NTC Signal | I | — |
| 7 | 0.5 | BK | 1150 | Ground | I | — |
| 8 | 0.5 | GN/BU | 6133 | Local Interconnect Network Serial Data Bus 2 | I | — |
| 9 - 16 | — | — | — | Not Occupied | — | — |

## K33 HVAC Control Module X1




5109511

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35162722
Service Connector: 13525993
Description: 20-Way F 0.64 Series (GN)

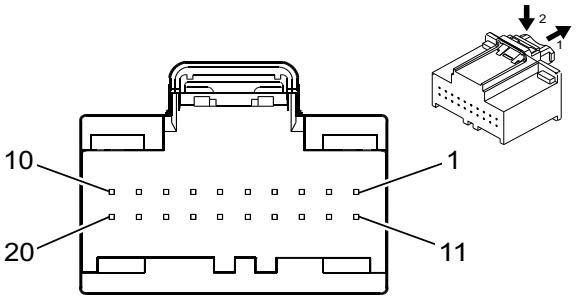
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K33 HVAC Control Module X1

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | — | — | — | Not Occupied | — | — |
| 2 | 0.35 | GY/GN | 7565 | Windscreen Temp Sensor Signal | I | — |
| 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.35 | BU/WH | 734 | Inside Air Temperature Sensor Signal | I | — |
| 5 | 0.35 | YE/BU | 3197 | Humidity Temperature Sensor Signal | I | — |
| 6 | 0.35 | YE/RD | 597 | 5V Reference | I | — |
| 7 | 0.35 | BK/BU | 7566 | Humidity/Windscreen Temp Sensor Low Reference | I | — |
| 8 - 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.35 | GY/BU | 7564 | Humidity Sensor Signal | I | — |
| 13 | — | — | — | Not Occupied | — | — |
| 14 | 0.35 | GY | 590 | Solar Sensor Driver Signal | I | — |
| 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.5 | BK | 1050 | Ground | I | — |
| 17 - 20 | — | — | — | Not Occupied | — | — |

## K33 HVAC Control Module X2




5109514

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35162720
Service Connector: 13525992
Description: 20-Way F 0.64 Series (BN)

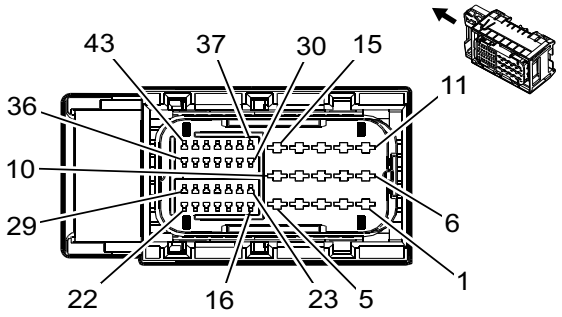
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K33 HVAC Control Module X2

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | RD/VT | 3340 | Battery Positive Voltage | I | — |
| 2 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.35 | GN/YE | 7531 | Local Interconnect Network Serial Data Bus 9 | I | — |
| 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.35 | GN/BU | 4119 | Local Interconnect Network Serial Data Bus 19 | I | — |
| 7 | 0.35 | VT | 3195 | Auxiliary Heater Control | I | — |
| 8 | 0.5 | BK | 1050 | Ground | I | — |
| 9 | 0.35 | VT/BN | 300 | Run Ignition 3 Voltage | I | — |
| 10 | 0.35 | BU/YE | 7574 | Electric Variable Displacement Control | I | — |
| 11 | 0.35 | BU/BN | 7573 | Electric Variable Displacement Supply | I | — |
| 12 - 14 | — | — | — | Not Occupied | — | — |
| 15 | 0.35 | BU/GY | 754 | Blower Motor Speed Control | I | — |
| 16 - 17 | — | — | — | Not Occupied | — | — |
| 18 | 0.35 | BK/GN | 7567 | Solar Sensor Low Reference | I | — |
| 19 | 0.5 | BN/VT | 193 | Rear Defog Relay Control | I | — |
| 20 | — | — | — | Not Occupied | — | — |

## K34 Glow Plug Control Module X2 (LM2)




3553744

### Connector Part Information

Harness Type: Engine
OEM Connector: 13699580
Service Connector: 13576417
Description: 43-Way F 1.2, 2.8 Series, Sealed (BK)

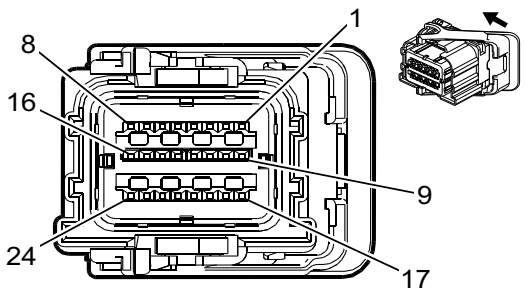
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K34 Glow Plug Control Module X2 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | — | — | — | Not Occupied | — | — |
| 2 | 2.5 | GY/YE | 1584 | Glow Plug Control 4 | I | — |
| 3 | 2.5 | GY/GN | 1583 | Glow Plug Control 3 | I | — |
| 4 | 2.5 | GY/BN | 1582 | Glow Plug Control 2 | I | — |
| 5 | 2.5 | GY/BU | 1581 | Glow Plug Control 1 | I | — |
| 6 - 9 | — | — | — | Not Occupied | — | — |
| 10 | 2.5 | BK/WH | 4451 | — | I | — |
| 11 | — | — | — | Not Occupied | — | — |
| 12 | 2.5 | GY/WH | 1585 | Glow Plug Control 5 | I | — |
| 13 | 2.5 | GY/VT | 1586 | Glow Plug Control 6 | I | — |
| 14 - 17 | — | — | — | Not Occupied | — | — |
| 18 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 19 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 20 - 24 | — | — | — | Not Occupied | — | — |
| 25 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 26 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 27 - 32 | — | — | — | Not Occupied | — | — |
| 33 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | I | — |
| 34 - 39 | — | — | — | Not Occupied | — | — |
| 40 | 0.5 | VT/YE | 5985 | Accessory Wakeup Serial Data | I | — |
| 41 - 43 | — | — | — | Not Occupied | — | — |

## K36 Inflatable Restraint Sensing and Diagnostic Module X1 (Crew Cab)




3240106

### Connector Part Information

Harness Type: Body
OEM Connector: 13887360
Service Connector: 19328755
Description: 24-Way F 0.64 Series, Sealed (YE)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

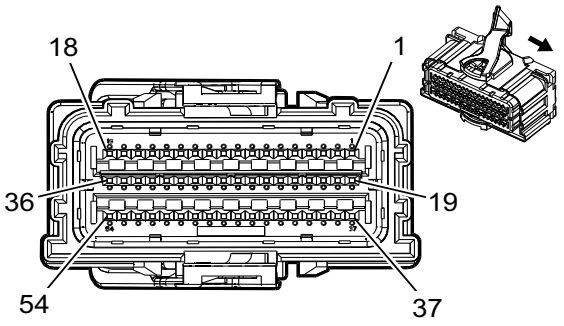
### K36 Inflatable Restraint Sensing and Diagnostic Module X1 (Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | OG/GN | 3023 | Steering Wheel Module Stage 2 High Control | I | — |
| 2 | 0.35 | WH/OG | 3022 | Steering Wheel Module Stage 2 Low Control | I | — |
| 3 | 0.35 | BN/OG | 3020 | Steering Wheel Module Stage 1 Low Control | I | — |
| 4 | 0.35 | OG/VT | 3021 | Steering Wheel Module Stage 1 High Control | I | — |
| 5 | 0.35 | YE/OG | 3025 | Passenger IP Module Stage 1 High Control | I | — |
| 6 | 0.35 | OG/WH | 3024 | Passenger IP Module Stage 1 Low Control | I | — |
| 7 | 0.35 | OG/VT | 3026 | Passenger IP Module Stage 2 Low Control | I | — |
| 8 | 0.35 | GY/OG | 3027 | Passenger IP Module Stage 2 High Control | I | — |
| 9 | 0.5 | RD/GN | 4440 | Battery Positive Voltage | I | — |
| 10 | 0.35 | VT/WH | 5234 | Passenger Seat Belt Indicator Control | I | — |
| 11 | 0.35 | BU | 2307 | Passenger Air Bag On Indicator Control | I | — |
| 12 | 0.35 | GN | 2308 | Passenger Air Bag Off Indicator Control | I | — |
| 13 | 0.5 | BU/WH | 3119 | Roof Rail Air Bag Defeat Switch Signal | I | — |
| 14 | 0.5 | BN/WH | 3895 | Roof Rail Air Bag Defeat Switch Low Reference | I | — |
| 15 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 16 | — | — | — | Not Occupied | — | — |
| 17 | 0.35 | WH/BU | 5986 | Serial Data Communication Enable | I | — |
| 18 | 0.5 | BU/YE | 6105 | High Speed GMLAN Serial Data (+) 2 | I | — |
| 19 | 0.75 | BK/WH | 2551 | Signal Ground | I | — |

## K36 Inflatable Restraint Sensing and Diagnostic Module X1 (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 20 | 0.5 | WH | 6106 | High Speed GMLAN Serial Data (-) 2 | I | — |
| 21 - 24 | — | — | — | Not Occupied | — | — |

## K36 Inflatable Restraint Sensing and Diagnostic Module X2 (Crew Cab)




2817420

### Connector Part Information

Harness Type: Body
OEM Connector: 13944372
Service Connector: 19303770
Description: 54-Way F 0.64 Series, Sealed (YE)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

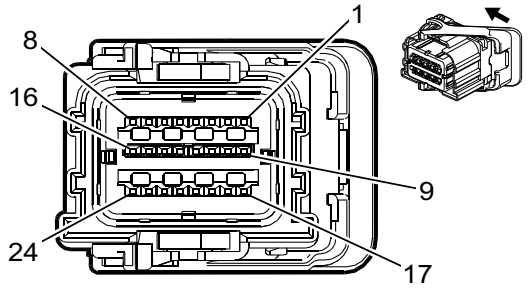
## K36 Inflatable Restraint Sensing and Diagnostic Module X2 (Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.5 | OG/YE | 3481 | Driver Seat Belt Anchor Pretensioner High Control | I | — |
| 10 | 0.5 | YE/OG | 3482 | Driver Seat Belt Anchor Pretensioner Low Control | I | — |
| 11 | 0.5 | GY/OG | 3480 | Passenger Seat Belt Anchor Pretensioner Low Control | I | — |
| 12 | 0.5 | OG/BN | 3479 | Passenger Seat Belt Anchor Pretensioner High Control | I | — |
| 13 | 0.5 | OG/BU | 3068 | Driver Side Impact Module High Control | I | — |
| 14 | 0.5 | GN/OG | 3069 | Driver Side Impact Module Low Control | I | — |
| 15 | 0.35 | BN/OG | 3067 | Passenger Side Impact Module Low Control | I | — |
| 16 | 0.35 | OG/GY | 3066 | Passenger Side Impact Module High Control | I | — |
| 17 - 18 | — | — | — | Not Occupied | — | — |
| 19 | 0.35 | OG/GN | 2132 | Left Front Side Impact Sensing Module Signal | I | — |

## K36 Inflatable Restraint Sensing and Diagnostic Module X2 (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 20 | 0.35 | BK/OG | 6628 | Left Front Side Impact Sensing Module Low Reference | I | — |
| 21 | 0.35 | BK/OG | 6629 | Right Front Side Impact Sensing Module Low Reference | I | — |
| 22 | 0.35 | BN/OG | 2134 | Right Front Side Impact Sensing Module Signal | I | — |
| 23 | 0.5 | OG/YE | 354 | Left Front Discriminating Sensor Signal | I | — |
| 24 | 0.5 | BK/OG | 5045 | Left Front Discriminating Sensor Low Reference | I | — |
| 25 | 0.5 | BK/OG | 5600 | Right Front Discriminating Sensor Low Reference | I | — |
| 26 | 0.5 | OG/GN | 1409 | Right Front Discriminating Sensor Signal | I | — |
| 27 | 0.35 | OG/BU | 6622 | Left Rear Side Impact Sensing Module Signal | I | — |
| 28 | 0.35 | BK/OG | 6623 | Left Rear Side Impact Sensing Module Low Reference | I | — |
| 29 | 0.35 | BK/OG | 6627 | Right Rear Side Impact Sensing Module Low Reference | I | — |
| 30 | 0.35 | OG/WH | 6626 | Right Rear Side Impact Sensing Module Signal | I | — |
| 31 - 40 | — | — | — | Not Occupied | — | — |
| 41 | 0.35 | OG/BN | 238 | Driver Seat Belt Switch Signal | I | — |
| 42 | 0.35 | OG/GN | 5055 | Driver Seat Position Switch Signal | I | — |
| 43 | 0.35 | BK/OG | 1363 | Driver Seat Belt Switch Low Reference | I | — |
| 44 | 0.35 | BK/OG | 1361 | Passenger Seat Belt Switch Low Reference | I | — |
| 45 | 0.35 | OG/VT | 1362 | Passenger Seat Belt Switch Signal | I | — |
| 46 - 54 | — | — | — | Not Occupied | — | — |

## K36 Inflatable Restraint Sensing and Diagnostic Module X1 (Extended Cab)




3240106

### Connector Part Information

Harness Type: Body
OEM Connector: 35036798
Service Connector: 84769281
Description: 24-Way F 0.64 Series, Sealed (YE)

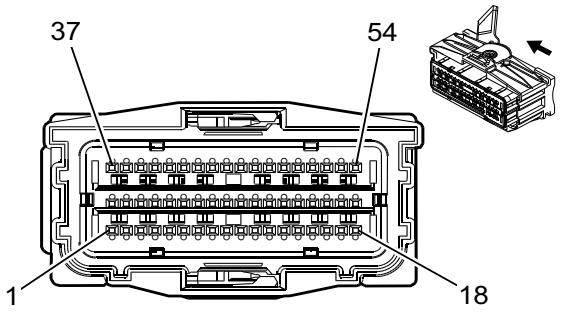
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K36 Inflatable Restraint Sensing and Diagnostic Module X1 (Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | OG/GN | 3023 | Steering Wheel Module Stage 2 High Control | I | — |
| 2 | 0.35 | WH/OG | 3022 | Steering Wheel Module Stage 2 Low Control | I | — |
| 3 | 0.35 | BN/OG | 3020 | Steering Wheel Module Stage 1 Low Control | I | — |
| 4 | 0.35 | OG/VT | 3021 | Steering Wheel Module Stage 1 High Control | I | — |
| 5 | 0.35 | YE/OG | 3025 | Passenger IP Module Stage 1 High Control | I | — |
| 6 | 0.35 | OG/WH | 3024 | Passenger IP Module Stage 1 Low Control | I | — |
| 7 | 0.35 | OG/VT | 3026 | Passenger IP Module Stage 2 Low Control | I | — |
| 8 | 0.35 | GY/OG | 3027 | Passenger IP Module Stage 2 High Control | I | — |
| 9 | 0.5 | RD/GN | 4440 | Battery Positive Voltage | I | — |
| 10 | 0.35 | VT/WH | 5234 | Passenger Seat Belt Indicator Control | I | — |
| 11 | 0.35 | BU | 2307 | Passenger Air Bag On Indicator Control | I | — |
| 12 | 0.35 | GN | 2308 | Passenger Air Bag Off Indicator Control | I | — |
| 13 | 0.5 | BU/WH | 3119 | Roof Rail Air Bag Defeat Switch Signal | I | — |
| 14 | 0.5 | BN/WH | 3895 | Roof Rail Air Bag Defeat Switch Low Reference | I | — |
| 15 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 16 | — | — | — | Not Occupied | — | — |
| 17 | 0.35 | WH/BU | 5986 | Serial Data Communication Enable | I | — |
| 18 | 0.5 | BU/YE | 6105 | High Speed GMLAN Serial Data (+) 2 | I | — |
| 19 | 0.75 | BK/WH | 2551 | Signal Ground | I | — |
| 20 | 0.5 | WH | 6106 | High Speed GMLAN Serial Data (-) 2 | I | — |
| 21 - 24 | — | — | — | Not Occupied | — | — |

## K36 Inflatable Restraint Sensing and Diagnostic Module X2 (Extended Cab)




5197939

### Connector Part Information

Harness Type: Body
OEM Connector: 35036051

Service Connector: 84769282
Description: 54-Way F 0.64 Series, Sealed (YE)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

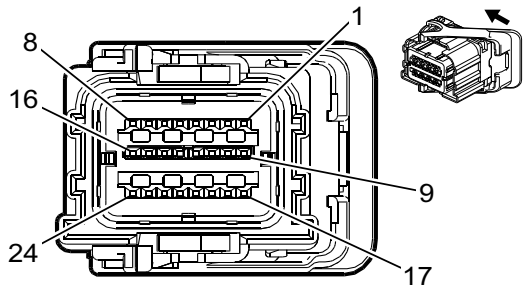
## K36 Inflatable Restraint Sensing and Diagnostic Module X2 (Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.5 | OG/YE | 3481 | Driver Seat Belt Anchor Pretensioner High Control | I | — |
| 10 | 0.5 | YE/OG | 3482 | Driver Seat Belt Anchor Pretensioner Low Control | I | — |
| 11 | 0.5 | GY/OG | 3480 | Passenger Seat Belt Anchor Pretensioner Low Control | I | — |
| 12 | 0.5 | OG/BN | 3479 | Passenger Seat Belt Anchor Pretensioner High Control | I | — |
| 13 | 0.5 | OG/BU | 3068 | Driver Side Impact Module High Control | I | — |
| 14 | 0.5 | GN/OG | 3069 | Driver Side Impact Module Low Control | I | — |
| 15 | 0.35 | BN/OG | 3067 | Passenger Side Impact Module Low Control | I | — |
| 16 | 0.35 | OG/GY | 3066 | Passenger Side Impact Module High Control | I | — |
| 17 | 0.5 | OG/GN | 5019 | Left Front Head Curtain Module High Control | I | — |
| 18 | 0.5 | VT/OG | 5020 | Left Front Head Curtain Module Low Control | I | — |
| 19 | 0.35 | OG/GN | 2132 | Left Front Side Impact Sensing Module Signal | I | — |
| 20 | 0.35 | BK/OG | 6628 | Left Front Side Impact Sensing Module Low Reference | I | — |
| 21 | 0.35 | BK/OG | 6629 | Right Front Side Impact Sensing Module Low Reference | I | — |
| 22 | 0.35 | BN/OG | 2134 | Right Front Side Impact Sensing Module Signal | I | — |
| 23 | 0.5 | OG/YE | 354 | Left Front Discriminating Sensor Signal | I | — |
| 24 | 0.5 | BK/OG | 5045 | Left Front Discriminating Sensor Low Reference | I | — |
| 25 | 0.5 | BK/OG | 5600 | Right Front Discriminating Sensor Low Reference | I | — |
| 26 | 0.5 | OG/GN | 1409 | Right Front Discriminating Sensor Signal | I | — |
| 27 | 0.35 | OG/BU | 6622 | Left Rear Side Impact Sensing Module Signal | I | — |
| 28 | 0.35 | BK/OG | 6623 | Left Rear Side Impact Sensing Module Low Reference | I | — |
| 29 | 0.35 | BK/OG | 6627 | Right Rear Side Impact Sensing Module Low Reference | I | — |
| 30 | 0.35 | OG/WH | 6626 | Right Rear Side Impact Sensing Module Signal | I | — |
| 31 - 36 | — | — | — | Not Occupied | — | — |
| 37 | 0.5 | OG/WH | 3477 | Driver Seat Belt Retractor Pretensioner High Control | I | — |
| 38 | 0.5 | GY/OG | 3478 | Driver Seat Belt Retractor Pretensioner Low Control | I | — |
| 39 | 0.5 | WH/OG | 3476 | Passenger Seat Belt Retractor Pretensioner Low Control | I | — |
| 40 | 0.5 | OG/GN | 3475 | Passenger Seat Belt Retractor Pretensioner High Control | I | — |

## K36 Inflatable Restraint Sensing and Diagnostic Module X2 (Extended Cab) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 41 | 0.35 | OG/BN | 238 | Driver Seat Belt Switch Signal | I | — |
| 42 | — | — | — | Not Occupied | — | — |
| 43 | 0.35 | BK/OG | 1363 | Driver Seat Belt Switch Low Reference | I | — |
| 44 | 0.35 | BK/OG | 1361 | Passenger Seat Belt Switch Low Reference | I | — |
| 45 | 0.35 | OG/VT | 1362 | Passenger Seat Belt Switch Signal | I | — |
| 46 - 52 | — | — | — | Not Occupied | — | — |
| 53 | 0.5 | OG/GY | 5021 | Right Front Head Curtain Module High Control | I | — |
| 54 | 0.5 | WH/OG | 5022 | Right Front Head Curtain Module Low Control | I | — |

## K36 Inflatable Restraint Sensing and Diagnostic Module X1 (Regular Cab)




3240106

### Connector Part Information

Harness Type: Body
OEM Connector: 35036798
Service Connector: 84769281
Description: 24-Way F 0.64 Series, Sealed (YE)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

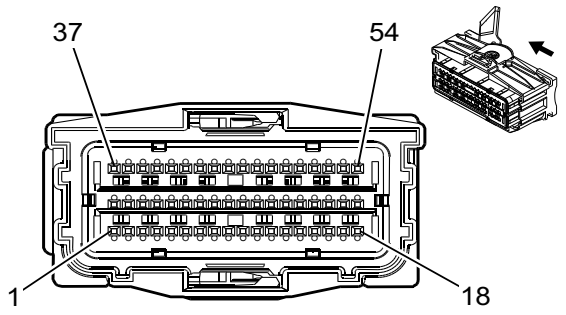
## K36 Inflatable Restraint Sensing and Diagnostic Module X1 (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | OG/GN | 3023 | Steering Wheel Module Stage 2 High Control | I | — |
| 2 | 0.35 | WH/OG | 3022 | Steering Wheel Module Stage 2 Low Control | I | — |
| 3 | 0.35 | BN/OG | 3020 | Steering Wheel Module Stage 1 Low Control | I | — |
| 4 | 0.35 | OG/VT | 3021 | Steering Wheel Module Stage 1 High Control | I | — |
| 5 | 0.35 | YE/OG | 3025 | Passenger IP Module Stage 1 High Control | I | — |
| 6 | 0.35 | OG/WH | 3024 | Passenger IP Module Stage 1 Low Control | I | — |
| 7 | 0.35 | OG/VT | 3026 | Passenger IP Module Stage 2 Low Control | I | — |
| 8 | 0.35 | GY/OG | 3027 | Passenger IP Module Stage 2 High Control | I | — |

## K36 Inflatable Restraint Sensing and Diagnostic Module X1 (Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 9 | 0.5 | RD/GN | 4440 | Battery Positive Voltage | I | — |
| 10 | 0.35 | VT/WH | 5234 | Passenger Seat Belt Indicator Control | I | — |
| 11 | 0.35 | BU | 2307 | Passenger Air Bag On Indicator Control | I | — |
| 12 | 0.35 | GN | 2308 | Passenger Air Bag Off Indicator Control | I | — |
| 13 | 0.5 | BU/WH | 3119 | Roof Rail Air Bag Defeat Switch Signal | I | — |
| 14 | 0.5 | BN/WH | 3895 | Roof Rail Air Bag Defeat Switch Low Reference | I | — |
| 15 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 16 | — | — | — | Not Occupied | — | — |
| 17 | 0.35 | WH/BU | 5986 | Serial Data Communication Enable | I | — |
| 18 | 0.5 | BU/YE | 6105 | High Speed GMLAN Serial Data (+) 2 | I | — |
| 19 | 0.75 | BK/WH | 2551 | Signal Ground | I | — |
| 20 | 0.5 | WH | 6106 | High Speed GMLAN Serial Data (-) 2 | I | — |
| 21 - 24 | — | — | — | Not Occupied | — | — |

## K36 Inflatable Restraint Sensing and Diagnostic Module X2 (Regular Cab)




5197939

### Connector Part Information

Harness Type: Body
OEM Connector: 35036051
Service Connector: 84769282
Description: 54-Way F 0.64 Series, Sealed (YE)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

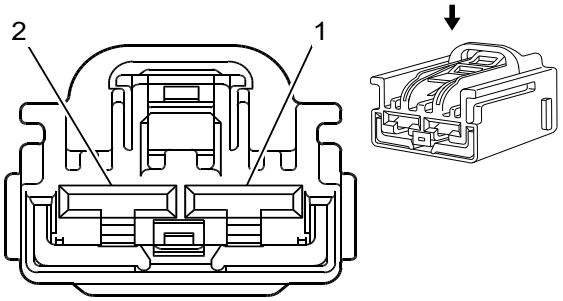
## K36 Inflatable Restraint Sensing and Diagnostic Module X2 (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.5 | OG/YE | 3481 | Driver Seat Belt Anchor Pretensioner High Control | I | — |

## K36 Inflatable Restraint Sensing and Diagnostic Module X2 (Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 10 | 0.5 | YE/OG | 3482 | Driver Seat Belt Anchor Pretensioner Low Control | I | — |
| 11 | 0.5 | GY/OG | 3480 | Passenger Seat Belt Anchor Pretensioner Low Control | I | — |
| 12 | 0.5 | OG/BN | 3479 | Passenger Seat Belt Anchor Pretensioner High Control | I | — |
| 13 | 0.5 | OG/BU | 3068 | Driver Side Impact Module High Control | I | — |
| 14 | 0.5 | GN/OG | 3069 | Driver Side Impact Module Low Control | I | — |
| 15 | 0.35 | BN/OG | 3067 | Passenger Side Impact Module Low Control | I | — |
| 16 | 0.35 | OG/GY | 3066 | Passenger Side Impact Module High Control | I | — |
| 17 | 0.5 | OG/GN | 5019 | Left Front Head Curtain Module High Control | I | — |
| 18 | 0.5 | VT/OG | 5020 | Left Front Head Curtain Module Low Control | I | — |
| 19 | 0.35 | OG/GN | 2132 | Left Front Side Impact Sensing Module Signal | I | — |
| 20 | 0.35 | BK/OG | 6628 | Left Front Side Impact Sensing Module Low Reference | I | — |
| 21 | 0.35 | BK/OG | 6629 | Right Front Side Impact Sensing Module Low Reference | I | — |
| 22 | 0.35 | BN/OG | 2134 | Right Front Side Impact Sensing Module Signal | I | — |
| 23 | 0.5 | OG/YE | 354 | Left Front Discriminating Sensor Signal | I | — |
| 24 | 0.5 | BK/OG | 5045 | Left Front Discriminating Sensor Low Reference | I | — |
| 25 | 0.5 | BK/OG | 5600 | Right Front Discriminating Sensor Low Reference | I | — |
| 26 | 0.5 | OG/GN | 1409 | Right Front Discriminating Sensor Signal | I | — |
| 27 - 36 | — | — | — | Not Occupied | — | — |
| 37 | 0.5 | OG/WH | 3477 | Driver Seat Belt Retractor Pretensioner High Control | I | — |
| 38 | 0.5 | GY/OG | 3478 | Driver Seat Belt Retractor Pretensioner Low Control | I | — |
| 39 | 0.5 | WH/OG | 3476 | Passenger Seat Belt Retractor Pretensioner Low Control | I | — |
| 40 | 0.5 | OG/GN | 3475 | Passenger Seat Belt Retractor Pretensioner High Control | I | — |
| 41 | 0.35 | OG/BN | 238 | Driver Seat Belt Switch Signal | I | — |
| 42 | — | — | — | Not Occupied | — | — |
| 43 | 0.35 | BK/OG | 1363 | Driver Seat Belt Switch Low Reference | I | — |
| 44 | 0.35 | BK/OG | 1361 | Passenger Seat Belt Switch Low Reference | I | — |
| 45 | 0.35 | OG/VT | 1362 | Passenger Seat Belt Switch Signal | I | — |
| 46 - 52 | — | — | — | Not Occupied | — | — |
| 53 | 0.5 | OG/GY | 5021 | Right Front Head Curtain Module High Control | I | — |
| 54 | 0.5 | WH/OG | 5022 | Right Front Head Curtain Module Low Control | I | — |

## K40 Seat Memory Control Module X1 (A45)




1817814

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 7283-6458-40
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 6.3 Series (L-GY)

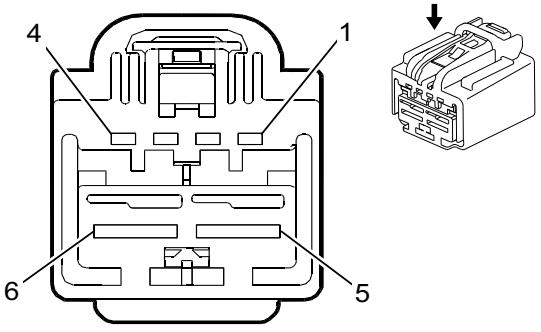
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## K40 Seat Memory Control Module X1 (A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | RD/BN | 1140 | Battery Positive Voltage | I | — |
| 2 | 2.5 | RD/YE | 5040 | Battery Positive Voltage | I | — |

## K40 Seat Memory Control Module X2 (A45)




1798802

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 7283-9749-30
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F YESC Kaizen Series (BK)

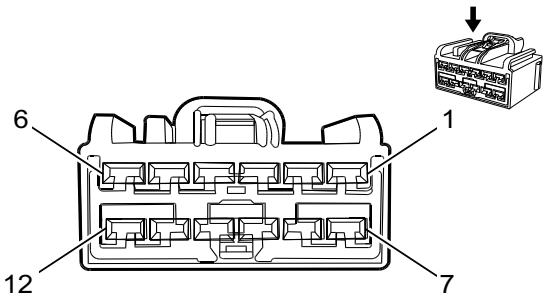
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### K40 Seat Memory Control Module X2 (A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.5 | GN/WH | 7530 | Local Interconnect Network Serial Data Bus 8 | I | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 2.5 | BK | 1150 | Ground | I | — |
| 6 | — | — | — | Not Occupied | — | — |

### K40 Seat Memory Control Module X3 (A45)




2231648

#### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 7283-6467-40
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 2.8 Kaizen Series (L-GY)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

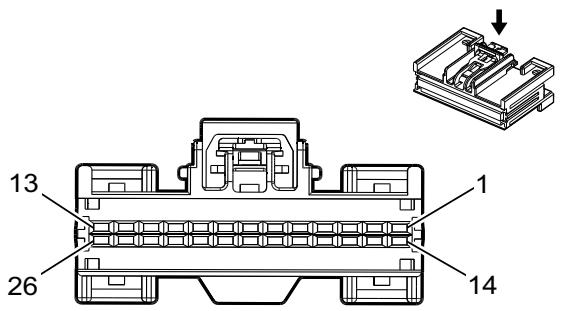
### K40 Seat Memory Control Module X3 (A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GN/YE | 276 | Driver Power Seat Recline Motor Forward Control | I | — |
| 2 | 1.5 | BU/YE | 277 | Driver Power Seat Recline Motor Rearward Control | I | — |

## K40 Seat Memory Control Module X3 (A45) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 3 | 1.5 | GN/BN | 286 | Driver Power Seat Front Vertical Motor Up Control | I | — |
| 4 | 1.5 | BU/VT | 287 | Driver Power Seat Front Vertical Motor Down Control | I | — |
| 5 | 1.5 | YE | 282 | Driver Power Seat Rear Vertical Motor Up Control | I | — |
| 6 | 1.5 | GY/BU | 283 | Driver Power Seat Rear Vertical Motor Down Control | I | — |
| 7 - 10 | — | — | — | Not Occupied | — | — |
| 11 | 1.5 | YE/BU | 285 | Driver Power Seat Horizontal Motor Forward Control | I | — |
| 12 | 1.5 | GY/GN | 284 | Driver Power Seat Horizontal Motor Rearward Control | I | — |

## K40 Seat Memory Control Module X5 (A45)




2916473

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 7287-2043-30
Service Connector: Service by Harness - See Part Catalog
Description: 26-Way F 0.64 Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

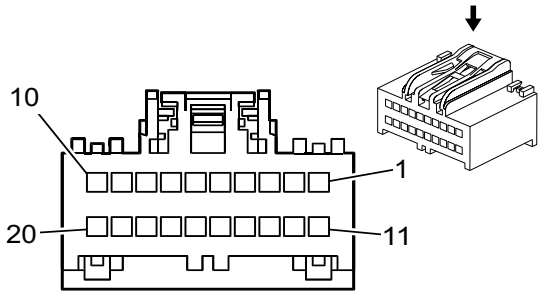
## K40 Seat Memory Control Module X5 (A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/RD | 3298 | Memory Sensor High Reference 2 | I | — |
| 2 - 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.5 | BN | 3038 | Right Rear Haptic Seat Motor Control | I | — |
| 5 | 0.5 | YE/BN | 3037 | Left Rear Haptic Seat Motor Control | I | — |
| 6 | — | — | — | Not Occupied | — | — |

## K40 Seat Memory Control Module X5 (A45) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 7 | 0.5 | YE/BN | 1522 | Power Seat Horizontal Forward Switch Signal | I | — |
| 8 | 0.5 | GY/GN | 1523 | Power Seat Horizontal Rearward Switch Signal | I | — |
| 9 | 0.5 | GN/BN | 1518 | Power Seat Front Vertical Up Switch Signal | I | — |
| 10 | 0.5 | BU/VT | 1520 | Power Seat Front Vertical Down Switch Signal | I | — |
| 11 | 0.5 | GN | 569 | Memory Seat Horizontal Motor Position Sensor Signal | I | — |
| 12 | 0.5 | BN/WH | 557 | Memory Seat Front Vertical Motor Position Sensor Signal | I | — |
| 13 - 18 | — | — | — | Not Occupied | — | — |
| 19 | 0.5 | YE | 1519 | Power Seat Rear Vertical Up Switch Signal | I | — |
| 20 | 0.5 | YE/BU | 1521 | Power Seat Rear Vertical Down Switch Signal | I | — |
| 21 | 0.5 | GY/BK | 1269 | Power Seat Recline Forward Switch Signal | I | — |
| 22 | 0.5 | GN/GY | 1270 | Power Seat Recline Rearward Switch Signal | I | — |
| 23 - 24 | — | — | — | Not Occupied | — | — |
| 25 | 0.5 | YE/BU | 568 | Memory Seat Rear Vertical Motor Position Sensor Signal | I | — |
| 26 | 0.5 | WH/BK | 570 | Driver Memory Seat Recline Motor Position Sensor Signal | I | — |

## K40 Seat Memory Control Module X6 (A45)




1715228

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 31410-0201
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F USCAR 64 Series (GY)

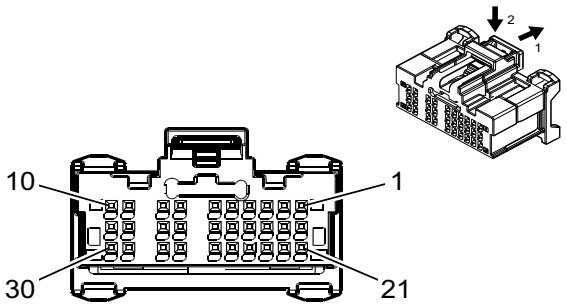
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## K40 Seat Memory Control Module X6 (A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.5 | BK/BU | 5978 | Memory Switch Low Reference | I | — |
| 12 | 0.5 | WH | 615 | Memory Seat Switch Signal 1 | I | — |
| 13 - 14 | — | — | — | Not Occupied | — | — |
| 15 | 0.5 | BU/GN | 614 | Memory Seat Switch Set Signal | I | — |
| 16 - 20 | — | — | — | Not Occupied | — | — |

## K56 Serial Data Gateway Module X1




4900333

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35077574
Service Connector: 13519319
Description: 30-Way F 0.5 MQS Series (BK with GY Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

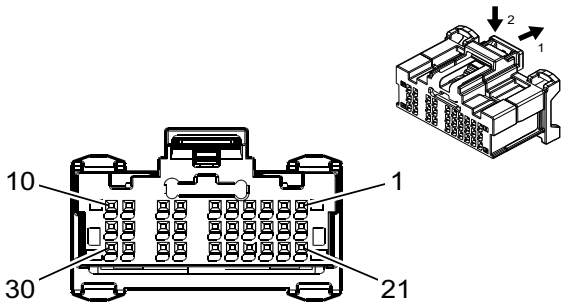
## K56 Serial Data Gateway Module X1

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | RD/VT | 3340 | Battery Positive Voltage | I | — |
| 2 - 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.35 | BU/GY | 3935 | High Speed GMLAN Serial Data (+) 8 | I | — |
| 5 | 0.35 | WH/GY | 3936 | High Speed GMLAN Serial Data (-) 8 | I | — |
| 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.35 | BK/WH | 1851 | Signal Ground | I | — |
| 8 | 0.35 | BU/GN | 1304 | High Speed GMLAN Serial Data (+)9 | I | — |
| 9 | 0.35 | WH/GN | 1305 | High Speed GMLAN Serial Data (-)9 | I | — |
| 10 - 12 | — | — | — | Not Occupied | — | — |
| 13 | 0.35 | BU/WH | 2089 | High Speed GMLAN Serial Data (+)(13) | I | — |

## K56 Serial Data Gateway Module X1 (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 14 | 0.35 | WH | 2090 | High Speed GMLAN Serial Data (-)(13) | I | — |
| 15 | 0.35 | BU/BK | 1978 | High Speed GMLAN Serial Data (+)(11) | I | — |
| 16 | 0.35 | WH | 1979 | High Speed GMLAN Serial Data (-)(11) | I | — |
| 17 | 0.35 | BU/BN | 1980 | High Speed GMLAN Serial Data (+)(12) | I | — |
| 18 | 0.35 | WH | 1981 | High Speed GMLAN Serial Data (-)(12) | I | — |
| 19 | — | — | — | Not Occupied | — | — |
| 20 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 21 - 25 | — | — | — | Not Occupied | — | — |
| 26 | 0.35 | GN/WH | 2100 | Low Speed GMLAN Serial Data #3 | I | — |
| 27 - 29 | — | — | — | Not Occupied | — | — |
| 30 | 0.35 | GY/GN | 1102 | Low Speed GMLAN Serial Data #2 | I | — |

## K56 Serial Data Gateway Module X2




4897967

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35074169
Service Connector: 13519320
Description: 30-Way F 0.5 MQS Series (BK with BU Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

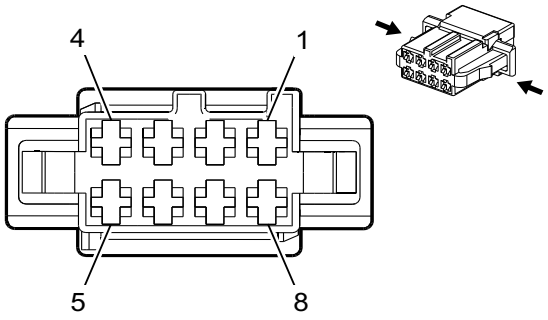
## K56 Serial Data Gateway Module X2

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.35 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 5 | 0.35 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 6 | 0.35 | BU/GY | 3935 | High Speed GMLAN Serial Data (+) 8 | I | — |
| 7 | 0.35 | WH/GY | 3936 | High Speed GMLAN Serial Data (-) 8 | I | — |

## K56 Serial Data Gateway Module X2 (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 8 | 0.35 | BU/YE | 6105 | High Speed GMLAN Serial Data (+) 2 | I | — |
| 9 | 0.35 | WH | 6106 | High Speed GMLAN Serial Data (-) 2 | I | — |
| 10 | 0.35 | BU/GN | 1304 | High Speed GMLAN Serial Data (+)9 | I | — |
| 11 - 13 | — | — | — | Not Occupied | — | — |
| 14 | 0.35 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 15 | 0.35 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 16 | 0.35 | BU/GY | 3935 | High Speed GMLAN Serial Data (+) 8 | I | — |
| 17 | 0.35 | WH/GY | 3936 | High Speed GMLAN Serial Data (-) 8 | I | — |
| 18 | 0.35 | BU/YE | 6105 | High Speed GMLAN Serial Data (+) 2 | I | — |
| 19 | 0.35 | WH | 6106 | High Speed GMLAN Serial Data (-) 2 | I | — |
| 20 | 0.35 | WH/GN | 1305 | High Speed GMLAN Serial Data (-)9 | I | — |
| 21 - 22 | — | — | — | Not Occupied | — | — |
| 23 | 0.35 | VT/BK | 1639 | Run/Crank Ignition 1 Voltage | I | — |
| 24 | — | — | — | Not Occupied | — | — |
| 25 | 0.35 | WH/BU | 5986 | Serial Data Communication Enable | I | — |
| 26 - 30 | — | — | — | Not Occupied | — | — |

## K60 Steering Column Lock Module




2173871

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 10718780
Service Connector: 13576545
Description: 8-Way F 1.6 Micro-Timer Series (BK)

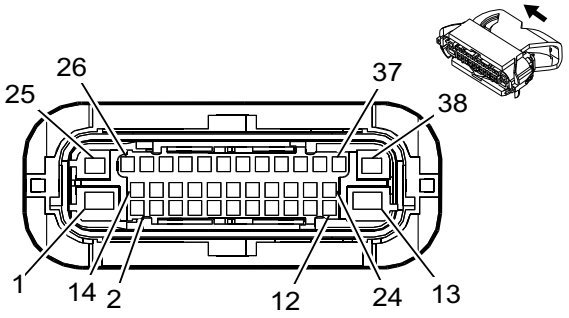
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## K60 Steering Column Lock Module

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | — | — | — | Not Occupied | — | — |
| 2 | 0.35 | BU/VT | 5904 | Steering Column Lock Status Signal | I | — |
| 3 | 0.35 | BU/VT | 807 | OFF /Accessory Ignition Voltage | I | — |
| 4 | 0.35 | GN/VT | 1601 | Steering Column Lock Signal | I | — |
| 5 | 0.5 | RD/GY | 4140 | Battery Positive Voltage | I | — |
| 6 | 0.35 | BK | 1850 | Ground | I | — |
| 7 | 0.35 | BK/WH | 1851 | Signal Ground | I | — |
| 8 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |

## K69 Transfer Case Control Module (NP0/NQH)




3240112

### Connector Part Information

Harness Type: Engine
OEM Connector: 33110415
Service Connector: 19353395
Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 MCP Series, Sealed (BK with BU Inner Connector)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1241374-1 | Lear 17 | E | 2 |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1241408-1 | Lear 28 | B | G |
| III | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1-968857-3 | Lear 7 | C | 1 |
| IV | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K69 Transfer Case Control Module (NP0/NQH)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 3 | RD/GY | 1342 | Battery Positive Voltage | II | — |
| 2 | — | — | — | Not Occupied | — | — |

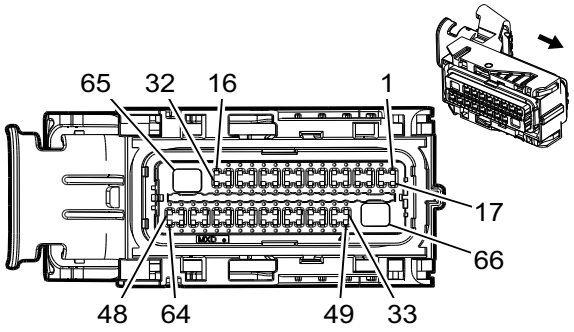
## K69 Transfer Case Control Module (NP0/NQH) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 3 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | IV | — |
| 4 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | IV | — |
| 5 | 0.5 | WH/GN | 7479 | Rotary Position Sensor Signal | I | — |
| | 0.5 | WH/GN | 7479 | Rotary Position Sensor Signal | IV | — |
| 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.5 | YE | 7474 | Incremental Encoder Direction Signal | I | — |
| | 0.5 | YE | 7474 | Incremental Encoder Direction Signal | IV | — |
| 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.5 | YE/WH | 1695 | Four Wheel Drive Wheel Lock Indicator Control | IV | — |
| | 0.5 | YE/WH | 1695 | Four Wheel Drive Wheel Lock Indicator Control | I | — |
| 10 | 0.5 | BN | 1560 | Neutral Indicator Control | IV | — |
| | 0.5 | BN | 1560 | Neutral Indicator Control | I | — |
| 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.5 | GY/BK | 1570 | Front Axle Actuator Control | I | — |
| | 0.5 | GY/BK | 1570 | Front Axle Actuator Control | IV | — |
| 13 | 4 | YE/VT | 1553 | Transfer Case Motor Counter Clockwise Control | II | — |
| 14 | — | — | — | Not Occupied | — | — |
| 15 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | IV | — |
| | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 16 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | IV | — |
| | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 17 | — | — | — | Not Occupied | — | — |
| 18 | 0.5 | WH/BU | 5986 | Serial Data Communication Enable | I | — |
| | 0.5 | WH/BU | 5986 | Serial Data Communication Enable | IV | — |
| 19 | 0.5 | BU/GY | 7473 | Incremental Encoder Impulse Signal | IV | — |
| | 0.5 | BU/GY | 7473 | Incremental Encoder Impulse Signal | I | — |
| 20 | 0.5 | WH/RD | 7477 | Rotary Position Sensor 5V Reference | IV | — |
| | 0.5 | WH/RD | 7477 | Rotary Position Sensor 5V Reference | I | — |
| 21 - 23 | — | — | — | Not Occupied | — | — |
| 24 | 0.5 | GN | 953 | — | I | — |
| | 0.5 | GN | 953 | — | IV | — |
| 25 | 2.5 | BK | 4450 | Ground | III | — |
| | 2.5 | BK | 4450 | Ground | IV | — |
| 26 | — | — | — | Not Occupied | — | — |
| 27 | 0.5 | GN | 951 | Knock Sensor Shield | I | — |
| | 0.5 | GN | 951 | Knock Sensor Shield | IV | — |
| 28 - 29 | — | — | — | Not Occupied | — | — |
| 30 | 0.5 | YE/BK | 7478 | Rotary Position Sensor Low Reference | IV | — |
| | 0.5 | YE/BK | 7478 | Rotary Position Sensor Low Reference | I | — |
| 31 | 0.5 | WH/GN | 7475 | Incremental Encoder Sensor 8V Reference | IV | — |
| | 0.5 | WH/GN | 7475 | Incremental Encoder Sensor 8V Reference | I | — |
| 32 | — | — | — | Not Occupied | — | — |
| 33 | 0.75 | BK | 952 | — | IV | — |
| | 0.75 | BK | 952 | — | I | — |
| 34 | 0.75 | YE/BN | 1569 | Transfer Case Lock Solenoid Control | IV | — |
| | 0.75 | YE/BN | 1569 | Transfer Case Lock Solenoid Control | I | — |

## K69 Transfer Case Control Module (NP0/NQH) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 35 | — | — | — | Not Occupied | — | — |
| 36 | 0.5 | VT | 7476 | Incremental Encoder Sensor Low Reference | IV | — |
| | 0.5 | VT | 7476 | Incremental Encoder Sensor Low Reference | I | — |
| 37 | — | — | — | Not Occupied | — | — |
| 38 | 2.5 | YE/GY | 1552 | Transfer Case Motor Clockwise Control | IV | — |
| | 2.5 | YE/GY | 1552 | Transfer Case Motor Clockwise Control | III | — |

## K71 Transmission Control Module (MQB)




4024881

### Connector Part Information

Harness Type: Engine
OEM Connector: 33344977
Service Connector: 19330900
Description: 66-Way F 0.64, 2.8 Series, Sealed (BK with BK Terminal Position Assurance)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

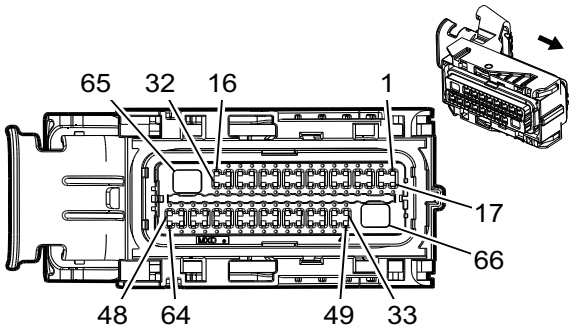
## K71 Transmission Control Module (MQB)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/WH | 422 | Torque Converter Clutch Solenoid Control | I | — |
| 2 | 0.5 | GY/GN | 6403 | Clutch D Control | I | — |
| 3 | 0.5 | WH/BU | 4507 | Transmission Clutch H Control | I | — |
| 4 | 0.5 | WH | 4508 | Transmission Clutch G Control | I | — |
| 5 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.5 | YE/GN | 4170 | Transmission Position Sensor B 9V Reference | I | — |
| 8 | 0.5 | YE/BU | 4171 | Transmission Position Sensor A 9V Reference | I | — |
| 9 - 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.5 | GN/YE | 6353 | Input Speed Signal | I | — |
| 13 | 0.5 | GN/VT | 4510 | Transmission Intermediate Speed Signal | I | — |

## K71 Transmission Control Module (MQB) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 14 | 0.5 | GY/BU | 6358 | Output Speed Signal | I | — |
| 15 | 0.5 | BN/WH | 6254 | Transmission Input Speed Sensor Signal | I | — |
| 16 | — | — | — | Not Occupied | — | — |
| 17 | 0.5 | GN/WH | 1530 | Transmission Mainline Pressure Solenoid Control | I | — |
| 18 | 0.5 | YE/BN | 6404 | Clutch E Control | I | — |
| 19 | 0.5 | GY | 6402 | Clutch C Control | I | — |
| 20 | 0.5 | VT | 4509 | Transmission Clutch F Control | I | — |
| 21 | — | — | — | Not Occupied | — | — |
| 22 | 0.5 | GN/BK | 7819 | Default Disable Solenoid Control | I | — |
| 23 | — | — | — | Not Occupied | — | — |
| 24 | 0.5 | GN/WH | 2968 | Transmission Auxiliary Oil Pump Control | I | — |
| 25 - 27 | — | — | — | Not Occupied | — | — |
| 28 | 0.5 | BK/BN | 586 | Transmission Oil Temperature Sensor Low Reference | I | — |
| 29 - 32 | — | — | — | Not Occupied | — | — |
| 33 | 0.5 | GN/GY | 6387 | Transmission High Side Driver 1 Signal Driver | I | — |
| 34 | — | — | — | Not Occupied | — | — |
| 35 | 0.5 | VT/BK | 2139 | Run/Crank Ignition 1 Voltage | I | — |
| 36 | — | — | — | Not Occupied | — | — |
| 37 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 38 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 39 - 48 | — | — | — | Not Occupied | — | — |
| 49 | 0.5 | GY/BN | 6388 | Transmission High Side Driver 2 Signal | I | — |
| 50 | — | — | — | Not Occupied | — | — |
| 51 | 0.5 | VT/YE | 5985 | Accessory Wakeup Serial Data | I | — |
| 52 | — | — | — | Not Occupied | — | — |
| 53 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 54 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 55 - 62 | — | — | — | Not Occupied | — | — |
| 63 | 0.5 | BN/WH | 585 | Transmission Oil Temperature Sensor Signal | I | — |
| 64 | 0.5 | VT/BU | 5724 | Ignition Mode Switch Mode Control | I | MQB |
| | 0.5 | GN/YE | 5724 | Ignition Mode Switch Mode Control | I | MQB/MGM/MGU |
| 65 | 1.5 | BK/WH | 451 | Signal Ground | I | MQB |
| | 1.5 | BK/WH | 451 | Signal Ground | I | MQE |
| 66 | 1.5 | RD/GN | 1840 | Battery Positive Voltage | I | MQB |
| | 1.5 | RD/GN | 1840 | Battery Positive Voltage | I | MQE |

## K71 Transmission Control Module (MQE)




4024881

### Connector Part Information

Harness Type: Engine
OEM Connector: 33344977
Service Connector: 19330900
Description: 66-Way F 0.64, 2.8 Series, Sealed (BK with BK Terminal Position Assurance)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

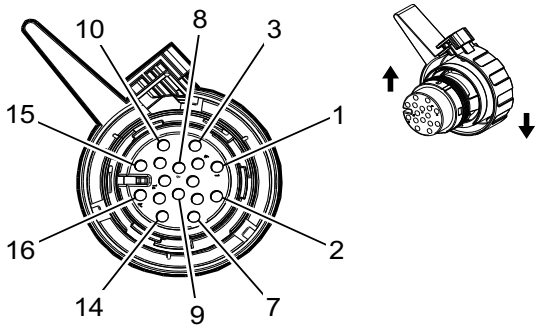
### K71 Transmission Control Module (MQE)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/BU | 4507 | Transmission Clutch H Control | I | — |
| 2 | 0.5 | BU | 6401 | Clutch B Control | I | — |
| 3 | 0.5 | GN/WH | 1530 | Transmission Mainline Pressure Solenoid Control | I | — |
| 4 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.5 | YE/GN | 4170 | Transmission Position Sensor B 9V Reference | I | — |
| 8 | 0.5 | YE/BU | 4171 | Transmission Position Sensor A 9V Reference | I | — |
| 9 - 12 | — | — | — | Not Occupied | — | — |
| 13 | 0.5 | GN/VT | 4510 | Transmission Intermediate Speed Signal | I | — |
| 14 | 0.5 | GY/BU | 6358 | Output Speed Signal | I | — |
| 15 | 0.5<br>0.5 | GN/YE<br>BN/WH | 6254<br>6254 | Transmission Input Speed Sensor Signal<br>Transmission Input Speed Sensor Signal | I<br>I | —<br>— |
| 16 | — | — | — | Not Occupied | — | — |
| 17 | 0.5 | WH | 4508 | Transmission Clutch G Control | I | — |
| 18 | 0.5 | BN | 6400 | Clutch A Control | I | — |
| 19 | 0.5 | GY | 6402 | Clutch C Control | I | — |
| 20 | 0.5 | VT/WH | 422 | Torque Converter Clutch Solenoid Control | I | — |
| 21 | 0.5 | GN/WH | 6380 | TCC On/Off Solenoid A Control | I | — |
| 22 | 0.5 | YE/BN | 6210 | TCC On/Off Solenoid B Control | I | — |
| 23 | — | — | — | Not Occupied | — | — |
| 24 | 0.5 | WH/GY | 4578 | Surge Accumulator Solenoid Low Side Control | I | — |
| 25 - 27 | — | — | — | Not Occupied | — | — |

## K71 Transmission Control Module (MQE) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 28 | 0.5 | BK/BN | 586 | Transmission Oil Temperature Sensor Low Reference | I | — |
| 29 - 32 | — | — | — | Not Occupied | — | — |
| 33 | 0.5 | GN/GY | 6387 | Transmission High Side Driver 1 Signal Driver | I | — |
| 34 | — | — | — | Not Occupied | — | — |
| 35 | 0.5 | VT/BK | 2139 | Run/Crank Ignition 1 Voltage | I | — |
| 36 | — | — | — | Not Occupied | — | — |
| 37 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 38 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 39 - 48 | — | — | — | Not Occupied | — | — |
| 49 | 0.5 | GY/BN | 6388 | Transmission High Side Driver 2 Signal | I | — |
| 50 | — | — | — | Not Occupied | — | — |
| 51 | 0.5 | VT/YE | 5985 | Accessory Wakeup Serial Data | I | — |
| 52 | — | — | — | Not Occupied | — | — |
| 53 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 54 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 55 - 62 | — | — | — | Not Occupied | — | — |
| 63 | 0.5 | BN/WH | 585 | Transmission Oil Temperature Sensor Signal | I | — |
| 64 | 0.5<br>0.5 | BN/WH<br>BU/WH | 3338<br>3338 | Transmission Internal Mode Switch Mode Control B<br>Transmission Internal Mode Switch Mode Control B | I<br>I | —<br>MQE |
| 65 | 1.5 | BK/WH | 451 | Signal Ground | I | — |
| 66 | 1.5 | RD/GN | 1840 | Battery Positive Voltage | I | — |

## K71 Transmission Control Module (MYC/MYD)




3277917

### Connector Part Information

Harness Type: Engine
OEM Connector: 13878751
Service Connector: 19303772
Description: 16-Way F 1.5 Series, Sealed (BK)

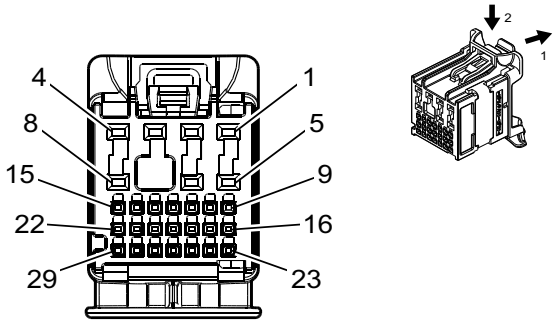
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 2 21 24 47220 0 | Yazaki 12 | E | 1 |

## K71 Transmission Control Module (MYC/MYD)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | RD/GN | 1840 | Battery Positive Voltage | I | — |
| 2 | 0.75 | BK/WH | 451 | Signal Ground | I | — |
| | 1 | BK/WH | 451 | Signal Ground | I | — |
| 3 | 0.5 | WH/GY | 1786 | Transmission Park/Neutral Signal 1 | I | — |
| 4 | 0.75 | RD/GN | 1840 | Battery Positive Voltage | I | — |
| 5 | 0.75 | BK/WH | 451 | Signal Ground | I | — |
| | 1 | BK/WH | 451 | Signal Ground | I | — |
| 6 - 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.5 | VT/YE | 5985 | Accessory Wakeup Serial Data | I | — |
| 10 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 11 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 12 | 0.5 | VT/BK | 2139 | Run/Crank Ignition 1 Voltage | I | — |
| 13 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 14 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.5 | BN/WH | 6354 | Output Speed High (Replicated TOS) Input Signal | I | — |

## K73 Telematics Communication Interface Control Module X1 (UE1)




4496253

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33303954
Service Connector: 13506123
Description: 29-Way F 0.5 NANO, 1.2 MCON Series Sealed (BK)

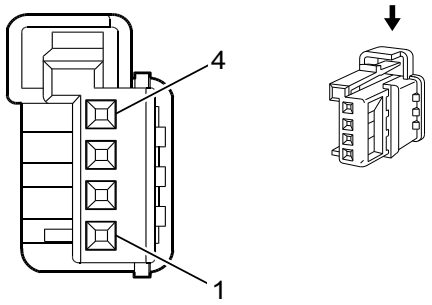
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K73 Telematics Communication Interface Control Module X1 (UE1)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | RD/BU | 3240 | Battery Positive Voltage | I | — |
| 2 - 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.5 | BK/WH | 2751 | Signal Ground | I | — |
| 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.35 | GN/BK | 2515 | Keypad Control | I | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | BK/WH | 2751 | Signal Ground | I | — |
| 9 | 0.35 | WH/GN | 1305 | High Speed GMLAN Serial Data (-)9 | I | — |
| 10 | 0.35 | BU/GN | 1304 | High Speed GMLAN Serial Data (+)9 | I | — |
| 11 | 0.35 | GN/WH | 2514 | Keypad Signal | I | — |
| 12 | 0.35 | WH/BU | 5986 | Serial Data Communication Enable | I | — |
| 13 | 0.35 | Bare | 1792 | Low Reference | I | — |
| 14 | 0.35 | BK/GY | 5152 | Voice Recognition Audio Low Reference | I | — |
| 15 | 0.35 | GY/YE | 5149 | Voice Recognition Audio Signal | I | — |
| 16 | 0.35 | WH/GN | 1305 | High Speed GMLAN Serial Data (-)9 | I | — |
| 17 | 0.35 | BU/GN | 1304 | High Speed GMLAN Serial Data (+)9 | I | — |
| 18 | — | — | — | Not Occupied | — | — |
| 19 | 0.35 | YE/VT | 2516 | Keypad Green LED Control | I | — |
| 20 | 0.35 | Bare | 1782 | Low Reference | I | — |
| 21 | 0.35 | BK/BN | 654 | Cellular Telephone Microphone Low Reference | I | — |
| 22 | 0.35 | BU | 655 | Cellular Telephone Microphone Signal | I | — |
| 23 | 0.35 | GY/GN | 1102 | Low Speed GMLAN Serial Data #2 | I | — |
| 24 - 25 | — | — | — | Not Occupied | — | — |
| 26 | 0.35 | BN/WH | 2517 | Keypad Red LED Control | I | — |
| 27 | — | — | — | Not Occupied | — | — |
| 28 | 0.35 | GY/WH | 7211 | Ethernet Bus 4 (+) | I | — |
| 29 | 0.35 | GY | 7210 | Ethernet Bus 4 (-) | I | — |

## K77 Remote Control Door Lock Receiver




2179793

### Connector Part Information

Harness Type: Body
OEM Connector: 10768790
Service Connector: 13584096
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

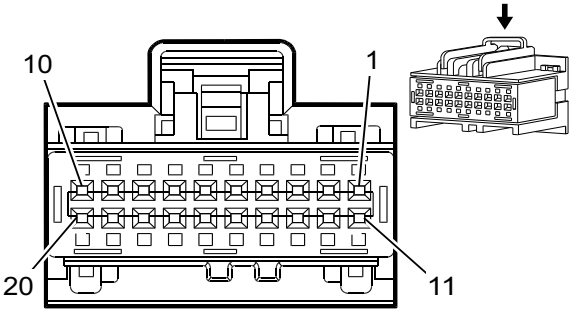
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### K77 Remote Control Door Lock Receiver

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GY | 3273 | Remote Function Actuator Low Reference | I | — |
| 2 | 0.35 | YE/GN | 3274 | Remote Function Actuator Transmit Signal | I | — |
| 3 | 0.35 | BU/WH | 3275 | Remote Function Actuator Receive Signal | I | — |
| 4 | 0.35 | GY/WH | 3272 | Remote Function Actuator Control | I | — |

## K84 Keyless Entry Control Module X1 (Crew Cab+BTM)




1664552

### Connector Part Information

Harness Type: Body
OEM Connector: 13950640
Service Connector: 13525992
Description: 20-Way F USCAR 64 Series (BN)

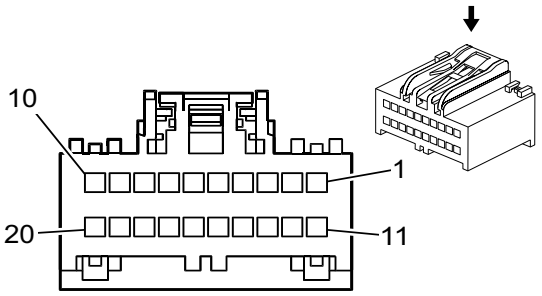
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K84 Keyless Entry Control Module X1 (Crew Cab+BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GN/VT | 1601 | Steering Column Lock Signal | I | — |
| 2 | 0.5 | RD/YE | 4340 | Battery Positive Voltage | I | — |
| 3 | 0.5 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.35 | VT/YE | 4 | Accessory Ignition Voltage | I | — |
| 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.35 | GY/GN | 4083 | RAP Relay 2 Coil Control | I | — |
| 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.35 | WH/YE | 3574 | Driver Door Open Switch Signal | I | — |
| 10 | 0.35 | YE/BU | 4086 | Pushbutton Start Challenge Active Signal | I | — |
| 11 | 0.35 | GN/BK | 3558 | Passive Start Switch Signal 2 | I | — |
| 12 | 0.35 | BK/GY | 3559 | Passive Start Switch 2 Low Reference | I | — |
| 13 | 0.35 | VT/BK | 3 | Run/Crank Ignition 1 Voltage | I | — |
| 14 | 0.5 | BK/WH | 1151 | Signal Ground | I | — |
| 15 | 0.35 | GY/BK | 3555 | Passive Start Interior Antenna 2 Signal Lo | I | — |
| 16 | 0.35 | BN/BK | 3552 | Passive Start Interior Antenna 1 Signal Hi | I | — |
| 17 | 0.35 | WH | 3553 | Passive Start Interior Antenna 1 Signal Lo | I | — |
| 18 - 19 | — | — | — | Not Occupied | — | — |
| 20 | 0.35 | BU | 3554 | Passive Start Interior Antenna 2 Signal Hi | I | — |

## K84 Keyless Entry Control Module X2 (Crew Cab+BTM)




1715228

### Connector Part Information

Harness Type: Body
OEM Connector: 13859758
Service Connector: 13525991
Description: 20-Way F USCAR 64 Series (GY)

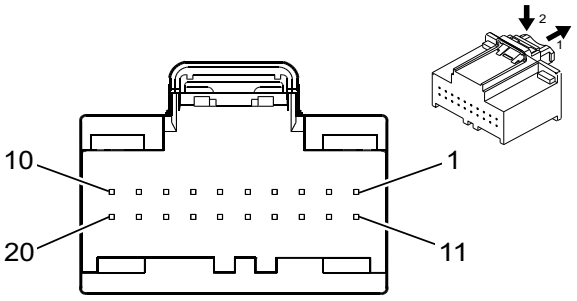
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K84 Keyless Entry Control Module X2 (Crew Cab+BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE/GY | 6158 | Right Rear Door Handle Switch Signal | I | — |
| 2 | 0.35 | BN/YE | 6157 | Left Rear Door Handle Switch Signal | I | — |
| 3 - 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.5 | VT | 3560 | Passive Entry Driver Door Antenna Signal Hi | I | — |
| 7 | 0.5 | VT/GY | 3561 | Passive Entry Driver Door Antenna Signal Lo | I | — |
| 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.5 | GN/BK | 3563 | Passive Entry Passenger Door Antenna Signal Lo | I | — |
| 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | VT/WH | 3571 | Passenger Door Handle Switch Signal | I | — |
| 12 | 0.35 | GN/WH | 3570 | Driver Door Handle Switch Signal | I | — |
| 13 - 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.5 | BN/GN | 3568 | Passive Entry Rear Closure Antenna Signal Hi | I | — |
| 17 | — | — | — | Not Occupied | — | — |
| 18 | 0.5 | GN/GY | 3569 | Passive Entry Rear Closure Antenna Signal Lo | I | — |
| 19 | — | — | — | Not Occupied | — | — |
| 20 | 0.5 | GN/YE | 3562 | Passive Entry Passenger Door Antenna Signal Hi | I | — |

## K84 Keyless Entry Control Module X1 (Extended Cab+BTM)




5109514

### Connector Part Information

Harness Type: Body
OEM Connector: 35162720
Service Connector: 13525992
Description: 20-Way F 0.64 Series (BN)

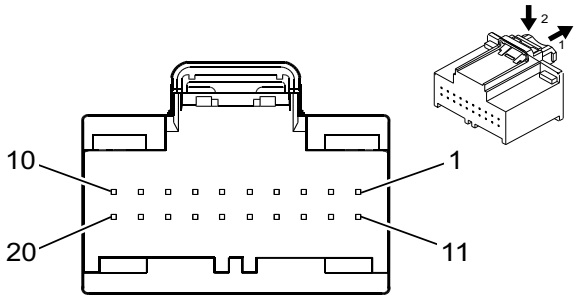
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

### K84 Keyless Entry Control Module X1 (Extended Cab+BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GN/VT | 1601 | Steering Column Lock Signal | I | — |
| 2 | 0.5 | RD/YE | 4340 | Battery Positive Voltage | I | — |
| 3 | 0.5 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.35 | VT/YE | 4 | Accessory Ignition Voltage | I | — |
| 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.35 | GY/GN | 4083 | RAP Relay 2 Coil Control | I | — |
| 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.35 | WH/YE | 3574 | Driver Door Open Switch Signal | I | — |
| 10 | 0.35 | YE/BU | 4086 | Pushbutton Start Challenge Active Signal | I | — |
| 11 | 0.35 | GN/BK | 3558 | Passive Start Switch Signal 2 | I | — |
| 12 | 0.35 | BK/GY | 3559 | Passive Start Switch 2 Low Reference | I | — |
| 13 | 0.35 | VT/BK | 3 | Run/Crank Ignition 1 Voltage | I | — |
| 14 | 0.5 | BK/WH | 1151 | Signal Ground | I | — |
| 15 | 0.35 | GY/BK | 3555 | Passive Start Interior Antenna 2 Signal Lo | I | — |
| 16 | 0.35 | BN/BK | 3552 | Passive Start Interior Antenna 1 Signal Hi | I | — |
| 17 | 0.35 | WH | 3553 | Passive Start Interior Antenna 1 Signal Lo | I | — |
| 18 - 19 | — | — | — | Not Occupied | — | — |
| 20 | 0.35 | BU | 3554 | Passive Start Interior Antenna 2 Signal Hi | I | — |

## K84 Keyless Entry Control Module X2 (Extended Cab+BTM)




5109537

### Connector Part Information

Harness Type: Body
OEM Connector: 35165309
Service Connector: 13525991
Description: 20-Way F 0.64 Series (GY)

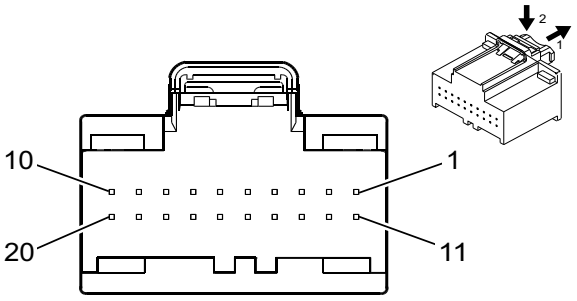
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K84 Keyless Entry Control Module X2 (Extended Cab+BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE/GY | 6158 | Right Rear Door Handle Switch Signal | I | — |
| 2 | 0.35 | BN/YE | 6157 | Left Rear Door Handle Switch Signal | I | — |
| 3 - 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.5 | VT | 3560 | Passive Entry Driver Door Antenna Signal Hi | I | — |
| 7 | 0.5 | VT/GY | 3561 | Passive Entry Driver Door Antenna Signal Lo | I | — |
| 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.5 | GN/BK | 3563 | Passive Entry Passenger Door Antenna Signal Lo | I | — |
| 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | VT/WH | 3571 | Passenger Door Handle Switch Signal | I | — |
| 12 | 0.35 | GN/WH | 3570 | Driver Door Handle Switch Signal | I | — |
| 13 - 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.5 | BN/GN | 3568 | Passive Entry Rear Closure Antenna Signal Hi | I | — |
| 17 | — | — | — | Not Occupied | — | — |
| 18 | 0.5 | GN/GY | 3569 | Passive Entry Rear Closure Antenna Signal Lo | I | — |
| 19 | — | — | — | Not Occupied | — | — |
| 20 | 0.5 | GN/YE | 3562 | Passive Entry Passenger Door Antenna Signal Hi | I | — |

## K84 Keyless Entry Control Module X1 (Regular Cab+BTM)




5109514

### Connector Part Information

Harness Type: Body
OEM Connector: 35162720
Service Connector: 13525992
Description: 20-Way F 0.64 Series (BN)

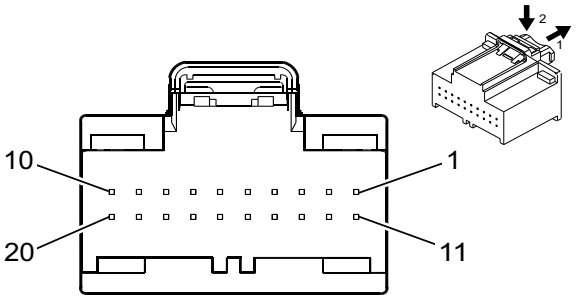
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | SAIT-A03T-M064 | Yazaki 14 | P | P |

## K84 Keyless Entry Control Module X1 (Regular Cab+BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GN/VT | 1601 | Steering Column Lock Signal | I | — |
| 2 | 0.5 | RD/YE | 4340 | Battery Positive Voltage | I | — |
| 3 | 0.5 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.35 | VT/YE | 4 | Accessory Ignition Voltage | I | — |
| 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.35 | GY/GN | 4083 | RAP Relay 2 Coil Control | I | — |
| 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.35 | WH/YE | 3574 | Driver Door Open Switch Signal | I | — |
| 10 | 0.35 | YE/BU | 4086 | Pushbutton Start Challenge Active Signal | I | — |
| 11 | 0.35 | GN/BK | 3558 | Passive Start Switch Signal 2 | I | — |
| 12 | 0.35 | BK/GY | 3559 | Passive Start Switch 2 Low Reference | I | — |
| 13 | 0.35 | VT/BK | 3 | Run/Crank Ignition 1 Voltage | I | — |
| 14 | 0.5 | BK/WH | 1151 | Signal Ground | I | — |
| 15 | 0.35 | GY/BK | 3555 | Passive Start Interior Antenna 2 Signal Lo | I | — |
| 16 | 0.35 | BN/BK | 3552 | Passive Start Interior Antenna 1 Signal Hi | I | — |
| 17 | 0.35 | WH | 3553 | Passive Start Interior Antenna 1 Signal Lo | I | — |
| 18 - 19 | — | — | — | Not Occupied | — | — |
| 20 | 0.35 | BU | 3554 | Passive Start Interior Antenna 2 Signal Hi | I | — |

## K84 Keyless Entry Control Module X2 (Regular Cab+BTM)




5109537

### Connector Part Information

Harness Type: Body
OEM Connector: 35165309
Service Connector: 13525991
Description: 20-Way F 0.64 Series (GY)

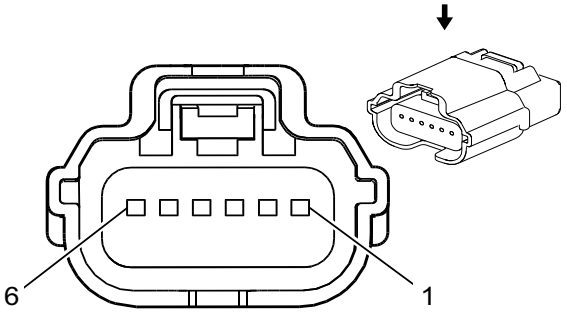
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | SAIT-A03T-M064 | Yazaki 14 | P | P |

## K84 Keyless Entry Control Module X2 (Regular Cab+BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.5 | VT | 3560 | Passive Entry Driver Door Antenna Signal Hi | I | — |
| 7 | 0.5 | VT/GY | 3561 | Passive Entry Driver Door Antenna Signal Lo | I | — |
| 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.5 | GN/BK | 3563 | Passive Entry Passenger Door Antenna Signal Lo | I | — |
| 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | VT/WH | 3571 | Passenger Door Handle Switch Signal | I | — |
| 12 | 0.35 | GN/WH | 3570 | Driver Door Handle Switch Signal | I | — |
| 13 - 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.5 | BN/GN | 3568 | Passive Entry Rear Closure Antenna Signal Hi | I | — |
| 17 | — | — | — | Not Occupied | — | — |
| 18 | 0.5 | GN/GY | 3569 | Passive Entry Rear Closure Antenna Signal Lo | I | — |
| 19 | — | — | — | Not Occupied | — | — |
| 20 | 0.5 | GN/YE | 3562 | Passive Entry Passenger Door Antenna Signal Hi | I | — |

## K85 Passenger Presence Module




1974974

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 31404-6132
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Series, Sealed (BK)

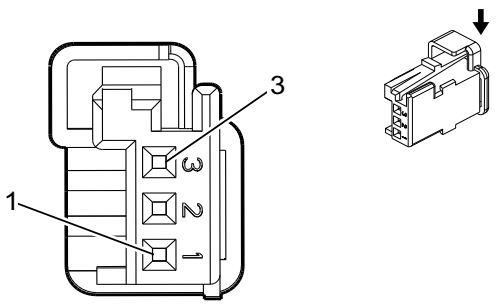
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### K85 Passenger Presence Module

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | RD/GN | 4440 | Battery Positive Voltage | I | — |
| 2 | 0.5 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.5 | BK/WH | 2551 | Signal Ground | I | — |
| 5 | 0.5 | GY/OG | 3946 | Automatic Locking Retractor Switch Low Reference | I | — |
| 6 | 0.5 | OG/BN | 3947 | Automatic Locking Retractor Switch Signal | I | — |

## K89 Immobilizer Control Module (-BTM)




4218883

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 10763117
Service Connector: 19333317
Description: 3-Way F 0.64 Micro-Quadlock Series (BK)

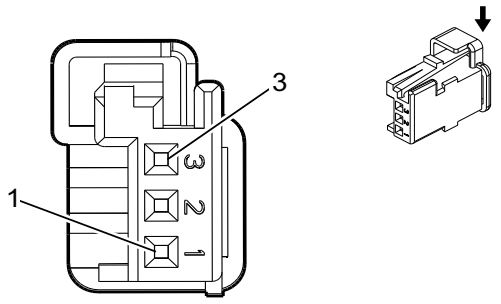
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### K89 Immobilizer Control Module (-BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/GY | 3277 | Vehicle Anti-Theft System Immobilizer Low Reference | I | — |
| 2 | 0.5 | GN/VT | 7533 | Local Interconnect Network Serial Data Bus 11 | I | — |
| 3 | 0.5 | GY/BK | 3276 | Vehicle Anti-Theft System Immobilizer Control | I | — |

### K89 Immobilizer Control Module (BTM+D07)




4218883

### Connector Part Information

Harness Type: Floor Console
OEM Connector: 10763117
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 0.64 Micro-Quadlock Series (BK)

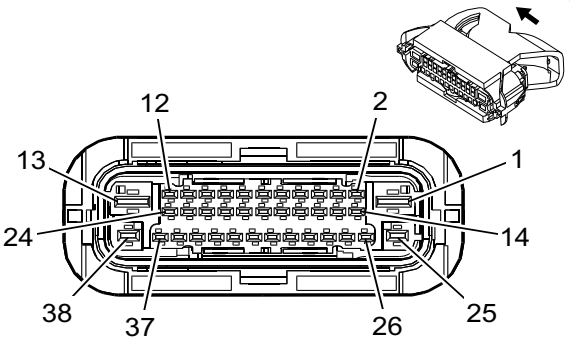
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## K89 Immobilizer Control Module (BTM+D07)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/GY | 3277 | Vehicle Anti-Theft System Immobilizer Low Reference | I | — |
| 2 | 0.35 | GN/VT | 7533 | Local Interconnect Network Serial Data Bus 11 | I | — |
| 3 | 0.5 | GY/BK | 3276 | Vehicle Anti-Theft System Immobilizer Control | I | — |

## K101 Trailer Interface Control Module




5141918

### Connector Part Information

Harness Type: Chassis
OEM Connector: 13670757
Service Connector: 19371190
Description: 38-Way F 1.5, 2.8, 4.8 MCP Series, Sealed (BK with BN Inner Connector)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-35 (VT) | J-38125-557 | 1-968857-3 | Lear 7 | C | 1 |
| III | 19371240 | J-35616-40 (BU) | J-38125-556 | 1241408-1 | Lear 28 | A | B |

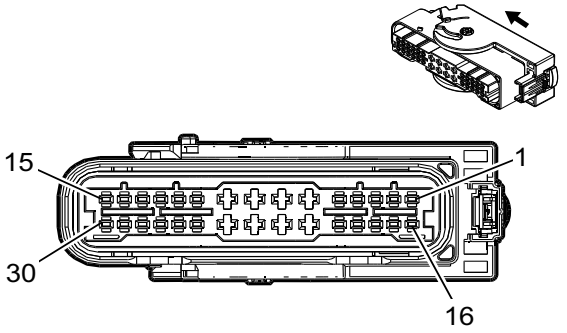
## K101 Trailer Interface Control Module

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2 | RD/YE | 5840 | Battery Positive Voltage | III | — |
| 2 | 0.75 | YE/GY | 1618 | Left Rear Trailer Stop/Turn Lamp Control | I | — |
| 3 | 0.75 | GN/VT | 1619 | Right Rear Trailer Stop/Turn Lamp Control | I | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.75 | GY/BN | 2109 | Trailer Park Lamp Control | I | — |
| 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.75 | GN/WH | 5189 | Trailer Backup Lamp Control | I | — |
| 8 - 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | I | — |

## K101 Trailer Interface Control Module (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 11 | 0.5 | VT/WH | 5065 | Stop Lamp Relay Coil Control | I | — |
| 12 | — | — | — | Not Occupied | — | — |
| 13 | 2.5 | BK | 1750 | Ground | III | — |
| 14 - 24 | — | — | — | Not Occupied | — | — |
| 25 | 2 | RD/BN | 7601 | Trailer Battery Charge Control | II | — |
| 26 | — | — | — | Not Occupied | — | — |
| 27 | 0.5 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 28 - 37 | — | — | — | Not Occupied | — | — |
| 38 | 2 | RD/VT | 5640 | Battery Positive Voltage | II | — |

## K111 Fuel Pump Driver Control Module




3240109

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33386317
Service Connector: 19354086
Description: 30-Way F 1.5, 2.8 Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-2A (GY) | J-38125-11A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-4A (PU) | J-38125-557 | Not Available | Not Available | Not Available | Not Available |

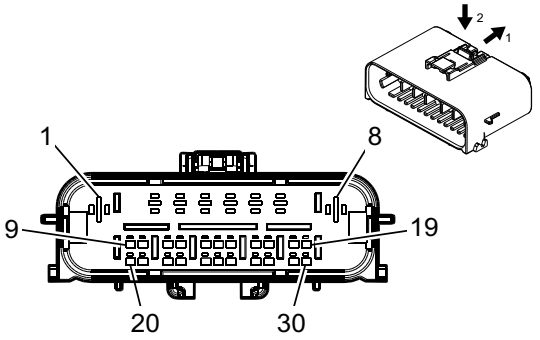
## K111 Fuel Pump Driver Control Module

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/RD | 6862 | Water In Fuel Sensor 5V Reference | I | — |
| 2 | 0.5 | BU/YE | 6861 | Water In Fuel Sensor Signal | I | — |
| 3 | 0.5 | BK/BU | 6863 | Water In Fuel Sensor Low Reference | I | — |
| 4 | 0.5 | BN/VT | 455 | Fuel Filter Temperature Signal | I | — |
| 5 - 6 | — | — | — | Not Occupied | — | — |

## K111 Fuel Pump Driver Control Module (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 7 | 2.5 | RD/VT | 1940 | Battery Positive Voltage | II | — |
| 8 | 2.5 | GY | 120 | Fuel Pump Control | II | — |
| 9 | 2.5 | YE/GY | 4137 | Fuel Pump Supply Voltage Phase 2 | II | — |
| 10 | 0.5 | YE/RD | 2709 | Fuel Tank Pressure Sensor 5V Reference | I | — |
| 11 | 0.5 | BU/WH | 890 | Fuel Tank Pressure Sensor Signal | I | — |
| 12 | 0.5 | BN/RD | 7445 | Fuel Line Pressure Sensor 5V Reference | I | — |
| 13 | 0.5 | BU/VT | 1589 | Primary Fuel Level Sensor Signal | I | — |
| 14 | — | — | — | Not Occupied | — | — |
| 15 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | I | — |
| 16 | 0.5 | VT/GN | 4320 | Powertrain Sensor Bus Enable | I | — |
| 17 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | I | — |
| 18 | 0.5 | GN/GY | 465 | Fuel Pump Primary Relay Control | I | — |
| 19 | 0.5 | BK/VT | 412 | Fuel Filter Temperature Sensor Low Reference | I | — |
| 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.5 | WH | 1310 | EVAP Canister Vent Solenoid Control | II | — |
| 22 | 2.5 | BK | 1750 | Ground | II | — |
| 23 | 0.5 | BN | 7444 | Fuel System Control Module Shield Ground | II | — |
| 24 | 2.5 | WH/BN | 4138 | Fuel Pump Supply Voltage Phase 3 | II | — |
| 25 | 0.5 | BK/BN | 6284 | Fuel Tank Vapor Pressure Sensor Low Reference | I | — |
| 26 | 0.5 | BU/WH | 7446 | Fuel Line Pressure Sensor Signal | I | — |
| 27 | 0.5 | BK/YE | 7447 | Fuel Line Pressure Sensor Low Reference | I | — |
| 28 | 0.5 | BK/GN | 6281 | Fuel Level Sensor Low Reference | I | — |
| 29 | — | — | — | Not Occupied | — | — |
| 30 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | I | — |

## K115 Reductant Control Module (LM2)




4817393

### Connector Part Information

Harness Type: Chassis
OEM Connector: 35099030
Service Connector: 19371177
Description: 30-Way M 1.2 MCON-CB, 2.8 MCP Series, Sealed (BK)

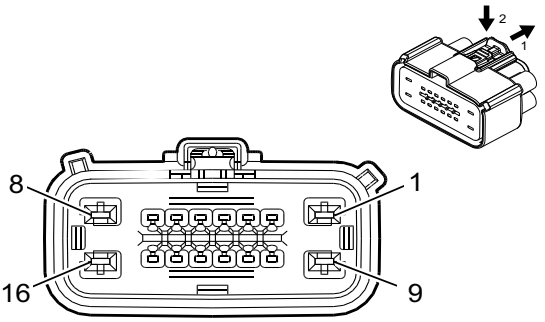
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-43 (RD) | J-38125-557 | Not Available | Not Available | Not Available | Not Available |
| III | 19371240 | J-35616-5 (PU) | J-38125-36 | 1-962915-3 | Yazaki 15 | E | 1 |

## K115 Reductant Control Module (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | BU | 3921 | DEF Heater Supply 1 | II | — |
| 2 | 1 | RD/WH | 3440 | Battery Positive Voltage | III | — |
| 3 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.75 | BK/WH | 1651 | Signal Ground | III | — |
| 8 | 2.5 | BK/WH | 1651 | Signal Ground | II | — |
| 9 - 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | I | — |
| 12 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | I | — |
| 13 | — | — | — | Not Occupied | — | — |
| 14 | 0.5 | VT/GN | 4320 | Powertrain Sensor Bus Enable | I | — |
| 15 | 0.5 | VT/YE | 5985 | Accessory Wakeup Serial Data | I | — |
| 16 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 17 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 18 - 21 | — | — | — | Not Occupied | — | — |
| 22 | 0.5 | BU/BN | 4498 | High Speed GMLAN Serial Data (+) 7 | I | — |
| 23 | 0.5 | WH | 4499 | High Speed GMLAN Serial Data (-) 7 | I | — |
| 24 | — | — | — | Not Occupied | — | — |
| 25 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | I | — |
| 26 | — | — | — | Not Occupied | — | — |
| 27 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| 28 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |
| 29 - 30 | — | — | — | Not Occupied | — | — |

## K133 Trailer Brake Power Control Module (JL1)




4624589

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33297568
Service Connector: 13599889
Description: 16-Way F 1.5, 2.8 Series, Sealed (GY)

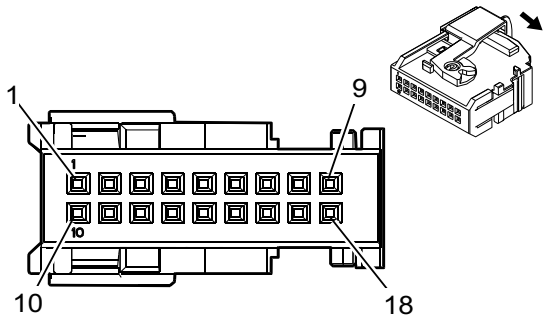
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-2A (GY) | J-38125-217 | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-35 (VT) | J-38125-12A | 1326030-8 | Lear 17 | 4 | D |

## K133 Trailer Brake Power Control Module (JL1)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | RD/VT | 1242 | Battery Positive Voltage | II | — |
| 2 | 1 | WH/BK | 2223 | Trailer Brake Control Signal | I | — |
| 3 - 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | YE/BK | 2224 | Trailer Brake Enable Signal | I | — |
| 6 - 7 | — | — | — | Not Occupied | — | — |
| 8 | 2.5 | BU | 47 | Trailer Auxiliary Control | II | — |
| 9 | 2.5 | BK | 1450 | Ground | II | — |
| 10 - 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.5 | GN/BU | 2733 | Local Interconnect Network Bus 33 | I | — |
| 13 - 16 | — | — | — | Not Occupied | — | — |

## K157 Video Processing Control Module X1 (UVI/UVS)




4329088

### Connector Part Information

Harness Type: Body
OEM Connector: 33168840
Service Connector: 19369840
Description: 18-Way F Micro-Quadlock Series (BK)

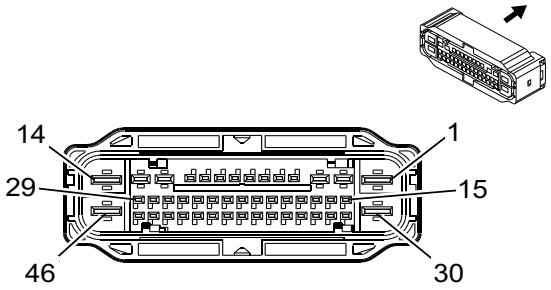
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-64B (LT BU) | J-38125-12A | Not Available | Not Available | Not Available | Not Available |

## K157 Video Processing Control Module X1 (UVI/UVS)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | RD/VT | 1640 | Battery Positive Voltage | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.5 | BK/WH | 2751 | Signal Ground | I | UVS |
| | 0.75 | BK/WH | 2751 | Signal Ground | I | UVS |
| | 0.5 | BK/WH | 2751 | Signal Ground | I | -UVS |
| | 0.75 | BK/WH | 2751 | Signal Ground | I | -UVS |
| 4 - 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | UVI |
| | 0.35 | GY/GN | 1102 | Low Speed GMLAN Serial Data #2 | I | UVS |
| | 0.35 | GY/GN | 1102 | Low Speed GMLAN Serial Data #2 | I | -UVS |
| | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | -UVS |
| 10 | 0.35 | RD/VT | 1640 | Battery Positive Voltage | I | — |
| 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.75 | BK/WH | 2751 | Signal Ground | I | UVS |
| | 0.5 | BK/WH | 2751 | Signal Ground | I | -UVS |
| 13 - 18 | — | — | — | Not Occupied | — | — |

## K160 Brake System Control Module




4162046

### Connector Part Information

Harness Type: Body
OEM Connector: 33222138
Service Connector: 19333026
Description: 46-Way F 1.2 OCS, 2.8, 4.8 CTS Series, Sealed (GY)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | 19371240 | J-35616-16 (LT GN) | J-38125-559 | Not Available | Not Available | Not Available | Not Available |
| IV | 19371240 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

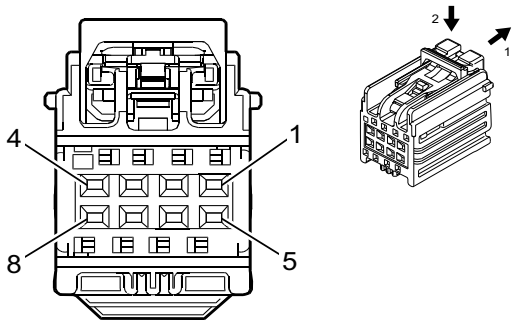
### K160 Brake System Control Module

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 6 | BK | 150 | Ground | II | — |
| 2 | 2.5 | WH | 2001 | Park Brake Motor Apply Left Rear Control | IV | — |
| 3 | 2.5 | GY/BK | 4369 | Park Brake Motor Low Reference Left Rear | IV | — |
| 4 | 0.5 | GY/WH | 7064 | Wheel Speed Sensor Control Left Front | II | — |
| | 0.5 | GY/WH | 7064 | Wheel Speed Sensor Control Left Front | III | — |
| 5 | 0.5 | GY | 830 | Wheel Speed Sensor Signal Left Front | II | — |
| | 0.5 | GY | 830 | Wheel Speed Sensor Signal Left Front | III | — |
| 6 - 8 | — | — | — | Not Occupied | — | — |
| 9 | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | III | — |
| | 0.5 | VT/GN | 439 | Run/Crank Ignition 1 Voltage | II | — |
| 10 | 0.5 | GY/BN | 7065 | Wheel Speed Sensor Control Right Front | III | — |
| | 0.5 | GY/BN | 7065 | Wheel Speed Sensor Control Right Front | II | — |
| 11 | 0.5 | YE | 872 | Wheel Speed Sensor Signal Right Front | III | — |
| | 0.5 | YE | 872 | Wheel Speed Sensor Signal Right Front | II | — |
| 12 | 2.5 | GN/VT | 1988 | Park Brake Motor Apply Right Rear Control | IV | — |
| 13 | 2.5 | GY | 4368 | Park Brake Motor Low Reference Right Rear | IV | — |
| 14 | 6 | RD/YE | 442 | Battery Positive Voltage | II | — |

## K160 Brake System Control Module (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 15 | 0.5 | GY/BK | 7127 | Wheel Speed Sensor Control Left Rear | II | — |
| | 0.5 | GY/BK | 7127 | Wheel Speed Sensor Control Left Rear | III | — |
| 16 | 0.5 | BU | 884 | Wheel Speed Sensor Signal Left Rear | III | — |
| | 0.5 | BU | 884 | Wheel Speed Sensor Signal Left Rear | II | — |
| 17 | 0.5 | BU/YE | 6105 | High Speed GMLAN Serial Data (+) 2 | III | — |
| | 0.5 | BU/YE | 6105 | High Speed GMLAN Serial Data (+) 2 | II | — |
| 18 | — | — | — | Not Occupied | — | — |
| 19 | 0.35 | GN/GY | 817 | Vehicle Speed Signal | II | — |
| | 0.35 | GN/GY | 817 | Vehicle Speed Signal | III | — |
| 20 - 22 | — | — | — | Not Occupied | — | — |
| 23 | 0.35 | GN/YE | 2731 | Local Interconnect Network Bus 31 | III | — |
| | 0.35 | GN/YE | 2731 | Local Interconnect Network Bus 31 | II | — |
| 24 | — | — | — | Not Occupied | — | — |
| 25 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | III | — |
| | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | II | — |
| 26 | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | II | — |
| | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | III | — |
| 27 | 0.35 | VT/YE | 5985 | Accessory Wakeup Serial Data | II | — |
| | 0.35 | VT/YE | 5985 | Accessory Wakeup Serial Data | III | — |
| 28 | 0.5 | GY/YE | 7128 | Wheel Speed Sensor Control Right Rear | II | — |
| | 0.5 | GY/YE | 7128 | Wheel Speed Sensor Control Right Rear | III | — |
| 29 | 0.5 | VT | 882 | Wheel Speed Sensor Signal Right Rear | II | — |
| | 0.5 | VT | 882 | Wheel Speed Sensor Signal Right Rear | III | — |
| 30 | 6 | BK | 2250 | Ground | II | — |
| 31 - 32 | — | — | — | Not Occupied | — | — |
| 33 | 0.5 | WH | 6106 | High Speed GMLAN Serial Data (-) 2 | III | — |
| | 0.5 | WH | 6106 | High Speed GMLAN Serial Data (-) 2 | II | — |
| 34 | — | — | — | Not Occupied | — | — |
| 35 | 0.35 | GN/BU | 2733 | Local Interconnect Network Bus 33 | III | — |
| | 0.35 | GN/BU | 2733 | Local Interconnect Network Bus 33 | II | — |
| 36 | 1 | WH/BK | 2223 | Trailer Brake Control Signal | I | — |
| 37 | 0.5 | YE/BK | 2224 | Trailer Brake Enable Signal | III | — |
| | 0.5 | YE/BK | 2224 | Trailer Brake Enable Signal | II | — |
| 38 | 0.5 | GN/GY | 333 | Brake Fluid Level Sensor Signal | III | — |
| | 0.5 | GN/GY | 333 | Brake Fluid Level Sensor Signal | II | — |
| 39 | 0.5 | WH | 1612 | Brake Lining Wear Sensor Signal Left Front | II | — |
| | 0.5 | WH | 1612 | Brake Lining Wear Sensor Signal Left Front | III | — |
| 40 | — | — | — | Not Occupied | — | — |
| 41 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | III | — |
| | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | II | — |
| 42 | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | III | — |
| | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | II | — |
| 43 | — | — | — | Not Occupied | — | — |
| 44 | 0.5 | GN/YE | 1616 | Brake Lining Wear Sensor Signal Rear | III | — |
| | 0.5 | GN/YE | 1616 | Brake Lining Wear Sensor Signal Rear | II | — |
| 45 | — | — | — | Not Occupied | — | — |
| 46 | 6 | RD/VT | 1640 | Battery Positive Voltage | II | — |

## K182 Parking Assist Control Module X2 (UD5)




4280711

### Connector Part Information

Harness Type: Body
OEM Connector: 33183559
Service Connector: 19355209
Description: 8-Way F YESC Kaizen Series (GY)

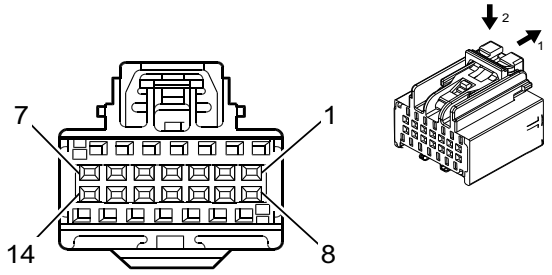
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## K182 Parking Assist Control Module X2 (UD5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | — | — | — | Not Occupied | — | — |
| 2 | 0.5 | YE/WH | 2377 | Right Rear Middle Object Sensor Signal | I | — |
| 3 | 0.5 | YE | 2375 | Left Rear Corner Object Sensor Signal | I | — |
| 4 | 0.5 | BN/WH | 2374 | Object Sensor Control | I | — |
| 5 | 0.5 | YE/VT | 2378 | Right Rear Corner Object Sensor Signal | I | — |
| 6 | 0.5 | YE/BU | 2376 | Left Rear Middle Object Sensor Signal | I | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | BK/GY | 2379 | Object Sensor Low Reference | I | — |

## K182 Parking Assist Control Module X3 (UD5)




4547098

### Connector Part Information

Harness Type: Body
OEM Connector: 35014564
Service Connector: 19354933
Description: 14-Way F 0.64 Kaizen Series (BU)

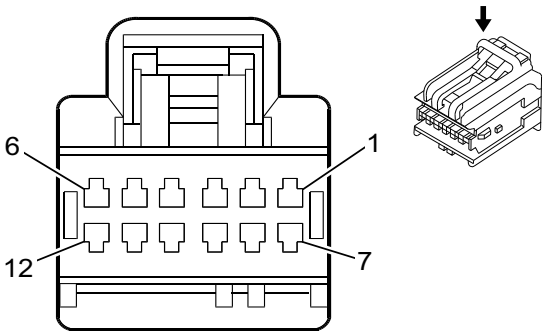
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | SAIT-A03T-M064 | Yazaki 14 | P | P |

## K182 Parking Assist Control Module X3 (UD5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/VT | 5213 | Front Parking Left/Right/Mid Sensor | I | — |
| 2 - 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.5 | YE/GY | 5216 | Front Parking Left Mid Sensor | I | — |
| 5 | 0.5 | WH/GY | 5217 | Front Parking Right Corner Sensor | I | — |
| 6 - 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | BK/BU | 5214 | Front Parking Sensor Low Reference | I | — |
| 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.5 | VT/WH | 5215 | Front Parking Left Corner Sensor | I | — |
| 11 | 0.5 | VT/GY | 5218 | Front Parking Right Mid Sensor | I | — |
| 12 - 14 | — | — | — | Not Occupied | — | — |

## K182 Parking Assist Control Module X1 (UD5+Crew Cab)




1664569

### Connector Part Information

Harness Type: Body
OEM Connector: 13950639
Service Connector: 13525987
Description: 12-Way F 0.64 Series, Sealed (BK)

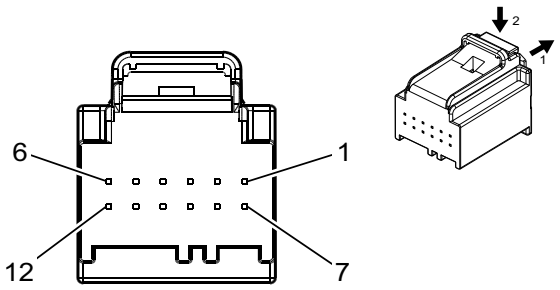
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K182 Parking Assist Control Module X1 (UD5+Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | RD/GN | 3140 | Battery Positive Voltage | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | GN/BN | 5852 | Rear Park Assist LED Disable Signal | I | — |
| 4 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 5 - 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.35 | GY/GN | 2555 | Rear Park Assist Disable Signal | I | — |
| 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.5<br>0.35 | BK/WH<br>BK/WH | 1151<br>1151 | Signal Ground<br>Signal Ground | I<br>I | -BTM<br>UD5/UD7+BTM |
| 11 - 12 | — | — | — | Not Occupied | — | — |

## K182 Parking Assist Control Module X1 (UD5+Extended Cab)




5095565

### Connector Part Information

Harness Type: Body
OEM Connector: 35130710
Service Connector: 13525987
Description: 12-Way F 0.64 Series, Sealed (BK)

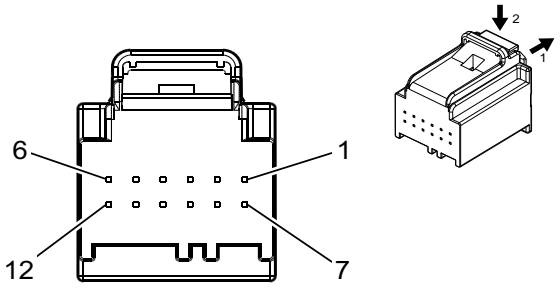
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## K182 Parking Assist Control Module X1 (UD5+Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | RD/GN | 3140 | Battery Positive Voltage | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | GN/BN | 5852 | Rear Park Assist LED Disable Signal | I | — |
| 4 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 5 - 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.35 | GY/GN | 2555 | Rear Park Assist Disable Signal | I | — |
| 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.35<br>0.5 | BK/WH<br>BK/WH | 1151<br>1151 | Signal Ground<br>Signal Ground | I<br>I | BTM<br>-BTM |
| 11 - 12 | — | — | — | Not Occupied | — | — |

## K182 Parking Assist Control Module X1 (UD5+Regular Cab)




5095565

### Connector Part Information

Harness Type: Body
OEM Connector: 35130710
Service Connector: 13525987
Description: 12-Way F 0.64 Series, Sealed (BK)

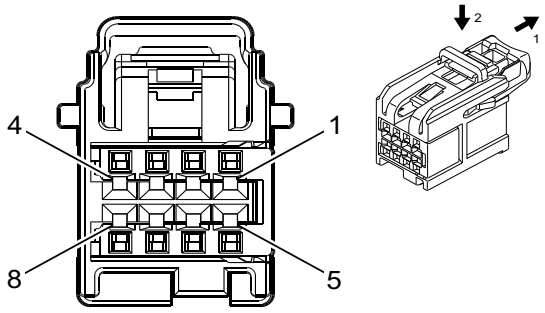
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | SAIT-A03T-M064 | Yazaki 14 | P | P |

## K182 Parking Assist Control Module X1 (UD5+Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | RD/GN | 3140 | Battery Positive Voltage | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | GN/BN | 5852 | Rear Park Assist LED Disable Signal | I | — |
| 4 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 5 - 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.35 | GY/GN | 2555 | Rear Park Assist Disable Signal | I | — |
| 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.35<br>0.5 | BK/WH<br>BK/WH | 1151<br>1151 | Signal Ground<br>Signal Ground | I<br>I | BTM<br>-BTM |
| 11 - 12 | — | — | — | Not Occupied | — | — |

## K183 UHF Short Range Low Energy Remote Control Access Transceiver (BOP)




4935776

### Connector Part Information

Harness Type: Body
OEM Connector: 15526972
Service Connector: 19370429
Description: 8-Way F 0.64 OCS Series (BK)

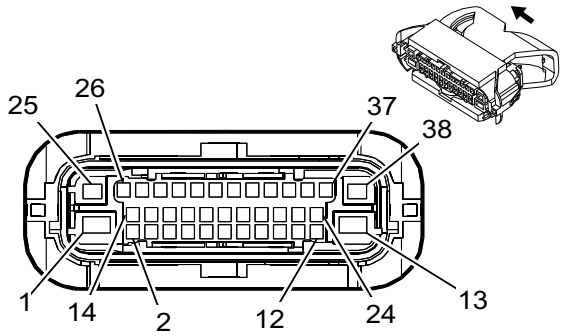
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### K183 UHF Short Range Low Energy Remote Control Access Transceiver (BOP)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/BK | 2738 | Virtual Key Module Local Interconnect Network 1 | I | — |
| 2 | 0.5 | RD/YE | 2340 | Battery Positive Voltage | I | — |
| 3 | 0.5 | BK | 1150 | Ground | I | — |
| 4 | 0.5 | GY/GN | 1102 | Low Speed GMLAN Serial Data #2 | I | — |
| 5 - 8 | — | — | — | Not Occupied | — | — |

## K194 Pickup Box Endgate Control Module (QT6)




3240111

## Connector Part Information

Harness Type: Endgate
OEM Connector: 13924619
Service Connector: Service by Harness - See Part Catalog
Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 MCP Series, Sealed (BK with BK Inner Connector)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

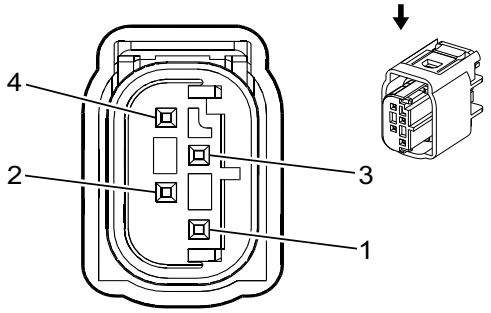
## K194 Pickup Box Endgate Control Module (QT6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | BK | 1450 | Ground | I | — |
| 2 - 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | PK/BK | 4668 | Rear Closure Ajar Switch Signal 3 | I | — |
| 6 | 0.5 | GY/VT | 4678 | Rear Closure Ajar Switch Signal 1 | I | — |
| 7 | 0.35 | GN/BK | 4659 | Rear Closure Open | I | — |
| 8 | 0.35 | BU/BK | 4665 | Rear Closure Ajar Switch Signal 2 | I | — |
| 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.35 | YE | 1144 | Endgate Release Switch Discrete Signal Exterior | I | — |
| 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.5 | GY | 1198 | Endgate Release Switch Analog Signal Interior | I | — |
| 13 | 2.5 | RD/GY | 7040 | Battery Positive Voltage | I | — |
| 14 | 0.5 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.35 | YE/RD | 7734 | Rear Closure Latch 2 Rachet Status | I | — |
| 17 | — | — | — | Not Occupied | — | — |
| 18 | 0.5 | BN/RD | 4683 | Rear Closure Position Sensor Voltage Reference | I | — |
| 19 | 0.35 | BK/GN | 4687 | Rear Closure Position Sensor Low Reference | I | — |
| 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.35 | BN/YE | 4686 | Rear Closure Position Sensor Signal 2 | I | — |
| 22 | 0.5 | BU/WH | 4685 | Rear Closure Position Sensor Signal 1 | I | — |
| 23 | 0.5 | WH | 7735 | Rear Closure Latch 2 Pawl Status | I | — |
| 24 | 0.5 | VT | 7736 | Rear Closure Latch 2 Unlatch Status | I | — |
| 25 | 1 | BN/WH | 4690 | Rear Closure Open/Close Motor Close Control | I | — |
| 26 | 0.35 | OG | 7733 | Rear Closure Latch 2 Sector Status | I | — |
| 27 | 0.5 | GY/BK | 1575 | Rear Closure Sensor Low Reference 2 | I | — |
| 28 | 0.5 | BK/VT | 4656 | Rear Closure Object Sensor Low Reference | I | — |
| 29 | — | — | — | Not Occupied | — | — |
| 30 | 1 | BU | 1509 | Rear Closure Cinch Latch Motor 2 Release Control | I | — |
| 31 | 1 | PK | 1499 | Rear Closure Cinch Latch Motor 2 Cinch Control | I | — |
| 32 | — | — | — | Not Occupied | — | — |
| 33 | 1 | BU/GY | 4682 | Rear Closure Cinch Latch Motor Close Control | I | — |

## K194 Pickup Box Endgate Control Module (QT6) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 34 | 1 | BN | 4681 | Rear Closure Cinch Latch Motor Open Control | I | — |
| 35 | 0.5 | GN | 1577 | Rear Closure Clutch Control | I | — |
| 36 | 0.5 | OG/WH | 1590 | Rear Closure Clutch Return | I | — |
| 37 | — | — | — | Not Occupied | — | — |
| 38 | 1 | WH | 4689 | Rear Closure Open/Close Motor Open Control | I | — |

## K214 Trailer Tire Pressure Indicator Module (PTT)




2173574

### Connector Part Information

Harness Type: Chassis
OEM Connector: 13679454
Service Connector: 13314098
Description: 4-Way F 0.64 Micro-Quadlock Series, Sealed (BK)

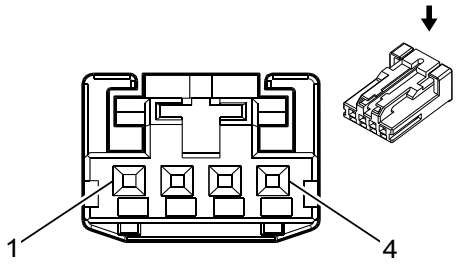
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## K214 Trailer Tire Pressure Indicator Module (PTT)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | RD/GN | 1840 | Battery Positive Voltage | I | — |
| 2 | 0.75 | BK | 1750 | Ground | I | — |
| 3 | 0.5 | BU/GN | 1304 | High Speed GMLAN Serial Data (+)9 | I | — |
| 4 | 0.5 | WH/GN | 1305 | High Speed GMLAN Serial Data (-)9 | I | — |

## KR62 Trailer Brake Control Relay




2717162

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13969166
Service Connector: 13587297
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

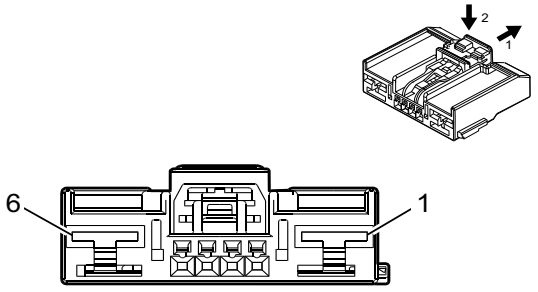
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### KR62 Trailer Brake Control Relay

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | RD/GN | 5140 | Battery Positive Voltage | I | — |
| 2 | 0.35 | GN/BU | 2733 | Local Interconnect Network Bus 33 | I | — |
| 3 | 0.35 | BK/WH | 1851 | Signal Ground | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## M8 Blower Motor




4650258

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33395154
Service Connector: 19356432
Description: 6-Way F 0.64, 6.3 Series (BK)

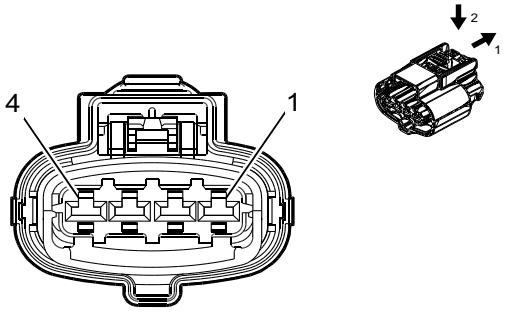
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M8 Blower Motor

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 4 | RD/VT | 542 | Battery Positive Voltage | I | — |
| 2 | 0.35 | BU/GY | 754 | Blower Motor Speed Control | I | — |
| 3 | 0.35 | GN/BU | 761 | Blower Speed Feedback Signal | I | — |
| 4 - 5 | — | — | — | Not Occupied | — | — |
| 6 | 4 | BK | 1050 | Ground | I | — |

### M10 Charge Air Cooler Pump (LM2)




4997613

### Connector Part Information

Harness Type: Engine
OEM Connector: 33230781
Service Connector: 19371209
Description: 4-Way F 2.8 CTS Series, Sealed (BK)

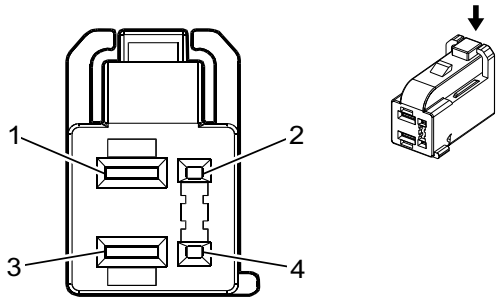
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M10 Charge Air Cooler Pump (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1 | BK | 550 | Ground | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.5 | GN/BN | 2732 | Local Interconnect Network Bus 32 | I | — |
| 4 | 1 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | I | — |

## M50D Seat Front Vertical Motor - Driver (A2K+A45)




3683652

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BK)

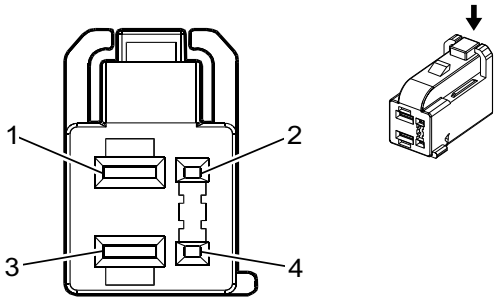
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M50D Seat Front Vertical Motor - Driver (A2K+A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | BU/VT | 287 | Driver Power Seat Front Vertical Motor Down Control | I | — |
| 2 | 0.5 | WH/RD | 3298 | Memory Sensor High Reference 2 | I | — |
| 3 | 1.5 | GN/BN | 286 | Driver Power Seat Front Vertical Motor Up Control | I | — |
| 4 | 0.5 | BN/WH | 557 | Memory Seat Front Vertical Motor Position Sensor Signal | I | — |

## M50D Seat Front Vertical Motor - Driver (A2K-A45)




3683652

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BK)

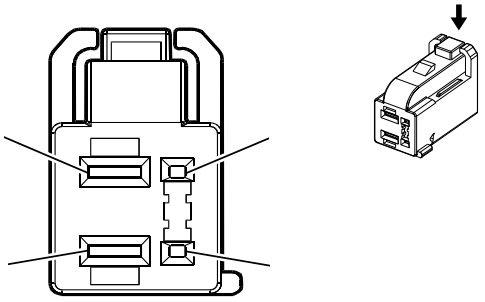
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M50D Seat Front Vertical Motor - Driver (A2K-A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | BU/VT | 287 | Driver Power Seat Front Vertical Motor Down Control | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 1.5 | GN/BN | 286 | Driver Power Seat Front Vertical Motor Up Control | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## M50P Seat Front Vertical Motor - Passenger (A7K)



3683652

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BK)

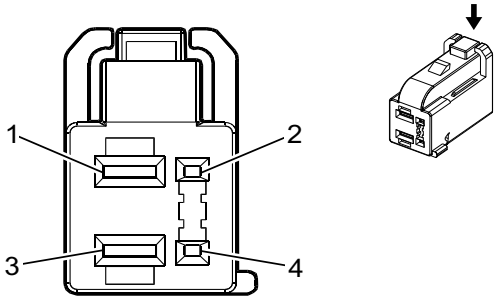
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M50P Seat Front Vertical Motor - Passenger (A7K)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GN/VT | 297 | Passenger Power Seat Front Vertical Motor Up Control | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 1.5 | GN/BU | 298 | Passenger Power Seat Front Vertical Motor Down Control | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## M51D Seat Horizontal Motor - Driver (A2K-A45)




3683652

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BK)

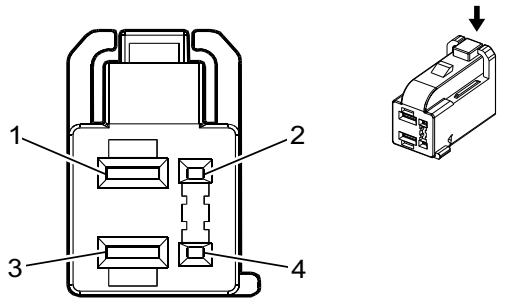
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M51D Seat Horizontal Motor - Driver (A2K-A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GY/GN | 284 | Driver Power Seat Horizontal Motor Rearward Control | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 1.5 | YE/BU | 285 | Driver Power Seat Horizontal Motor Forward Control | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## M51D Seat Horizontal Motor - Driver (A45)




3683652

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BK)

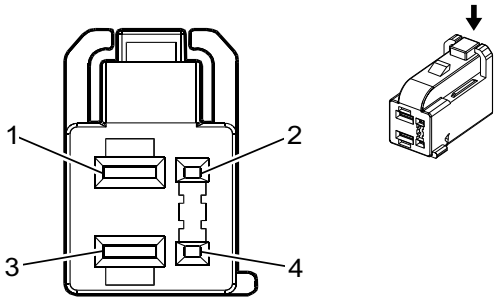
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M51D Seat Horizontal Motor - Driver (A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GY/GN | 284 | Driver Power Seat Horizontal Motor Rearward Control | I | — |
| 2 | 0.5 | GN | 569 | Memory Seat Horizontal Motor Position Sensor Signal | I | — |
| 3 | 1.5 | YE/BU | 285 | Driver Power Seat Horizontal Motor Forward Control | I | — |
| 4 | 0.5 | WH/RD | 3298 | Memory Sensor High Reference 2 | I | — |

## M51P Seat Horizontal Motor - Passenger (A7K)




3683652

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BK)

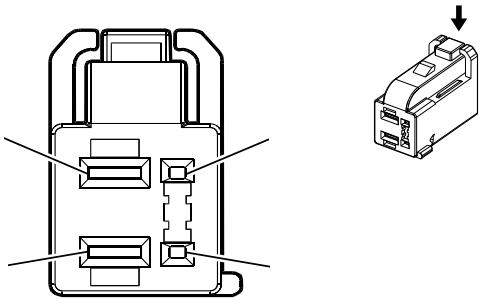
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M51P Seat Horizontal Motor - Passenger (A7K)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | YE/BU | 290 | Passenger Power Seat Horizontal Motor Rearward Control | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 1.5 | YE/WH | 296 | Passenger Power Seat Horizontal Motor Forward Control | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## M55D Seat Rear Vertical Motor - Driver (A2X+A45)



3683652

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BK)

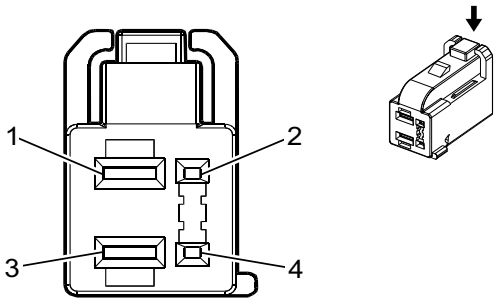
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M55D Seat Rear Vertical Motor - Driver (A2X+A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GY/BU | 283 | Driver Power Seat Rear Vertical Motor Down Control | I | — |
| 2 | 0.5 | YE/BU | 568 | Memory Seat Rear Vertical Motor Position Sensor Signal | I | — |
| 3 | 1.5 | YE | 282 | Driver Power Seat Rear Vertical Motor Up Control | I | — |
| 4 | 0.5 | WH/RD | 3298 | Memory Sensor High Reference 2 | I | — |

## M55D Seat Rear Vertical Motor - Driver (A2X-A45)




3683652

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BK)

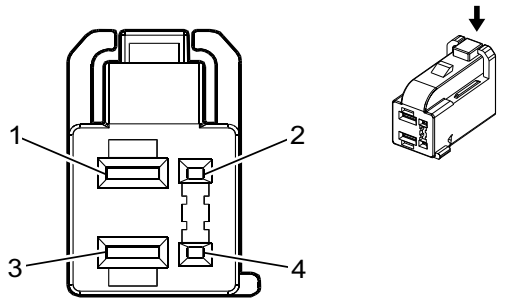
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M55D Seat Rear Vertical Motor - Driver (A2X-A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GY/BU | 283 | Driver Power Seat Rear Vertical Motor Down Control | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 1.5 | YE | 282 | Driver Power Seat Rear Vertical Motor Up Control | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## M55P Seat Rear Vertical Motor - Passenger (A7K)




3683652

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BK)

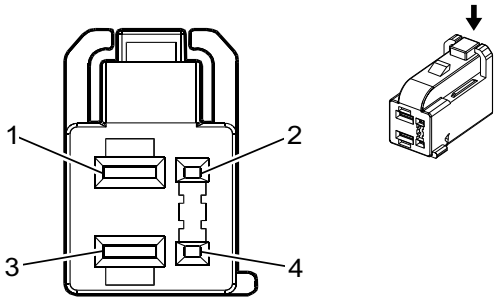
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M55P Seat Rear Vertical Motor - Passenger (A7K)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | BU/WH | 289 | Passenger Power Seat Rear Vertical Motor Down Control | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 1.5 | GN/WH | 288 | Passenger Power Seat Rear Vertical Motor Up Control | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## M56D Seat Recline Motor - Driver (A45)




3683652

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BK)

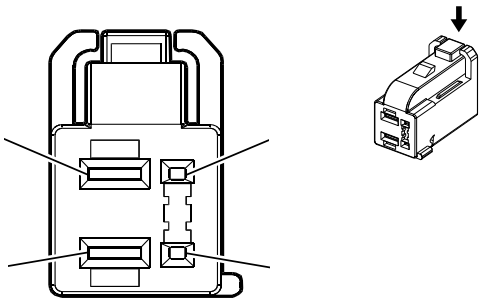
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M56D Seat Recline Motor - Driver (A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GN/YE | 276 | Driver Power Seat Recline Motor Forward Control | I | — |
| 2 | 0.5 | WH/RD | 3298 | Memory Sensor High Reference 2 | I | — |
| 3 | 1.5 | BU/YE | 277 | Driver Power Seat Recline Motor Rearward Control | I | — |
| 4 | 0.5 | WH/BK | 570 | Driver Memory Seat Recline Motor Position Sensor Signal | I | — |

## M56D Seat Recline Motor - Driver (-A45)



3683652

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BK)

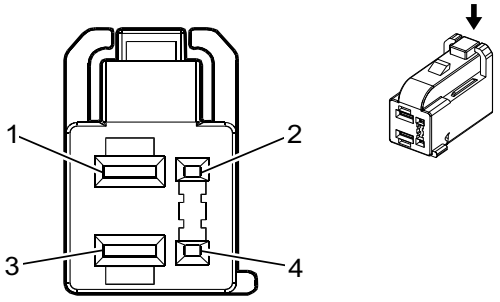
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M56D Seat Recline Motor - Driver (-A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GN/YE | 276 | Driver Power Seat Recline Motor Forward Control | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 1.5 | BU/YE | 277 | Driver Power Seat Recline Motor Rearward Control | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## M56P Seat Recline Motor - Passenger (A7K)




3683652

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BK)

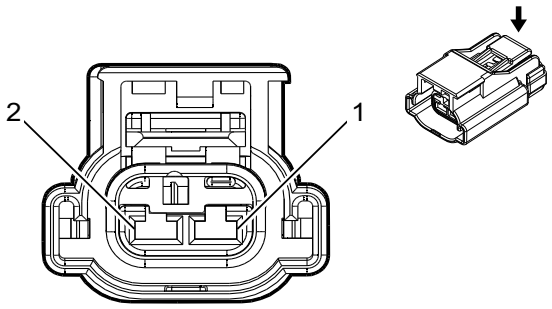
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M56P Seat Recline Motor - Passenger (A7K)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GN | 76 | Passenger Power Seat Recline Motor Forward Control | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 1.5 | BU/BN | 77 | Passenger Power Seat Recline Motor Rearward Control | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## M63 Sliding Rear Window Motor (A48)




2716333

### Connector Part Information

Harness Type: Body
OEM Connector: 13863838
Service Connector: 19301518
Description: 2-Way F 2.8 Series, Sealed (BK)

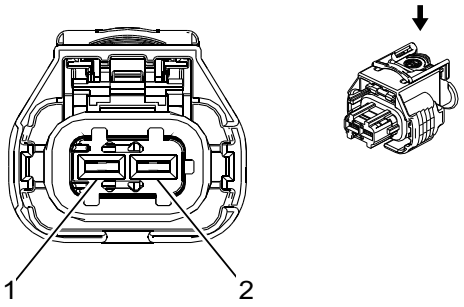
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M63 Sliding Rear Window Motor (A48)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | YE/BU | 5442 | Endgate Window Regulator Up Signal | I | — |
| 2 | 2.5 | GY/GN | 5441 | Endgate Window Regulator Down Signal | I | — |

## M64 Starter Motor X1 (L3B)




2577394

### Connector Part Information

Harness Type: Engine
OEM Connector: 13930085
Service Connector: 13384371
Description: 2-Way F 2.8 Series, Sealed (BK)

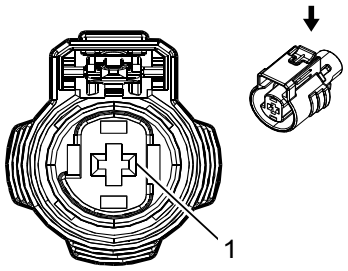
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M64 Starter Motor X1 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | YE | 6 | Starter Solenoid Crank Ignition Voltage | I | — |
| 2 | 2.5 | YE/GN | 4358 | Starter Pinion Solenoid Voltage | I | — |

## M64 Starter Motor X1 (L82)




2717134

### Connector Part Information

Harness Type: Engine
OEM Connector: 15526411
Service Connector: 19300471
Description: 1-Way F 2.8 MCP Series, Sealed (BK)

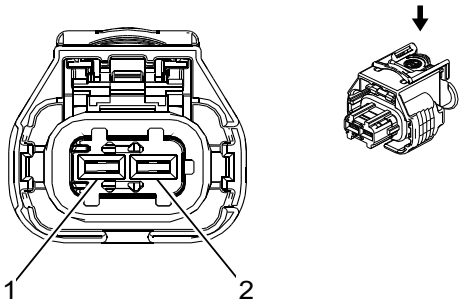
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M64 Starter Motor X1 (L82)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | YE | 6 | Starter Solenoid Crank Ignition Voltage | I | — |

### M64 Starter Motor X1 (L84/L87)




2577394

#### Connector Part Information

Harness Type: Engine
OEM Connector: 13930085
Service Connector: 13384371
Description: 2-Way F 2.8 Series, Sealed (BK)

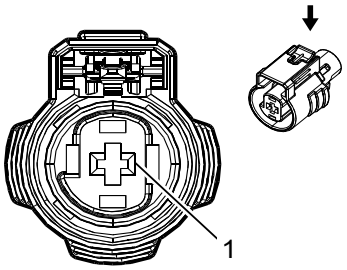
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M64 Starter Motor X1 (L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | YE | 6 | Starter Solenoid Crank Ignition Voltage | I | — |
| 2 | 2.5 | YE/GN | 4358 | Starter Pinion Solenoid Voltage | I | — |

## M64 Starter Motor X1 (LM2)




2717134

### Connector Part Information

Harness Type: Engine
OEM Connector: 15526411
Service Connector: 19300471
Description: 1-Way F 2.8 MCP Series, Sealed (BK)

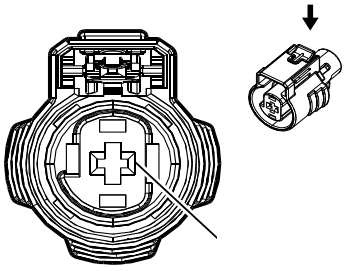
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M64 Starter Motor X1 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | YE | 6 | Starter Solenoid Crank Ignition Voltage | I | — |

## M64 Starter Motor X1 (LV3)



2717134

### Connector Part Information

Harness Type: Engine
OEM Connector: 15526411
Service Connector: 19300471
Description: 1-Way F 2.8 MCP Series, Sealed (BK)

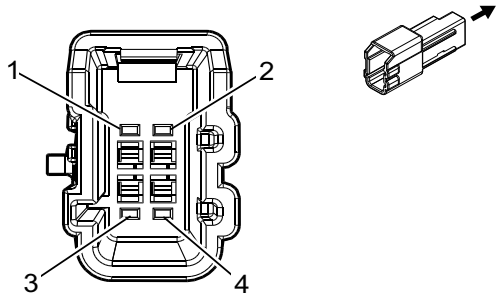
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M64 Starter Motor X1 (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | YE | 6 | Starter Solenoid Crank Ignition Voltage | I | — |

## M73A Seat Blower Motor - Driver Back (KQV)




4293695

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 6098-7781
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (GY)

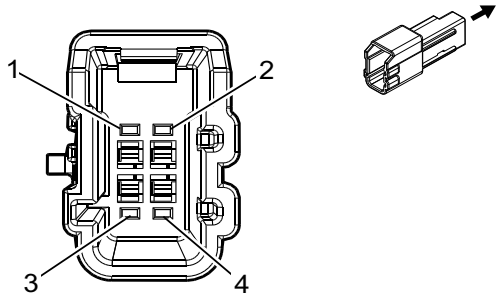
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M73A Seat Blower Motor - Driver Back (KQV)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | VT/WH | 4939 | Run/Crank Ignition 1 Voltage | I | — |
| 2 | 0.5 | GN/VT | 5906 | Driver Seat Vent Motor Control 1 | I | — |
| 3 | 0.75 | BK | 1150 | Ground | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## M73B Seat Blower Motor - Passenger Back (KQV)




4293695

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 6098-7781
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (GY)

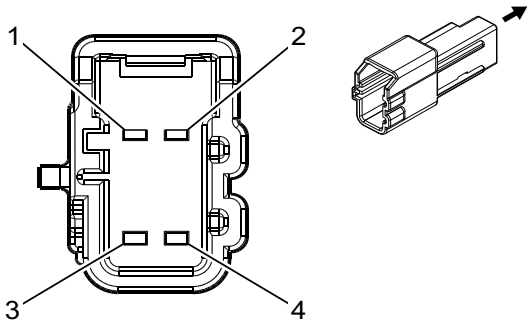
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M73B Seat Blower Motor - Passenger Back (KQV)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | VT/WH | 4939 | Run/Crank Ignition 1 Voltage | I | — |
| 2 | 0.5 | WH | 5908 | Passenger Seat Vent Motor Control 1 | I | — |
| 3 | 0.75 | BK | 1250 | Ground | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## M73C Seat Blower Motor - Driver Cushion (KQV)




4210503

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 6098-7779
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (BK)

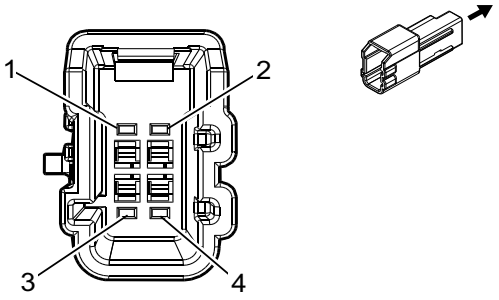
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M73C Seat Blower Motor - Driver Cushion (KQV)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BN/VT | 2077 | Driver Heated Seat Element Control | I | — |
| 2 | 0.5 | YE/GY | 2079 | Driver Heated Seat NTC Signal | I | — |
| 3 | 0.5 | BK/YE | 2080 | Driver Heated Seat NTC Low Reference | I | — |
| 4 | 0.75 | BN/BK | 2078 | Driver Heated Seat Element Low Reference | I | — |

### M73D Seat Blower Motor - Passenger Cushion (KQV)




4293695

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 6098-7781
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (GY)

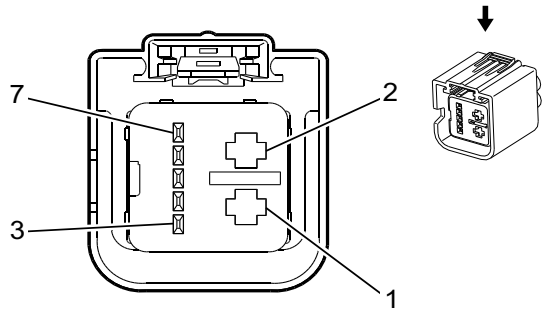
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M73D Seat Blower Motor - Passenger Cushion (KQV)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | VT/WH | 4939 | Run/Crank Ignition 1 Voltage | I | — |
| 2 | 0.5 | WH | 5908 | Passenger Seat Vent Motor Control 1 | I | — |
| 3 | 0.75 | BK | 1250 | Ground | I | — |
| 4 | — | — | — | Not Occupied | — | — |

## M74D Window Motor - Driver (AXG)




2282932

### Connector Part Information

Harness Type: Driver Door
OEM Connector: 15504732
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F 0.64, 2.8 Kaizen Timer Series, Sealed (GY)

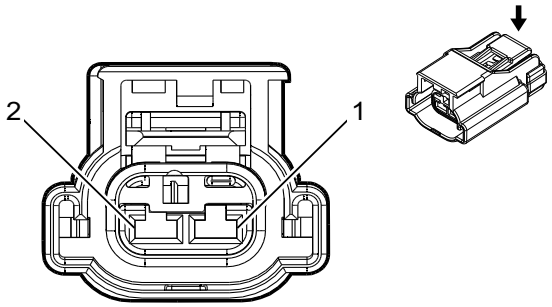
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M74D Window Motor - Driver (AXG)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | BK | 1150 | Ground | I | — |
| 2 | 2.5 | RD/BU | 1842 | Battery Positive Voltage | I | — |
| 3 | 0.35 | GN/WH | 3379 | Power Window Switch Driver Up Signal | I | — |
| 4 | 0.5 | GN/YE | 6134 | Local Interconnect Network Serial Data Bus 3 | I | — |
| 5 | 0.35 | GN | 3381 | Power Window Switch Driver Express Signal | I | — |
| 6 | 0.5 | PK | 745 | Left Front Door Ajar Switch Signal | I | — |
| 7 | 0.5 | GY | 3380 | Power Window Switch Driver Down Signal | I | — |

## M74LR Window Motor - Left Rear (AEQ)




2716333

### Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 13863838
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed (BK)

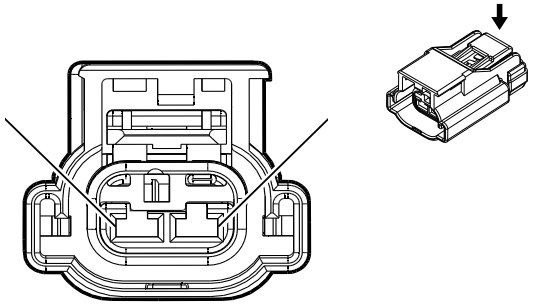
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M74LR Window Motor - Left Rear (AEQ)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2 | BU/VT | 668 | Power Window Motor Left Rear Up Control | I | — |
| 2 | 2 | YE/BU | 669 | Power Window Motor Left Rear Down Control | I | — |

## M74P Window Motor - Passenger (AED)



2716333

### Connector Part Information

Harness Type: Passenger Door
OEM Connector: 13863838
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed (BK)

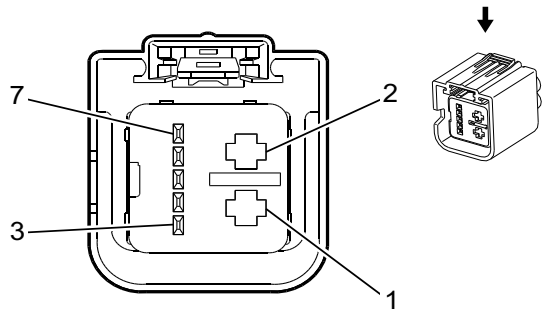
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M74P Window Motor - Passenger (AED)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GN/GY | 3387 | Power Window Motor Passenger Up Control | I | — |
| | 2 | GN/GY | 3387 | Power Window Motor Passenger Up Control | I | AED |
| 2 | 1.5 | YE/BU | 3388 | Power Window Motor Passenger Down Control | I | — |
| | 2 | YE/BU | 3388 | Power Window Motor Passenger Down Control | I | AED |

## M74P Window Motor - Passenger (AEF)




2282932

### Connector Part Information

Harness Type: Passenger Door
OEM Connector: 15504732
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F 0.64, 2.8 Kaizen Timer Series, Sealed (GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

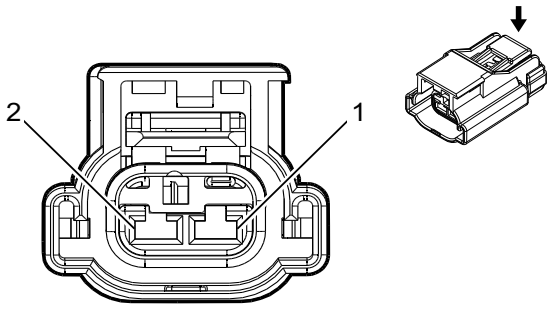
## M74P Window Motor - Passenger (AEF)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | BK | 1250 | Ground | I | — |
| 2 | 2.5 | RD/WH | 1340 | Battery Positive Voltage | I | — |
| 3 | 0.35 | YE/BK | 3384 | Power Window Switch Passenger Up Signal | I | — |
| 4 | 0.35 | GN/YE | 6134 | Local Interconnect Network Serial Data Bus 3 | I | — |
| 5 | 0.35 | VT/GY | 3386 | Power Window Switch Passenger Express Signal | I | — |
| 6 | 0.5 | GY | 746 | Right Front Door Ajar Switch Signal | I | — |

## M74P Window Motor - Passenger (AEF) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 7 | 0.5 | BN/YE | 3385 | Power Window Switch Passenger Down Signal | I | — |

## M74RR Window Motor - Right Rear (AEQ)




2716333

### Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 13863838
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed (BK)

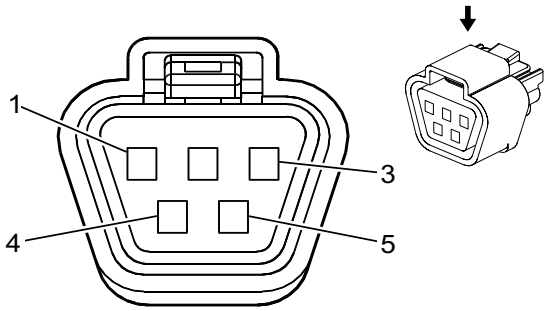
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M74RR Window Motor - Right Rear (AEQ)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2 | BU/GY | 670 | Power Window Motor Right Rear Up Control | I | — |
| 2 | 2 | GN/BK | 671 | Power Window Motor Right Rear Down Control | I | — |

## M75 Windshield Wiper Motor




1715213

### Connector Part Information

Harness Type: Body
OEM Connector: 15316488
Service Connector: 13587179
Description: 5-Way F 090 Series, Sealed (BK)

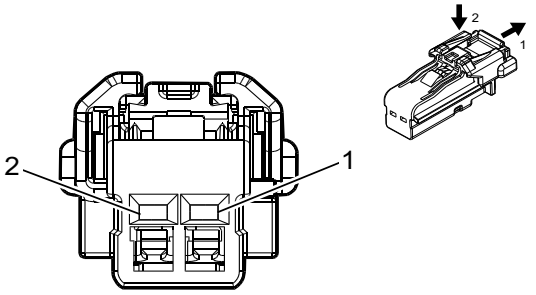
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M75 Windshield Wiper Motor

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2 | YE/BN | 95 | Windshield Wiper Motor Low Speed Control | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | BN/GN | 196 | Windshield Wiper Motor Park Switch Signal | I | — |
| 4 | 2 | WH | 92 | Windshield Wiper Motor High Speed Control | I | — |
| 5 | 2 | BK | 150 | Ground | I | — |

## M93 Key Capture Solenoid Actuator (-BTM)




4115691

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35026312
Service Connector: 19352066
Description: 2-Way F 1.2 Series (BK)

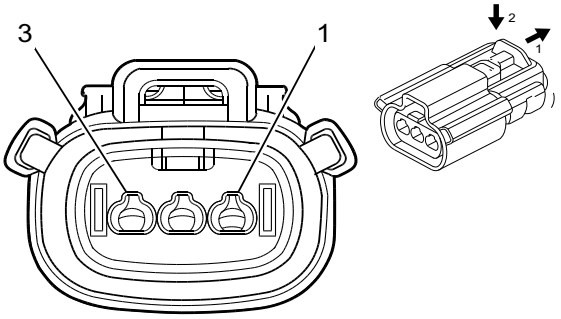
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M93 Key Capture Solenoid Actuator (-BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | VT/GY | 1630 | Steering Column Key Cylinder Lock Solenoid Control | I | — |
| 2 | 0.35 | BK | 1850 | Ground | I | — |

### M96A Active Grille Air Shutter 1 Actuator (VTI/WMI)




5095610

### Connector Part Information

Harness Type: Engine
OEM Connector: 35143007
Service Connector: 84719651
Description: 3-Way F 1.5 Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

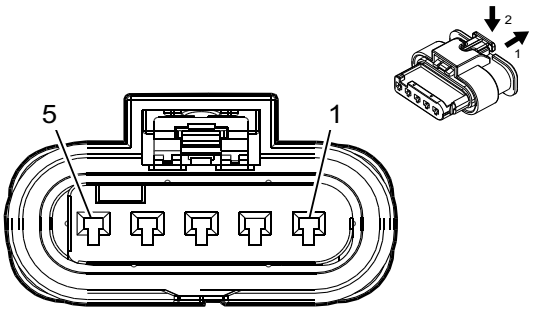
### M96A Active Grille Air Shutter 1 Actuator (VTI/WMI)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/BU | 5705 | Powertrain Main Relay Fused Control 6 | I | — |
| 2 | 0.5 | GN/VT | 4621 | Local Interconnect Network Serial Data Bus 21 | I | — |

## M96A Active Grille Air Shutter 1 Actuator (VTI/WMI) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 3 | 1 | BK | 4450 | Ground | I | — |

## M103 Turbocharger Vane Position Actuator (LM2)




3338689

### Connector Part Information

Harness Type: Engine
OEM Connector: 13943325
Service Connector: 19119351
Description: 5-Way F 1.2 MCON-LL Series, Sealed (BK)

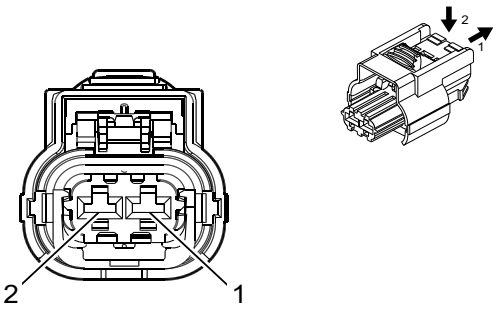
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M103 Turbocharger Vane Position Actuator (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | WH/BN | 1313 | Variable Geometry Turbocharger Position Sensor Motor Open Control | I | — |
| 2 | 0.5 | VT/YE | 5947 | Variable Nozzle Turbo Position Sensor Signal | I | — |
| 3 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |
| 4 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 5 | 0.75 | GY/BK | 1330 | Variable Geometry Turbocharger Position Sensor Motor Close Control | I | — |

## M104L Park Brake Actuator - Left




4992524

### Connector Part Information

Harness Type: Rear Axle
OEM Connector: 35050650
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 CTS Series, Sealed (BK)

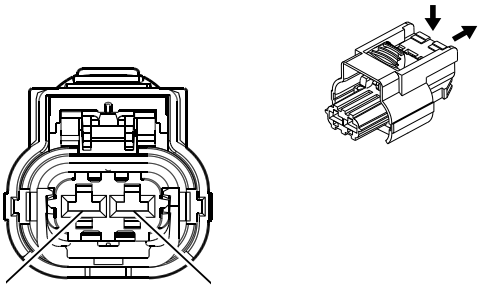
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M104L Park Brake Actuator - Left

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | GY/BK | 4369 | Park Brake Motor Low Reference Left Rear | I | — |
| 2 | 2.5 | WH | 2001 | Park Brake Motor Apply Left Rear Control | I | — |

## M104R Park Brake Actuator - Right



4992524

### Connector Part Information

Harness Type: Rear Axle
OEM Connector: 35050650
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 CTS Series, Sealed (BK)

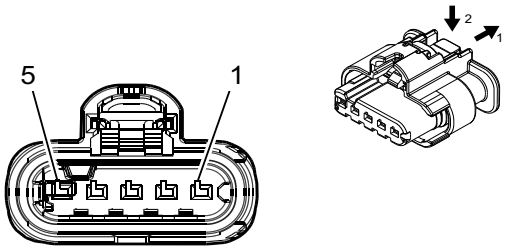
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M104R Park Brake Actuator - Right

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | GY | 4368 | Park Brake Motor Low Reference Right Rear | I | — |
| 2 | 2.5 | GN/VT | 1988 | Park Brake Motor Apply Right Rear Control | I | — |

## M106 Exhaust Flow Control Valve Actuator (LM2)




4997783

### Connector Part Information

Harness Type: Engine
OEM Connector: 35026727
Service Connector: 19371195
Description: 5-Way F 1.2 MCON-CB Series, Sealed (BK)

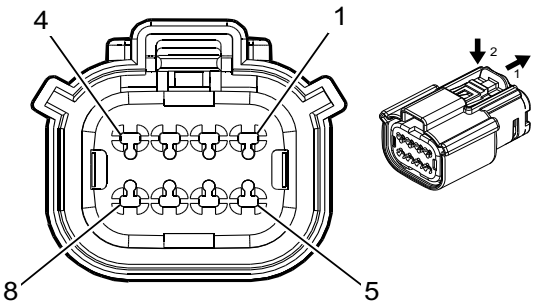
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M106 Exhaust Flow Control Valve Actuator (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 2 | 0.5 | BN/GN | 4305 | Exhaust Flapper Valve Control 1 | I | — |
| 3 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 4 | 0.75 | BN | 1421 | Exhaust Restrictor Motor Closed Control | I | — |
| 5 | 0.75 | YE/BN | 1420 | Exhaust Restrictor Motor Open Control | I | — |

## M125 Pickup Box Endgate Power Assist Actuator (QT6)




4846407

### Connector Part Information

Harness Type: Endgate
OEM Connector: 35037827
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 150 MX Series, Sealed (BK)

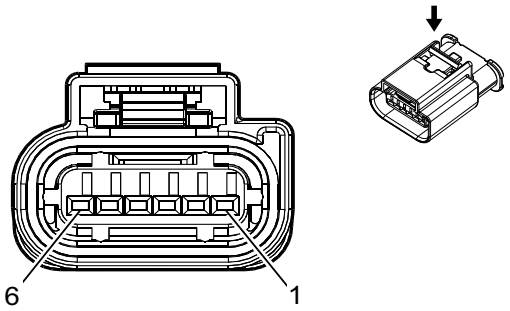
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M125 Pickup Box Endgate Power Assist Actuator (QT6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1 | BN/WH | 4690 | Rear Closure Open/Close Motor Close Control | I | — |
| 2 | 0.5 | GN | 1577 | Rear Closure Clutch Control | I | — |
| 3 | 0.5 | OG/WH | 1590 | Rear Closure Clutch Return | I | — |
| 4 | 0.5 | BN/RD | 4683 | Rear Closure Position Sensor Voltage Reference | I | — |
| 5 | 1 | WH | 4689 | Rear Closure Open/Close Motor Open Control | I | — |
| 6 | 0.35 | BN/YE | 4686 | Rear Closure Position Sensor Signal 2 | I | — |
| 7 | 0.35 | BK/GN | 4687 | Rear Closure Position Sensor Low Reference | I | — |
| 8 | 0.5 | BU/WH | 4685 | Rear Closure Position Sensor Signal 1 | I | — |

## M128 Turbocharger Wastegate Actuator (L3B)




3747579

### Connector Part Information

Harness Type: Engine
OEM Connector: 33220833
Service Connector: 19352911
Description: 6-Way F 1.2 MCON Series, Sealed (BK)

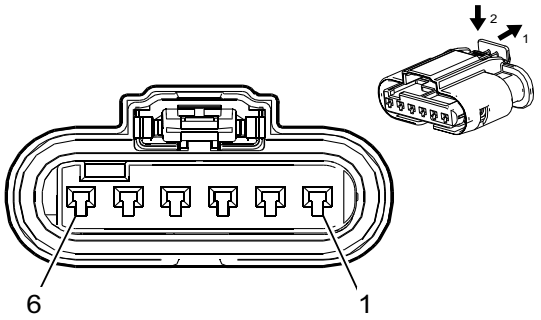
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M128 Turbocharger Wastegate Actuator (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 2 | 0.5 | WH | 2590 | Turbo Charger Wastegate Motor Feedback Signal | I | — |
| 3 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 4 | 0.75 | WH/BU | 2592 | Turbo Charger Wastegate Motor Close Control | I | — |
| 5 | 0.75 | WH/BN | 2591 | Turbo Charger Wastegate Motor Open Control | I | — |
| 6 | — | — | — | Not Occupied | — | — |

## M129A Intake Camshaft Profile Actuator 1 (L3B)




3960142

### Connector Part Information

Harness Type: Engine
OEM Connector: 33230495
Service Connector: 19368560
Description: 6-Way F 1.2 MCON-LL Series, Sealed (BK)

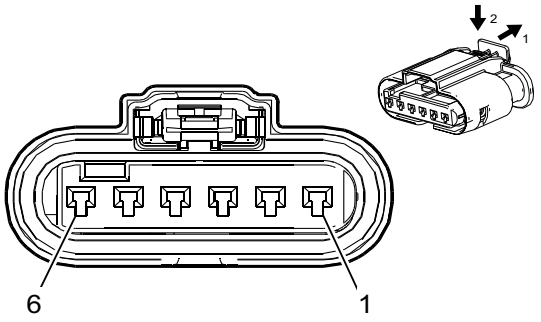
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M129A Intake Camshaft Profile Actuator 1 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/GY | 3615 | Step Cam A Control | I | — |
| 2 | 0.5 | BU/WH | 3589 | Camshaft Stepper Position Sensor 1 Signal | I | — |
| 3 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 4 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 5 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | — |
| 6 | 0.5 | GN/BK | 3616 | Step Cam B Control | I | — |

## M129B Intake Camshaft Profile Actuator 2 (L3B)




3960142

### Connector Part Information

Harness Type: Engine
OEM Connector: 33230495
Service Connector: 19368560
Description: 6-Way F 1.2 MCON-LL Series, Sealed (BK)

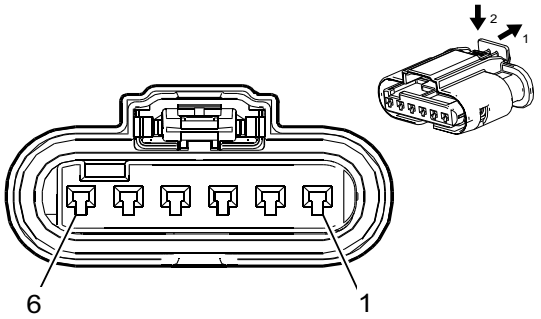
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M129B Intake Camshaft Profile Actuator 2 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU | 3584 | Camshaft Stepper A Control | I | — |
| 2 | 0.5 | GN/WH | 3592 | Camshaft Stepper Position Sensor 2 Signal | I | — |
| 3 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 4 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 5 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | — |
| 6 | 0.5 | GN | 3585 | Camshaft Stepper B Control | I | — |

## M129C Intake Camshaft Profile Actuator 3 (L3B)




3960142

### Connector Part Information

Harness Type: Engine
OEM Connector: 33230495
Service Connector: 19368560
Description: 6-Way F 1.2 MCON-LL Series, Sealed (BK)

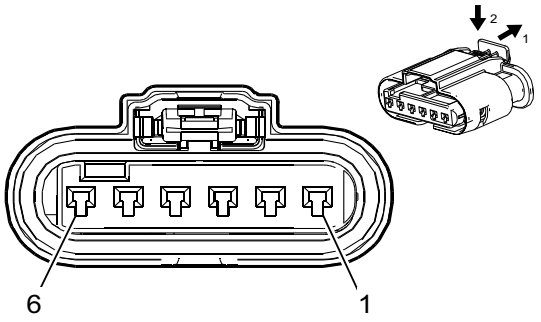
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M129C Intake Camshaft Profile Actuator 3 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/BU | 3587 | Camshaft Stepper D Control | I | — |
| 2 | 0.5 | WH | 924 | — | I | — |
| 3 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 4 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 5 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | — |
| 6 | 0.5 | GY | 3586 | Camshaft Stepper C Control | I | — |

## M129D Intake Camshaft Profile Actuator 4 (L3B)




3960142

### Connector Part Information

Harness Type: Engine
OEM Connector: 33230495
Service Connector: 19368560
Description: 6-Way F 1.2 MCON-LL Series, Sealed (BK)

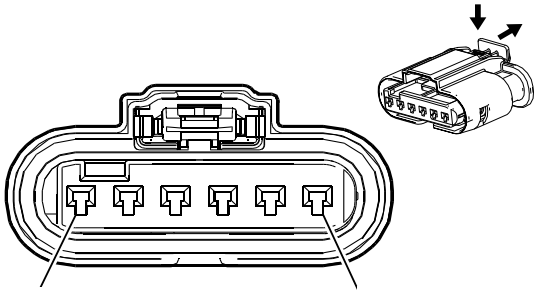
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### M129D Intake Camshaft Profile Actuator 4 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/GN | 927 | — | I | — |
| 2 | 0.5 | BU/BK | 928 | — | I | — |
| 3 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 4 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 5 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | — |
| 6 | 0.5 | BU | 926 | — | I | — |

## M130A Exhaust Camshaft Profile Actuator 1 (L3B)



3960142

### Connector Part Information

Harness Type: Engine
OEM Connector: 33230495
Service Connector: 19368560
Description: 6-Way F 1.2 MCON-LL Series, Sealed (BK)

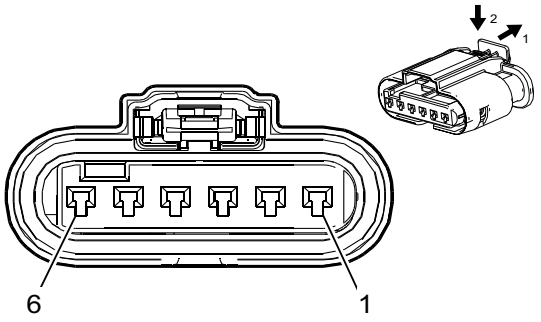
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M130A Exhaust Camshaft Profile Actuator 1 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/BN | 6262 | Camshaft CAM Z Signal | I | — |
| 2 | 0.5 | GY/BN | 933 | — | I | — |
| 3 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 4 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 5 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | — |
| 6 | 0.5 | GN/BN | 6261 | Camshaft CAM Z Control | I | — |

## M130B Exhaust Camshaft Profile Actuator 2 (L3B)




3960142

### Connector Part Information

Harness Type: Engine
OEM Connector: 33230495
Service Connector: 19368560
Description: 6-Way F 1.2 MCON-LL Series, Sealed (BK)

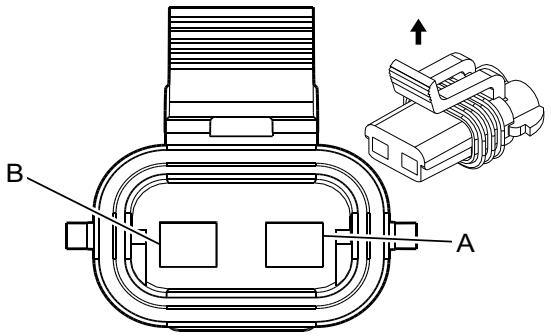
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## M130B Exhaust Camshaft Profile Actuator 2 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE/VT | 6265 | Camshaft CAM W Signal | I | — |
| 2 | 0.5 | BU | 932 | — | I | — |
| 3 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 4 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 5 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | — |
| 6 | 0.5 | VT/BK | 6264 | Camshaft CAM X Signal | I | — |

## P3 Backup Alarm




68721

### Connector Part Information

Harness Type: Trailer Jumper
OEM Connector: 15300027
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 280 Metri-Pack Series, Sealed (BK)

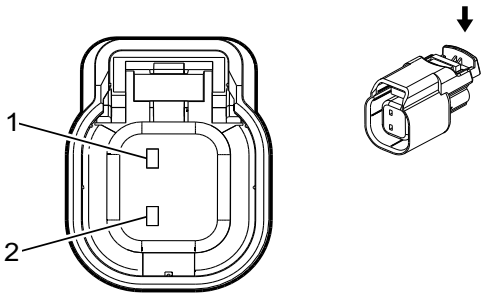
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## P3 Backup Alarm

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 1 | GN | 1624 | Trailer Backup Lamp Control | I | — |
| B | 1 | WH | 22 | Trailer Ground | I | — |

## P12 Horn (Crew Cab)




2792100

### Connector Part Information

Harness Type: Body
OEM Connector: 13828712
Service Connector: 19352068
Description: 2-Way F 1.5 Series, Sealed (BK)

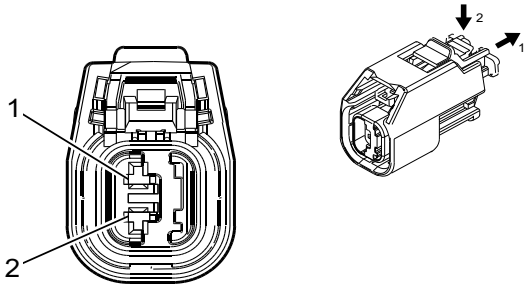
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### P12 Horn (Crew Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 250 | Ground | I | — |
| 2 | 0.75 | BN/GY | 29 | Horn Control | I | — |

## P12 Horn (Extended Cab)




4889830

### Connector Part Information

Harness Type: Body
OEM Connector: 33164011
Service Connector: 13586115
Description: 2-Way F 1.5 OCS Series, Sealed (BK)

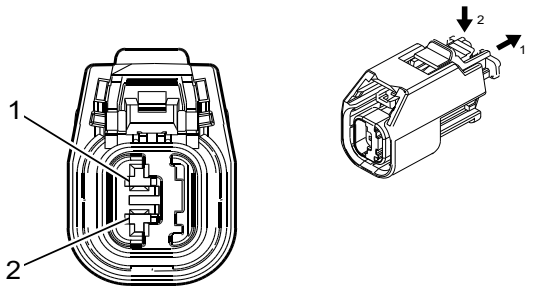
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## P12 Horn (Extended Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 250 | Ground | I | — |
| 2 | 0.75 | BN/GY | 29 | Horn Control | I | — |

## P12 Horn (Regular Cab)




4889830

### Connector Part Information

Harness Type: Body
OEM Connector: 33164011
Service Connector: 13586115
Description: 2-Way F 1.5 OCS Series, Sealed (BK)

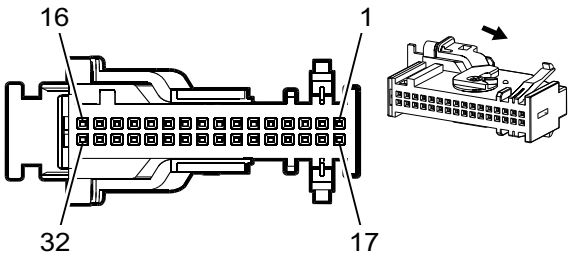
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## P12 Horn (Regular Cab)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 250 | Ground | I | — |
| 2 | 0.75 | BN/GY | 29 | Horn Control | I | — |

## P16 Instrument Cluster X1




627214

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12198036
Service Connector: 13511333
Description: 32-Way F 0.64 Micro-Quadlock Series (BK with GY Cover)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 144969-1 | Lear 25 | E | 2 |

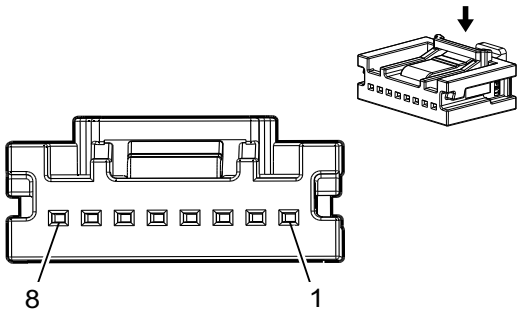
### P16 Instrument Cluster X1

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BN/BU | 7216 | Ethernet Bus 7 (-) | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | GY/GN | 1102 | Low Speed GMLAN Serial Data #2 | I | — |
| 4 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.35 | RD/GY | 2840 | Battery Positive Voltage | I | — |
| 8 | 0.35 | VT/BK | 1639 | Run/Crank Ignition 1 Voltage | I | — |
| 9 - 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | GY/BK | 4787 | Day Night LED Control | I | — |
| 12 | 0.35 | GY/YE | 3885 | Forward Collision Alert LED Control | I | — |
| 13 | 0.35 | BU/GN | 1304 | High Speed GMLAN Serial Data (+)9 | I | — |
| 14 | 0.35 | WH/GN | 1305 | High Speed GMLAN Serial Data (-)9 | I | — |
| 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.35 | BN/WH | 419 | Check Engine Indicator Control | I | — |
| 17 | 0.35 | GY/BU | 7217 | Ethernet Bus 7 (+) | I | — |
| 18 | — | — | — | Not Occupied | — | — |
| 19 | 0.5 | BK/WH | 1851 | Signal Ground | I | — |
| 20 | 0.35 | GN/BK | 3894 | Local Interconnect Network Serial Data Bus 12 | I | — |
| 21 - 22 | — | — | — | Not Occupied | — | — |
| 23 | 0.35 | WH/BU | 5986 | Serial Data Communication Enable | I | — |
| 24 | 0.35 | VT | 185 | Low Washer Fluid Indicator Control | I | — |
| 25 - 28 | — | — | — | Not Occupied | — | — |

## P16 Instrument Cluster X1 (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 29 | 0.35 | BU/GN | 1304 | High Speed GMLAN Serial Data (+)9 | I | — |
| 30 | 0.35 | WH/GN | 1305 | High Speed GMLAN Serial Data (-)9 | I | — |
| 31 | — | — | — | Not Occupied | — | — |
| 32 | 0.35 | GN/BN | 507 | Wait To Start Indicator Control | I | — |

## P17 Info Display Module X1 (IOR)




4017639

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33227522
Service Connector: 19354223
Description: 8-Way F Mini 50 Series (BK)

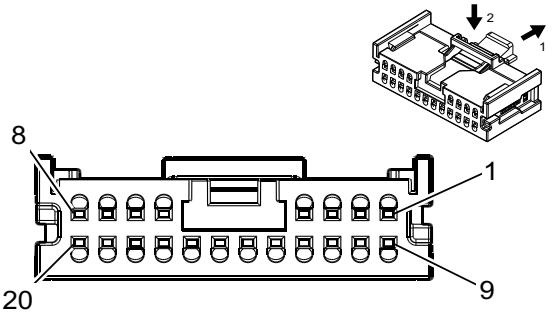
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## P17 Info Display Module X1 (IOR)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | RD/WH | 1340 | Battery Positive Voltage | I | — |
| 2 - 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.35 | BK/WH | 2751 | Signal Ground | I | — |

## P17 Info Display Module X1 (IOS/IOT)




4231339

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33167777
Service Connector: 13596105
Description: 20-Way F Mini 50 Series (BK)

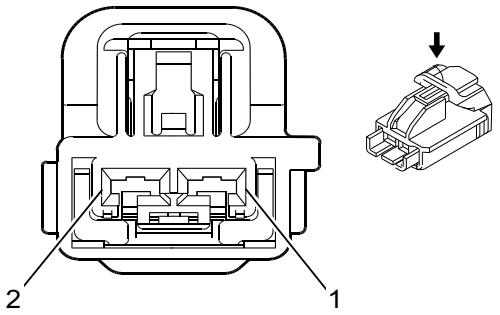
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## P17 Info Display Module X1 (IOS/IOT)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BU/RD | 2807 | Radio Keypad Voltage Reference | I | — |
| 2 | 0.35 | GY/BU | 2803 | Radio Display Touch Interrupt Request Signal | I | — |
| 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.35 | BU | 4315 | Radio Volume Up Signal | I | — |
| 5 | 0.35 | GY/BN | 4314 | Radio Volume Down Signal | I | — |
| 6 | 0.35 | BN/WH | 2809 | Radio Keypad Power Signal | I | — |
| 7 | 0.35 | VT/WH | 2810 | Radio Keypad Button Signal | I | — |
| 8 | 0.35 | BU/GY | 2808 | Radio Keypad Dimming Control | I | — |
| 9 | 0.35 | BU/GN | 2813 | Radio Display Backlight Dimming Control | I | — |
| 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | BK/GN | 2804 | Radio Display Backlight Low Reference | I | — |
| 12 | 0.35 | BU/RD | 2807 | Radio Keypad Voltage Reference | I | — |
| 13 | — | — | — | Not Occupied | — | — |
| 14 | 0.35 | BU | 4315 | Radio Volume Up Signal | I | — |
| 15 | 0.35 | GY/BN | 4314 | Radio Volume Down Signal | I | — |
| 16 | 0.35 | BN/WH | 2809 | Radio Keypad Power Signal | I | — |
| 17 | 0.35 | VT/WH | 2810 | Radio Keypad Button Signal | I | — |
| 18 | 0.35 | BU/GY | 2808 | Radio Keypad Dimming Control | I | — |
| 19 | 0.35 | GY/VT | 3363 | Navigation Display Dimming Control | I | — |
| 20 | 0.35 | BK/YE | 2806 | Radio Keypad Low Reference | I | — |

## P19AC Speaker - Subwoofer (UQA)




1803142

### Connector Part Information

Harness Type: Body
OEM Connector: 10846819
Service Connector: 19367562
Description: 2-Way F YESC Kaizen Series (L-GY)

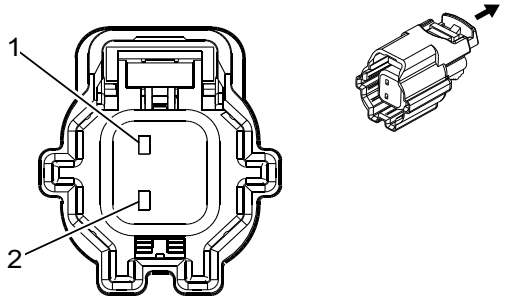
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### P19AC Speaker - Subwoofer (UQA)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | GN/BK | 1794 | Left/Rear Subwoofer Speaker (-) Low Reference | I | — |
| 2 | 2.5 | BU/GY | 346 | Left/Rear Subwoofer Speaker Control (+) | I | — |

## P19AG Speaker - Left Front Door




4223204

### Connector Part Information

Harness Type: Driver Door
OEM Connector: 15548606
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series (BK)

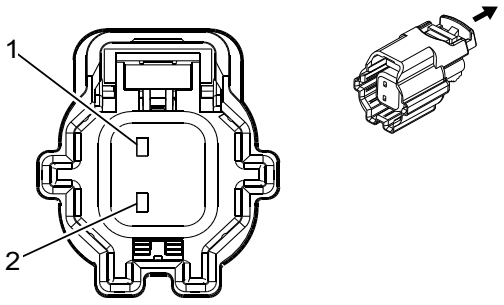
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## P19AG Speaker - Left Front Door

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BN/BU | 118 | Left Front Speaker Signal (-) 1 | I | — |
| 2 | 0.75 | BU | 201 | Left Front Speaker Control (+) 1 | I | — |

## P19AH Speaker - Right Front Door (U95/UQA/UQF)




4223204

### Connector Part Information

Harness Type: Passenger Door
OEM Connector: 15548606
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series (BK)

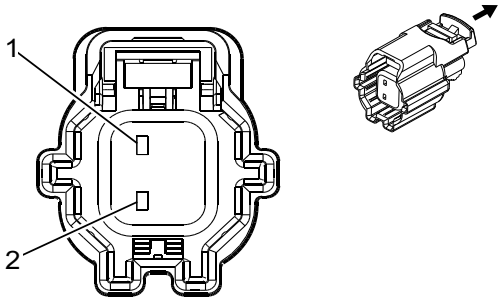
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## P19AH Speaker - Right Front Door (U95/UQA/UQF)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | YE/BK | 117 | Right Front Speaker Signal (-) 1 | I | — |
| 2 | 0.75 | YE | 200 | Right Front Speaker Control (+) 1 | I | — |

## P19AL Speaker - Left Rear Door (UQA/UQF)




4223204

### Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 15548606
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series (BK)

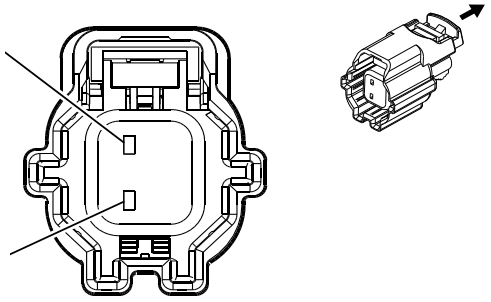
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### P19AL Speaker - Left Rear Door (UQA/UQF)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/BK | 116 | Left Rear Speaker Signal (-) | I | — |
| 2 | 0.5 | GN | 199 | Left Rear Speaker Control (+) | I | — |

## P19AM Speaker - Right Rear Door (UQA/UQF)



4223204

### Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 15548606
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series (BK)

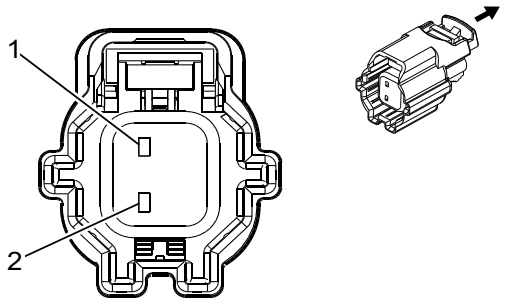
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## P19AM Speaker - Right Rear Door (UQA/UQF)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU/BK | 115 | Right Rear Speaker Signal (-) | I | — |
| 2 | 0.5 | WH | 46 | Right Rear Speaker Control (+) | I | — |

## P19AM Speaker - Right Rear Door (UQF/UQA)




4223204

### Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 15548606
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series (BK)

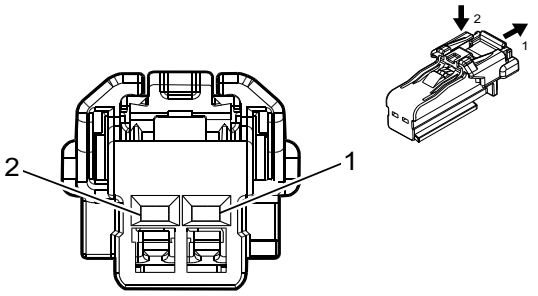
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## P19AM Speaker - Right Rear Door (UQF/UQA)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU/BK | 115 | Right Rear Speaker Signal (-) | I | — |
| 2 | 0.5 | WH | 46 | Right Rear Speaker Control (+) | I | — |

## P19J Speaker - Left Instrument Panel (UQA)




4373379

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35034269
Service Connector: 19369632
Description: 2-Way F 1.2 Series (GY)

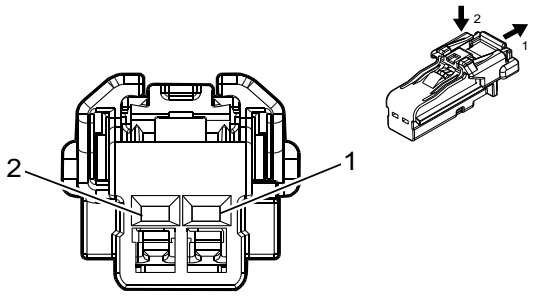
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### P19J Speaker - Left Instrument Panel (UQA)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BU/BN | 1957 | Left Front Midrange Speaker (-) Low Reference | I | — |
| 2 | 0.75 | BU/VT | 1857 | Left Front Midrange Speaker Control (+) | I | — |

## P19J Speaker - Left Instrument Panel (UQF/U95)




4115691

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35026312
Service Connector: 19352066
Description: 2-Way F 1.2 Series (BK)

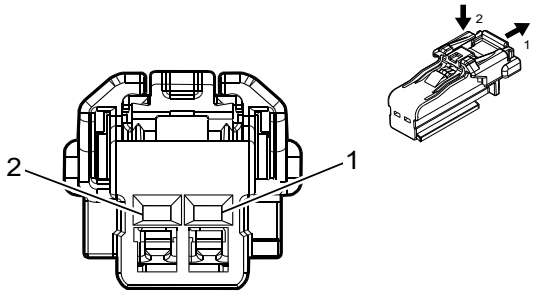
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## P19J Speaker - Left Instrument Panel (UQF/U95)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BN/BU | 118 | Left Front Speaker Signal (-) 1 | I | — |
| 2 | 0.75 | BU | 201 | Left Front Speaker Control (+) 1 | I | — |

## P19W Speaker - Right Instrument Panel (UQA)




4373379

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35034269
Service Connector: 19369632
Description: 2-Way F 1.2 Series (GY)

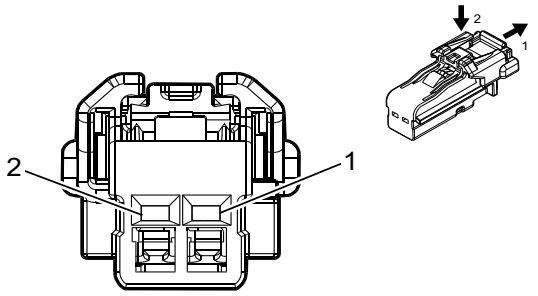
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## P19W Speaker - Right Instrument Panel (UQA)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BN/BK | 1953 | Right Front Midrange Speaker (-) Low Reference | I | — |
| 2 | 0.75 | WH/YE | 1853 | Right Front Midrange Speaker Control (+) | I | — |

## P19W Speaker - Right Instrument Panel (UQF/U95)




4115691

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35026312
Service Connector: 19352066
Description: 2-Way F 1.2 Series (BK)

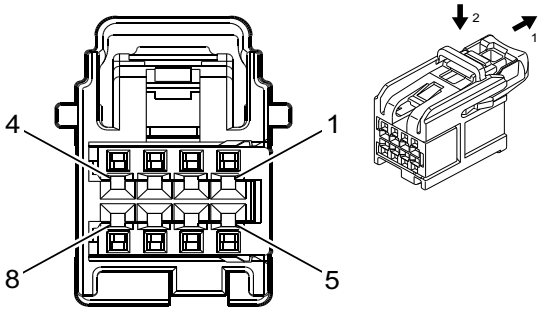
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### P19W Speaker - Right Instrument Panel (UQF/U95)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | YE/BK | 117 | Right Front Speaker Signal (-) 1 | I | — |
| 2 | 0.75 | YE | 200 | Right Front Speaker Control (+) 1 | I | — |

## P29 Head-Up Display X1 (UV6)




4935776

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15526972
Service Connector: 19370429
Description: 8-Way F 0.64 OCS Series (BK)

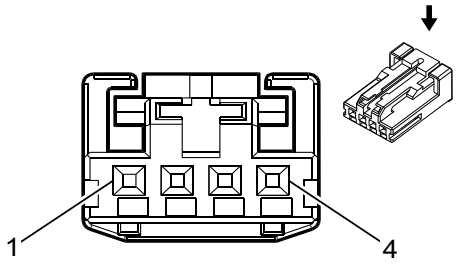
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## P29 Head-Up Display X1 (UV6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GN/BK | 3894 | Local Interconnect Network Serial Data Bus 12 | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | YE/WH | 622 | Head Up Display Switch Signal | I | — |
| 4 | 0.35 | BK/WH | 1851 | Signal Ground | I | — |
| 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.35 | RD/WH | 1340 | Battery Positive Voltage | I | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.35 | BK/GN | 5699 | Head Up Display Switch Low Reference | I | — |

## P43 Collision Alert Indicators ((UEU/UHX)-UV6)




2717162

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13969166
Service Connector: 13587297
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

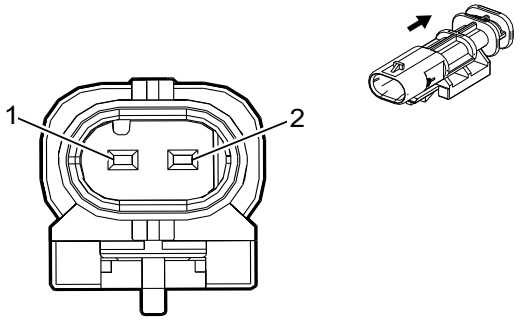
## P43 Collision Alert Indicators ((UEU/UHX)-UV6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | VT/BK | 1639 | Run/Crank Ignition 1 Voltage | I | — |
| 2 | 0.35 | GY/YE | 3885 | Forward Collision Alert LED Control | I | — |

## P43 Collision Alert Indicators ((UEU/UHX)-UV6) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 3 | 0.35 | GY/BK | 4787 | Day Night LED Control | I | — |
| 4 | 0.5 | BK/WH | 1851 | Signal Ground | I | — |

## P45LR Seat Haptic Movement Motor - Driver Left Rear (HS1)




2474755

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 2203314-1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 Multilock Series, Sealed (BK)

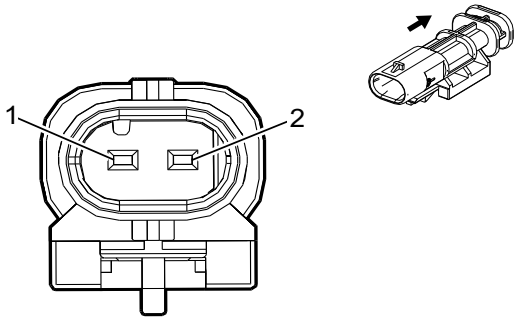
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## P45LR Seat Haptic Movement Motor - Driver Left Rear (HS1)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK | 1150 | Ground | I | — |
| 2 | 0.5 | YE/BN | 3037 | Left Rear Haptic Seat Motor Control | I | — |

## P45RR Seat Haptic Movement Motor - Driver Right Rear (HS1)




2474755

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 2203314-1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 Multilock Series, Sealed (BK)

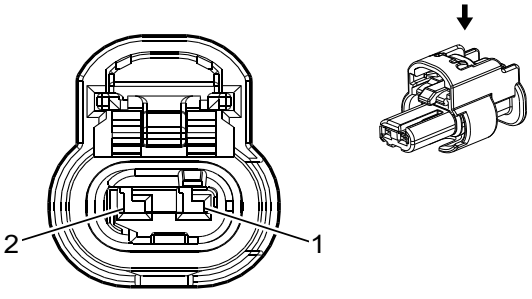
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### P45RR Seat Haptic Movement Motor - Driver Right Rear (HS1)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK | 1150 | Ground | I | — |
| 2 | 0.5 | BN | 3038 | Right Rear Haptic Seat Motor Control | I | — |

## Q2 A/C Compressor Clutch




4649903

### Connector Part Information

Harness Type: Engine
OEM Connector: 33327048
Service Connector: 19366858
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

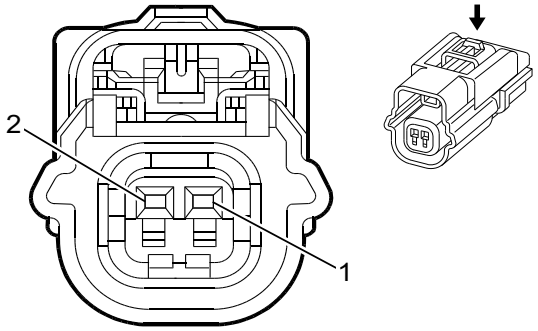
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q2 A/C Compressor Clutch

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1 | BK | 4450 | Ground | I | C4P/C67 |
| | 0.5 | BK | 4450 | Ground | I | CJ2 |
| 2 | 0.5 | BN/GN | 59 | A/C Compressor Clutch Control | I | — |

## Q6 Camshaft Position Actuator Solenoid Valve (L82/L84/L87)




1664592

### Connector Part Information

Harness Type: Camshaft Position Sensor Jumper
OEM Connector: 13528494
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Kaizen Series, Sealed (BK)

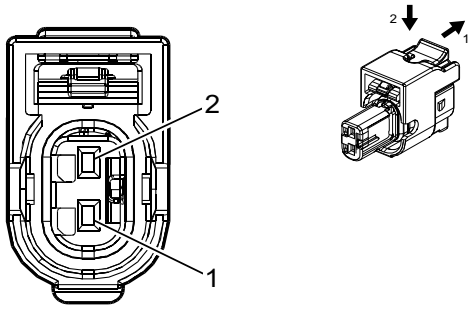
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q6 Camshaft Position Actuator Solenoid Valve (L82/L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/BN | 6753 | Cam Phaser W Low Reference | I | — |
| 2 | 0.5 | VT/BN | 5284 | Camshaft Phaser Intake Solenoid 1 | I | — |

## Q6E Camshaft Position Actuator Solenoid Valve - Exhaust (L3B)




4994585

### Connector Part Information

Harness Type: Engine
OEM Connector: 33386202
Service Connector: 19371204
Description: 2-Way F 1.2 MCP Series, Sealed (BK)

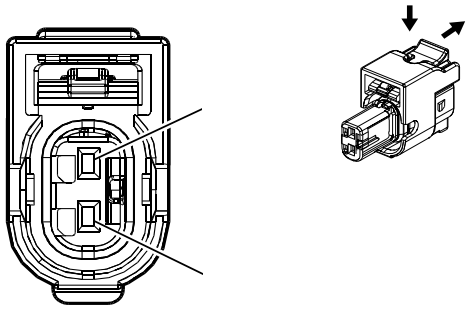
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q6E Camshaft Position Actuator Solenoid Valve - Exhaust (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY/BU | 5282 | Camshaft Phaser Exhaust Solenoid 1 | I | — |
| 2 | 0.5 | BK/VT | 6754 | Cam Phaser X Low Reference | I | — |

## Q6F Camshaft Position Actuator Solenoid Valve - Intake (L3B)



4994585

### Connector Part Information

Harness Type: Engine
OEM Connector: 33386202
Service Connector: 19371204
Description: 2-Way F 1.2 MCP Series, Sealed (BK)

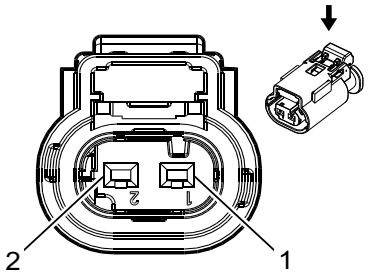
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q6F Camshaft Position Actuator Solenoid Valve - Intake (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/BN | 5284 | Camshaft Phaser Intake Solenoid 1 | I | — |
| 2 | 0.5 | BK/BN | 6753 | Cam Phaser W Low Reference | I | — |

## Q12 Evaporative Emission Purge Solenoid Valve (L3B/L82/L84/L87/L3B)




2717066

### Connector Part Information

Harness Type: Engine
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

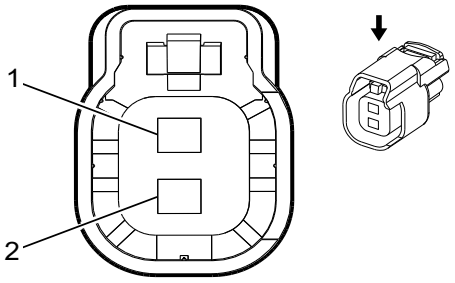
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q12 Evaporative Emission Purge Solenoid Valve (L3B/L82/L84/L87/L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | L3B |
| | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | L82/L84/L87 |
| 2 | 0.75 | GN/BU | 428 | EVAP Canister Purge Solenoid Control | I | L3B |
| | 0.5 | GN/BU | 428 | EVAP Canister Purge Solenoid Control | I | L82/L84/L87 |
| | 0.5 | GN/BU | 428 | EVAP Canister Purge Solenoid Control | I | LV3 |

## Q13 Evaporative Emission Vent Solenoid Valve (L3B/L82/L84/L87/L3B)




2422378

### Connector Part Information

Harness Type: Chassis
OEM Connector: 13771883
Service Connector: 13579002
Description: 2-Way F 1.5 Series, Sealed (BK)

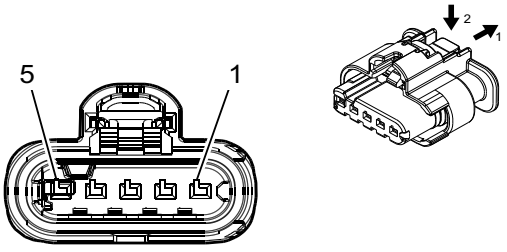
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q13 Evaporative Emission Vent Solenoid Valve (L3B/L82/L84/L87/L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH | 1310 | EVAP Canister Vent Solenoid Control | I | — |
| 2 | 0.5 | RD/WH | 2040 | Battery Positive Voltage | I | — |

## Q14A Exhaust Gas Recirculation Valve 1 (LM2)




4997783

### Connector Part Information

Harness Type: Engine
OEM Connector: 35026727
Service Connector: 19371195
Description: 5-Way F 1.2 MCON-CB Series, Sealed (BK)

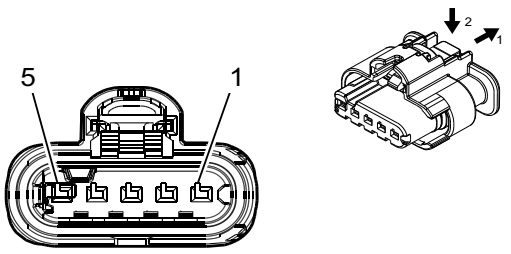
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q14A Exhaust Gas Recirculation Valve 1 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |
| 2 | 0.5 | BN/WH | 5763 | Exhaust Gas Recirculation Valve Sensor Signal | I | — |
| 3 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 4 | 0.75 | WH/VT | 5764 | Exhaust Gas Recirculation Valve Motor High Signal | I | — |
| 5 | 0.75 | VT/BK | 5746 | Exhaust Gas Recirculation Valve Motor Low Signal | I | — |

## Q14B Exhaust Gas Recirculation Valve 2 (LM2)




4997783

### Connector Part Information

Harness Type: Engine
OEM Connector: 35026727
Service Connector: 19371195
Description: 5-Way F 1.2 MCON-CB Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

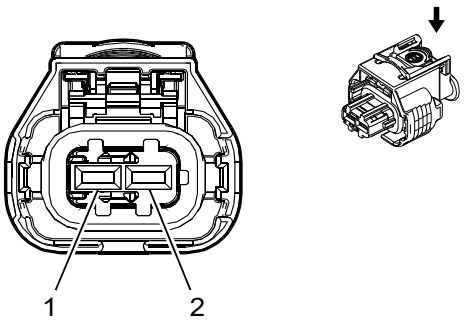
## Q14B Exhaust Gas Recirculation Valve 2 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/YE | 548 | Engine Control Sensors Low Reference (1) | I | — |
| 2 | 0.5 | BU/GN | 4012 | Low Pressure Exhaust Gas Recirculation Actuator Position Signal | I | — |
| 3 | 0.5 | BU/RD | 460 | Engine Control Sensors 5 Volt Reference (1) | I | — |

## Q14B Exhaust Gas Recirculation Valve 2 (LM2) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 4 | 0.75 | BU/WH | 4014 | Low Pressure Exhaust Gas Recirculation Actuator Control Open | I | — |
| 5 | 0.75 | BU/BN | 4013 | Low Pressure Exhaust Gas Recirculation Actuator Control Close | I | — |

## Q17A Fuel Injector 1 (LM2)




2845578

### Connector Part Information

Harness Type: Fuel Injector
OEM Connector: 1928405715
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed (BK)

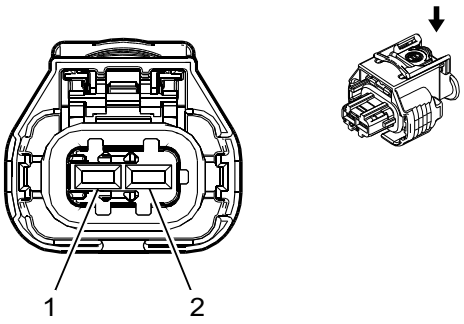
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q17A Fuel Injector 1 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | BN/WH | 4901 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1 | I | — |
| 2 | 1.5 | BN | 4801 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 1 | I | — |

## Q17B Fuel Injector 2 (LM2)




2845578

### Connector Part Information

Harness Type: Fuel Injector
OEM Connector: 1928405715
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed (BK)

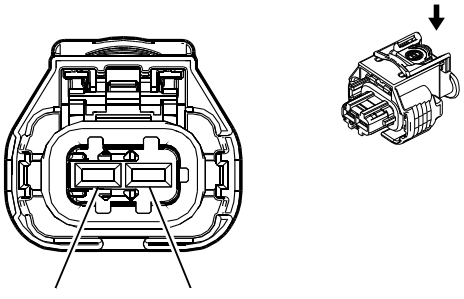
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q17B Fuel Injector 2 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | BU/GY | 4902 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2 | I | — |
| 2 | 1.5 | BU | 4802 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 2 | I | — |

## Q17C Fuel Injector 3 (LM2)



2845578

### Connector Part Information

Harness Type: Fuel Injector
OEM Connector: 1928405715

Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed (BK)

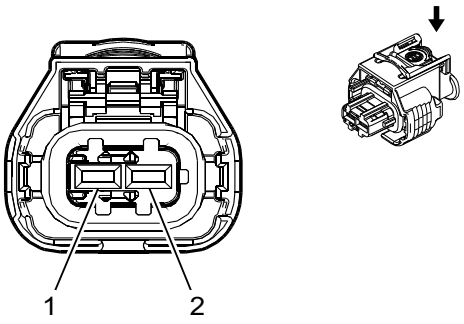
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q17C Fuel Injector 3 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GN/GY | 4903 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3 | I | — |
| 2 | 1.5 | GN | 4803 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 3 | I | — |

## Q17D Fuel Injector 4 (LM2)




2845578

### Connector Part Information

Harness Type: Fuel Injector
OEM Connector: 1928405715
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed (BK)

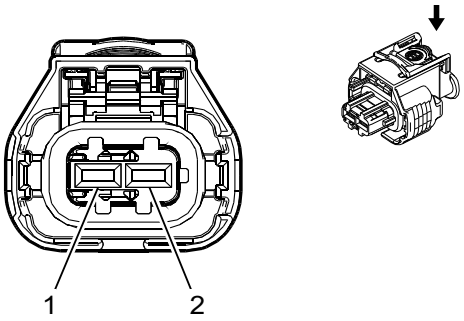
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q17D Fuel Injector 4 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | BU/WH | 4904 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4 | I | — |
| 2 | 1.5 | GY/BU | 4804 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 4 | I | — |

## Q17E Fuel Injector 5 (LM2)




2845578

### Connector Part Information

Harness Type: Fuel Injector
OEM Connector: 1928405715
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed (BK)

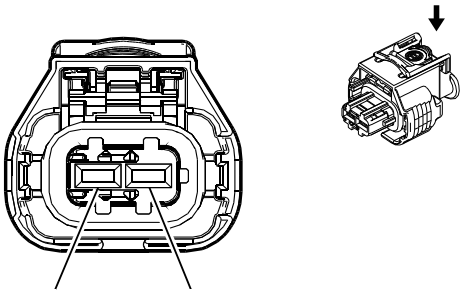
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q17E Fuel Injector 5 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | GN/WH | 4905 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5 | I | — |
| 2 | 1.5 | WH/GN | 4805 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 5 | I | — |

## Q17F Fuel Injector 6 (LM2)



2845578

### Connector Part Information

Harness Type: Fuel Injector
OEM Connector: 1928405715
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed (BK)

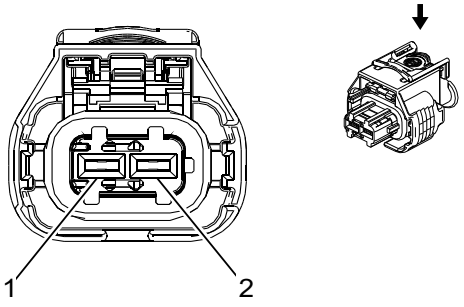
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q17F Fuel Injector 6 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1.5 | VT/GY | 4906 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6 | I | — |
| 2 | 1.5 | VT/GN | 4806 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 6 | I | — |

### Q18A Fuel Pressure Regulator 1 (LM2)




2577394

### Connector Part Information

Harness Type: Engine
OEM Connector: 13930085
Service Connector: 13384371
Description: 2-Way F 2.8 Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

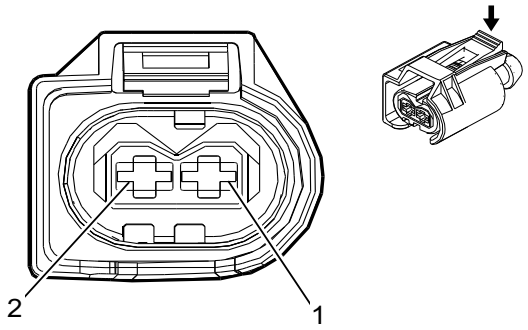
### Q18A Fuel Pressure Regulator 1 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | YE/VT | 7245 | High Pressure Fuel Pump Low Enable | I | — |

## Q18A Fuel Pressure Regulator 1 (LM2) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 2 | 0.75 | GY/BN | 7244 | High Pressure Fuel Pump High Side Supply | I | — |

## Q18B Fuel Pressure Regulator 2 (LM2)




5095463

### Connector Part Information

Harness Type: Engine
OEM Connector: 33163309
Service Connector: 84616656
Description: 2-Way F 2.8 Series, Sealed (BK)

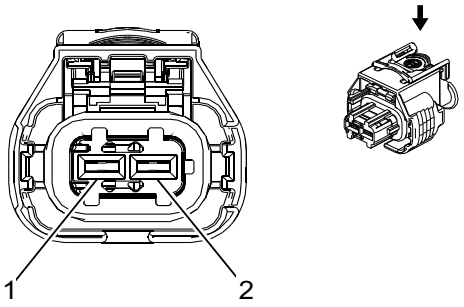
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q18B Fuel Pressure Regulator 2 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK/YE | 2834 | Fuel Rail Pressure Solenoid Low Reference | I | — |
| 2 | 0.75 | BU/WH | 2530 | Fuel Rail Pressure Solenoid Control | I | — |

## Q18C Fuel Pressure Regulator 3 (LM2)




2577394

### Connector Part Information

Harness Type: Engine
OEM Connector: 13930085
Service Connector: 13384371
Description: 2-Way F 2.8 Series, Sealed (BK)

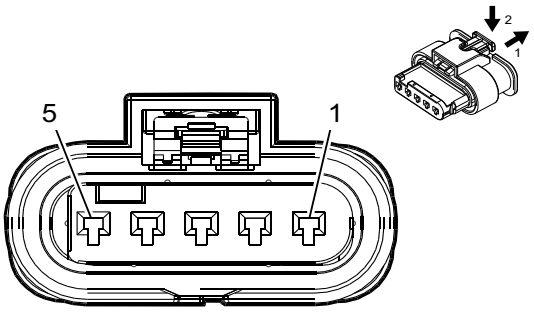
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q18C Fuel Pressure Regulator 3 (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 1 | YE/VT | 2420 | Fuel High Pressure Pump Low Enable | I | — |
| 2 | 1 | GY/BN | 2419 | Fuel High Pressure Pump High Side Supply | I | — |

## Q22 Intake Manifold Tuning Solenoid Valve (LM2)




3338689

### Connector Part Information

Harness Type: Engine
OEM Connector: 13943325
Service Connector: 19119351
Description: 5-Way F 1.2 MCON-LL Series, Sealed (BK)

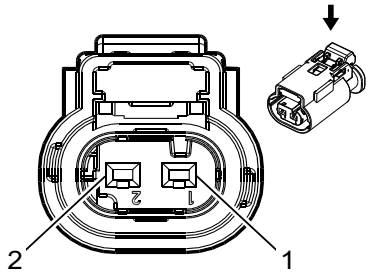
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q22 Intake Manifold Tuning Solenoid Valve (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |
| 2 | 0.5 | GN/GY | 7316 | Variable Swirl Valve PWM Control Signal | I | — |
| 3 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |
| 4 | 0.75 | BK/BU | 1408 | Variable Swirl Valve Close Control | I | — |
| 5 | 0.75 | BK/GN | 1389 | Variable Swirl Valve Open Control | I | — |

## Q37LF Shock Absorber Actuator - Left Front (Z45)




2717066

### Connector Part Information

Harness Type: Electronic Suspension Strut Extension
OEM Connector: 10010337
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

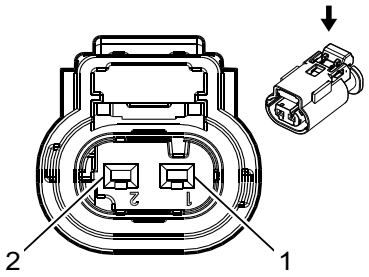
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q37LF Shock Absorber Actuator - Left Front (Z45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BU/WH | 1107 | Left Front Damping Servo Control | I | — |
| 2 | 0.75 | GY | 1113 | Left Front Damping Servo Control | I | — |

## Q37RF Shock Absorber Actuator - Right Front (Z45)




2717066

### Connector Part Information

Harness Type: Electronic Suspension Strut Extension
OEM Connector: 10010337
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

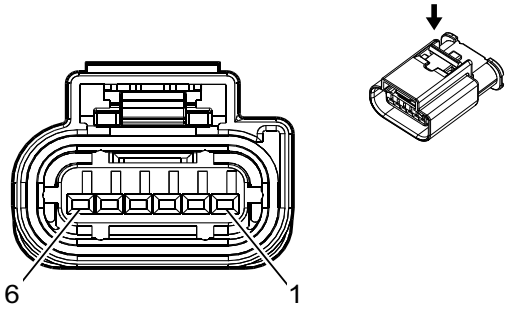
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q37RF Shock Absorber Actuator - Right Front (Z45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BU/WH | 1116 | Right Front Damping Servo Control | I | — |
| 2 | 0.75 | GY | 1117 | Right Front Damping Servo Control | I | — |

## Q38 Throttle Body




3747579

### Connector Part Information

Harness Type: Engine
OEM Connector: 33220833
Service Connector: 19352911
Description: 6-Way F 1.2 MCON Series, Sealed (BK)

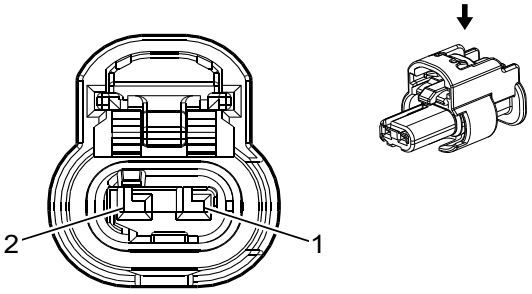
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q38 Throttle Body

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | YE | 581 | Throttle Actuator Control Open | I | L3B |
| | 0.75 | YE | 581 | Throttle Actuator Control Open | I | LM2 |
| 2 | 0.5 | BN/WH | 582 | Throttle Actuator Control Close | I | L3B |
| | 0.75 | BN/WH | 582 | Throttle Actuator Control Close | I | LM2 |
| 3 | 0.5 | BU/WH | 3630 | Throttle Position Sensor (SENT1) Signal | I | L3B |
| | 0.75 | BU/WH | 3630 | Throttle Position Sensor (SENT1) Signal | I | LM2 |
| 4 | 0.5 | BK/BN | 2752 | Throttle Position Sensor Low Reference | I | L3B |
| | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | LM2 |
| 5 | 0.5 | BN/RD | 2701 | Throttle Position Sensor 5V Reference | I | L3B |
| | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | LM2 |
| 6 | — | — | — | Not Occupied | — | — |

### Q40 Turbocharger Bypass Solenoid Valve (L3B)




4690744

#### Connector Part Information

Harness Type: Engine
OEM Connector: 33375932
Service Connector: 19366871
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

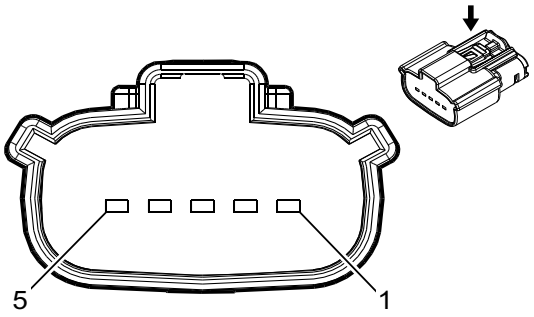
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q40 Turbocharger Bypass Solenoid Valve (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | — |
| 2 | 0.75 | GN | 3060 | Turbo Bypass Solenoid Control Bank 1 | I | — |

## Q43 Valve Lifter Oil Manifold Assembly (LV3)




3240108

### Connector Part Information

Harness Type: Engine
OEM Connector: 13843947
Service Connector: 19301721
Description: 5-Way F 150 MX Series, Sealed (BK)

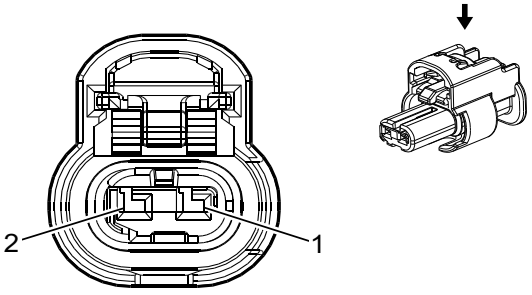
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q43 Valve Lifter Oil Manifold Assembly (LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU | 5491 | Cylinder Shutoff Solenoid Control 1 | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.75 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | — |
| 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.5 | GN | 5492 | Cylinder Shutoff Solenoid Control 2 | I | — |

## Q46 A/C Compressor Solenoid Valve




4335931

### Connector Part Information

Harness Type: Engine
OEM Connector: 33371691
Service Connector: 19366843
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

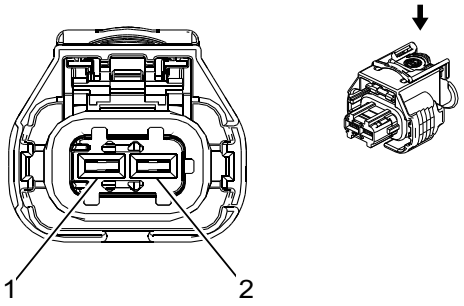
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q46 A/C Compressor Solenoid Valve

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU/YE | 7574 | Electric Variable Displacement Control | I | — |
| 2 | 0.5 | BU/BN | 7573 | Electric Variable Displacement Supply | I | — |

## Q61 Reductant Injector (LM2)




2577394

### Connector Part Information

Harness Type: Engine
OEM Connector: 13930085
Service Connector: 13384371
Description: 2-Way F 2.8 Series, Sealed (BK)

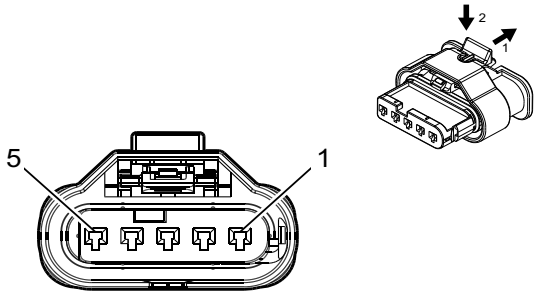
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q61 Reductant Injector (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BN/WH | 3100 | DEF Dosing Valve Low Control | I | — |
| 2 | 0.75 | BN | 3099 | DEF Dosing Valve High Control | I | — |

## Q74 Engine Coolant Bypass Valve (L3B)




4994456

### Connector Part Information

Harness Type: Engine
OEM Connector: 35110578
Service Connector: 19371191
Description: 5-Way F 1.2 MCON-LL Series, Sealed (NA)

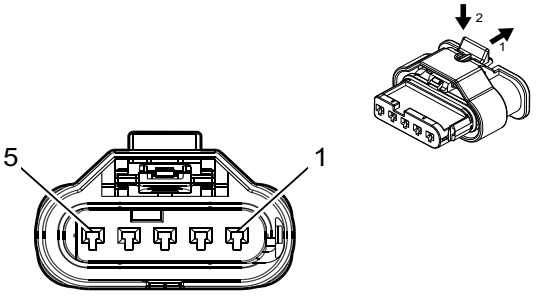
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q74 Engine Coolant Bypass Valve (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BU | 2976 | Coolant Diverter Valve Actuator Control Low | I | — |
| 2 | 0.75 | BU/BN | 2977 | Coolant Diverter Valve Actuator Control High | I | — |
| 3 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |
| 4 | 0.5 | BK/BU | 2979 | Coolant Diverter Valve Position Sensor Low Reference | I | L3B |
| 5 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |

## Q74 Engine Coolant Bypass Valve (LM2)




4994456

### Connector Part Information

Harness Type: Engine
OEM Connector: 35110578
Service Connector: 19371191
Description: 5-Way F 1.2 MCON-LL Series, Sealed (NA)

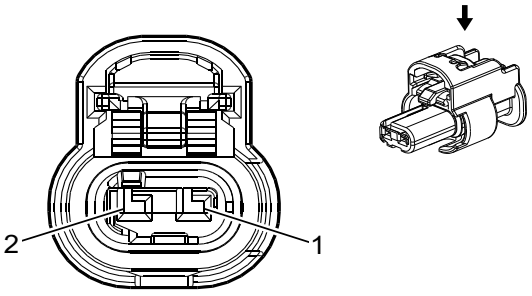
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q74 Engine Coolant Bypass Valve (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BU | 2976 | Coolant Diverter Valve Actuator Control Low | I | — |
| 2 | 0.75 | BU/BN | 2977 | Coolant Diverter Valve Actuator Control High | I | — |
| 3 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |
| 4 | 0.5 | BU/GY | 2978 | Coolant Diverter Valve Position Signal | I | LM2 |
| 5 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |

## Q80L Engine Mount Solenoid Valve - Left (LM2)




4690744

### Connector Part Information

Harness Type: Engine
OEM Connector: 33375932
Service Connector: 19366871
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

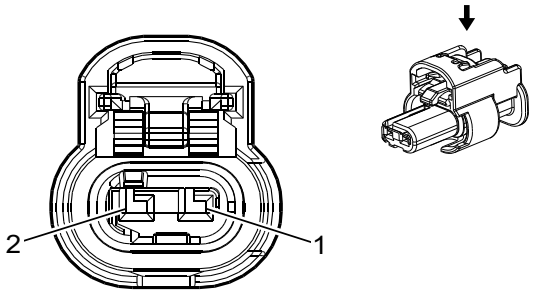
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q80L Engine Mount Solenoid Valve - Left (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | RD/GN | 40 | Battery Positive Voltage | I | — |
| 2 | 0.5 | BN/BU | 4065 | Powertrain Mount Solenoid Control 1 | I | — |

### Q80R Engine Mount Solenoid Valve - Right (LM2)




4690744

### Connector Part Information

Harness Type: Engine
OEM Connector: 33375932
Service Connector: 19366871
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

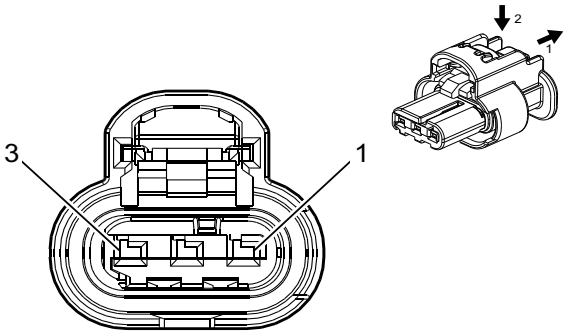
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q80R Engine Mount Solenoid Valve - Right (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | RD/GN | 40 | Battery Positive Voltage | I | — |
| 2 | 0.5 | BN/YE | 4066 | Powertrain Mount Solenoid Control 2 | I | — |

## Q97B Engine Coolant Flow Control Valve - Block (L3B)




4778903

### Connector Part Information

Harness Type: Engine
OEM Connector: 33358808
Service Connector: 19369810
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

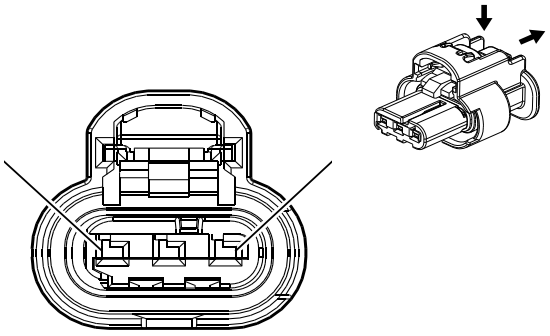
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## Q97B Engine Coolant Flow Control Valve - Block (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/BN | 2732 | Local Interconnect Network Bus 32 | I | L3B |
| 2 | 0.5 | BK | 4450 | Ground | I | L3B |
| 3 | 0.5 | VT/BU | 5294 | Powertrain Main Relay Fused Supply 5 | I | L3B |

## Q97B Engine Coolant Flow Control Valve - Block (LM2)



4778903

### Connector Part Information

Harness Type: Engine
OEM Connector: 33358808
Service Connector: 19369810
Description: 3-Way F 1.2 MCON-CB Series, Sealed (BK)

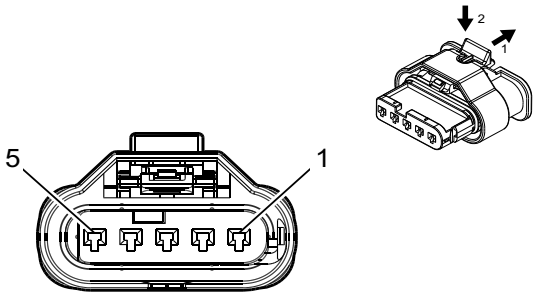
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### Q97B Engine Coolant Flow Control Valve - Block (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/BN | 2732 | Local Interconnect Network Bus 32 | I | — |
| 2 | 1 | BK | 4450 | Ground | I | — |
| 3 | 0.5 | VT/BU | 5293 | Powertrain Main Relay Fused Supply 4 | I | — |

### Q97M Engine Coolant Flow Control Valve - Main (LM2)




4994456

### Connector Part Information

Harness Type: Engine
OEM Connector: 35110578
Service Connector: 19371191
Description: 5-Way F 1.2 MCON-LL Series, Sealed (NA)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

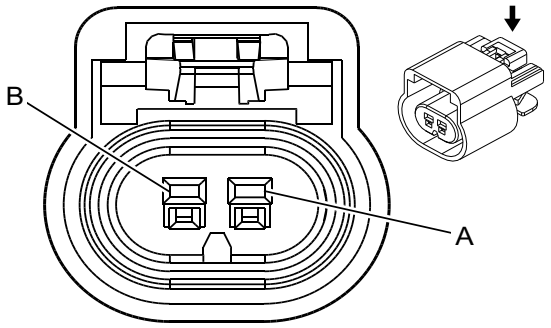
### Q97M Engine Coolant Flow Control Valve - Main (LM2)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | GY/BN | 2972 | Coolant Flow Control Actuator Control High | I | — |

## Q97M Engine Coolant Flow Control Valve - Main (LM2) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 2 | 0.75 | GY/BU | 2971 | Coolant Flow Control Actuator Control Low | I | — |
| 3 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |
| 4 | 0.5 | GY | 2973 | Coolant Flow Control Valve Position Signal | I | — |
| 5 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |

## R6A Terminating Resistor - High Speed Bus




523630

### Connector Part Information

Harness Type: Chassis
OEM Connector: 13510085
Service Connector: 13580114
Description: 2-Way F 150 GT Series, Sealed (BK)

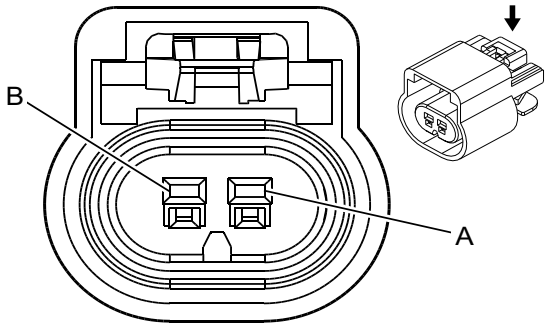
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## R6A Terminating Resistor - High Speed Bus

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 0.5 | BU | 2500 | High Speed GMLAN Serial Data (+) 1 | I | — |
| B | 0.5 | WH | 2501 | High Speed GMLAN Serial Data (-) 1 | I | — |

## R6E Terminating Resistor - High Speed Extension Bus 1 (UEU)




523630

### Connector Part Information

Harness Type: Headliner
OEM Connector: 13510085
Service Connector: 13580114
Description: 2-Way F 150 GT Series, Sealed (BK)

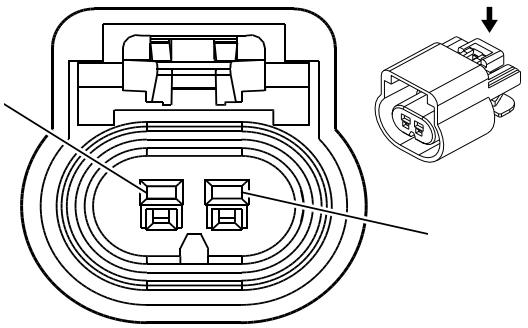
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## R6E Terminating Resistor - High Speed Extension Bus 1 (UEU)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 0.35 | BU/GY | 3935 | High Speed GMLAN Serial Data (+) 8 | I | — |
| B | 0.35 | WH/GY | 3936 | High Speed GMLAN Serial Data (-) 8 | I | — |

## R6F Terminating Resistor - High Speed Extension Bus 2 (IOS/IOT)



523630

### Connector Part Information

Harness Type: Chassis
OEM Connector: 13510085
Service Connector: 13580114
Description: 2-Way F 150 GT Series, Sealed (BK)

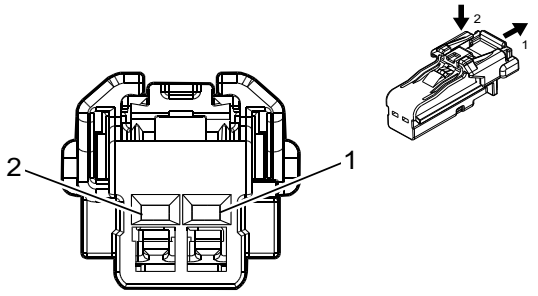
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## R6F Terminating Resistor - High Speed Extension Bus 2 (IOS/IOT)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 0.5 | BU/GN | 1304 | High Speed GMLAN Serial Data (+)9 | I | — |
| B | 0.5 | WH/GN | 1305 | High Speed GMLAN Serial Data (-)9 | I | — |

## S2 Transmission Manual Shift Switch




4115691

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35026312
Service Connector: 19352066
Description: 2-Way F 1.2 Series (BK)

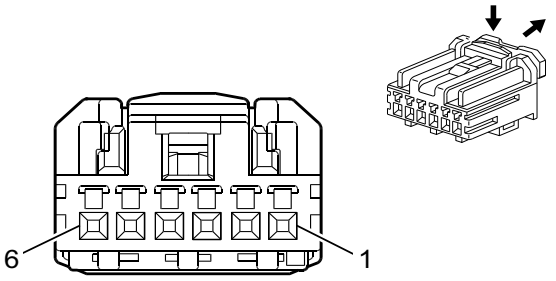
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## S2 Transmission Manual Shift Switch

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/YE | 5526 | Tap Up/Tap Down Switch Signal | I | — |
| 2 | 0.5 | BK/WH | 1851 | Signal Ground | I | — |

## S13D Door Lock Switch - Driver




4650256

### Connector Part Information

Harness Type: Driver Door Trim
OEM Connector: 33315784
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 HCM Series (BK)

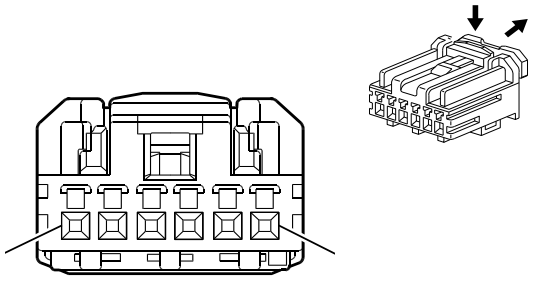
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S13D Door Lock Switch - Driver

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | A45 |
| | 0.5 | YE | 6817 | LED Backlight Dimming Control | I | AU3 |
| 2 | 0.35 | BN/YE | 780 | Driver Door Lock Switch Lock Signal | I | A45 |
| | 0.5 | BN/YE | 780 | Driver Door Lock Switch Lock Signal | I | AU3 |
| 3 | 0.35 | BN/WH | 781 | Driver Door Lock Switch Unlock Signal | I | — |
| 4 | 0.35 | BK | 1150 | Ground | I | — |
| 5 - 6 | — | — | — | Not Occupied | — | — |

## S13P Door Lock Switch - Passenger (AU3)



4650256

### Connector Part Information

Harness Type: Passenger Door Trim
OEM Connector: 33315784
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 HCM Series (BK)

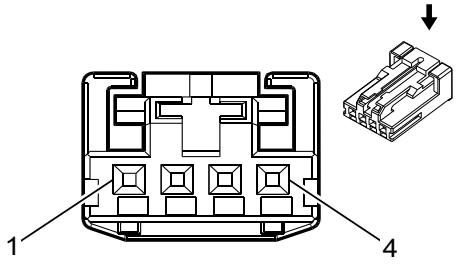
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## S13P Door Lock Switch - Passenger (AU3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 2 | 0.35 | YE/VT | 244 | Passenger Door Lock Switch Lock Control | I | — |
| 3 | 0.35 | BN/VT | 245 | Passenger Door Lock Switch Unlock Control | I | — |
| 4 | 0.35 | BK | 1250 | Ground | I | — |
| 5 - 6 | — | — | — | Not Occupied | — | — |

## S27 Head-Up Display Switch (UV6)




2717162

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13969166
Service Connector: 13587297
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

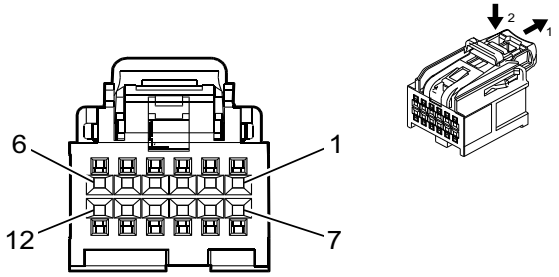
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## S27 Head-Up Display Switch (UV6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 2 | 0.35 | BK | 1850 | Ground | I | — |
| 3 | 0.35 | BK/GN | 5699 | Head Up Display Switch Low Reference | I | — |
| 4 | 0.35 | YE/WH | 622 | Head Up Display Switch Signal | I | — |

## S30 Headlamp Switch




4975223

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35016616
Service Connector: 13519750
Description: 12-Way F 0.64 OCS Series (BK)

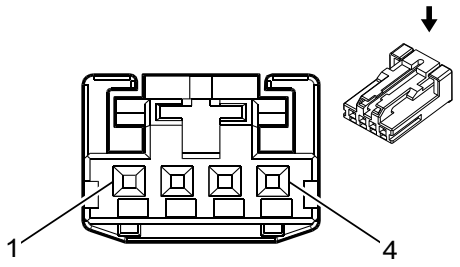
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## S30 Headlamp Switch

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | WH/VT | 103 | Headlamp Switch On Signal | I | — |
| 2 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 3 | 0.35 | GN/BN | 306 | Headlamp Switch Headlamps Off Signal Control | I | — |
| 4 | 0.35 | GY | 158 | Cargo Lamp Switch Signal | I | — |
| 5 | 0.35 | GN/GY | 13 | Headlamp Switch Park Lamp Signal | I | — |
| 6 | 0.5 | WH/VT | 1430 | Exterior Courtesy Lamp Control | I | — |
| 7 | 0.35 | WH/GY | 2935 | Task Lamp Switch Signal | I | — |
| 8 | 0.35 | BK/WH | 1851 | Signal Ground | I | — |
| 9 - 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | WH/BN | 7555 | Lighting Control Switch Signal | I | — |
| 12 | 0.35 | YE | 7556 | Lighting Control Switch Reference | I | — |

## S32R Seat Heating Switch - Rear (D07+KA6)




2717162

### Connector Part Information

Harness Type: Floor Console
OEM Connector: 13969166
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

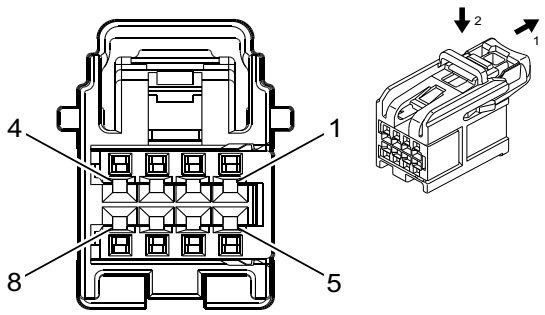
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S32R Seat Heating Switch - Rear (D07+KA6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | RD/WH | 1340 | Battery Positive Voltage | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | GN/WH | 4115 | Local Interconnect Network Serial Data Bus 15 | I | — |
| 4 | 0.5 | BK | 1250 | Ground | I | — |

## S38 Ignition Mode Switch (BTM)




4232228

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15526973
Service Connector: 19353873
Description: 8-Way F 0.64 OCS Series (GY)

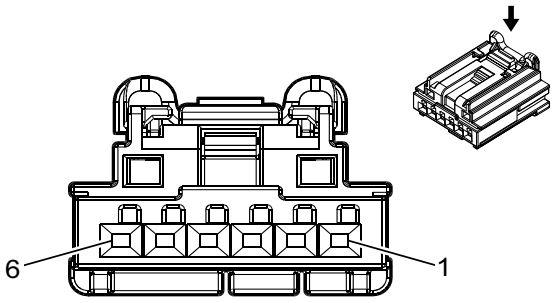
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S38 Ignition Mode Switch (BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BU/BK | 5719 | Ignition Mode Switch Start LED Signal | I | — |
| 2 | 0.35 | BN/BK | 5720 | Ignition Mode Switch Accessory LED Signal | I | — |
| 3 | 0.35 | BK/WH | 1851 | Signal Ground | I | — |
| 4 | 0.35 | BU/GN | 5723 | Ignition Mode Switch Mode Voltage | I | — |
| 5 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.35 | BK/GY | 3559 | Passive Start Switch 2 Low Reference | I | — |
| 8 | 0.35 | GN/BK | 3558 | Passive Start Switch Signal 2 | I | — |

### S39 Ignition Switch (-BTM)




3960313

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13920633
Service Connector: 19332786
Description: 6-Way F 0.64 Generation Y Series (BK)

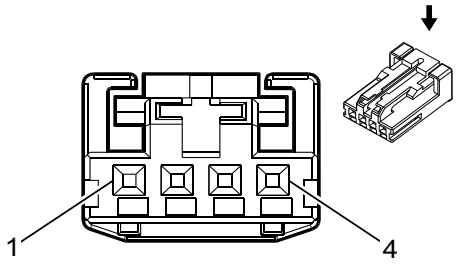
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## S39 Ignition Switch (-BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | WH/BK | 1073 | Ignition Key Resistor Signal | I | — |
| 2 | 0.5 | WH/VT | 1020 | Off/Run/Crank Ignition Voltage | I | — |
| 3 | 0.35 | VT/YE | 4 | Accessory Ignition Voltage | I | — |
| 4 | 0.35 | RD/BU | 540 | Battery Positive Voltage | I | — |
| 5 | 0.35 | VT/BK | 3 | Run/Crank Ignition 1 Voltage | I | — |
| 6 | 0.5 | WH/VT | 1020 | Off/Run/Crank Ignition Voltage | I | — |

## S47D Seat Memory Switch - Driver (A45)




2717162

### Connector Part Information

Harness Type: Driver Door Trim
OEM Connector: 13969166
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

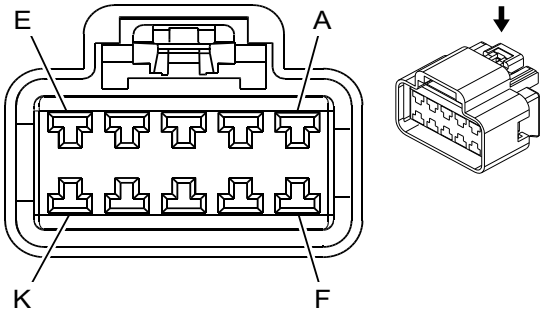
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## S47D Seat Memory Switch - Driver (A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 2 | 0.35 | BK/BU | 5978 | Memory Switch Low Reference | I | — |
| 3 | 0.35 | WH | 615 | Memory Seat Switch Signal 1 | I | — |
| 4 | 0.35 | BU/GN | 614 | Memory Seat Switch Set Signal | I | — |

## S64D Seat Adjuster Switch - Driver (A2X-A45)




623046

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 15326931
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 280 GT Series (BK)

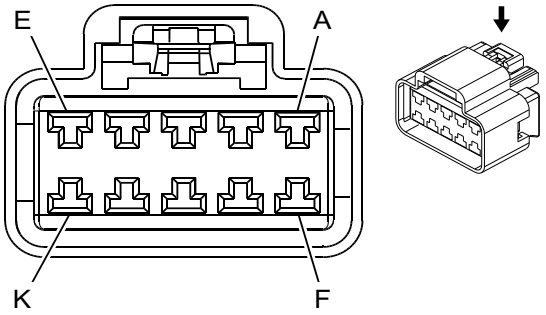
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S64D Seat Adjuster Switch - Driver (A2X-A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 1.5 | GN/BN | 286 | Driver Power Seat Front Vertical Motor Up Control | I | — |
| B | 2.5 | BK | 1150 | Ground | I | — |
| C | 1.5 | GY/GN | 284 | Driver Power Seat Horizontal Motor Rearward Control | I | — |
| D | 1.5 | YE/BU | 285 | Driver Power Seat Horizontal Motor Forward Control | I | — |
| E | 2.5 | RD/YE | 5040 | Battery Positive Voltage | I | — |
| F | 1.5 | YE | 282 | Driver Power Seat Rear Vertical Motor Up Control | I | — |
| G | 1.5 | BU/YE | 277 | Driver Power Seat Recline Motor Rearward Control | I | — |
| H | 1.5 | GN/YE | 276 | Driver Power Seat Recline Motor Forward Control | I | — |
| J | 1.5 | GY/BU | 283 | Driver Power Seat Rear Vertical Motor Down Control | I | — |
| K | 1.5 | BU/VT | 287 | Driver Power Seat Front Vertical Motor Down Control | I | — |

## S64D Seat Adjuster Switch - Driver (A45)




623046

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 15326931
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 280 GT Series (BK)

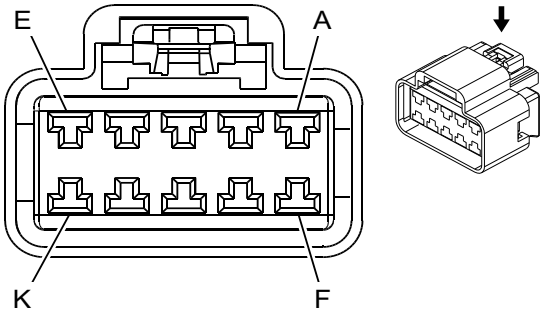
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S64D Seat Adjuster Switch - Driver (A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 0.5 | GN/BN | 1518 | Power Seat Front Vertical Up Switch Signal | I | — |
| B | — | — | — | Not Occupied | — | — |
| C | 0.5 | GY/GN | 1523 | Power Seat Horizontal Rearward Switch Signal | I | — |
| D | 0.5 | YE/BN | 1522 | Power Seat Horizontal Forward Switch Signal | I | — |
| E | 0.5 | BK | 1150 | Ground | I | — |
| F | 0.5 | YE | 1519 | Power Seat Rear Vertical Up Switch Signal | I | — |
| G | 0.5 | GN/GY | 1270 | Power Seat Recline Rearward Switch Signal | I | — |
| H | 0.5 | GY/BK | 1269 | Power Seat Recline Forward Switch Signal | I | — |
| J | 0.5 | YE/BU | 1521 | Power Seat Rear Vertical Down Switch Signal | I | — |
| K | 0.5 | BU/VT | 1520 | Power Seat Front Vertical Down Switch Signal | I | — |

## S64P Seat Adjuster Switch - Passenger




623046

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 15326931
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 280 GT Series (BK)

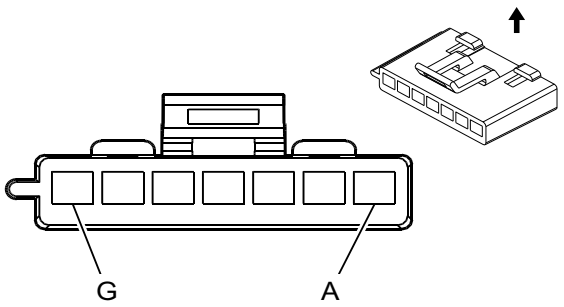
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S64P Seat Adjuster Switch - Passenger

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 1.5 | GN/BU | 298 | Passenger Power Seat Front Vertical Motor Down Control | I | — |
| B | 2.5 | BK | 1250 | Ground | I | — |
| C | 1.5 | YE/BU | 290 | Passenger Power Seat Horizontal Motor Rearward Control | I | — |
| D | 1.5 | YE/WH | 296 | Passenger Power Seat Horizontal Motor Forward Control | I | — |
| E | 2.5 | RD/BN | 1440 | Battery Positive Voltage | I | — |
| F | 1.5 | BU/WH | 289 | Passenger Power Seat Rear Vertical Motor Down Control | I | — |
| G | 1.5 | BU/BN | 77 | Passenger Power Seat Recline Motor Rearward Control | I | — |
| H | 1.5 | GN | 76 | Passenger Power Seat Recline Motor Forward Control | I | — |
| J | 1.5 | GN/WH | 288 | Passenger Power Seat Rear Vertical Motor Up Control | I | — |
| K | 1.5 | GN/VT | 297 | Passenger Power Seat Front Vertical Motor Up Control | I | — |

## S65D Seat Lumbar Support Switch - Driver (A2X-A45)




73146

### Connector Part Information

Harness Type: Driver Seat
OEM Connector: 12052854
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F 280 Metri-Pack Series (BK)

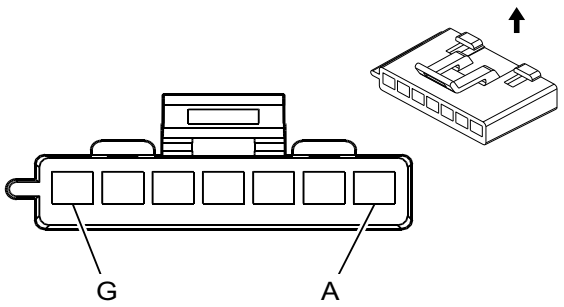
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S65D Seat Lumbar Support Switch - Driver (A2X-A45)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | — | — | — | Not Occupied | — | — |
| B | 0.75 | VT | 610 | Driver Power Seat Lumbar Motor Rearward Control | I | — |
| C | 0.75 | BU | 611 | Driver Power Seat Lumbar Motor Forward Control | I | — |
| D | — | — | — | Not Occupied | — | — |
| E | 0.75 | BK | 1150 | Ground | I | — |
| F | — | — | — | Not Occupied | — | — |
| G | 0.75 | RD/YE | 8840 | Battery Positive Voltage | I | — |

## S65P Seat Lumbar Support Switch - Passenger (A7K)




73146

### Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 12052854
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F 280 Metri-Pack Series (BK)

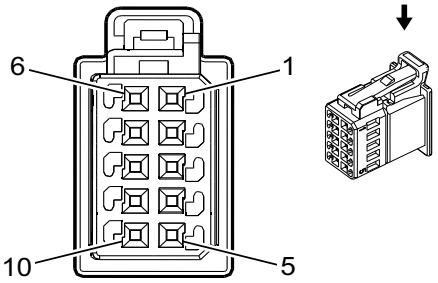
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S65P Seat Lumbar Support Switch - Passenger (A7K)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | — | — | — | Not Occupied | — | — |
| B | 0.75 | VT | 210 | Passenger Power Seat Lumbar Motor Rearward Control | I | — |
| C | 0.75 | BU | 211 | Passenger Power Seat Lumbar Motor Forward Control | I | — |
| D | — | — | — | Not Occupied | — | — |
| E | 0.75 | BK | 1250 | Ground | I | — |
| F | — | — | — | Not Occupied | — | — |
| G | 0.75 | RD/YE | 8840 | Battery Positive Voltage | I | — |

## S78 Turn Signal/Multifunction Switch




2830955

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13650061
Service Connector: 19299776
Description: 10-Way F 0.64 Micro-Quadlock Series (BK)

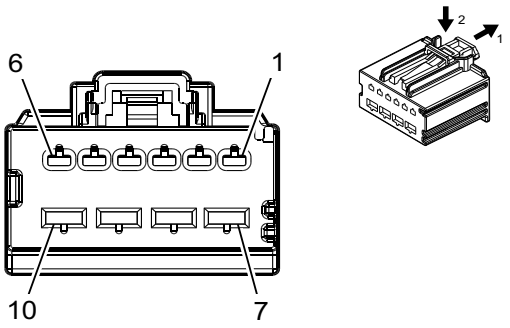
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 144969-1 | Lear 25 | E | 2 |

## S78 Turn Signal/Multifunction Switch

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | WH/GN | 663 | Hazard Switch Left Turn Signal | I | — |
| 2 | 0.5 | VT/BU | 664 | Hazard Switch Right Turn Signal | I | — |
| 3 | 0.5 | BK/WH | 1851 | Signal Ground | I | — |
| 4 | 0.5 | WH/GY | 3849 | High Beam Auto On/Off Switch Signal | I | — |
| 5 | 0.35 | WH/BK | 94 | Windshield Washer Switch Signal | I | — |
| 6 | 0.5 | YE/BN | 307 | Headlamp Switch Flash To Pass Signal | I | — |
| 7 | 0.5 | WH | 524 | Headlamp Dimmer Switch High Beam Signal | I | — |
| 8 | 0.5 | BK/GY | 6009 | Windshield Wiper Switch Low Reference | I | — |
| 9 | 0.5 | GY | 1715 | Windshield Wiper Switch High Signal | I | — |
| 10 | 0.5 | YE/BU | 1714 | Windshield Wiper Switch Low Signal | I | — |

## S79LR Window Switch - Left Rear (AEQ+(Extended Cab/Crew Cab))




5035058

### Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 35152553
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 Series (BK)

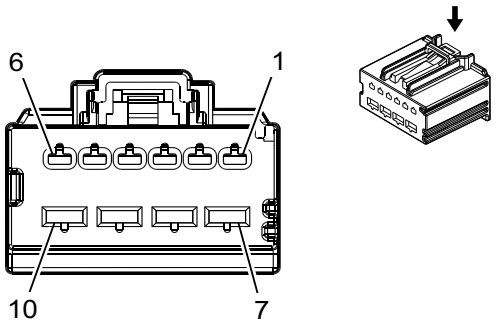
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## S79LR Window Switch - Left Rear (AEQ+(Extended Cab/Crew Cab))

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/GY | 6135 | Local Interconnect Network Serial Data Bus 4 | I | — |
| 2 | 0.5<br>0.5 | GY<br>GN | 747<br>747 | Left Rear Door Ajar Switch Signal<br>Left Rear Door Ajar Switch Signal | I<br>I | CREW CAB<br>EXTENDED CAB |
| 3 | 0.75 | BK | 1150 | Ground | I | — |
| 4 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 2.5 | BK | 1150 | Ground | I | — |
| 8 | 2.5 | RD/BU | 1842 | Battery Positive Voltage | I | — |
| 9 | 2 | BU/VT | 668 | Power Window Motor Left Rear Up Control | I | — |
| 10 | 2 | YE/BU | 669 | Power Window Motor Left Rear Down Control | I | — |

## S79P Window Switch - Passenger (AED)




3791446

### Connector Part Information

Harness Type: Passenger Door Trim
OEM Connector: 33175128
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 Series (BK)

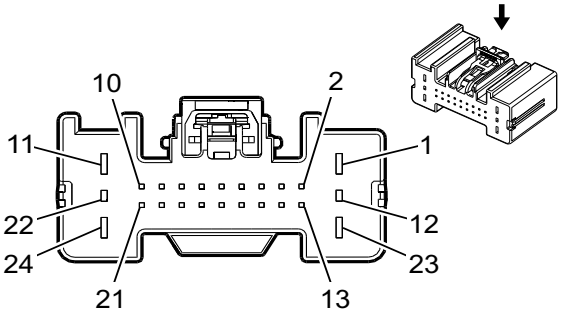
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S79P Window Switch - Passenger (AED)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GN/YE | 6134 | Local Interconnect Network Serial Data Bus 3 | I | — |
| | 0.5 | GN/YE | 6134 | Local Interconnect Network Serial Data Bus 3 | I | — |
| 2 | 0.5 | GY | 746 | Right Front Door Ajar Switch Signal | I | — |
| 3 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 2.5 | BK | 1250 | Ground | I | — |
| 8 | 2.5 | RD/WH | 1340 | Battery Positive Voltage | I | — |
| 9 | 2.5 | GN/GY | 3387 | Power Window Motor Passenger Up Control | I | — |
| 10 | 2.5 | YE/BU | 3388 | Power Window Motor Passenger Down Control | I | — |

## S79P Window Switch - Passenger (AEF)




2871905

### Connector Part Information

Harness Type: Passenger Door Trim
OEM Connector: 13706537
Service Connector: Service by Harness - See Part Catalog
Description: 24-Way F 0.64, 1.5, 2.8 Series (BK)

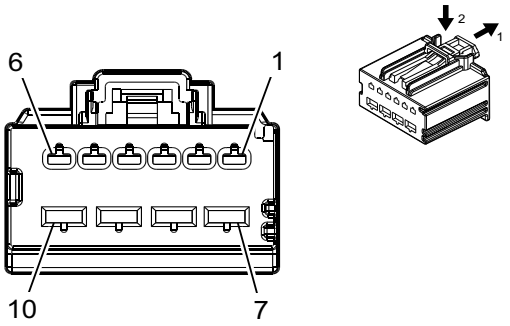
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S79P Window Switch - Passenger (AEF)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/YE | 3385 | Power Window Switch Passenger Down Signal | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | GN/BK | 3396 | Passenger Mirror Motor Right (+) Left (-) Control | I | — |
| 4 | 0.35 | YE/VT | 3397 | Passenger Mirror Motor Up (+) Down (-) Control | I | — |
| 5 | 0.5 | WH | 3398 | Passenger Mirror Motor Common Control | I | — |
| 6 | 0.35 | YE/RD | 3399 | Passenger Mirror Position Sensor 5V Reference | I | — |
| 7 | 0.35 | BU/YE | 3401 | Passenger Mirror Position Sensor Up (+) Down (-) Signal | I | — |
| 8 | 0.35 | BK/GN | 3400 | Passenger Mirror Position Sensor Low Reference | I | — |
| 9 | 0.35 | VT/WH | 3403 | Passenger Mirror Position Sensor Left (-) Right (+) Signal | I | — |
| 10 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 11 | 0.5 | YE/BK | 3384 | Power Window Switch Passenger Up Signal | I | — |
| 12 | 0.5 | BU/GY | 3414 | Passenger Mirror Motor Fold In Control | I | — |
| 13 | 0.35 | VT/GY | 3386 | Power Window Switch Passenger Express Signal | I | — |
| 14 - 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.35 | GN/WH | 7530 | Local Interconnect Network Serial Data Bus 8 | I | — |
| 22 | 0.5 | YE/WH | 3413 | Passenger Mirror Motor Fold Out Control | I | — |
| 23 | 2.5 | RD/WH | 1340 | Battery Positive Voltage | I | — |
| 24 | 2.5 | BK | 1250 | Ground | I | — |

## S79RR Window Switch - Right Rear (AEQ+(Extended Cab/Crew Cab))




5035058

### Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 35152553
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 Series (BK)

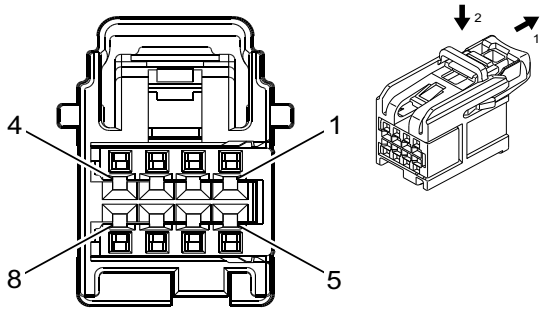
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S79RR Window Switch - Right Rear (AEQ+(Extended Cab/Crew Cab))

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/GY | 6135 | Local Interconnect Network Serial Data Bus 4 | I | — |
| 2 | 0.5 | GN | 748 | Right Rear Door Ajar Switch Signal | I | — |
| 3 - 6 | — | — | — | Not Occupied | — | — |
| 7 | 2.5 | BK | 1250 | Ground | I | — |
| 8 | 2.5 | RD/WH | 1340 | Battery Positive Voltage | I | — |
| 9 | 2 | BU/GY | 670 | Power Window Motor Right Rear Up Control | I | — |
| 10 | 2 | GN/BK | 671 | Power Window Motor Right Rear Down Control | I | — |

## S86 Vehicle Stability Control Switch




4935776

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15526972
Service Connector: 19370429
Description: 8-Way F 0.64 OCS Series (BK)

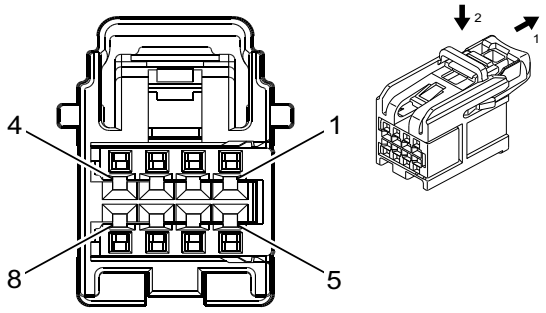
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## S86 Vehicle Stability Control Switch

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BU/VT | 1788 | Traction Control Switch Signal 1 | I | — |
| 2 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 3 | 0.35 | BN | 7291 | Major Endgate Release Switch Signal Interior | I | — |
| 4 - 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.5 | BK | 1050 | Ground | I | — |
| 7 | 0.35 | GN/WH | 111 | Hazard Switch Signal | I | — |
| 8 | 0.35 | GY | 1198 | Endgate Release Switch Analog Signal Interior | I | — |

## S126 Drive Mode Select Switch (URC)




4232228

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15526973
Service Connector: 19353873
Description: 8-Way F 0.64 OCS Series (GY)

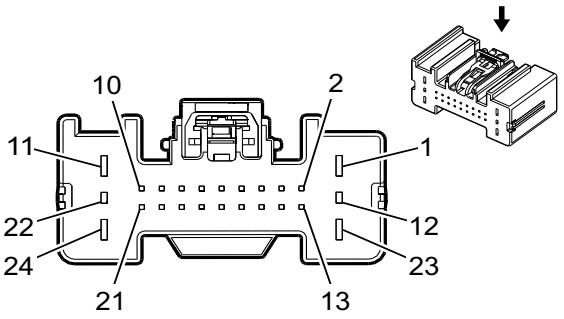
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## S126 Drive Mode Select Switch (URC)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | WH/BN | 2203 | Enhanced Driver Mode 2 Switch Signal | I | — |
| 2 | 0.35 | GY | 4109 | Driver Mode Switch 5V Reference | I | — |
| 3 | 0.35 | BK/GY | 2204 | Enhanced Driver Mode 1 Switch Low Reference | I | — |
| 4 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 5 | 0.35 | BK | 1850 | Ground | I | — |
| 6 | 0.35 | VT/BN | 300 | Run Ignition 3 Voltage | I | — |
| 7 | 0.35 | BN | 1560 | Neutral Indicator Control | I | — |
| 8 | — | — | — | Not Occupied | — | — |

## S146 Window/Outside Rearview Mirror Switch - Driver




2871905

### Connector Part Information

Harness Type: Driver Door Trim
OEM Connector: 13706537
Service Connector: Service by Harness - See Part Catalog
Description: 24-Way F 0.64, 1.5, 2.8 Series (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

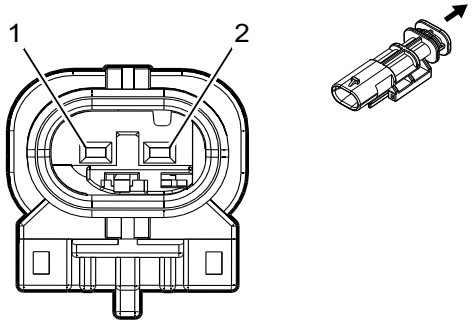
### S146 Window/Outside Rearview Mirror Switch - Driver

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GY | 3380 | Power Window Switch Driver Down Signal | I | — |
| | 0.5 | GY | 3380 | Power Window Switch Driver Down Signal | I | — |
| 2 | 0.35 | YE/VT | 3397 | Passenger Mirror Motor Up (+) Down (-) Control | I | — |
| 3 | 0.35 | WH | 3398 | Passenger Mirror Motor Common Control | I | — |
| | 0.5 | WH | 3398 | Passenger Mirror Motor Common Control | I | — |
| 4 | 0.35 | GN/BK | 3396 | Passenger Mirror Motor Right (+) Left (-) Control | I | — |
| 5 | 0.35 | GN | 3381 | Power Window Switch Driver Express Signal | I | — |
| 6 | 0.35 | BN/BK | 3389 | Driver Mirror Motor Right (+) Left (-) Control | I | — |
| 7 | 0.35 | VT/BU | 3390 | Driver Mirror Motor Up (+) Down (-) Control | I | — |
| 8 | 0.35 | YE/BN | 3391 | Driver Mirror Motor Common Control | I | — |
| 9 | 0.35 | GN/YE | 6134 | Local Interconnect Network Serial Data Bus 3 | I | — |
| | 0.5 | GN/YE | 6134 | Local Interconnect Network Serial Data Bus 3 | I | — |
| 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | GN/WH | 3379 | Power Window Switch Driver Up Signal | I | — |
| | 0.5 | GN/WH | 3379 | Power Window Switch Driver Up Signal | I | — |
| 12 | 0.35 | WH/GN | 3412 | Driver Mirror Motor Fold In Control | I | — |
| 13 | — | — | — | Not Occupied | — | — |
| 14 | 0.35 | WH/VT | 3270 | Driver Door Lock Motor Status Signal | I | — |
| 15 | 0.35 | BU/VT | 1124 | Door Lock Key Switch Unlock Signal | I | — |
| 16 | 0.35 | WH/YE | 3395 | Driver Mirror Position Sensor Left (-) Right (+) Signal | I | — |

## S146 Window/Outside Rearview Mirror Switch - Driver (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 17 | 0.35 | VT/RD | 3392 | Driver Mirror Position Sensor 5V Reference | I | — |
| | 0.5 | VT/RD | 3392 | Driver Mirror Position Sensor 5V Reference | I | — |
| 18 | 0.35 | GY/BN | 3394 | Driver Mirror Position Sensor Up (+) Down (-) Signal | I | — |
| 19 | 0.35 | BK/BN | 3393 | Driver Mirror Position Sensor Low Reference | I | — |
| 20 | — | — | — | Not Occupied | — | — |
| 21 | 0.35 | GN/WH | 7530 | Local Interconnect Network Serial Data Bus 8 | I | — |
| | 0.5 | GN/WH | 7530 | Local Interconnect Network Serial Data Bus 8 | I | — |
| 22 | 0.35 | GY/WH | 3411 | Driver Mirror Motor Fold Out Control | I | — |
| 23 | 0.35 | RD/VT | 1940 | Battery Positive Voltage | I | — |
| | 0.5 | RD/VT | 1940 | Battery Positive Voltage | I | — |
| 24 | 0.35 | BK | 1150 | Ground | I | — |
| | 0.5 | BK | 1150 | Ground | I | — |

## S157 Pickup Box Endgate Unlatch Switch (QK1/QK2/QT5)




4994411

### Connector Part Information

Harness Type: Endgate
OEM Connector: 35068608
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 MCON Series (GY)

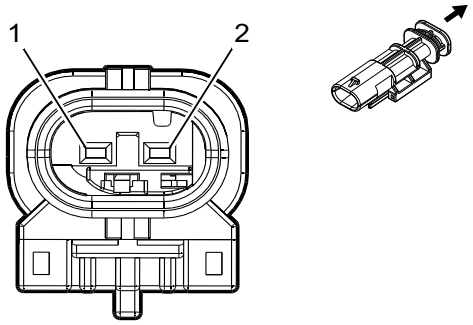
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## S157 Pickup Box Endgate Unlatch Switch (QK1/QK2/QT5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY | 7292 | Major Endgate Release Switch Signal Exterior | I | — |
| 2 | 0.75 | BK | 1450 | Ground | I | — |

## S157 Pickup Box Endgate Unlatch Switch (QT5)




4994411

### Connector Part Information

Harness Type: Endgate
OEM Connector: 35068608
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 MCON Series (GY)

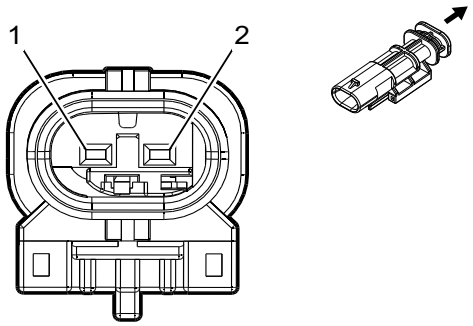
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S157 Pickup Box Endgate Unlatch Switch (QT5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GY | 7292 | Major Endgate Release Switch Signal Exterior | I | — |
| 2 | 0.75 | BK | 1450 | Ground | I | — |

## S159E Pickup Box Endgate Control Switch - Exterior (QK2/QT5)




4994410

### Connector Part Information

Harness Type: Endgate
OEM Connector: 33365831
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 MCON Series (GY)

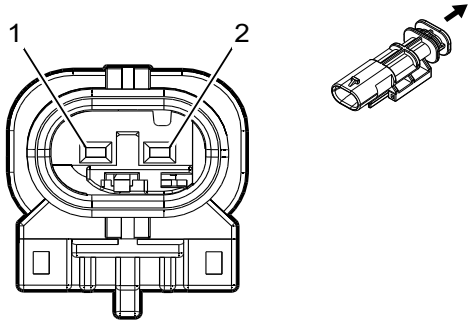
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S159E Pickup Box Endgate Control Switch - Exterior (QK2/QT5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE | 7294 | Minor Endgate Release Switch Discrete Signal Exterior | I | — |
| 2 | 0.75 | BK | 1450 | Ground | I | — |

### S159E Pickup Box Endgate Control Switch - Exterior (QT6)




4994411

#### Connector Part Information

Harness Type: Endgate
OEM Connector: 35068608
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 MCON Series (GY)

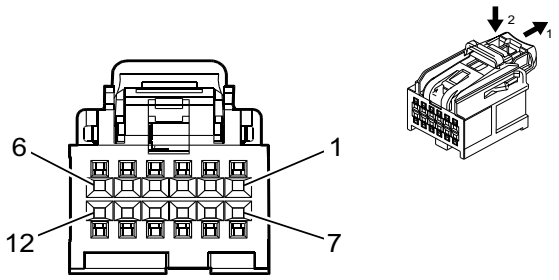
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S159E Pickup Box Endgate Control Switch - Exterior (QT6)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | YE | 1144 | Endgate Release Switch Discrete Signal Exterior | I | — |
| 2 | 0.75 | BK | 1450 | Ground | I | — |

## S171L Instrument Panel Center Accessory Function Switch - Left




4975223

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35016616
Service Connector: 13519750
Description: 12-Way F 0.64 OCS Series (BK)

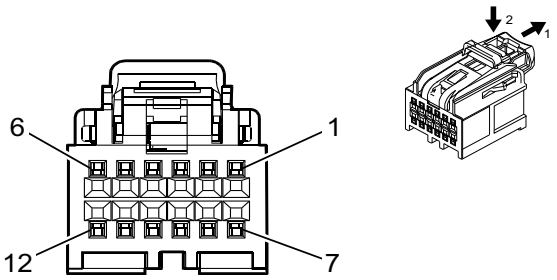
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

### S171L Instrument Panel Center Accessory Function Switch - Left

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GY/GN | 2555 | Rear Park Assist Disable Signal | I | — |
| 2 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 3 | 0.5 | BU/WH | 3119 | Roof Rail Air Bag Defeat Switch Signal | I | — |
| 4 | 0.35 | GY/WH | 3153 | Lane Departure Warning Disable Switch Signal | I | — |
| 5 | 0.35 | WH | 3152 | Lane Departure Warning Indicator Control | I | — |
| 6 | 0.35 | BU/YE | 6844 | ABS/TCS Hill Descent Control Switch Signal | I | — |
| 7 | 0.5 | WH | 6816 | Indicator Dimming Control | I | — |
| 8 | 0.35 | GN/BN | 5852 | Rear Park Assist LED Disable Signal | I | — |
| 9 | 0.5 | BK | 1050 | Ground | I | — |
| 10 | 0.5 | BN/WH | 3895 | Roof Rail Air Bag Defeat Switch Low Reference | I | — |
| 11 | 0.35 | GN | 1110 | Auto Stop Start Indicator Control | I | — |
| 12 | 0.35 | GN | 1111 | Auto Stop Start Switch Signal | I | — |

## S171R Instrument Panel Center Accessory Function Switch - Right




4997362

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35016613
Service Connector: 13519752
Description: 12-Way F 0.64 OCS Series (BN)

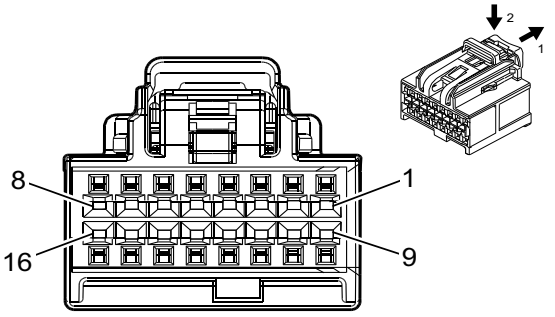
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

### S171R Instrument Panel Center Accessory Function Switch - Right

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GY/WH | 4630 | AC Power Outlet Switch Signal | I | — |
| 2 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 3 | 0.35 | BU/YE | 6844 | ABS/TCS Hill Descent Control Switch Signal | I | — |
| 4 - 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.35 | GN | 1110 | Auto Stop Start Indicator Control | I | — |
| 7 | — | — | — | Not Occupied | — | — |
| 8 | 0.5 | BN/WH | 7462 | Running Boards Disable Signal | I | — |
| 9 | 0.5 | BK | 1050 | Ground | I | — |
| 10 | 0.35 | WH | 6816 | Indicator Dimming Control | I | — |
| 11 | 0.35 | YE | 7755 | AC Power Outlet Status Indicator Control | I | — |
| 12 | 0.35<br>0.35 | GN<br>BU/GY | 1111<br>553 | Auto Stop Start Switch Signal<br>Shift Select Switch Performance Signal | I<br>I | KL9<br>-URC |

## S172 Auxiliary Multifunction Switch (9L7)




4873243

### Connector Part Information

Harness Type: Auxiliary Instrument Panel
OEM Connector: 35016343
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 0.64 OCS Series (BK)

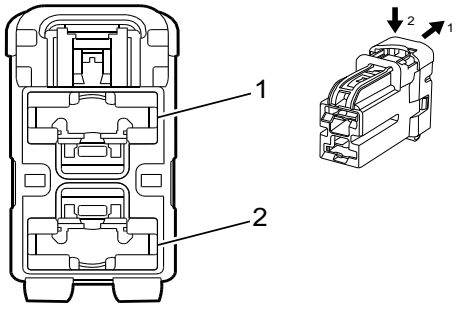
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### S172 Auxiliary Multifunction Switch (9L7)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | — | — | — | Not Occupied | — | — |
| 2 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 3 | 0.35 | WH | 6816 | Indicator Dimming Control | I | — |
| 4 - 5 | — | — | — | Not Occupied | — | — |
| 6 | 0.35 | BK | 961 | — | I | — |
| 7 | 0.35 | BK | 962 | — | I | — |
| 8 | 0.35 | BK | 963 | — | I | — |
| 9 | 0.35<br>0.35 | WH/VT<br>BK | 6821<br>964 | Surveillance Switch Signal<br>— | I<br>I | 9L7<br>9L7 |
| 10 | 0.5 | WH/BK | 5990 | Emergency Lamp Switch Signal | I | — |
| 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.75 | BK | 1050 | Ground | I | — |
| 13 - 16 | — | — | — | Not Occupied | — | — |

## T1 Accessory DC/AC Power Inverter Module X1 (KI4/KI5)




2453116

### Connector Part Information

Harness Type: Body
OEM Connector: 13581928
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 9.5 Series (BK)

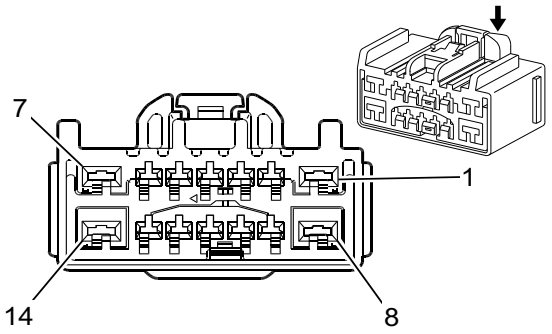
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## T1 Accessory DC/AC Power Inverter Module X1 (KI4/KI5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 5 | BN/BK | 4629 | DC/AC Inverter Control | I | — |
| 2 | 5 | BK | 1150 | Ground | I | — |

## T1 Accessory DC/AC Power Inverter Module X2 (KI4/KI5)




1540775

### Connector Part Information

Harness Type: Power Inverter Module Jumper
OEM Connector: 33356826
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way F 1.5, 2.8 Series (BU)

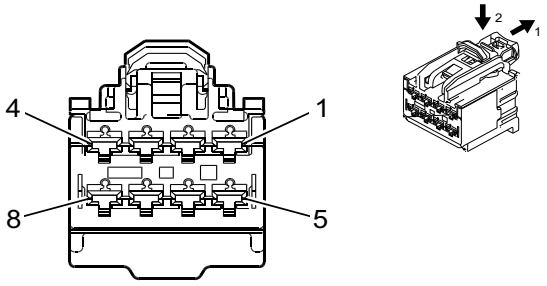
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## T1 Accessory DC/AC Power Inverter Module X2 (KI4/KI5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 5683 | 120 V AC Phase A | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | VT/YE | 5985 | Accessory Wakeup Serial Data | I | — |
| 4 | 0.35 | WH/GN | 4628 | DC/AC Inverter Relay Control | I | — |
| 5 | 0.35 | BU/BN | 6807 | DC To AC Inverter Control | I | — |
| 6 | — | — | — | Not Occupied | — | — |
| 7 | 0.75 | BK/WH | 2264 | 120 VAC Phase A 2 | I | — |
| 8 | 0.75 | RD | 5684 | 120 V AC Phase B | I | — |
| 9 | 0.35 | Bare | 514 | Low Reference | I | — |
| 10 | 0.35 | GN | 5060 | Low Speed GMLAN Serial Data | I | — |
| 11 | — | — | — | Not Occupied | — | — |
| 12 | 0.75 | GN/BN | 2266 | DC To AC Inverter Control 2 | I | — |
| 13 | 0.35 | Bare | 2257 | Drain Wire | I | — |
| 14 | 0.75 | RD/WH | 2265 | 120 VAC Phase B 2 | I | — |

## T3 Audio Amplifier X1 (UQA)




4875738

### Connector Part Information

Harness Type: Body
OEM Connector: 33223792
Service Connector: 19369366
Description: 8-Way F 2.8 OCS Series (BK)

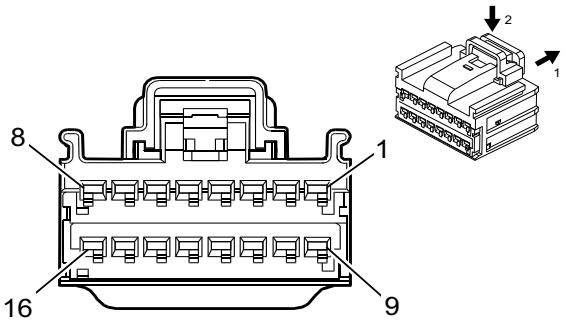
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## T3 Audio Amplifier X1 (UQA)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 2.5 | BU/GY | 346 | Left/Rear Subwoofer Speaker Control (+) | I | — |
| 2 | 0.75 | YE | 200 | Right Front Speaker Control (+) 1 | I | — |
| 3 | 0.75 | BU | 201 | Left Front Speaker Control (+) 1 | I | — |
| 4 | 2.5 | RD/YE | 3740 | Battery Positive Voltage | I | — |
| 5 | 2.5 | GN/BK | 1794 | Left/Rear Subwoofer Speaker (-) Low Reference | I | — |
| 6 | 0.75 | YE/BK | 117 | Right Front Speaker Signal (-) 1 | I | — |
| 7 | 0.75 | BN/BU | 118 | Left Front Speaker Signal (-) 1 | I | — |
| 8 | 2.5 | BK/WH | 2751 | Signal Ground | I | — |

## T3 Audio Amplifier X2 (UQA)




4332214

### Connector Part Information

Harness Type: Body
OEM Connector: 15512506
Service Connector: 13591061
Description: 16-Way F 1.5 OCS Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

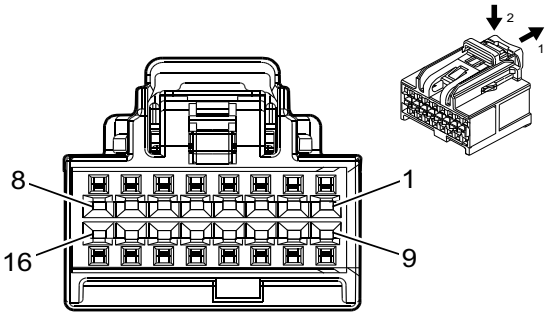
## T3 Audio Amplifier X2 (UQA)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | — | — | — | Not Occupied | — | — |
| 2 | 0.75 | BN/BK | 1953 | Right Front Midrange Speaker (-) Low Reference | I | — |
| 3 | 0.75 | BU/VT | 1857 | Left Front Midrange Speaker Control (+) | I | — |
| 4 | 0.5 | WH | 46 | Right Rear Speaker Control (+) | I | — |
| 5 | 0.5 | GN | 199 | Left Rear Speaker Control (+) | I | — |
| 6 - 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.75 | WH/YE | 1853 | Right Front Midrange Speaker Control (+) | I | — |

## T3 Audio Amplifier X2 (UQA) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 11 | 0.75 | BU/BN | 1957 | Left Front Midrange Speaker (-) Low Reference | I | — |
| 12 | 0.5 | BU/BK | 115 | Right Rear Speaker Signal (-) | I | — |
| 13 | 0.5 | GN/BK | 116 | Left Rear Speaker Signal (-) | I | — |
| 14 - 16 | — | — | — | Not Occupied | — | — |

## T3 Audio Amplifier X3 (UQA)




4873243

### Connector Part Information

Harness Type: Body
OEM Connector: 35016343
Service Connector: 13519738
Description: 16-Way F 0.64 OCS Series (BK)

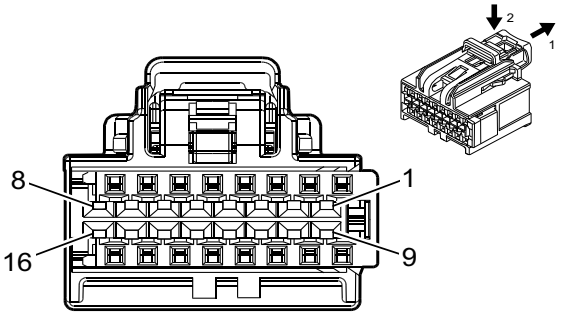
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## T3 Audio Amplifier X3 (UQA)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | GY/GN | 1102 | Low Speed GMLAN Serial Data #2 | I | −UVI−UV2 |
| | 0.75 | GY/GN | 1102 | Low Speed GMLAN Serial Data #2 | I | UVI/UV2 |
| 2 - 16 | — | — | — | Not Occupied | — | — |

## T3 Audio Amplifier X4 (UQA)




4256181

### Connector Part Information

Harness Type: Body
OEM Connector: 35016345
Service Connector: 13519740
Description: 16-Way F 0.64 OCS Series (BN)

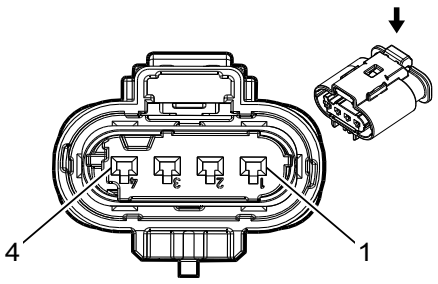
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## T3 Audio Amplifier X4 (UQA)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.35 | GY/BK | 7215 | Ethernet Bus 6 (+) | I | UQA |
| | 0.35 | GY/BK | 7215 | Ethernet Bus 6 (+) | I | UQA/UQH |
| 4 | 0.35 | BN/BK | 7214 | Ethernet Bus 6 (-) | I | UQA |
| | 0.35 | BN/BK | 7214 | Ethernet Bus 6 (-) | I | UQA/UQH |
| 5 - 16 | — | — | — | Not Occupied | — | — |

## T8A Ignition Coil 1 (L3B)




2717079

### Connector Part Information

Harness Type: Engine
OEM Connector: 13815341
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

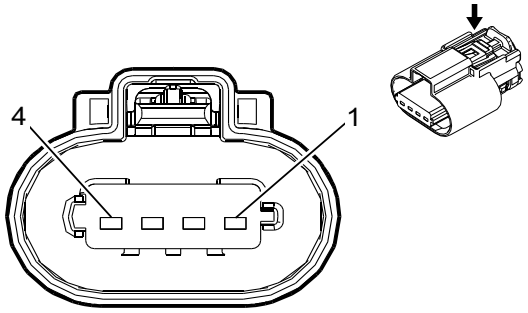
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### T8A Ignition Coil 1 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 450 | Ground | I | — |
| 2 | 0.5 | BK/BU | 2129 | Ignition Control Low Reference Bank 1 | I | — |
| 3 | 0.5 | BU/VT | 2121 | Ignition Control 1 | I | — |
| 4 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | I | — |

### T8A Ignition Coil 1 (L82/L84/L87/LV3)




3240115

### Connector Part Information

Harness Type: Engine
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 150 MX Series, Sealed (BK)

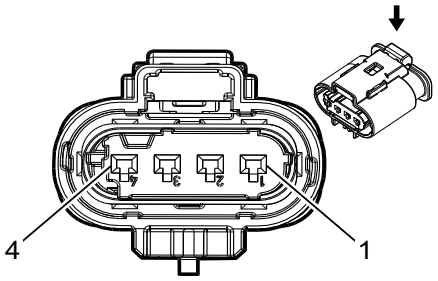
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## T8A Ignition Coil 1 (L82/L84/L87/LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 4450 | Ground | I | — |
| | 0.75 | BK | 4550 | Ground | I | — |
| 2 | 0.5 | BK/BU | 2129 | Ignition Control Low Reference Bank 1 | I | — |
| 3 | 0.5 | BU/VT | 2121 | Ignition Control 1 | I | — |
| 4 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | I | — |

## T8B Ignition Coil 2 (L3B)




2717079

### Connector Part Information

Harness Type: Engine
OEM Connector: 13815341
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

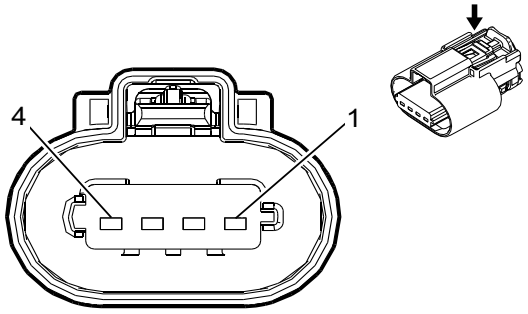
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## T8B Ignition Coil 2 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 450 | Ground | I | — |
| 2 | 0.5 | BK/BU | 2129 | Ignition Control Low Reference Bank 1 | I | — |
| 3 | 0.5 | BU/WH | 2122 | Ignition Control 2 | I | — |
| 4 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | I | — |

## T8B Ignition Coil 2 (L82/L84/L87/LV3)




3240115

### Connector Part Information

Harness Type: Engine
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 150 MX Series, Sealed (BK)

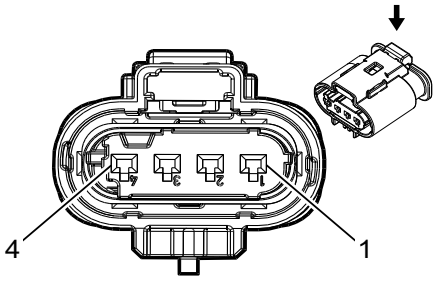
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### T8B Ignition Coil 2 (L82/L84/L87/LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 350 | Ground | I | — |
| | 0.75 | BK | 4550 | Ground | I | — |
| 2 | 0.5 | BK/GY | 2130 | Ignition Control Low Reference Bank 2 | I | — |
| 3 | 0.5 | BU/WH | 2122 | Ignition Control 2 | I | — |
| 4 | 0.75 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | I | — |

## T8C Ignition Coil 3 (L3B)




2717079

### Connector Part Information

Harness Type: Engine
OEM Connector: 13815341
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

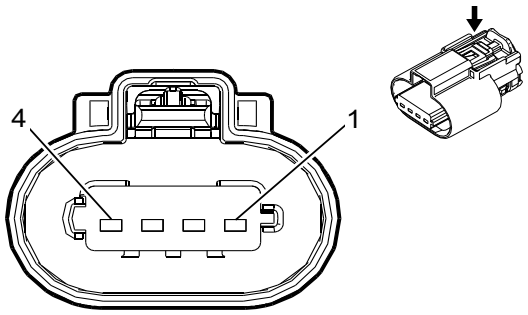
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### T8C Ignition Coil 3 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 450 | Ground | I | — |
| 2 | 0.5 | BK/BU | 2129 | Ignition Control Low Reference Bank 1 | I | — |
| 3 | 0.5 | GN/BU | 2123 | Ignition Control 3 | I | — |
| 4 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | I | — |

### T8C Ignition Coil 3 (L82/L84/L87/LV3)




3240115

### Connector Part Information

Harness Type: Engine
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 150 MX Series, Sealed (BK)

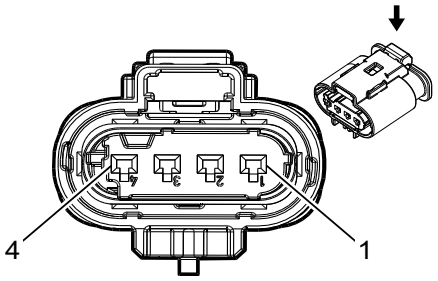
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## T8C Ignition Coil 3 (L82/L84/L87/LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 4450 | Ground | I | — |
| | 0.75 | BK | 4550 | Ground | I | — |
| 2 | 0.5 | BK/BU | 2129 | Ignition Control Low Reference Bank 1 | I | — |
| 3 | 0.5 | GN/BU | 2123 | Ignition Control 3 | I | — |
| 4 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | I | — |

## T8D Ignition Coil 4 (L3B)




2717079

### Connector Part Information

Harness Type: Engine
OEM Connector: 13815341
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

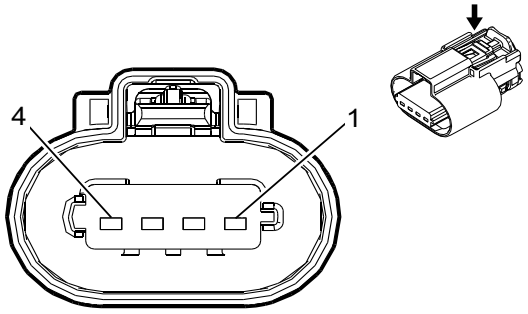
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## T8D Ignition Coil 4 (L3B)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 450 | Ground | I | — |
| 2 | 0.5 | BK/BU | 2129 | Ignition Control Low Reference Bank 1 | I | — |
| 3 | 0.5 | YE/BU | 2124 | Ignition Control 4 | I | — |
| 4 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | I | — |

## T8D Ignition Coil 4 (L82/L84/L87/LV3)




3240115

### Connector Part Information

Harness Type: Engine
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 150 MX Series, Sealed (BK)

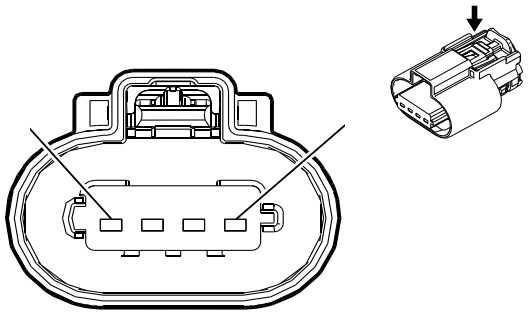
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## T8D Ignition Coil 4 (L82/L84/L87/LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 4450 | Ground | I | — |
| | 0.75 | BK | 4550 | Ground | I | — |
| 2 | 0.5 | BK/GY | 2130 | Ignition Control Low Reference Bank 2 | I | — |
| 3 | 0.5 | YE/BU | 2124 | Ignition Control 4 | I | — |
| 4 | 0.75 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | I | — |

## T8E Ignition Coil 5 (L82/L84/L87/LV3)



3240115

### Connector Part Information

Harness Type: Engine
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 150 MX Series, Sealed (BK)

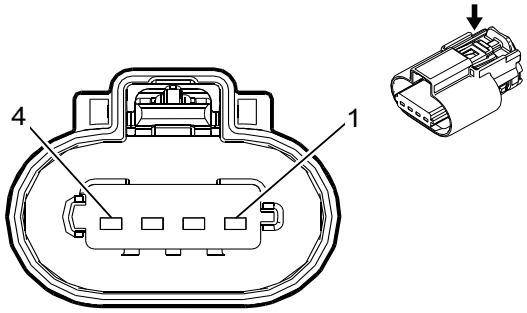
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## T8E Ignition Coil 5 (L82/L84/L87/LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 4550 | Ground | I | L82/L84/L87 |
| | 0.75 | BK | 4450 | Ground | I | LV3 |
| 2 | 0.5 | BK/BU | 2129 | Ignition Control Low Reference Bank 1 | I | — |
| 3 | 0.5 | BU/GY | 2125 | Ignition Control 5 | I | — |
| 4 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | I | — |

## T8F Ignition Coil 6 (L82/L84/L87/LV3)




3240115

### Connector Part Information

Harness Type: Engine
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 150 MX Series, Sealed (BK)

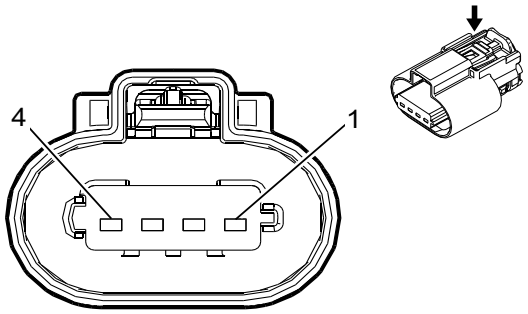
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## T8F Ignition Coil 6 (L82/L84/L87/LV3)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 4550 | Ground | I | L82/L84/L87 |
| | 0.5 | BK | 4450 | Ground | I | LV3 |
| 2 | 0.5 | BK/GY | 2130 | Ignition Control Low Reference Bank 2 | I | — |
| 3 | 0.5 | BN/BU | 2126 | Ignition Control 6 | I | — |
| 4 | 0.75 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | I | L82/L84/L87 |
| | 0.5 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | I | LV3 |

## T8G Ignition Coil 7 (L82/L84/L87)




3240115

### Connector Part Information

Harness Type: Engine
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 150 MX Series, Sealed (BK)

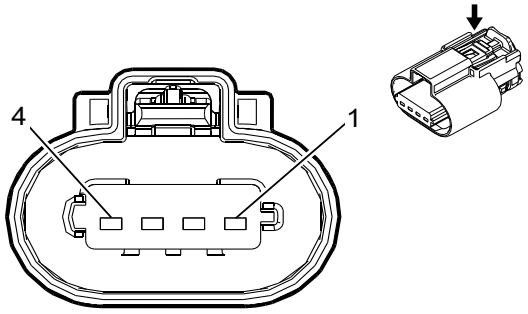
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## T8G Ignition Coil 7 (L82/L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 4550 | Ground | I | — |
| 2 | 0.5 | BK/BU | 2129 | Ignition Control Low Reference Bank 1 | I | — |
| 3 | 0.5 | GN/GY | 2127 | Ignition Control 7 | I | — |
| 4 | 0.75 | VT/BU | 5291 | Powertrain Main Relay Fused Supply 2 | I | — |

## T8H Ignition Coil 8 (L82/L84/L87)




3240115

### Connector Part Information

Harness Type: Engine
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 150 MX Series, Sealed (BK)

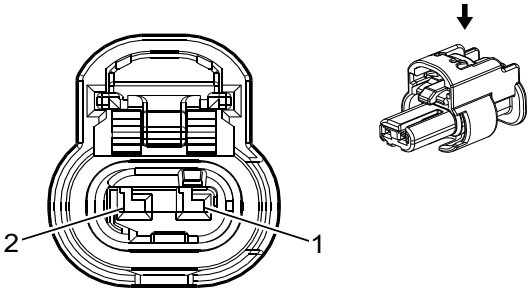
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### T8H Ignition Coil 8 (L82/L84/L87)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 4550 | Ground | I | — |
| 2 | 0.5 | BK/GY | 2130 | Ignition Control Low Reference Bank 2 | I | — |
| 3 | 0.5 | VT/WH | 2128 | Ignition Control 8 | I | — |
| 4 | 0.75 | VT/BU | 5292 | Powertrain Main Relay Fused Supply 3 | I | — |

## T10B Keyless Entry Antenna - Instrument Panel Compartment (BTM)




4649903

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33327048
Service Connector: 19366858
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

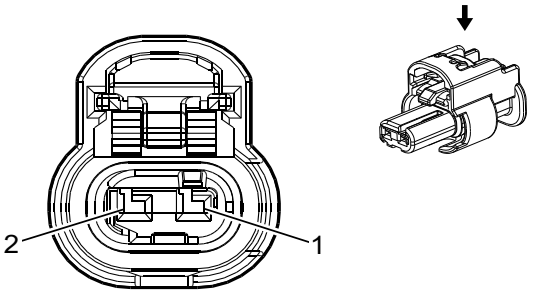
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### T10B Keyless Entry Antenna - Instrument Panel Compartment (BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/BK | 3552 | Passive Start Interior Antenna 1 Signal Hi | I | — |
| 2 | 0.5 | WH | 3553 | Passive Start Interior Antenna 1 Signal Lo | I | — |

### T10E Keyless Entry Antenna - Rear Compartment (BTM)




4649903

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33327048
Service Connector: 19366858
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

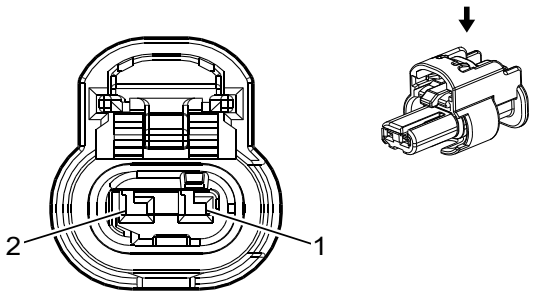
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### T10E Keyless Entry Antenna - Rear Compartment (BTM)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN/GN | 3568 | Passive Entry Rear Closure Antenna Signal Hi | I | — |
| 2 | 0.5 | GN/GY | 3569 | Passive Entry Rear Closure Antenna Signal Lo | I | — |

## T10J Keyless Entry Antenna - Center Console Front (BTM+D07)




4649903

### Connector Part Information

Harness Type: Floor Console
OEM Connector: 33327048
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

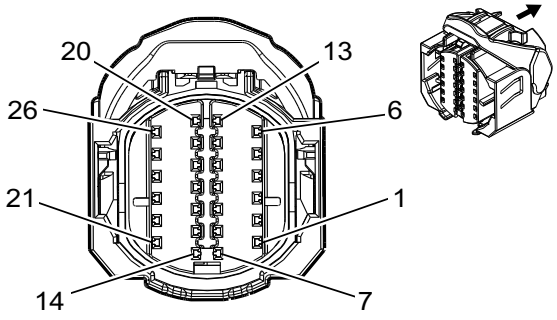
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### T10J Keyless Entry Antenna - Center Console Front (BTM+D07)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BU | 3554 | Passive Start Interior Antenna 2 Signal Hi | I | — |
| 2 | 0.5 | GY/BK | 3555 | Passive Start Interior Antenna 2 Signal Lo | I | — |

## T12 Automatic Transmission Assembly X1 (MQB)




4420489

### Connector Part Information

Harness Type: Engine
OEM Connector: 33178413

Service Connector: 13596549
Description: 26-Way F 1.2 MCON-CB Series, Sealed (BK)

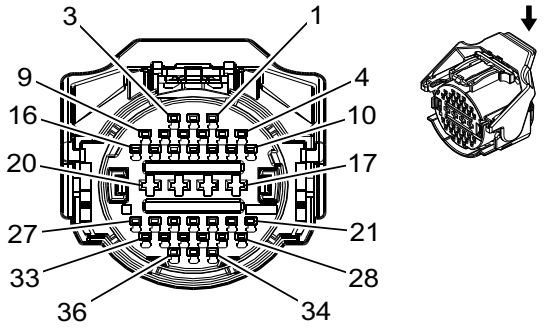
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## T12 Automatic Transmission Assembly X1 (MQB)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/YE | 6353 | Input Speed Signal | I | — |
| 2 | 0.5 | GN/VT | 4510 | Transmission Intermediate Speed Signal | I | — |
| 3 | 0.5 | BN/WH | 6254 | Transmission Input Speed Sensor Signal | I | — |
| 4 | 0.5 | GY/BU | 6358 | Output Speed Signal | I | — |
| 5 | 0.5 | GN/YE | 5724 | Ignition Mode Switch Mode Control | I | MQB |
| | 0.5 | VT/BU | 5724 | Ignition Mode Switch Mode Control | I | MQB |
| 6 | 0.5 | WH/BU | 5726 | Ignition Mode Switch Mode Control Backup | I | — |
| 7 | 0.5 | YE/GN | 4170 | Transmission Position Sensor B 9V Reference | I | — |
| 8 | 0.5 | YE/BU | 4171 | Transmission Position Sensor A 9V Reference | I | — |
| 9 | 0.5 | GY/BN | 6388 | Transmission High Side Driver 2 Signal | I | — |
| 10 | 0.75 | RD/VT | 7940 | Battery Positive Voltage | I | — |
| 11 | 0.5 | GN/GY | 6387 | Transmission High Side Driver 1 Signal Driver | I | — |
| 12 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | I | — |
| 13 | 0.5 | BN/WH | 585 | Transmission Oil Temperature Sensor Signal | I | — |
| 14 | 0.5 | YE/BN | 6404 | Clutch E Control | I | — |
| 15 | 0.5 | GY/GN | 6403 | Clutch D Control | I | — |
| 16 | 0.5 | GY | 6402 | Clutch C Control | I | — |
| 17 | 1 | BK | 4450 | Ground | I | — |
| | 1.5 | BK | 4450 | Ground | I | — |
| 18 | 0.5 | GN/WH | 2968 | Transmission Auxiliary Oil Pump Control | I | — |
| 19 | 0.5 | GN/BK | 7819 | Default Disable Solenoid Control | I | — |
| 20 | 0.5 | BK/GN | 580 | Engine Control Sensors Low Reference (2) | I | — |
| 21 | 0.5 | VT | 4509 | Transmission Clutch F Control | I | — |
| 22 | 0.5 | WH/BU | 4507 | Transmission Clutch H Control | I | — |
| 23 | 0.5 | WH | 4508 | Transmission Clutch G Control | I | — |
| 24 | 0.5 | GN/WH | 1530 | Transmission Mainline Pressure Solenoid Control | I | — |
| 25 | 0.5 | VT/WH | 422 | Torque Converter Clutch Solenoid Control | I | — |
| 26 | 0.5 | BK/BN | 586 | Transmission Oil Temperature Sensor Low Reference | I | — |

## T12 Automatic Transmission Assembly X1 (MQE)




3621473

### Connector Part Information

Harness Type: Engine
OEM Connector: 15532799
Service Connector: 19332681
Description: 36-Way F 1.2 MCON-CB, 2.8 MCP Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1241388-1 | Lear 17 | E | C |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

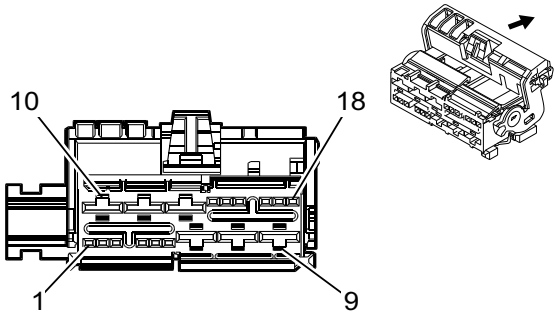
### T12 Automatic Transmission Assembly X1 (MQE)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/WH | 6380 | TCC On/Off Solenoid A Control | II | — |
| 2 | 0.5 | GN/GY | 6387 | Transmission High Side Driver 1 Signal Driver | II | — |
| 3 | 0.5 | VT/WH | 422 | Torque Converter Clutch Solenoid Control | II | — |
| 4 | 0.5 | GN/WH | 1530 | Transmission Mainline Pressure Solenoid Control | II | — |
| 5 | 0.5 | BN | 6400 | Clutch A Control | II | — |
| 6 | 0.5 | BU | 6401 | Clutch B Control | II | — |
| 7 | 0.5 | YE/BN | 6210 | TCC On/Off Solenoid B Control | II | — |
| 8 | 0.5 | WH/GY | 4578 | Surge Accumulator Solenoid Low Side Control | II | — |
| 9 | — | — | — | Not Occupied | — | — |
| 10 | 0.5 | GY | 6402 | Clutch C Control | II | — |
| 11 | 0.5 | BK/BN | 586 | Transmission Oil Temperature Sensor Low Reference | II | — |
| 12 | 0.5 | BN/WH | 585 | Transmission Oil Temperature Sensor Signal | II | — |
| 13 | 0.5 | WH | 4508 | Transmission Clutch G Control | II | — |
| 14 | 0.5 | WH/BU | 4507 | Transmission Clutch H Control | II | — |
| 15 - 17 | — | — | — | Not Occupied | — | — |
| 18 | 0.5 | GN/GY | 6387 | Transmission High Side Driver 1 Signal Driver | I | — |
| 19 | 0.5 | GY/BN | 6388 | Transmission High Side Driver 2 Signal | I | — |
| 20 | — | — | — | Not Occupied | — | — |

## T12 Automatic Transmission Assembly X1 (MQE) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 21 | 0.5 | GN/YE | 3337 | Transmission Internal Mode Switch Mode Control A | II | — |
| 22 | 0.5 | BN/WH | 3338 | Transmission Internal Mode Switch Mode Control B | II | — |
| 23 | — | — | — | Not Occupied | — | — |
| 24 | 0.5 | GY/BU | 6358 | Output Speed Signal | II | — |
| 25 | 0.5 | YE/GN | 4170 | Transmission Position Sensor B 9V Reference | II | — |
| 26 | 0.5 | BN/WH | 6254 | Transmission Input Speed Sensor Signal | II | — |
| 27 | 0.5 | YE/BU | 4171 | Transmission Position Sensor A 9V Reference | II | — |
| 28 | — | — | — | Not Occupied | — | — |
| 29 | 0.5 | WH/RD | 480 | Engine Control Sensors 5 Volt Reference (2) | II | — |
| 30 | 0.5 | BK/GY | 626 | Engine Control Sensors Low Reference (3) | II | — |
| 31 | — | — | — | Not Occupied | — | — |
| 32 | 0.5 | GN/VT | 4510 | Transmission Intermediate Speed Signal | II | — |
| 33 - 36 | — | — | — | Not Occupied | — | — |

## T19 Power Supply Transformer (KL9)




3825662

### Connector Part Information

Harness Type: Body
OEM Connector: 15534193
Service Connector: 19330678
Description: 18-Way F 0.64 MTS, 6.3 MCP Series (BK)

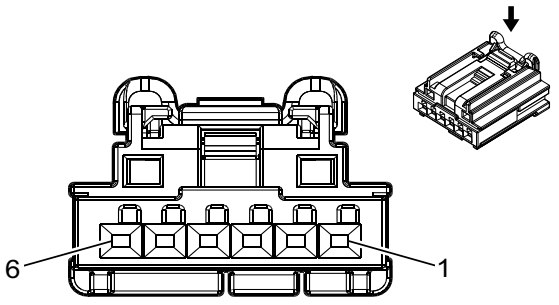
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | 1241408-1 | Lear 28 | A | B |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## T19 Power Supply Transformer (KL9)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 - 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.35 | VT/YE | 5985 | Accessory Wakeup Serial Data | II | — |
| 5 | 0.5 | YE/BK | 625 | Starter Enable Relay Control | II | — |
| 6 | 0.5 | VT/GN | 1739 | Run/Crank Ignition 1 Voltage | II | — |
| 7 | 2.5 | BK | 1250 | Ground | I | — |
| 8 | 2.5 | RD/YE | 8140 | Battery Positive Voltage | I | — |
| 9 | 2.5 | RD/GN | 2173 | 12V Regulated Supply Voltage 2 | I | — |
| 10 | 2.5 | RD/YE | 2172 | 12V Regulated Supply Voltage 1 | I | — |
| 11 | 2.5 | RD/WH | 8040 | Battery Positive Voltage | I | — |
| 12 | 2.5 | BK | 1150 | Ground | I | — |
| 13 | 0.5 | WH | 7494 | High Speed GMLAN Serial Data (-)3 | II | — |
| 14 | 0.5 | WH | 7494 | High Speed GMLAN Serial Data (-)3 | II | — |
| 15 | 0.5 | BU/BK | 7493 | High Speed GMLAN Serial Data (+)3 | II | — |
| 16 | 0.5 | BU/BK | 7493 | High Speed GMLAN Serial Data (+)3 | II | — |
| 17 | 0.5 | WH | 7494 | High Speed GMLAN Serial Data (-)3 | II | — |
| 18 | 0.5 | BU/BK | 7493 | High Speed GMLAN Serial Data (+)3 | II | — |

## T22 Mobile Device Wireless Charger Module (K4C)




3960313

### Connector Part Information

Harness Type: Floor Console
OEM Connector: 13920633
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Generation Y Series (BK)

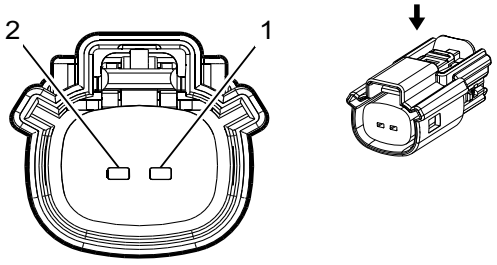
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## T22 Mobile Device Wireless Charger Module (K4C)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT | 4601 | Retained Accessory Power Fused Control | I | — |
| 2 | 0.5 | BK | 1250 | Ground | I | — |
| 3 | 0.35 | GN | 4512 | Wireless Charging System Charge Indicator Control | I | — |
| 4 | 0.5 | BN | 4511 | Wireless Charging System Fault Indicator Control | I | — |
| 5 - 6 | — | — | — | Not Occupied | — | — |

## TBD1 Pickup Box Endgate Latch (QK1)




2474713

### Connector Part Information

Harness Type: Endgate
OEM Connector: 13782480
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series, Sealed (BK)

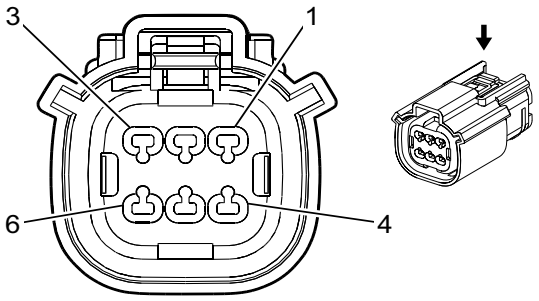
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## TBD1 Pickup Box Endgate Latch (QK1)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | GN | 1299 | Major Endgate Motor Supply Voltage | I | — |
| 2 | 0.5 | YE/BK | 7730 | Major Endgate Motor Return | I | — |

## X80C Accessory Power Receptacle - Cargo (KC9/KCA)




1986157

### Connector Part Information

Harness Type: Power Inverter Module Jumper
OEM Connector: 15533832
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 150 MX Series, Sealed (BK)

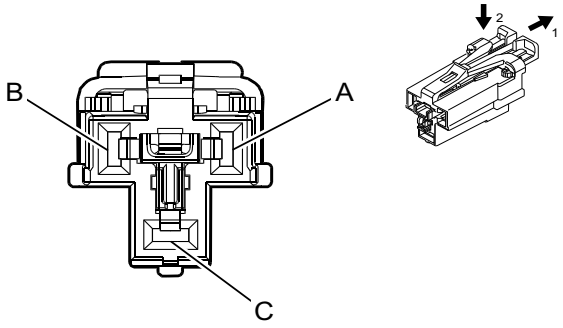
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X80C Accessory Power Receptacle - Cargo (KC9/KCA)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BN | 7754 | AC Power Outlet Enable | I | — |
| 2 | 0.75 | GN/BN | 2266 | DC To AC Inverter Control 2 | I | — |
| 3 | — | — | — | Not Occupied | — | — |
| 4 | 0.75 | BK/WH | 2264 | 120 VAC Phase A 2 | I | — |
| 5 | 1 | BK | 6650 | Ground (66) Propulsion System | I | — |
| 6 | 0.75 | RD/WH | 2265 | 120 VAC Phase B 2 | I | — |

## X80G Accessory Power Receptacle - Instrument Panel




4872413

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33386302
Service Connector: 19369281
Description: 3-Way F 2.8 APEX Series (GY)

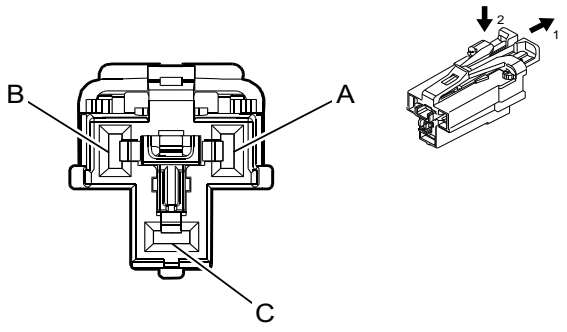
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### X80G Accessory Power Receptacle - Instrument Panel

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 1.5 | RD/BN | 4240 | Battery Positive Voltage | I | — |
| B | — | — | — | Not Occupied | — | — |
| C | 1.5 | BK | 1050 | Ground | I | — |

### X80L Accessory Power Receptacle - Center Console Rear (A50/D07)




4872413

### Connector Part Information

Harness Type: Floor Console
OEM Connector: 33386302
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 2.8 APEX Series (GY)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

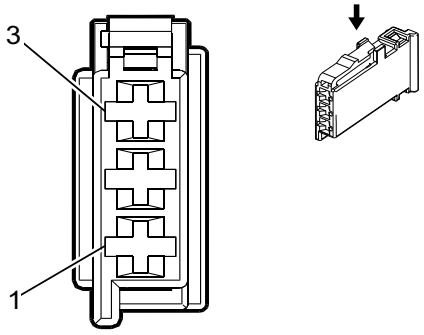
### X80L Accessory Power Receptacle - Center Console Rear (A50/D07)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 1.5 | RD/WH | 1040 | Battery Positive Voltage | I | — |

## X80L Accessory Power Receptacle - Center Console Rear (A50/D07) (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| B | — | — | — | Not Occupied | — | — |
| C | 1.5 | BK | 1250 | Ground | I | — |

## X81 Accessory Power Receptacle - 110V AC X1 (KI4/KI5)




2039656

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 10865339
Service Connector: 93186706
Description: 3-Way F 1.6 Micro-Timer Series (BK)

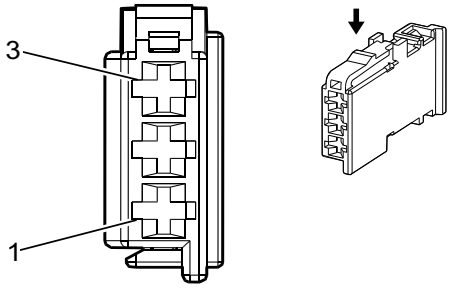
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X81 Accessory Power Receptacle - 110V AC X1 (KI4/KI5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BN | 7754 | AC Power Outlet Enable | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.75 | BK | 5683 | 120 V AC Phase A | I | — |

## X81 Accessory Power Receptacle - 110V AC X2 (KI4/KI5)




2236412

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13648774
Service Connector: 19367740
Description: 3-Way F 1.6 Timer Series, Sealed (GY)

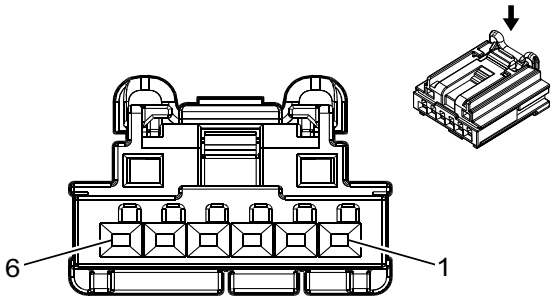
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-14 (GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

### X81 Accessory Power Receptacle - 110V AC X2 (KI4/KI5)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | BU/BN | 6807 | DC To AC Inverter Control | I | — |
| 2 | — | — | — | Not Occupied | — | — |
| 3 | 0.75 | RD | 5684 | 120 V AC Phase B | I | — |

## X83 Auxiliary Audio Input X1 ((IOS/IOT)+D07)




3960313

### Connector Part Information

Harness Type: Floor Console
OEM Connector: 13920633

Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Generation Y Series (BK)

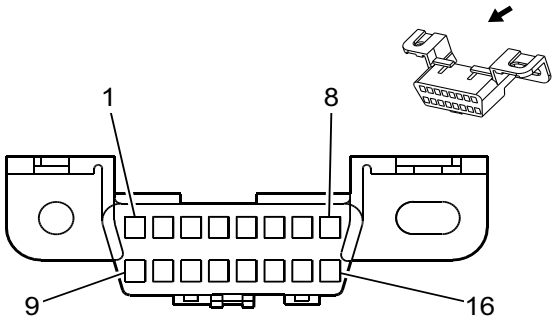
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X83 Auxiliary Audio Input X1 ((IOS/IOT)+D07)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | RD/WH | 1340 | Battery Positive Voltage | I | — |
| 2 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 3 | 0.5 | BK | 1250 | Ground | I | — |
| 4 - 6 | — | — | — | Not Occupied | — | — |

## X84 Data Link Connector




68793

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12110250
Service Connector: 12110250
Description: 16-Way F 150 Metri-Pack Series (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13575724 | J-35616-14 (GN) | J-38125-12A | 12129484 | Delphi 19 | E | C |
| II | 13580059 | J-35616-14 (GN) | J-38125-12A | 12129484 | Delphi 19 | E | C |

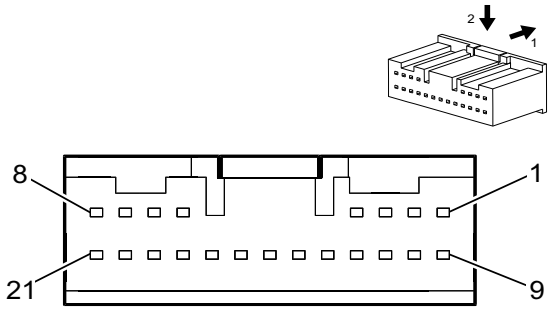
## X84 Data Link Connector

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | GN/WH | 2100 | Low Speed GMLAN Serial Data #3 | I | — |
| 2 | — | — | — | Not Occupied | — | — |

## X84 Data Link Connector (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 3 | 0.35 | BU/WH | 2089 | High Speed GMLAN Serial Data (+)(13) | I | — |
| 4 | 0.35 | BK | 1850 | Ground | I | — |
| 5 | 0.5 | BK/WH | 1851 | Signal Ground | II | — |
| 6 | 0.35 | BU/BK | 1978 | High Speed GMLAN Serial Data (+)(11) | I | — |
| 7 - 10 | — | — | — | Not Occupied | — | — |
| 11 | 0.35 | WH | 2090 | High Speed GMLAN Serial Data (-)(13) | I | — |
| 12 | 0.35 | BU/BN | 1980 | High Speed GMLAN Serial Data (+)(12) | I | — |
| 13 | 0.35 | WH | 1981 | High Speed GMLAN Serial Data (-)(12) | I | — |
| 14 | 0.35 | WH | 1979 | High Speed GMLAN Serial Data (-)(11) | I | — |
| 15 | — | — | — | Not Occupied | — | — |
| 16 | 0.5 | RD/WH | 640 | Battery Positive Voltage | II | — |

## X85 Steering Wheel Air Bag Coil X1




3960237

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33291416
Service Connector: 13510218
Description: 21-Way F 0.64 Series, Sealed (YE)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13575742 | J-35616-64B (LT BU) | J-38125-215A | SAIT-A03T-M064 | Yazaki 14 | P | P |
| II | 13575864 | J-35616-64B (LT BU) | J-38125-215A | SAIT-A03GF-M064 | Yazaki 27 | P | P |
| III | 13575867 | J-35616-64B (LT BU) | J-38125-215A | SAIT-A03T-M064 | Yazaki 14 | P | P |

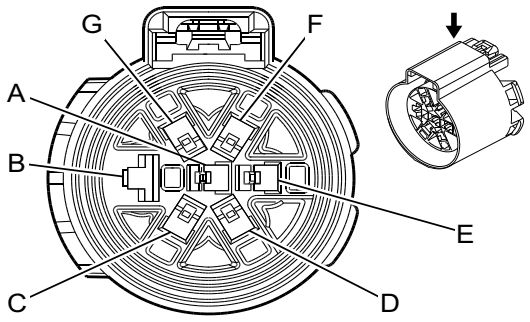
## X85 Steering Wheel Air Bag Coil X1

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | BK/WH | 1851 | Signal Ground | I | — |

## X85 Steering Wheel Air Bag Coil X1 (cont'd)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 2 | 0.35 | GN/WH | 3287 | Horn Switch Signal | III | — |
| 3 - 4 | — | — | — | Not Occupied | — | — |
| 5 | 0.35 | OG/GN | 3023 | Steering Wheel Module Stage 2 High Control | II | — |
| 6 | 0.35 | WH/OG | 3022 | Steering Wheel Module Stage 2 Low Control | II | — |
| 7 | 0.35 | BN/OG | 3020 | Steering Wheel Module Stage 1 Low Control | II | — |
| 8 | 0.35 | OG/VT | 3021 | Steering Wheel Module Stage 1 High Control | II | — |
| 9 | 0.35 | GN/BK | 3894 | Local Interconnect Network Serial Data Bus 12 | III | — |
| 10 | 0.35 | GN/BU | 4119 | Local Interconnect Network Serial Data Bus 19 | III | — |
| 11 | 0.35 | BN/GN | 1884 | Cruise Control Set/Coast/Resume/Accelerate Switch Signal | III | — |
| 12 | 0.35 | WH/RD | 1444 | 12V Reference | III | — |
| 13 | — | — | — | Not Occupied | — | — |
| 14 | 0.35 | RD/YE | 3040 | Battery Positive Voltage | III | — |
| 15 | 0.35 | GY/GN | 5737 | Adaptive Cruise Control Gap Up/Down Switch Signal | III | — |
| 16 | — | — | — | Not Occupied | — | — |
| 17 | 0.5 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 18 - 19 | — | — | — | Not Occupied | — | — |
| 20 | 0.5 | BK | 1850 | Ground | I | — |
| 21 | 0.5 | VT/WH | 1139 | Run/Crank Ignition 1 Voltage | I | — |

## X88 Trailer Connector X1 (U1D)




2056936

### Connector Part Information

Harness Type: Chassis
OEM Connector: 13857223
Service Connector: 15306164
Description: 7-Way F 280, 630 Metri-Pack Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

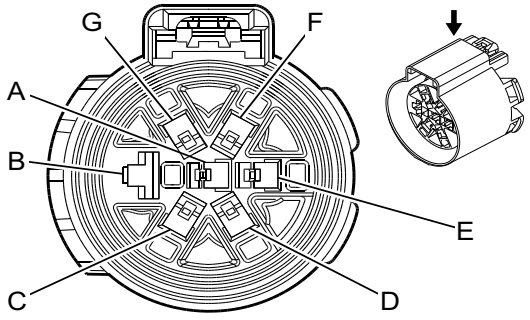
## Terminal Part Information (cont'd)

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| II | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X88 Trailer Connector X1 (U1D)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 0.75 | GN/WH | 5189 | Trailer Backup Lamp Control | II | U1D |
| | 0.75 | WH/GN | 1624 | Trailer Backup Lamp Control | II | -U1D |
| B | 5 | WH | 22 | Trailer Ground | I | — |
| C | 2.5 | BU | 47 | Trailer Auxiliary Control | II | — |
| D | 0.75 | GN/VT | 1619 | Right Rear Trailer Stop/Turn Lamp Control | II | — |
| E | 2 | RD/BN | 7601 | Trailer Battery Charge Control | II | U1D |
| | 4 | RD/GN | 742 | Battery Positive Voltage | II | -U1D |
| F | 0.75 | GY/BN | 2109 | Trailer Park Lamp Control | II | U1D |
| | 1.5 | GY/BN | 2109 | Trailer Park Lamp Control | II | -U1D |
| G | 0.75 | YE/GY | 1618 | Left Rear Trailer Stop/Turn Lamp Control | II | U1D |
| | 0.75 | YE/BU | 318 | Left Rear Trailer Stop/Turn Lamp Control | II | -U1D |

## X88 Trailer Connector X1 (UY2/Z6A)




2056936

### Connector Part Information

Harness Type: Trailer Jumper
OEM Connector: 13857223
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F 280, 630 Metri-Pack Series, Sealed (BK)

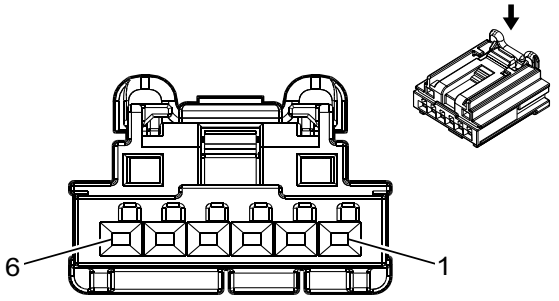
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X88 Trailer Connector X1 (UY2/Z6A)

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| A | 1 | GN | 1624 | Trailer Backup Lamp Control | II | — |
| B | 5 | WH | 22 | Trailer Ground | I | — |
| C | 3 | BU | 47 | Trailer Auxiliary Control | II | — |
| D | 0.8 | GN | 1619 | Right Rear Trailer Stop/Turn Lamp Control | II | — |
| E | 3 | RD/BK | 742 | Battery Positive Voltage | II | — |
| F | 1 | BN | 2109 | Trailer Park Lamp Control | II | — |
| G | 0.8 | YE | 1618 | Left Rear Trailer Stop/Turn Lamp Control | II | — |

## X92 USB Receptacle X1 (D07+(IOS/IOT))




3960313

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13920633
Service Connector: 19332786
Description: 6-Way F 0.64 Generation Y Series (BK)

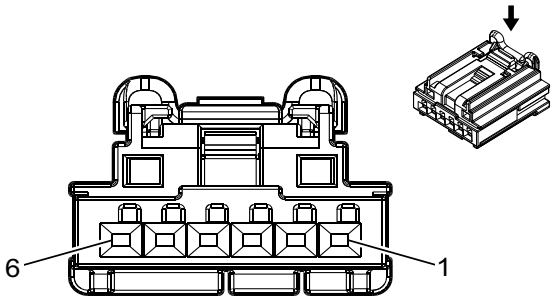
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X92 USB Receptacle X1 (D07+(IOS/IOT))

| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.35 | RD/WH | 1340 | Battery Positive Voltage | I | — |
| 2 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | — |
| 3 | 0.35 | BK/WH | 1851 | Signal Ground | I | — |
| 4 - 6 | — | — | — | Not Occupied | — | — |

### X92C USB Receptacle - Center Console Rear ((IOS/IOT)+(A50/D07))




3960313

**Connector Part Information**

Harness Type: Floor Console
OEM Connector: 13920633
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Generation Y Series (BK)

**Terminal Part Information**

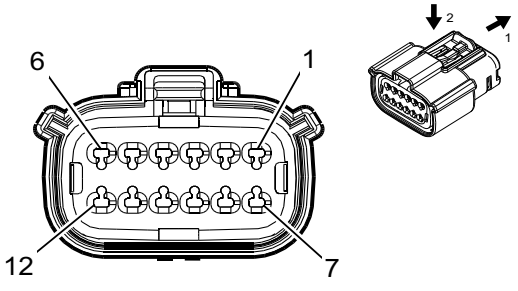
| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-64B (LT BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

**X92C USB Receptacle - Center Console Rear ((IOS/IOT)+(A50/D07))**

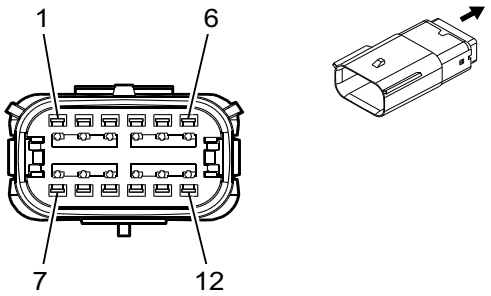
| Pin | Size | Color | Circuit | Function | Terminal Type ID | Option |
|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/YE | 143 | Accessory Ignition Voltage | I | — |
| 2 | 0.35 | YE | 6817 | LED Backlight Dimming Control | I | IOS/IOT |
| | 0.5 | YE | 6817 | LED Backlight Dimming Control | I | -IOS-IOT |
| 3 | 0.5 | BK | 1250 | Ground | I | — |
| 4 - 6 | — | — | — | Not Occupied | — | — |

## Inline Harness Connector End Views

### X100 Front Bumper Harness to Body Harness (X88+(Extended Cab/Regular Cab) +B26+T3U)




2871860




4862194

### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 35104104
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 150 MX Series, Sealed (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 15521147
Service Connector: 19371239
Description: 12-Way M 1.5 OCS Series, Sealed (BK)

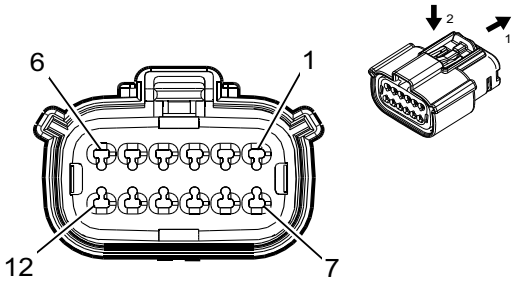
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

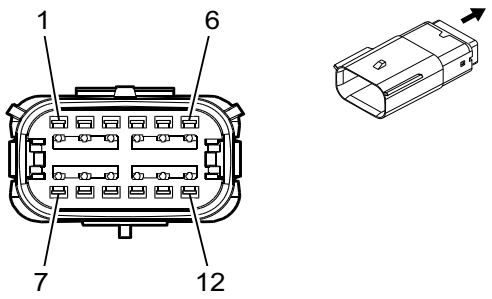
## X100 Front Bumper Harness to Body Harness (X88+(Extended Cab/Regular Cab) +B26+T3U)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | BK | 250 | I | — | Ground | 1 | 0.5 | BK | 250 | II | — |
| 2 - 3 | — | — | — | — | — | Not Occupied | 2 - 3 | — | — | — | — | — |
| 4 | 0.5 | BK | 150 | I | — | Ground | 4 | 0.75 | BK | 150 | II | — |
| 5 - 8 | — | — | — | — | — | Not Occupied | 5 - 8 | — | — | — | — | — |
| 9 | 0.5 | BN/ VT | 2234 | I | — | Front Fog Lamp Control | 9 | 0.5 | BN/ VT | 2234 | II | — |
| 10 - 12 | — | — | — | — | — | Not Occupied | 10 - 12 | — | — | — | — | — |

# X100 Front Bumper Harness to Body Harness (X88+(Extended Cab/Regular Cab) +B26-T3U)




2871860




4862194

### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 35104106
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 150 MX Series, Sealed (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 15521147
Service Connector: 19371239
Description: 12-Way M 1.5 OCS Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

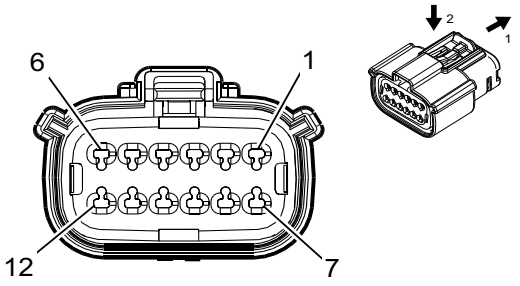
## X100 Front Bumper Harness to Body Harness (X88+(Extended Cab/Regular Cab) +B26-T3U)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | — | — | — | — | — | Not Occupied | 1 | — | — | — | — | — |
| 2 | 0.5 | VT/ GY | 5218 | I | — | Front Parking Right Mid Sensor | 2 | 0.5 | VT/ GY | 5218 | II | — |
| 3 | 0.5 | WH/ GY | 5217 | I | — | Front Parking Right Corner Sensor | 3 | 0.5 | WH/ GY | 5217 | II | — |
| 4 | — | — | — | — | — | Not Occupied | 4 | — | — | — | — | — |
| 5 | 0.5 | VT/ WH | 5215 | I | — | Front Parking Left Corner Sensor | 5 | 0.5 | VT/ WH | 5215 | II | — |
| 6 | 0.5 | BK/ BU | 5214 | I | — | Front Parking Sensor Low Reference | 6 | 0.5 | BK/ BU | 5214 | II | — |
| 7 | 0.5 | YE/ GY | 5216 | I | — | Front Parking Left Mid Sensor | 7 | 0.5 | YE/ GY | 5216 | II | — |

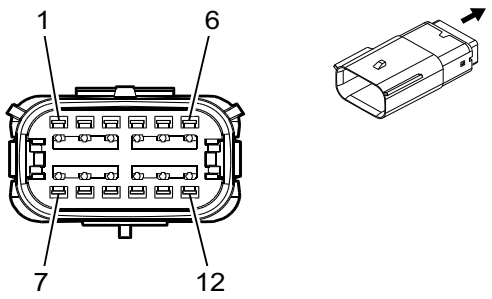
## X100 Front Bumper Harness to Body Harness (X88+(Extended Cab/Regular Cab) +B26-T3U) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 0.5 | YE/ VT | 5213 | I | — | Front Parking Left/ Right/Mid Sensor | 8 | 0.5 | YE/ VT | 5213 | II | — |
| 9 - 12 | — | — | — | — | — | Not Occupied | 9 - 12 | — | — | — | — | — |

# X100 Front Bumper Harness to Body Harness (X88+(Extended Cab/Regular Cab) +T3U-B26)




2871860




4862194

### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 33276998
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 150 MX Series, Sealed (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 15521147
Service Connector: 19371239
Description: 12-Way M 1.5 OCS Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

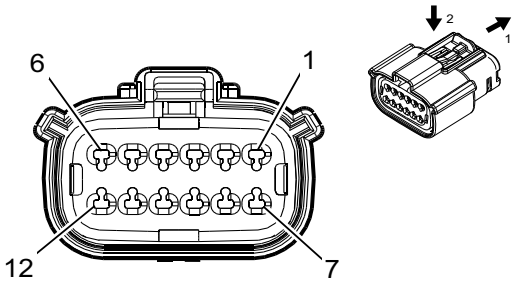
## X100 Front Bumper Harness to Body Harness (X88+(Extended Cab/Regular Cab) +T3U-B26)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | BK | 250 | I | — | Ground | 1 | 0.5 | BK | 250 | II | — |
| 2 | 0.5 | VT/ GY | 5218 | I | — | Front Parking Right Mid Sensor | 2 | 0.5 | VT/ GY | 5218 | II | — |
| 3 | 0.5 | WH/ GY | 5217 | I | — | Front Parking Right Corner Sensor | 3 | 0.5 | WH/ GY | 5217 | II | — |
| 4 | 0.5 | BK | 150 | I | — | Ground | 4 | 0.75 | BK | 150 | II | — |
| 5 | 0.5 | VT/ WH | 5215 | I | — | Front Parking Left Corner Sensor | 5 | 0.5 | VT/ WH | 5215 | II | — |
| 6 | 0.5 | BK/ BU | 5214 | I | — | Front Parking Sensor Low Reference | 6 | 0.5 | BK/ BU | 5214 | II | — |
| 7 | 0.5 | YE/ GY | 5216 | I | — | Front Parking Left Mid Sensor | 7 | 0.5 | YE/ GY | 5216 | II | — |

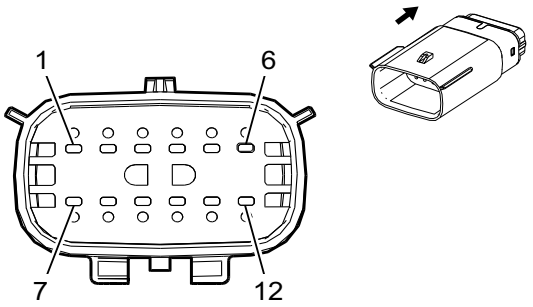
## X100 Front Bumper Harness to Body Harness (X88+(Extended Cab/Regular Cab) +T3U-B26) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 0.5 | YE/ VT | 5213 | I | — | Front Parking Left/ Right/Mid Sensor | 8 | 0.5 | YE/ VT | 5213 | II | — |
| 9 | 0.5 | BN/ VT | 2234 | I | — | Front Fog Lamp Control | 9 | 0.5 | BN/ VT | 2234 | II | — |
| 10 - 12 | — | — | — | — | — | Not Occupied | 10 - 12 | — | — | — | — | — |

# X100 Front Bumper Harness to Body Harness (X88+Crew Cab+B26+T3U)




2871860




2424959

### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 35104104
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 150 MX Series, Sealed (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 13534850
Service Connector: 19369242
Description: 12-Way M 150 MX Series, Sealed (BK)

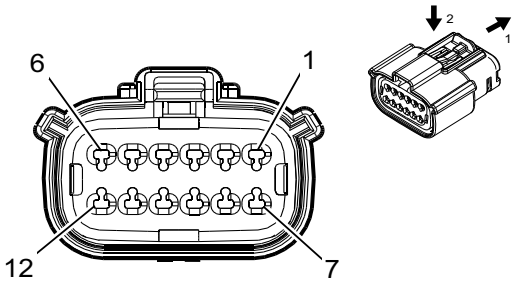
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

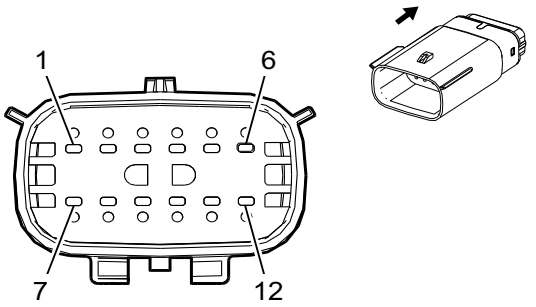
## X100 Front Bumper Harness to Body Harness (X88+Crew Cab+B26+T3U)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | BK | 250 | I | — | Ground | 1 | 0.5 | BK | 250 | II | — |
| 2 - 3 | — | — | — | — | — | Not Occupied | 2 - 3 | — | — | — | — | — |
| 4 | 0.5 | BK | 150 | I | — | Ground | 4 | 0.5 | BK | 150 | II | — |
| 5 - 8 | — | — | — | — | — | Not Occupied | 5 - 8 | — | — | — | — | — |
| 9 | 0.5 | BN/VT | 2234 | I | — | Front Fog Lamp Control | 9 | 0.5 | BN/VT | 2234 | II | — |
| 10 - 12 | — | — | — | — | — | Not Occupied | 10 - 12 | — | — | — | — | — |

# X100 Front Bumper Harness to Body Harness (X88+Crew Cab+B26-T3U)




2871860




2424959

### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 35104106
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 150 MX Series, Sealed (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 13534850
Service Connector: 19369242
Description: 12-Way M 150 MX Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

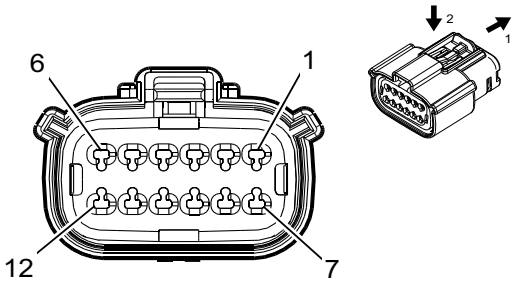
## X100 Front Bumper Harness to Body Harness (X88+Crew Cab+B26-T3U)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | — | — | — | — | — | Not Occupied | 1 | — | — | — | — | — |
| 2 | 0.5 | VT/GY | 5218 | I | — | Front Parking Right Mid Sensor | 2 | 0.5 | VT/GY | 5218 | II | — |
| 3 | 0.5 | WH/GY | 5217 | I | — | Front Parking Right Corner Sensor | 3 | 0.5 | WH/GY | 5217 | II | — |
| 4 | — | — | — | — | — | Not Occupied | 4 | — | — | — | — | — |
| 5 | 0.5 | VT/WH | 5215 | I | — | Front Parking Left Corner Sensor | 5 | 0.5 | VT/WH | 5215 | II | — |
| 6 | 0.5 | BK/BU | 5214 | I | — | Front Parking Sensor Low Reference | 6 | 0.5 | BK/BU | 5214 | II | — |
| 7 | 0.5 | YE/GY | 5216 | I | — | Front Parking Left Mid Sensor | 7 | 0.5 | YE/GY | 5216 | II | — |

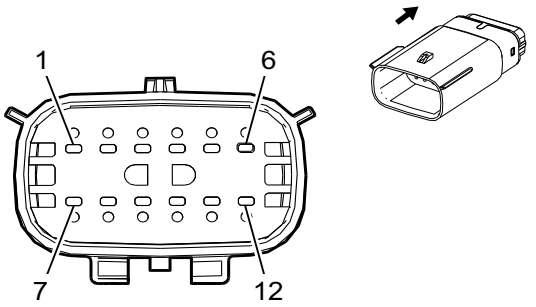
## X100 Front Bumper Harness to Body Harness (X88+Crew Cab+B26-T3U) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 0.5 | YE/ VT | 5213 | I | — | Front Parking Left/ Right/Mid Sensor | 8 | 0.5 | YE/ VT | 5213 | II | — |
| 9 - 12 | — | — | — | — | — | Not Occupied | 9 - 12 | — | — | — | — | — |

# X100 Front Bumper Harness to Body Harness (X88+Crew Cab+T3U-B26)




2871860




2424959

### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 33276998
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 150 MX Series, Sealed (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 13534850
Service Connector: 19369242
Description: 12-Way M 150 MX Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

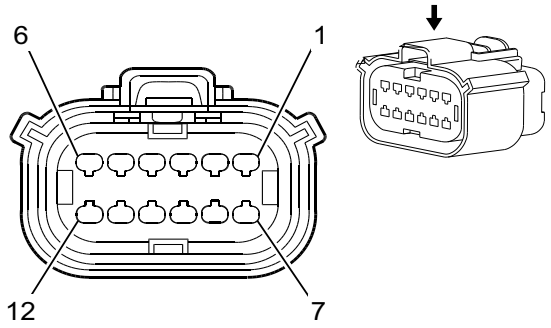
## X100 Front Bumper Harness to Body Harness (X88+Crew Cab+T3U-B26)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | BK | 250 | I | — | Ground | 1 | 0.5 | BK | 250 | II | — |
| 2 | 0.5 | VT/ GY | 5218 | I | — | Front Parking Right Mid Sensor | 2 | 0.5 | VT/ GY | 5218 | II | — |
| 3 | 0.5 | WH/ GY | 5217 | I | — | Front Parking Right Corner Sensor | 3 | 0.5 | WH/ GY | 5217 | II | — |
| 4 | 0.5 | BK | 150 | I | — | Ground | 4 | 0.5 | BK | 150 | II | — |
| 5 | 0.5 | VT/ WH | 5215 | I | — | Front Parking Left Corner Sensor | 5 | 0.5 | VT/ WH | 5215 | II | — |
| 6 | 0.5 | BK/ BU | 5214 | I | — | Front Parking Sensor Low Reference | 6 | 0.5 | BK/ BU | 5214 | II | — |
| 7 | 0.5 | YE/ GY | 5216 | I | — | Front Parking Left Mid Sensor | 7 | 0.5 | YE/ GY | 5216 | II | — |
| 8 | 0.5 | YE/ VT | 5213 | I | — | Front Parking Left/ Right/Mid Sensor | 8 | 0.5 | YE/ VT | 5213 | II | — |

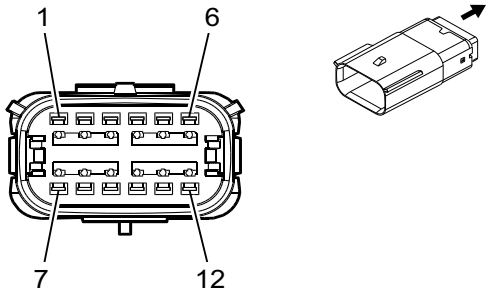
## X100 Front Bumper Harness to Body Harness (X88+Crew Cab+T3U-B26) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0.5 | BN/ VT | 2234 | I | — | Front Fog Lamp Control | 9 | 0.5 | BN/ VT | 2234 | II | — |
| 10 - 12 | — | — | — | — | — | Not Occupied | 10 - 12 | — | — | — | — | — |

# X100 Front Bumper Harness to Body Harness (Z88+(Extended Cab/Regular Cab))




1825165




4862194

### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 13653762
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 1.5 Series, Sealed (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 15521147
Service Connector: 19371239
Description: 12-Way M 1.5 OCS Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

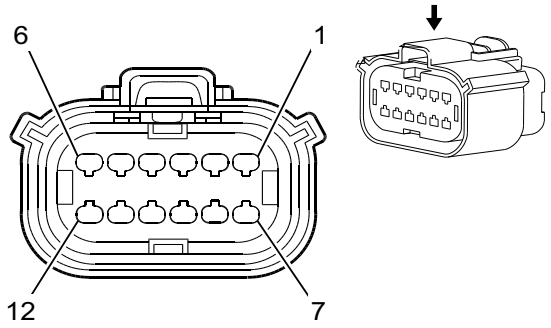
## X100 Front Bumper Harness to Body Harness (Z88+(Extended Cab/Regular Cab))

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | BK | 250 | I | — | Ground | 1 | 0.5 | BK | 250 | II | — |
| 2 | 0.5 | VT/GY | 5218 | I | — | Front Parking Right Mid Sensor | 2 | 0.5 | VT/GY | 5218 | II | — |
| 3 | 0.5 | WH/GY | 5217 | I | — | Front Parking Right Corner Sensor | 3 | 0.5 | WH/GY | 5217 | II | — |
| 4 | 0.5 | BK | 150 | I | — | Ground | 4 | 0.5<br>0.75 | BK<br>BK | 150<br>150 | II<br>II | —<br>— |
| 5 | 0.5 | VT/WH | 5215 | I | — | Front Parking Left Corner Sensor | 5 | 0.5 | VT/WH | 5215 | II | — |
| 6 | 0.5 | BK/BU | 5214 | I | — | Front Parking Sensor Low Reference | 6 | 0.5 | BK/BU | 5214 | II | — |
| 7 | 0.5 | YE/GY | 5216 | I | — | Front Parking Left Mid Sensor | 7 | 0.5 | YE/GY | 5216 | II | — |

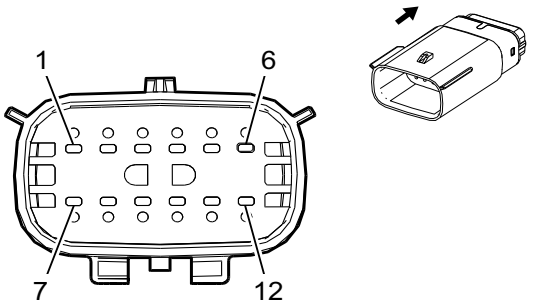
## X100 Front Bumper Harness to Body Harness (Z88+(Extended Cab/Regular Cab)) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 0.5 | YE/ VT | 5213 | I | — | Front Parking Left/ Right/Mid Sensor | 8 | 0.5 | YE/ VT | 5213 | II | — |
| 9 | 0.5 | BN/ VT | 2234 | I | — | Front Fog Lamp Control | 9 | 0.5 | BN/ VT | 2234 | II | — |
| 10 - 12 | — | — | — | — | — | Not Occupied | 10 - 12 | — | — | — | — | — |

# X100 Front Bumper Harness to Body Harness (Z88+Crew Cab)




1825165




2424959

### Connector Part Information

Harness Type: Front Bumper
OEM Connector: 13653762
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 1.5 Series, Sealed (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 13534850
Service Connector: 19369242
Description: 12-Way M 150 MX Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

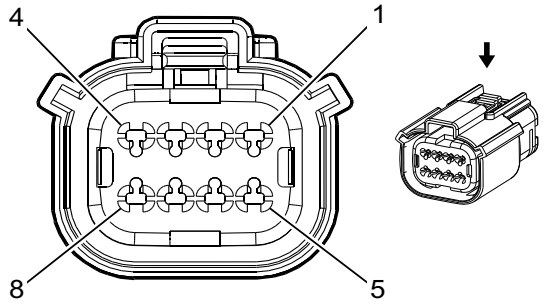
## X100 Front Bumper Harness to Body Harness (Z88+Crew Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | BK | 250 | I | — | Ground | 1 | 0.5 | BK | 250 | II | — |
| 2 | 0.5 | VT/GY | 5218 | I | — | Front Parking Right Mid Sensor | 2 | 0.5 | VT/GY | 5218 | II | — |
| 3 | 0.5 | WH/GY | 5217 | I | — | Front Parking Right Corner Sensor | 3 | 0.5 | WH/GY | 5217 | II | — |
| 4 | 0.5 | BK | 150 | I | — | Ground | 4 | 0.5 | BK | 150 | II | — |
| 5 | 0.5 | VT/WH | 5215 | I | — | Front Parking Left Corner Sensor | 5 | 0.5 | VT/WH | 5215 | II | — |
| 6 | 0.5 | BK/BU | 5214 | I | — | Front Parking Sensor Low Reference | 6 | 0.5 | BK/BU | 5214 | II | — |
| 7 | 0.5 | YE/GY | 5216 | I | — | Front Parking Left Mid Sensor | 7 | 0.5 | YE/GY | 5216 | II | — |
| 8 | 0.5 | YE/VT | 5213 | I | — | Front Parking Left/Right/Mid Sensor | 8 | 0.5 | YE/VT | 5213 | II | — |

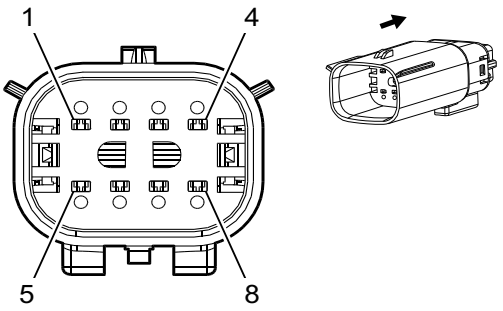
## X100 Front Bumper Harness to Body Harness (Z88+Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0.5 | BN/ VT | 2234 | I | — | Front Fog Lamp Control | 9 | 0.5 | BN/ VT | 2234 | II | — |
| 10 - 12 | — | — | — | — | — | Not Occupied | 10 - 12 | — | — | — | — | — |

# X110 Body Harness to Headlamp - Left Harness (Crew Cab)




2268728




2667653

### Connector Part Information

Harness Type: Body
OEM Connector: 13654393
Service Connector: 19366859
Description: 8-Way F 1.5 Series, Sealed (BK)

### Connector Part Information

Harness Type: Headlamp - Left
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

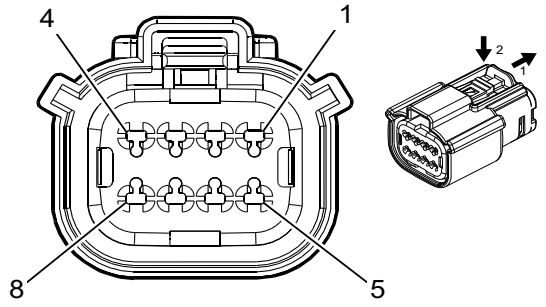
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

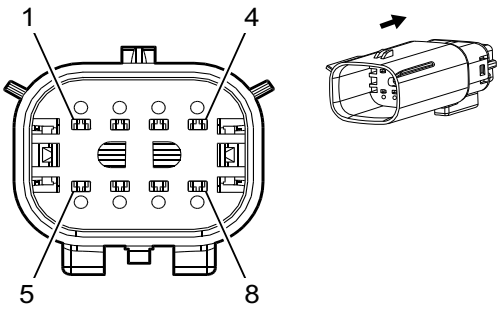
## X110 Body Harness to Headlamp - Left Harness (Crew Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 150 | I | — | Ground | 1 | 0.75 | BK | 150 | II | — |
| 2 | 0.75 | YE | 2227 | I | — | Left Headlamp Control | 2 | 0.75 | YE | 2227 | II | — |
| 3 | 0.75 | YE | 712 | I | — | Left Headlamp Low Beam Control | 3 | 0.75 | YE | 712 | II | — |
| 4 | 0.75 | WH | 711 | I | — | Left Headlamp High Beam Control | 4 | 0.75 | WH | 711 | II | — |
| 5 | 0.5 | VT/ GY | 709 | I | — | Left Park Lamp Control | 5 | 0.5 | VT/ GY | 709 | II | — |
| 6 | 0.35 | BU/ VT | 3204 | I | — | Left Headlamp Bulb Outage Signal | 6 | 0.35 | BU/ VT | 3204 | II | — |
| 7 | 0.5 | BU/ WH | 1314 | I | — | Left Front Turn Signal Lamp Control | 7 | 0.5 | BU/ WH | 1314 | II | — |
| 8 | 0.35 | GY/ BU | 7538 | I | — | Left Front DRL Control | 8 | 0.35 | GY/ BU | 7538 | II | — |

# X110 Body Harness to Headlamp - Left Harness (Extended Cab)




4846407




2667653

### Connector Part Information

Harness Type: Body
OEM Connector: 35037827
Service Connector: 19366859
Description: 8-Way F 150 MX Series, Sealed (BK)

### Connector Part Information

Harness Type: Headlamp - Left
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

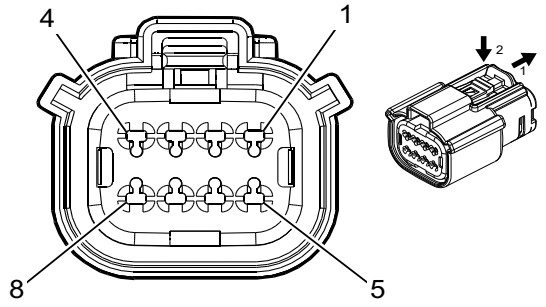
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

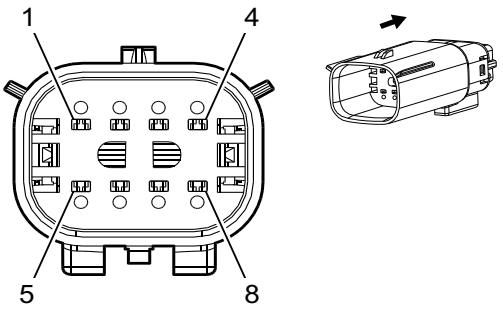
## X110 Body Harness to Headlamp - Left Harness (Extended Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 150 | I | — | Ground | 1 | 0.75 | BK | 150 | II | — |
| 2 | 0.75 | YE | 2227 | I | — | Left Headlamp Control | 2 | 0.75 | YE | 2227 | II | — |
| 3 | 0.75 | YE | 712 | I | — | Left Headlamp Low Beam Control | 3 | 0.75 | YE | 712 | II | — |
| 4 | 0.75 | WH | 711 | I | — | Left Headlamp High Beam Control | 4 | 0.75 | WH | 711 | II | — |
| 5 | 0.5 | VT/ GY | 709 | I | — | Left Park Lamp Control | 5 | 0.5 | VT/ GY | 709 | II | — |
| 6 | 0.35 | BU/ VT | 3204 | I | — | Left Headlamp Bulb Outage Signal | 6 | 0.35 | BU/ VT | 3204 | II | — |
| 7 | 0.5 | BU/ WH | 1314 | I | — | Left Front Turn Signal Lamp Control | 7 | 0.5 | BU/ WH | 1314 | II | — |
| 8 | 0.35 | GY/ BU | 7538 | I | — | Left Front DRL Control | 8 | 0.35 | GY/ BU | 7538 | II | — |

# X110 Body Harness to Headlamp - Left Harness (Regular Cab)




4846407




2667653

### Connector Part Information

Harness Type: Body
OEM Connector: 35037827
Service Connector: 19366859
Description: 8-Way F 150 MX Series, Sealed (BK)

### Connector Part Information

Harness Type: Headlamp - Left
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

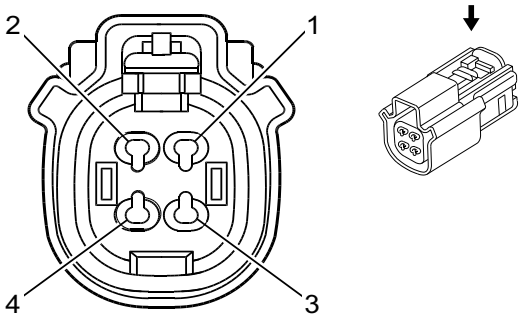
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

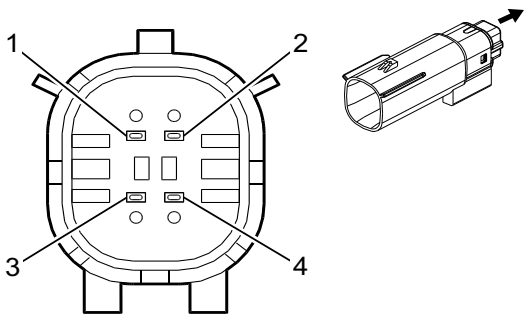
## X110 Body Harness to Headlamp - Left Harness (Regular Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 150 | I | — | Ground | 1 | 0.75 | BK | 150 | II | — |
| 2 | 0.75 | YE | 2227 | I | — | Left Headlamp Control | 2 | 0.75 | YE | 2227 | II | — |
| 3 | 0.75 | YE | 712 | I | — | Left Headlamp Low Beam Control | 3 | 0.75 | YE | 712 | II | — |
| 4 | 0.75 | WH | 711 | I | — | Left Headlamp High Beam Control | 4 | 0.75 | WH | 711 | II | — |
| 5 | 0.5 | VT/ GY | 709 | I | — | Left Park Lamp Control | 5 | 0.5 | VT/ GY | 709 | II | — |
| 6 | 0.35 | BU/ VT | 3204 | I | — | Left Headlamp Bulb Outage Signal | 6 | 0.35 | BU/ VT | 3204 | II | — |
| 7 | 0.5 | BU/ WH | 1314 | I | — | Left Front Turn Signal Lamp Control | 7 | 0.5 | BU/ WH | 1314 | II | — |
| 8 | 0.35 | GY/ BU | 7538 | I | — | Left Front DRL Control | 8 | 0.35 | GY/ BU | 7538 | II | — |

# X111 Axle Harness to Engine Harness (NP0/NQH)




1960031




2368875

### Connector Part Information

Harness Type: Axle
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F

### Connector Part Information

Harness Type: Engine
OEM Connector: 33344515
Service Connector: 19330396
Description: 4-Way M 150 MX Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

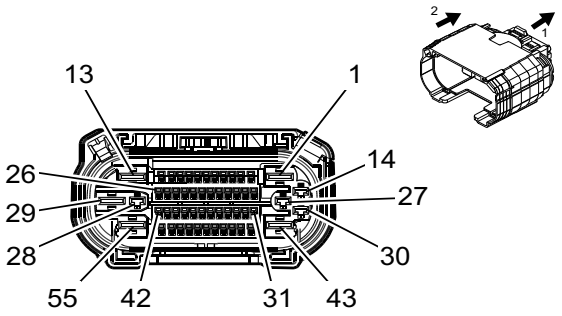
## X111 Axle Harness to Engine Harness (NP0/NQH)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1<br>0.5 | BK<br>BK | 4450<br>4450 | I<br>I | NP0<br>NQH | Ground<br>Ground<br>Ground | 1 | 0.5<br>1<br>0.5 | BK<br>BK<br>BK | 4450<br>4450<br>4450 | II<br>II<br>II | —<br>NP0<br>NQH |
| 1 | 1<br>0.5 | BK<br>BK | 4450<br>4450 | I<br>I | NP0<br>NQH | Ground<br>Ground<br>Ground | 1 | 0.5<br>1<br>0.5 | BK<br>BK<br>BK | 4450<br>4450<br>4450 | II<br>II<br>II | —<br>NP0<br>NQH |
| 2 | 0.5 | YE/WH | 1695 | I | — | Four Wheel Drive Wheel Lock Indicator Control<br>Four Wheel Drive Wheel Lock Indicator Control | 2 | 0.5 | YE/WH | 1695 | II | — |
| 2 | 0.5 | YE/WH | 1695 | I | — | Four Wheel Drive Wheel Lock Indicator Control<br>Four Wheel Drive Wheel Lock Indicator Control | 2 | 0.5 | YE/WH | 1695 | II | — |

## X111 Axle Harness to Engine Harness (NP0/NQH) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 0.5 | VT/ BK | 2139 | I | — | Run/Crank Ignition 1 Voltage | 3 | 0.5 | VT/ BK | 2139 | II | — |
| | | | | | | Run/Crank Ignition 1 Voltage | | | | | | |
| 3 | 0.5 | VT/ BK | 2139 | I | — | Run/Crank Ignition 1 Voltage | 3 | 0.5 | VT/ BK | 2139 | II | — |
| | | | | | | Run/Crank Ignition 1 Voltage | | | | | | |
| 4 | 0.5 | GY/ BK | 1570 | I | — | Front Axle Actuator Control | 4 | 0.5 | GY/ BK | 1570 | II | — |
| | | | | | | Front Axle Actuator Control | | | | | | |
| 4 | 0.5 | GY/ BK | 1570 | I | — | Front Axle Actuator Control | 4 | 0.5 | GY/ BK | 1570 | II | — |
| | | | | | | Front Axle Actuator Control | | | | | | |

# X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+(L84/L87))




—

4992329

### Connector Part Information

Harness Type: Engine

OEM Connector: 35179598

Service Connector: 19371184

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

### Connector Part Information

Harness Type: Body

OEM Connector: 35205185

Service Connector: 84727363

Description: 55-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+(L84/L87))

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | — | — | Not Occupied | 1 - 2 | — | — | — | — | — |
| 3 | 0.5 | BK/ BU | 1271 | I | — | Accelerator Pedal Position Low Reference 1 | 3 | 0.35 | BK/ BU | 1271 | II | — |
| 4 | 0.5 | BN/ WH | 419 | I | — | Check Engine Indicator Control | 4 | 0.35 | BN/ WH | 419 | II | — |
| 5 | 0.5 | GN/ WH | 1162 | I | — | Accelerator Pedal Position Signal 2 | 5 | 0.35 | GN/ WH | 1162 | II | — |
| 6 - 14 | — | — | — | — | — | Not Occupied | 6 - 14 | — | — | — | — | — |
| 15 | 0.5 | YE | 4063 | I | — | Hood Status A Signal | 15 | 0.35 | YE | 4063 | II | — |
| 16 | 0.5 | VT/ GN | 439 | I | — | Run/Crank Ignition 1 Voltage | 16 | 0.5 | VT/ GN | 439 | II | — |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+(L84/L87)) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 0.5 | WH/ BU | 5986 | I | — | Serial Data Communi-cation Enable | 17 | 0.35 | WH/ BU | 5986 | II | — |
| 18 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 18 | 0.35 | BK/ GY | 2204 | II | — |
| 19 | 0.5 | WH/ BN | 2203 | I | — | Enhanced Driver Mode 2 Switch Signal | 19 | 0.35 | WH/ BN | 2203 | II | — |
| 20 | 0.5 | BU/ RD | 460 | I | — | Engine Control Sensors 5 Volt Reference (1) | 20 | 0.35 | GY | 4109 | II | — |
| 21 | — | — | — | — | — | Not Occupied | 21 | — | — | — | — | — |
| 22 | 0.5 | VT/ YE | 5985 | I | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/ YE | 5985 | II | — |
| 23 | 0.5 | GN/ VT | 4621 | I | — | Local Interconnect Network Serial Data Bus 21 | 23 | 0.5 | GN/ VT | 4621 | II | — |
| 24 | 0.5 | BU/ BK | 7493 | I | — | High Speed GMLAN Serial Data (+)3 | 24 | 0.5 | BU/ BK | 7493 | II | — |
| 25 | 0.5 | WH | 7494 | I | — | High Speed GMLAN Serial Data (-)3 | 25 | 0.5 | WH | 7494 | II | — |
| 26 | 0.5 | BU/ GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 26 | 0.35 | BU/ GY | 636 | II | — |
| 27 - 30 | — | — | — | — | — | Not Occupied | 27 - 30 | — | — | — | — | — |
| 31 | 0.5 | WH/ BU | 6311 | I | — | Cruise/ETC/ TCC Brake Signal | 31 | 0.35 | WH/ BU | 6311 | II | — |
| 32 | 0.5 | VT/ BU | 6091 | I | — | Crankshaft Position Sensor Replicated Signal | 32 | 0.35 | VT/ BU | 6091 | II | — |
| 33 | 0.5 | BN | 1560 | I | — | Neutral Indicator Control | 33 | 0.35 | BN | 1560 | II | — |
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |

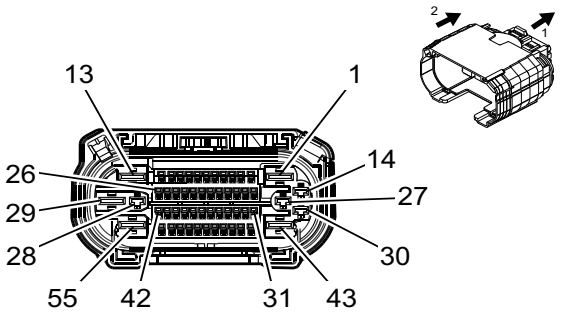
## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+(L84/L87)) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 35 | 0.35 | BK/ YE | 5382 | II | — |
| 36 | 0.5 | WH/ GN | 5380 | I | — | Brake Position Sensor Signal | 36 | 0.35 | WH/ GN | 5380 | II | — |
| 37 | 0.5 | WH/ RD | 480 | I | — | Engine Control Sensors 5 Volt Reference (2) | 37 | 0.35 | WH/ RD | 5381 | II | — |
| 38 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 38 | 0.5 | BU | 2500 | II | — |
| 39 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 39 | 0.5 | WH | 2501 | II | — |
| 40 | 0.5 | BK/ VT | 1272 | I | — | Accelerator Pedal Position Low Reference 2 | 40 | 0.35 | BK/ VT | 1272 | II | — |
| 41 | — | — | — | — | — | Not Occupied | 41 | — | — | — | — | — |
| 42 | 0.5 | YE/ BK | 625 | I | — | Starter Enable Relay Control | 42 | 0.5 | YE/ BK | 625 | II | — |
| 43 | 4 | BK/ WH | 451 | I | — | Signal Ground | 43 | 4 | BK/ WH | 2251 | II | — |
| 44 | 1.5 | RD/ GN | 1840 | I | — | Battery Positive Voltage | 44 | 1 | RD/ GN | 1840 | II | — |
| 45 | — | — | — | — | — | Not Occupied | 45 | — | — | — | — | — |
| 46 | 0.5 | BK/ GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 46 | 0.35 | BK/ GN | 580 | II | — |
| 47 | 0.5 | BU/ BN | 7573 | I | — | Electric Variable Displace-ment Supply | 47 | 0.35 | BU/ BN | 7573 | II | — |
| 48 | — | — | — | — | — | Not Occupied | 48 | — | — | — | — | — |
| 49 | 0.5 | YE/ WH | 1161 | I | — | Accelerator Pedal Position Signal 1 | 49 | 0.35 | YE/ WH | 1161 | II | — |
| 50 | 0.5 | WH/ RD | 1164 | I | — | Accelerator Pedal Position 5V Reference 1 | 50 | 0.35 | WH/ RD | 1164 | II | — |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+(L84/L87)) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | 0.5 | BN/ RD | 1274 | I | — | Accelerator Pedal Position 5V Reference 2 | 51 | 0.35 | BN/ RD | 1274 | II | — |
| 52 | — | — | — | — | — | Not Occupied | 52 | — | — | — | — | — |
| 53 | 0.5 | BU/ YE | 7574 | I | — | Electric Variable Displace-ment Control | 53 | 0.35 | BU/ YE | 7574 | II | — |
| 54 - 55 | — | — | — | — | — | Not Occupied | 54 - 55 | — | — | — | — | — |

# X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+L3B)




4992329

—

### Connector Part Information

Harness Type: Engine

OEM Connector: 35179575

Service Connector: 19371184

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

### Connector Part Information

Harness Type: Body

OEM Connector: 35205185

Service Connector: 84727363

Description: 55-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+L3B)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | — | — | Not Occupied | 1 - 2 | — | — | — | — | — |
| 3 | 0.5 | BK/ BU | 1271 | I | — | Accelerator Pedal Position Low Reference 1 | 3 | 0.35 | BK/ BU | 1271 | II | — |
| 4 | 0.5 | BN/ WH | 419 | I | — | Check Engine Indicator Control | 4 | 0.35 | BN/ WH | 419 | II | — |
| 5 | 0.5 | GN/ WH | 1162 | I | — | Accelerator Pedal Position Signal 2 | 5 | 0.35 | GN/ WH | 1162 | II | — |
| 6 - 14 | — | — | — | — | — | Not Occupied | 6 - 14 | — | — | — | — | — |
| 15 | 0.5 | YE | 4063 | I | — | Hood Status A Signal | 15 | 0.35 | YE | 4063 | II | — |
| 16 | 0.5 | VT/ GN | 439 | I | — | Run/Crank Ignition 1 Voltage | 16 | 0.5 | VT/ GN | 439 | II | — |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+L3B) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 0.5 | WH/ BU | 5986 | I | — | Serial Data Communi-cation Enable | 17 | 0.35 | WH/ BU | 5986 | II | — |
| 18 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 18 | 0.35 | BK/ GY | 2204 | II | — |
| 19 | 0.5 | WH/ VT | 4108 | I | — | Driver Mode Switch Signal | 19 | 0.35 | WH/ BN | 2203 | II | — |
| 20 | 0.5 | BU/ RD | 460 | I | — | Engine Control Sensors 5 Volt Reference (1) | 20 | 0.35 | GY | 4109 | II | — |
| 21 | — | — | — | — | — | Not Occupied | 21 | — | — | — | — | — |
| 22 | 0.5 | VT/ YE | 5985 | I | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/ YE | 5985 | II | — |
| 23 | 0.5 | GN/ VT | 4621 | I | — | Local Interconnect Network Serial Data Bus 21 | 23 | 0.5 | GN/ VT | 4621 | II | — |
| 24 | 0.5 | BU/ BK | 7493 | I | — | High Speed GMLAN Serial Data (+)3 | 24 | 0.5 | BU/ BK | 7493 | II | — |
| 25 | 0.5 | WH | 7494 | I | — | High Speed GMLAN Serial Data (-)3 | 25 | 0.5 | WH | 7494 | II | — |
| 26 | 0.5 | BU/ GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 26 | 0.35 | BU/ GY | 636 | II | — |
| 27 - 30 | — | — | — | — | — | Not Occupied | 27 - 30 | — | — | — | — | — |
| 31 | 0.5 | WH/ BU | 6311 | I | — | Cruise/ETC/ TCC Brake Signal | 31 | 0.35 | WH/ BU | 6311 | II | — |
| 32 | 0.5 | VT/ BU | 6091 | I | — | Crankshaft Position Sensor Replicated Signal | 32 | 0.35 | VT/ BU | 6091 | II | — |
| 33 | 0.5 | BN | 1560 | I | — | Neutral Indicator Control | 33 | 0.35 | BN | 1560 | II | — |
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |
| 35 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 35 | 0.35 | BK/ YE | 5382 | II | — |

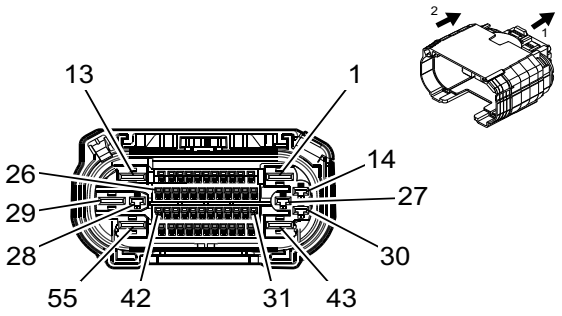
## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+L3B) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 0.5 | WH/ GN | 5380 | I | — | Brake Position Sensor Signal | 36 | 0.35 | WH/ GN | 5380 | II | — |
| 37 | 0.5 | WH/ RD | 480 | I | — | Engine Control Sensors 5 Volt Reference (2) | 37 | 0.35 | WH/ RD | 5381 | II | — |
| 38 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 38 | 0.5 | BU | 2500 | II | — |
| 39 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 39 | 0.5 | WH | 2501 | II | — |
| 40 | 0.5 | BK/ VT | 1272 | I | — | Accelerator Pedal Position Low Reference 2 | 40 | 0.35 | BK/ VT | 1272 | II | — |
| 41 | — | — | — | — | — | Not Occupied | 41 | — | — | — | — | — |
| 42 | 0.5 | YE/ BK | 625 | I | — | Starter Enable Relay Control | 42 | 0.5 | YE/ BK | 625 | II | — |
| 43 | 4 | BK/ WH | 451 | I | — | Signal Ground | 43 | 4 | BK/ WH | 2251 | II | — |
| 44 | 1.5 | RD/ GN | 1840 | I | — | Battery Positive Voltage | 44 | 1 | RD/ GN | 1840 | II | — |
| 45 | — | — | — | — | — | Not Occupied | 45 | — | — | — | — | — |
| 46 | 0.5 | BK/ GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 46 | 0.35 | BK/ GN | 580 | II | — |
| 47 | 0.5 | BU/ BN | 7573 | I | — | Electric Variable Displace-ment Supply | 47 | 0.35 | BU/ BN | 7573 | II | — |
| 48 | 0.5 | RD/ GN | 40 | I | — | Battery Positive Voltage | 48 | 0.35 | RD/ GN | 40 | II | — |
| 49 | 0.5 | YE/ WH | 1161 | I | — | Accelerator Pedal Position Signal 1 | 49 | 0.35 | YE/ WH | 1161 | II | — |
| 50 | 0.5 | WH/ RD | 1164 | I | — | Accelerator Pedal Position 5V Reference 1 | 50 | 0.35 | WH/ RD | 1164 | II | — |
| 51 | 0.5 | BN/ RD | 1274 | I | — | Accelerator Pedal Position 5V Reference 2 | 51 | 0.35 | BN/ RD | 1274 | II | — |
| 52 | — | — | — | — | — | Not Occupied | 52 | — | — | — | — | — |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+L3B) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 53 | 0.5 | BU/ YE | 7574 | I | — | Electric Variable Displace- ment Control | 53 | 0.35 | BU/ YE | 7574 | II | — |
| 54 - 55 | — | — | — | — | — | Not Occupied | 54 - 55 | — | — | — | — | — |

# X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+L82)




—

4992329

### Connector Part Information

Harness Type: Engine

OEM Connector: 35179599

Service Connector: 19371184

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

### Connector Part Information

Harness Type: Body

OEM Connector: 35205185

Service Connector: 84727363

Description: 55-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+L82)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | — | — | Not Occupied | 1 - 2 | — | — | — | — | — |
| 3 | 0.5 | BK/ BU | 1271 | I | — | Accelerator Pedal Position Low Reference 1 | 3 | 0.35 | BK/ BU | 1271 | II | — |
| 4 | 0.5 | BN/ WH | 419 | I | — | Check Engine Indicator Control | 4 | 0.35 | BN/ WH | 419 | II | — |
| 5 | 0.5 | GN/ WH | 1162 | I | — | Accelerator Pedal Position Signal 2 | 5 | 0.35 | GN/ WH | 1162 | II | — |
| 6 - 14 | — | — | — | — | — | Not Occupied | 6 - 14 | — | — | — | — | — |
| 15 | 0.5 | YE | 4063 | I | — | Hood Status A Signal | 15 | 0.35 | YE | 4063 | II | — |
| 16 | 0.5 | VT/ GN | 439 | I | — | Run/Crank Ignition 1 Voltage | 16 | 0.5 | VT/ GN | 439 | II | — |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+L82) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 0.5 | WH/ BU | 5986 | I | — | Serial Data Communi-cation Enable | 17 | 0.35 | WH/ BU | 5986 | II | — |
| 18 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 18 | 0.35 | BK/ GY | 2204 | II | — |
| 19 | 0.5 | WH/ BN | 2203 | I | — | Enhanced Driver Mode 2 Switch Signal | 19 | 0.35 | WH/ BN | 2203 | II | — |
| 20 | 0.5 | BU/ RD | 460 | I | — | Engine Control Sensors 5 Volt Reference (1) | 20 | 0.35 | GY | 4109 | II | — |
| 21 | — | — | — | — | — | Not Occupied | 21 | — | — | — | — | — |
| 22 | 0.5 | VT/ YE | 5985 | I | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/ YE | 5985 | II | — |
| 23 | — | — | — | — | — | Not Occupied | 23 | — | — | — | — | — |
| 24 | 0.5 | BU/ BK | 7493 | I | — | High Speed GMLAN Serial Data (+)3 | 24 | 0.5 | BU/ BK | 7493 | II | — |
| 25 | 0.5 | WH | 7494 | I | — | High Speed GMLAN Serial Data (-)3 | 25 | 0.5 | WH | 7494 | II | — |
| 26 | 0.5 | BU/ GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 26 | 0.35 | BU/ GY | 636 | II | — |
| 27 - 30 | — | — | — | — | — | Not Occupied | 27 - 30 | — | — | — | — | — |
| 31 | 0.5 | WH/ BU | 6311 | I | — | Cruise/ETC/ TCC Brake Signal | 31 | 0.35 | WH/ BU | 6311 | II | — |
| 32 | 0.5 | VT/ BU | 6091 | I | — | Crankshaft Position Sensor Replicated Signal | 32 | 0.35 | VT/ BU | 6091 | II | — |
| 33 | 0.5 | BN | 1560 | I | — | Neutral Indicator Control | 33 | 0.35 | BN | 1560 | II | — |
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |
| 35 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 35 | 0.35 | BK/ YE | 5382 | II | — |

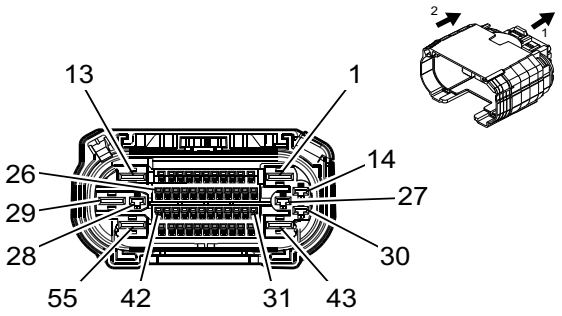
## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+L82) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 0.5 | WH/ GN | 5380 | I | — | Brake Position Sensor Signal | 36 | 0.35 | WH/ GN | 5380 | II | — |
| 37 | 0.5 | WH/ RD | 480 | I | — | Engine Control Sensors 5 Volt Reference (2) | 37 | 0.35 | WH/ RD | 5381 | II | — |
| 38 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 38 | 0.5 | BU | 2500 | II | — |
| 39 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 39 | 0.5 | WH | 2501 | II | — |
| 40 | 0.5 | BK/ VT | 1272 | I | — | Accelerator Pedal Position Low Reference 2 | 40 | 0.35 | BK/ VT | 1272 | II | — |
| 41 - 42 | — | — | — | — | — | Not Occupied | 41 - 42 | — | — | — | — | — |
| 43 | 4 | BK/ WH | 451 | I | — | Signal Ground | 43 | 4 | BK/ WH | 2251 | II | — |
| 44 | 1.5 | RD/ GN | 1840 | I | — | Battery Positive Voltage | 44 | 1 | RD/ GN | 1840 | II | — |
| 45 | — | — | — | — | — | Not Occupied | 45 | — | — | — | — | — |
| 46 | 0.5 | BK/ GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 46 | 0.35 | BK/ GN | 580 | II | — |
| 47 | 0.5 | BU/ BN | 7573 | I | — | Electric Variable Displace-ment Supply | 47 | 0.35 | BU/ BN | 7573 | II | — |
| 48 | — | — | — | — | — | Not Occupied | 48 | — | — | — | — | — |
| 49 | 0.5 | YE/ WH | 1161 | I | — | Accelerator Pedal Position Signal 1 | 49 | 0.35 | YE/ WH | 1161 | II | — |
| 50 | 0.5 | WH/ RD | 1164 | I | — | Accelerator Pedal Position 5V Reference 1 | 50 | 0.35 | WH/ RD | 1164 | II | — |
| 51 | 0.5 | BN/ RD | 1274 | I | — | Accelerator Pedal Position 5V Reference 2 | 51 | 0.35 | BN/ RD | 1274 | II | — |
| 52 | — | — | — | — | — | Not Occupied | 52 | — | — | — | — | — |
| 53 | 0.5 | BU/ YE | 7574 | I | — | Electric Variable Displace-ment Control | 53 | 0.35 | BU/ YE | 7574 | II | — |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+L82) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54 - 55 | — | — | — | — | — | Not Occupied | 54 - 55 | — | — | — | — | — |

# X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+LM2)




—

4992329

### Connector Part Information

Harness Type: Engine

OEM Connector: 35016653

Service Connector: 19371184

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

### Connector Part Information

Harness Type: Body

OEM Connector: 35205185

Service Connector: 84727363

Description: 55-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+LM2)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | — | — | — | — | — | Not Occupied | 1 | — | — | — | — | — |
| 2 | 1 | BK | 9003 | I | — | — | 2 | — | — | — | — | — |
| 3 | 0.5 | BK/BU | 1271 | I | — | Accelerator Pedal Position Low Reference 1 | 3 | 0.35 | BK/BU | 1271 | II | — |
| 4 | 0.5 | BN/WH | 419 | I | — | Check Engine Indicator Control | 4 | 0.35 | BN/WH | 419 | II | — |
| 5 | 0.5 | GN/WH | 1162 | I | — | Accelerator Pedal Position Signal 2 | 5 | 0.35 | GN/WH | 1162 | II | — |
| 6 | 0.5 | GN/BN | 507 | I | — | Wait To Start Indicator Control | 6 | 0.35 | GN/BN | 507 | II | — |
| 7 - 11 | — | — | — | — | — | Not Occupied | 7 - 11 | — | — | — | — | — |
| 12 | 1 | BK | 9003 | I | — | — | 12 | — | — | — | — | — |
| 13 - 14 | — | — | — | — | — | Not Occupied | 13 - 14 | — | — | — | — | — |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+LM2) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 0.5 | YE | 4063 | I | — | Hood Status A Signal | 15 | 0.35 | YE | 4063 | II | — |
| 16 | 0.5 | VT/ GN | 439 | I | — | Run/Crank Ignition 1 Voltage | 16 | 0.5 | VT/ GN | 439 | II | — |
| 17 | 0.5 | WH/ BU | 5986 | I | — | Serial Data Communi-cation Enable | 17 | 0.35 | WH/ BU | 5986 | II | — |
| 18 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 18 | 0.35 | BK/ GY | 2204 | II | — |
| 19 | 0.5 | WH/ BN | 2203 | I | — | Enhanced Driver Mode 2 Switch Signal | 19 | 0.35 | WH/ BN | 2203 | II | — |
| 20 | 0.5 | BU/ RD | 460 | I | — | Engine Control Sensors 5 Volt Reference (1) | 20 | 0.35 | GY | 4109 | II | — |
| 21 | — | — | — | — | — | Not Occupied | 21 | — | — | — | — | — |
| 22 | 0.5 | VT/ YE | 5985 | I | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/ YE | 5985 | II | — |
| 23 | 0.5 | GN/ VT | 4621 | I | — | Local Interconnect Network Serial Data Bus 21 | 23 | 0.5 | GN/ VT | 4621 | II | — |
| 24 | 0.5 | BU/ BK | 7493 | I | — | High Speed GMLAN Serial Data (+)3 | 24 | 0.5 | BU/ BK | 7493 | II | — |
| 25 | 0.5 | WH | 7494 | I | — | High Speed GMLAN Serial Data (-)3 | 25 | 0.5 | WH | 7494 | II | — |
| 26 | 0.5 | BU/ GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 26 | 0.35 | BU/ GY | 636 | II | — |
| 27 - 30 | — | — | — | — | — | Not Occupied | 27 - 30 | — | — | — | — | — |
| 31 | 0.5 | WH/ BU | 6311 | I | — | Cruise/ETC/ TCC Brake Signal | 31 | 0.35 | WH/ BU | 6311 | II | — |
| 32 | 0.5 | VT/ BU | 6091 | I | — | Crankshaft Position Sensor Replicated Signal | 32 | 0.35 | VT/ BU | 6091 | II | — |
| 33 | 0.5 | BN | 1560 | I | — | Neutral Indicator Control | 33 | 0.35 | BN | 1560 | II | — |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+LM2) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |
| 35 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 35 | 0.35 | BK/ YE | 5382 | II | — |
| 36 | 0.5 | WH/ GN | 5380 | I | — | Brake Position Sensor Signal | 36 | 0.35 | WH/ GN | 5380 | II | — |
| 37 | 0.5 | WH/ RD | 480 | I | — | Engine Control Sensors 5 Volt Reference (2) | 37 | 0.35 | WH/ RD | 5381 | II | — |
| 38 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 38 | 0.5 | BU | 2500 | II | — |
| 39 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 39 | 0.5 | WH | 2501 | II | — |
| 40 | 0.5 | BK/ VT | 1272 | I | — | Accelerator Pedal Position Low Reference 2 | 40 | 0.35 | BK/ VT | 1272 | II | — |
| 41 | — | — | — | — | — | Not Occupied | 41 | — | — | — | — | — |
| 42 | 0.5 | YE/ BK | 625 | I | — | Starter Enable Relay Control | 42 | 0.5 | YE/ BK | 625 | II | — |
| 43 | 6 | BK/ WH | 451 | I | — | Signal Ground | 43 | 4 | BK/ WH | 2251 | II | — |
| 44 | 1.5 | RD/ GN | 1840 | I | — | Battery Positive Voltage | 44 | 1 | RD/ GN | 1840 | II | — |
| 45 | — | — | — | — | — | Not Occupied | 45 | — | — | — | — | — |
| 46 | 0.5 | BK/ GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 46 | 0.35 | BK/ GN | 580 | II | — |
| 47 | 0.5 | BU/ BN | 7573 | I | — | Electric Variable Displace-ment Supply | 47 | 0.35 | BU/ BN | 7573 | II | — |
| 48 | 0.5 | RD/ GN | 40 | I | — | Battery Positive Voltage | 48 | 0.35 | RD/ GN | 40 | II | — |
| 49 | 0.5 | YE/ WH | 1161 | I | — | Accelerator Pedal Position Signal 1 | 49 | 0.35 | YE/ WH | 1161 | II | — |
| 50 | 0.5 | WH/ RD | 1164 | I | — | Accelerator Pedal Position 5V Reference 1 | 50 | 0.35 | WH/ RD | 1164 | II | — |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+LM2) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | 0.5 | BN/ RD | 1274 | I | — | Accelerator Pedal Position 5V Reference 2 | 51 | 0.35 | BN/ RD | 1274 | II | — |
| 52 | — | — | — | — | — | Not Occupied | 52 | — | — | — | — | — |
| 53 | 0.5 | BU/ YE | 7574 | I | — | Electric Variable Displace-ment Control | 53 | 0.35 | BU/ YE | 7574 | II | — |
| 54 - 55 | — | — | — | — | — | Not Occupied | 54 - 55 | — | — | — | — | — |

# X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+LV3)

—

### Connector Part Information

Harness Type: Engine
OEM Connector: 35179597
Service Connector: 19371184
Description: 55-Way F

—

### Connector Part Information

Harness Type: Body
OEM Connector: 35205185
Service Connector: 84727363
Description: 55-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+LV3)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 0.5 | BK/ BU | 1271 | I | — | Accelerator Pedal Position Low Reference 1 | 3 | 0.35 | BK/ BU | 1271 | II | — |
| 4 | 0.5 | BN/ WH | 419 | I | — | Check Engine Indicator Control | 4 | 0.35 | BN/ WH | 419 | II | — |
| 5 | 0.5 | GN/ WH | 1162 | I | — | Accelerator Pedal Position Signal 2 | 5 | 0.35 | GN/ WH | 1162 | II | — |
| 15 | 0.5 | YE | 4063 | I | — | Hood Status A Signal | 15 | 0.35 | YE | 4063 | II | — |
| 16 | 0.5 | VT/ GN | 439 | I | — | Run/Crank Ignition 1 Voltage | 16 | 0.5 | VT/ GN | 439 | II | — |
| 17 | 0.5 | WH/ BU | 5986 | I | — | Serial Data Communi cation Enable | 17 | 0.35 | WH/ BU | 5986 | II | — |
| 18 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 18 | 0.35 | BK/ GY | 2204 | II | — |
| 19 | 0.5 | WH/ BN | 2203 | I | — | Enhanced Driver Mode 2 Switch Signal | 19 | 0.35 | WH/ BN | 2203 | II | — |
| 20 | 0.5 | BU/ RD | 460 | I | — | Engine Control Sensors 5 Volt Reference (1) | 20 | 0.35 | GY | 4109 | II | — |
| 22 | 0.5 | VT/ YE | 5985 | I | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/ YE | 5985 | II | — |

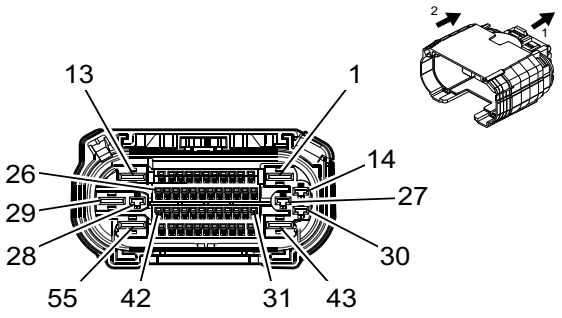
## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+LV3) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 0.5 | BU/ BK | 7493 | I | — | High Speed GMLAN Serial Data (+)3 | 24 | 0.5 | BU/ BK | 7493 | II | — |
| 25 | 0.5 | WH | 7494 | I | — | High Speed GMLAN Serial Data (-)3 | 25 | 0.5 | WH | 7494 | II | — |
| 26 | 0.5 | BU/ GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 26 | 0.35 | BU/ GY | 636 | II | — |
| 31 | 0.5 | WH/ BU | 6311 | I | — | Cruise/ETC/ TCC Brake Signal | 31 | 0.35 | WH/ BU | 6311 | II | — |
| 32 | 0.5 | VT/ BU | 6091 | I | — | Crankshaft Position Sensor Replicated Signal | 32 | 0.35 | VT/ BU | 6091 | II | — |
| 33 | 0.5 | BN | 1560 | I | — | Neutral Indicator Control | 33 | 0.35 | BN | 1560 | II | — |
| 35 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 35 | 0.35 | BK/ YE | 5382 | II | — |
| 36 | 0.5 | WH/ GN | 5380 | I | — | Brake Position Sensor Signal | 36 | 0.35 | WH/ GN | 5380 | II | — |
| 37 | 0.5 | WH/ RD | 480 | I | — | Engine Control Sensors 5 Volt Reference (2) | 37 | 0.35 | WH/ RD | 5381 | II | — |
| 38 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 38 | 0.5 | BU | 2500 | II | — |
| 39 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 39 | 0.5 | WH | 2501 | II | — |
| 40 | 0.5 | BK/ VT | 1272 | I | — | Accelerator Pedal Position Low Reference 2 | 40 | 0.35 | BK/ VT | 1272 | II | — |
| 43 | 4 | BK/ WH | 451 | I | — | Signal Ground | 43 | 4 | BK/ WH | 2251 | II | — |
| 44 | 1.5 | RD/ GN | 1840 | I | — | Battery Positive Voltage | 44 | 1 | RD/ GN | 1840 | II | — |
| 46 | 0.5 | BK/ GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 46 | 0.35 | BK/ GN | 580 | II | — |

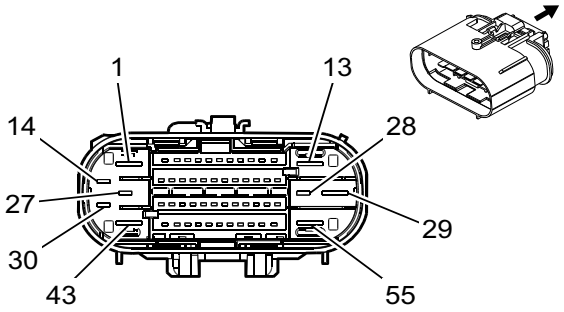
## X115 Engine Harness to Body Harness ((Extended Cab/Regular Cab)+LV3) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 47 | 0.5 | BU/ BN | 7573 | I | — | Electric Variable Displace-ment Supply | 47 | 0.35 | BU/ BN | 7573 | II | — |
| 49 | 0.5 | YE/ WH | 1161 | I | — | Accelerator Pedal Position Signal 1 | 49 | 0.35 | YE/ WH | 1161 | II | — |
| 50 | 0.5 | WH/ RD | 1164 | I | — | Accelerator Pedal Position 5V Reference 1 | 50 | 0.35 | WH/ RD | 1164 | II | — |
| 51 | 0.5 | BN/ RD | 1274 | I | — | Accelerator Pedal Position 5V Reference 2 | 51 | 0.35 | BN/ RD | 1274 | II | — |
| 53 | 0.5 | BU/ YE | 7574 | I | — | Electric Variable Displace-ment Control | 53 | 0.35 | BU/ YE | 7574 | II | — |

# X115 Engine Harness to Body Harness (Crew Cab+(L84/L87))




4992329




4994369

### Connector Part Information

Harness Type: Engine

OEM Connector: 35179598

Service Connector: 19371184

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

### Connector Part Information

Harness Type: Body

OEM Connector: 33357992

Service Connector: 84727363

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X115 Engine Harness to Body Harness (Crew Cab+(L84/L87))

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | — | — | Not Occupied | 1 - 2 | — | — | — | — | — |
| 3 | 0.5 | BK/ BU | 1271 | I | — | Accelerator Pedal Position Low Reference 1 | 3 | 0.35 | BK/ BU | 1271 | II | — |
| 4 | 0.5 | BN/ WH | 419 | I | — | Check Engine Indicator Control | 4 | 0.35 | BN/ WH | 419 | II | — |
| 5 | 0.5 | GN/ WH | 1162 | I | — | Accelerator Pedal Position Signal 2 | 5 | 0.35 | GN/ WH | 1162 | II | — |
| 6 - 14 | — | — | — | — | — | Not Occupied | 6 - 14 | — | — | — | — | — |
| 15 | 0.5 | YE | 4063 | I | — | Hood Status A Signal | 15 | 0.35 | YE | 4063 | II | — |
| 16 | 0.5 | VT/ GN | 439 | I | — | Run/Crank Ignition 1 Voltage | 16 | 0.5 | VT/ GN | 439 | II | — |

## X115 Engine Harness to Body Harness (Crew Cab+(L84/L87)) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 0.5 | WH/ BU | 5986 | I | — | Serial Data Communi cation Enable | 17 | 0.35 | WH/ BU | 5986 | II | — |
| 18 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 18 | 0.35 | BK/ GY | 2204 | II | — |
| 19 | 0.5 | WH/ BN | 2203 | I | — | Enhanced Driver Mode 2 Switch Signal | 19 | 0.35 | WH/ BN | 2203 | II | — |
| 20 | 0.5 | BU/ RD | 460 | I | — | Engine Control Sensors 5 Volt Reference (1) | 20 | 0.35 | GY | 4109 | II | — |
| 21 | — | — | — | — | — | Not Occupied | 21 | — | — | — | — | — |
| 22 | 0.5 | VT/ YE | 5985 | I | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/ YE | 5985 | II | — |
| 23 | 0.5 | GN/ VT | 4621 | I | — | Local Interconnect Network Serial Data Bus 21 | 23 | 0.5 | GN/ VT | 4621 | II | — |
| 24 | 0.5 | BU/ BK | 7493 | I | — | High Speed GMLAN Serial Data (+)3 | 24 | 0.5 | BU/ BK | 7493 | II | — |
| 25 | 0.5 | WH | 7494 | I | — | High Speed GMLAN Serial Data (-)3 | 25 | 0.5 | WH | 7494 | II | — |
| 26 | 0.5 | BU/ GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 26 | 0.35 | BU/ GY | 636 | II | — |
| 27 - 30 | — | — | — | — | — | Not Occupied | 27 - 30 | — | — | — | — | — |
| 31 | 0.5 | WH/ BU | 6311 | I | — | Cruise/ETC/ TCC Brake Signal | 31 | 0.35 | WH/ BU | 6311 | II | — |
| 32 | 0.5 | VT/ BU | 6091 | I | — | Crankshaft Position Sensor Replicated Signal | 32 | 0.35 | VT/ BU | 6091 | II | — |
| 33 | 0.5 | BN | 1560 | I | — | Neutral Indicator Control | 33 | 0.35 | BN | 1560 | II | — |
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |

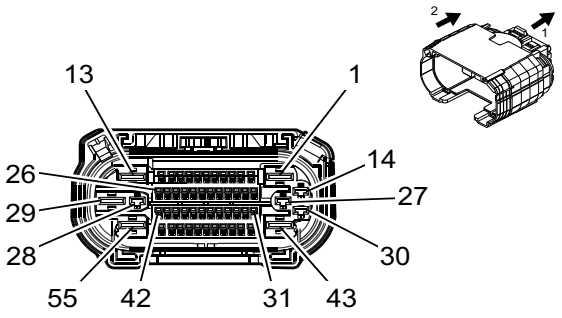
## X115 Engine Harness to Body Harness (Crew Cab+(L84/L87)) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 35 | 0.35 | BK/ YE | 5382 | II | — |
| 36 | 0.5 | WH/ GN | 5380 | I | — | Brake Position Sensor Signal | 36 | 0.35 | WH/ GN | 5380 | II | — |
| 37 | 0.5 | WH/ RD | 480 | I | — | Engine Control Sensors 5 Volt Reference (2) | 37 | 0.35 | WH/ RD | 5381 | II | — |
| 38 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 38 | 0.5 | BU | 2500 | II | — |
| 39 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 39 | 0.5 | WH | 2501 | II | — |
| 40 | 0.5 | BK/ VT | 1272 | I | — | Accelerator Pedal Position Low Reference 2 | 40 | 0.35 | BK/ VT | 1272 | II | — |
| 41 | — | — | — | — | — | Not Occupied | 41 | — | — | — | — | — |
| 42 | 0.5 | YE/ BK | 625 | I | — | Starter Enable Relay Control | 42 | 0.5 | YE/ BK | 625 | II | — |
| 43 | 4 | BK/ WH | 451 | I | — | Signal Ground | 43 | 6 | BK/ WH | 2251 | II | — |
| 44 | 1.5 | RD/ GN | 1840 | I | — | Battery Positive Voltage | 44 | 1 | RD/ GN | 1840 | II | — |
| 45 | — | — | — | — | — | Not Occupied | 45 | — | — | — | — | — |
| 46 | 0.5 | BK/ GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 46 | 0.35 | BK/ GN | 580 | II | — |
| 47 | 0.5 | BU/ BN | 7573 | I | — | Electric Variable Displace-ment Supply | 47 | 0.35 | BU/ BN | 7573 | II | — |
| 48 | — | — | — | — | — | Not Occupied | 48 | — | — | — | — | — |
| 49 | 0.5 | YE/ WH | 1161 | I | — | Accelerator Pedal Position Signal 1 | 49 | 0.35 | YE/ WH | 1161 | II | — |
| 50 | 0.5 | WH/ RD | 1164 | I | — | Accelerator Pedal Position 5V Reference 1 | 50 | 0.35 | WH/ RD | 1164 | II | — |

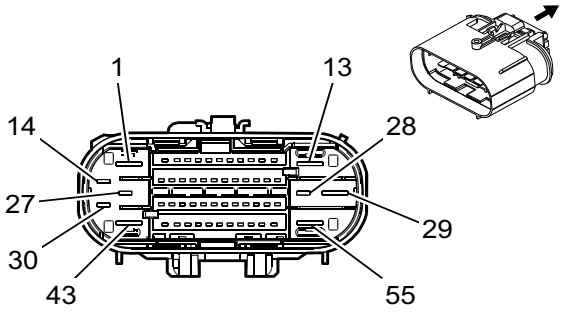
## X115 Engine Harness to Body Harness (Crew Cab+(L84/L87)) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | 0.5 | BN/ RD | 1274 | I | — | Accelerator Pedal Position 5V Reference 2 | 51 | 0.35 | BN/ RD | 1274 | II | — |
| 52 | — | — | — | — | — | Not Occupied | 52 | — | — | — | — | — |
| 53 | 0.5 | BU/ YE | 7574 | I | — | Electric Variable Displace-ment Control | 53 | 0.35 | BU/ YE | 7574 | II | — |
| 54 - 55 | — | — | — | — | — | Not Occupied | 54 - 55 | — | — | — | — | — |

# X115 Engine Harness to Body Harness (Crew Cab+L3B)




4992329




4994369

## Connector Part Information

Harness Type: Engine

OEM Connector: 35179575

Service Connector: 19371184

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

## Connector Part Information

Harness Type: Body

OEM Connector: 33357992

Service Connector: 84727363

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X115 Engine Harness to Body Harness (Crew Cab+L3B)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | — | — | Not Occupied | 1 - 2 | — | — | — | — | — |
| 3 | 0.5 | BK/ BU | 1271 | I | — | Accelerator Pedal Position Low Reference 1 | 3 | 0.35 | BK/ BU | 1271 | II | — |
| 4 | 0.5 | BN/ WH | 419 | I | — | Check Engine Indicator Control | 4 | 0.35 | BN/ WH | 419 | II | — |
| 5 | 0.5 | GN/ WH | 1162 | I | — | Accelerator Pedal Position Signal 2 | 5 | 0.35 | GN/ WH | 1162 | II | — |
| 6 - 14 | — | — | — | — | — | Not Occupied | 6 - 14 | — | — | — | — | — |
| 15 | 0.5 | YE | 4063 | I | — | Hood Status A Signal | 15 | 0.35 | YE | 4063 | II | — |
| 16 | 0.5 | VT/ GN | 439 | I | — | Run/Crank Ignition 1 Voltage | 16 | 0.5 | VT/ GN | 439 | II | — |

## X115 Engine Harness to Body Harness (Crew Cab+L3B) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 0.5 | WH/ BU | 5986 | I | — | Serial Data Communi-cation Enable | 17 | 0.35 | WH/ BU | 5986 | II | — |
| 18 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 18 | 0.35 | BK/ GY | 2204 | II | — |
| 19 | 0.5 | WH/ VT | 4108 | I | — | Driver Mode Switch Signal | 19 | 0.35 | WH/ BN | 2203 | II | — |
| 20 | 0.5 | BU/ RD | 460 | I | — | Engine Control Sensors 5 Volt Reference (1) | 20 | 0.35 | GY | 4109 | II | — |
| 21 | — | — | — | — | — | Not Occupied | 21 | — | — | — | — | — |
| 22 | 0.5 | VT/ YE | 5985 | I | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/ YE | 5985 | II | — |
| 23 | 0.5 | GN/ VT | 4621 | I | — | Local Interconnect Network Serial Data Bus 21 | 23 | 0.5 | GN/ VT | 4621 | II | — |
| 24 | 0.5 | BU/ BK | 7493 | I | — | High Speed GMLAN Serial Data (+)3 | 24 | 0.5 | BU/ BK | 7493 | II | — |
| 25 | 0.5 | WH | 7494 | I | — | High Speed GMLAN Serial Data (-)3 | 25 | 0.5 | WH | 7494 | II | — |
| 26 | 0.5 | BU/ GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 26 | 0.35 | BU/ GY | 636 | II | — |
| 27 - 30 | — | — | — | — | — | Not Occupied | 27 - 30 | — | — | — | — | — |
| 31 | 0.5 | WH/ BU | 6311 | I | — | Cruise/ETC/ TCC Brake Signal | 31 | 0.35 | WH/ BU | 6311 | II | — |
| 32 | 0.5 | VT/ BU | 6091 | I | — | Crankshaft Position Sensor Replicated Signal | 32 | 0.35 | VT/ BU | 6091 | II | — |
| 33 | 0.5 | BN | 1560 | I | — | Neutral Indicator Control | 33 | 0.35 | BN | 1560 | II | — |
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |
| 35 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 35 | 0.35 | BK/ YE | 5382 | II | — |

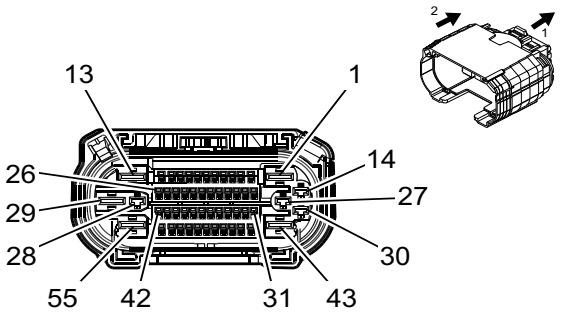
## X115 Engine Harness to Body Harness (Crew Cab+L3B) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 0.5 | WH/GN | 5380 | I | — | Brake Position Sensor Signal | 36 | 0.35 | WH/GN | 5380 | II | — |
| 37 | 0.5 | WH/RD | 480 | I | — | Engine Control Sensors 5 Volt Reference (2) | 37 | 0.35 | WH/RD | 5381 | II | — |
| 38 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 38 | 0.5 | BU | 2500 | II | — |
| 39 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 39 | 0.5 | WH | 2501 | II | — |
| 40 | 0.5 | BK/VT | 1272 | I | — | Accelerator Pedal Position Low Reference 2 | 40 | 0.35 | BK/VT | 1272 | II | — |
| 41 | — | — | — | — | — | Not Occupied | 41 | — | — | — | — | — |
| 42 | 0.5 | YE/BK | 625 | I | — | Starter Enable Relay Control | 42 | 0.5 | YE/BK | 625 | II | — |
| 43 | 4 | BK/WH | 451 | I | — | Signal Ground | 43 | 6 | BK/WH | 2251 | II | — |
| 44 | 1.5 | RD/GN | 1840 | I | — | Battery Positive Voltage | 44 | 1 | RD/GN | 1840 | II | — |
| 45 | — | — | — | — | — | Not Occupied | 45 | — | — | — | — | — |
| 46 | 0.5 | BK/GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 46 | 0.35 | BK/GN | 580 | II | — |
| 47 | 0.5 | BU/BN | 7573 | I | — | Electric Variable Displace-ment Supply | 47 | 0.35 | BU/BN | 7573 | II | — |
| 48 | 0.5 | RD/GN | 40 | I | — | Battery Positive Voltage | 48 | 0.35 | RD/GN | 40 | II | — |
| 49 | 0.5 | YE/WH | 1161 | I | — | Accelerator Pedal Position Signal 1 | 49 | 0.35 | YE/WH | 1161 | II | — |
| 50 | 0.5 | WH/RD | 1164 | I | — | Accelerator Pedal Position 5V Reference 1 | 50 | 0.35 | WH/RD | 1164 | II | — |
| 51 | 0.5 | BN/RD | 1274 | I | — | Accelerator Pedal Position 5V Reference 2 | 51 | 0.35 | BN/RD | 1274 | II | — |
| 52 | — | — | — | — | — | Not Occupied | 52 | — | — | — | — | — |

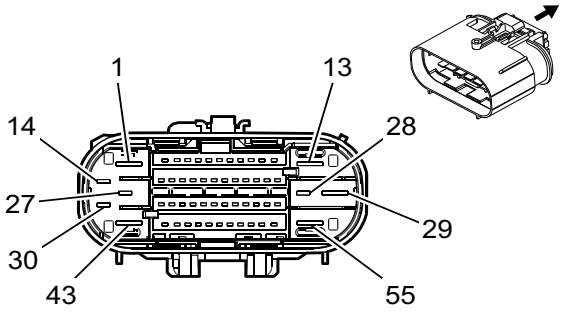
## X115 Engine Harness to Body Harness (Crew Cab+L3B) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 53 | 0.5 | BU/ YE | 7574 | I | — | Electric Variable Displace-ment Control | 53 | 0.35 | BU/ YE | 7574 | II | — |
| 54 - 55 | — | — | — | — | — | Not Occupied | 54 - 55 | — | — | — | — | — |

# X115 Engine Harness to Body Harness (Crew Cab+L82)




4992329




4994369

## Connector Part Information

Harness Type: Engine

OEM Connector: 35179599

Service Connector: 19371184

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

## Connector Part Information

Harness Type: Body

OEM Connector: 33357992

Service Connector: 84727363

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X115 Engine Harness to Body Harness (Crew Cab+L82)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | — | — | Not Occupied | 1 - 2 | — | — | — | — | — |
| 3 | 0.5 | BK/ BU | 1271 | I | — | Accelerator Pedal Position Low Reference 1 | 3 | 0.35 | BK/ BU | 1271 | II | — |
| 4 | 0.5 | BN/ WH | 419 | I | — | Check Engine Indicator Control | 4 | 0.35 | BN/ WH | 419 | II | — |
| 5 | 0.5 | GN/ WH | 1162 | I | — | Accelerator Pedal Position Signal 2 | 5 | 0.35 | GN/ WH | 1162 | II | — |
| 6 - 14 | — | — | — | — | — | Not Occupied | 6 - 14 | — | — | — | — | — |
| 15 | 0.5 | YE | 4063 | I | — | Hood Status A Signal | 15 | 0.35 | YE | 4063 | II | — |
| 16 | 0.5 | VT/ GN | 439 | I | — | Run/Crank Ignition 1 Voltage | 16 | 0.5 | VT/ GN | 439 | II | — |

## X115 Engine Harness to Body Harness (Crew Cab+L82) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 0.5 | WH/ BU | 5986 | I | — | Serial Data Communi-cation Enable | 17 | 0.35 | WH/ BU | 5986 | II | — |
| 18 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 18 | 0.35 | BK/ GY | 2204 | II | — |
| 19 | 0.5 | WH/ BN | 2203 | I | — | Enhanced Driver Mode 2 Switch Signal | 19 | 0.35 | WH/ BN | 2203 | II | — |
| 20 | 0.5 | BU/ RD | 460 | I | — | Engine Control Sensors 5 Volt Reference (1) | 20 | 0.35 | GY | 4109 | II | — |
| 21 | — | — | — | — | — | Not Occupied | 21 | — | — | — | — | — |
| 22 | 0.5 | VT/ YE | 5985 | I | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/ YE | 5985 | II | — |
| 23 | — | — | — | — | — | Not Occupied | 23 | — | — | — | — | — |
| 24 | 0.5 | BU/ BK | 7493 | I | — | High Speed GMLAN Serial Data (+)3 | 24 | 0.5 | BU/ BK | 7493 | II | — |
| 25 | 0.5 | WH | 7494 | I | — | High Speed GMLAN Serial Data (-)3 | 25 | 0.5 | WH | 7494 | II | — |
| 26 | 0.5 | BU/ GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 26 | 0.35 | BU/ GY | 636 | II | — |
| 27 - 30 | — | — | — | — | — | Not Occupied | 27 - 30 | — | — | — | — | — |
| 31 | 0.5 | WH/ BU | 6311 | I | — | Cruise/ETC/ TCC Brake Signal | 31 | 0.35 | WH/ BU | 6311 | II | — |
| 32 | 0.5 | VT/ BU | 6091 | I | — | Crankshaft Position Sensor Replicated Signal | 32 | 0.35 | VT/ BU | 6091 | II | — |
| 33 | 0.5 | BN | 1560 | I | — | Neutral Indicator Control | 33 | 0.35 | BN | 1560 | II | — |
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |
| 35 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 35 | 0.35 | BK/ YE | 5382 | II | — |

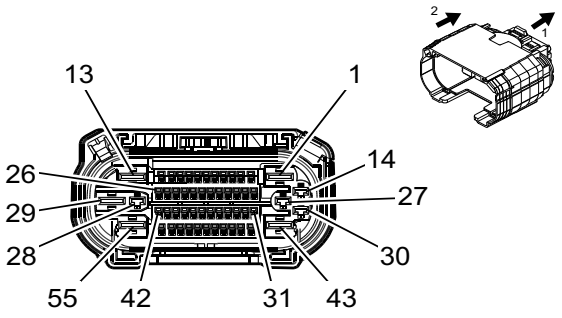
## X115 Engine Harness to Body Harness (Crew Cab+L82) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 0.5 | WH/GN | 5380 | I | — | Brake Position Sensor Signal | 36 | 0.35 | WH/GN | 5380 | II | — |
| 37 | 0.5 | WH/RD | 480 | I | — | Engine Control Sensors 5 Volt Reference (2) | 37 | 0.35 | WH/RD | 5381 | II | — |
| 38 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 38 | 0.5 | BU | 2500 | II | — |
| 39 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 39 | 0.5 | WH | 2501 | II | — |
| 40 | 0.5 | BK/VT | 1272 | I | — | Accelerator Pedal Position Low Reference 2 | 40 | 0.35 | BK/VT | 1272 | II | — |
| 41 - 42 | — | — | — | — | — | Not Occupied | 41 - 42 | — | — | — | — | — |
| 43 | 4 | BK/WH | 451 | I | — | Signal Ground | 43 | 6 | BK/WH | 2251 | II | — |
| 44 | 1.5 | RD/GN | 1840 | I | — | Battery Positive Voltage | 44 | 1 | RD/GN | 1840 | II | — |
| 45 | — | — | — | — | — | Not Occupied | 45 | — | — | — | — | — |
| 46 | 0.5 | BK/GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 46 | 0.35 | BK/GN | 580 | II | — |
| 47 | 0.5 | BU/BN | 7573 | I | — | Electric Variable Displace-ment Supply | 47 | 0.35 | BU/BN | 7573 | II | — |
| 48 | — | — | — | — | — | Not Occupied | 48 | — | — | — | — | — |
| 49 | 0.5 | YE/WH | 1161 | I | — | Accelerator Pedal Position Signal 1 | 49 | 0.35 | YE/WH | 1161 | II | — |
| 50 | 0.5 | WH/RD | 1164 | I | — | Accelerator Pedal Position 5V Reference 1 | 50 | 0.35 | WH/RD | 1164 | II | — |
| 51 | 0.5 | BN/RD | 1274 | I | — | Accelerator Pedal Position 5V Reference 2 | 51 | 0.35 | BN/RD | 1274 | II | — |
| 52 | — | — | — | — | — | Not Occupied | 52 | — | — | — | — | — |
| 53 | 0.5 | BU/YE | 7574 | I | — | Electric Variable Displace-ment Control | 53 | 0.35 | BU/YE | 7574 | II | — |

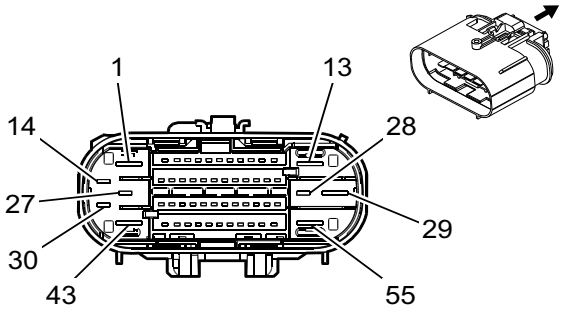
## X115 Engine Harness to Body Harness (Crew Cab+L82) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54 - 55 | — | — | — | — | — | Not Occupied | 54 - 55 | — | — | — | — | — |

# X115 Engine Harness to Body Harness (Crew Cab+LM2)




4992329




4994369

## Connector Part Information

Harness Type: Engine

OEM Connector: 35016653

Service Connector: 19371184

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

## Connector Part Information

Harness Type: Body

OEM Connector: 33357992

Service Connector: 84727363

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X115 Engine Harness to Body Harness (Crew Cab+LM2)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | — | — | — | — | — | Not Occupied | 1 | — | — | — | — | — |
| 2 | 1 | BK | 9003 | I | — | — | 2 | 1 | BK | 9003 | II | — |
| 3 | 0.5 | BK/BU | 1271 | I | — | Accelerator Pedal Position Low Reference 1 | 3 | 0.35 | BK/BU | 1271 | II | — |
| 4 | 0.5 | BN/WH | 419 | I | — | Check Engine Indicator Control | 4 | 0.35 | BN/WH | 419 | II | — |
| 5 | 0.5 | GN/WH | 1162 | I | — | Accelerator Pedal Position Signal 2 | 5 | 0.35 | GN/WH | 1162 | II | — |
| 6 | 0.5 | GN/BN | 507 | I | — | Wait To Start Indicator Control | 6 | 0.35 | GN/BN | 507 | II | — |
| 7 - 11 | — | — | — | — | — | Not Occupied | 7 - 11 | — | — | — | — | — |
| 12 | 1 | BK | 9003 | I | — | — | 12 | 1 | BK | 9003 | II | — |
| 13 - 14 | — | — | — | — | — | Not Occupied | 13 - 14 | — | — | — | — | — |

## X115 Engine Harness to Body Harness (Crew Cab+LM2) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 0.5 | YE | 4063 | I | — | Hood Status A Signal | 15 | 0.35 | YE | 4063 | II | — |
| 16 | 0.5 | VT/ GN | 439 | I | — | Run/Crank Ignition 1 Voltage | 16 | 0.5 | VT/ GN | 439 | II | — |
| 17 | 0.5 | WH/ BU | 5986 | I | — | Serial Data Communi-cation Enable | 17 | 0.35 | WH/ BU | 5986 | II | — |
| 18 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 18 | 0.35 | BK/ GY | 2204 | II | — |
| 19 | 0.5 | WH/ BN | 2203 | I | — | Enhanced Driver Mode 2 Switch Signal | 19 | 0.35 | WH/ BN | 2203 | II | — |
| 20 | 0.5 | BU/ RD | 460 | I | — | Engine Control Sensors 5 Volt Reference (1) | 20 | 0.35 | GY | 4109 | II | — |
| 21 | — | — | — | — | — | Powertrain Relay Coil Control | 21 | 0.5 | YE | 5991 | II | — |
| 22 | 0.5 | VT/ YE | 5985 | I | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/ YE | 5985 | II | — |
| 23 | 0.5 | GN/ VT | 4621 | I | — | Local Interconnect Network Serial Data Bus 21 | 23 | 0.5 | GN/ VT | 4621 | II | — |
| 24 | 0.5 | BU/ BK | 7493 | I | — | High Speed GMLAN Serial Data (+)3 | 24 | 0.5 | BU/ BK | 7493 | II | — |
| 25 | 0.5 | WH | 7494 | I | — | High Speed GMLAN Serial Data (-)3 | 25 | 0.5 | WH | 7494 | II | — |
| 26 | 0.5 | BU/ GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 26 | 0.35 | BU/ GY | 636 | II | — |
| 27 - 30 | — | — | — | — | — | Not Occupied | 27 - 30 | — | — | — | — | — |
| 31 | 0.5 | WH/ BU | 6311 | I | — | Cruise/ETC/ TCC Brake Signal | 31 | 0.35 | WH/ BU | 6311 | II | — |
| 32 | 0.5 | VT/ BU | 6091 | I | — | Crankshaft Position Sensor Replicated Signal | 32 | 0.35 | VT/ BU | 6091 | II | — |
| 33 | 0.5 | BN | 1560 | I | — | Neutral Indicator Control | 33 | 0.35 | BN | 1560 | II | — |

## X115 Engine Harness to Body Harness (Crew Cab+LM2) (cont'd)

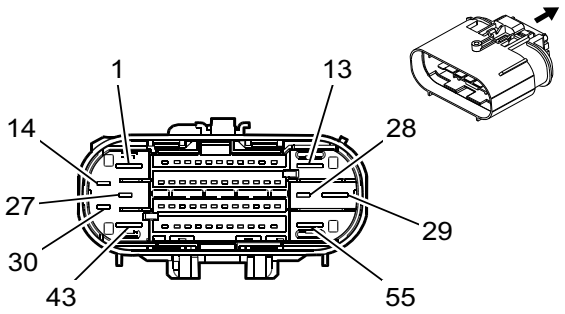
| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 | — | — | — | — | — | Accessory Ignition Voltage | 34 | 0.35 | VT/ YE | 43 | II | — |
| 35 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 35 | 0.35 | BK/ YE | 5382 | II | — |
| 36 | 0.5 | WH/ GN | 5380 | I | — | Brake Position Sensor Signal | 36 | 0.35 | WH/ GN | 5380 | II | — |
| 37 | 0.5 | WH/ RD | 480 | I | — | Engine Control Sensors 5 Volt Reference (2) | 37 | 0.35 | WH/ RD | 5381 | II | — |
| 38 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 38 | 0.5 | BU | 2500 | II | — |
| 39 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 39 | 0.5 | WH | 2501 | II | — |
| 40 | 0.5 | BK/ VT | 1272 | I | — | Accelerator Pedal Position Low Reference 2 | 40 | 0.35 | BK/ VT | 1272 | II | — |
| 41 | — | — | — | — | — | Powertrain Relay Coil Control | 41 | 0.5 | YE | 5991 | II | — |
| 42 | 0.5 | YE/ BK | 625 | I | — | Starter Enable Relay Control | 42 | 0.5 | YE/ BK | 625 | II | — |
| 43 | 6 | BK/ WH | 451 | I | — | Signal Ground | 43 | 6 | BK/ WH | 2251 | II | — |
| 44 | 1.5 | RD/ GN | 1840 | I | — | Battery Positive Voltage | 44 | 1 | RD/ GN | 1840 | II | — |
| 45 | — | — | — | — | — | Not Occupied | 45 | — | — | — | — | — |
| 46 | 0.5 | BK/ GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 46 | 0.35 | BK/ GN | 580 | II | — |
| 47 | 0.5 | BU/ BN | 7573 | I | — | Electric Variable Displace-ment Supply | 47 | 0.35 | BU/ BN | 7573 | II | — |
| 48 | 0.5 | RD/ GN | 40 | I | — | Battery Positive Voltage | 48 | 0.35 | RD/ GN | 40 | II | — |
| 49 | 0.5 | YE/ WH | 1161 | I | — | Accelerator Pedal Position Signal 1 | 49 | 0.35 | YE/ WH | 1161 | II | — |

## X115 Engine Harness to Body Harness (Crew Cab+LM2) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 0.5 | WH/ RD | 1164 | I | — | Accelerator Pedal Position 5V Reference 1 | 50 | 0.35 | WH/ RD | 1164 | II | — |
| 51 | 0.5 | BN/ RD | 1274 | I | — | Accelerator Pedal Position 5V Reference 2 | 51 | 0.35 | BN/ RD | 1274 | II | — |
| 52 | — | — | — | — | — | Not Occupied | 52 | — | — | — | — | — |
| 53 | 0.5 | BU/ YE | 7574 | I | — | Electric Variable Displace-ment Control | 53 | 0.35 | BU/ YE | 7574 | II | — |
| 54 | 1 | BK | 9003 | I | — | — | 54 | 1 | BK | 9003 | II | — |
| 55 | — | — | — | — | — | Not Occupied | 55 | — | — | — | — | — |

# X115 Engine Harness to Body Harness (Crew Cab+LV3)

—




4994369

### Connector Part Information

Harness Type: Engine
OEM Connector: 35179597
Service Connector: 19371184
Description: 55-Way F

### Connector Part Information

Harness Type: Body
OEM Connector: 33357992
Service Connector: 84727363
Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X115 Engine Harness to Body Harness (Crew Cab+LV3)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 0.5 | BK/BU | 1271 | I | — | Accelerator Pedal Position Low Reference 1 | 3 | 0.35 | BK/BU | 1271 | II | — |
| 4 | 0.5 | BN/WH | 419 | I | — | Check Engine Indicator Control | 4 | 0.35 | BN/WH | 419 | II | — |
| 5 | 0.5 | GN/WH | 1162 | I | — | Accelerator Pedal Position Signal 2 | 5 | 0.35 | GN/WH | 1162 | II | — |
| 15 | 0.5 | YE | 4063 | I | — | Hood Status A Signal | 15 | 0.35 | YE | 4063 | II | — |
| 16 | 0.5 | VT/GN | 439 | I | — | Run/Crank Ignition 1 Voltage | 16 | 0.5 | VT/GN | 439 | II | — |
| 17 | 0.5 | WH/BU | 5986 | I | — | Serial Data Communi-cation Enable | 17 | 0.35 | WH/BU | 5986 | II | — |

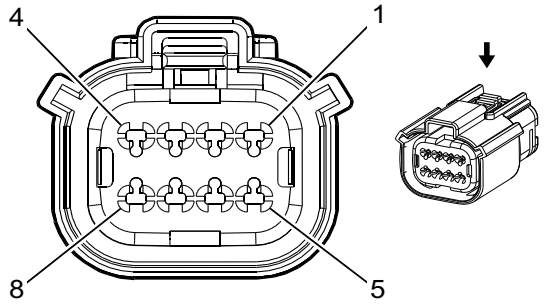
## X115 Engine Harness to Body Harness (Crew Cab+LV3) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 18 | 0.35 | BK/ GY | 2204 | II | — |
| 19 | 0.5 | WH/ BN | 2203 | I | — | Enhanced Driver Mode 2 Switch Signal | 19 | 0.35 | WH/ BN | 2203 | II | — |
| 20 | 0.5 | BU/ RD | 460 | I | — | Engine Control Sensors 5 Volt Reference (1) | 20 | 0.35 | GY | 4109 | II | — |
| 22 | 0.5 | VT/ YE | 5985 | I | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/ YE | 5985 | II | — |
| 24 | 0.5 | BU/ BK | 7493 | I | — | High Speed GMLAN Serial Data (+)3 | 24 | 0.5 | BU/ BK | 7493 | II | — |
| 25 | 0.5 | WH | 7494 | I | — | High Speed GMLAN Serial Data (-)3 | 25 | 0.5 | WH | 7494 | II | — |
| 26 | 0.5 | BU/ GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 26 | 0.35 | BU/ GY | 636 | II | — |
| 31 | 0.5 | WH/ BU | 6311 | I | — | Cruise/ETC/ TCC Brake Signal | 31 | 0.35 | WH/ BU | 6311 | II | — |
| 32 | 0.5 | VT/ BU | 6091 | I | — | Crankshaft Position Sensor Replicated Signal | 32 | 0.35 | VT/ BU | 6091 | II | — |
| 33 | 0.5 | BN | 1560 | I | — | Neutral Indicator Control | 33 | 0.35 | BN | 1560 | II | — |
| 35 | 0.5 | BK/ GY | 626 | I | — | Engine Control Sensors Low Reference (3) | 35 | 0.35 | BK/ YE | 5382 | II | — |
| 36 | 0.5 | WH/ GN | 5380 | I | — | Brake Position Sensor Signal | 36 | 0.35 | WH/ GN | 5380 | II | — |
| 37 | 0.5 | WH/ RD | 480 | I | — | Engine Control Sensors 5 Volt Reference (2) | 37 | 0.35 | WH/ RD | 5381 | II | — |
| 38 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 38 | 0.5 | BU | 2500 | II | — |

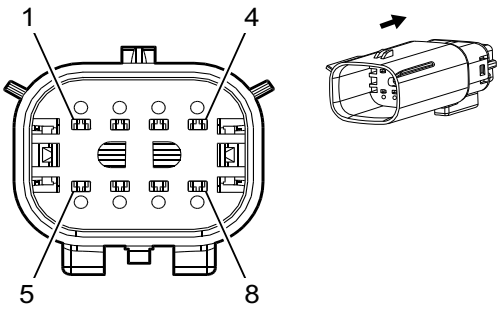
## X115 Engine Harness to Body Harness (Crew Cab+LV3) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 39 | 0.5 | WH | 2501 | II | — |
| 40 | 0.5 | BK/ VT | 1272 | I | — | Accelerator Pedal Position Low Reference 2 | 40 | 0.35 | BK/ VT | 1272 | II | — |
| 43 | 4 | BK/ WH | 451 | I | — | Signal Ground | 43 | 6 | BK/ WH | 2251 | II | — |
| 44 | 1.5 | RD/ GN | 1840 | I | — | Battery Positive Voltage | 44 | 1 | RD/ GN | 1840 | II | — |
| 46 | 0.5 | BK/ GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 46 | 0.35 | BK/ GN | 580 | II | — |
| 47 | 0.5 | BU/ BN | 7573 | I | — | Electric Variable Displace-ment Supply | 47 | 0.35 | BU/ BN | 7573 | II | — |
| 49 | 0.5 | YE/ WH | 1161 | I | — | Accelerator Pedal Position Signal 1 | 49 | 0.35 | YE/ WH | 1161 | II | — |
| 50 | 0.5 | WH/ RD | 1164 | I | — | Accelerator Pedal Position 5V Reference 1 | 50 | 0.35 | WH/ RD | 1164 | II | — |
| 51 | 0.5 | BN/ RD | 1274 | I | — | Accelerator Pedal Position 5V Reference 2 | 51 | 0.35 | BN/ RD | 1274 | II | — |
| 53 | 0.5 | BU/ YE | 7574 | I | — | Electric Variable Displace-ment Control | 53 | 0.35 | BU/ YE | 7574 | II | — |

# X120 Body Harness to Headlamp - Right Harness (Crew Cab)




2268728




2667653

### Connector Part Information

Harness Type: Body
OEM Connector: 13654393
Service Connector: 19366859
Description: 8-Way F 1.5 Series, Sealed (BK)

### Connector Part Information

Harness Type: Headlamp - Right
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

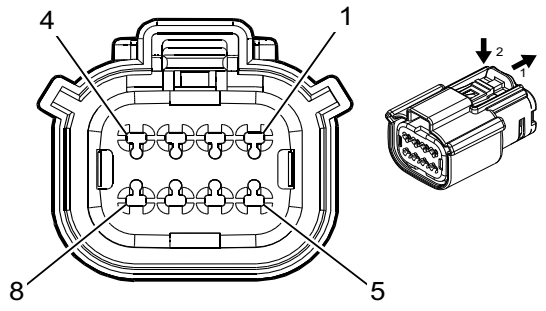
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

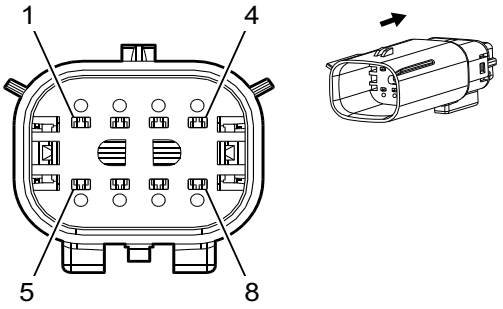
## X120 Body Harness to Headlamp - Right Harness (Crew Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 250 | I | — | Ground | 1 | 0.75 | BK | 250 | II | — |
| 2 | 0.75 | YE/GY | 2226 | I | — | Right Headlamp Control | 2 | 0.75 | YE/GY | 2226 | II | — |
| 3 | 1 | YE | 312 | I | — | Right Headlamp Low Beam Control | 3 | 1 | YE | 312 | II | — |
| 4 | 0.75 | WH | 311 | I | — | Right Headlamp High Beam Control | 4 | 0.75 | WH | 311 | II | — |
| 5 | 0.5 | GY/BN | 309 | I | — | Right Park Lamp Control | 5 | 0.5 | GY/BN | 309 | II | — |
| 6 | 0.35 | WH/BU | 3203 | I | — | Right Headlamp Bulb Outage Signal | 6 | 0.35 | WH/BU | 3203 | II | — |
| 7 | 0.5 | GN/VT | 1315 | I | — | Right Front Turn Signal Lamp Control | 7 | 0.5 | — | 1315 | II | — |
| 8 | 0.35 | BU/BN | 7539 | I | — | Right Front DRL Control | 8 | 0.35 | BU/BN | 7539 | II | — |

# X120 Body Harness to Headlamp - Right Harness (Extended Cab)




4846407




2667653

### Connector Part Information

Harness Type: Body
OEM Connector: 35037827
Service Connector: 19366859
Description: 8-Way F 150 MX Series, Sealed (BK)

### Connector Part Information

Harness Type: Headlamp - Right
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

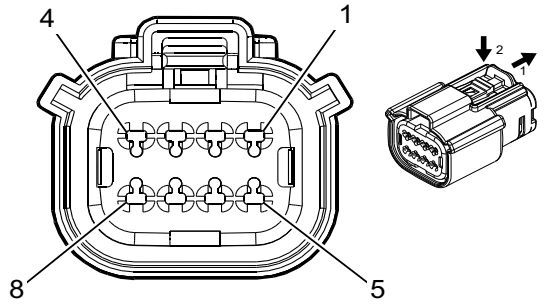
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

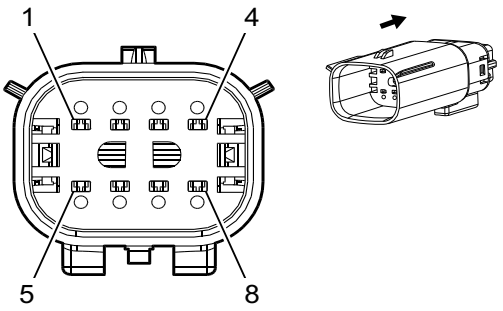
## X120 Body Harness to Headlamp - Right Harness (Extended Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 250 | I | — | Ground | 1 | 0.75 | BK | 250 | II | — |
| 2 | 0.75 | YE/GY | 2226 | I | — | Right Headlamp Control | 2 | 0.75 | YE/GY | 2226 | II | — |
| 3 | 1 | YE | 312 | I | — | Right Headlamp Low Beam Control | 3 | 1 | YE | 312 | II | — |
| 4 | 0.75 | WH | 311 | I | — | Right Headlamp High Beam Control | 4 | 0.75 | WH | 311 | II | — |
| 5 | 0.5 | GY/BN | 309 | I | — | Right Park Lamp Control | 5 | 0.5 | GY/BN | 309 | II | — |
| 6 | 0.35 | WH/BU | 3203 | I | — | Right Headlamp Bulb Outage Signal | 6 | 0.35 | WH/BU | 3203 | II | — |
| 7 | 0.5 | GN/VT | 1315 | I | — | Right Front Turn Signal Lamp Control | 7 | 0.5 | — | 1315 | II | — |
| 8 | 0.35 | BU/BN | 7539 | I | — | Right Front DRL Control | 8 | 0.35 | BU/BN | 7539 | II | — |

# X120 Body Harness to Headlamp - Right Harness (Regular Cab)




4846407




2667653

### Connector Part Information

Harness Type: Body
OEM Connector: 35037827
Service Connector: 19366859
Description: 8-Way F 150 MX Series, Sealed (BK)

### Connector Part Information

Harness Type: Headlamp - Right
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

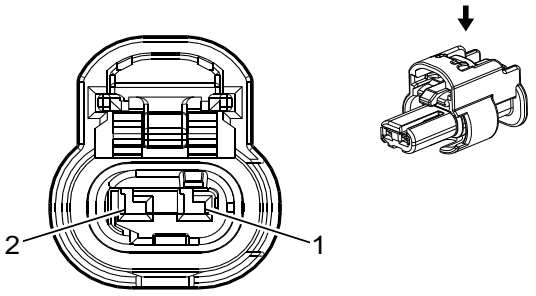
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

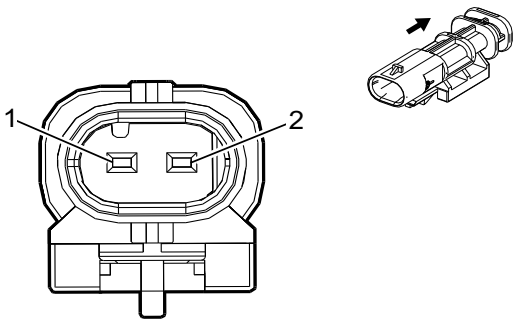
## X120 Body Harness to Headlamp - Right Harness (Regular Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 250 | I | — | Ground | 1 | 0.75 | BK | 250 | II | — |
| 2 | 0.75 | YE/GY | 2226 | I | — | Right Headlamp Control | 2 | 0.75 | YE/GY | 2226 | II | — |
| 3 | 1 | YE | 312 | I | — | Right Headlamp Low Beam Control | 3 | 1 | YE | 312 | II | — |
| 4 | 0.75 | WH | 311 | I | — | Right Headlamp High Beam Control | 4 | 0.75 | WH | 311 | II | — |
| 5 | 0.5 | GY/BN | 309 | I | — | Right Park Lamp Control | 5 | 0.5 | GY/BN | 309 | II | — |
| 6 | 0.35 | WH/BU | 3203 | I | — | Right Headlamp Bulb Outage Signal | 6 | 0.35 | WH/BU | 3203 | II | — |
| 7 | 0.5 | GN/VT | 1315 | I | — | Right Front Turn Signal Lamp Control | 7 | 0.5 | — | 1315 | II | — |
| 8 | 0.35 | BU/BN | 7539 | I | — | Right Front DRL Control | 8 | 0.35 | BU/BN | 7539 | II | — |

# X136 Chassis Harness to Electronic Suspension Strut Extension Harness (Z45)




4649903




2474755

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33327048
Service Connector: 19366858
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

### Connector Part Information

Harness Type: Electronic Suspension Strut Extension
OEM Connector: 2203314-1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 Multilock Series, Sealed (BK)

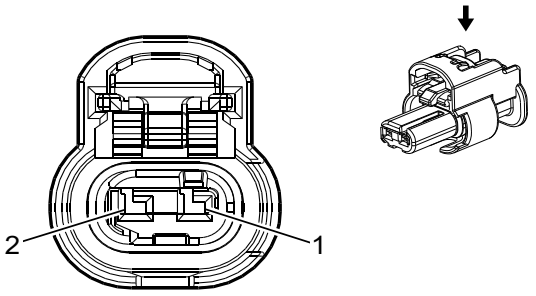
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

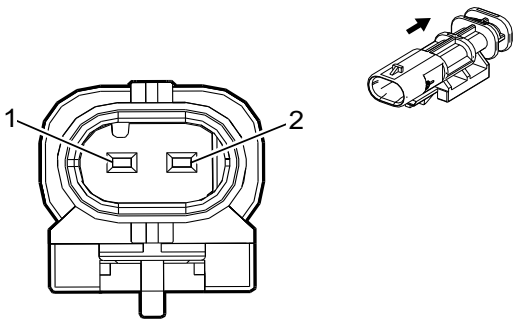
## X136 Chassis Harness to Electronic Suspension Strut Extension Harness (Z45)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | BN/WH | 1107 | I | — | Left Front Damping Servo Control | 1 | 0.75 | BU/WH | 1107 | II | — |
| 2 | 0.75 | GY/BU | 1113 | I | — | Left Front Damping Servo Control | 2 | 0.75 | GY | 1113 | II | — |

# X137 Chassis Harness to Electronic Suspension Strut Extension Harness (Z45)




4649903




2474755

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33327048
Service Connector: 19366858
Description: 2-Way F 1.2 MCON Series, Sealed (BK)

### Connector Part Information

Harness Type: Electronic Suspension Strut Extension
OEM Connector: 2203314-1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 Multilock Series, Sealed (BK)

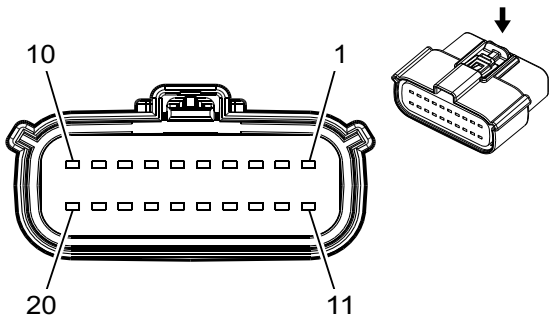
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

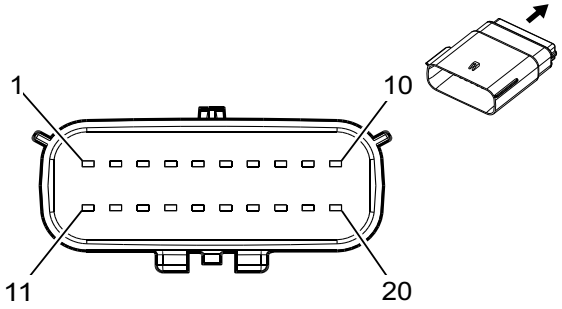
## X137 Chassis Harness to Electronic Suspension Strut Extension Harness (Z45)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | BN/BU | 1116 | I | — | Right Front Damping Servo Control | 1 | 0.75 | BU/WH | 1116 | II | — |
| 2 | 0.75 | GY/WH | 1117 | I | — | Right Front Damping Servo Control | 2 | 0.75 | GY | 1117 | II | — |

# X138 Body Harness to Chassis Harness (Crew Cab)




2871898




2871861

### Connector Part Information

Harness Type: Body
OEM Connector: 35210697
Service Connector: 19300557
Description: 20-Way F

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33181044
Service Connector: 19351705
Description: 20-Way M 1.5 Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

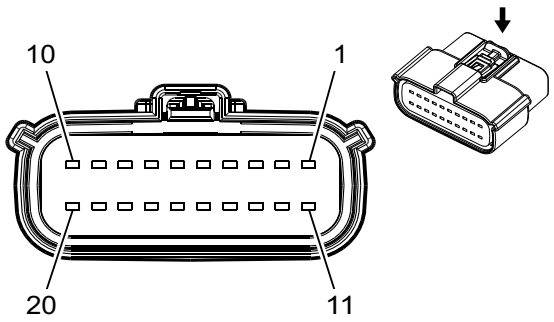
## X138 Body Harness to Chassis Harness (Crew Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/ GN | 1739 | I | — | Run/Crank Ignition 1 Voltage | 1 | 0.5 | VT/ GN | 1739 | II | — |
| 2 | — | — | — | — | — | Not Occupied | 2 | — | — | — | — | — |
| 3 | 0.35 | WH/ BU | 6973 | I | — | Camera Signal 2 | 3 | 0.5 | WH/ BU | 6973 | II | — |
| 4 | 0.75 | GN/ BN | 2266 | I | — | DC To AC Inverter Control 2 | 4 | 0.75 | GN/ BN | 2266 | II | — |
| 5 | 0.5 | VT/ WH | 5065 | I | — | Stop Lamp Relay Coil Control | 5 | 0.5 | VT/ WH | 5065 | II | — |
| 6 | — | — | — | — | — | Not Occupied | 6 | — | — | — | — | — |
| 7 | 0.5 | BN/ GN | 3568 | I | — | Passive Entry Rear Closure Antenna Signal Hi | 7 | 0.5 | BN/ GN | 3568 | II | — |
| 8 | 0.75 | BK/ WH | 2264 | I | — | 120 VAC Phase A 2 | 8 | 0.75 | BK/ WH | 2264 | II | — |
| 9 - 10 | — | — | — | — | — | Not Occupied | 9 - 10 | — | — | — | — | — |

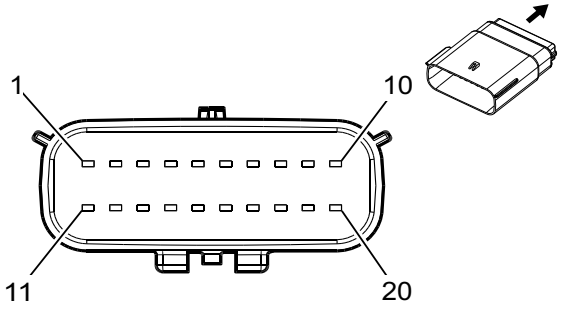
## X138 Body Harness to Chassis Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 0.35 | GN | 5060 | I | — | Low Speed GMLAN Serial Data | 11 | 0.5 | GN | 5060 | II | — |
| 12 | 0.35 | BK | 6974 | I | — | Camera Low Reference | 12 | 0.5 | BU | 6974 | II | — |
| 13 | 0.35 | GY/ YE | 6972 | I | — | Camera Signal 2 + | 13 | 0.5 | GY/ YE | 6972 | II | — |
| 14 | 0.75 | RD/ WH | 2265 | I | — | 120 VAC Phase B 2 | 14 | 0.75 | RD/ WH | 2265 | II | — |
| 15 | 0.35 | WH/ BU | 5986 | I | — | Serial Data Communi- cation Enable | 15 | 0.5 | WH/ BU | 5986 | II | — |
| 16 | 1 | WH/ VT | 1430 | I | — | Exterior Courtesy Lamp Control | 16 | 0.5 | WH/ VT | 1430 | II | — |
| 17 | 0.5 | GN/ GY | 3569 | I | — | Passive Entry Rear Closure Antenna Signal Lo | 17 | 0.5 | GN/ GY | 3569 | II | — |
| 18 | 0.35 | BN | 2257 | I | — | Drain Wire | 18 | 0.5 | BN | 2257 | II | — |
| 19 | 0.5 | BU/ GN | 1304 | I | — | High Speed GMLAN Serial Data (+)9 | 19 | 0.5 | BU/ GN | 1304 | II | — |
| 20 | 0.5 | WH/ GN | 1305 | I | — | High Speed GMLAN Serial Data (-)9 | 20 | 0.5 | WH/ GN | 1305 | II | — |

# X138 Body Harness to Chassis Harness (Extended Cab)




2871898




2871861

### Connector Part Information

Harness Type: Body
OEM Connector: 13650143
Service Connector: 19300557
Description: 20-Way F 1.5 Series, Sealed (BK)

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33181044
Service Connector: 19351705
Description: 20-Way M 1.5 Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

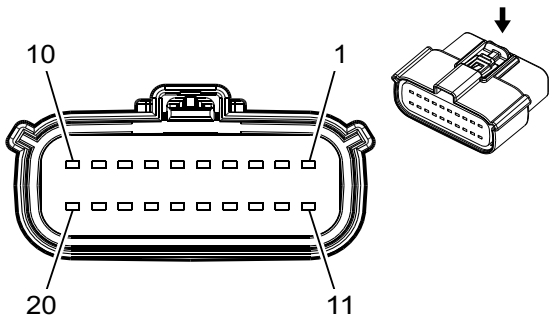
## X138 Body Harness to Chassis Harness (Extended Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/ GN | 1739 | I | — | Run/Crank Ignition 1 Voltage | 1 | 0.5 | VT/ GN | 1739 | II | — |
| 2 | 0.35 | BN/ WH | 7462 | I | — | Running Boards Disable Signal | 2 | 0.5 | BN/ WH | 7462 | II | — |
| 3 | 0.35 | WH/ BU | 6973 | I | — | Camera Signal 2 | 3 | 0.5 | WH/ BU | 6973 | II | — |
| 4 | 0.75 | GN/ BN | 2266 | I | — | DC To AC Inverter Control 2 | 4 | 0.75 | GN/ BN | 2266 | II | — |
| 5 | 0.5 | VT/ WH | 5065 | I | — | Stop Lamp Relay Coil Control | 5 | 0.5 | VT/ WH | 5065 | II | — |
| 6 | — | — | — | — | — | Not Occupied | 6 | — | — | — | — | — |
| 7 | 0.5 | BN/ GN | 3568 | I | — | Passive Entry Rear Closure Antenna Signal Hi | 7 | 0.5 | BN/ GN | 3568 | II | — |
| 8 | 0.75 | BK/ WH | 2264 | I | — | 120 VAC Phase A 2 | 8 | 0.75 | BK/ WH | 2264 | II | — |

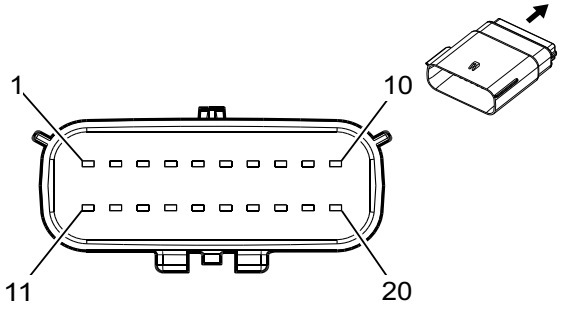
## X138 Body Harness to Chassis Harness (Extended Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | — | — | — | — | — | Not Occupied | 9 | — | — | — | — | — |
| 10 | — | — | — | — | — | Battery Positive Voltage | 10 | 0.5 | RD/YE | 2340 | II | — |
| 11 | 0.35 | GN | 5060 | I | — | Low Speed GMLAN Serial Data | 11 | 0.5 | GN | 5060 | II | — |
| 12 | 0.35 | BK | 6974 | I | — | Camera Low Reference | 12 | 0.5 | BU | 6974 | II | — |
| 13 | 0.35 | GY/YE | 6972 | I | — | Camera Signal 2 + | 13 | 0.5 | GY/YE | 6972 | II | — |
| 14 | 0.75 | RD/WH | 2265 | I | — | 120 VAC Phase B 2 | 14 | 0.75 | RD/WH | 2265 | II | — |
| 15 | 0.35 | WH/BU | 5986 | I | — | Serial Data Communi-cation Enable | 15 | 0.5 | WH/BU | 5986 | II | — |
| 16 | 1 | WH/VT | 1430 | I | — | Exterior Courtesy Lamp Control | 16 | 0.5 | WH/VT | 1430 | II | — |
| 17 | 0.5 | GN/GY | 3569 | I | — | Passive Entry Rear Closure Antenna Signal Lo | 17 | 0.5 | GN/GY | 3569 | II | — |
| 18 | 0.35 | BN | 2257 | I | — | Drain Wire | 18 | 0.5 | BN | 2257 | II | — |
| 19 | 0.5 | BU/GN | 1304 | I | — | High Speed GMLAN Serial Data (+)9 | 19 | 0.5 | BU/GN | 1304 | II | — |
| 20 | 0.5 | WH/GN | 1305 | I | — | High Speed GMLAN Serial Data (-)9 | 20 | 0.5 | WH/GN | 1305 | II | — |

## X138 Body Harness to Chassis Harness (Regular Cab)




2871898




2871861

### Connector Part Information

Harness Type: Body
OEM Connector: 13650143
Service Connector: 19300557
Description: 20-Way F 1.5 Series, Sealed (BK)

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33181044
Service Connector: 19351705
Description: 20-Way M 1.5 Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

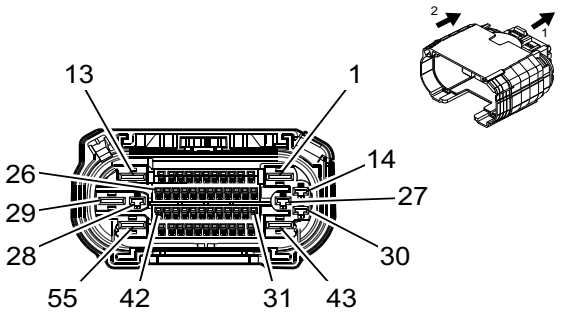
### X138 Body Harness to Chassis Harness (Regular Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/GN | 1739 | I | — | Run/Crank Ignition 1 Voltage | 1 | 0.5 | VT/GN | 1739 | II | — |
| 2 | — | — | — | — | — | Not Occupied | 2 | — | — | — | — | — |
| 3 | 0.35 | WH/BU | 6973 | I | — | Camera Signal 2 | 3 | 0.5 | WH/BU | 6973 | II | — |
| 4 | 0.75 | GN/BN | 2266 | I | — | DC To AC Inverter Control 2 | 4 | 0.75 | GN/BN | 2266 | II | — |
| 5 - 6 | — | — | — | — | — | Not Occupied | 5 - 6 | — | — | — | — | — |
| 7 | 0.5 | BN/GN | 3568 | I | — | Passive Entry Rear Closure Antenna Signal Hi | 7 | 0.5 | BN/GN | 3568 | II | — |
| 8 | 0.75 | BK/WH | 2264 | I | — | 120 VAC Phase A 2 | 8 | 0.75 | BK/WH | 2264 | II | — |
| 9 | — | — | — | — | — | Not Occupied | 9 | — | — | — | — | — |
| 10 | 0.5 | RD/YE | 2340 | I | — | Battery Positive Voltage | 10 | — | — | — | — | — |

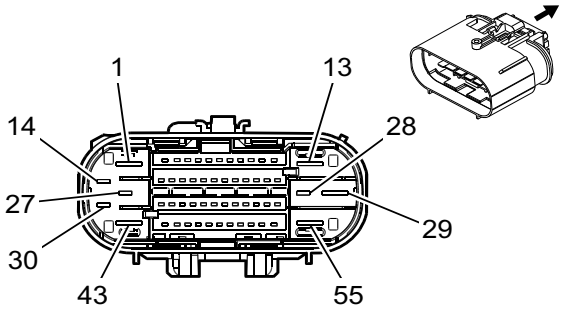
## X138 Body Harness to Chassis Harness (Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 0.35 | GN | 5060 | I | — | Low Speed GMLAN Serial Data | 11 | 0.5 | GN | 5060 | II | — |
| 12 | 0.35 | BK | 6974 | I | — | Camera Low Reference | 12 | 0.5 | BU | 6974 | II | — |
| 13 | 0.35 | GY/ YE | 6972 | I | — | Camera Signal 2 + | 13 | 0.5 | GY/ YE | 6972 | II | — |
| 14 | 0.75 | RD/ WH | 2265 | I | — | 120 VAC Phase B 2 | 14 | 0.75 | RD/ WH | 2265 | II | — |
| 15 | 0.35 | WH/ BU | 5986 | I | — | Serial Data Communi- cation Enable | 15 | 0.5 | WH/ BU | 5986 | II | — |
| 16 | 1 | WH/ VT | 1430 | I | — | Exterior Courtesy Lamp Control | 16 | 0.5 | WH/ VT | 1430 | II | — |
| 17 | 0.5 | GN/ GY | 3569 | I | — | Passive Entry Rear Closure Antenna Signal Lo | 17 | 0.5 | GN/ GY | 3569 | II | — |
| 18 | 0.35 | BN | 2257 | I | — | Drain Wire | 18 | 0.5 | BN | 2257 | II | — |
| 19 | 0.5 | BU/ GN | 1304 | I | — | High Speed GMLAN Serial Data (+)9 | 19 | 0.5 | BU/ GN | 1304 | II | — |
| 20 | 0.5 | WH/ GN | 1305 | I | — | High Speed GMLAN Serial Data (-)9 | 20 | 0.5 | WH/ GN | 1305 | II | — |

# X140 Chassis Harness to Body Harness (Crew Cab)




4992168




4993301

## Connector Part Information

Harness Type: Chassis

OEM Connector: 35016652

Service Connector: 19371185

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

## Connector Part Information

Harness Type: Body

OEM Connector: 33357991

Service Connector: 19371183

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X140 Chassis Harness to Body Harness (Crew Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | GN/VT | 1988 | I | — | Park Brake Motor Apply Right Rear Control | 1 | 2.5 | GN/VT | 1988 | II | — |
| 2 | 1 | BN/GN | 19 | I | — | Right Rear Stop/Turn Lamp Control | 2 | 1 | BN/GN | 19 | II | — |
| 3 | 0.5 | GY/YE | 7128 | I | — | Wheel Speed Sensor Control Right Rear | 3 | 0.5 | GY/YE | 7128 | II | — |
| 4 | 0.5 | VT | 882 | I | — | Wheel Speed Sensor Signal Right Rear | 4 | 0.5 | VT | 882 | II | — |
| 5 | 0.5 | GY/YE | 1760 | I | — | Left Side Object Detection LED Control | 5 | 0.35 | GY/YE | 1760 | II | — |
| 6 | 0.5 | GY/WH | 7064 | I | — | Wheel Speed Sensor Control Left Front | 6 | 0.5 | GY/WH | 7064 | II | — |

## X140 Chassis Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 0.5 | GY | 830 | I | — | Wheel Speed Sensor Signal Left Front | 7 | 0.5 | GY | 830 | II | — |
| 8 | 0.5 | GY/ BN | 7065 | I | — | Wheel Speed Sensor Control Right Front | 8 | 0.5 | GY/ BN | 7065 | II | — |
| 9 | 0.5 | YE | 872 | I | — | Wheel Speed Sensor Signal Right Front | 9 | 0.5 | YE | 872 | II | — |
| 10 | 0.5 | GY/ BK | 7127 | I | — | Wheel Speed Sensor Control Left Rear | 10 | 0.5 | GY/ BK | 7127 | II | — |
| 11 | 0.5 | BU | 884 | I | — | Wheel Speed Sensor Signal Left Rear | 11 | 0.5 | BU | 884 | II | — |
| 12 | 1 | YE/ BU | 18 | I | — | Left Rear Stop/Turn Lamp Control | 12 | 1 | YE/ BU | 18 | II | — |
| 13 | 5 | WH | 2001 | I | — | Park Brake Motor Apply Left Rear Control | 13 | 2.5 | WH | 2001 | II | — |
| 14 | 2.5 | RD/ VT | 1242 | I | — | Battery Positive Voltage | 14 | 2 | RD/ VT | 1242 | II | — |
| 15 | 0.5 | BN/ BK | 7726 | I | — | Minor Endgate Motor Return | 15 | 0.5 | BN/ BK | 7726 | II | — |
| 16 | 0.5 | GY | 7292 | I | — | Major Endgate Release Switch Signal Exterior | 16 | 0.35 | GY | 7292 | II | — |
| 17 | 0.5 | VT | 7725 | I | — | Minor Endgate Motor Supply Voltage | 17 | 0.5 | VT | 7725 | II | — |
| 18 | 0.5 | GN/ YE | 6846 | I | — | Rear License Lamp Control | 18 | 0.35 | GN/ YE | 6846 | II | — |
| 19 | 0.5 | YE/ BK | 2224 | I | — | Trailer Brake Enable Signal | 19 | 0.5 | YE/ BK | 2224 | II | — |
| 20 | 0.5 | GN/ YE | 1616 | I | — | Brake Lining Wear Sensor Signal Rear | 20 | 0.5 | GN/ YE | 1616 | II | — |
| 21 | 0.5 | GN | 1299 | I | — | Major Endgate Motor Supply Voltage | 21 | 0.5 | GN | 1299 | II | — |

## X140 Chassis Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 | — | — | — | — | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/ YE | 5985 | II | — |
| 23 | 0.5 | VT/ GN | 439 | I | — | Run/Crank Ignition 1 Voltage | 23 | 0.5 | VT/ GN | 439 | II | — |
| 24 | 0.5 | YE | 7294 | I | — | Minor Endgate Release Switch Discrete Signal Exterior | 24 | 0.35 | YE | 7294 | II | — |
| 25 | 0.5 | BN/ WH | 2374 | I | — | Object Sensor Control | 25 | 0.5 | BN/ WH | 2374 | II | — |
| 26 | 0.5 | YE/ BU | 2376 | I | — | Left Rear Middle Object Sensor Signal | 26 | 0.5 | YE/ BU | 2376 | II | — |
| 27 | — | — | — | — | — | Ground | 27 | 2.5 | BK | 150 | II | — |
| 28 | 2.5 | RD/ GY | 7040 | I | — | Battery Positive Voltage | 28 | 2.5 | RD/ GY | 7040 | II | — |
| 29 | 5 | GY/ BK | 4369 | I | — | Park Brake Motor Low Reference Left Rear | 29 | 2.5 | GY/ BK | 4369 | II | — |
| 30 | 2.5 | BU | 47 | I | — | Trailer Auxiliary Control | 30 | 2 | BU | 47 | II | — |
| 31 | 0.5 | GY | 1198 | I | — | Endgate Release Switch Analog Signal Interior | 31 | 0.35 | GY | 1198 | II | — |
| 32 | 0.5 | YE/ BK | 7730 | I | — | Major Endgate Motor Return | 32 | 0.5 | YE/ BK | 7730 | II | — |
| 33 | 0.5 | WH | 1612 | I | — | Brake Lining Wear Sensor Signal Left Front | 33 | 0.5 | WH | 1612 | II | — |
| 34 | 0.5 | GY/ BU | 7762 | I | — | Cargo Bed Lamp Control | 34 | 0.5 | GY/ BU | 7762 | II | — |
| 35 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 35 | 0.5 | BU | 2500 | II | — |
| 36 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 36 | 0.5 | WH | 2501 | II | — |
| 37 | 0.5 | YE/ BU | 7295 | I | — | Left Minor Endgate Ajar Signal | 37 | 0.35 | YE/ BU | 7295 | II | — |

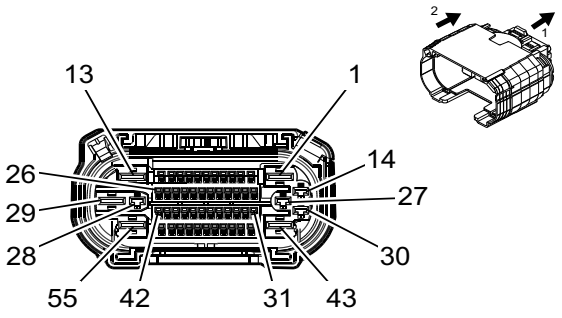
## X140 Chassis Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 38 | 0.5 | GN/ BU | 2733 | I | — | Local Interconnect Network Bus 33 | 38 | 0.35 | GN/ BU | 2733 | II | — |
| 39 | 0.5 | WH | 6106 | I | — | High Speed GMLAN Serial Data (-) 2 | 39 | 0.5 | WH | 6106 | II | — |
| 40 | 0.5 | YE/ BK | 5356 | I | — | Left Tail Lamp Outage Detection Signal | 40 | 0.35 | YE/ BK | 5356 | II | — |
| 41 | 0.5 | BU/ YE | 6105 | I | — | High Speed GMLAN Serial Data (+) 2 | 41 | 0.5 | BU/ YE | 6105 | II | — |
| 42 | 0.5 | WH | 6106 | I | — | High Speed GMLAN Serial Data (-) 2 | 42 | 0.5 | WH | 6106 | II | — |
| 43 | 5 | GY | 4368 | I | — | Park Brake Motor Low Reference Right Rear | 43 | 2.5 | GY | 4368 | II | — |
| 44 | 0.5 | GN/ BK | 2738 | I | — | — Virtual Key Module Local Interconnect Network 1 | 44 | 1 0.5 | BK GN/ BK | 9003 2738 | II II | — BOP |
| 45 | 0.5 | BK/ GY | 2379 | I | — | Object Sensor Low Reference | 45 | 0.5 | BK/ GY | 2379 | II | — |
| 46 | 0.5 | YE/ WH | 2377 | I | — | Right Rear Middle Object Sensor Signal | 46 | 0.5 | YE/ WH | 2377 | II | — |
| 47 | 0.5 | YE/ VT | 2378 | I | — | Right Rear Corner Object Sensor Signal | 47 | 0.5 | YE/ VT | 2378 | II | — |
| 48 | 0.5 | GY | 1761 | I | — | Right Side Object Detection LED Control | 48 | 0.35 | GY | 1761 | II | — |
| 49 | 0.5 | BN | 7754 | I | — | AC Power Outlet Enable | 49 | 0.5 | BN | 7754 | II | — |
| 50 | 0.5 | VT/ YE | 5357 | I | — | Right Tail Lamp Outage Detection Signal | 50 | 0.35 | VT/ YE | 5357 | II | — |
| 51 | 0.5 | WH/ BN | 7296 | I | — | Right Minor Endgate Ajar Signal | 51 | 0.35 | WH/ BN | 7296 | II | — |

## X140 Chassis Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52 | 0.5 | YE | 2375 | I | — | Left Rear Corner Object Sensor Signal | 52 | 0.5 | YE | 2375 | II | — |
| 53 | 0.5 | BU/ YE | 6105 | I | — | High Speed GMLAN Serial Data (+) 2 | 53 | 0.5 | BU/ YE | 6105 | II | — |
| 54 | 1<br>1 | WH/ BK<br>BK | 2223<br>9003 | I<br>I | —<br>— | Trailer Brake Control Signal<br>— | 54 | 1 | WH/ BK | 2223 | II | — |
| 55 | — | — | — | — | — | Battery Positive Voltage | 55 | 4 | RD/ YE | 442 | II | — |

# X140 Chassis Harness to Body Harness (Extended Cab)




—

4992168

### Connector Part Information

Harness Type: Chassis
OEM Connector: 35016652
Service Connector: 19371185
Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 35205188
Service Connector: 84727364
Description: 55-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | 19371240 | J-35616-32 (OR) | J-38125-36 | Not Available | Not Available | Not Available | Not Available |
| IV | 19371240 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X140 Chassis Harness to Body Harness (Extended Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | GN/VT | 1988 | I | — | Park Brake Motor Apply Right Rear Control | 1 | 2.5 | GN/VT | 1988 | III | — |
| 2 | 1 | BN/GN | 19 | I | — | Right Rear Stop/Turn Lamp Control | 2 | 1 | BN/GN | 19 | II | — |
| 3 | 0.5 | GY/YE | 7128 | I | — | Wheel Speed Sensor Control Right Rear | 3 | 0.5 | GY/YE | 7128 | II | — |
| 4 | 0.5 | VT | 882 | I | — | Wheel Speed Sensor Signal Right Rear | 4 | 0.5 | VT | 882 | II | — |
| 5 | 0.5 | GY/YE | 1760 | I | — | Left Side Object Detection LED Control | 5 | 0.35 | GY/YE | 1760 | II | — |

## X140 Chassis Harness to Body Harness (Extended Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 0.5 | GY/WH | 7064 | I | — | Wheel Speed Sensor Control Left Front | 6 | 0.5 | GY/WH | 7064 | II | — |
| 7 | 0.5 | GY | 830 | I | — | Wheel Speed Sensor Signal Left Front | 7 | 0.5 | GY | 830 | II | — |
| 8 | 0.5 | GY/BN | 7065 | I | — | Wheel Speed Sensor Control Right Front | 8 | 0.5 | GY/BN | 7065 | II | — |
| 9 | 0.5 | YE | 872 | I | — | Wheel Speed Sensor Signal Right Front | 9 | 0.5 | YE | 872 | II | — |
| 10 | 0.5 | GY/BK | 7127 | I | — | Wheel Speed Sensor Control Left Rear | 10 | 0.5 | GY/BK | 7127 | II | — |
| 11 | 0.5 | BU | 884 | I | — | Wheel Speed Sensor Signal Left Rear | 11 | 0.5 | BU | 884 | II | — |
| 12 | 1 | YE/BU | 18 | I | — | Left Rear Stop/Turn Lamp Control | 12 | 1 | YE/BU | 18 | II | — |
| 13 | 5 | WH | 2001 | I | — | Park Brake Motor Apply Left Rear Control | 13 | 2.5 | WH | 2001 | III | — |
| 14 | 2.5 | RD/VT | 1242 | I | — | Battery Positive Voltage | 14 | 2 | RD/VT | 1242 | IV | — |
| 15 | 0.5 | BN/BK | 7726 | I | — | Minor Endgate Motor Return | 15 | 0.5 | BN/BK | 7726 | II | — |
| 16 | 0.5 | GY | 7292 | I | — | Major Endgate Release Switch Signal Exterior | 16 | 0.35 | GY | 7292 | II | — |
| 17 | 0.5 | VT | 7725 | I | — | Minor Endgate Motor Supply Voltage | 17 | 0.5 | VT | 7725 | II | — |
| 18 | 0.5 | GN/YE | 6846 | I | — | Rear License Lamp Control | 18 | 0.35 | GN/YE | 6846 | II | — |
| 19 | 0.5 | YE/BK | 2224 | I | — | Trailer Brake Enable Signal | 19 | 0.5 | YE/BK | 2224 | II | — |
| 20 | 0.5 | GN/YE | 1616 | I | — | Brake Lining Wear Sensor Signal Rear | 20 | 0.5 | GN/YE | 1616 | II | — |

## X140 Chassis Harness to Body Harness (Extended Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 0.5 | GN | 1299 | I | — | Major Endgate Motor Supply Voltage | 21 | 0.5 | GN | 1299 | II | — |
| 22 | — | — | — | — | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/ YE | 5985 | II | — |
| 23 | 0.5 | VT/ GN | 439 | I | — | Run/Crank Ignition 1 Voltage | 23 | 0.5 | VT/ GN | 439 | II | — |
| 24 | 0.5 | YE | 7294 | I | — | Minor Endgate Release Switch Discrete Signal Exterior | 24 | 0.35 | YE | 7294 | II | — |
| 25 | 0.5 | BN/ WH | 2374 | I | — | Object Sensor Control | 25 | 0.5 | BN/ WH | 2374 | II | — |
| 26 | 0.5 | YE/ BU | 2376 | I | — | Left Rear Middle Object Sensor Signal | 26 | 0.5 | YE/ BU | 2376 | II | — |
| 27 | — | — | — | — | — | Ground | 27 | 2.5 | BK | 150 | IV | — |
| 28 | 2.5 | RD/ GY | 7040 | I | — | Battery Positive Voltage | 28 | 2.5 | RD/ GY | 7040 | IV | — |
| 29 | 5 | GY/ BK | 4369 | I | — | Park Brake Motor Low Reference Left Rear | 29 | 2.5 | GY/ BK | 4369 | III | — |
| 30 | 2.5 | BU | 47 | I | — | Trailer Auxiliary Control | 30 | 2 | BU | 47 | IV | — |
| 31 | 0.5 | GY | 1198 | I | — | Endgate Release Switch Analog Signal Interior | 31 | 0.35 | GY | 1198 | II | — |
| 32 | 0.5 | YE/ BK | 7730 | I | — | Major Endgate Motor Return | 32 | 0.5 | YE/ BK | 7730 | II | — |
| 33 | 0.5 | WH | 1612 | I | — | Brake Lining Wear Sensor Signal Left Front | 33 | 0.5 | WH | 1612 | II | — |
| 34 | 0.5 | GY/ BU | 7762 | I | — | Cargo Bed Lamp Control | 34 | 0.5 | GY/ BU | 7762 | II | — |
| 35 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 35 | 0.5 | BU | 2500 | II | — |
| 36 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 36 | 0.5 | WH | 2501 | II | — |

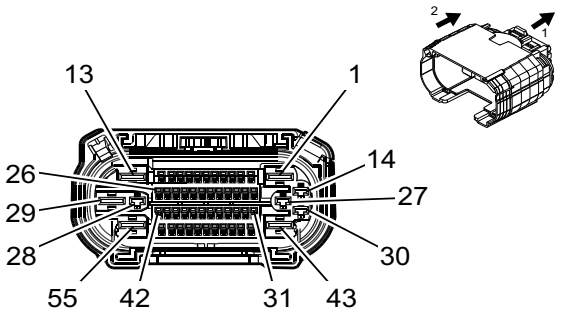
## X140 Chassis Harness to Body Harness (Extended Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | 0.5 | YE/ BU | 7295 | I | — | Left Minor Endgate Ajar Signal | 37 | 0.35 | YE/ BU | 7295 | II | — |
| 38 | 0.5 | GN/ BU | 2733 | I | — | Local Interconnect Network Bus 33 | 38 | 0.35 | GN/ BU | 2733 | II | — |
| 39 | 0.5 | WH | 6106 | I | — | High Speed GMLAN Serial Data (-) 2 | 39 | 0.5 | WH | 6106 | II | — |
| 40 | 0.5 | YE/ BK | 5356 | I | — | Left Tail Lamp Outage Detection Signal | 40 | 0.35 | YE/ BK | 5356 | II | — |
| 41 | 0.5 | BU/ YE | 6105 | I | — | High Speed GMLAN Serial Data (+) 2 | 41 | 0.5 | BU/ YE | 6105 | II | — |
| 42 | 0.5 | WH | 6106 | I | — | High Speed GMLAN Serial Data (-) 2 | 42 | 0.5 | WH | 6106 | II | — |
| 43 | 5 | GY | 4368 | I | — | Park Brake Motor Low Reference Right Rear | 43 | 2.5 | GY | 4368 | III | — |
| 44 | — | — | — | — | — | Not Occupied | 44 | — | — | — | — | — |
| 45 | 0.5 | BK/ GY | 2379 | I | — | Object Sensor Low Reference | 45 | 0.5 | BK/ GY | 2379 | II | — |
| 46 | 0.5 | YE/ WH | 2377 | I | — | Right Rear Middle Object Sensor Signal | 46 | 0.5 | YE/ WH | 2377 | II | — |
| 47 | 0.5 | YE/ VT | 2378 | I | — | Right Rear Corner Object Sensor Signal | 47 | 0.5 | YE/ VT | 2378 | II | — |
| 48 | 0.5 | GY | 1761 | I | — | Right Side Object Detection LED Control | 48 | 0.35 | GY | 1761 | II | — |
| 49 | 0.5 | BN | 7754 | I | — | AC Power Outlet Enable | 49 | 0.5 | BN | 7754 | II | — |
| 50 | 0.5 | VT/ YE | 5357 | I | — | Right Tail Lamp Outage Detection Signal | 50 | 0.35 | VT/ YE | 5357 | II | — |
| 51 | 0.5 | WH/ BN | 7296 | I | — | Right Minor Endgate Ajar Signal | 51 | 0.35 | WH/ BN | 7296 | II | — |

## X140 Chassis Harness to Body Harness (Extended Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52 | 0.5 | YE | 2375 | I | — | Left Rear Corner Object Sensor Signal | 52 | 0.5 | YE | 2375 | II | — |
| 53 | 0.5 | BU/ YE | 6105 | I | — | High Speed GMLAN Serial Data (+) 2 | 53 | 0.5 | BU/ YE | 6105 | II | — |
| 54 | 1 | BK | 9003 | I | — | — | 54 | 1 | WH/ BK | 2223 | II | — |
| 55 | — | — | — | — | — | Battery Positive Voltage | 55 | 4 | RD/ YE | 442 | III | — |

# X140 Chassis Harness to Body Harness (Regular Cab)




4992168

—

### Connector Part Information

Harness Type: Chassis

OEM Connector: 35016652

Service Connector: 19371185

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

### Connector Part Information

Harness Type: Body

OEM Connector: 35205188

Service Connector: 84727364

Description: 55-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19333088 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 19371240 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | 19371240 | J-35616-16 (LT GN) | J-38125-559 | Not Available | Not Available | Not Available | Not Available |
| IV | 84634921 | J-35616-42 (RD) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| V | 19329756 | J-35616-32 (OR) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VI | 19368968 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VII | 19370818 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VIII | 84616651 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X140 Chassis Harness to Body Harness (Regular Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | GN/VT | 1988 | IV | — | Park Brake Motor Apply Right Rear Control | 1 | 2.5 | GN/VT | 1988 | V | — |
| 2 | 1 | BN/GN | 19 | II | — | Right Rear Stop/Turn Lamp Control | 2 | 1 | BN/GN | 19 | VII | — |
| 3 | 0.5 | GY/YE | 7128 | III | — | Wheel Speed Sensor Control Right Rear | 3 | 0.5 | GY/YE | 7128 | VIII | — |

## X140 Chassis Harness to Body Harness (Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 0.5 | VT | 882 | III | — | Wheel Speed Sensor Signal Right Rear | 4 | 0.5 | VT | 882 | VIII | — |
| 5 | 0.5 | GY/ YE | 1760 | III | — | Left Side Object Detection LED Control | 5 | 0.35 | GY/ YE | 1760 | VIII | — |
| 6 | 0.5 | GY/ WH | 7064 | III | — | Wheel Speed Sensor Control Left Front | 6 | 0.5 | GY/ WH | 7064 | VIII | — |
| 7 | 0.5 | GY | 830 | III | — | Wheel Speed Sensor Signal Left Front | 7 | 0.5 | GY | 830 | VIII | — |
| 8 | 0.5 | GY/ BN | 7065 | III | — | Wheel Speed Sensor Control Right Front | 8 | 0.5 | GY/ BN | 7065 | VIII | — |
| 9 | 0.5 | YE | 872 | III | — | Wheel Speed Sensor Signal Right Front | 9 | 0.5 | YE | 872 | VIII | — |
| 10 | 0.5 | GY/ BK | 7127 | III | — | Wheel Speed Sensor Control Left Rear | 10 | 0.5 | GY/ BK | 7127 | VIII | — |
| 11 | 0.5 | BU | 884 | III | — | Wheel Speed Sensor Signal Left Rear | 11 | 0.5 | BU | 884 | VIII | — |
| 12 | 1 | YE/ BU | 18 | II | — | Left Rear Stop/Turn Lamp Control | 12 | 1 | YE/ BU | 18 | VII | — |
| 13 | 5 | WH | 2001 | IV | — | Park Brake Motor Apply Left Rear Control | 13 | 2.5 | WH | 2001 | V | — |
| 14 | 2.5 | RD/ VT | 1242 | I | — | Battery Positive Voltage | 14 | 2 | RD/ VT | 1242 | VI | — |
| 15 | 0.5 | BN/ BK | 7726 | III | — | Minor Endgate Motor Return | 15 | 0.5 | BN/ BK | 7726 | VIII | — |
| 16 | 0.5 | GY | 7292 | III | — | Major Endgate Release Switch Signal Exterior | 16 | 0.35 | GY | 7292 | VIII | — |
| 17 | 0.5 | VT | 7725 | III | — | Minor Endgate Motor Supply Voltage | 17 | 0.5 | VT | 7725 | VIII | — |

## X140 Chassis Harness to Body Harness (Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0.5 | GN/YE | 6846 | III | — | Rear License Lamp Control | 18 | 0.35 | GN/YE | 6846 | VIII | — |
| 19 | 0.5 | YE/BK | 2224 | III | — | Trailer Brake Enable Signal | 19 | 0.5 | YE/BK | 2224 | VIII | — |
| 20 | 0.5 | GN/YE | 1616 | III | — | Brake Lining Wear Sensor Signal Rear | 20 | 0.5 | GN/YE | 1616 | VIII | — |
| 21 | 0.5 | GN | 1299 | III | — | Major Endgate Motor Supply Voltage | 21 | 0.5 | GN | 1299 | VIII | — |
| 22 | — | — | — | — | — | Accessory Wakeup Serial Data | 22 | 0.35 | VT/YE | 5985 | VIII | — |
| 23 | 0.5 | VT/GN | 439 | III | — | Run/Crank Ignition 1 Voltage | 23 | 0.5 | VT/GN | 439 | VIII | — |
| 24 | 0.5 | YE | 7294 | III | — | Minor Endgate Release Switch Discrete Signal Exterior | 24 | 0.35 | YE | 7294 | VIII | — |
| 25 | 0.5 | BN/WH | 2374 | III | — | Object Sensor Control | 25 | 0.5 | BN/WH | 2374 | VIII | — |
| 26 | 0.5 | YE/BU | 2376 | III | — | Left Rear Middle Object Sensor Signal | 26 | 0.5 | YE/BU | 2376 | VIII | — |
| 27 | — | — | — | — | — | Ground | 27 | 2.5 | BK | 150 | VI | — |
| 28 | — | — | — | — | — | Not Occupied | 28 | — | — | — | — | — |
| 29 | 5 | GY/BK | 4369 | IV | — | Park Brake Motor Low Reference Left Rear | 29 | 2.5 | GY/BK | 4369 | V | — |
| 30 | 2.5 | BU | 47 | I | — | Trailer Auxiliary Control | 30 | 2 | BU | 47 | VI | — |
| 31 | 0.5 | GY | 1198 | III | — | Endgate Release Switch Analog Signal Interior | 31 | — | — | — | — | — |
| 32 | 0.5 | YE/BK | 7730 | III | — | Major Endgate Motor Return | 32 | 0.5 | YE/BK | 7730 | VIII | — |
| 33 | 0.5 | WH | 1612 | III | — | Brake Lining Wear Sensor Signal Left Front | 33 | 0.5 | WH | 1612 | VIII | — |
| 34 | 0.5 | GY/BU | 7762 | III | — | Cargo Bed Lamp Control | 34 | 0.5 | GY/BU | 7762 | VIII | — |

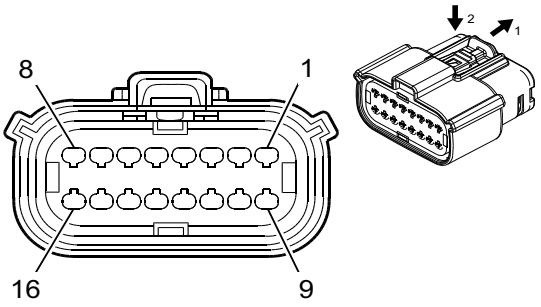
## X140 Chassis Harness to Body Harness (Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | 0.5 | BU | 2500 | III | — | High Speed GMLAN Serial Data (+) 1 | 35 | 0.5 | BU | 2500 | VIII | — |
| 36 | 0.5 | WH | 2501 | III | — | High Speed GMLAN Serial Data (-) 1 | 36 | 0.5 | WH | 2501 | VIII | — |
| 37 | 0.5 | YE/ BU | 7295 | III | — | Left Minor Endgate Ajar Signal | 37 | 0.35 | YE/ BU | 7295 | VIII | — |
| 38 | 0.5 | GN/ BU | 2733 | III | — | Local Interconnect Network Bus 33 | 38 | 0.35 | GN/ BU | 2733 | VIII | — |
| 39 | 0.5 | WH | 6106 | III | — | High Speed GMLAN Serial Data (-) 2 | 39 | 0.5 | WH | 6106 | VIII | — |
| 40 | 0.5 | YE/ BK | 5356 | III | — | Left Tail Lamp Outage Detection Signal | 40 | 0.35 | YE/ BK | 5356 | VIII | — |
| 41 | 0.5 | BU/ YE | 6105 | III | — | High Speed GMLAN Serial Data (+) 2 | 41 | 0.5 | BU/ YE | 6105 | VIII | — |
| 42 | 0.5 | WH | 6106 | III | — | High Speed GMLAN Serial Data (-) 2 | 42 | 0.5 | WH | 6106 | VIII | — |
| 43 | 5 | GY | 4368 | IV | — | Park Brake Motor Low Reference Right Rear | 43 | 2.5 | GY | 4368 | V | — |
| 44 | — | — | — | — | — | Not Occupied | 44 | — | — | — | — | — |
| 45 | 0.5 | BK/ GY | 2379 | III | — | Object Sensor Low Reference | 45 | 0.5 | BK/ GY | 2379 | VIII | — |
| 46 | 0.5 | YE/ WH | 2377 | III | — | Right Rear Middle Object Sensor Signal | 46 | 0.5 | YE/ WH | 2377 | VIII | — |
| 47 | 0.5 | YE/ VT | 2378 | III | — | Right Rear Corner Object Sensor Signal | 47 | 0.5 | YE/ VT | 2378 | VIII | — |
| 48 | 0.5 | GY | 1761 | III | — | Right Side Object Detection LED Control | 48 | 0.35 | GY | 1761 | VIII | — |
| 49 | 0.5 | BN | 7754 | III | — | AC Power Outlet Enable | 49 | 0.5 | BN | 7754 | VIII | — |

## X140 Chassis Harness to Body Harness (Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 0.5 | VT/ YE | 5357 | III | — | Right Tail Lamp Outage Detection Signal | 50 | 0.35 | VT/ YE | 5357 | VIII | — |
| 51 | 0.5 | WH/ BN | 7296 | III | — | Right Minor Endgate Ajar Signal | 51 | 0.35 | WH/ BN | 7296 | VIII | — |
| 52 | 0.5 | YE | 2375 | III | — | Left Rear Corner Object Sensor Signal | 52 | 0.5 | YE | 2375 | VIII | — |
| 53 | 0.5 | BU/ YE | 6105 | III | — | High Speed GMLAN Serial Data (+) 2 | 53 | 0.5 | BU/ YE | 6105 | VIII | — |
| 54 | 1<br>1 | WH/ BK<br>BK | 2223<br>9003 | II<br>II | —<br>— | Trailer Brake Control Signal<br>— | 54 | 1<br>1 | WH/ BK<br>BK | 2223<br>9003 | VII<br>VII | —<br>— |
| 55 | — | — | — | — | — | Battery Positive Voltage | 55 | 4 | RD/ YE | 442 | V | — |

# X160 Engine Harness to Fuel Injector Harness (L3B)




—

4574233

### Connector Part Information

Harness Type: Engine
OEM Connector: 33386201
Service Connector: 19354087
Description: 16-Way F 150 MX Series, Sealed (BK)

### Connector Part Information

Harness Type: Fuel Injector
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13578813 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | Not Required | Not Available | No Tool Required | Not Required | Not Required | Not Required | Not Required |

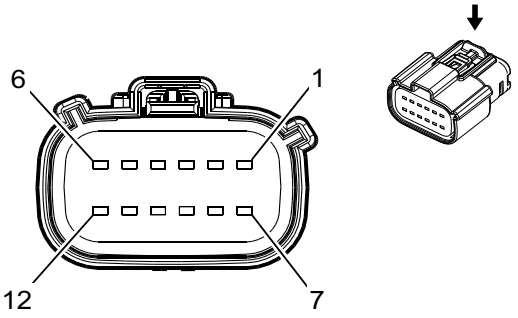
## X160 Engine Harness to Fuel Injector Harness (L3B)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | VT/GY | 496 | I | — | Knock Sensor Signal 1 | 1 | 0.5 | VT/GY | 496 | II | — |
| 2 | 0.75 | BN | 4801 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 1 | 2 | 0.75 | BN | 4801 | II | — |
| 3 | 0.5 | WH/RD | 480 | I | — | Engine Control Sensors 5 Volt Reference (2) | 3 | 0.5 | WH/RD | 480 | II | — |
| 4 | 0.75 | GY/BU | 4804 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 4 | 4 | 0.75 | GY/BU | 4804 | II | — |
| 5 | — | — | — | — | — | Not Occupied | 5 | — | — | — | — | — |
| 6 | 0.75 | GN | 4803 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 3 | 6 | 0.75 | — | 4803 | II | — |

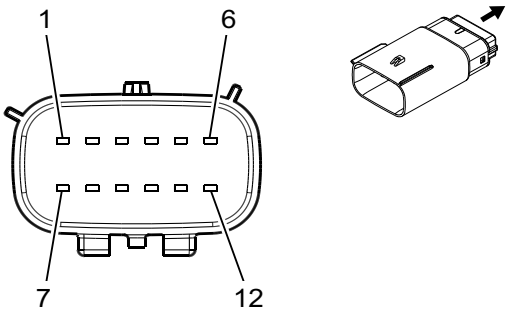
## X160 Engine Harness to Fuel Injector Harness (L3B) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 0.75 | BU | 4802 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 2 | 7 | 0.75 | BU | 4802 | II | — |
| 8 | 0.5 | WH/GY | 1876 | I | — | Knock Sensor Signal 2 | 8 | 0.5 | WH/GY | 1876 | II | — |
| 9 | 0.5 | BK/YE | 1716 | I | — | Knock Sensor Low Reference 1 | 9 | 0.5 | BK/YE | 1716 | II | — |
| 10 | 0.75 | BN/WH | 4901 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1 | 10 | 0.75 | BN/WH | 4901 | II | — |
| 11 | 0.5 | BU/WH | 2918 | I | — | Fuel Rail Pressure Sensor Signal | 11 | 0.5 | BU/WH | 2918 | II | — |
| 12 | 0.5 | BK/GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 12 | 0.5 | BK | 580 | II | — |
| 13 | 0.75 | BU/WH | 4904 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4 | 13 | 0.75 | BU/WH | 4904 | II | — |
| 14 | 0.75 | GN/GY | 4903 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3 | 14 | 0.75 | — | 4903 | II | — |
| 15 | 0.75 | BU/GY | 4902 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2 | 15 | 0.75 | BU/GY | 4902 | II | — |
| 16 | 0.5 | BK/GY | 2303 | I | — | Knock Sensor Low Reference 2 | 16 | 0.5 | BK/GY | 2303 | II | — |

# X160 Engine Harness to Fuel Injector Harness (LM2)




2871866




5187933

### Connector Part Information

Harness Type: Engine
OEM Connector: 33221171
Service Connector: 19333239
Description: 12-Way F 150 MX Series, Sealed (D-GY)

### Connector Part Information

Harness Type: Fuel Injector
OEM Connector: 33482-6261
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way M 150 MX Series, Sealed (GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19368973 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | Not Required | J-35616-3 (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

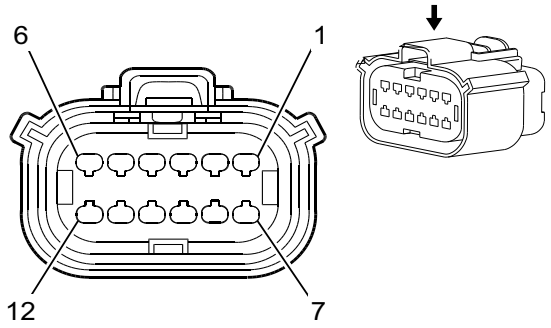
## X160 Engine Harness to Fuel Injector Harness (LM2)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.5 | BN/WH | 4901 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1 | 1 | 1.5 | BN/WH | 4901 | II | — |
| 2 | 1.5 | BN | 4801 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 1 | 2 | 1.5 | BN | 4801 | II | — |
| 3 | 1.5 | BU/GY | 4902 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2 | 3 | 1.5 | BU/GY | 4902 | II | — |
| 4 | 1.5 | BU | 4802 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 2 | 4 | 1.5 | BU | 4802 | II | — |
| 5 | 1.5 | GN/GY | 4903 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3 | 5 | 1.5 | GN/GY | 4903 | II | — |

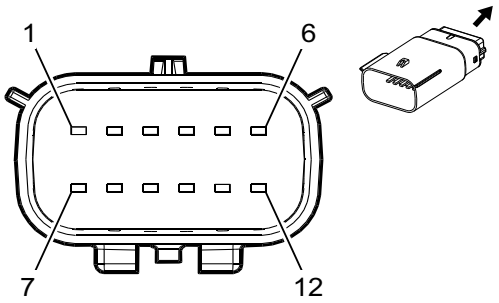
## X160 Engine Harness to Fuel Injector Harness (LM2) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 1.5 | GN | 4803 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 3 | 6 | 1.5 | GN | 4803 | II | — |
| 7 | 1.5 | BU/ WH | 4904 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4 | 7 | 1.5 | BU/ WH | 4904 | II | — |
| 8 | 1.5 | GY/ BU | 4804 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 4 | 8 | 1.5 | GY/ BU | 4804 | II | — |
| 9 | 1.5 | GN/ WH | 4905 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5 | 9 | 1.5 | GN/ WH | 4905 | II | — |
| 10 | 1.5 | WH/ GN | 4805 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 5 | 10 | 1.5 | WH/ GN | 4805 | II | — |
| 11 | 1.5 | VT/ GY | 4906 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6 | 11 | 1.5 | VT/ GY | 4906 | II | — |
| 12 | 1.5 | VT/ GN | 4806 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 6 | 12 | 1.5 | VT/ GN | 4806 | II | — |

# X160 Engine Harness to Fuel Injector Harness (LV3)




1825165




2687960

### Connector Part Information

Harness Type: Engine
OEM Connector: 13609715
Service Connector: 19178148
Description: 12-Way F 1.5 Series, Sealed (BK)

### Connector Part Information

Harness Type: Fuel Injector
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13578813 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 13578813 | J-35616-2A (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | Not Required | J-35616-3 (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

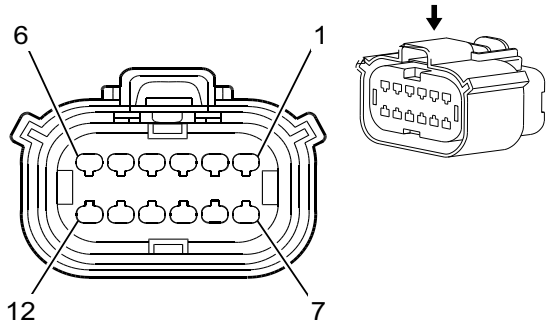
## X160 Engine Harness to Fuel Injector Harness (LV3)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | — | — | — | — | — | Not Occupied | 1 | — | — | — | — | — |
| 2 | 0.75 | BN/WH | 4901 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1 | 2 | 0.75 | BN/WH | 4901 | III | — |
| 3 | 0.75 | GN/GY | 4903 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3 | 3 | 0.75 | — | 4903 | III | — |
| 4 | 0.75 | GN/WH | 4905 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5 | 4 | 0.75 | — | 4905 | III | — |
| 5 | 0.75 | BN | 4801 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 1 | 5 | 0.75 | BN | 4801 | III | — |
| 6 - 7 | — | — | — | — | — | Not Occupied | 6 - 7 | — | — | — | — | — |

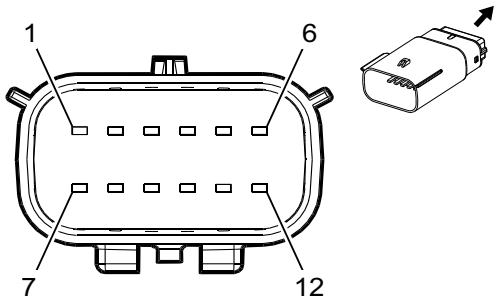
## X160 Engine Harness to Fuel Injector Harness (LV3) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 0.75 | GN | 4803 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 3 | 8 | 0.75 | — | 4803 | III | — |
| 9 | 0.75 | WH/ GN | 4805 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 5 | 9 | 0.75 | WH | 4805 | III | — |
| 10 | 0.5 | WH/ RD | 480 | II | — | Engine Control Sensors 5 Volt Reference (2) | 10 | 0.5 | WH/ RD | 480 | III | — |
| 11 | 0.5 | BU/ WH | 2918 | II | — | Fuel Rail Pressure Sensor Signal | 11 | 0.5 | BU/ WH | 2918 | III | — |
| 12 | 0.5 | BK/ YE | 548 | II | — | Engine Control Sensors Low Reference (1) | 12 | 0.5 | BK/ YE | 548 | III | — |

# X161 Engine Harness to Fuel Injector - Even Harness (LV3)




1825165




2687960

### Connector Part Information

Harness Type: Engine
OEM Connector: 13863397
Service Connector: 19329931
Description: 12-Way F 1.5 Series, Sealed (BK)

### Connector Part Information

Harness Type: Fuel Injector - Even
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13578813 | J-35616-14 (GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | Not Required | Not Available | No Tool Required | Not Required | Not Required | Not Required | Not Required |

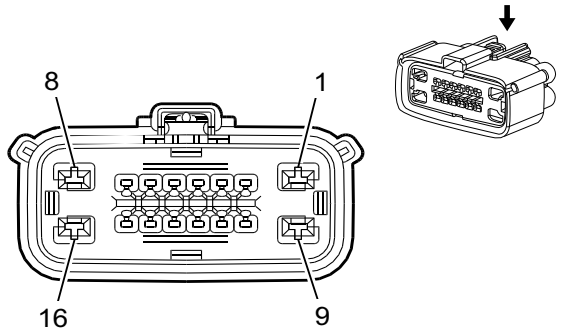
## X161 Engine Harness to Fuel Injector - Even Harness (LV3)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | — | — | — | — | — | Not Occupied | 1 | — | — | — | — | — |
| 2 | 0.75 | BU/GY | 4902 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2 | 2 | 0.75 | BU/GY | 4902 | II | — |
| 3 | 0.75 | BU/WH | 4904 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4 | 3 | 0.75 | BU/WH | 4904 | II | — |
| 4 | 0.75 | VT/GY | 4906 | I | — | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6 | 4 | 0.75 | VT/GY | 4906 | II | — |
| 5 | 0.75 | BU | 4802 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 2 | 5 | 0.75 | BU | 4802 | II | — |
| 6 - 7 | — | — | — | — | — | Not Occupied | 6 - 7 | — | — | — | — | — |

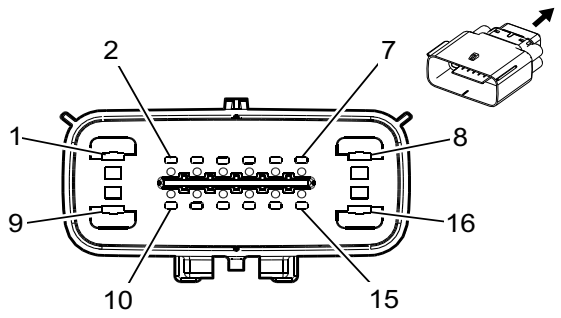
## X161 Engine Harness to Fuel Injector - Even Harness (LV3) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 0.75 | GY/ BU | 4804 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 4 | 8 | 0.75 | GY/ BU | 4804 | II | — |
| 9 | 0.75 | VT/ GN | 4806 | I | — | Direct Fuel Injector (DFI) High Voltage Control Cylinder 6 | 9 | 0.75 | VT | 4806 | II | — |
| 10 | 0.75 | VT/ BK | 7300 | I | — | High Pressure Fuel Pump Actuator Low - Control | 10 | 0.75 | VT/ BK | 7300 | II | — |
| 11 | 0.75 | YE | 7301 | I | — | High Pressure Fuel Pump Actuator High - Control | 11 | 0.75 | YE | 7301 | II | — |
| 12 | — | — | — | — | — | Not Occupied | 12 | — | — | — | — | — |

## X171 Engine Harness to Chassis Harness




3684497




2373686

### Connector Part Information

Harness Type: Engine
OEM Connector: 33218250
Service Connector: 19352906
Description: 16-Way F 1.5, 2.8 Series, Sealed (BK)

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33129084
Service Connector: 19331031
Description: 16-Way M 1.5, 2.8 Series, Sealed (BK)

### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13576376 | J-35616-35 (VT) | J-38125-215A | 1326030-6 | Lear 17 | C | A |
| II | 13576376 | J-35616-35 (VT) | J-38125-215A | 1326030-8 | Lear 17 | A | 4 |
| III | 13576377 | J-35616-35 (VT) | J-38125-215A | 1326030-8 | Lear 17 | 4 | D |
| IV | 13576377 | J-35616-35 (VT) | J-38125-215A | 1326030-8 | Lear 17 | A | 4 |
| V | 19300432 | J-35616-2A (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VI | 19300625 | J-35616-2A (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VII | 19119395 | J-35616-3 (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VIII | 19329833 | J-35616-5 (PU) | J-38125-215A | 1326030-6 | Lear 17 | E | 2 |
| IX | 19332835 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

### X171 Engine Harness to Chassis Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | VT/GN | 355 | III | — | Fuel Filter Heater Voltage | 1 | 2.5 | VT/GN | 355 | IX | — |
| 2 | 0.5<br>0.5 | VT/YE<br>VT/YE | 5985<br>5985 | VI<br>V | —<br>— | Accessory Wakeup Serial Data<br>Accessory Wakeup Serial Data | 2 | 0.5 | VT/YE | 5985 | VII | — |

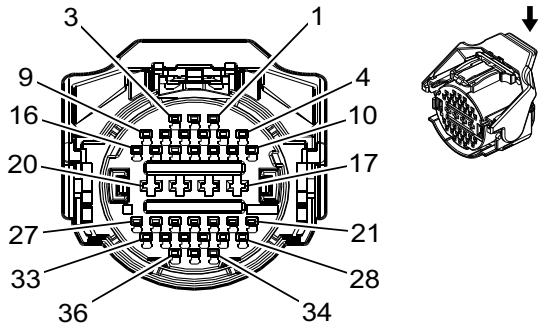
## X171 Engine Harness to Chassis Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 0.5<br>0.5 | BU/BN<br>BU/BN | 4498<br>4498 | VI<br>V | —<br>— | High Speed GMLAN Serial Data (+) 7<br>High Speed GMLAN Serial Data (+) 7 | 3 | 0.5 | BU/BN | 4498 | VII | — |
| 4 | 0.5 | BU/WH | 7446 | V | — | Fuel Line Pressure Sensor Signal | 4 | 0.5 | BU/WH | 7446 | VII | — |
| 5 | 0.5 | BK/GN | 580 | V | — | Engine Control Sensors Low Reference (2) | 5 | 0.5 | BK/YE | 7447 | VII | — |
| 6 | 0.5 | WH | 1579 | V | — | Fuel Temperature/ Composition Signal | 6 | 0.5 | WH | 1579 | VII | — |
| 7 | 0.5<br>0.5 | VT/GN<br>VT/GN | 4320<br>4320 | VI<br>V | —<br>— | Powertrain Sensor Bus Enable<br>Powertrain Sensor Bus Enable | 7 | 0.5 | VT/GN | 4320 | VII | — |
| 8 | 0.5<br>1 | BK/WH<br>BK/WH | 451<br>451 | II<br>I | —<br>— | Signal Ground<br>Signal Ground | 8 | 0.5 | BK/WH | 451 | VIII | — |
| 9 | 1.5 | VT/BU | 3674 | IV | — | NOx Sensor 1 Control | 9 | 1.5 | VT/BU | 3674 | IX | — |
| 10 | 0.5 | VT/BU | 5294 | V | — | Powertrain Main Relay Fused Supply 5 | 10 | 0.5 | VT/BU | 5294 | VII | — |
| 11 | 0.5<br>0.5 | WH<br>WH | 4499<br>4499 | VI<br>V | —<br>— | High Speed GMLAN Serial Data (-) 7<br>High Speed GMLAN Serial Data (-) 7 | 11 | 0.5 | WH | 4499 | VII | — |
| 12 | — | — | — | — | — | Not Occupied | 12 | — | — | — | — | — |
| 13 | 0.5 | BU/RD | 460 | V | — | Engine Control Sensors 5 Volt Reference (1) | 13 | 0.5 | BN/RD | 7445 | VII | — |
| 14 | — | — | — | — | — | Not Occupied | 14 | — | — | — | — | — |

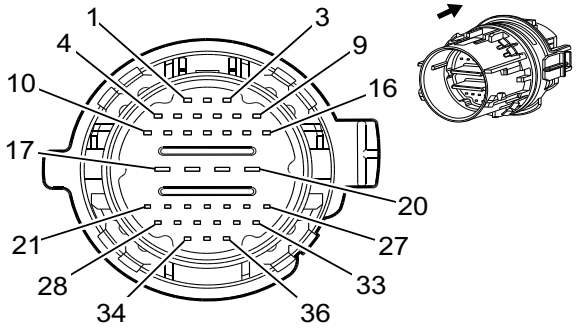
## X171 Engine Harness to Chassis Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 0.5<br>0.5<br>0.75 | GN/GY<br>GN/GY<br>GN/GY | 465<br>465<br>465 | VI<br>V<br>V | —<br>—<br>— | Fuel Pump Primary Relay Control<br>Fuel Pump Primary Relay Control<br>Fuel Pump Primary Relay Control | 15 | 0.5 | GN/GY | 465 | VII | — |
| 16 | 2.5 | BU | 3921 | III | — | DEF Heater Supply 1 | 16 | 2.5 | BU | 3921 | IX | — |

# X175 Engine Harness to Transmission Harness X1 (MQE)




3621473




3977661

### Connector Part Information

Harness Type: Engine
OEM Connector: 15532799
Service Connector: 19332681
Description: 36-Way F 1.2 MCON-CB, 2.8 MCP Series, Sealed (BK)

### Connector Part Information

Harness Type: Transmission
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 36-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19119772 | J-35616-35 (VT) | J-38125-215A | 1241388-1 | Lear 17 | E | C |
| II | 19300445 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X175 Engine Harness to Transmission Harness X1 (MQE)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/WH | 6380 | II | — | TCC On/Off Solenoid A Control | 1 | 0.5 | — | 6380 | III | — |
| 2 | 0.5 | GN/GY | 6387 | II | — | Transmission High Side Driver 1 Signal Driver | 2 | 0.5 | — | 6387 | III | — |
| 3 | 0.5 | VT/WH | 422 | II | — | Torque Converter Clutch Solenoid Control | 3 | 0.5 | VT/WH | 422 | III | — |
| 4 | 0.5 | GN/WH | 1530 | II | — | Transmission Mainline Pressure Solenoid Control | 4 | 0.5 | — | 1530 | III | — |
| 5 | 0.5 | BN | 6400 | II | — | Clutch A Control | 5 | 0.5 | BN | 6400 | III | — |
| 6 | 0.5 | BU | 6401 | II | — | Clutch B Control | 6 | 0.5 | BU | 6401 | III | — |

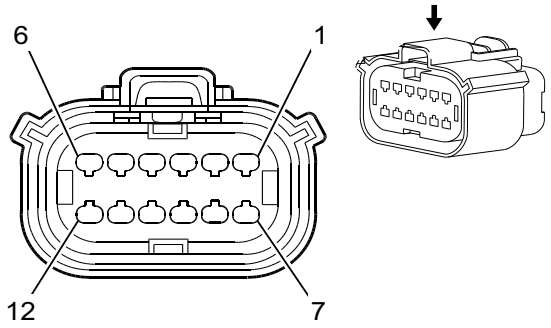
## X175 Engine Harness to Transmission Harness X1 (MQE) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 0.5 | YE/ BN | 6210 | II | — | TCC On/Off Solenoid B Control | 7 | 0.5 | YE/ BN | 6210 | III | — |
| 8 | 0.5 | WH/ GY | 4578 | II | — | Surge Accumulator Solenoid Low Side Control | 8 | 0.5 | WH/ GY | 4578 | III | — |
| 9 | — | — | — | — | — | Not Occupied | 9 | — | — | — | — | — |
| 10 | 0.5 | GY | 6402 | II | — | Clutch C Control | 10 | 0.5 | GY | 6402 | III | — |
| 11 | 0.5 | BK/ BN | 586 | II | — | Transmission Oil Temperature Sensor Low Reference | 11 | 0.5 | BK/ BN | 586 | III | — |
| 12 | 0.5 | BN/ WH | 585 | II | — | Transmission Oil Temperature Sensor Signal | 12 | 0.5 | BN/ WH | 585 | III | — |
| 13 | 0.5 | WH | 4508 | II | — | Transmission Clutch G Control | 13 | 0.5 | WH | 4508 | III | — |
| 14 | 0.5 | WH/ BU | 4507 | II | — | Transmission Clutch H Control | 14 | 0.5 | WH/ BU | 4507 | III | — |
| 15 - 17 | — | — | — | — | — | Not Occupied | 15 - 17 | — | — | — | — | — |
| 18 | 0.5 | GN/ GY | 6387 | I | — | Transmission High Side Driver 1 Signal Driver | 18 | 0.5 | — | 6387 | III | — |
| 19 | 0.5 | GY/ BN | 6388 | I | — | Transmission High Side Driver 2 Signal | 19 | 0.5 | GY/ BN | 6388 | III | — |
| 20 | — | — | — | — | — | Not Occupied | 20 | — | — | — | — | — |
| 21 | 0.5 | GN/ YE | 3337 | II | — | Transmission Internal Mode Switch Mode Control A | 21 | 0.5 | — | 3337 | III | — |
| 22 | 0.5 | BU/ WH | 3338 | II | — | Transmission Internal Mode Switch Mode Control B | 22 | 0.5 | BU/ WH | 3338 | III | — |
| 23 | — | — | — | — | — | Not Occupied | 23 | — | — | — | — | — |
| 24 | 0.5 | GY/ BU | 6358 | II | — | Output Speed Signal | 24 | 0.5 | GY/ BU | 6358 | III | — |
| 25 | 0.5 | YE/ GN | 4170 | II | — | Transmission Position Sensor B 9V Reference | 25 | 0.5 | YE | 4170 | III | — |

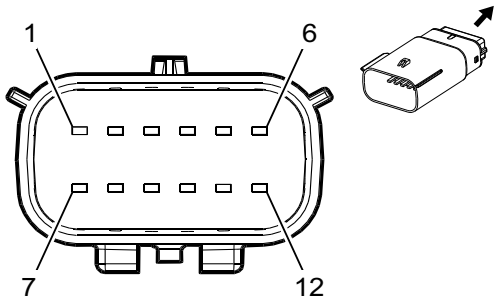
## X175 Engine Harness to Transmission Harness X1 (MQE) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 | 0.5<br>0.5 | GN/YE<br>BN/WH | 6254<br>6254 | II<br>II | —<br>MQE | Transmission Input Speed Sensor Signal<br>Transmission Input Speed Sensor Signal | 26 | 0.5<br>0.5 | GN/YE<br>BN/WH | 6254<br>6254 | III<br>III | —<br>MQE |
| 27 | 0.5 | YE/BU | 4171 | II | — | Transmission Position Sensor A 9V Reference | 27 | 0.5 | YE/BU | 4171 | III | — |
| 28 | — | — | — | — | — | Not Occupied | 28 | — | — | — | — | — |
| 29 | 0.5 | WH/RD | 480 | II | — | Engine Control Sensors 5 Volt Reference (2) | 29 | 0.5 | WH/RD | 480 | III | — |
| 30 | 0.5 | BK/GY | 626 | II | — | Engine Control Sensors Low Reference (3) | 30 | 0.5 | BK/GY | 626 | III | — |
| 31 | — | — | — | — | — | Not Occupied | 31 | — | — | — | — | — |
| 32 | 0.5 | GN/VT | 4510 | II | — | Transmission Intermediate Speed Signal | 32 | 0.5 | — | 4510 | III | — |
| 33 - 36 | — | — | — | — | — | Not Occupied | 33 - 36 | — | — | — | — | — |

# X182 Chassis Harness to Power Steering Jumper Harness (Z45)




1825165




2687960

### Connector Part Information

Harness Type: Chassis
OEM Connector: 13609715
Service Connector: 19178148
Description: 12-Way F 1.5 Series, Sealed (BK)

### Connector Part Information

Harness Type: Power Steering Jumper
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 19300432 | J-35616-2A (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | Not Required | J-35616-3 (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

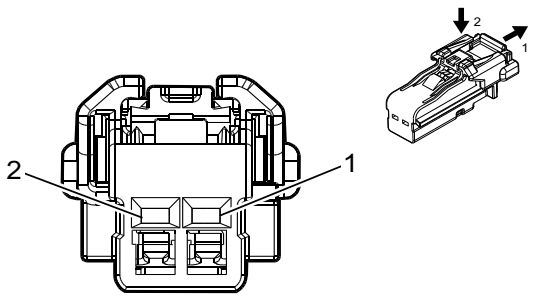
## X182 Chassis Harness to Power Steering Jumper Harness (Z45)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | — | — | — | — | — | Not Occupied | 1 | — | — | — | — | — |
| 2 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 2 | 0.5 | BU | 2500 | II | — |
| 3 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 3 | 0.5 | WH | 2501 | II | — |
| 4 | 0.5 | BU/YE | 6105 | I | — | High Speed GMLAN Serial Data (+) 2 | 4 | 0.5 | BU/YE | 6105 | II | — |
| 5 | 0.5 | WH | 6106 | I | — | High Speed GMLAN Serial Data (-) 2 | 5 | 0.5 | WH | 6106 | II | — |
| 6 - 7 | — | — | — | — | — | Not Occupied | 6 - 7 | — | — | — | — | — |
| 8 | 0.5 | WH/BU | 5986 | I | — | Serial Data Communi-cation Enable | 8 | 0.5 | WH/BU | 5986 | II | — |

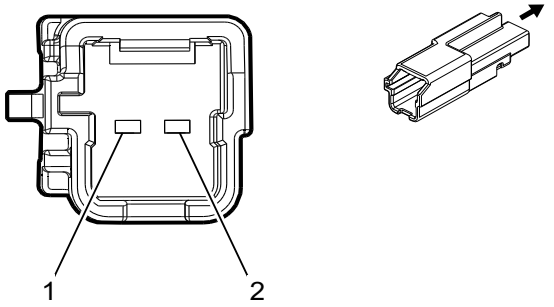
## X182 Chassis Harness to Power Steering Jumper Harness (Z45) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0.5 | BU | 2500 | I | — | High Speed GMLAN Serial Data (+) 1 | 9 | 0.5 | BU | 2500 | II | — |
| 10 | 0.5 | WH | 2501 | I | — | High Speed GMLAN Serial Data (-) 1 | 10 | 0.5 | WH | 2501 | II | — |
| 11 | 0.5 | BU/ YE | 6105 | I | — | High Speed GMLAN Serial Data (+) 2 | 11 | 0.5 | BU/ YE | 6105 | II | — |
| 12 | 0.5 | WH | 6106 | I | — | High Speed GMLAN Serial Data (-) 2 | 12 | 0.5 | WH | 6106 | II | — |

# X211 Instrument Panel Harness to Body Harness (UQA)




4115691




4116496

### Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35026312
Service Connector: 19352066
Description: 2-Way F 1.2 Series (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 33189233
Service Connector: 19332376
Description: 2-Way M 1.2 Series (BK)

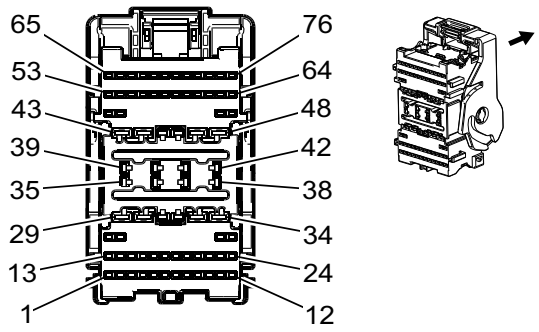
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

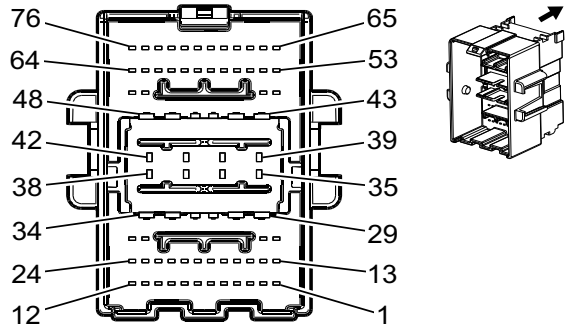
## X211 Instrument Panel Harness to Body Harness (UQA)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.35 | BN/ BK | 7214 | I | — | Ethernet Bus 6 (-) Ethernet Bus 6 (-) | 1 | 0.35 | BN/ BK | 7214 | II | — |
| 2 | 0.35 | GY/ BK | 7215 | I | — | Ethernet Bus 6 (+) Ethernet Bus 6 (+) | 2 | 0.35 | GY/ BK | 7215 | II | — |

# X225 Instrument Panel Harness to Body Harness




3960183




3960526

## Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35142991
Service Connector: 84581287
Description: 76-Way F 1.2, 1.5, 2.8 YESC Series (BK)

## Connector Part Information

Harness Type: Body
OEM Connector: 33303580
Service Connector: 19369989
Description: 76-Way M 1.2 MCON-CB, 1.5, 2.8 YESC Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13575708 | J-35616-2A (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 13578891 | J-35616-2A (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | 13578893 | J-35616-4A (PU) | J-38125-215A | 7116-4110-02 | Yazaki 9 | E | C |
| IV | 13580025 | J-35616-4A (PU) | J-38125-215A | 7116-4111-02 | Yazaki 9 | E | A |
| V | 13582232 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VI | 19300649 | J-35616-4A (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VII | 19301752 | J-35616-4A (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VIII | 19301767 | J-35616-2A (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IX | 19333323 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| X | 19367551 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| XI | 19371240 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| XII | 13575824 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| XIII | 19352074 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| XIV | 19352075 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| XV | 19352417 | J-35616-3 (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| XVI | 19352418 | J-35616-3 (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## Terminal Part Information (cont'd)

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| XVII | 19354072 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| XVIII | 19355729 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| XIX | 19370818 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| XX | 19371217 | J-25616-64B (LT BU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| XXI | 84616651 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X225 Instrument Panel Harness to Body Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | — | — | Not Occupied | 1 - 2 | — | — | — | — | — |
| 3 | 0.35 | BU/YE | 5361 | IX | — | Brake Apply Sensor Signal<br>Brake Apply Sensor Signal | 3 | 0.35<br>0.35 | BU/YE<br>BU/YE | 5361<br>5361 | XXI<br>XIII | —<br>— |
| 4 | 0.35 | BK/BN | 5360 | IX | — | Brake Apply Sensor Low Reference<br>Brake Apply Sensor Low Reference | 4 | 0.35<br>0.35 | BK/BN<br>BK/BN | 5360<br>5360 | XXI<br>XIII | —<br>— |
| 5 | 0.35 | WH | 5359 | IX | — | Brake Apply Sensor Control<br>Brake Apply Sensor Control | 5 | 0.35<br>0.35 | WH<br>WH | 5359<br>5359 | XIII<br>XXI | —<br>— |
| 6 | 0.35 | BK/GY | 2204 | IX | — | Enhanced Driver Mode 1 Switch Low Reference<br>Enhanced Driver Mode 1 Switch Low Reference | 6 | 0.35<br>0.35 | BK/GY<br>BK/GY | 2204<br>2204 | XXI<br>XIII | —<br>— |
| 7 | 0.35 | GY | 4109 | IX | — | Driver Mode Switch 5V Reference<br>Driver Mode Switch 5V Reference | 7 | 0.35<br>0.35 | GY<br>GY | 4109<br>4109 | XIII<br>XXI | —<br>— |
| 8 | 0.35 | WH/BN | 2203 | IX | — | Enhanced Driver Mode 2 Switch Signal<br>Enhanced Driver Mode 2 Switch Signal | 8 | 0.35<br>0.35 | WH/BN<br>WH/BN | 2203<br>2203 | XIII<br>XXI | —<br>— |

## X225 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0.35 | YE | 6817 | IX | — | LED Backlight Dimming Control<br>LED Backlight Dimming Control | 9 | 0.35<br>0.35 | YE<br>YE | 6817<br>6817 | XIII<br>XXI | —<br>— |
| 10 | 0.35 | GN | 5060 | IX | — | Low Speed GMLAN Serial Data<br>Low Speed GMLAN Serial Data | 10 | 0.35<br>0.35 | GN<br>GN | 5060<br>5060 | XIII<br>XXI | —<br>— |
| 11 | 0.35 | VT/ GY | 1630 | IX | — | Steering Column Key Cylinder Lock Solenoid Control<br>Steering Column Key Cylinder Lock Solenoid Control | 11 | 0.35<br>0.35 | VT/ GY<br>VT/ GY | 1630<br>1630 | XIII<br>XXI | —<br>— |
| 12 | 0.35 | VT/ BK | 3 | IX | — | Run/Crank Ignition 1 Voltage<br>Run/Crank Ignition 1 Voltage | 12 | 0.35<br>0.35 | VT/ BK<br>VT/ BK | 3<br>3 | XXI<br>XIII | —<br>— |
| 13 | 0.35 | GN/ BK | 3558 | IX | — | Passive Start Switch Signal 2<br>Passive Start Switch Signal 2 | 13 | 0.35<br>0.35 | GN/ BK<br>GN/ BK | 3558<br>3558 | XIII<br>XXI | —<br>— |
| 14 | 0.35 | VT/ YE | 4 | IX | — | Accessory Ignition Voltage<br>Accessory Ignition Voltage | 14 | 0.35<br>0.35 | VT/ YE<br>VT/ YE | 4<br>4 | XIII<br>XXI | —<br>— |
| 15 | 0.35 | OG/ VT | 3021 | V | — | Steering Wheel Module Stage 1 High Control<br>Steering Wheel Module Stage 1 High Control | 15 | 0.35<br>0.35 | OG/ VT<br>OG/ VT | 3021<br>3021 | XXI<br>XX | —<br>— |
| 16 | 0.35 | BN/ OG | 3020 | V | — | Steering Wheel Module Stage 1 Low Control<br>Steering Wheel Module Stage 1 Low Control | 16 | 0.35<br>0.35 | BN/ OG<br>BN/ OG | 3020<br>3020 | XXI<br>XX | —<br>— |

## X225 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 0.35 | OG/GN | 3023 | V | — | Steering Wheel Module Stage 2 High Control<br>Steering Wheel Module Stage 2 High Control | 17 | 0.35<br>0.35 | OG/GN<br>OG/GN | 3023<br>3023 | XX<br>XXI | —<br>— |
| 18 | 0.35 | WH/OG | 3022 | V | — | Steering Wheel Module Stage 2 Low Control<br>Steering Wheel Module Stage 2 Low Control | 18 | 0.35<br>0.35 | WH/OG<br>WH/OG | 3022<br>3022 | XX<br>XXI | —<br>— |
| 19 | 0.35 | GN/BU | 2733 | IX | — | Local Interconnect Network Bus 33<br>Local Interconnect Network Bus 33 | 19 | 0.35<br>0.35 | GN/BU<br>GN/BU | 2733<br>2733 | XIII<br>XXI | —<br>— |
| 20 | 0.35 | YE/WH | 1690 | IX | — | Automatic Day/Night Mirror Signal<br>Automatic Day/Night Mirror Signal | 20 | 0.35<br>0.35 | YE/WH<br>YE/WH | 1690<br>1690 | XXI<br>XIII | —<br>— |
| 21 | 0.35 | BK/YE | 1691 | IX | — | Automatic Day/Night Mirror Low Reference<br>Automatic Day/Night Mirror Low Reference | 21 | 0.35<br>0.35 | BK/YE<br>BK/YE | 1691<br>1691 | XIII<br>XXI | —<br>— |
| 22 | 0.35 | GN | 4512 | IX | — | Wireless Charging System Charge Indicator Control<br>Wireless Charging System Charge Indicator Control | 22 | 0.35<br>0.35 | GN<br>GN | 4512<br>4512 | XIII<br>XXI | —<br>— |
| 23 | 0.35 | GN/WH | 4115 | IX | — | Local Interconnect Network Serial Data Bus 15 | 23 | 0.35 | GN/WH | 4115 | XIII | — |

## X225 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 0.35 | BU/ YE | 6105 | IX | — | High Speed GMLAN Serial Data (+) 2<br>High Speed GMLAN Serial Data (+) 2 | 24 | 0.5<br>0.5 | BU/ YE<br>BU/ YE | 6105<br>6105 | XXI<br>XIII | —<br>— |
| 25 | 0.35 | WH | 6106 | IX | — | High Speed GMLAN Serial Data (-) 2<br>High Speed GMLAN Serial Data (-) 2 | 25 | 0.5<br>0.5 | WH<br>WH | 6106<br>6106 | XIII<br>XXI | —<br>— |
| 26 | 0.35 | BN/ WH | 419 | IX | — | Check Engine Indicator Control<br>Check Engine Indicator Control | 26 | 0.35<br>0.35 | BN/ WH<br>BN/ WH | 419<br>419 | XXI<br>XIII | —<br>— |
| 27 | 0.35 | GN/ GY | 3277 | IX | — | Vehicle Anti-Theft System Immobilizer Low Reference<br>Vehicle Anti-Theft System Immobilizer Low Reference | 27 | 0.35<br>0.35 | GN/ GY<br>GN/ GY | 3277<br>3277 | XXI<br>XIII | —<br>— |
| 28 | 0.35 | WH/ BU | 5986 | IX | — | Serial Data Communication Enable<br>Serial Data Communication Enable | 28 | 0.35<br>0.35 | WH/ BU<br>WH/ BU | 5986<br>5986 | XIII<br>XXI | —<br>— |
| 29 | — | — | — | — | — | — | 29 | 0.5 | YE/ WH | 9002 | XII | — |
| 30 | 0.35 | YE/ WH | 816 | III | — | Brake Transmission Shift Interlock Solenoid Control | 30 | 0.35 | YE/ WH | 816 | XVII | — |
| 31 | 0.35 | WH | 2501 | II | — | High Speed GMLAN Serial Data (-) 1 | 31 | 0.5 | WH | 2501 | XV | — |
| 32 | 0.35 | BU | 2500 | II | — | High Speed GMLAN Serial Data (+) 1 | 32 | 0.5 | BU | 2500 | XV | — |
| 33 | 0.75 | BU/ VT | 1857 | IV | — | Left Front Midrange Speaker Control (+) | 33 | 0.75 | BU/ VT | 1857 | XVIII | — |

## X225 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 | 0.75 | BU/ BN | 1957 | IV | — | Left Front Midrange Speaker (-) Low Reference | 34 | 0.75 | BU/ BN | 1957 | XVIII | — |
| 35 | 0.5 | WH/ BN | 6815 | VIII | — | Inadvertent Power Control | 35 | 0.5 | WH/ BN | 6815 | XV | — |
| 36 | 0.35 | GN/ WH | 1932 | II | — | Shift Select Switch Park Signal | 36 | 0.35 | GN/ WH | 1932 | XV | — |
| 37 - 38 | — | — | — | — | — | Not Occupied | 37 - 38 | — | — | — | — | — |
| 39 | 0.35 | BU/ GY | 553 | II | — | Shift Select Switch Performance Signal | 39 | 0.35 | BU/ GY | 553 | XV | — |
| 40 - 41 | — | — | — | — | — | Not Occupied | 40 - 41 | — | — | — | — | — |
| 42 | 0.35 | BU/ YE | 6844 | I | — | ABS/TCS Hill Descent Control Switch Signal | 42 | 0.35 | BU/ YE | 6844 | XV | — |
| 43 | — | — | — | — | — | — | 43 | 0.5 | YE/ WH | 9001 | XII | — |
| 44 | 0.35 | Bare | 514 | VI | — | Low Reference | 44 | 0.35 | Bare | 514 | XVII | — |
| 45 | 0.75 | BK | 5683 | I | — | 120 V AC Phase A | 45 | 0.75 | BK | 5683 | XVI | — |
| 46 | 0.75 | RD | 5684 | I | — | 120 V AC Phase B | 46 | 0.75 | RD | 5684 | XVI | — |
| 47 | 0.75 | BN/ BU | 118 | VII | — | Left Front Speaker Signal (-) 1 | 47 | 0.75 | BN/ BU | 118 | XVIII | — |
| 48 | 0.75 | BU | 201 | VII | — | Left Front Speaker Control (+) 1 | 48 | 0.75 | BU | 201 | XVIII | — |
| 49 | 0.35 | BU/ BN | 7573 | IX | — | Electric Variable Displace-ment Supply<br>Electric Variable Displace-ment Supply | 49 | 0.35<br>0.35 | BU/ BN<br>BU/ BN | 7573<br>7573 | XIII<br>XXI | —<br>— |
| 50 | 0.35 | BU/ YE | 7574 | IX | — | Electric Variable Displace-ment Control<br>Electric Variable Displace-ment Control | 50 | 0.35<br>0.35 | BU/ YE<br>BU/ YE | 7574<br>7574 | XIII<br>XXI | —<br>— |

## X225 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | 0.5<br>0.5 | GN<br>GN | 199<br>199 | XI<br>X | —<br>— | Left Rear Speaker Control (+)<br>Left Rear Speaker Control (+) | 51 | 0.5<br>0.5 | GN<br>GN | 199<br>199 | XXI<br>XIII | —<br>— |
| 52 | 0.5<br>0.5 | GN/ BK<br>GN/ BK | 116<br>116 | XI<br>X | —<br>— | Left Rear Speaker Signal (-)<br>Left Rear Speaker Signal (-) | 52 | 0.5<br>0.5 | GN/ BK<br>GN/ BK | 116<br>116 | XXI<br>XIII | —<br>— |
| 53 | 0.35 | GN/ BN | 507 | IX | — | Wait To Start Indicator Control<br>Wait To Start Indicator Control | 53 | 0.35<br>0.35 | GN/ BN<br>GN/ BN | 507<br>507 | XXI<br>XIII | —<br>— |
| 54 | 0.35 | WH/ BN | 7296 | IX | — | Right Minor Endgate Ajar Signal<br>Right Minor Endgate Ajar Signal | 54 | 0.35<br>0.35 | WH/ BN<br>WH/ BN | 7296<br>7296 | XIII<br>XXI | —<br>— |
| 55 | 0.35 | YE/ BU | 7295 | IX | — | Left Minor Endgate Ajar Signal<br>Left Minor Endgate Ajar Signal | 55 | 0.35<br>0.35 | YE/ BU<br>YE/ BU | 7295<br>7295 | XIII<br>XXI | —<br>— |
| 56 | 0.35 | GN/ VT | 7533 | IX | — | Local Interconnect Network Serial Data Bus 11<br>Local Interconnect Network Serial Data Bus 11 | 56 | 0.35<br>0.35 | GN/ VT<br>GN/ VT | 7533<br>7533 | XIII<br>XXI | —<br>— |
| 57 | 0.35 | GN/ YE | 2731 | IX | — | Local Interconnect Network Bus 31<br>Local Interconnect Network Bus 31 | 57 | 0.35<br>0.35 | GN/ YE<br>GN/ YE | 2731<br>2731 | XIII<br>XXI | —<br>— |
| 58 | — | — | — | — | — | Run/Crank Ignition 1 Voltage | 58 | 0.5 | VT/ GN | 439 | XIII | — |
| 59 | 0.35 | BN | 7754 | IX | — | AC Power Outlet Enable<br>AC Power Outlet Enable | 59 | 0.5<br>0.5<br>0.35<br>0.35 | BN<br>BN<br>BN<br>BN | 7754<br>7754<br>7754<br>7754 | XIX<br>XIV<br>XXI<br>XIV | —<br>—<br>—<br>— |

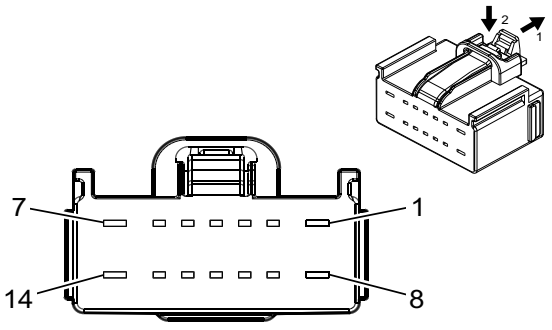
## X225 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60 | 0.35 | GN/VT | 1601 | IX | — | Steering Column Lock Signal<br>Steering Column Lock Signal | 60 | 0.35<br>0.35 | GN/VT<br>GN/VT | 1601<br>1601 | XIII<br>XXI | —<br>— |
| 61 | 0.35 | BK/GY | 3559 | IX | — | Passive Start Switch 2 Low Reference<br>Passive Start Switch 2 Low Reference | 61 | 0.35<br>0.35 | BK/GY<br>BK/GY | 3559<br>3559 | XIII<br>XXI | —<br>— |
| 62 | — | — | — | — | — | Not Occupied | 62 | — | — | — | — | — |
| 63 | 0.35 | BU/YE | 6105 | IX | — | High Speed GMLAN Serial Data (+) 2<br>High Speed GMLAN Serial Data (+) 2 | 63 | 0.5<br>0.5 | BU/YE<br>BU/YE | 6105<br>6105 | XXI<br>XIII | —<br>— |
| 64 | 0.35 | WH | 6106 | IX | — | High Speed GMLAN Serial Data (-) 2<br>High Speed GMLAN Serial Data (-) 2 | 64 | 0.5<br>0.5 | WH<br>WH | 6106<br>6106 | XIII<br>XXI | —<br>— |
| 65 | — | — | — | — | — | Powertrain Relay Coil Control | 65 | 0.5 | YE | 5991 | XIII | — |
| 66 | 0.5 | BN/BK | 3552 | XI | — | Passive Start Interior Antenna 1 Signal Hi<br>Passive Start Interior Antenna 1 Signal Hi | 66 | 0.35<br>0.35 | BN/BK<br>BN/BK | 3552<br>3552 | XXI<br>XIII | —<br>— |
| 67 | 0.5 | WH | 3553 | XI | — | Passive Start Interior Antenna 1 Signal Lo<br>Passive Start Interior Antenna 1 Signal Lo | 67 | 0.35<br>0.35 | WH<br>WH | 3553<br>3553 | XIII<br>XXI | —<br>— |
| 68 | 0.35 | YE/VT | 6191 | IX | — | Power Sliding Window Switch Open Signal<br>Power Sliding Window Switch Open Signal | 68 | 0.35<br>0.35 | YE/VT<br>YE/VT | 6191<br>6191 | XXI<br>XIII | —<br>— |

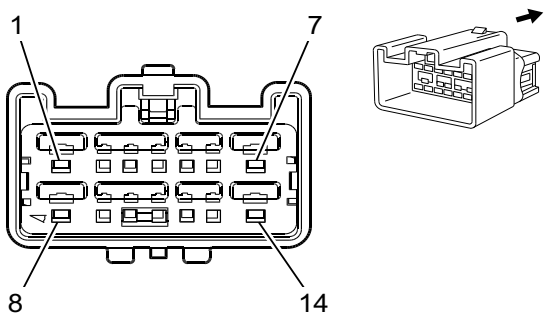
## X225 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 69 | 0.35 | WH | 6192 | IX | — | Power Sliding Window Switch Close Signal<br>Power Sliding Window Switch Close Signal | 69 | 0.35<br>0.35 | WH<br>WH | 6192<br>6192 | XIII<br>XXI | —<br>— |
| 70 | 0.35 | GY/BK | 3276 | IX | — | Vehicle Anti-Theft System Immobilizer Control<br>Vehicle Anti-Theft System Immobilizer Control | 70 | 0.35<br>0.35 | GY/BK<br>GY/BK | 3276<br>3276 | XXI<br>XIII | —<br>— |
| 71 | — | — | — | — | — | Powertrain Relay Coil Control | 71 | 0.5 | YE | 5991 | XIII | — |
| 72 | 0.35 | BN | 1560 | IX | — | Neutral Indicator Control<br>Neutral Indicator Control | 72 | 0.35<br>0.35 | BN<br>BN | 1560<br>1560 | XXI<br>XIII | —<br>— |
| 73 | — | — | — | — | — | Not Occupied | 73 | — | — | — | — | — |
| 74 | 0.35 | BU/BN | 6807 | IX | — | DC To AC Inverter Control<br>DC To AC Inverter Control | 74 | 0.35<br>0.35 | BU/BN<br>BU/BN | 6807<br>6807 | XXI<br>XIII | —<br>— |
| 75 | 0.35 | VT | 185 | IX | — | Low Washer Fluid Indicator Control<br>Low Washer Fluid Indicator Control | 75 | 0.35<br>0.35 | VT<br>VT | 185<br>185 | XIII<br>XXI | —<br>— |
| 76 | 0.5 | BN/WH | 7462 | X | — | Running Boards Disable Signal<br>Running Boards Disable Signal | 76 | 0.35<br>0.35 | BN/WH<br>BN/WH | 7462<br>7462 | XIII<br>XXI | —<br>— |

# X241 Body Harness to Power Inverter Module Jumper Harness (KI4/KI5)




4934172




1283905

### Connector Part Information

Harness Type: Body
OEM Connector: 33366376
Service Connector: 13513605
Description: 14-Way F 1.5, 2.8 Series (GY)

### Connector Part Information

Harness Type: Power Inverter Module Jumper
OEM Connector: 10846900
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way M 1.5, 2.8 Series (L-GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 84616651 | J-35616-2A (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 84616651 | J-35616-4A (PU) | J-38125-215A | 7116-4111-02 | Yazaki 9 | E | A |
| III | Not Required | J-35616-3 (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| IV | Not Required | J-35616-5 (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

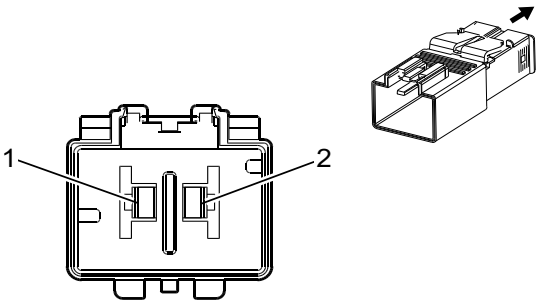
## X241 Body Harness to Power Inverter Module Jumper Harness (KI4/KI5)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 5683 | II | — | 120 V AC Phase A | 1 | 0.75 | BK | 5683 | IV | — |
| 2 | — | — | — | — | — | Not Occupied | 2 | — | — | — | — | — |
| 3 | 0.35 | VT/YE | 5985 | I | — | Accessory Wakeup Serial Data | 3 | 0.35 | VT/YE | 5985 | III | — |
| 4 | 0.35 | WH/GN | 4628 | I | — | DC/AC Inverter Relay Control | 4 | 0.35 | WH/GN | 4628 | III | — |
| 5 | 0.35 | BU/BN | 6807 | I | — | DC To AC Inverter Control | 5 | 0.35 | BU/BN | 6807 | III | — |
| 6 | — | — | — | — | — | Not Occupied | 6 | — | — | — | — | — |
| 7 | 0.75 | BK/WH | 2264 | II | — | 120 VAC Phase A 2 | 7 | 0.75 | BK/WH | 2264 | IV | — |
| 8 | 0.75 | RD | 5684 | II | — | 120 V AC Phase B | 8 | 0.75 | RD | 5684 | IV | — |

## X241 Body Harness to Power Inverter Module Jumper Harness (KI4/KI5) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0.35 | Bare | 514 | I | — | Low Reference | 9 | 0.35 | Bare | 514 | III | — |
| 10 | 0.35 | GN | 5060 | I | — | Low Speed GMLAN Serial Data | 10 | 0.35 | GN | 5060 | III | — |
| 11 | — | — | — | — | — | Not Occupied | 11 | — | — | — | — | — |
| 12 | 0.75 | GN/ BN | 2266 | I | — | DC To AC Inverter Control 2 | 12 | 0.75 | GN/ BN | 2266 | III | — |
| 13 | 0.35 | Bare | 2257 | I | — | Drain Wire | 13 | 0.35 | Bare | 2257 | III | — |
| 14 | 0.75 | RD/ WH | 2265 | II | — | 120 VAC Phase B 2 | 14 | 0.75 | RD/ WH | 2265 | IV | — |

# X250 Electrical Auxiliary Heater Jumper Harness to Body Harness (C32+Crew Cab)




4891120

### Connector Part Information

Harness Type: Electrical Auxiliary Heater Jumper
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

### Connector Part Information

Harness Type: Body
OEM Connector: 33362086
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 9.5 MCON-LL Series (BK)

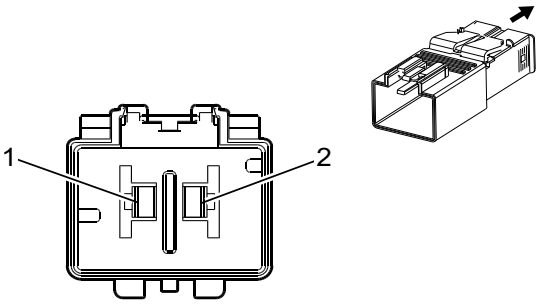
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-22 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-21 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X250 Electrical Auxiliary Heater Jumper Harness to Body Harness (C32+Crew Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 10 | RD/GY | 642 | I | — | Battery Positive Voltage | 2 | 10 | RD/GY | 642 | II | — |

# X250 Electrical Auxiliary Heater Jumper Harness to Body Harness (C32 +Extended Cab)




4891120

## Connector Part Information

Harness Type: Electrical Auxiliary Heater Jumper
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

## Connector Part Information

Harness Type: Body
OEM Connector: 35134697
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 9.5 MCON-LL Series (BK)

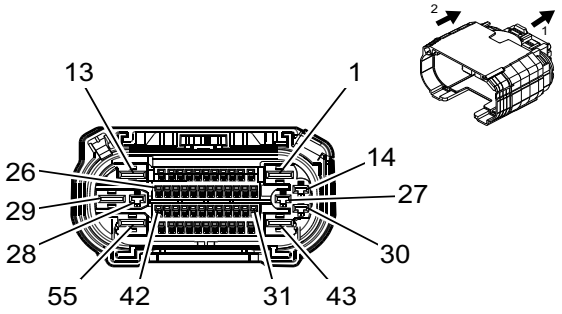
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-22 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-21 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

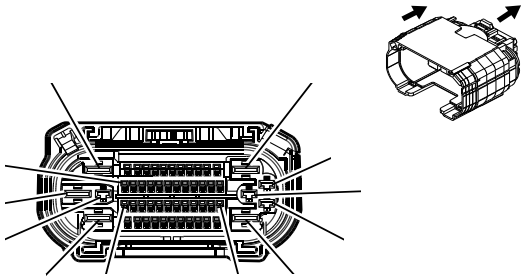
## X250 Electrical Auxiliary Heater Jumper Harness to Body Harness (C32+Extended Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 10 | RD/GY | 642 | I | — | Battery Positive Voltage | 2 | 10 | RD/GY | 642 | II | — |

# X256 Headliner Harness to Instrument Panel Harness




4992168



4992168

### Connector Part Information

Harness Type: Headliner

OEM Connector: 35141318

Service Connector: 84616678

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

### Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 35205189

Service Connector: 84727364

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 84616651 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 84616651 | J-35616-35 (VT) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | 84616651 | J-35616-40 (BU) | J-38125-215A | 1241408-1 | Lear 28 | A | B |
| IV | 84616651 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| V | 84616651 | J-35616-32 (OR) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VI | 84616651 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X256 Headliner Harness to Instrument Panel Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | BK | 1050 | III | — | Ground | 1 | 2.5 | BK | 1050 | V | — |
| 2 | 1.5 | BK | 9003 | I | — | — | 2 | — | — | — | — | — |
| 3 | 0.35 | BU/BK | 7044 | I | — | Microphone (-) Low Reference | 3 | 0.35 | BU/BK | 7044 | IV | — |
| 4 | 0.35 | VT/YE | 7043 | I | — | Microphone (+) Signal | 4 | 0.35 | VT/YE | 7043 | IV | — |
| 5 | 0.35 | BU | 655 | I | — | Cellular Telephone Microphone Signal | 5 | 0.35 | BU | 655 | IV | — |

## X256 Headliner Harness to Instrument Panel Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 0.35 | BK/ BN | 654 | I | — | Cellular Telephone Microphone Low Reference | 6 | 0.35 | BK/ BN | 654 | IV | — |
| 7 | 0.35 | BK | 1782 | I | — | Low Reference | 7 | 0.35 | BK | 1782 | IV | — |
| 8 | 0.35 | WH/ GY | 3936 | I | — | High Speed GMLAN Serial Data (-) 8 | 8 | 0.35 | WH/ GY | 3936 | IV | — |
| 9 | 0.35 | BU/ GY | 3935 | I | — | High Speed GMLAN Serial Data (+) 8 | 9 | 0.35 | BU/ GY | 3935 | IV | — |
| 10 | 0.35 | GY | 157 | I | — | Interior Lamp Control | 10 | 0.35 | GY | 157 | IV | — |
| 11 | 0.35 | BK/ WH | 1851 | I | — | Signal Ground | 11 | 0.5 | BK/ WH | 1851 | IV | — |
| 12 | 1.5 | BK | 9003 | I | — | — | 12 | — | — | — | — | — |
| 13 | — | — | — | — | — | Not Occupied | 13 | — | — | — | — | — |
| 14 | 2.5 | RD/ GN | 3140 | II | — | Battery Positive Voltage | 14 | 2.5 | RD/ GN | 3140 | VI | — |
| 15 | 0.5 | WH/ VT | 1430 | I | — | Exterior Courtesy Lamp Control | 15 | 0.5 | WH/ VT | 1430 | IV | — |
| 16 | 0.35 | WH/ BU | 5986 | I | — | Serial Data Communi-cation Enable | 16 | 0.35 | WH/ BU | 5986 | IV | — |
| 17 | 0.35 | BK/ YE | 1691 | I | — | Automatic Day/Night Mirror Low Reference | 17 | 0.35 | BK/ YE | 1691 | IV | — |
| 18 | 0.35 | GY/ GN | 7565 | I | — | Windscreen Temp Sensor Signal | 18 | 0.35 | GY/ GN | 7565 | IV | — |
| 19 | 0.5 | WH/ BN | 6815 | I | — | Inadvertent Power Control | 19 | 0.5 | WH/ BN | 6815 | IV | — |
| 20 | 0.35 | GN | 2308 | I | — | Passenger Air Bag Off Indicator Control | 20 | 0.35 | GN | 2308 | IV | — |
| 21 | 0.35 | BU | 2307 | I | — | Passenger Air Bag On Indicator Control | 21 | 0.35 | BU | 2307 | IV | — |
| 22 | 0.35 | YE/ WH | 1690 | I | — | Automatic Day/Night Mirror Signal | 22 | 0.35 | YE/ WH | 1690 | IV | — |
| 23 | 0.35 | WH | 6192 | I | — | Power Sliding Window Switch Close Signal | 23 | 0.35 | WH | 6192 | IV | — |

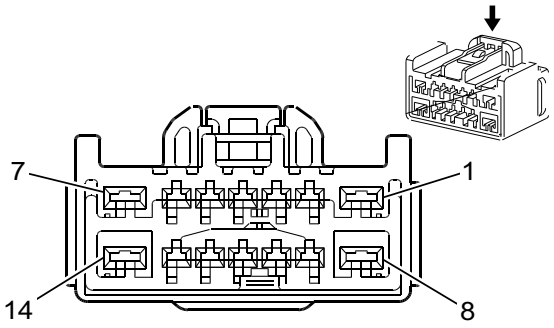
## X256 Headliner Harness to Instrument Panel Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 0.35 | GY | 156 | I | — | Courtesy Lamp Switch Signal | 24 | 0.35 | GY | 156 | IV | — |
| 25 | 0.35 | GN | 5060 | I | — | Low Speed GMLAN Serial Data | 25 | 0.35 | GN | 5060 | IV | — |
| 26 | 0.35 | YE/ BU | 3197 | I | — | Humidity Temperature Sensor Signal | 26 | 0.35 | YE/ BU | 3197 | IV | — |
| 27 - 29 | — | — | — | — | — | Not Occupied | 27 - 29 | — | — | — | — | — |
| 30 | 2.5 | GN/ BU | 5989 | II | — | Emergency Lamp Relay Contact Control | 30 | 2.5 | GN/ BU | 5989 | VI | — |
| 31 | 0.35 | BN/ WH | 2517 | I | — | Keypad Red LED Control | 31 | 0.35 | BN/ WH | 2517 | IV | — |
| 32 | 0.35 | YE/ VT | 2516 | I | — | Keypad Green LED Control | 32 | 0.35 | YE/ VT | 2516 | IV | — |
| 33 | 0.35 | GN/ WH | 24 | I | — | Backup Lamp Control | 33 | 0.35 | GN/ WH | 24 | IV | — |
| 34 | 0.35 | GY/ GN | 328 | I | — | Interior Lamp Defeat Switch Signal | 34 | 0.35 | GY/ GN | 328 | IV | — |
| 35 | 0.35 | BU/ GY | 4672 | I | — | Dome Lamp Off Indicator Control | 35 | 0.35 | BU/ GY | 4672 | IV | — |
| 36 | — | — | — | — | — | Not Occupied | 36 | — | — | — | — | — |
| 37 | 0.35 | GN/ WH | 2514 | I | — | Keypad Signal | 37 | 0.35 | GN/ WH | 2514 | IV | — |
| 38 | 0.35 | GN/ BK | 2515 | I | — | Keypad Control | 38 | 0.35 | GN/ BK | 2515 | IV | — |
| 39 | 0.5<br>0.5 | VT/ GY<br>VT/ WH | 1054<br>5065 | I<br>I | —<br>— | Stop Lamp Control<br>Stop Lamp Relay Coil Control | 39 | 0.35 | VT/ GY | 1054 | IV | — |
| 40 | 0.35 | WH | 3152 | I | — | Lane Departure Warning Indicator Control | 40 | 0.35 | WH | 3152 | IV | — |
| 41 | 0.35 | GY/ WH | 3153 | I | — | Lane Departure Warning Disable Switch Signal | 41 | 0.35 | GY/ WH | 3153 | IV | — |
| 42 | 0.35 | YE | 6817 | I | — | LED Backlight Dimming Control | 42 | 0.35 | YE | 6817 | IV | — |
| 43 | — | — | — | — | — | Not Occupied | 43 | — | — | — | — | — |
| 44 | 1.5 | BK | 9003 | I | — | — | 44 | — | — | — | — | — |

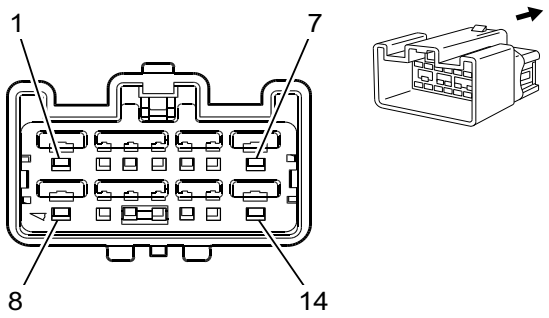
## X256 Headliner Harness to Instrument Panel Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | 0.35 | WH | 6816 | I | — | Indicator Dimming Control | 45 | 0.35 | WH | 6816 | IV | — |
| 46 | 0.35 | YE/RD | 597 | I | — | 5V Reference | 46 | 0.35 | YE/RD | 597 | IV | — |
| 47 | 0.35 | VT/GN | 7558 | I | — | LED Ambient Lighting Control 2 | 47 | 0.35 | VT/GN | 7558 | IV | — |
| 48 | 0.35 | VT/WH | 5234 | I | — | Passenger Seat Belt Indicator Control | 48 | 0.35 | VT/WH | 5234 | IV | — |
| 49 | 0.35 | BK/BU | 7566 | I | — | Humidity/Windscreen Temp Sensor Low Reference | 49 | 0.35 | BK/BU | 7566 | IV | — |
| 50 | 0.35 | GN/BN | 6132 | I | — | Local Interconnect Network Serial Data Bus 1 | 50 | 0.35 | GN/BN | 6132 | IV | — |
| 51 | 0.35 | GY/BU | 7564 | I | — | Humidity Sensor Signal | 51 | 0.35 | GY/BU | 7564 | IV | — |
| 52 | 0.35 | YE/VT | 6191 | I | — | Power Sliding Window Switch Open Signal | 52 | 0.35 | YE/VT | 6191 | IV | — |
| 53 | — | — | — | — | — | Not Occupied | 53 | — | — | — | — | — |
| 54 | 1.5 | BK | 9003 | I | — | — | 54 | — | — | — | — | — |
| 55 | — | — | — | — | — | Not Occupied | 55 | — | — | — | — | — |

# X260 Auxiliary Instrument Panel Harness to Trailer Harness




823290




1283905

### Connector Part Information

Harness Type: Auxiliary Instrument Panel
OEM Connector: 10847017
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way F 1.5, 2.8 Series (L-GY)

### Connector Part Information

Harness Type: Trailer
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way M

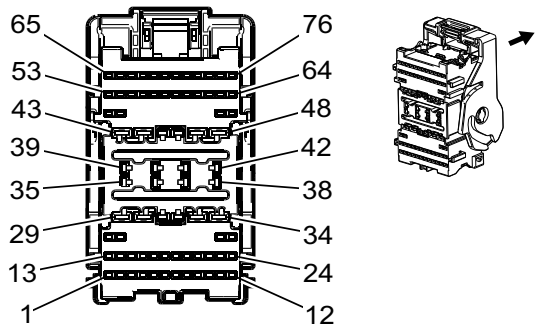
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | J-35616-5 (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

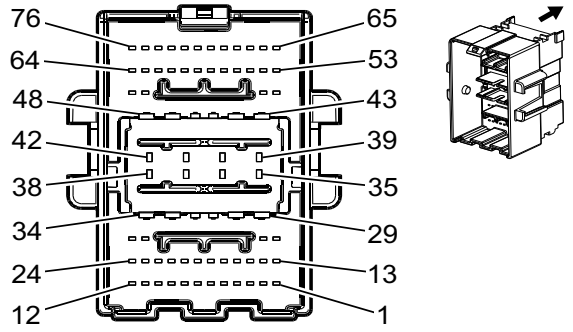
## X260 Auxiliary Instrument Panel Harness to Trailer Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | BK | 1250 | II | — | Ground | 1 | 2 | BK | 1250 | III | — |
| 2 - 4 | — | — | — | — | — | Not Occupied | 2 - 4 | — | — | — | — | — |
| 5 | 0.5 | WH/BU | 3691 | I | — | Trailer Brake Apply Signal | 5 | 0.5 | WH/BU | 3691 | III | — |
| 6 | — | — | — | — | — | Not Occupied | 6 | — | — | — | — | — |
| 7 | 2 | RD/VT | 1242 | II | — | Battery Positive Voltage | 7 | 2 | RD/VT | 1242 | III | — |
| 8 - 13 | — | — | — | — | — | Not Occupied | 8 - 13 | — | — | — | — | — |
| 14 | 2 | BU | 47 | II | — | Trailer Auxiliary Control | 14 | 2 | BU | 47 | III | — |

# X275 Instrument Panel Harness to Body Harness




3960183




3960526

## Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35142991
Service Connector: 84581287
Description: 76-Way F 1.2, 1.5, 2.8 YESC Series (BK)

## Connector Part Information

Harness Type: Body
OEM Connector: 33303580
Service Connector: 19369989
Description: 76-Way M 1.2 MCON-CB, 1.5, 2.8 YESC Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 84616651 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| II | 84616651 | J-35616-2A (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| III | 84616651 | J-35616-4A (PU) | J-38125-215A | 7116-4110-02 | Yazaki 9 | E | C |
| IV | 84616651 | J-35616-4A (PU) | J-38125-215A | 7116-4111-02 | Yazaki 9 | E | A |
| V | 84616651 | J-35616-4A (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VI | 84616651 | J-25616-64B (LT BU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VII | 84616651 | J-35616-13 (BU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VIII | 84616651 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IX | 84616651 | J-35616-3 (GY) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| X | 84616651 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X275 Instrument Panel Harness to Body Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | — | — | — | — | — | Not Occupied | 1 | — | — | — | — | — |
| 2 | 0.5 | RD/WH | 3440 | I | — | Battery Positive Voltage | 2 | 0.5 | RD/WH | 3440 | VIII | — |

## X275 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 0.5 | BN/WH | 3895 | I | — | Roof Rail Air Bag Defeat Switch Low Reference | 3 | 0.5 | BN/WH | 3895 | VIII | — |
| | | | | | | Roof Rail Air Bag Defeat Switch Low Reference | | | | | | |
| 4 | 0.5 | BU/WH | 3119 | I | — | Roof Rail Air Bag Defeat Switch Signal | 4 | 0.5 | BU/WH | 3119 | VIII | — |
| | | | | | | Roof Rail Air Bag Defeat Switch Signal | | | | | | |
| 5 | 0.35 | GY/GN | 2555 | I | — | Rear Park Assist Disable Signal | 5 | 0.35 | GY/GN | 2555 | VIII | — |
| | | | | | | Rear Park Assist Disable Signal | | | | | | |
| 6 | — | — | — | — | — | Not Occupied | 6 | — | — | — | — | — |
| 7 | 0.35 | VT/WH | 5234 | I | — | Passenger Seat Belt Indicator Control | 7 | 0.35 | VT/WH | 5234 | VIII | — |
| | | | | | | Passenger Seat Belt Indicator Control | | | | | | |
| 8 | 0.35 | BU | 2307 | I | — | Passenger Air Bag On Indicator Control | 8 | 0.35 | BU | 2307 | VIII | — |
| | | | | | | Passenger Air Bag On Indicator Control | | | | | | |
| 9 | 0.35 | BU/GY | 4672 | I | — | Dome Lamp Off Indicator Control | 9 | 0.35 | BU/GY | 4672 | VIII | — |
| | | | | | | Dome Lamp Off Indicator Control | | | | | | |
| 10 | 0.35 | GY | 156 | I | — | Courtesy Lamp Switch Signal | 10 | 0.35 | GY | 156 | VIII | — |
| | | | | | | Courtesy Lamp Switch Signal | | | | | | |
| 11 | 0.35 | GN/BU | 761 | I | — | Blower Speed Feedback Signal | 11 | 0.35 | GN/BU | 761 | VIII | — |
| | | | | | | Blower Speed Feedback Signal | | | | | | |

## X275 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 0.35 | GN/ GY | 817 | I | — | Vehicle Speed Signal<br>Vehicle Speed Signal | 12 | 0.35 | GN/ GY | 817 | VIII | — |
| 13 | 0.35 | GN | 2308 | I | — | Passenger Air Bag Off Indicator Control<br>Passenger Air Bag Off Indicator Control | 13 | 0.35 | GN | 2308 | VIII | — |
| 14 | — | — | — | — | — | Not Occupied | 14 | — | — | — | — | — |
| 15 | 0.35 | YE/ OG | 3025 | I | — | Passenger IP Module Stage 1 High Control<br>Passenger IP Module Stage 1 High Control | 15 | 0.35<br>0.35 | YE/ OG<br>YE/ OG | 3025<br>3025 | VI<br>VIII | —<br>— |
| 16 | 0.35 | OG/ WH | 3024 | I | — | Passenger IP Module Stage 1 Low Control<br>Passenger IP Module Stage 1 Low Control | 16 | 0.35<br>0.35 | OG/ WH<br>OG/ WH | 3024<br>3024 | VI<br>VIII | —<br>— |
| 17 | 0.35 | GY/ OG | 3027 | I | — | Passenger IP Module Stage 2 High Control<br>Passenger IP Module Stage 2 High Control | 17 | 0.35<br>0.35 | GY/ OG<br>GY/ OG | 3027<br>3027 | VI<br>VIII | —<br>— |
| 18 | 0.35 | OG/ VT | 3026 | I | — | Passenger IP Module Stage 2 Low Control<br>Passenger IP Module Stage 2 Low Control | 18 | 0.35<br>0.35 | OG/ VT<br>OG/ VT | 3026<br>3026 | VI<br>VIII | —<br>— |
| 19 | 0.35 | GN/ BN | 6132 | I | — | Local Interconnect Network Serial Data Bus 1<br>Local Interconnect Network Serial Data Bus 1 | 19 | 0.5 | GN/ BN | 6132 | VIII | — |

## X275 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 0.35 | GY/GN | 1102 | I | — | Low Speed GMLAN Serial Data #2<br>Low Speed GMLAN Serial Data #2 | 20 | 0.75<br>0.5<br>0.35 | GY/GN<br>GY/GN<br>GY/GN | 1102<br>1102<br>1102 | VIII<br>VIII<br>VIII | —<br>—<br>— |
| 21 | 0.35 | YE | 6817 | I | — | LED Backlight Dimming Control<br>LED Backlight Dimming Control | 21 | 0.35 | YE | 6817 | VIII | — |
| 22 | 0.5 | GN/GY | 6135 | I | — | Local Interconnect Network Serial Data Bus 4<br>Local Interconnect Network Serial Data Bus 4 | 22 | 0.35 | GN/GY | 6135 | VIII | — |
| 23 - 26 | — | — | — | — | — | Not Occupied | 23 - 26 | — | — | — | — | — |
| 27 | 0.35 | YE | 7755 | I | — | AC Power Outlet Status Indicator Control<br>AC Power Outlet Status Indicator Control | 27 | 0.35 | YE | 7755 | VIII | — |
| 28 | 0.35 | VT/WH | 239 | I | — | Run/Crank Ignition 1 Voltage<br>Run/Crank Ignition 1 Voltage | 28 | 0.35 | VT/WH | 239 | VIII | — |
| 29 | 2 | BK | 1250 | V | — | Ground | 29 | 2 | BK | 1250 | X | — |
| 30 | 0.5 | RD/GN | 5140 | III | — | Battery Positive Voltage | 30 | 0.5 | RD/GN | 5140 | X | — |
| 31 | 0.5 | BK/WH | 2751 | II | — | Signal Ground<br>Signal Ground | 31 | 0.75<br>0.5 | BK/WH<br>BK/WH | 2751<br>2751 | IX<br>IX | —<br>— |
| 32 | 0.35 | WH/VT | 6821 | II | — | Surveillance Switch Signal | 32 | 0.35 | WH/VT | 6821 | IX | — |
| 33 | 0.75 | WH/YE | 1853 | IV | — | Right Front Midrange Speaker Control (+) | 33 | 0.75 | WH/YE | 1853 | X | — |

## X275 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 | 0.75 | BN/ BK | 1953 | IV | — | Right Front Midrange Speaker (-) Low Reference | 34 | 0.75 | BN/ BK | 1953 | X | — |
| 35 | 0.35 | GY | 1198 | II | — | Endgate Release Switch Analog Signal Interior | 35 | 0.35 | GY | 1198 | IX | — |
| 36 | 0.5 | WH/ BU | 3691 | II | — | Trailer Brake Apply Signal | 36 | 0.5 | WH/ BU | 3691 | IX | — |
| 37 | 0.35 | RD/ WH | 1340 | II | — | Battery Positive Voltage | 37 | 0.35 | RD/ WH | 1340 | IX | — |
| 38 - 39 | — | — | — | — | — | Not Occupied | 38 - 39 | — | — | — | — | — |
| 40 | 0.35 | GN/ WH | 24 | II | — | Backup Lamp Control | 40 | 0.35 | GN/ WH | 24 | IX | — |
| 41 | 0.5 | WH/ VT | 1430 | II | — | Exterior Courtesy Lamp Control | 41 | 1 | WH/ VT | 1430 | IX | — |
| 42 | 0.35 | VT/ BN | 300 | II | — | Run Ignition 3 Voltage | 42 | 0.35 | VT/ BN | 300 | IX | — |
| 43 | 2 | BU | 47 | V | — | Trailer Auxiliary Control | 43 | 2 | BU | 47 | X | — |
| 44 | 2 | RD/ VT | 1242 | V | — | Battery Positive Voltage | 44 | 2 | RD/ VT | 1242 | X | — |
| 45 | 0.75 | BK/ WH | 2751 | II | — | Signal Ground | 45 | 0.75 | BK/ WH | 2751 | IX | — |
| 46 | 0.35 | VT/ BU | 6091 | II | — | Crankshaft Position Sensor Replicated Signal | 46 | 0.35 | VT/ BU | 6091 | IX | — |
| 47 | 0.75 | YE/ BK | 117 | V | — | Right Front Speaker Signal (-) 1 | 47 | 0.75 | YE/ BK | 117 | X | — |
| 48 | 0.75 | YE | 200 | V | — | Right Front Speaker Control (+) 1 | 48 | 0.75 | YE | 200 | X | — |
| 49 - 50 | — | — | — | — | — | Not Occupied | 49 - 50 | — | — | — | — | — |
| 51 | 0.5 | WH | 46 | I | — | Right Rear Speaker Control (+) Right Rear Speaker Control (+) | 51 | 0.5 | WH | 46 | VIII | — |
| 52 | 0.5 | BU/ BK | 115 | I | — | Right Rear Speaker Signal (-) Right Rear Speaker Signal (-) | 52 | 0.5 | BU/ BK | 115 | VIII | — |

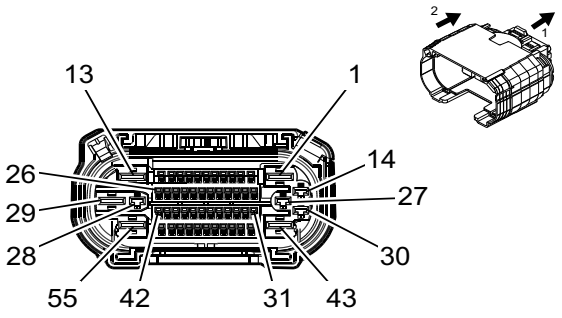
## X275 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 53 | — | — | — | — | — | Not Occupied | 53 | — | — | — | — | — |
| 54 | 0.35 | GY/ WH | 3272 | I | — | Remote Function Actuator Control | 54 | 0.35 | GY/ WH | 3272 | VIII | — |
| | | | | | | Remote Function Actuator Control | | | | | | |
| 55 | 0.35 | BU/ WH | 3275 | I | — | Remote Function Actuator Receive Signal | 55 | 0.35 | BU/ WH | 3275 | VIII | — |
| | | | | | | Remote Function Actuator Receive Signal | | | | | | |
| 56 | 0.35 | YE/ GN | 3274 | I | — | Remote Function Actuator Transmit Signal | 56 | 0.35 | YE/ GN | 3274 | VIII | — |
| | | | | | | Remote Function Actuator Transmit Signal | | | | | | |
| 57 | 0.35 | GY | 3273 | I | — | Remote Function Actuator Low Reference | 57 | 0.35 | GY | 3273 | VIII | — |
| | | | | | | Remote Function Actuator Low Reference | | | | | | |
| 58 | 0.5 | BN/ VT | 193 | I | — | Rear Defog Relay Control | 58 | 0.5 | BN/ VT | 193 | VIII | — |
| | | | | | | Rear Defog Relay Control | | | | | | |
| 59 | 0.35 | YE | 6812 | I | — | Out of Park Signal | 59 | 0.35 | YE | 6812 | VIII | — |
| | | | | | | Out of Park Signal | | | | | | |
| 60 - 62 | — | — | — | — | — | Not Occupied | 60 - 62 | — | — | — | — | — |
| 63 | 0.35 | WH/ GN | 1305 | I | — | High Speed GMLAN Serial Data (-)9 | 63 | 0.5 | WH/ GN | 1305 | VIII | — |
| | | | | | | High Speed GMLAN Serial Data (-)9 | | | | | | |

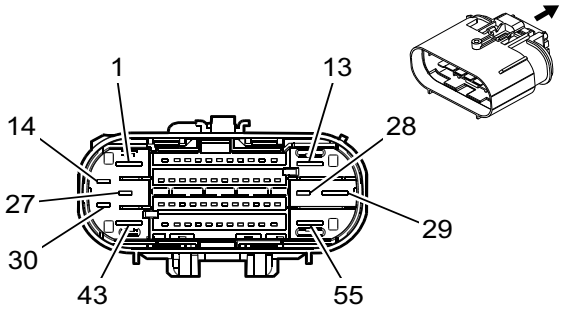
## X275 Instrument Panel Harness to Body Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 | 0.35 | BU/ GN | 1304 | I | — | High Speed GMLAN Serial Data (+)9 | 64 | 0.5 | BU/ GN | 1304 | VIII | — |
| | | | | | | High Speed GMLAN Serial Data (+)9 | | | | | | |
| 65 | — | — | — | — | — | Not Occupied | 65 | — | — | — | — | — |
| 66 | 0.35 | Bare | 6974 | I | — | Camera Low Reference | 66 | 0.35 | Bare | 6974 | VII | — |
| | | | | | | Camera Low Reference | | 0.35 | Bare | 6974 | VIII | — |
| 67 | 0.35 | GY/ YE | 6972 | I | — | Camera Signal 2 + | 67 | 0.35 | GY/ YE | 6972 | VIII | — |
| | | | | | | Camera Signal 2 + | | | | | | |
| 68 | 0.35 | WH/ BU | 6973 | I | — | Camera Signal 2 | 68 | 0.35 | WH/ BU | 6973 | VIII | — |
| | | | | | | Camera Signal 2 | | | | | | |
| 69 | 0.35 | GN/ BN | 5852 | I | — | Rear Park Assist LED Disable Signal | 69 | 0.35 | GN/ BN | 5852 | VIII | — |
| | | | | | | Rear Park Assist LED Disable Signal | | | | | | |
| 70 | 0.35 | VT/ YE | 43 | I | — | Accessory Ignition Voltage | 70 | 0.35 | VT/ YE | 43 | VIII | — |
| | | | | | | Accessory Ignition Voltage | | | | | | |
| 71 - 72 | — | — | — | — | — | Not Occupied | 71 - 72 | — | — | — | — | — |
| 73 | 0.35 | VT/ GY | 1054 | I | — | Stop Lamp Relay Coil Control | 73 | 0.35 | VT/ WH | 5065 | VIII | — |
| | | | | | | Stop Lamp Control | | 0.35 | VT/ GY | 1054 | VIII | — |
| 74 | 0.35 | BN | 7291 | I | — | Major Endgate Release Switch Signal Interior | 74 | 0.35 | BN | 7291 | VIII | — |
| | | | | | | Major Endgate Release Switch Signal Interior | | | | | | |
| 75 - 76 | — | — | — | — | — | Not Occupied | 75 - 76 | — | — | — | — | — |

# X310 Driver Seat Harness to Body Harness (Crew Cab)




4992168




4993301

## Connector Part Information

Harness Type: Driver Seat

OEM Connector: 35016652

Service Connector: Service by Harness - See Part Catalog

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

## Connector Part Information

Harness Type: Body

OEM Connector: 33357991

Service Connector: 19371183

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-43 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| IV | 84616651 | J-25616-64B (LT BU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| V | 84616651 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VI | 84616651 | J-35616-32 (OR) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X310 Driver Seat Harness to Body Harness (Crew Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | BK | 1150 | II | — | Ground | 1 | 2.5 | BK | 1150 | VI | — |
| 2 | — | — | — | — | — | — | 2 | 1 | BK | 9003 | V | — |
| 3 | 0.5 | GN/WH | 7530 | I | — | Local Interconnect Network Serial Data Bus 8 | 3 | 0.35 | GN/WH | 7530 | V | — |
| 4 | 0.5 | RD/BN | 1140 | I | — | Battery Positive Voltage | 4 | 0.35 | RD/BN | 1140 | V | — |
| 5 | 0.5 | GN | 5060 | I | — | Low Speed GMLAN Serial Data | 5 | 0.35 | GN | 5060 | V | — |

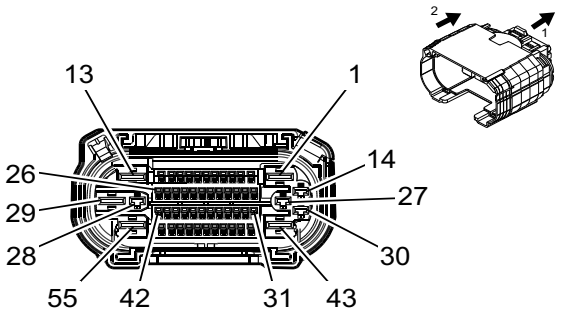
## X310 Driver Seat Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 0.5 | BU/ GN | 614 | I | — | Memory Seat Switch Set Signal | 6 | 0.35 | BU/ GN | 614 | V | — |
| 7 | 0.5 | BK/ BU | 5978 | I | — | Memory Switch Low Reference | 7 | 0.35 | BK/ BU | 5978 | V | — |
| 8 | 0.5 | WH | 615 | I | — | Memory Seat Switch Signal 1 | 8 | 0.35 | WH | 615 | V | — |
| 9 | — | — | — | — | — | Not Occupied | 9 | — | — | — | — | — |
| 10 | 0.5 | BK/ YE | 2080 | I | — | Driver Heated Seat NTC Low Reference | 10 | 0.35 | BK/ YE | 2080 | V | — |
| 11 | 0.5 | YE/ GY | 2079 | I | — | Driver Heated Seat NTC Signal | 11 | 0.35 | YE/ GY | 2079 | V | — |
| 12 | — | — | — | — | — | — | 12 | 1 | BK | 9003 | V | — |
| 13 | 2.5 | RD/ YE | 5040 | II | — | Battery Positive Voltage | 13 | 2.5 | RD/ YE | 5040 | VI | — |
| 14 | — | — | — | — | — | Not Occupied | 14 | — | — | — | — | — |
| 15 | 0.75 | BN/ VT | 2077 | I | — | Driver Heated Seat Element Control | 15 | 0.75 | BN/ VT | 2077 | V | — |
| 16 | 0.75 | BN/ BK | 2078 | I | — | Driver Heated Seat Element Low Reference | 16 | 0.75 | BN/ BK | 2078 | V | — |
| 17 | 0.5 | BK/ VT | 2426 | I | — | Driver Heated Back NTC Low Reference | 17 | 0.35 | BK/ VT | 2426 | V | — |
| 18 | 0.5 | BU | 2425 | I | — | Driver Heated Back NTC Signal | 18 | 0.35 | BU | 2425 | V | — |
| 19 | 0.75 | BN | 2432 | I | — | Driver Heated Back Element Control | 19 | 0.75 | BN | 2432 | V | — |
| 20 | 0.5 | GN/ VT | 5906 | I | — | Driver Seat Vent Motor Control 1 | 20 | 0.35 | GN/ VT | 5906 | V | — |
| 21 | 0.75 | VT/ WH | 4939 | I | — | Run/Crank Ignition 1 Voltage | 21 | 0.5 | VT/ WH | 4939 | V | — |
| 22 - 28 | — | — | — | — | — | Not Occupied | 22 - 28 | — | — | — | — | — |
| 29 | 0.75 | RD/ YE | 8840 | II | — | Battery Positive Voltage | 29 | 0.75 | RD/ YE | 8840 | VI | — |
| 30 | — | — | — | — | — | Not Occupied | 30 | — | — | — | — | — |

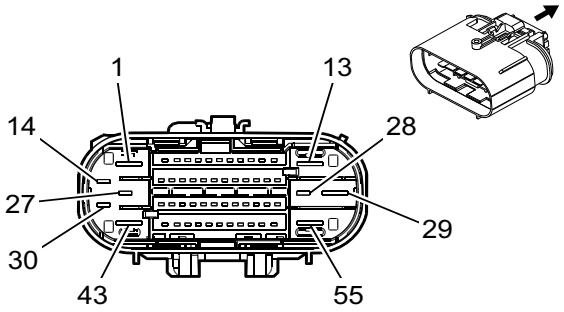
## X310 Driver Seat Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | — | — | — | — | — | Driver Seat Position Switch Signal | 31 | 0.35 | OG/ GN | 5055 | V | — |
| 32 | 0.35 | OG/ BN | 238 | I | — | Driver Seat Belt Switch Signal | 32 | 0.35 | OG/ BN | 238 | V | — |
| 33 | 0.5 | BK/ OG | 1363 | I | — | Driver Seat Belt Switch Low Reference | 33 | 0.35 | BK/ OG | 1363 | V | — |
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |
| 35 | 0.5 | OG/ BU | 3068 | III | — | Driver Side Impact Module High Control | 35 | 0.5 | OG/ BU | 3068 | IV | — |
| 36 | 0.5 | BK/ OG | 3069 | III | — | Driver Side Impact Module Low Control | 36 | 0.5 | GN/ OG | 3069 | IV | — |
| 37 - 43 | — | — | — | — | — | Not Occupied | 37 - 43 | — | — | — | — | — |
| 44 | — | — | — | — | — | — | 44 | 1 | BK | 9003 | V | — |
| 45 - 53 | — | — | — | — | — | Not Occupied | 45 - 53 | — | — | — | — | — |
| 54 | — | — | — | — | — | — | 54 | 1 | BK | 9003 | V | — |
| 55 | — | — | — | — | — | Not Occupied | 55 | — | — | — | — | — |

# X310 Driver Seat Harness to Body Harness (Extended Cab/Regular Cab)




4992168




4993301

## Connector Part Information

Harness Type: Driver Seat

OEM Connector: 35016652

Service Connector: Service by Harness - See Part Catalog

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

## Connector Part Information

Harness Type: Body

OEM Connector: 35205186

Service Connector: 84727364

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-43 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| IV | 84616651 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| V | 84616651 | J-35616-32 (OR) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X310 Driver Seat Harness to Body Harness (Extended Cab/Regular Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | BK | 1150 | II | — | Ground | 1 | 2.5 | BK | 1150 | V | — |
| 2 | — | — | — | — | — | Not Occupied | 2 | — | — | — | — | — |
| 3 | 0.5 | GN/WH | 7530 | I | — | Local Interconnect Network Serial Data Bus 8 | 3 | 0.35 | GN/WH | 7530 | IV | — |
| 4 | 0.5 | RD/BN | 1140 | I | — | Battery Positive Voltage | 4 | 0.35 | RD/BN | 1140 | IV | — |
| 5 | 0.5 | GN | 5060 | I | — | Low Speed GMLAN Serial Data | 5 | 0.35 | GN | 5060 | IV | — |
| 6 | 0.5 | BU/GN | 614 | I | — | Memory Seat Switch Set Signal | 6 | 0.35 | BU/GN | 614 | IV | — |

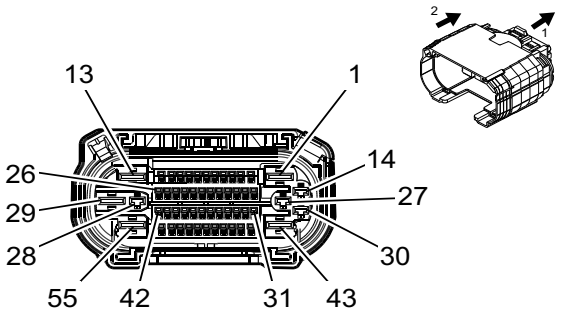
## X310 Driver Seat Harness to Body Harness (Extended Cab/Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 0.5 | BK/ BU | 5978 | I | — | Memory Switch Low Reference | 7 | 0.35 | BK/ BU | 5978 | IV | — |
| 8 | 0.5 | WH | 615 | I | — | Memory Seat Switch Signal 1 | 8 | 0.35 | WH | 615 | IV | — |
| 9 | — | — | — | — | — | Not Occupied | 9 | — | — | — | — | — |
| 10 | 0.5 | BK/ YE | 2080 | I | — | Driver Heated Seat NTC Low Reference | 10 | 0.35 | BK/ YE | 2080 | IV | — |
| 11 | 0.5 | YE/ GY | 2079 | I | — | Driver Heated Seat NTC Signal | 11 | 0.35 | YE/ GY | 2079 | IV | — |
| 12 | — | — | — | — | — | Not Occupied | 12 | — | — | — | — | — |
| 13 | 2.5 | RD/ YE | 5040 | II | — | Battery Positive Voltage | 13 | 2.5 | RD/ YE | 5040 | V | — |
| 14 | — | — | — | — | — | Not Occupied | 14 | — | — | — | — | — |
| 15 | 0.75 | BN/ VT | 2077 | I | — | Driver Heated Seat Element Control | 15 | 0.75 | BN/ VT | 2077 | IV | — |
| 16 | 0.75 | BN/ BK | 2078 | I | — | Driver Heated Seat Element Low Reference | 16 | 0.75 | BN/ BK | 2078 | IV | — |
| 17 | 0.5 | BK/ VT | 2426 | I | — | Driver Heated Back NTC Low Reference | 17 | 0.35 | BK/ VT | 2426 | IV | — |
| 18 | 0.5 | BU | 2425 | I | — | Driver Heated Back NTC Signal | 18 | 0.35 | BU | 2425 | IV | — |
| 19 | 0.75 | BN | 2432 | I | — | Driver Heated Back Element Control | 19 | 0.75 | BN | 2432 | IV | — |
| 20 | 0.5 | GN/ VT | 5906 | I | — | Driver Seat Vent Motor Control 1 | 20 | 0.35 | GN/ VT | 5906 | IV | — |
| 21 | 0.75 | VT/ WH | 4939 | I | — | Run/Crank Ignition 1 Voltage | 21 | 0.5 | VT/ WH | 4939 | IV | — |
| 22 - 28 | — | — | — | — | — | Not Occupied | 22 - 28 | — | — | — | — | — |
| 29 | 0.75 | RD/ YE | 8840 | II | — | Battery Positive Voltage | 29 | 0.75 | RD/ YE | 8840 | V | — |
| 30 - 31 | — | — | — | — | — | Not Occupied | 30 - 31 | — | — | — | — | — |
| 32 | 0.35 | OG/ BN | 238 | I | — | Driver Seat Belt Switch Signal | 32 | 0.35 | OG/ BN | 238 | IV | — |

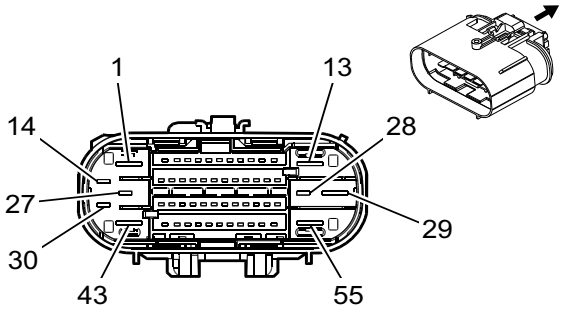
## X310 Driver Seat Harness to Body Harness (Extended Cab/Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 | 0.5 | BK/OG | 1363 | I | — | Driver Seat Belt Switch Low Reference | 33 | 0.35 | BK/OG | 1363 | IV | — |
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |
| 35 | 0.5 | OG/BU | 3068 | III | — | Driver Side Impact Module High Control | 35 | 0.5 | OG/BU | 3068 | IV | — |
| 36 | 0.5 | BK/OG | 3069 | III | — | Driver Side Impact Module Low Control | 36 | 0.5 | GN/OG | 3069 | IV | — |
| 37 - 55 | — | — | — | — | — | Not Occupied | 37 - 55 | — | — | — | — | — |

# X320 Passenger Seat Harness to Body Harness (Crew Cab)




4992168




4993301

## Connector Part Information

Harness Type: Passenger Seat

OEM Connector: 35016652

Service Connector: Service by Harness - See Part Catalog

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

## Connector Part Information

Harness Type: Body

OEM Connector: 33357991

Service Connector: 19371183

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | J-35616-43 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| IV | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| V | 84616651 | J-25616-64B (LT BU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VI | 84616651 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VII | 84616651 | J-35616-32 (OR) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VIII | 84616651 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X320 Passenger Seat Harness to Body Harness (Crew Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75<br>2.5 | BK<br>BK | 1250<br>1250 | III<br>III | —<br>— | Ground<br>Ground | 1 | 2.5 | BK | 1250 | VII | — |
| 2 | — | — | — | — | — | — | 2 | 1 | BK | 9003 | VI | — |
| 3 - 8 | — | — | — | — | — | Not Occupied | 3 - 8 | — | — | — | — | — |
| 9 | 0.5 | GN/BU | 6133 | I | — | Local Interconnect Network Serial Data Bus 2 | 9 | 0.35 | GN/BU | 6133 | VI | — |

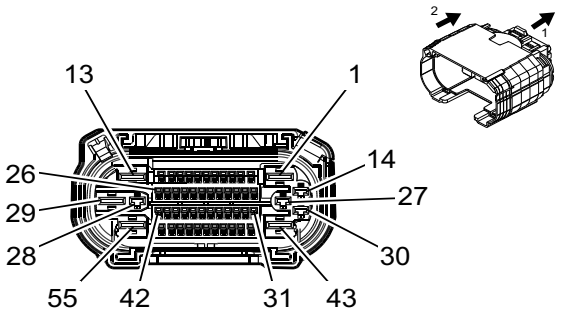
## X320 Passenger Seat Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 0.5 | BK/YE | 2080 | I | — | Driver Heated Seat NTC Low Reference | 10 | 0.35 | BK/YE | 2080 | VI | — |
| 11 | 0.5 | YE/GY | 2079 | I | — | Driver Heated Seat NTC Signal | 11 | 0.35 | YE/GY | 2079 | VI | — |
| 12 | — | — | — | — | — | — | 12 | 1 | BK | 9003 | VI | — |
| 13 | 2.5 | RD/BN | 1440 | III | — | Battery Positive Voltage | 13 | 2.5 | RD/BN | 1440 | VII | — |
| 14 | 0.75 | RD | 6140 | II | — | Battery Positive Voltage | 14 | 0.5 | RD | 6140 | VIII | — |
| 15 | 0.75 | BN/VT | 2077 | I | — | Driver Heated Seat Element Control | 15 | 0.75 | BN/VT | 2077 | VI | — |
| 16 | 0.75 | BN/BK | 2078 | I | — | Driver Heated Seat Element Low Reference | 16 | 0.75 | BN/BK | 2078 | VI | — |
| 17 | 0.5 | BK/VT | 2426 | I | — | Driver Heated Back NTC Low Reference | 17 | 0.35 | BK/VT | 2426 | VI | — |
| 18 | 0.5 | BU | 2425 | I | — | Driver Heated Back NTC Signal | 18 | 0.35 | BU | 2425 | VI | — |
| 19 | 0.75 | BN | 2432 | I | — | Driver Heated Back Element Control | 19 | 0.75 | BN | 2432 | VI | — |
| 20 | 0.35 | GN/VT | 5906 | I | — | Driver Seat Vent Motor Control 1 | 20 | 0.35 | GN/VT | 5906 | VI | — |
| 21 | 0.75 | VT/WH | 4939 | I | — | Run/Crank Ignition 1 Voltage | 21 | 0.5 | VT/WH | 4939 | VI | — |
| 22 | 0.5 | RD/GN | 4440 | I | — | Battery Positive Voltage | 22 | 0.5 | RD/GN | 4440 | VI | — |
| 23 | 0.5 | GN | 5060 | I | — | Low Speed GMLAN Serial Data | 23 | 0.35 | GN | 5060 | VI | — |
| 24 | 0.5 | GY/OG | 3946 | I | — | Automatic Locking Retractor Switch Low Reference | 24 | 0.5 | GY/OG | 3946 | VI | — |
| 25 | 0.5 | OG/BN | 3947 | I | — | Automatic Locking Retractor Switch Signal | 25 | 0.5 | OG/BN | 3947 | VI | — |
| 26 | 0.5 | BK/WH | 2551 | I | — | Signal Ground | 26 | 0.5 | BK/WH | 2551 | VI | — |
| 27 | 0.75 | RD/GN | 5140 | II | — | Battery Positive Voltage | 27 | 0.5 | RD/GN | 5140 | VIII | — |

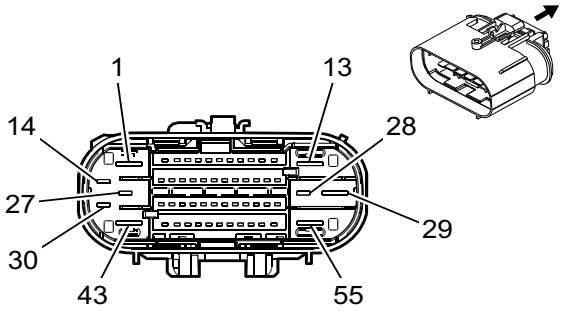
## X320 Passenger Seat Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | — | — | — | — | — | Not Occupied | 28 | — | — | — | — | — |
| 29 | 0.75 | RD/YE | 8840 | III | — | Battery Positive Voltage | 29 | 0.75 | RD/YE | 8840 | VII | — |
| 30 - 31 | — | — | — | — | — | Not Occupied | 30 - 31 | — | — | — | — | — |
| 32 | 0.35 | OG/VT | 1362 | I | — | Passenger Seat Belt Switch Signal | 32 | 0.35 | OG/VT | 1362 | VI | — |
| 33 | 0.5 | BK/OG | 1361 | I | — | Passenger Seat Belt Switch Low Reference | 33 | 0.35 | BK/OG | 1361 | VI | — |
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |
| 35 | 0.5 | OG/GY | 3066 | IV | — | Passenger Side Impact Module High Control | 35 | 0.35 | OG/GY | 3066 | V | — |
| 36 | 0.5 | BU/OG | 3067 | IV | — | Passenger Side Impact Module Low Control | 36 | 0.35 | BN/OG | 3067 | V | — |
| 37 - 43 | — | — | — | — | — | Not Occupied | 37 - 43 | — | — | — | — | — |
| 44 | — | — | — | — | — | — | 44 | 1 | BK | 9003 | VI | — |
| 45 - 53 | — | — | — | — | — | Not Occupied | 45 - 53 | — | — | — | — | — |
| 54 | — | — | — | — | — | — | 54 | 1 | BK | 9003 | VI | — |
| 55 | — | — | — | — | — | Not Occupied | 55 | — | — | — | — | — |

# X320 Passenger Seat Harness to Body Harness (Extended Cab/Regular Cab)




4992168




4993301

## Connector Part Information

Harness Type: Passenger Seat

OEM Connector: 35016652

Service Connector: Service by Harness - See Part Catalog

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

## Connector Part Information

Harness Type: Body

OEM Connector: 35205187

Service Connector: 84727364

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | J-35616-43 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| IV | Not Required | No Tool Required | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| V | 84616651 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VI | 84616651 | J-35616-32 (OR) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VII | 84616651 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X320 Passenger Seat Harness to Body Harness (Extended Cab/Regular Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | BK | 1250 | III | — | Ground | 1 | 2.5 | BK | 1250 | VI | — |
| 2 - 8 | — | — | — | — | — | Not Occupied | 2 - 8 | — | — | — | — | — |
| 9 | 0.5 | GN/BU | 6133 | I | — | Local Interconnect Network Serial Data Bus 2 | 9 | 0.35 | GN/BU | 6133 | V | — |
| 10 | 0.5 | BK/YE | 2080 | I | — | Driver Heated Seat NTC Low Reference | 10 | 0.35 | BK/YE | 2080 | V | — |

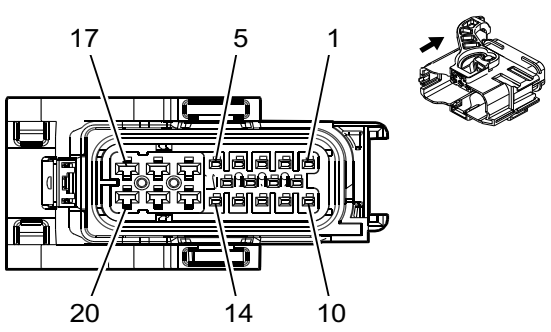
## X320 Passenger Seat Harness to Body Harness (Extended Cab/Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 0.5 | YE/ GY | 2079 | I | — | Driver Heated Seat NTC Signal | 11 | 0.35 | YE/ GY | 2079 | V | — |
| 12 | — | — | — | — | — | Not Occupied | 12 | — | — | — | — | — |
| 13 | 2.5 | RD/ BN | 1440 | III | — | Battery Positive Voltage | 13 | 2.5 | RD/ BN | 1440 | VI | — |
| 14 | 0.75 | RD | 6140 | II | — | Battery Positive Voltage | 14 | 0.5 | RD | 6140 | VII | — |
| 15 | 0.75 | BN/ VT | 2077 | I | — | Driver Heated Seat Element Control | 15 | 0.75 | BN/ VT | 2077 | V | — |
| 16 | 0.75 | BN/ BK | 2078 | I | — | Driver Heated Seat Element Low Reference | 16 | 0.75 | BN/ BK | 2078 | V | — |
| 17 | 0.5 | BK/ VT | 2426 | I | — | Driver Heated Back NTC Low Reference | 17 | 0.35 | BK/ VT | 2426 | V | — |
| 18 | 0.5 | BU | 2425 | I | — | Driver Heated Back NTC Signal | 18 | 0.35 | BU | 2425 | V | — |
| 19 | 0.75 | BN | 2432 | I | — | Driver Heated Back Element Control | 19 | 0.75 | BN | 2432 | V | — |
| 20 | 0.35 | GN/ VT | 5906 | I | — | Driver Seat Vent Motor Control 1 | 20 | 0.35 | GN/ VT | 5906 | V | — |
| 21 | 0.75 | VT/ WH | 4939 | I | — | Run/Crank Ignition 1 Voltage | 21 | 0.5 | VT/ WH | 4939 | V | — |
| 22 | 0.5 | RD/ GN | 4440 | I | — | Battery Positive Voltage | 22 | 0.5 | RD/ GN | 4440 | V | — |
| 23 | 0.5 | GN | 5060 | I | — | Low Speed GMLAN Serial Data | 23 | 0.35 | GN | 5060 | V | — |
| 24 | 0.5 | GY/ OG | 3946 | I | — | Automatic Locking Retractor Switch Low Reference | 24 | 0.5 | GY/ OG | 3946 | V | — |
| 25 | 0.5 | OG/ BN | 3947 | I | — | Automatic Locking Retractor Switch Signal | 25 | 0.5 | OG/ BN | 3947 | V | — |
| 26 | 0.5 | BK/ WH | 2551 | I | — | Signal Ground | 26 | 0.5 | BK/ WH | 2551 | V | — |
| 27 | 0.75 | RD/ GN | 5140 | II | — | Battery Positive Voltage | 27 | 0.5 | RD/ GN | 5140 | VII | — |
| 28 | — | — | — | — | — | Not Occupied | 28 | — | — | — | — | — |

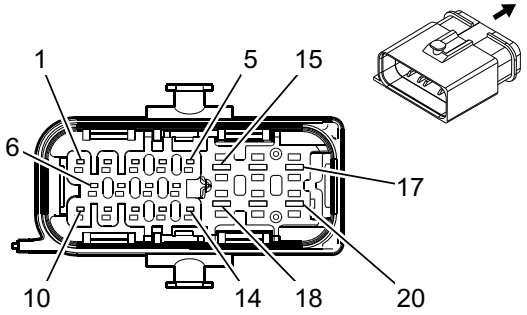
## X320 Passenger Seat Harness to Body Harness (Extended Cab/Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | 0.75 | RD/YE | 8840 | III | — | Battery Positive Voltage | 29 | 0.75 | RD/YE | 8840 | VI | — |
| 30 - 31 | — | — | — | — | — | Not Occupied | 30 - 31 | — | — | — | — | — |
| 32 | 0.35 | OG/VT | 1362 | I | — | Passenger Seat Belt Switch Signal | 32 | 0.35 | OG/VT | 1362 | V | — |
| 33 | 0.5 | BK/OG | 1361 | I | — | Passenger Seat Belt Switch Low Reference | 33 | 0.35 | BK/OG | 1361 | V | — |
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |
| 35 | 0.5 | OG/GY | 3066 | IV | — | Passenger Side Impact Module High Control | 35 | 0.35 | OG/GY | 3066 | V | — |
| 36 | 0.5 | BU/OG | 3067 | IV | — | Passenger Side Impact Module Low Control | 36 | 0.35 | BN/OG | 3067 | V | — |
| 37 - 55 | — | — | — | — | — | Not Occupied | 37 - 55 | — | — | — | — | — |

# X348 Body Harness to Floor Console Harness




4994285




4500420

### Connector Part Information

Harness Type: Body
OEM Connector: 13974124
Service Connector: 19371189
Description: 20-Way F 1.2, 2.8 MCP Series, Sealed (BK)

### Connector Part Information

Harness Type: Floor Console
OEM Connector: 35137619
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way M 1.2, 2.8 MCP Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | 13576374 | J-35616-35 (VT) | J-38125-557 | 1-968857-3 | Lear 7 | C | 1 |
| II | 19119772 | J-35616-35 (VT) | J-38125-215A | 1241388-1 | Lear 17 | 2 | 4 |
| III | 19119772 | J-35616-35 (VT) | J-38125-215A | 1241388-1 | Lear 17 | E | C |
| IV | 19119772 | J-35616-4A (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| V | 19300446 | J-35616-16 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| VI | 19301535 | J-35616-16 (LT GN) | J-38125-12A | Not Available | Not Available | Not Available | Not Available |
| VII | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| VIII | Not Required | J-35616-5 (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X348 Body Harness to Floor Console Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | — | — | — | — | — | Not Occupied | 1 | — | — | — | — | — |
| 2 | 0.35<br>0.35 | YE<br>YE | 6817<br>6817 | V<br>VI | —<br>— | LED Backlight Dimming Control<br>LED Backlight Dimming Control | 2 | 0.5 | YE | 6817 | VII | — |

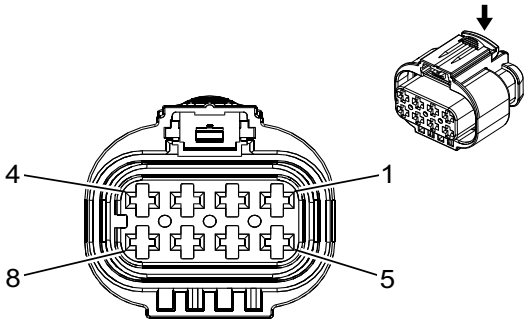
## X348 Body Harness to Floor Console Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 0.35<br>0.35 | GN/VT<br>GN/VT | 7533<br>7533 | V<br>VI | —<br>— | Local Interconnect Network Serial Data Bus 11<br>Local Interconnect Network Serial Data Bus 11 | 3 | 0.35 | GN/VT | 7533 | VII | — |
| 4 | 0.35<br>0.35 | GN/GY<br>GN/GY | 3277<br>3277 | V<br>VI | —<br>— | Vehicle Anti-Theft System Immobilizer Low Reference<br>Vehicle Anti-Theft System Immobilizer Low Reference | 4 | 0.5 | GN/GY | 3277 | VII | — |
| 5 | 0.35<br>0.35 | GY/BK<br>GY/BK | 3276<br>3276 | V<br>VI | —<br>— | Vehicle Anti-Theft System Immobilizer Control<br>Vehicle Anti-Theft System Immobilizer Control | 5 | 0.5 | GY/BK | 3276 | VII | — |
| 6 | — | — | — | — | — | Not Occupied | 6 | — | — | — | — | — |
| 7 | 0.35<br>0.35 | RD/WH<br>RD/WH | 1340<br>1340 | V<br>VI | —<br>— | Battery Positive Voltage<br>Battery Positive Voltage | 7 | 0.5<br>0.35 | RD/WH<br>RD/WH | 1340<br>1340 | VII<br>VII | —<br>— |
| 8 | 0.35 | GN/WH | 4115 | VI | — | Local Interconnect Network Serial Data Bus 15 | 8 | 0.35 | GN/WH | 4115 | VII | — |
| 9 | 0.35<br>0.35 | VT/YE<br>VT/YE | 143<br>143 | V<br>VI | —<br>— | Accessory Ignition Voltage<br>Accessory Ignition Voltage | 9 | 0.5 | VT/YE | 143 | VII | — |
| 10 | — | — | — | — | — | Not Occupied | 10 | — | — | — | — | — |
| 11 | 0.35<br>0.35 | VT<br>VT | 4601<br>4601 | V<br>VI | —<br>— | Retained Accessory Power Fused Control<br>Retained Accessory Power Fused Control | 11 | 0.5 | VT | 4601 | VII | — |

## X348 Body Harness to Floor Console Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 0.35<br>0.35 | GN<br>GN | 4512<br>4512 | V<br>VI | —<br>— | Wireless Charging System Charge Indicator Control<br>Wireless Charging System Charge Indicator Control | 12 | 0.35 | GN | 4512 | VII | — |
| 13 | 0.35<br>0.35 | GY/BK<br>GY/BK | 3555<br>3555 | V<br>VI | —<br>— | Passive Start Interior Antenna 2 Signal Lo<br>Passive Start Interior Antenna 2 Signal Lo | 13 | 0.5 | GY/BK | 3555 | VII | — |
| 14 | 0.35<br>0.35 | BU<br>BU | 3554<br>3554 | V<br>VI | —<br>— | Passive Start Interior Antenna 2 Signal Hi<br>Passive Start Interior Antenna 2 Signal Hi | 14 | 0.5 | BU | 3554 | VII | — |
| 15 | 1.5 | RD/WH | 1040 | I | — | Battery Positive Voltage | 15 | 1.5 | RD/WH | 1040 | VIII | — |
| 16 | 0.5 | WH/BN | 6815 | III | — | Inadvertent Power Control | 16 | 0.5 | WH/BN | 6815 | VIII | — |
| 17 | 1<br>1.5 | BK<br>BK | 1250<br>1250 | II<br>I | —<br>— | Ground<br>Ground | 17 | 1 | BK | 1250 | VIII | — |
| 18 | — | — | — | — | — | Not Occupied | 18 | — | — | — | — | — |
| 19 | 0.35 | BN | 4511 | IV | — | Wireless Charging System Fault Indicator Control | 19 | 0.5 | BN | 4511 | VIII | — |
| 20 | 2 | BK | 1250 | I | — | Ground | 20 | 2 | BK | 1250 | VIII | — |

## X350 Chassis Harness to Fuel Tank Harness




—

3749582

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33180742
Service Connector: 19354078
Description: 8-Way F 2.8 Series, Sealed (L-GY)

### Connector Part Information

Harness Type: Fuel Tank
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

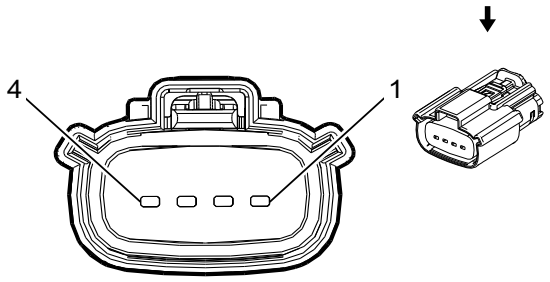
### Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-5 (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

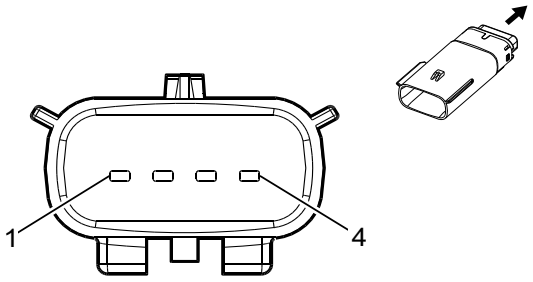
### X350 Chassis Harness to Fuel Tank Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | GY | 120 | I | — | Fuel Pump Control | 1 | 2.5 | GY | 120 | II | — |
| 2 | 2.5 | YE/GY | 4137 | I | — | Fuel Pump Supply Voltage Phase 2 | 2 | 2.5 | YE/GY | 4137 | II | — |
| 3 | 2.5 | WH/BN | 4138 | I | — | Fuel Pump Supply Voltage Phase 3 | 3 | 2.5 | WH/BN | 4138 | II | — |
| 4 | 0.5 | BN | 7444 | I | — | Fuel System Control Module Shield Ground | 4 | 0.5 | BN | 7444 | II | — |
| 5 | 0.5 | BU/VT | 1589 | I | — | Primary Fuel Level Sensor Signal | 5 | 0.5 | BU/VT | 1589 | II | — |
| 6 | 0.5 | BK/GN | 6281 | I | — | Fuel Level Sensor Low Reference | 6 | 0.5 | BK | 6281 | II | — |
| 7 - 8 | — | — | — | — | — | Not Occupied | 7 - 8 | — | — | — | — | — |

# X370 Body Harness to Left Rear Seat Harness (KA6)




2474747




2917338

### Connector Part Information

Harness Type: Body
OEM Connector: 15456952
Service Connector: 19371211
Description: 4-Way F 1.5 Series, Sealed (BK)

### Connector Part Information

Harness Type: Left Rear Seat
OEM Connector: 33481-0401
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.5 Series, Sealed (BK)

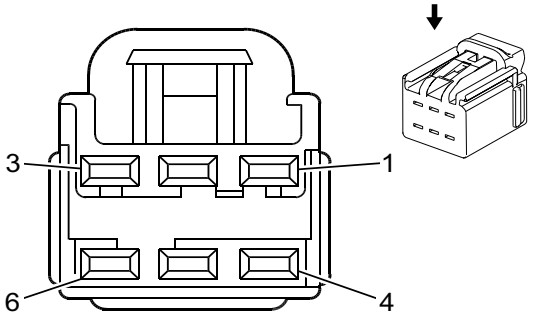
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-3 (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

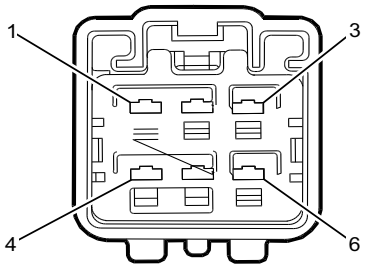
## X370 Body Harness to Left Rear Seat Harness (KA6)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | RD/YE | 240 | I | — | Battery Positive Voltage | 1 | 0.75 | RD/YE | 240 | II | — |
| 2 | 0.5 | RD/VT | 340 | I | — | Battery Positive Voltage | 2 | 0.75 | RD/VT | 340 | II | — |
| 3 | 0.35 | GN/BU | 6133 | I | — | Local Interconnect Network Serial Data Bus 2 | 3 | 0.5 | GN/BU | 6133 | II | — |
| 4 | 1 | BK | 1150 | I | — | Ground | 4 | 1 | BK | 1150 | II | — |

# X380 Center High Mounted Stop Lamp Harness to Headliner Harness (Extended Cab/Regular Cab)




1519696




1849802

### Connector Part Information

Harness Type: Center High Mounted Stop Lamp
OEM Connector: 10847014
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F YESC Kaizen Series (L-GY)

### Connector Part Information

Harness Type: Headliner
OEM Connector: 10847012
Service Connector: 84769086
Description: 6-Way M YESC Kaizen Series (L-GY)

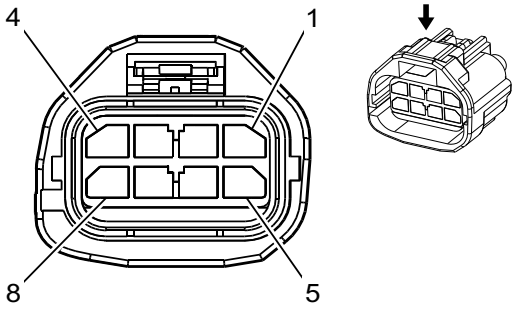
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-5 (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

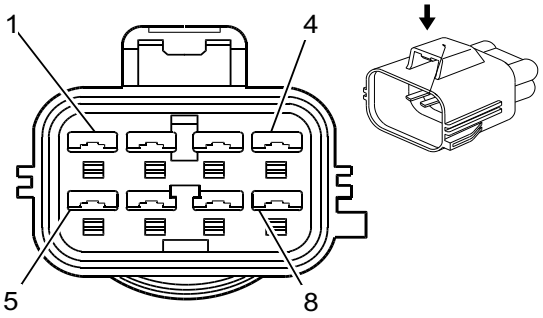
## X380 Center High Mounted Stop Lamp Harness to Headliner Harness (Extended Cab/Regular Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.35 | WH/VT | 1430 | I | — | Exterior Courtesy Lamp Control | 1 | 0.35 | WH/VT | 1430 | II | — |
| 2 | 0.35 | VT/WH | 5065 | I | — | Stop Lamp Relay Coil Control | 2 | 0.5 | VT/WH | 5065 | II | — |
| 3 | 0.35 | BK | 1050 | I | — | Ground | 3 | 0.35 | BK | 1050 | II | — |
| 4 | 2.5 | GN/BU | 5989 | I | — | Emergency Lamp Relay Contact Control | 4 | 2.5 | GN/BU | 5989 | II | — |
| 5 | 2.5 | BK | 1050 | I | — | Ground | 5 | 2.5 | BK | 1050 | II | — |
| 6 | — | — | — | — | — | Not Occupied | 6 | — | — | — | — | — |

# X408 Left Assist Step Jumper Harness to Chassis Harness (BRS)




1401778




1856785

### Connector Part Information

Harness Type: Left Assist Step Jumper
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F

### Connector Part Information

Harness Type: Chassis
OEM Connector: 15419459
Service Connector: 19367561
Description: 8-Way M 2.8 Series, Sealed (D-GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-5 (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

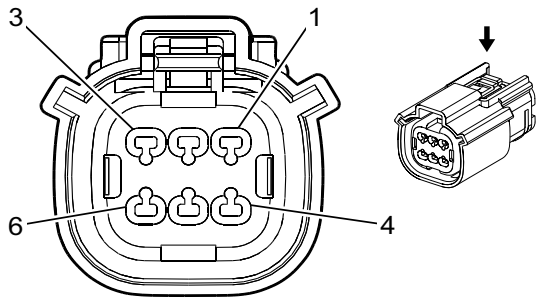
## X408 Left Assist Step Jumper Harness to Chassis Harness (BRS)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | GY | 7472 | I | — | Articulating Running Boards Motor Left Control Retract | 1 | 2 | GY | 7472 | II | — |
| 2 | 0.5 | VT/RD | 7468 | I | — | Running Boards Motor Hall Sensor Left 5V Reference | 2 | 0.5 | VT/RD | 7468 | II | — |
| 3 | 0.5 | YE | 7467 | I | — | Running Boards Motor Hall Sensor Left Signal | 3 | 0.5 | YE | 7467 | II | — |
| 4 | 0.5 | YE/BN | 7466 | I | — | Running Boards Motor Hall Sensor Left Low Reference | 4 | 0.5 | YE/BN | 7466 | II | — |
| 5 | 2 | WH/BN | 7471 | I | — | Articulating Running Boards Motor Left Control Extend | 5 | 2 | WH/BN | 7471 | II | — |
| 6 | — | — | — | — | — | Not Occupied | 6 | — | — | — | — | — |

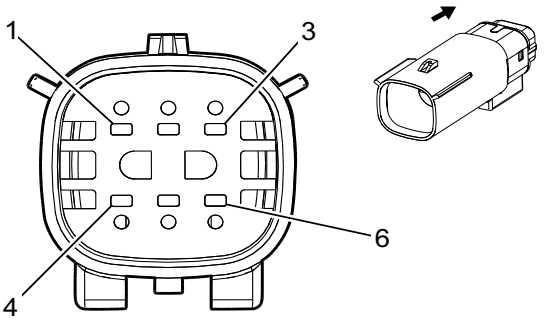
## X408 Left Assist Step Jumper Harness to Chassis Harness (BRS) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 0.5 | BU | 4746 | I | — | Articulating Running Board Left Kick Switch Signal | 7 | 0.5 | BU/ GN | 4746 | II | — |
| 8 | 0.5 | BK/ BU | 685 | I | — | Articulating Running Board Kick Switch Return | 8 | 0.5 | BK/ BU | 685 | II | — |

# X410 Tail Lamp - Left Harness to Chassis Harness




1986157




1986159

### Connector Part Information

Harness Type: Tail Lamp - Left
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F

### Connector Part Information

Harness Type: Chassis
OEM Connector: 35014074
Service Connector: 19367742
Description: 6-Way M 150 MX Series, Sealed (BK)

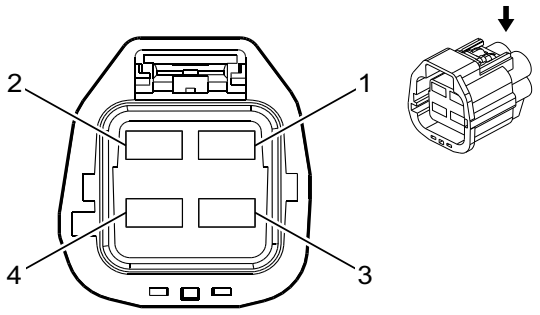
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-3 (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

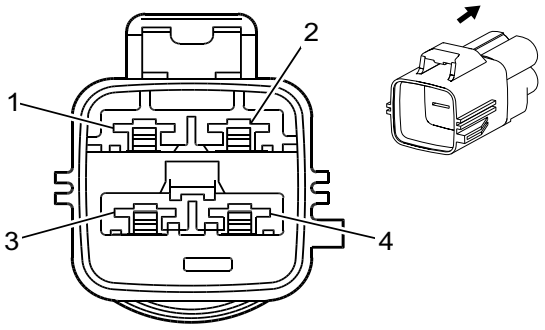
## X410 Tail Lamp - Left Harness to Chassis Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | VT/GY | 709 | I | — | Left Park Lamp Control | 1 | 0.75 | VT/GY | 709 | II | — |
| 2 | 0.5 | YE/BK | 5356 | I | — | Left Tail Lamp Outage Detection Signal | 2 | 0.5 | YE/BK | 5356 | II | — |
| 3 | 0.5 | GY/BU | 7762 | I | — | Cargo Bed Lamp Control | 3 | 0.5 | GY/BU | 7762 | II | — |
| 4 | 0.5 | — | 24 | I | — | Backup Lamp Control | 4 | 0.5 | GN/WH | 24 | II | — |
| 5 | 1 | YE/BU | 18 | I | — | Left Rear Stop/Turn Lamp Control | 5 | 1 | YE/BU | 18 | II | — |
| 6 | 1 | BK | 1450 | I | — | Ground | 6 | 1 | BK | 1450 | II | — |

# X415 Rear Axle Harness to Chassis Harness




2852121




1853524

### Connector Part Information

Harness Type: Rear Axle
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33360098
Service Connector: 19371198
Description: 4-Way M 6.3 Series, Sealed (GY)

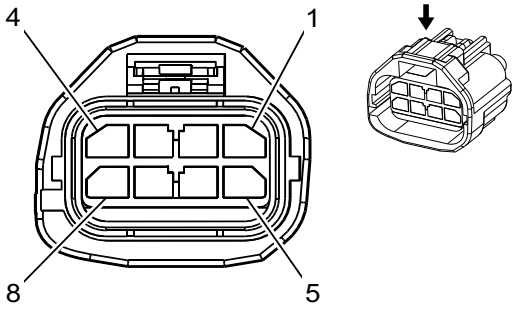
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-43 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

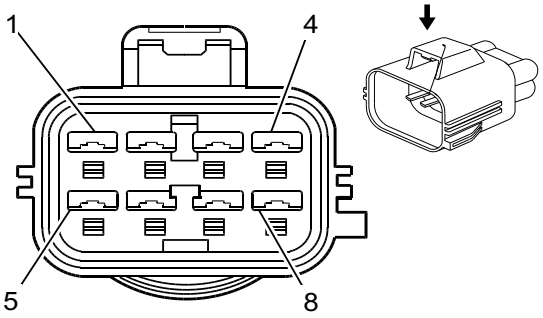
## X415 Rear Axle Harness to Chassis Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | WH | 2001 | I | — | Park Brake Motor Apply Left Rear Control | 1 | 5 | WH | 2001 | II | — |
| 2 | 5 | GY/BK | 4369 | I | — | Park Brake Motor Low Reference Left Rear | 2 | 5 | GY/BK | 4369 | II | — |
| 3 | 5 | — | 1988 | I | — | Park Brake Motor Apply Right Rear Control | 3 | 5 | GN/VT | 1988 | II | — |
| 4 | 5 | GY | 4368 | I | — | Park Brake Motor Low Reference Right Rear | 4 | 5 | GY | 4368 | II | — |

# X418 Right Assist Step Jumper Harness to Chassis Harness (BRS)




1401778




1856785

### Connector Part Information

Harness Type: Right Assist Step Jumper
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F

### Connector Part Information

Harness Type: Chassis
OEM Connector: 15419459
Service Connector: 19367561
Description: 8-Way M 2.8 Series, Sealed (D-GY)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-5 (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

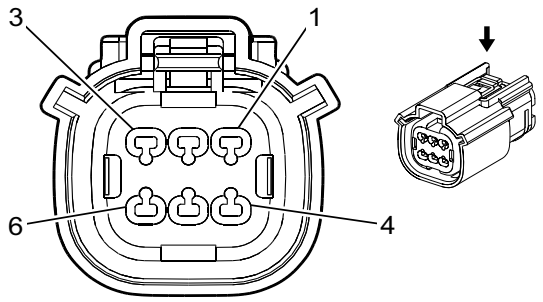
## X418 Right Assist Step Jumper Harness to Chassis Harness (BRS)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | — | 7469 | I | — | Articulating Running Boards Motor Right Control Retract | 1 | 2 | GN | 7469 | II | — |
| 2 | 0.5 | — | 7464 | I | — | Running Boards Motor Hall Sensor Right 5V Reference | 2 | 0.5 | GN/RD | 7464 | II | — |
| 3 | 0.5 | VT | 7465 | I | — | Running Boards Motor Hall Sensor Right Signal | 3 | 0.5 | VT | 7465 | II | — |
| 4 | 0.5 | YE/BK | 7463 | I | — | Running Boards Motor Hall Sensor Right Low Reference | 4 | 0.5 | YE/BK | 7463 | II | — |
| 5 | 2 | BU | 7470 | I | — | Articulating Running Boards Motor Right Control Extend | 5 | 2 | BU | 7470 | II | — |
| 6 | — | — | — | — | — | Not Occupied | 6 | — | — | — | — | — |

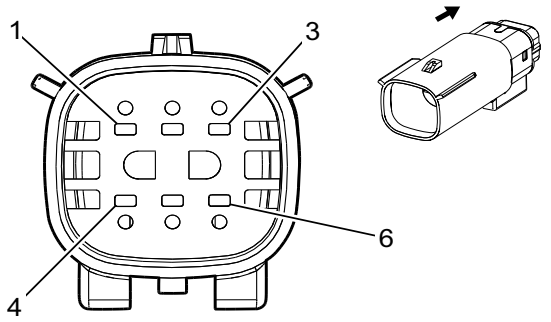
## X418 Right Assist Step Jumper Harness to Chassis Harness (BRS) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 0.5 | WH | 4747 | I | — | Articulating Running Board Right Kick Switch Signal | 7 | 0.5 | WH | 4747 | II | — |
| 8 | 0.5 | BK/ BU | 685 | I | — | Articulating Running Board Kick Switch Return | 8 | 0.5 | BK/ BU | 685 | II | — |

# X420 Tail Lamp - Right Harness to Chassis Harness




1986157




1986159

### Connector Part Information

Harness Type: Tail Lamp - Right
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F

### Connector Part Information

Harness Type: Chassis
OEM Connector: 35014074
Service Connector: 19367742
Description: 6-Way M 150 MX Series, Sealed (BK)

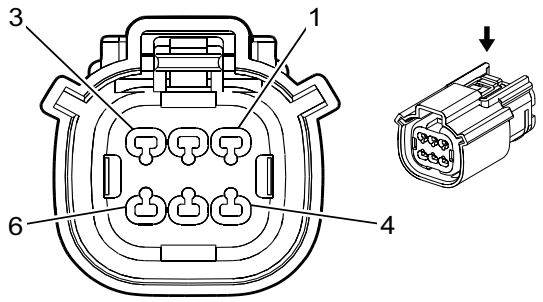
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-3 (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

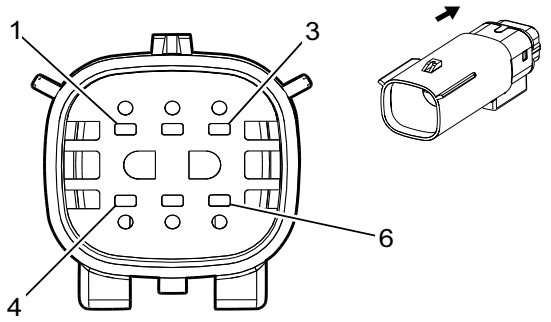
## X420 Tail Lamp - Right Harness to Chassis Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | GY/BN | 309 | I | — | Right Park Lamp Control | 1 | 0.75 | GY/BN | 309 | II | — |
| 2 | 0.5 | VT/YE | 5357 | I | — | Right Tail Lamp Outage Detection Signal | 2 | 0.5 | VT/YE | 5357 | II | — |
| 3 | 0.5 | GY/BU | 7762 | I | — | Cargo Bed Lamp Control | 3 | 0.5 | GY/BU | 7762 | II | — |
| 4 | 0.5 | — | 24 | I | — | Backup Lamp Control | 4 | 0.5 | GN/WH | 24 | II | — |
| 5 | 1 | BN | 19 | I | — | Right Rear Stop/Turn Lamp Control | 5 | 1 | BN/GN | 19 | II | — |
| 6 | 0.75 | BK | 1750 | I | — | Ground | 6 | 0.75 | BK | 1750 | II | — |

# X436 Chassis Harness to Rear Axle Harness (Z45)




1986157




1986159

### Connector Part Information

Harness Type: Chassis
OEM Connector: 13609714
Service Connector: 13578533
Description: 6-Way F 150 MX Series, Sealed (BK)

### Connector Part Information

Harness Type: Rear Axle
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way M

## Terminal Part Information

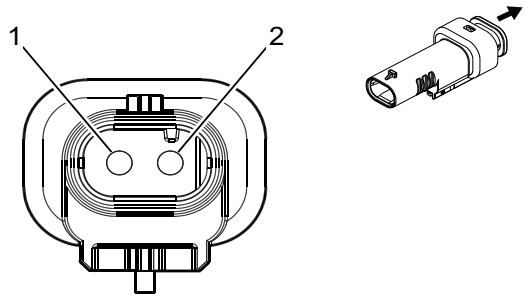
| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-3 (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X436 Chassis Harness to Rear Axle Harness (Z45)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.75 | BU/GY | 1114 | I | — | Left Rear Damping Servo Control | 1 | 0.75 | BU/GY | 1114 | II | — |
| 2 | 0.5 | GN/YE | 1616 | I | — | Brake Lining Wear Sensor Signal Rear | 2 | 0.5 | — | 1616 | II | — |
| 3 | 0.75 | BN/GN | 1118 | I | — | Right Rear Damping Servo Control | 3 | 0.75 | BN | 1118 | II | — |
| 4 | 0.75 | GN/VT | 1115 | I | — | Left Rear Damping Servo Control | 4 | 0.75 | — | 1115 | II | — |
| 5 | 0.5 | BK/WH | 1751 | I | — | Signal Ground | 5 | 0.5 | BK/WH | 1751 | II | — |
| 6 | 0.75 | GN/GY | 1119 | I | — | Right Rear Damping Servo Control | 6 | 0.75 | — | 1119 | II | — |

# X436 Rear Axle Harness to Chassis Harness (-Z45)

—




4992757

### Connector Part Information

Harness Type: Rear Axle
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33356666
Service Connector: 19371200
Description: 2-Way M 1.2 MLK Series, Sealed (GY)

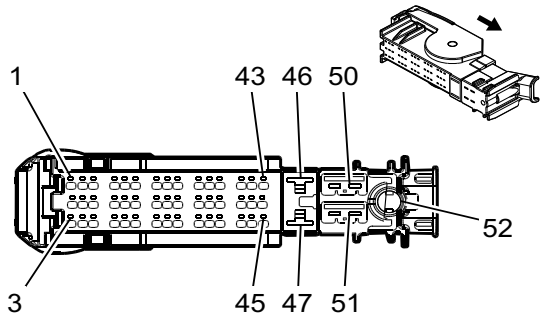
## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

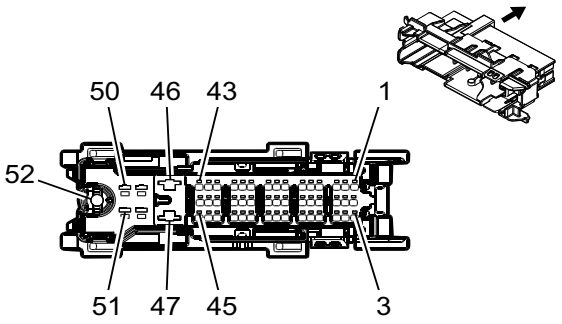
## X436 Rear Axle Harness to Chassis Harness (-Z45)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | — | 1616 | I | — | Brake Lining Wear Sensor Signal Rear | 1 | 0.5 | GN/YE | 1616 | II | — |
| 2 | 0.5 | BK/WH | 1751 | I | — | Signal Ground | 2 | 0.5 | BK/WH | 1751 | II | — |

# X500 Driver Door Harness to Body Harness (Crew Cab)




4992530




4993484

### Connector Part Information

Harness Type: Driver Door

OEM Connector: 35077349

Service Connector: Service by Harness - See Part Catalog

Description: 52-Way F 1.2, 2.8, 6.3, Coaxial Series, Sealed (BK)

### Connector Part Information

Harness Type: Body

OEM Connector: 35072682

Service Connector: 13519704

Description: 52-Way M 1.2, 2.8, 6.3, Coaxial Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| IV | Not Required | Not Available | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| V | 13575824 | J-35616-5 (PU) | J-38125-11A | 7114-4111-02 | Yazaki 9 | Not Available | Not Available |
| VI | 13580023 | J-35616-43 (RD) | J-38125-11A | 7114-4122-02 | Yazaki 9 | A | B |
| VII | 19301536 | J-35616-43 (RD) | J-38125-11A | 7114-4121-02 | Yazaki 9 | Not Available | Not Available |
| VIII | 19352074 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IX | 19352075 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X500 Driver Door Harness to Body Harness (Crew Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | — | — | — | — | — | Not Occupied | 1 | — | — | — | — | — |
| 2 | 0.5 | GY/YE | 1760 | I | — | Left Side Object Detection LED Control | 2 | 0.35 | GY/YE | 1760 | VIII | — |
| 3 | — | — | — | — | — | Not Occupied | 3 | — | — | — | — | — |

## X500 Driver Door Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 0.5 | WH/ VT | 968 | I | — | — | 4 | 0.35 | WH/ VT | 968 | IX | — |
| 5 | — | — | — | — | — | Not Occupied | 5 | — | — | — | — | — |
| 6 | 0.5 | YE/ VT | 3397 | I | — | Passenger Mirror Motor Up (+) Down (-) Control | 6 | 0.5 | YE/ VT | 3397 | VIII | — |
| 7 | 0.5 | WH | 3398 | I | — | Passenger Mirror Motor Common Control | 7 | 0.5 | WH | 3398 | VIII | — |
| 8 | 0.5 | GN/ BK | 3396 | I | — | Passenger Mirror Motor Right (+) Left (-) Control | 8 | 0.5 | GN/ BK | 3396 | VIII | — |
| 9 | 0.5 | BU | 2082 | I | — | Puddle Lamp Control | 9 | 0.35 | BU | 2082 | VIII | — |
| 10 | 0.5 | BK/ BU | 5978 | I | — | Memory Switch Low Reference | 10 | 0.35 | BK/ BU | 5978 | VIII | — |
| 11 | — | — | — | — | — | Not Occupied | 11 | — | — | — | — | — |
| 12 | 0.5 | WH | 615 | I | — | Memory Seat Switch Signal 1 | 12 | 0.35 | WH | 615 | VIII | — |
| 13 | 0.5 | BN/ WH | 781 | I | — | Driver Door Lock Switch Unlock Signal | 13 | 0.35 | BN/ WH | 781 | VIII | — |
| 14 | 0.5 | BN/ YE | 2267 | I | — | Mirror Heating Element Control | 14 | 0.5 | BN/ YE | 2267 | VIII | — |
| 15 | — | — | — | — | — | Not Occupied | 15 | — | — | — | — | — |
| 16 | 0.5 | BU/ GN | 614 | I | — | Memory Seat Switch Set Signal | 16 | 0.35 | BU/ GN | 614 | VIII | — |
| 17 - 18 | — | — | — | — | — | Not Occupied | 17 - 18 | — | — | — | — | — |
| 19 | 0.35 | WH/ YE | 7557 | I | — | LED Ambient Lighting Control 1 | 19 | 0.35 | WH/ YE | 7557 | IX | — |
| 20 | 0.5 | GN/ WH | 3570 | I | — | Driver Door Handle Switch Signal | 20 | 0.35 | GN/ WH | 3570 | VIII | — |
| 21 | 0.5 | WH/ YE | 3574 | I | — | Driver Door Open Switch Signal | 21 | 0.35 | WH/ YE | 3574 | VIII | — |
| 22 | 0.5 | BU/ WH | 1314 | I | — | Left Front Turn Signal Lamp Control | 22 | 0.35 | BU/ WH | 1314 | VIII | — |
| 23 | 0.5 | GY | 745 | I | — | Left Front Door Ajar Switch Signal | 23 | — | — | — | — | — |

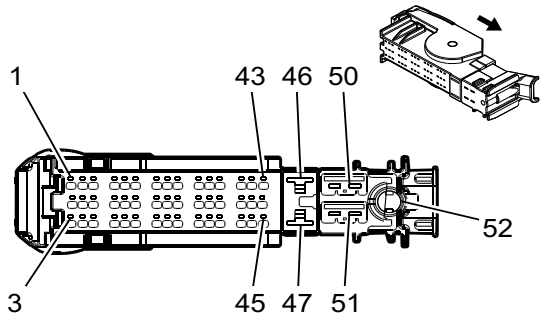
## X500 Driver Door Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | — | — | — | — | — | Not Occupied | 24 | — | — | — | — | — |
| 25 | 0.75 | OG/ GN | 2132 | I | — | Left Front Side Impact Sensing Module Signal | 25 | 0.35 | OG/ GN | 2132 | VIII | — |
| 26 | 0.5 | YE/ WH | 1690 | I | — | Automatic Day/Night Mirror Signal | 26 | 0.35 | YE/ WH | 1690 | VIII | — |
| 27 | 0.5 | GY/ GN | 5996 | I | — | Driver Outside Rear View Mirror Puddle Lamp Control | 27 | 0.35 | GY/ GN | 5996 | IX | — |
| 28 | 0.75 | BK/ OG | 6628 | I | — | Left Front Side Impact Sensing Module Low Reference | 28 | 0.35 | BK/ OG | 6628 | VIII | — |
| 29 | 0.35 | BN/ YE | 780 | I | — | Driver Door Lock Switch Lock Signal | 29 | 0.35 | BN/ YE | 780 | VIII | — |
| 30 | 0.5 | RD/ VT | 1940 | I | — | Battery Positive Voltage | 30 | 0.35 | RD/ VT | 1940 | VIII | — |
| 31 | 0.5 | VT/ GY | 3561 | I | — | Passive Entry Driver Door Antenna Signal Lo | 31 | 0.5 | VT/ GY | 3561 | VIII | — |
| 32 | 0.5 | VT | 3560 | I | — | Passive Entry Driver Door Antenna Signal Hi | 32 | 0.5 | VT | 3560 | VIII | — |
| 33 | 0.5 | BU/ VT | 1124 | I | — | Door Lock Key Switch Unlock Signal | 33 | — | — | — | — | — |
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |
| 35 | 0.5 | GN/ YE | 6134 | I | — | Local Interconnect Network Serial Data Bus 3 | 35 | 0.35 | GN/ YE | 6134 | VIII | — |
| 36 - 41 | — | — | — | — | — | Not Occupied | 36 - 41 | — | — | — | — | — |
| 42 | 0.5 | VT/ GY | 709 | I | — | Left Park Lamp Control | 42 | 0.5 | VT/ GY | 709 | VIII | — |
| 43 | 0.5 | YE | 6817 | I | — | LED Backlight Dimming Control | 43 | 0.35 | YE | 6817 | VIII | — |
| 44 | 0.5 | GN/ WH | 7530 | I | — | Local Interconnect Network Serial Data Bus 8 | 44 | 0.35 | GN/ WH | 7530 | IX | — |

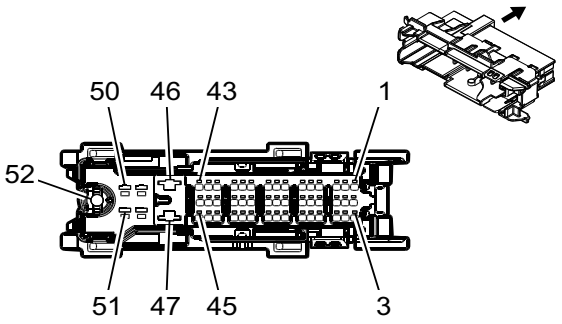
## X500 Driver Door Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | 0.5 | BK/YE | 1691 | I | — | Automatic Day/Night Mirror Low Reference | 45 | 0.35 | BK/YE | 1691 | VIII | — |
| 46 | 0.75<br>3 | BK<br>BK | 1150<br>1150 | II<br>II | —<br>— | Ground<br>Ground | 46 | 3 | BK | 1150 | VI | — |
| 47 | 2.5 | RD/BU | 1842 | II | — | Battery Positive Voltage | 47 | 2.5 | RD/BU | 1842 | VII | — |
| 48 | 0.75 | BN/YE | 294 | III | — | Door Lock Actuator Unlock Control | 48 | 0.75 | BN/YE | 294 | V | — |
| 49 | 0.75 | GY | 5911 | III | — | Door Lock Actuator Lock Control 2 | 49 | 0.75 | GY | 5911 | V | — |
| 50 | 0.75 | BN/BU | 118 | III | — | Left Front Speaker Signal (-) 1 | 50 | 0.75 | BN/BU | 118 | V | — |
| 51 | 0.75 | BU | 201 | III | — | Left Front Speaker Control (+) 1 | 51 | 0.75 | BU | 201 | V | — |
| 52 | 0 | Bare | 2628 | IV | — | Left Side Vision Camera Video Signal (+) | 52 | — | — | — | — | — |

# X500 Driver Door Harness to Body Harness (Extended Cab/Regular Cab)




4992530




4993484

## Connector Part Information

Harness Type: Driver Door

OEM Connector: 35077349

Service Connector: Service by Harness - See Part Catalog

Description: 52-Way F 1.2, 2.8, 6.3, Coaxial Series, Sealed (BK)

## Connector Part Information

Harness Type: Body

OEM Connector: 35190453

Service Connector: -

Description: 52-Way M 1.2, 2.8, 6.3, Coaxial Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| IV | Not Required | Not Available | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| V | 13575824 | J-35616-5 (PU) | J-38125-11A | 7114-4111-02 | Yazaki 9 | Not Available | Not Available |
| VI | 13580023 | J-35616-43 (RD) | J-38125-11A | 7114-4122-02 | Yazaki 9 | A | B |
| VII | 19301536 | J-35616-43 (RD) | J-38125-11A | 7114-4121-02 | Yazaki 9 | Not Available | Not Available |
| VIII | 19370818 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IX | 84616651 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X500 Driver Door Harness to Body Harness (Extended Cab/Regular Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | — | — | — | — | — | Not Occupied | 1 | — | — | — | — | — |
| 2 | 0.5 | GY/YE | 1760 | I | — | Left Side Object Detection LED Control | 2 | 0.35 | GY/YE | 1760 | IX | — |
| 3 | — | — | — | — | — | Not Occupied | 3 | — | — | — | — | — |

## X500 Driver Door Harness to Body Harness (Extended Cab/Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 0.5 | WH/ VT | 968 | I | — | — | 4 | 0.35 | WH/ VT | 968 | VIII | — |
| 5 | — | — | — | — | — | Not Occupied | 5 | — | — | — | — | — |
| 6 | 0.5 | YE/ VT | 3397 | I | — | Passenger Mirror Motor Up (+) Down (-) Control | 6 | 0.5 | YE/ VT | 3397 | IX | — |
| 7 | 0.5 | WH | 3398 | I | — | Passenger Mirror Motor Common Control | 7 | 0.5 | WH | 3398 | IX | — |
| 8 | 0.5 | GN/ BK | 3396 | I | — | Passenger Mirror Motor Right (+) Left (-) Control | 8 | 0.5 | GN/ BK | 3396 | IX | — |
| 9 | 0.5 | BU | 2082 | I | — | Puddle Lamp Control | 9 | 0.35 | BU | 2082 | IX | — |
| 10 | 0.5 | BK/ BU | 5978 | I | — | Memory Switch Low Reference | 10 | 0.35 | BK/ BU | 5978 | IX | — |
| 11 | — | — | — | — | — | Not Occupied | 11 | — | — | — | — | — |
| 12 | 0.5 | WH | 615 | I | — | Memory Seat Switch Signal 1 | 12 | 0.35 | WH | 615 | IX | — |
| 13 | 0.5 | BN/ WH | 781 | I | — | Driver Door Lock Switch Unlock Signal | 13 | 0.35 | BN/ WH | 781 | IX | — |
| 14 | 0.5 | BN/ YE | 2267 | I | — | Mirror Heating Element Control | 14 | 0.5 | BN/ YE | 2267 | IX | — |
| 15 | — | — | — | — | — | Not Occupied | 15 | — | — | — | — | — |
| 16 | 0.5 | BU/ GN | 614 | I | — | Memory Seat Switch Set Signal | 16 | 0.35 | BU/ GN | 614 | IX | — |
| 17 - 18 | — | — | — | — | — | Not Occupied | 17 - 18 | — | — | — | — | — |
| 19 | 0.35 | WH/ YE | 7557 | I | — | LED Ambient Lighting Control 1 | 19 | 0.35 | WH/ YE | 7557 | VIII | — |
| 20 | 0.5 | GN/ WH | 3570 | I | — | Driver Door Handle Switch Signal | 20 | 0.35 | GN/ WH | 3570 | IX | — |
| 21 | 0.5 | WH/ YE | 3574 | I | — | Driver Door Open Switch Signal | 21 | 0.35 | WH/ YE | 3574 | IX | — |
| 22 | 0.5 | BU/ WH | 1314 | I | — | Left Front Turn Signal Lamp Control | 22 | 0.35 | BU/ WH | 1314 | IX | — |
| 23 | 0.5 | GY | 745 | I | — | Left Front Door Ajar Switch Signal | 23 | 0.35 | GY | 745 | IX | — |

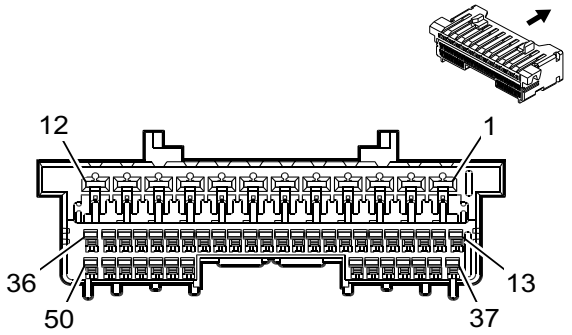
## X500 Driver Door Harness to Body Harness (Extended Cab/Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | — | — | — | — | — | Not Occupied | 24 | — | — | — | — | — |
| 25 | 0.75 | OG/ GN | 2132 | I | — | Left Front Side Impact Sensing Module Signal | 25 | 0.35 | OG/ GN | 2132 | IX | — |
| 26 | 0.5 | YE/ WH | 1690 | I | — | Automatic Day/Night Mirror Signal | 26 | 0.35 | YE/ WH | 1690 | IX | — |
| 27 | 0.5 | GY/ GN | 5996 | I | — | Driver Outside Rear View Mirror Puddle Lamp Control | 27 | 0.35 | GY/ GN | 5996 | VIII | — |
| 28 | 0.75 | BK/ OG | 6628 | I | — | Left Front Side Impact Sensing Module Low Reference | 28 | 0.35 | BK/ OG | 6628 | IX | — |
| 29 | 0.35 | BN/ YE | 780 | I | — | Driver Door Lock Switch Lock Signal | 29 | 0.35 | BN/ YE | 780 | IX | — |
| 30 | 0.5 | RD/ VT | 1940 | I | — | Battery Positive Voltage | 30 | 0.35 | RD/ VT | 1940 | IX | — |
| 31 | 0.5 | VT/ GY | 3561 | I | — | Passive Entry Driver Door Antenna Signal Lo | 31 | 0.5 | VT/ GY | 3561 | IX | — |
| 32 | 0.5 | VT | 3560 | I | — | Passive Entry Driver Door Antenna Signal Hi | 32 | 0.5 | VT | 3560 | IX | — |
| 33 | 0.5 | BU/ VT | 1124 | I | — | Door Lock Key Switch Unlock Signal | 33 | 0.35 | BU/ VT | 1124 | IX | — |
| 34 | — | — | — | — | — | Not Occupied | 34 | — | — | — | — | — |
| 35 | 0.5 | GN/ YE | 6134 | I | — | Local Interconnect Network Serial Data Bus 3 | 35 | 0.35 | GN/ YE | 6134 | IX | — |
| 36 - 41 | — | — | — | — | — | Not Occupied | 36 - 41 | — | — | — | — | — |
| 42 | 0.5 | VT/ GY | 709 | I | — | Left Park Lamp Control | 42 | 0.5 | VT/ GY | 709 | IX | — |
| 43 | 0.5 | YE | 6817 | I | — | LED Backlight Dimming Control | 43 | 0.35 | YE | 6817 | IX | — |
| 44 | 0.5 | GN/ WH | 7530 | I | — | Local Interconnect Network Serial Data Bus 8 | 44 | 0.35 | GN/ WH | 7530 | VIII | — |

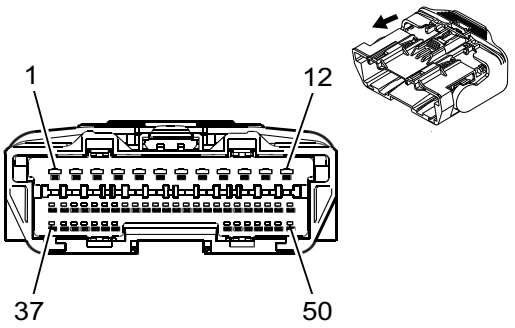
## X500 Driver Door Harness to Body Harness (Extended Cab/Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | 0.5 | BK/YE | 1691 | I | — | Automatic Day/Night Mirror Low Reference | 45 | 0.35 | BK/YE | 1691 | IX | — |
| 46 | 0.75 | BK | 1150 | II | — | Ground | 46 | 3 | BK | 1150 | VI | — |
| 47 | 2.5 | RD/BU | 1842 | II | — | Battery Positive Voltage | 47 | 2.5 | RD/BU | 1842 | VII | — |
| 48 | 0.75 | BN/YE | 294 | III | — | Door Lock Actuator Unlock Control | 48 | 0.75 | BN/YE | 294 | V | — |
| 49 | 0.75 | GY | 5911 | III | — | Door Lock Actuator Lock Control 2 | 49 | 0.75 | GY | 5911 | V | — |
| 50 | 0.75 | BN/BU | 118 | III | — | Left Front Speaker Signal (-) 1 | 50 | 0.75 | BN/BU | 118 | V | — |
| 51 | 0.75 | BU | 201 | III | — | Left Front Speaker Control (+) 1 | 51 | 0.75 | BU | 201 | V | — |
| 52 | — | — | — | — | — | Not Occupied | 52 | — | — | — | — | — |

# X505 Driver Door Harness to Driver Door Trim Harness




4997556




5022037

### Connector Part Information

Harness Type: Driver Door
OEM Connector: 33390107
Service Connector: Service by Harness - See Part Catalog
Description: 50-Way F 1.2, 2.8 OCS Series (BK)

### Connector Part Information

Harness Type: Driver Door Trim
OEM Connector: 33390111
Service Connector: Service by Harness - See Part Catalog
Description: 50-Way M 1.2, 2.8 OCS Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X505 Driver Door Harness to Driver Door Trim Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - 12 | — | — | — | — | — | Not Occupied | 1 - 12 | — | — | — | — | — |
| 13 | 0.5 | GN/ WH | 7530 | I | — | Local Interconnect Network Serial Data Bus 8 | 13 | 0.5 | GN/ WH | 7530 | II | — |
| 14 | 0.5 | BK/ BN | 3393 | I | — | Driver Mirror Position Sensor Low Reference | 14 | 0.35 | BK/ BN | 3393 | II | — |
| 15 | 0.5 | BU/ VT | 1124 | I | — | Door Lock Key Switch Unlock Signal | 15 | 0.35 | BU/ VT | 1124 | II | — |
| 16 | 0.35 | GN/ WH | 3379 | I | — | Power Window Switch Driver Up Signal | 16 | 0.5 | GN/ WH | 3379 | II | — |
| 17 | 0.5 | RD/ VT | 1940 | I | — | Battery Positive Voltage | 17 | 0.5 | RD/ VT | 1940 | II | — |

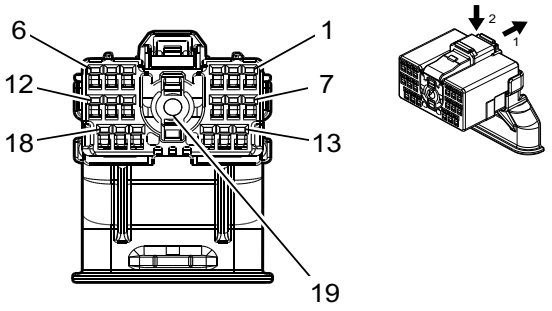
## X505 Driver Door Harness to Driver Door Trim Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0.35 | GN | 3381 | I | — | Power Window Switch Driver Express Signal | 18 | 0.35 | GN | 3381 | II | — |
| 19 | 0.5 | WH | 3398 | I | — | Passenger Mirror Motor Common Control<br>Passenger Mirror Motor Common Control | 19 | 0.35<br>0.5 | WH<br>WH | 3398<br>3398 | II<br>II | —<br>-A45 |
| 20 | 0.35 | WH/ YE | 7557 | I | — | LED Ambient Lighting Control 1 | 20 | 0.35 | WH/ YE | 7557 | II | — |
| 21 | 0.35<br>0.5 | BN/ BK<br>BN/ BK | 3389<br>3389 | I<br>I | —<br>— | Driver Mirror Motor Right (+) Left (-) Control<br>Driver Mirror Motor Right (+) Left (-) Control | 21 | 0.35 | BN/ BK | 3389 | II | — |
| 22 | 0.5 | WH/ YE | 3395 | I | — | Driver Mirror Position Sensor Left (-) Right (+) Signal | 22 | 0.35 | WH/ YE | 3395 | II | — |
| 23 | — | — | — | — | — | Not Occupied | 23 | — | — | — | — | — |
| 24 | 0.35 | WH/ GN | 3412 | I | — | Driver Mirror Motor Fold In Control | 24 | 0.35 | WH/ GN | 3412 | II | — |
| 25 | 0.35 | WH/ VT | 3270 | I | — | Driver Door Lock Motor Status Signal | 25 | 0.35 | WH/ VT | 3270 | II | — |
| 26 | 0.35 | GY/ BN | 3394 | I | — | Driver Mirror Position Sensor Up (+) Down (-) Signal | 26 | 0.35 | GY/ BN | 3394 | II | — |
| 27 | 0.5 | GN/ YE | 6134 | I | — | Local Interconnect Network Serial Data Bus 3<br>Local Interconnect Network Serial Data Bus 3 | 27 | 0.35<br>0.5 | GN/ YE<br>GN/ YE | 6134<br>6134 | II<br>II | —<br>— |
| 28 | 0.35 | YE/ BN | 3391 | I | — | Driver Mirror Motor Common Control | 28 | 0.35 | YE/ BN | 3391 | II | — |
| 29 | — | — | — | — | — | Not Occupied | 29 | — | — | — | — | — |
| 30 | 0.75 | BK | 1150 | I | — | Ground<br>Ground | 30 | 0.35<br>0.5 | BK<br>BK | 1150<br>1150 | II<br>II | —<br>— |

## X505 Driver Door Harness to Driver Door Trim Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | 0.35 | GY/WH | 3411 | I | — | Driver Mirror Motor Fold Out Control | 31 | 0.35 | GY/WH | 3411 | II | — |
| 32 | — | — | — | — | — | Not Occupied | 32 | — | — | — | — | — |
| 33 | 0.35 | VT/BU | 3390 | I | — | Driver Mirror Motor Up (+) Down (-) Control | 33 | 0.35 | VT/BU | 3390 | II | — |
| 34 | 0.5 | WH | 615 | I | — | Memory Seat Switch Signal 1 | 34 | 0.35 | WH | 615 | II | — |
| 35 | — | — | — | — | — | Not Occupied | 35 | — | — | — | — | — |
| 36 | 0.5 | YE | 6817 | I | — | LED Backlight Dimming Control<br>LED Backlight Dimming Control | 36 | 0.35<br>0.5 | YE<br>YE | 6817<br>6817 | II<br>II | —<br>— |
| 37 | — | — | — | — | — | Not Occupied | 37 | — | — | — | — | — |
| 38 | 0.35 | VT/RD | 3392 | I | — | Driver Mirror Position Sensor 5V Reference | 38 | 0.5 | VT/RD | 3392 | II | — |
| 39 | 0.5 | BN/WH | 781 | I | — | Driver Door Lock Switch Unlock Signal | 39 | 0.35 | BN/WH | 781 | II | — |
| 40 | 0.5 | GN/BK | 3396 | I | — | Passenger Mirror Motor Right (+) Left (-) Control | 40 | 0.35 | GN/BK | 3396 | II | — |
| 41 | 0.5 | YE/VT | 3397 | I | — | Passenger Mirror Motor Up (+) Down (-) Control | 41 | 0.35 | YE/VT | 3397 | II | — |
| 42 | 0.5 | GY | 3380 | I | — | Power Window Switch Driver Down Signal | 42 | 0.5 | GY | 3380 | II | — |
| 43 | 0.5 | BU/GN | 614 | I | — | Memory Seat Switch Set Signal | 43 | 0.35 | BU/GN | 614 | II | — |
| 44 | — | — | — | — | — | Not Occupied | 44 | — | — | — | — | — |
| 45 | 0.5 | BK/BU | 5978 | I | — | Memory Switch Low Reference | 45 | 0.35 | BK/BU | 5978 | II | — |
| 46 | — | — | — | — | — | Not Occupied | 46 | — | — | — | — | — |
| 47 | 0.35 | BN/YE | 780 | I | — | Driver Door Lock Switch Lock Signal | 47 | 0.5 | BN/YE | 780 | II | — |
| 48 - 50 | — | — | — | — | — | Not Occupied | 48 - 50 | — | — | — | — | — |

# X510 Driver Door Harness to Outside Rearview Mirror - Driver Harness




—

4991775

### Connector Part Information

Harness Type: Driver Door
OEM Connector: 35077331
Service Connector: Service by Harness - See Part Catalog
Description: 19-Way F 1.2 MCON, Coaxial Series, Sealed (BK)

### Connector Part Information

Harness Type: Outside Rearview Mirror - Driver
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 19-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | Not Available | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | Not Available | No Tool Required | Not Required | Not Required | Not Required | Not Required |

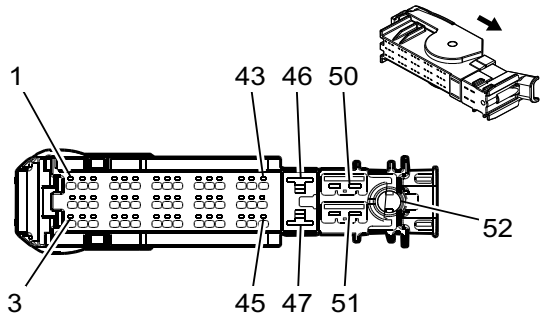
## X510 Driver Door Harness to Outside Rearview Mirror - Driver Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.35<br>0.5 | BN/BK<br>BN/BK | 3389<br>3389 | I<br>I | A45<br>A45/DZC | Driver Mirror Motor Right (+) Left (-) Control<br>Driver Mirror Motor Right (+) Left (-) Control | 1 | 0.35<br>0.5 | BN/BK<br>BN/BK | 3389<br>3389 | III<br>III | A45<br>A45/DZC |
| 2 | 0.35 | VT/BU | 3390 | I | — | Driver Mirror Motor Up (+) Down (-) Control | 2 | 0.35 | VT/BU | 3390 | III | — |
| 3 | 0.35 | WH/GN | 3412 | I | — | Driver Mirror Motor Fold In Control | 3 | 0.35 | WH | 3412 | III | — |
| 4 | 0.5 | GY/YE | 1760 | I | — | Left Side Object Detection LED Control | 4 | 0.5 | GY/YE | 1760 | III | — |

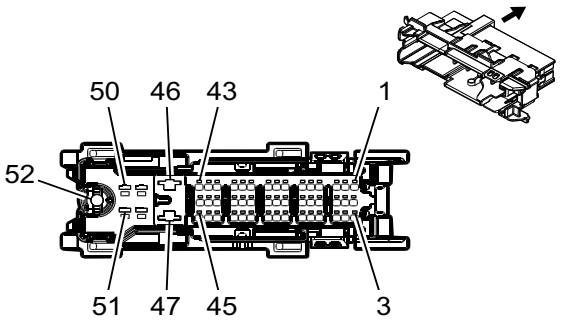
## X510 Driver Door Harness to Outside Rearview Mirror - Driver Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 0.5<br>0.5 | GY/GN<br>BU | 5996<br>2082 | I<br>I | DL3/UV2<br>DQS | Driver Outside Rear View Mirror Puddle Lamp Control<br>Puddle Lamp Control | 5 | 0.5<br>0.5 | GY/GN<br>BU | 5996<br>2082 | III<br>III | DL3/UV2<br>DQS |
| 6 | 0.5 | WH/YE | 3395 | I | — | Driver Mirror Position Sensor Left (-) Right (+) Signal | 6 | 0.5 | WH/YE | 3395 | III | — |
| 7 | 0.5 | BN/YE | 2267 | I | — | Mirror Heating Element Control | 7 | 0.5 | BN/YE | 2267 | III | — |
| 8 | 0.5 | BU/WH | 1314 | I | — | Left Front Turn Signal Lamp Control | 8 | 0.5 | BU/WH | 1314 | III | — |
| 9 | 0.75 | BK | 1150 | I | — | Ground | 9 | 0.75 | BK | 1150 | III | — |
| 10 | 0.35 | VT/RD | 3392 | I | — | Driver Mirror Position Sensor 5V Reference | 10 | 0.35 | VT/RD | 3392 | III | — |
| 11 | 0.35 | GY/BN | 3394 | I | — | Driver Mirror Position Sensor Up (+) Down (-) Signal | 11 | 0.35 | GY/BN | 3394 | III | — |
| 12 | 0.5 | BK/YE | 1691 | I | — | Automatic Day/Night Mirror Low Reference | 12 | 0.5 | BK/YE | 1691 | III | — |
| 13 | 0.5<br>0.5 | BU<br>VT/GY | 2082<br>709 | I<br>I | DEZ/DLF<br>DPO/DQS | Puddle Lamp Control<br>Left Park Lamp Control | 13 | 0.5<br>0.5 | BU<br>VT/GY | 2082<br>709 | III<br>III | DEZ/DLF<br>DPO/DQS |
| 14 | 0.35 | YE/BN | 3391 | I | — | Driver Mirror Motor Common Control | 14 | 0.35 | YE/BN | 3391 | III | — |
| 15 | 0.35 | GY/WH | 3411 | I | — | Driver Mirror Motor Fold Out Control | 15 | 0.35 | GY/WH | 3411 | III | — |
| 16 | 0.5 | WH/VT | 968 | I | — | — | 16 | 0.5 | WH/VT | 968 | III | — |
| 17 | 0.5 | YE/WH | 1690 | I | — | Automatic Day/Night Mirror Signal | 17 | 0.5 | YE/WH | 1690 | III | — |
| 18 | 0.5 | BK/BN | 3393 | I | — | Driver Mirror Position Sensor Low Reference | 18 | 0.5 | BK/BN | 3393 | III | — |
| 19 | 0 | Bare | 2628 | II | — | Left Side Vision Camera Video Signal (+) | 19 | 0 | — | 2628 | III | — |

# X600 Passenger Door Harness to Body Harness (Crew Cab)




4992530




4993484

### Connector Part Information

Harness Type: Passenger Door

OEM Connector: 35077349

Service Connector: Service by Harness - See Part Catalog

Description: 52-Way F 1.2, 2.8, 6.3, Coaxial Series, Sealed (BK)

### Connector Part Information

Harness Type: Body

OEM Connector: 35072682

Service Connector: 13519704

Description: 52-Way M 1.2, 2.8, 6.3, Coaxial Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| IV | Not Required | Not Available | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| V | 13575824 | J-35616-5 (PU) | J-38125-11A | 7114-4111-02 | Yazaki 9 | Not Available | Not Available |
| VI | 13580023 | J-35616-43 (RD) | J-38125-11A | 7114-4122-02 | Yazaki 9 | A | B |
| VII | 19301536 | J-35616-43 (RD) | J-38125-11A | 7114-4121-02 | Yazaki 9 | Not Available | Not Available |
| VIII | 19352074 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X600 Passenger Door Harness to Body Harness (Crew Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - 3 | — | — | — | — | — | Not Occupied | 1 - 3 | — | — | — | — | — |
| 4 | 0.5 | WH/VT | 968 | I | — | — | 4 | 0.35 | WH/VT | 968 | VIII | — |
| 5 | 0.5 | GY | 746 | I | — | Right Front Door Ajar Switch Signal | 5 | — | — | — | — | — |

## X600 Passenger Door Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 0.5 | YE/ VT | 3397 | I | — | Passenger Mirror Motor Up (+) Down (-) Control | 6 | 0.5 | YE/ VT | 3397 | VIII | — |
| 7 | 0.5 | WH | 3398 | I | — | Passenger Mirror Motor Common Control | 7 | 0.5 | WH | 3398 | VIII | — |
| 8 | 0.5 | GN/ BK | 3396 | I | — | Passenger Mirror Motor Right (+) Left (-) Control | 8 | 0.5 | GN/ BK | 3396 | VIII | — |
| 9 | 0.5 | BU | 2082 | I | — | Puddle Lamp Control | 9 | 0.35 | BU | 2082 | VIII | — |
| 10 - 12 | — | — | — | — | — | Not Occupied | 10 - 12 | — | — | — | — | — |
| 13 | 0.5 | BN/ VT | 245 | I | — | Passenger Door Lock Switch Unlock Control | 13 | 0.35 | BN/ VT | 245 | VIII | — |
| 14 - 18 | — | — | — | — | — | Not Occupied | 14 - 18 | — | — | — | — | — |
| 19 | 0.35 | WH/ YE | 7557 | I | — | LED Ambient Lighting Control 1 | 19 | 0.35 | WH/ YE | 7557 | VIII | — |
| 20 | 0.5 | VT/ WH | 3571 | I | — | Passenger Door Handle Switch Signal | 20 | 0.35 | VT/ WH | 3571 | VIII | — |
| 21 | 0.5 | GY | 1761 | I | — | Right Side Object Detection LED Control | 21 | 0.35 | GY | 1761 | VIII | — |
| 22 | 0.5 | GN/ VT | 1315 | I | — | Right Front Turn Signal Lamp Control | 22 | 0.35 | GN/ VT | 1315 | VIII | — |
| 23 | — | — | — | — | — | Not Occupied | 23 | — | — | — | — | — |
| 24 | 0.35 | BK | 1150 | I | — | Ground | 24 | 0.35 | BK | 1150 | VIII | — |
| 25 | 0.75 | BN/ OG | 2134 | I | — | Right Front Side Impact Sensing Module Signal | 25 | 0.35 | BN/ OG | 2134 | VIII | — |
| 26 | — | — | — | — | — | Not Occupied | 26 | — | — | — | — | — |
| 27 | 0.5 | GY/ GN | 5996 | I | — | Driver Outside Rear View Mirror Puddle Lamp Control | 27 | 0.35 | GY/ GN | 5996 | VIII | — |
| 28 | 0.75 | BK/ OG | 6629 | I | — | Right Front Side Impact Sensing Module Low Reference | 28 | 0.35 | BK/ OG | 6629 | VIII | — |

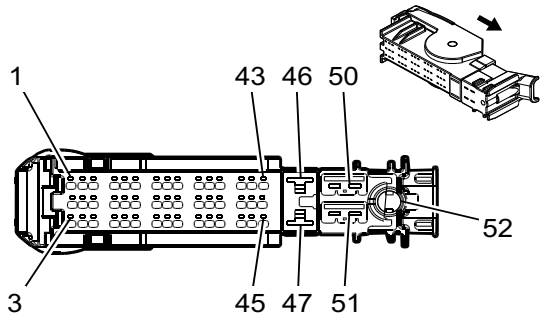
## X600 Passenger Door Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | 0.5 | YE/ VT | 244 | I | — | Passenger Door Lock Switch Lock Control | 29 | 0.35 | YE/ VT | 244 | VIII | — |
| 30 | — | — | — | — | — | Not Occupied | 30 | — | — | — | — | — |
| 31 | 0.5 | GN/ BK | 3563 | I | — | Passive Entry Passenger Door Antenna Signal Lo | 31 | 0.5 | GN/ BK | 3563 | VIII | — |
| 32 | 0.5 | GN/ YE | 3562 | I | — | Passive Entry Passenger Door Antenna Signal Hi | 32 | 0.5 | GN/ YE | 3562 | VIII | — |
| 33 | — | — | — | — | — | Not Occupied | 33 | — | — | — | — | — |
| 34 | 0.35 | BK/ GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 34 | 0.35 | BK/ GN | 580 | VIII | — |
| 35 | 0.5<br>0.35 | GN/ YE<br>GN/ YE | 6134<br>6134 | I<br>I | AED<br>AEF | Local Interconnect Network Serial Data Bus 3<br>Local Interconnect Network Serial Data Bus 3 | 35 | 0.35 | GN/ YE | 6134 | VIII | — |
| 36 | 0.35 | BU/ GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 36 | 0.35 | BU/ GY | 636 | VIII | — |
| 37 | — | — | — | — | — | Not Occupied | 37 | — | — | — | — | — |
| 38 | 0.5 | BN/ YE | 2267 | I | — | Mirror Heating Element Control | 38 | 0.5 | BN/ YE | 2267 | VIII | — |
| 39 | 0.5 | GY/ BN | 309 | I | — | Right Park Lamp Control | 39 | 0.5 | GY/ BN | 309 | VIII | — |
| 40 - 42 | — | — | — | — | — | Not Occupied | 40 - 42 | — | — | — | — | — |
| 43 | 0.5 | YE | 6817 | I | — | LED Backlight Dimming Control | 43 | 0.35 | YE | 6817 | VIII | — |
| 44 | 0.5 | GN/ WH | 7530 | I | — | Local Interconnect Network Serial Data Bus 8 | 44 | 0.35 | GN/ WH | 7530 | VIII | — |
| 45 | — | — | — | — | — | Not Occupied | 45 | — | — | — | — | — |

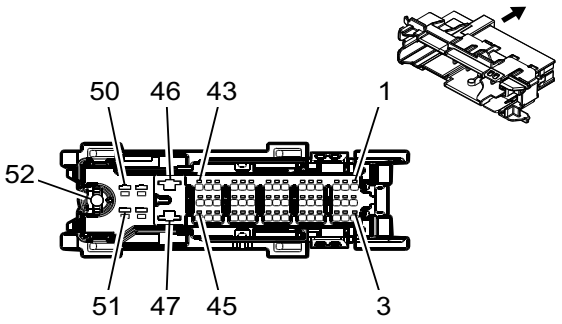
## X600 Passenger Door Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 46 | 0.75<br>3 | BK<br>BK | 1250<br>1250 | II<br>II | —<br>DEZ/DLF | Ground<br>Ground | 46 | 3 | BK | 1250 | VI | — |
| 47 | 2.5 | RD/WH | 1340 | II | — | Battery Positive Voltage | 47 | 2.5 | RD/WH | 1340 | VII | — |
| 48 | 0.75 | BN/YE | 294 | III | — | Door Lock Actuator Unlock Control | 48 | 0.75 | BN/YE | 294 | V | — |
| 49 | 0.75 | GY | 295 | III | — | Door Lock Actuator Lock Control | 49 | 0.75 | GY | 295 | V | — |
| 50 | 0.75 | YE/BK | 117 | III | — | Right Front Speaker Signal (-) 1 | 50 | 0.75 | YE/BK | 117 | V | — |
| 51 | 0.75 | YE | 200 | III | — | Right Front Speaker Control (+) 1 | 51 | 0.75 | YE | 200 | V | — |
| 52 | 0 | Bare | 2627 | IV | — | Right Side Vision Camera Video Signal (+) | 52 | — | — | — | — | — |

# X600 Passenger Door Harness to Body Harness (Extended Cab/Regular Cab)




4992530




4993484

## Connector Part Information

Harness Type: Passenger Door

OEM Connector: 35077349

Service Connector: Service by Harness - See Part Catalog

Description: 52-Way F 1.2, 2.8, 6.3, Coaxial Series, Sealed (BK)

## Connector Part Information

Harness Type: Body

OEM Connector: 35190453

Service Connector: -

Description: 52-Way M 1.2, 2.8, 6.3, Coaxial Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| IV | Not Required | Not Available | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| V | 13575824 | J-35616-5 (PU) | J-38125-11A | 7114-4111-02 | Yazaki 9 | Not Available | Not Available |
| VI | 13580023 | J-35616-43 (RD) | J-38125-11A | 7114-4122-02 | Yazaki 9 | A | B |
| VII | 19301536 | J-35616-43 (RD) | J-38125-11A | 7114-4121-02 | Yazaki 9 | Not Available | Not Available |
| VIII | 84616651 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

## X600 Passenger Door Harness to Body Harness (Extended Cab/Regular Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - 3 | — | — | — | — | — | Not Occupied | 1 - 3 | — | — | — | — | — |
| 4 | 0.5 | WH/VT | 968 | I | — | — | 4 | 0.35 | WH/VT | 968 | VIII | — |
| 5 | 0.5 | GY | 746 | I | — | Right Front Door Ajar Switch Signal | 5 | 0.35 | GY | 746 | VIII | — |

## X600 Passenger Door Harness to Body Harness (Extended Cab/Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 0.5 | YE/ VT | 3397 | I | — | Passenger Mirror Motor Up (+) Down (-) Control | 6 | 0.5 | YE/ VT | 3397 | VIII | — |
| 7 | 0.5 | WH | 3398 | I | — | Passenger Mirror Motor Common Control | 7 | 0.5 | WH | 3398 | VIII | — |
| 8 | 0.5 | GN/ BK | 3396 | I | — | Passenger Mirror Motor Right (+) Left (-) Control | 8 | 0.5 | GN/ BK | 3396 | VIII | — |
| 9 | 0.5 | BU | 2082 | I | — | Puddle Lamp Control | 9 | 0.35 | BU | 2082 | VIII | — |
| 10 - 12 | — | — | — | — | — | Not Occupied | 10 - 12 | — | — | — | — | — |
| 13 | 0.5 | BN/ VT | 245 | I | — | Passenger Door Lock Switch Unlock Control | 13 | 0.35 | BN/ VT | 245 | VIII | — |
| 14 - 18 | — | — | — | — | — | Not Occupied | 14 - 18 | — | — | — | — | — |
| 19 | 0.35 | WH/ YE | 7557 | I | — | LED Ambient Lighting Control 1 | 19 | 0.35 | WH/ YE | 7557 | VIII | — |
| 20 | 0.5 | VT/ WH | 3571 | I | — | Passenger Door Handle Switch Signal | 20 | 0.35 | VT/ WH | 3571 | VIII | — |
| 21 | 0.5 | GY | 1761 | I | — | Right Side Object Detection LED Control | 21 | 0.35 | GY | 1761 | VIII | — |
| 22 | 0.5 | GN/ VT | 1315 | I | — | Right Front Turn Signal Lamp Control | 22 | 0.35 | GN/ VT | 1315 | VIII | — |
| 23 | — | — | — | — | — | Not Occupied | 23 | — | — | — | — | — |
| 24 | 0.35 | BK | 1150 | I | — | Ground<br>Ground | 24 | 0.5<br>0.35 | BK<br>BK | 1150<br>1150 | VIII<br>VIII | —<br>— |
| 25 | 0.75 | BN/ OG | 2134 | I | — | Right Front Side Impact Sensing Module Signal | 25 | 0.35 | BN/ OG | 2134 | VIII | — |
| 26 | — | — | — | — | — | Not Occupied | 26 | — | — | — | — | — |
| 27 | 0.5 | GY/ GN | 5996 | I | — | Driver Outside Rear View Mirror Puddle Lamp Control | 27 | 0.35 | GY/ GN | 5996 | VIII | — |
| 28 | 0.75 | BK/ OG | 6629 | I | — | Right Front Side Impact Sensing Module Low Reference | 28 | 0.35 | BK/ OG | 6629 | VIII | — |

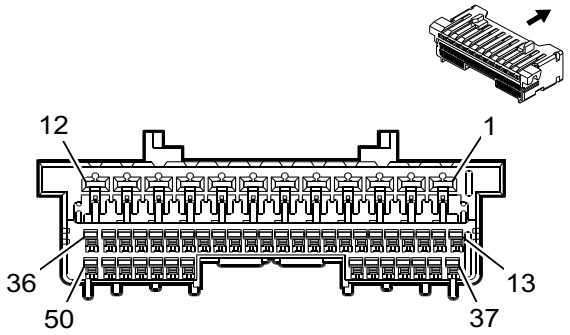
## X600 Passenger Door Harness to Body Harness (Extended Cab/Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | 0.5 | YE/ VT | 244 | I | — | Passenger Door Lock Switch Lock Control | 29 | 0.35 | YE/ VT | 244 | VIII | — |
| 30 | — | — | — | — | — | Not Occupied | 30 | — | — | — | — | — |
| 31 | 0.5 | GN/ BK | 3563 | I | — | Passive Entry Passenger Door Antenna Signal Lo | 31 | 0.5 | GN/ BK | 3563 | VIII | — |
| 32 | 0.5 | GN/ YE | 3562 | I | — | Passive Entry Passenger Door Antenna Signal Hi | 32 | 0.5 | GN/ YE | 3562 | VIII | — |
| 33 | — | — | — | — | — | Not Occupied | 33 | — | — | — | — | — |
| 34 | 0.35 | BK/ GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 34 | 0.35 | BK/ GN | 580 | VIII | — |
| 35 | 0.35 | GN/ YE | 6134 | I | — | Local Interconnect Network Serial Data Bus 3 | 35 | 0.35 | GN/ YE | 6134 | VIII | — |
| 36 | 0.35 | BU/ GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 36 | 0.35 | BU/ GY | 636 | VIII | — |
| 37 | — | — | — | — | — | Not Occupied | 37 | — | — | — | — | — |
| 38 | 0.5 | BN/ YE | 2267 | I | — | Mirror Heating Element Control | 38 | 0.5 | BN/ YE | 2267 | VIII | — |
| 39 | 0.5 | GY/ BN | 309 | I | — | Right Park Lamp Control | 39 | 0.5 | GY/ BN | 309 | VIII | — |
| 40 - 42 | — | — | — | — | — | Not Occupied | 40 - 42 | — | — | — | — | — |
| 43 | 0.5 | YE | 6817 | I | — | LED Backlight Dimming Control | 43 | 0.35 | YE | 6817 | VIII | — |
| 44 | 0.5 | GN/ WH | 7530 | I | — | Local Interconnect Network Serial Data Bus 8 | 44 | 0.35 | GN/ WH | 7530 | VIII | — |
| 45 | — | — | — | — | — | Not Occupied | 45 | — | — | — | — | — |
| 46 | 0.75<br>3 | BK<br>BK | 1250<br>1250 | II<br>II | —<br>— | Ground<br>Ground | 46 | 3 | BK | 1250 | VI | — |

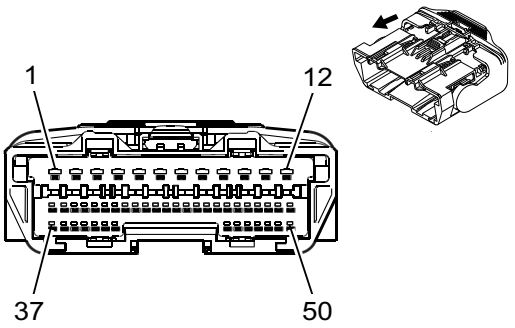
## X600 Passenger Door Harness to Body Harness (Extended Cab/Regular Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 47 | 2.5 | RD/WH | 1340 | II | — | Battery Positive Voltage | 47 | 2.5 | RD/WH | 1340 | VII | — |
| 48 | 0.75 | BN/YE | 294 | III | — | Door Lock Actuator Unlock Control | 48 | 0.75 | BN/YE | 294 | V | — |
| 49 | 0.75 | GY | 295 | III | — | Door Lock Actuator Lock Control | 49 | 0.75 | GY | 295 | V | — |
| 50 | 0.75 | YE/BK | 117 | III | — | Right Front Speaker Signal (-) 1 | 50 | 0.75 | YE/BK | 117 | V | — |
| 51 | 0.75 | YE | 200 | III | — | Right Front Speaker Control (+) 1 | 51 | 0.75 | YE | 200 | V | — |
| 52 | — | — | — | — | — | Not Occupied | 52 | — | — | — | — | — |

# X605 Passenger Door Harness to Passenger Door Trim Harness




4997556




5022037

### Connector Part Information

Harness Type: Passenger Door
OEM Connector: 33390107
Service Connector: Service by Harness - See Part Catalog
Description: 50-Way F 1.2, 2.8 OCS Series (BK)

### Connector Part Information

Harness Type: Passenger Door Trim
OEM Connector: 33390111
Service Connector: Service by Harness - See Part Catalog
Description: 50-Way M 1.2, 2.8 OCS Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | J-35616-17 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| IV | Not Required | J-35616-5 (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X605 Passenger Door Harness to Passenger Door Trim Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - 2 | — | — | — | — | — | Not Occupied | 1 - 2 | — | — | — | — | — |
| 3 | 2.5 | RD/WH | 1340 | II | — | Battery Positive Voltage | 3 | 2.5 | RD/WH | 1340 | IV | — |
| 4 - 6 | — | — | — | — | — | Not Occupied | 4 - 6 | — | — | — | — | — |
| 7 | 1.5<br>2 | GN/GY<br>GN/GY | 3387<br>3387 | II<br>II | —<br>AED | Power Window Motor Passenger Up Control<br>Power Window Motor Passenger Up Control | 7 | 2.5 | GN/GY | 3387 | IV | — |

## X605 Passenger Door Harness to Passenger Door Trim Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 1.5<br>2 | YE/BU<br>YE/BU | 3388<br>3388 | II<br>II | —<br>AED | Power Window Motor Passenger Down Control<br>Power Window Motor Passenger Down Control | 8 | 2.5 | YE/BU | 3388 | IV | — |
| 9 | — | — | — | — | — | Not Occupied | 9 | — | — | — | — | — |
| 10 | 2.5 | BK | 1250 | II | — | Ground | 10 | 3 | BK | 1250 | IV | — |
| 11 - 12 | — | — | — | — | — | Not Occupied | 11 - 12 | — | — | — | — | — |
| 13 | 0.5 | WH | 3398 | I | — | Passenger Mirror Motor Common Control | 13 | 0.5 | WH | 3398 | III | — |
| 14 | 0.5 | VT/WH | 3403 | I | — | Passenger Mirror Position Sensor Left (-) Right (+) Signal | 14 | 0.35 | VT/WH | 3403 | III | — |
| 15 | 0.35 | YE/VT | 3397 | I | — | Passenger Mirror Motor Up (+) Down (-) Control | 15 | 0.35 | YE/VT | 3397 | III | — |
| 16 | 0.5 | GN/BK | 3396 | I | — | Passenger Mirror Motor Right (+) Left (-) Control | 16 | 0.35 | GN/BK | 3396 | III | — |
| 17 | 0.5 | YE | 6817 | I | — | LED Backlight Dimming Control<br>LED Backlight Dimming Control | 17 | 0.35 | YE | 6817 | III | — |
| 18 | 0.35<br>0.5 | BK/GN<br>BK/GN | 3400<br>3400 | I<br>I | —<br>— | Passenger Mirror Position Sensor Low Reference<br>Passenger Mirror Position Sensor Low Reference | 18 | 0.35 | BK/GN | 3400 | III | — |
| 19 | 0.5 | GN/WH | 7530 | I | — | Local Interconnect Network Serial Data Bus 8 | 19 | 0.35 | GN/WH | 7530 | III | — |

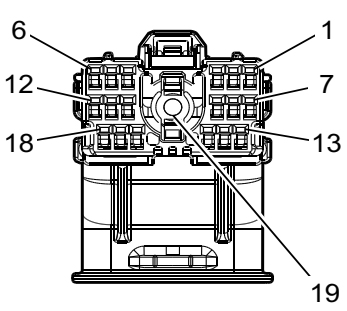
## X605 Passenger Door Harness to Passenger Door Trim Harness (cont'd)

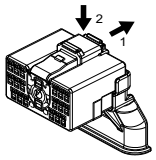
| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 0.5 | BN/ VT | 245 | I | — | Passenger Door Lock Switch Unlock Control | 20 | 0.35 | BN/ VT | 245 | III | — |
| 21 | 0.35 | YE/ RD | 3399 | I | — | Passenger Mirror Position Sensor 5V Reference | 21 | 0.35 | YE/ RD | 3399 | III | — |
| 22 | 0.35 | BK | 1150 | I | — | Ground | 22 | 0.35 | BK | 1250 | III | — |
| 23 | 0.5 | YE/ VT | 244 | I | — | Passenger Door Lock Switch Lock Control | 23 | 0.35 | YE/ VT | 244 | III | — |
| 24 | 0.35 | WH/ YE | 7557 | I | — | LED Ambient Lighting Control 1 | 24 | 0.35 | WH/ YE | 7557 | III | — |
| 25 | 0.35 | YE/ BK | 3384 | I | — | Power Window Switch Passenger Up Signal | 25 | 0.5 | YE/ BK | 3384 | III | — |
| 26 | 0.5 | YE/ WH | 3413 | I | — | Passenger Mirror Motor Fold Out Control | 26 | 0.5 | YE/ WH | 3413 | III | — |
| 27 | 0.5 | BU/ GY | 3414 | I | — | Passenger Mirror Motor Fold In Control | 27 | 0.5 | BU/ GY | 3414 | III | — |
| 28 | 0.5 | BN/ YE | 3385 | I | — | Power Window Switch Passenger Down Signal | 28 | 0.5 | BN/ YE | 3385 | III | — |
| 29 | 0.5 | GY | 746 | I | — | Right Front Door Ajar Switch Signal | 29 | 0.5 | GY | 746 | III | — |
| 30 | 0.35 | BU/ YE | 3401 | I | — | Passenger Mirror Position Sensor Up (+) Down (-) Signal | 30 | 0.35 | BU/ YE | 3401 | III | — |
| 31 - 33 | — | — | — | — | — | Not Occupied | 31 - 33 | — | — | — | — | — |
| 34 | 0.35 | VT/ GY | 3386 | I | — | Power Window Switch Passenger Express Signal | 34 | 0.35 | VT/ GY | 3386 | III | — |

## X605 Passenger Door Harness to Passenger Door Trim Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | 0.5 | GN/YE | 6134 | I | — | Local Interconnect Network Serial Data Bus 3<br>Local Interconnect Network Serial Data Bus 3 | 35 | 0.35<br>0.5 | GN/YE<br>GN/YE | 6134<br>6134 | III<br>III | AED<br>— |
| 36 - 50 | — | — | — | — | — | Not Occupied | 36 - 50 | — | — | — | — | — |

# X610 Passenger Door Harness to Outside Rear View Mirror - Passenger Harness




—

4991775

### Connector Part Information

Harness Type: Passenger Door
OEM Connector: 35077331
Service Connector: Service by Harness - See Part Catalog
Description: 19-Way F 1.2 MCON, Coaxial Series, Sealed (BK)

### Connector Part Information

Harness Type: Outside Rear View Mirror - Passenger
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 19-Way M

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | Not Available | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | Not Available | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X610 Passenger Door Harness to Outside Rear View Mirror - Passenger Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/BK | 3396 | I | — | Passenger Mirror Motor Right (+) Left (-) Control | 1 | 0.5 | — | 3396 | III | — |
| 2 | 0.35<br>0.5 | YE/VT<br>YE/VT | 3397<br>3397 | I<br>I | A45<br>-A45 | Passenger Mirror Motor Up (+) Down (-) Control<br>Passenger Mirror Motor Up (+) Down (-) Control | 2 | 0.35<br>0.5 | YE/VT<br>YE/VT | 3397<br>3397 | III<br>III | A45<br>-A45 |
| 3 | 0.5 | BU/GY | 3414 | I | — | Passenger Mirror Motor Fold In Control | 3 | 0.5 | BU/GY | 3414 | III | — |
| 4 | 0.5 | GY | 1761 | I | — | Right Side Object Detection LED Control | 4 | 0.5 | GY | 1761 | III | — |

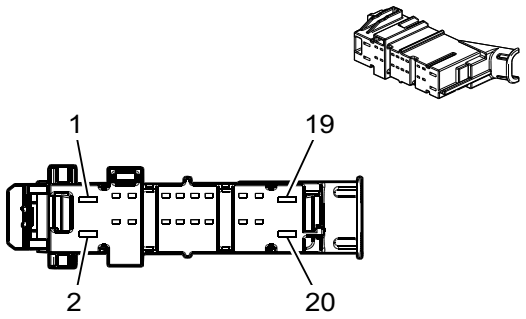
## X610 Passenger Door Harness to Outside Rear View Mirror - Passenger Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 0.5<br>0.5 | GY/GN<br>BU | 5996<br>2082 | I<br>I | DL3 /UV2<br>DQS | Driver Outside Rear View Mirror Puddle Lamp Control<br>Puddle Lamp Control | 5 | 0.5<br>0.5 | GY/GN<br>BU | 5996<br>2082 | III<br>III | DL3 /UV2<br>DQS |
| 6 | 0.5 | VT/WH | 3403 | I | — | Passenger Mirror Position Sensor Left (-) Right (+) Signal | 6 | 0.5 | VT/WH | 3403 | III | — |
| 7 | 0.5 | BN/YE | 2267 | I | — | Mirror Heating Element Control | 7 | 0.5 | BN/YE | 2267 | III | — |
| 8 | 0.5 | GN/VT | 1315 | I | — | Right Front Turn Signal Lamp Control | 8 | 0.5 | — | 1315 | III | — |
| 9 | 0.75 | BK | 1250 | I | — | Ground | 9 | 0.75 | BK | 1250 | III | — |
| 10 | 0.35 | YE/RD | 3399 | I | — | Passenger Mirror Position Sensor 5V Reference | 10 | 0.35 | YE/RD | 3399 | III | — |
| 11 | 0.35 | BU/YE | 3401 | I | — | Passenger Mirror Position Sensor Up (+) Down (-) Signal | 11 | 0.35 | BU/YE | 3401 | III | — |
| 12 | 0.35 | BK/GN | 580 | I | — | Engine Control Sensors Low Reference (2) | 12 | 0.35 | BK | 580 | III | — |
| 13 | 0.5<br>0.5 | BU<br>GY/BN | 2082<br>309 | I<br>I | DEZ/DLF<br>DPO/DQS | Puddle Lamp Control<br>Right Park Lamp Control | 13 | 0.5<br>0.5 | BU<br>GY/BN | 2082<br>309 | III<br>III | DEZ/DLF<br>DPO/DQS |
| 14 | 0.5 | WH | 3398 | I | — | Passenger Mirror Motor Common Control | 14 | 0.5 | WH | 3398 | III | — |
| 15 | 0.5 | YE/WH | 3413 | I | — | Passenger Mirror Motor Fold Out Control | 15 | 0.5 | YE/WH | 3413 | III | — |
| 16 | 0.5 | WH/VT | 968 | I | — | — | 16 | 0.5 | WH/VT | 968 | III | — |
| 17 | 0.35 | BU/GY | 636 | I | — | Outside Ambient Air Temperature Sensor Signal | 17 | 0.35 | BU/GY | 636 | III | — |

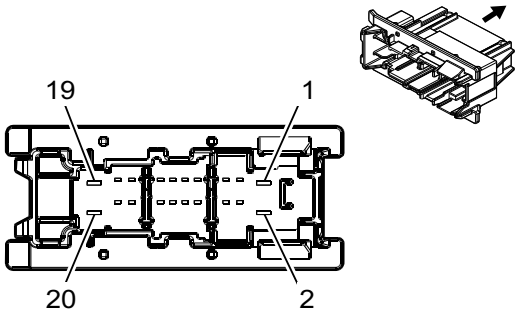
## X610 Passenger Door Harness to Outside Rear View Mirror - Passenger Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0.35<br>0.5 | BK/ GN<br>BK/ GN | 3400<br>3400 | I<br>I | A45<br>DZC | Passenger Mirror Position Sensor Low Reference<br>Passenger Mirror Position Sensor Low Reference | 18 | 0.35<br>0.5 | BK/ GN<br>BK | 3400<br>3400 | III<br>III | A45<br>DZC |
| 19 | 0 | Bare | 2627 | II | — | Right Side Vision Camera Video Signal (+) | 19 | 0 | — | 2627 | III | — |

# X700 Left Rear Door Harness to Body Harness (Crew Cab)




4650257




4663657

### Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 33303652
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 1.2 MCON, 2.8 MCP Series (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 33303657
Service Connector: 13509580
Description: 20-Way M 1.2 MCON, 2.8 MCP Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | 13586064 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IV | 19352074 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| V | 19352075 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

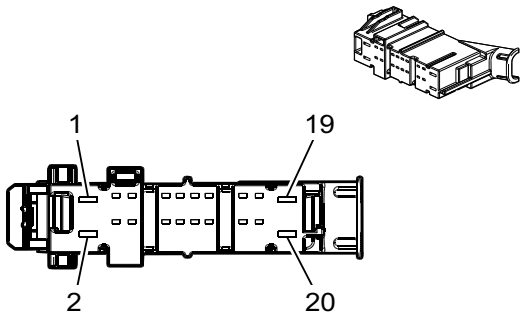
## X700 Left Rear Door Harness to Body Harness (Crew Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | RD/BU | 1842 | II | — | Battery Positive Voltage | 1 | 2.5 | RD/BU | 1842 | III | — |
| 2 | — | — | — | — | — | Not Occupied | 2 | — | — | — | — | — |
| 3 | 0.75 | BN/YE | 294 | I | — | Door Lock Actuator Unlock Control | 3 | 0.75 | BN/YE | 294 | V | — |
| 4 - 5 | — | — | — | — | — | Not Occupied | 4 - 5 | — | — | — | — | — |
| 6 | 0.5 | PK | 6157 | I | — | Left Rear Door Handle Switch Signal | 6 | 0.35 | BN/YE | 6157 | IV | — |
| 7 - 8 | — | — | — | — | — | Not Occupied | 7 - 8 | — | — | — | — | — |

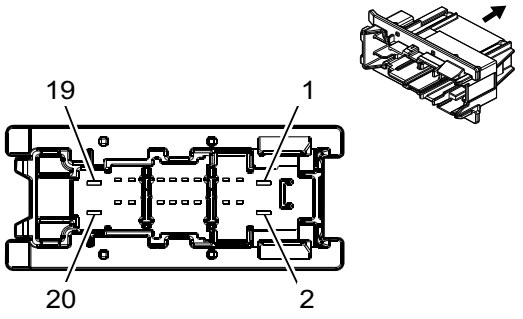
## X700 Left Rear Door Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0.5 | OG/ BU | 6622 | I | — | Left Rear Side Impact Sensing Module Signal | 9 | 0.35 | OG/ BU | 6622 | IV | — |
| 10 | 0.5 | BK/ OG | 6623 | I | — | Left Rear Side Impact Sensing Module Low Reference | 10 | 0.35 | BK/ OG | 6623 | IV | — |
| 11 | — | — | — | — | — | Not Occupied | 11 | — | — | — | — | — |
| 12 | 0.5 | GN/ GY | 6135 | I | — | Local Interconnect Network Serial Data Bus 4 | 12 | 0.35 | GN/ GY | 6135 | IV | — |
| 13 | 0.5 | GN/ BK | 116 | I | — | Left Rear Speaker Signal (-) | 13 | 0.5 | GN/ BK | 116 | IV | — |
| 14 | 0.5 | GN | 199 | I | — | Left Rear Speaker Control (+) | 14 | 0.5 | GN | 199 | IV | — |
| 15 - 16 | — | — | — | — | — | Not Occupied | 15 - 16 | — | — | — | — | — |
| 17 | 0.75 | GY | 295 | I | — | Door Lock Actuator Lock Control | 17 | 0.75 | GY | 295 | V | — |
| 18 - 19 | — | — | — | — | — | Not Occupied | 18 - 19 | — | — | — | — | — |
| 20 | 2.5 | BK | 1150 | II | — | Ground | 20 | 2.5 | BK | 1150 | III | — |

# X700 Left Rear Door Harness to Body Harness (Extended Cab)




4650257




4663657

### Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 33303652
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 1.2 MCON, 2.8 MCP Series (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 35215020
Service Connector: 13527239
Description: 20-Way M 1.2 MCON, 2.8 MCP Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | 13586064 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IV | 19332366 | J-35616-17 (LT GN) | J-38125-212 | Not Available | Not Available | Not Available | Not Available |
| V | 19370818 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

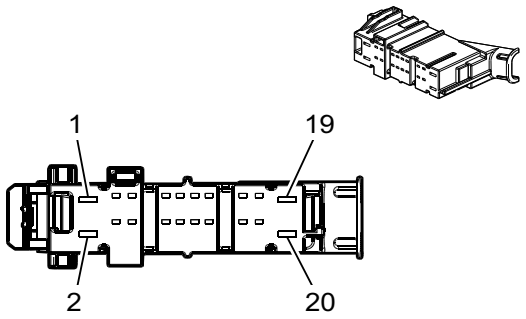
## X700 Left Rear Door Harness to Body Harness (Extended Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | RD/BU | 1842 | II | — | Battery Positive Voltage | 1 | 2.5 | RD/BU | 1842 | III | — |
| 2 | — | — | — | — | — | Not Occupied | 2 | — | — | — | — | — |
| 3 | 0.75 | BN/YE | 294 | I | — | Door Lock Actuator Unlock Control | 3 | 0.75 | BN/YE | 294 | V | — |
| 4 - 5 | — | — | — | — | — | Not Occupied | 4 - 5 | — | — | — | — | — |
| 6 | 0.5 | PK | 6157 | I | — | Left Rear Door Handle Switch Signal | 6 | 0.35 | BN/YE | 6157 | IV | — |
| 7 - 8 | — | — | — | — | — | Not Occupied | 7 - 8 | — | — | — | — | — |

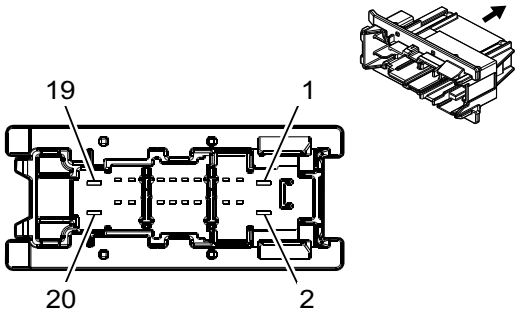
## X700 Left Rear Door Harness to Body Harness (Extended Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0.5 | OG/ BU | 6622 | I | — | Left Rear Side Impact Sensing Module Signal | 9 | 0.35 | OG/ BU | 6622 | IV | — |
| 10 | 0.5 | BK/ OG | 6623 | I | — | Left Rear Side Impact Sensing Module Low Reference | 10 | 0.35 | BK/ OG | 6623 | IV | — |
| 11 | — | — | — | — | — | Not Occupied | 11 | — | — | — | — | — |
| 12 | 0.5 | GN/ GY | 6135 | I | — | Local Interconnect Network Serial Data Bus 4 | 12 | 0.35 | GN/ GY | 6135 | IV | — |
| 13 | 0.5 | GN/ BK | 116 | I | — | Left Rear Speaker Signal (-) | 13 | 0.5 | GN/ BK | 116 | IV | — |
| 14 | 0.5 | GN | 199 | I | — | Left Rear Speaker Control (+) | 14 | 0.5 | GN | 199 | IV | — |
| 15 - 16 | — | — | — | — | — | Not Occupied | 15 - 16 | — | — | — | — | — |
| 17 | 0.75 | GY | 295 | I | — | Door Lock Actuator Lock Control | 17 | 0.75 | GY | 295 | V | — |
| 18 - 19 | — | — | — | — | — | Not Occupied | 18 - 19 | — | — | — | — | — |
| 20 | 2.5 | BK | 1150 | II | — | Ground | 20 | 2.5 | BK | 1150 | III | — |

# X800 Right Rear Door Harness to Body Harness (Crew Cab)




4650257




4663657

### Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 33303652
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 1.2 MCON, 2.8 MCP Series (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 33303657
Service Connector: 13509580
Description: 20-Way M 1.2 MCON, 2.8 MCP Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | 13586064 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IV | 19352074 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| V | 19352075 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

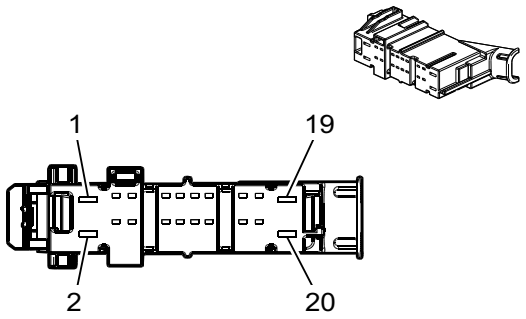
## X800 Right Rear Door Harness to Body Harness (Crew Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | RD/WH | 1340 | II | — | Battery Positive Voltage | 1 | 2.5 | RD/WH | 1340 | III | — |
| 2 | — | — | — | — | — | Not Occupied | 2 | — | — | — | — | — |
| 3 | 0.75 | BN/YE | 294 | I | — | Door Lock Actuator Unlock Control | 3 | 0.75 | BN/YE | 294 | V | — |
| 4 - 5 | — | — | — | — | — | Not Occupied | 4 - 5 | — | — | — | — | — |
| 6 | 0.5 | YE/GY | 6158 | I | — | Right Rear Door Handle Switch Signal | 6 | 0.35 | YE/GY | 6158 | IV | — |
| 7 - 8 | — | — | — | — | — | Not Occupied | 7 - 8 | — | — | — | — | — |

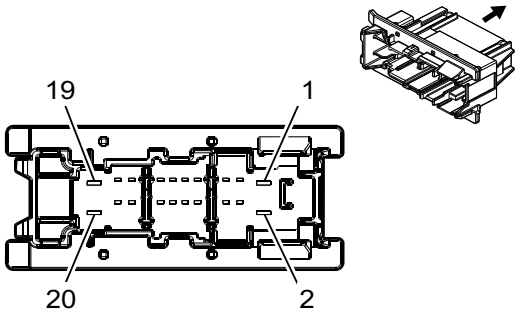
## X800 Right Rear Door Harness to Body Harness (Crew Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0.5 | OG/ VT | 6626 | I | — | Right Rear Side Impact Sensing Module Signal | 9 | 0.35 | OG/ WH | 6626 | IV | — |
| 10 | 0.5 | BK/ OG | 6627 | I | — | Right Rear Side Impact Sensing Module Low Reference | 10 | 0.35 | BK/ OG | 6627 | IV | — |
| 11 | — | — | — | — | — | Not Occupied | 11 | — | — | — | — | — |
| 12 | 0.5 | GN/ GY | 6135 | I | — | Local Interconnect Network Serial Data Bus 4 | 12 | 0.35 | GN/ GY | 6135 | IV | — |
| 13 | 0.5 | BU/ BK | 115 | I | — | Right Rear Speaker Signal (-) | 13 | 0.5 | BU/ BK | 115 | IV | — |
| 14 | 0.5 | WH | 46 | I | — | Right Rear Speaker Control (+) | 14 | 0.5 | WH | 46 | IV | — |
| 15 - 16 | — | — | — | — | — | Not Occupied | 15 - 16 | — | — | — | — | — |
| 17 | 0.75 | GY | 295 | I | — | Door Lock Actuator Lock Control | 17 | 0.75 | GY | 295 | V | — |
| 18 - 19 | — | — | — | — | — | Not Occupied | 18 - 19 | — | — | — | — | — |
| 20 | 2.5 | BK | 1250 | II | — | Ground | 20 | 2.5 | BK | 1250 | III | — |

# X800 Right Rear Door Harness to Body Harness (Extended Cab)




4650257




4663657

### Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 33303652
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 1.2 MCON, 2.8 MCP Series (BK)

### Connector Part Information

Harness Type: Body
OEM Connector: 35215020
Service Connector: 13527239
Description: 20-Way M 1.2 MCON, 2.8 MCP Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-35 (VT) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | 13586064 | J-35616-5 (PU) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |
| IV | 19332366 | J-35616-17 (LT GN) | J-38125-212 | Not Available | Not Available | Not Available | Not Available |
| V | 19370818 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

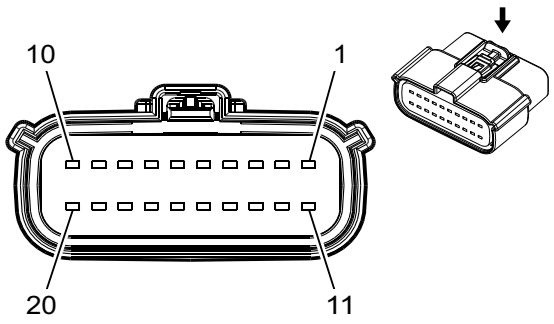
## X800 Right Rear Door Harness to Body Harness (Extended Cab)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | RD/WH | 1340 | II | — | Battery Positive Voltage | 1 | 2.5 | RD/WH | 1340 | III | — |
| 2 | — | — | — | — | — | Not Occupied | 2 | — | — | — | — | — |
| 3 | 0.75 | BN/YE | 294 | I | — | Door Lock Actuator Unlock Control | 3 | 0.75 | BN/YE | 294 | V | — |
| 4 - 5 | — | — | — | — | — | Not Occupied | 4 - 5 | — | — | — | — | — |
| 6 | 0.5 | YE/GY | 6158 | I | — | Right Rear Door Handle Switch Signal | 6 | 0.35 | YE/GY | 6158 | IV | — |
| 7 - 8 | — | — | — | — | — | Not Occupied | 7 - 8 | — | — | — | — | — |

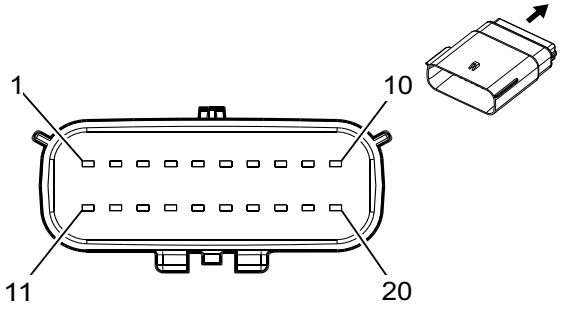
## X800 Right Rear Door Harness to Body Harness (Extended Cab) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0.5 | OG/ VT | 6626 | I | — | Right Rear Side Impact Sensing Module Signal | 9 | 0.35 | OG/ WH | 6626 | IV | — |
| 10 | 0.5 | BK/ OG | 6627 | I | — | Right Rear Side Impact Sensing Module Low Reference | 10 | 0.35 | BK/ OG | 6627 | IV | — |
| 11 | — | — | — | — | — | Not Occupied | 11 | — | — | — | — | — |
| 12 | 0.5 | GN/ GY | 6135 | I | — | Local Interconnect Network Serial Data Bus 4 | 12 | 0.35 | GN/ GY | 6135 | IV | — |
| 13 | 0.5 | BU/ BK | 115 | I | — | Right Rear Speaker Signal (-) | 13 | 0.5 | BU/ BK | 115 | IV | — |
| 14 | 0.5 | WH | 46 | I | — | Right Rear Speaker Control (+) | 14 | 0.5 | WH | 46 | IV | — |
| 15 - 16 | — | — | — | — | — | Not Occupied | 15 - 16 | — | — | — | — | — |
| 17 | 0.75 | GY | 295 | I | — | Door Lock Actuator Lock Control | 17 | 0.75 | GY | 295 | V | — |
| 18 - 19 | — | — | — | — | — | Not Occupied | 18 - 19 | — | — | — | — | — |
| 20 | 2.5 | BK | 1250 | II | — | Ground | 20 | 2.5 | BK | 1250 | III | — |

# X901 Rear Bumper Harness to Chassis Harness




2871898




2871861

### Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 13650143
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 1.5 Series, Sealed (BK)

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33181044
Service Connector: 19351705
Description: 20-Way M 1.5 Series, Sealed (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-2A (GY) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | 13575818 | J-35616-3 (GY) | J-38125-553 | Not Available | Not Available | Not Available | Not Available |
| III | 19119395 | J-35616-3 (GY) | J-38125-217 | Not Available | Not Available | Not Available | Not Available |
| IV | 19119440 | J-35616-3 (GY) | J-38125-217 | Not Available | Not Available | Not Available | Not Available |

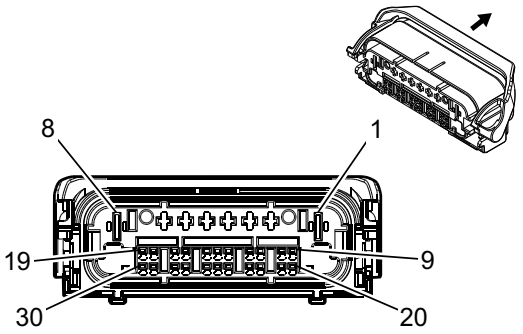
## X901 Rear Bumper Harness to Chassis Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | GN/YE | 6846 | I | — | Rear License Lamp Control | 1 | 0.5 | GN/YE | 6846 | III | — |
| 2 - 3 | — | — | — | — | — | Not Occupied | 2 - 3 | — | — | — | — | — |
| 4 | 0.5 | BK/WH | 1751 | I | — | Signal Ground<br>Signal Ground | 4 | 0.75<br>0.75 | BK/WH<br>BK/WH | 1751<br>1751 | IV<br>II | —<br>— |
| 5 | — | — | — | — | — | Not Occupied | 5 | — | — | — | — | — |
| 6 | 0.5 | BK | 1450 | I | — | Ground | 6 | 1 | BK | 1450 | IV | — |
| 7 | 0.35 | GY/YE | 1760 | I | — | Left Side Object Detection LED Control | 7 | 0.5 | GY/YE | 1760 | III | — |
| 8 | 0.35 | GY | 1761 | I | — | Right Side Object Detection LED Control | 8 | 0.5 | GY | 1761 | III | — |

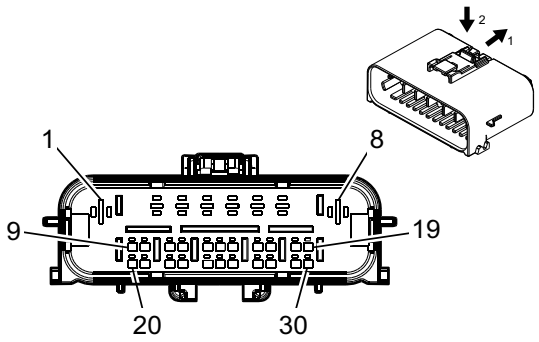
## X901 Rear Bumper Harness to Chassis Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0.5 | BN/WH | 2374 | I | — | Object Sensor Control | 9 | 0.5 | BN/WH | 2374 | III | — |
| 10 | 0.5 | YE | 2375 | I | — | Left Rear Corner Object Sensor Signal | 10 | 0.5 | YE | 2375 | III | — |
| 11 | 0.5 | YE/BU | 2376 | I | — | Left Rear Middle Object Sensor Signal | 11 | 0.5 | YE/BU | 2376 | III | — |
| 12 | 0.5 | YE/WH | 2377 | I | — | Right Rear Middle Object Sensor Signal | 12 | 0.5 | YE/WH | 2377 | III | — |
| 13 | — | — | — | — | — | Not Occupied | 13 | — | — | — | — | — |
| 14 | 0.5 | RD/GN | 1840 | I | — | Battery Positive Voltage | 14 | 0.5 | RD/GN | 1840 | III | — |
| 15 | 0.5 | YE/VT | 2378 | I | — | Right Rear Corner Object Sensor Signal | 15 | 0.5 | YE/VT | 2378 | III | — |
| 16 | 0.5 | BK/GY | 2379 | I | — | Object Sensor Low Reference | 16 | 0.5 | BK/GY | 2379 | III | — |
| 17 | — | — | — | — | — | Not Occupied | 17 | — | — | — | — | — |
| 18 | 0.5 | GN | 5060 | I | — | Low Speed GMLAN Serial Data | 18 | 0.5 | GN | 5060 | III | — |
| 19 - 20 | — | — | — | — | — | Not Occupied | 19 - 20 | — | — | — | — | — |

# X926 Rearview Camera Jumper Harness to Chassis Harness (5N5)




4650150




4817393

### Connector Part Information

Harness Type: Endgate
OEM Connector: 33378383
Service Connector: Service by Harness - See Part Catalog
Description: 30-Way F 1.2 MCON, 2.8, 6.3 MCP Series (BK)

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33363373
Service Connector: 19371177
Description: 30-Way M 1.2 MCON, 2.8, 6.3 MCP Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-40 (BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | 13575376 | J-35616-43 (RD) | J-38125-557 | Not Available | Not Available | Not Available | Not Available |
| IV | 19330704 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

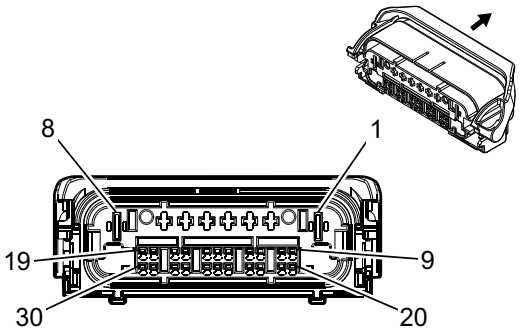
## X926 Rearview Camera Jumper Harness to Chassis Harness (5N5)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | RD/GY | 7040 | II | — | Battery Positive Voltage | 1 | 2.5 | RD/GY | 7040 | III | — |
| 2 - 7 | — | — | — | — | — | Not Occupied | 2 - 7 | — | — | — | — | — |
| 8 | 2.5 | BK | 1450 | II | — | Ground | 8 | 4 | BK | 1450 | III | — |
| 9 | 0.5 | BK/WH | 1751 | I | — | Signal Ground | 9 | 0.5 | BK/WH | 1751 | IV | — |
| 10 | 0.5 | YE/BU | 7295 | I | — | Left Minor Endgate Ajar Signal | 10 | 0.5 | YE/BU | 7295 | IV | — |
| 11 | 0.35 | WH/BN | 7296 | I | — | Right Minor Endgate Ajar Signal | 11 | 0.5 | WH/BN | 7296 | IV | — |
| 12 | 0.35 | BU | 6974 | I | — | Camera Low Reference | 12 | 0.5 | BU | 6974 | IV | — |

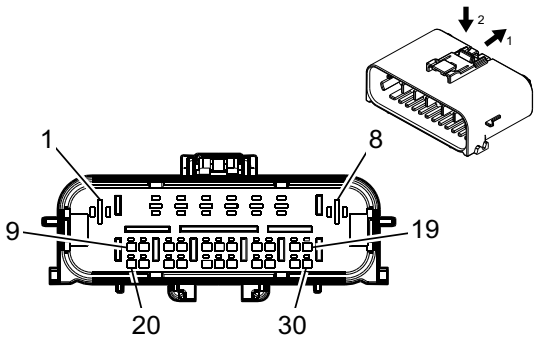
## X926 Rearview Camera Jumper Harness to Chassis Harness (5N5) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 0.5 | GY | 1198 | I | — | Endgate Release Switch Analog Signal Interior | 13 | 0.5 | GY | 1198 | IV | — |
| 14 | 0.5 | WH/BU | 6973 | I | — | Camera Signal 2 | 14 | 0.5 | WH/BU | 6973 | IV | — |
| 15 | — | — | — | — | — | Not Occupied | 15 | — | — | — | — | — |
| 16 | 0.5 | VT | 7725 | I | — | Minor Endgate Motor Supply Voltage | 16 | 0.5 | VT | 7725 | IV | — |
| 17 | 0.5 | YE/BK | 7730 | I | — | Major Endgate Motor Return | 17 | 0.5 | YE/BK | 7730 | IV | — |
| 18 | 0.5 | BN/BK | 7726 | I | — | Minor Endgate Motor Return | 18 | 0.5 | BN/BK | 7726 | IV | — |
| 19 | — | — | — | — | — | Not Occupied | 19 | — | — | — | — | — |
| 20 | 0.5 | GN | 5060 | I | — | Low Speed GMLAN Serial Data | 20 | 0.5 | GN | 5060 | IV | — |
| 21 - 23 | — | — | — | — | — | Not Occupied | 21 - 23 | — | — | — | — | — |
| 24 | 0.5 | VT/GN | 1739 | I | — | Run/Crank Ignition 1 Voltage | 24 | 0.5 | VT/GN | 1739 | IV | — |
| 25 | 0.5 | WH/VT | 1430 | I | — | Exterior Courtesy Lamp Control | 25 | 0.5 | WH/VT | 1430 | IV | — |
| 26 | 0.5 | GY/YE | 6972 | I | — | Camera Signal 2 + | 26 | 0.5 | GY/YE | 6972 | IV | — |
| 27 | 0.5 | GY | 7292 | I | — | Major Endgate Release Switch Signal Exterior | 27 | 0.5 | GY | 7292 | IV | — |
| 28 | 0.35 | YE | 7294 | I | — | Minor Endgate Release Switch Discrete Signal Exterior | 28 | 0.5 | YE | 7294 | IV | — |
| 29 | — | — | — | — | — | Not Occupied | 29 | — | — | — | — | — |
| 30 | 0.5<br>0.75 | GN<br>GN | 1299<br>1299 | I<br>I | QK2<br>QK2+QT5 | Major Endgate Motor Supply Voltage<br>Major Endgate Motor Supply Voltage | 30 | 0.5 | GN | 1299 | IV | — |

# X926 Endgate Harness to Chassis Harness (UVC)




4650150




4817393

### Connector Part Information

Harness Type: Endgate
OEM Connector: 33378383
Service Connector: Service by Harness - See Part Catalog
Description: 30-Way F 1.2 MCON, 2.8, 6.3 MCP Series (BK)

### Connector Part Information

Harness Type: Chassis
OEM Connector: 33363373
Service Connector: 19371177
Description: 30-Way M 1.2 MCON, 2.8, 6.3 MCP Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-16 (LT GN) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-40 (BU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | 13575376 | J-35616-43 (RD) | J-38125-557 | Not Available | Not Available | Not Available | Not Available |
| IV | 19330704 | J-35616-17 (LT GN) | J-38125-215A | Not Available | Not Available | Not Available | Not Available |

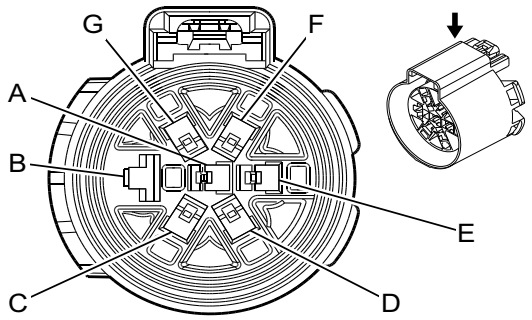
## X926 Endgate Harness to Chassis Harness (UVC)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | RD/GY | 7040 | II | — | Battery Positive Voltage | 1 | 2.5 | RD/GY | 7040 | III | — |
| 2 - 7 | — | — | — | — | — | Not Occupied | 2 - 7 | — | — | — | — | — |
| 8 | 2.5 | BK | 1450 | II | — | Ground | 8 | 4 | BK | 1450 | III | — |
| 9 | 0.5 | BK/WH | 1751 | I | — | Signal Ground | 9 | 0.5 | BK/WH | 1751 | IV | — |
| 10 | 0.5 | YE/BU | 7295 | I | — | Left Minor Endgate Ajar Signal | 10 | 0.5 | YE/BU | 7295 | IV | — |
| 11 | 0.35 | WH/BN | 7296 | I | — | Right Minor Endgate Ajar Signal | 11 | 0.5 | WH/BN | 7296 | IV | — |
| 12 | 0.35 | BU | 6974 | I | — | Camera Low Reference | 12 | 0.5 | BU | 6974 | IV | — |

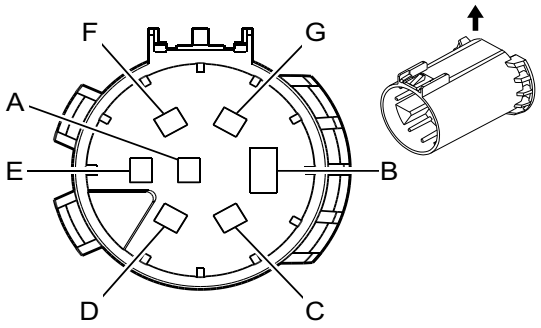
## X926 Endgate Harness to Chassis Harness (UVC) (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 0.5 | GY | 1198 | I | — | Endgate Release Switch Analog Signal Interior | 13 | 0.5 | GY | 1198 | IV | — |
| 14 | 0.5 | WH/BU | 6973 | I | — | Camera Signal 2 | 14 | 0.5 | WH/BU | 6973 | IV | — |
| 15 | — | — | — | — | — | Not Occupied | 15 | — | — | — | — | — |
| 16 | 0.5 | VT | 7725 | I | — | Minor Endgate Motor Supply Voltage | 16 | 0.5 | VT | 7725 | IV | — |
| 17 | 0.5 | YE/BK | 7730 | I | — | Major Endgate Motor Return | 17 | 0.5 | YE/BK | 7730 | IV | — |
| 18 | 0.5 | BN/BK | 7726 | I | — | Minor Endgate Motor Return | 18 | 0.5 | BN/BK | 7726 | IV | — |
| 19 | — | — | — | — | — | Not Occupied | 19 | — | — | — | — | — |
| 20 | 0.5 | GN | 5060 | I | — | Low Speed GMLAN Serial Data | 20 | 0.5 | GN | 5060 | IV | — |
| 21 - 23 | — | — | — | — | — | Not Occupied | 21 - 23 | — | — | — | — | — |
| 24 | 0.5 | VT/GN | 1739 | I | — | Run/Crank Ignition 1 Voltage | 24 | 0.5 | VT/GN | 1739 | IV | — |
| 25 | 0.5 | WH/VT | 1430 | I | — | Exterior Courtesy Lamp Control | 25 | 0.5 | WH/VT | 1430 | IV | — |
| 26 | 0.5 | GY/YE | 6972 | I | — | Camera Signal 2 + | 26 | 0.5 | GY/YE | 6972 | IV | — |
| 27 | 0.5 | GY | 7292 | I | — | Major Endgate Release Switch Signal Exterior | 27 | 0.5 | GY | 7292 | IV | — |
| 28 | 0.35 | YE | 7294 | I | — | Minor Endgate Release Switch Discrete Signal Exterior | 28 | 0.5 | YE | 7294 | IV | — |
| 29 | — | — | — | — | — | Not Occupied | 29 | — | — | — | — | — |
| 30 | 0.5<br>0.75 | GN<br>GN | 1299<br>1299 | I<br>I | QK2<br>QK2+QT5 | Major Endgate Motor Supply Voltage<br>Major Endgate Motor Supply Voltage | 30 | 0.5 | GN | 1299 | IV | — |

# X950 Chassis Harness to Trailer Jumper Harness




2056936




366087

### Connector Part Information

Harness Type: Chassis

OEM Connector: 13857223

Service Connector: 15306164

Description: 7-Way F 280, 630 Metri-Pack Series, Sealed (BK)

### Connector Part Information

Harness Type: Trailer Jumper

OEM Connector: 15317327

Service Connector: Service by Harness - See Part Catalog

Description: 7-Way M 280 Metri-Pack Series (BK)

## Terminal Part Information

| Terminal Type ID | Terminated Lead | Diagnostic Test Probe | Terminal Removal Tool | Service Terminal | Tray Name | Core Crimp | Insulation Crimp |
|---|---|---|---|---|---|---|---|
| I | Not Required | J-35616-42 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| II | Not Required | J-35616-4A (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| III | Not Required | J-35616-43 (RD) | No Tool Required | Not Required | Not Required | Not Required | Not Required |
| IV | Not Required | J-35616-5 (PU) | No Tool Required | Not Required | Not Required | Not Required | Not Required |

## X950 Chassis Harness to Trailer Jumper Harness

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.75 | WH/GN | 1624 | II | — | Trailer Backup Lamp Control | A | 1 | GN | 1624 | IV | — |
| B | 5 | WH | 22 | I | — | Trailer Ground | B | 5 | WH | 22 | III | — |
| C | 2.5 | BU | 47 | II | — | Trailer Auxiliary Control | C | 3 | BU | 47 | IV | — |
| D | 0.75 | GN/VT | 1619 | II | — | Right Rear Trailer Stop/Turn Lamp Control | D | 0.8 | GN | 1619 | IV | — |
| E | 4 | RD/GN | 742 | II | — | Battery Positive Voltage | E | 3 | RD/BK | 742 | IV | — |
| F | 1.5 | GY/BN | 2109 | II | — | Trailer Park Lamp Control | F | 1 | BN | 2109 | IV | — |

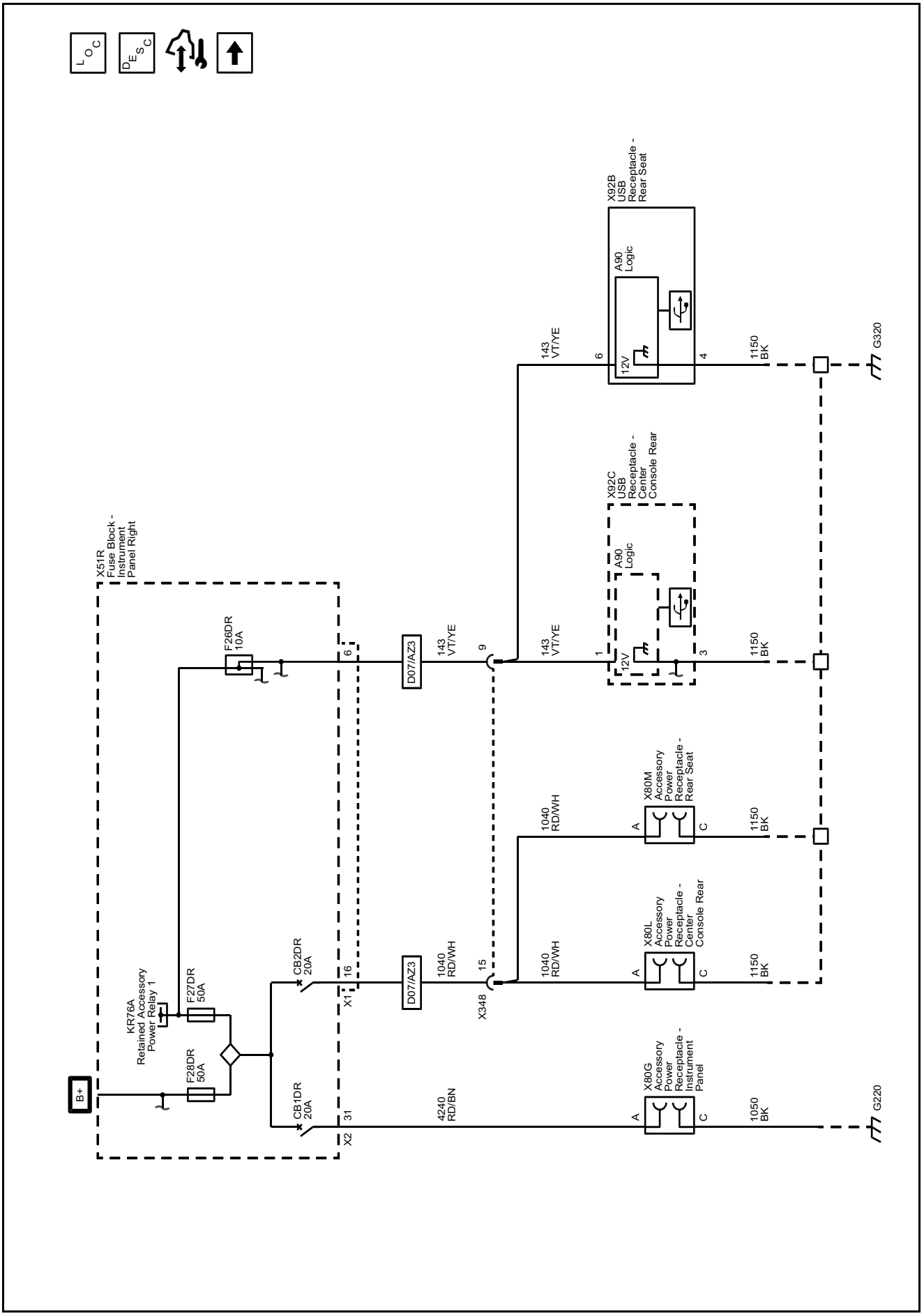
## X950 Chassis Harness to Trailer Jumper Harness (cont'd)

| Pin | Size | Color | Circuit | Terminal Type ID | Option | Function | Pin | Size | Color | Circuit | Terminal Type ID | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G | 0.75 | YE/ BU | 318 | II | — | Left Rear Trailer Stop/ Turn Lamp Control | G | 0.8 | YE | 1618 | IV | — |

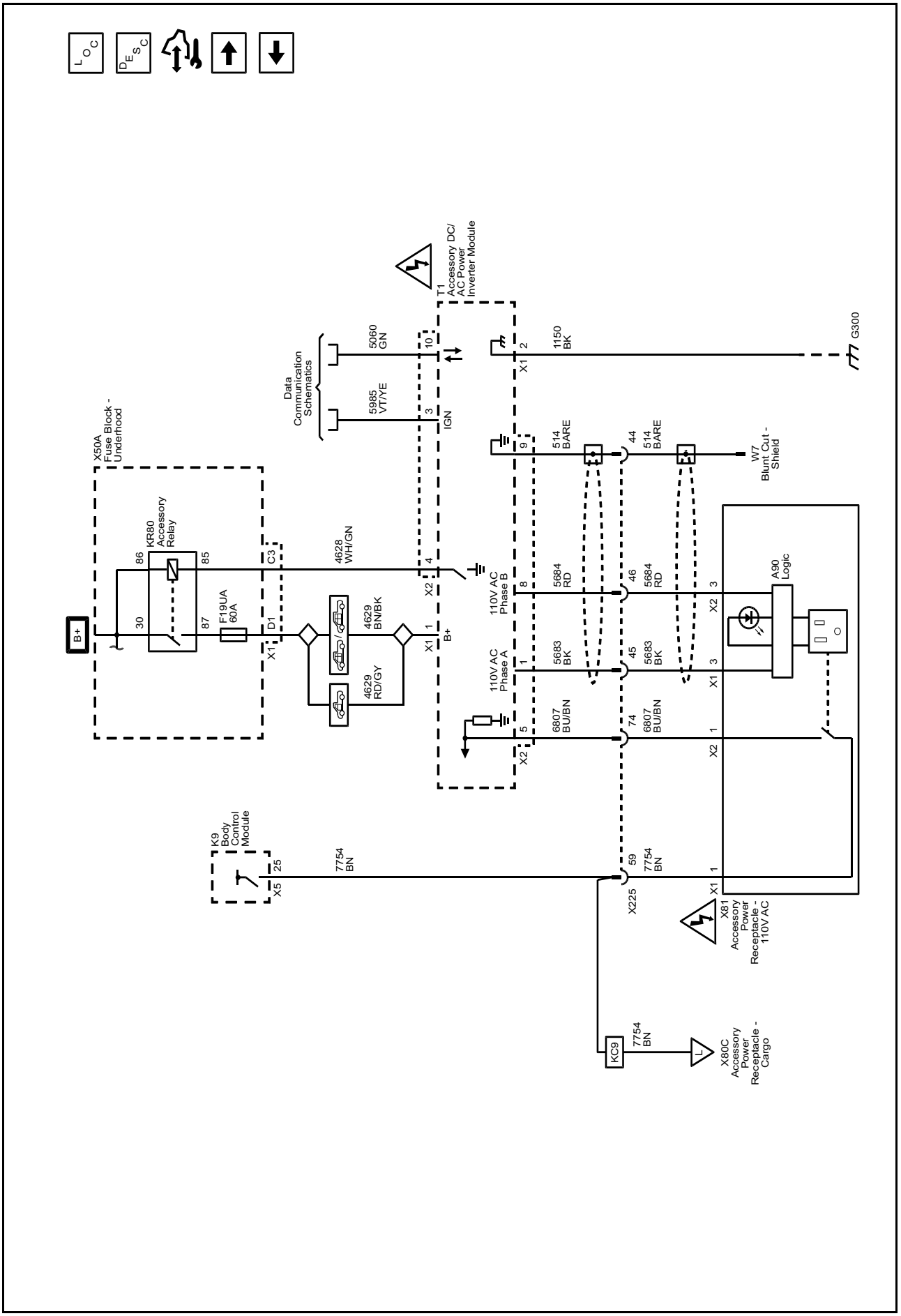
# Power Outlets

## Schematic and Routing Diagrams

## Cigar Lighter/Power Outlet Schematics (12V DC Power Outlets and USB Receptacles)

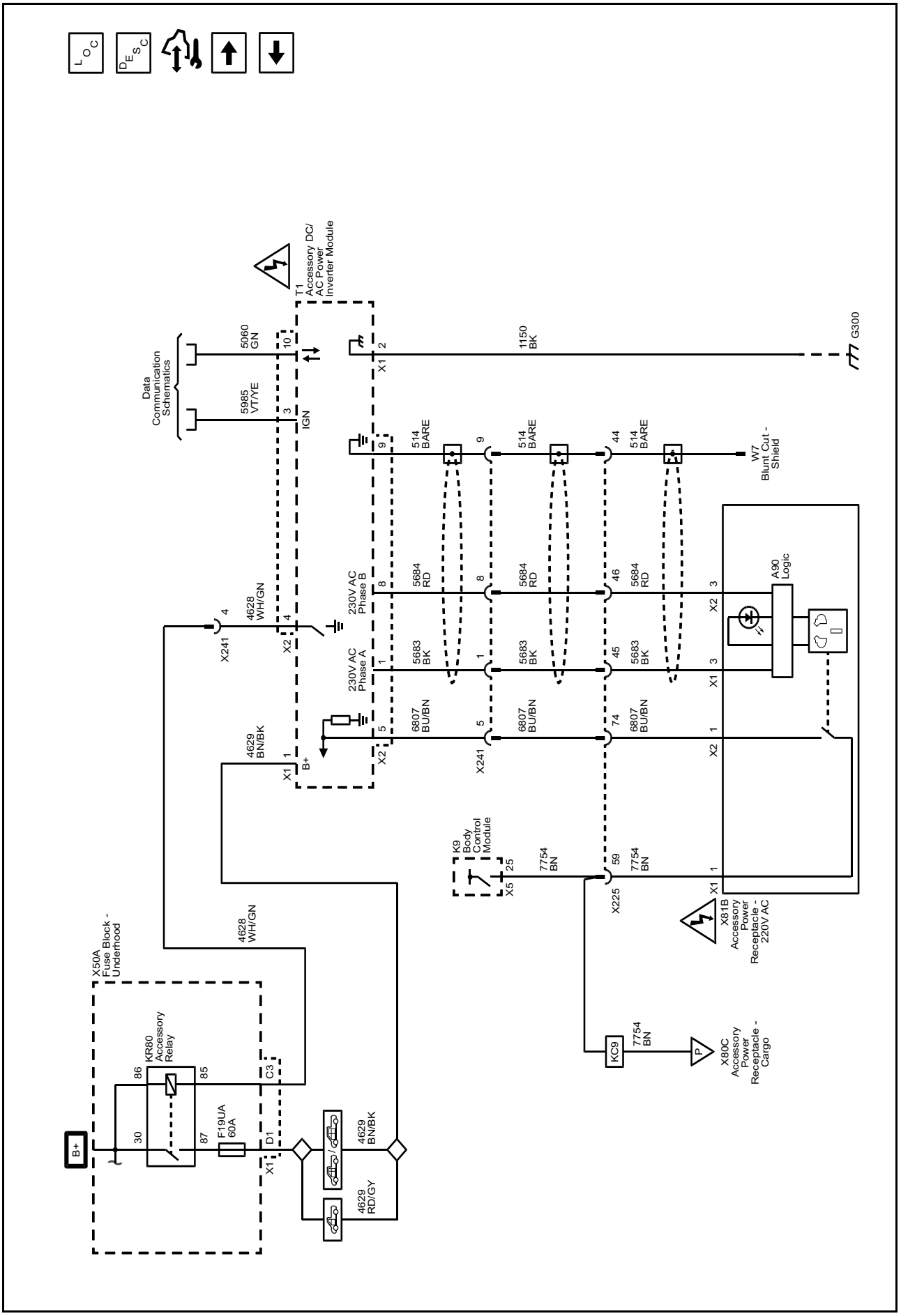


## Cigar Lighter/Power Outlet Schematics (Inverter Module and Instrument Panel Power Receptacle - 110V AC (KI4))

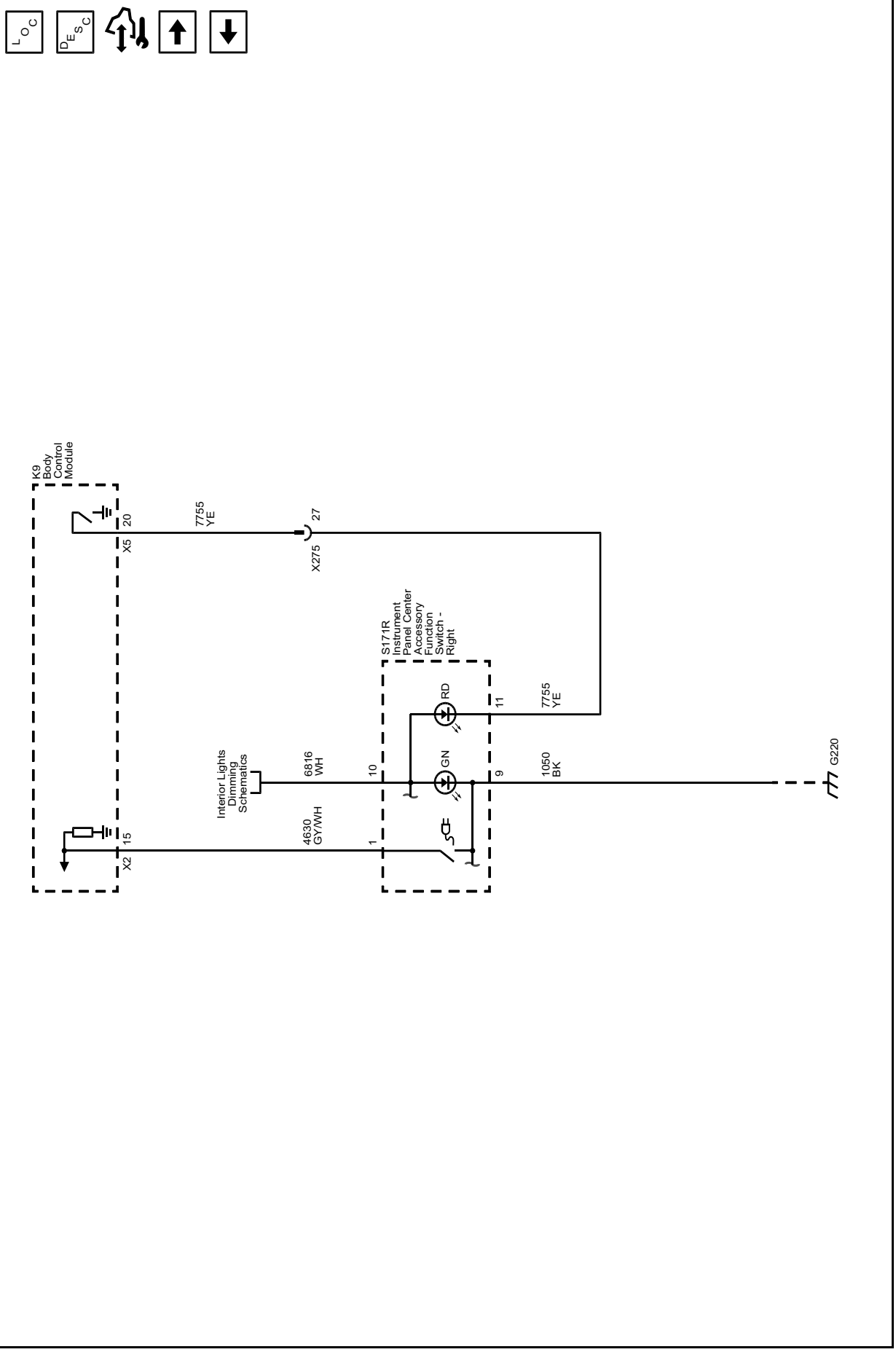



5256251

## Cigar Lighter/Power Outlet Schematics (Inverter Module and Instrument Panel Power Receptacle - 230V AC (KI5))

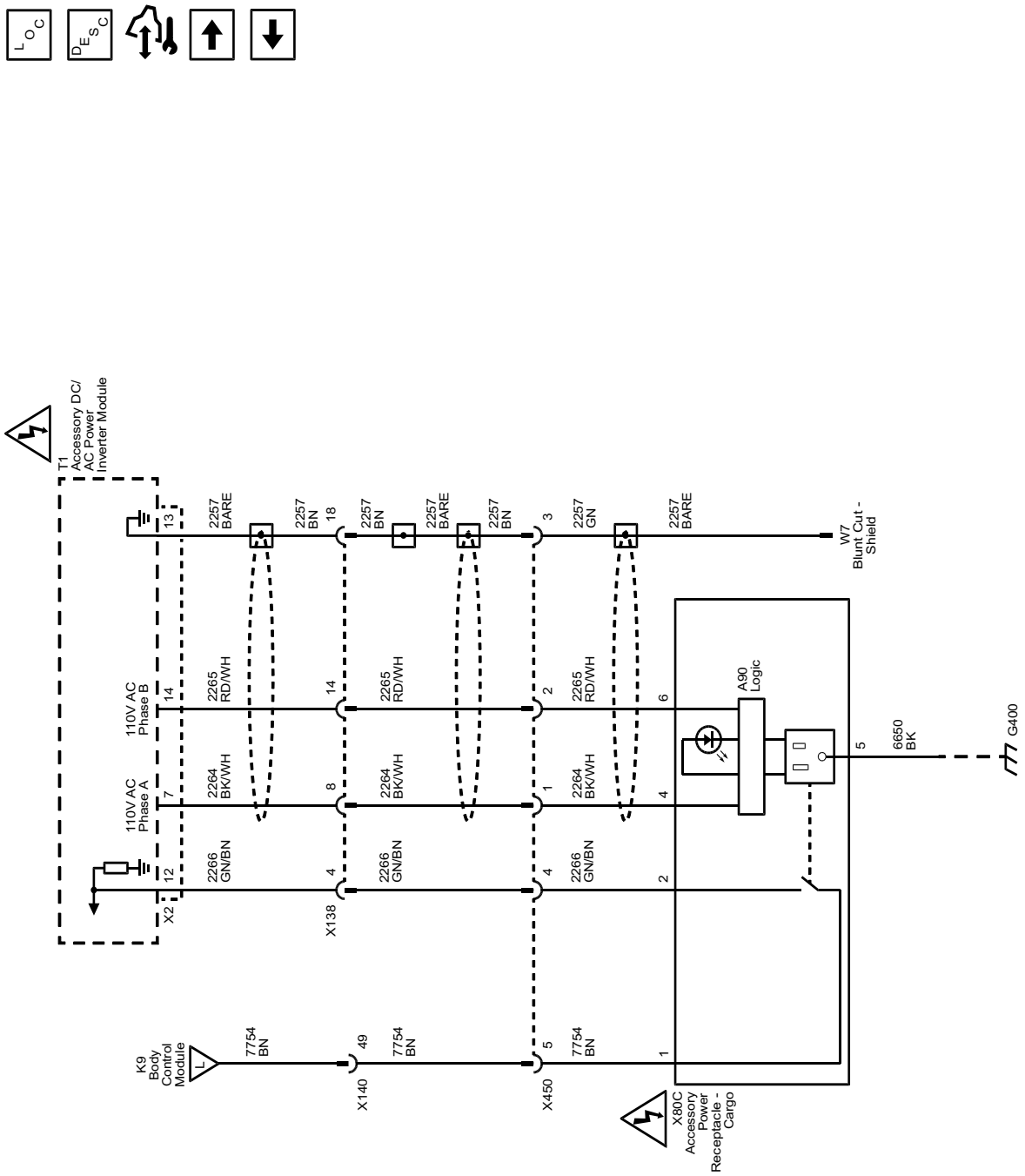


## Cigar Lighter/Power Outlet Schematics (Cargo Power Receptacle Controls and Indicators (KC9/KCA))

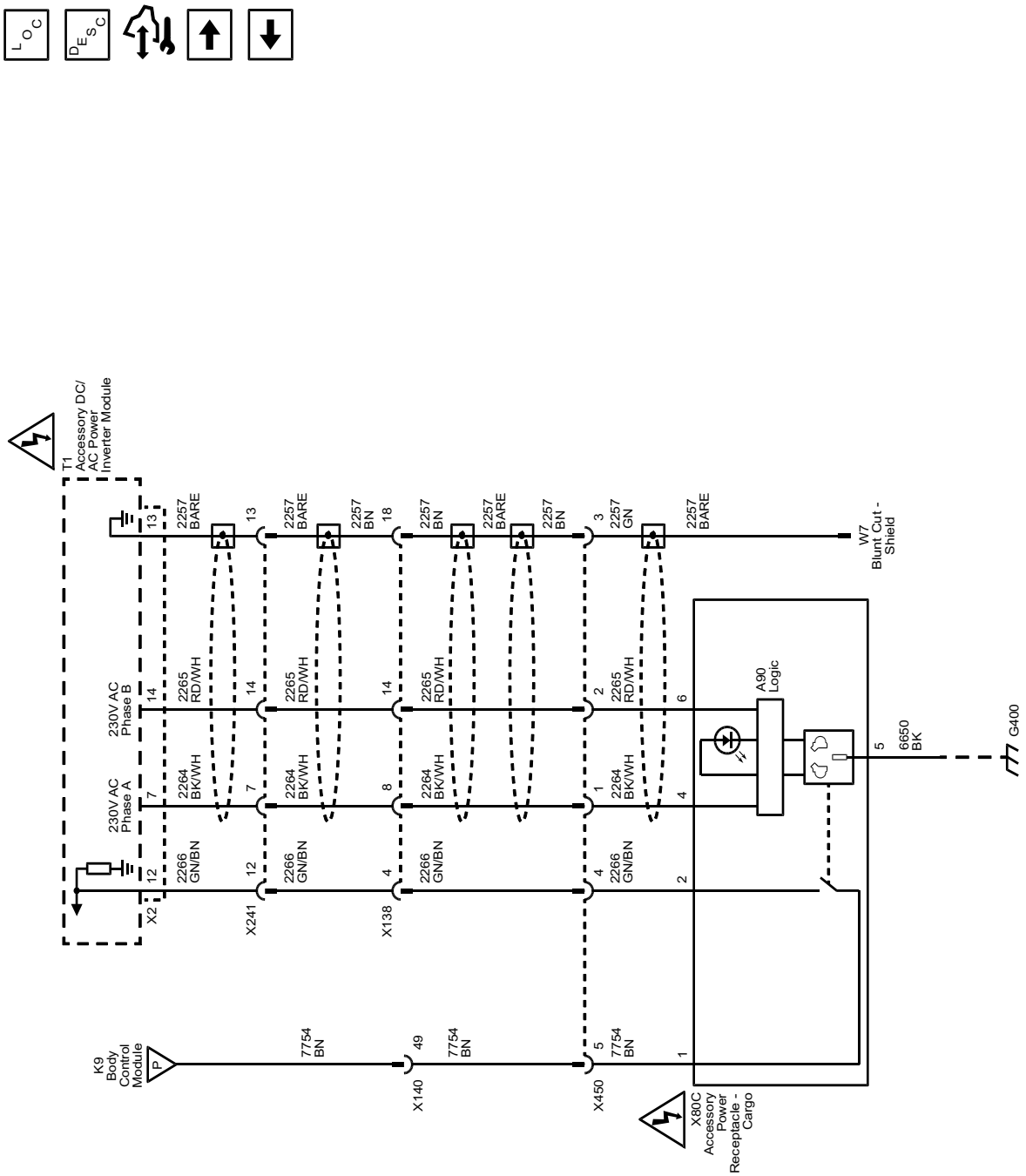



5256253

## Cigar Lighter/Power Outlet Schematics (Cargo Power Receptacle - 110V AC (KC9))

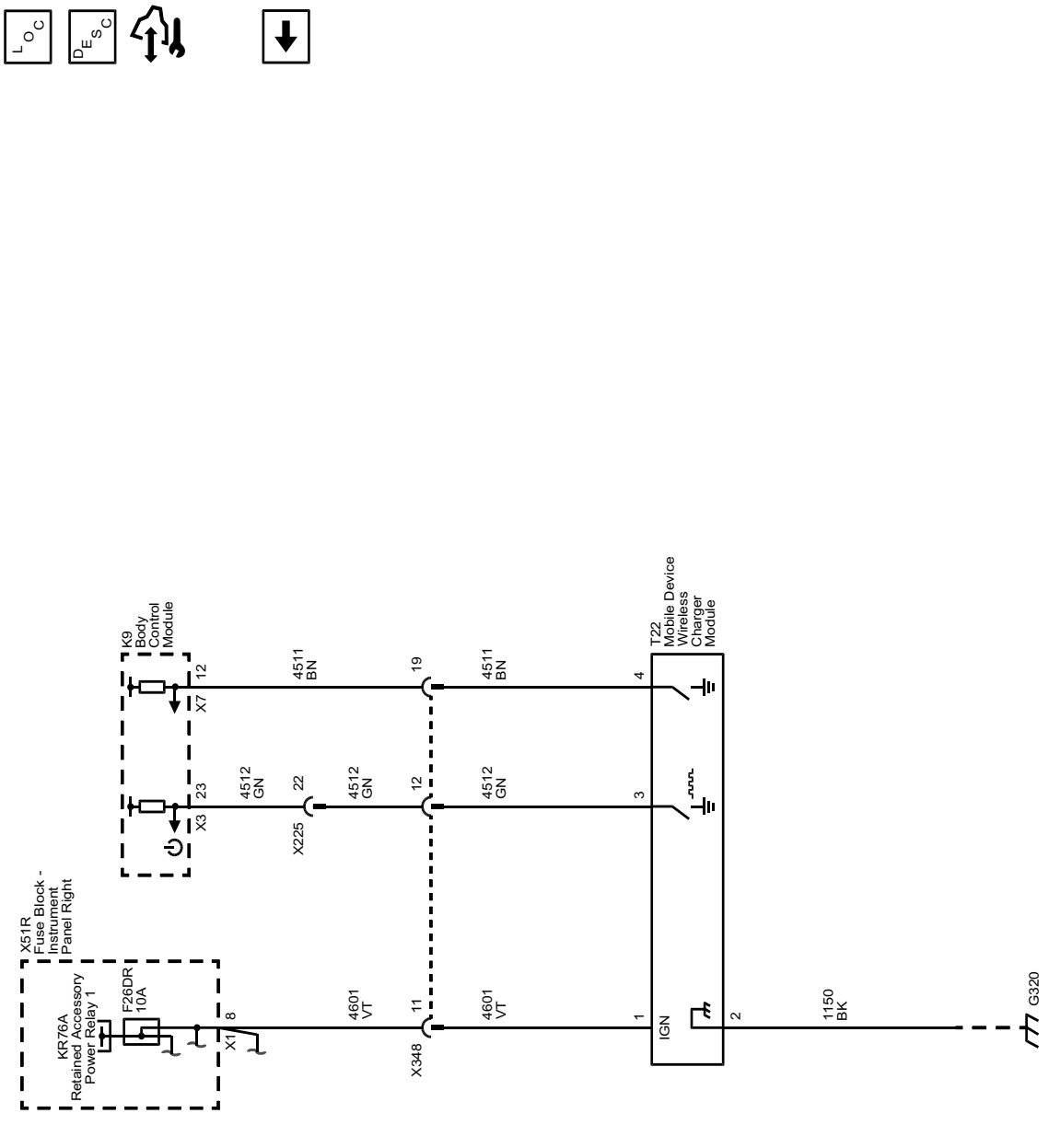


## Cigar Lighter/Power Outlet Schematics (Cargo Power Receptacle - 230V AC (KCA))




5256256

## Cigar Lighter/Power Outlet Schematics (Wireless Charging (K4C))



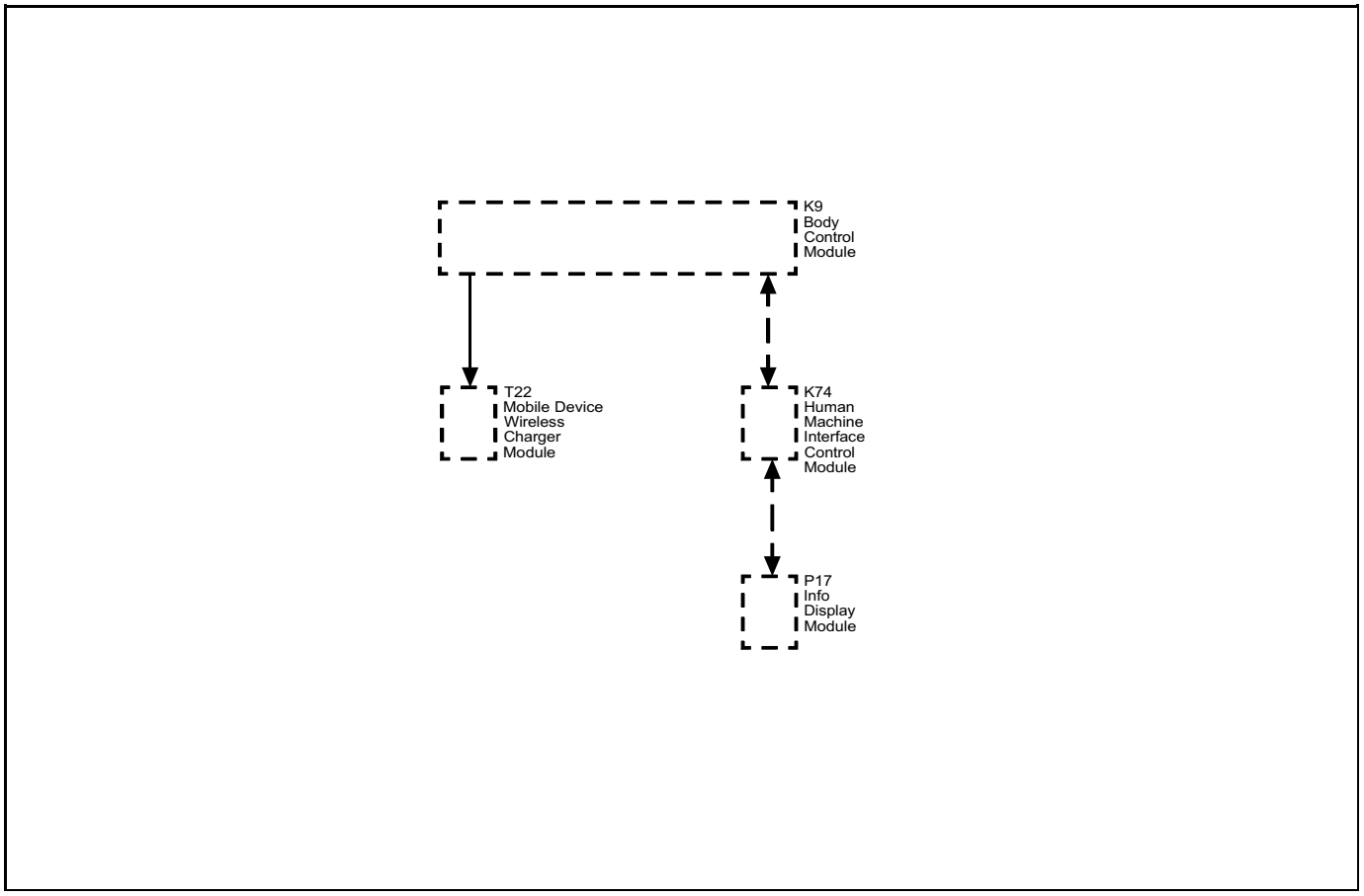

5256257

# Description and Operation

## Mobile Device Wireless Charger Description and Operation

### Mobile Device Wireless Charging System

#### Mobile Device Wireless Charging System Block Diagram




3607745

The Mobile Device Wireless Charging System (WCS) is an system for wirelessly charging mobile devices. It is capable of charging the batteries of compatible mobile devices. A compatible device is one that is compliant with Power Matters Alliance (PMA) or Wireless Power Consortium (WPC) Standard, meaning that it is equipped with a PMA or WPC wireless charge “receiver” that will work with the charge “transmitter” installed in the vehicle. The devices may utilize built-in charging circuitry or an adapter (external plug-in device which contains the charging circuitry). To check for phone or other device compatibility, refer to GM Total Connect.

***Warning: Remove all objects from the charging pad before charging your mobile device. Objects, such as coins, keys, rings, paper clips, or cards, between the phone and charging pad will become very hot. On the rare occasion that the charging system does not detect an object, and the object gets wedged between the phone and charger, remove the phone and allow the object to cool before removing it from the charging pad, to prevent burns.***

## Charging

To charge a device, place it on the charging surface in the vehicle. There is a charging coil located in the center of the charging surface. The device has a charging coil typically near the center of the device. These coils must be lined up in order for charging to proceed. When the interruptible retained accessory power (IRAP) relay is closed (this is true typically when vehicle ignition is in Run or Accessory position), the WCS will detect the device, establish communications with the device to confirm it is a compatible device, and then deliver charging power to the device via wireless interface. The WCS will be able to deliver up to 5W of power to compatible devices. It shall only enter a charging state if communication is established and a compatible device is identified.

The WCS shall not enter a charging state if there is no communication established with a compatible device. If a non-compatible device or metallic foreign object is detected, the WCS will not transfer power. The charger monitors its internal temperature and will shut down if the charger temperature exceeds 185F (85C).

## Indicator

The body control module will detect the device battery is charging and send a serial data message on the GMLAN bus to the radio display. The radio display will indicate a device is currently charging. When the indicator is toggling on and off this indicates a thermal limit has been reached and the device will not charge. For more information refer to the owners manual.

# Power Outlets Description and Operation

## 12 Volt Power Outlet Receptacle Description and Operation

The vehicle is fitted with a 12 V accessory power receptacle. The accessory power receptacles are controlled by an ignition operated relay. The accessory power receptacles are operational when the ignition is turned to either the On or the Accessories positions. The X80J and X80K accessory power receptacles may be configured to be operational when the ignition is Off by changing the position of the 50A fuse from the F10DL position to the F11DL position in the left instrument panel fuse block.

## 110 Volt Power Outlet Receptacle System Description

The alternating current (AC) accessory power outlet system consists of the accessory DC/AC power inverter module and the accessory power receptacle – 110 V AC. The accessory DC/AC power inverter module converts 12 V direct current (DC) battery power to 110 V at 60 Hertz (Hz) AC power to operate AC powered devices. The accessory DC/AC power inverter module provides up to 400 watts of power. The accessory power receptacle – 110 V AC provides the usual connection for AC powered devices.

## 110 Volt Power Outlet Receptacle System Operation

The accessory DC/AC power inverter module receives fuse protected battery voltage and is connected to the 12 V electrical system ground. The accessory power receptacle – 110 V AC has an internal switch, that detects when an AC powered device is plugged into the outlet. When the ignition is ON, and an AC powered device is plugged into the accessory power receptacle – 110 V AC, the normally open switch in the accessory power receptacle – 110 V AC, closes. When the accessory DC/AC power inverter module detects the voltage from the accessory power receptacle – 110 V AC switch, the inverter module begins to supply 110 V AC to the accessory power receptacle – 110 V AC after a 1.5 s delay. The accessory AC power system is protected against circuit overload and circuit shorts to ground.

## 110 Volt Power Outlet Receptacle Isolation Fault Protection

The accessory DC/AC power inverter module contains a ground fault circuit interrupter (GFCI). GFCI monitors the 110 V circuit for a short to vehicle chassis ground. If a 110 V AC short to ground is detected, the accessory DC/AC power inverter module will turn OFF. The module remains OFF, until the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 s delay.

## 110 Volt Power Outlet Receptacle Overload Shutdown

The accessory DC/AC power inverter module will turn OFF if the current in the 110 V circuit is greater than 3.8 A for 1 s , or 2.5 A for 10 s . The module will turn ON again, when the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 s delay.

## 110 Volt Power Outlet Receptacle Internal Shutdown

The accessory DC/AC power inverter module will turn OFF if the B+ supply voltage is greater than 16.5 V or less than 11 V. The module will also turn OFF if the device temperature is greater than 85°C (185°F). The module will turn ON again, after the shutdown condition is corrected, and the AC powered device is unplugged from the outlet, and then plugged into the outlet.

## 230 Volt Power Outlet Receptacle System Description

The alternating current (AC) accessory power outlet system consists of the accessory DC/AC power inverter module and the accessory power receptacle – 220V AC. The accessory DC/AC power inverter module converts 12 V direct current (DC) battery power to 220–230 V at 50 Hertz (Hz) AC power to operate AC powered devices. The accessory DC/AC power inverter module provides up to 400 watts of power. The accessory power receptacle – 220V AC provides the usual connection for AC powered devices.

## 230 Volt Power Outlet Receptacle System Operation

The accessory DC/AC power inverter module receives fuse protected battery voltage and is connected to the 12 V electrical system ground. The accessory power receptacle – 220V AC has an internal switch, that detects when an AC powered device is plugged into the outlet. When the ignition is ON, and an AC powered device is plugged into the accessory power receptacle – 220V AC, the normally open switch in the accessory power receptacle – 220V AC, closes. When the accessory DC/AC power inverter module detects the voltage from the accessory power receptacle – 220V AC switch, the inverter module begins to supply 220–230 V AC to the accessory power receptacle – 220V AC after a 1.5 second delay. The accessory AC power system is protected against circuit overload and circuit shorts to ground.

## 230 Volt Power Outlet Receptacle Isolation Fault Protection

The accessory DC/AC power inverter module contains a ground fault circuit interrupter (GFCI). GFCI monitors the 230 V circuit for a short to vehicle chassis ground. If a 230 V AC short to ground is detected, the accessory DC/AC power inverter module will turn OFF. The

module remains OFF, until the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 s delay.

## 230 Volt Power Outlet Receptacle Overload Shutdown

The accessory AC/DC power control module will turn OFF if the current in the 230 V circuit is greater than 3.8 A for 1 second, or 2.5 A for 10 seconds. The module will turn ON again, when the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 second delay.

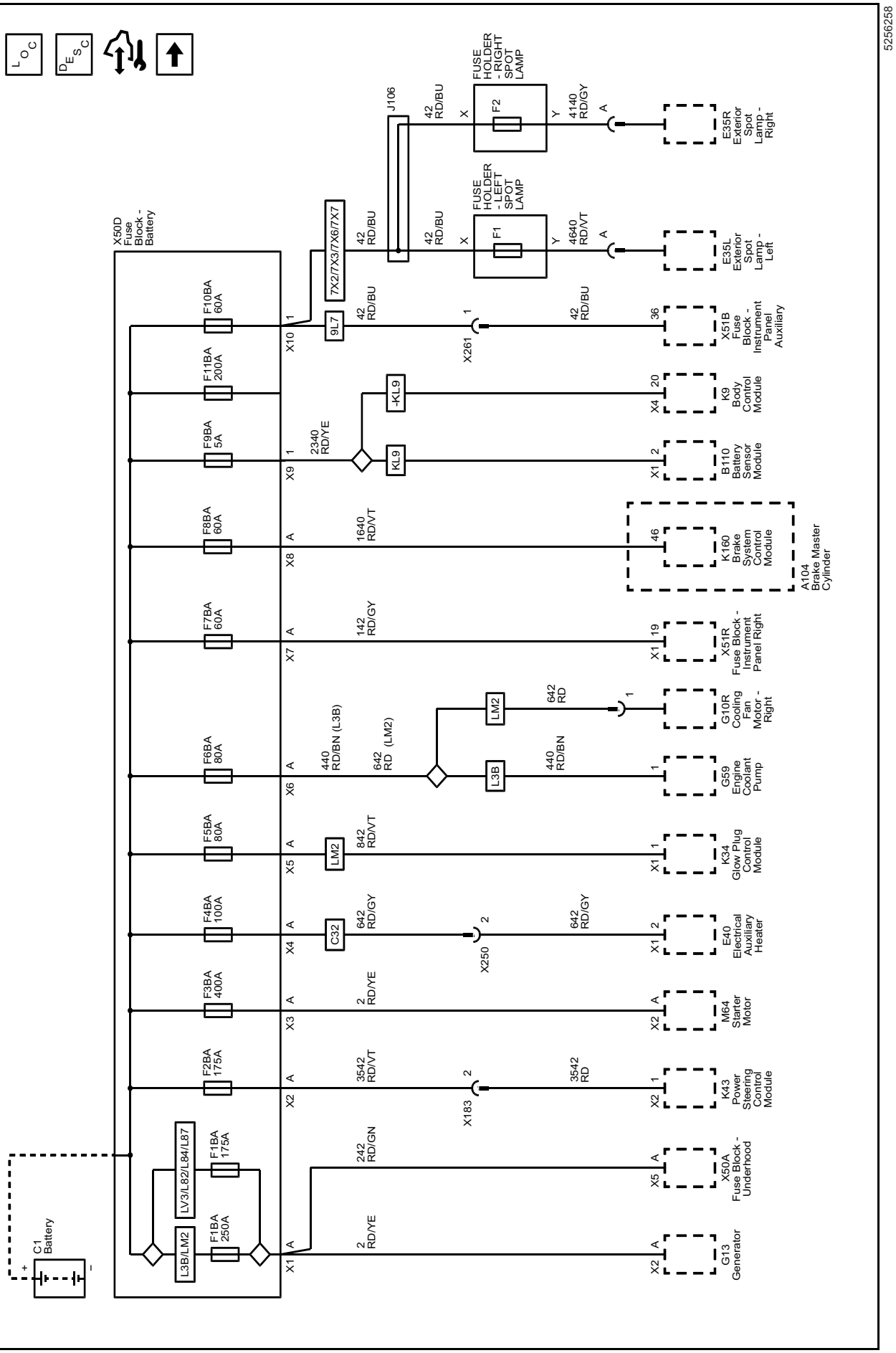
## 230 Volt Power Outlet Receptacle Internal Shutdown

The accessory DC/AC power inverter module will turn OFF if the B+ supply voltage is greater than 16.5 V or less than 11 V. The module will also turn OFF if the device temperature is greater than 85°C (185°F). The module will turn ON again, after the shutdown condition is corrected, and the AC powered device is unplugged from the accessory power receptacle – 220V AC, and then plugged into the accessory power receptacle – 220V AC.

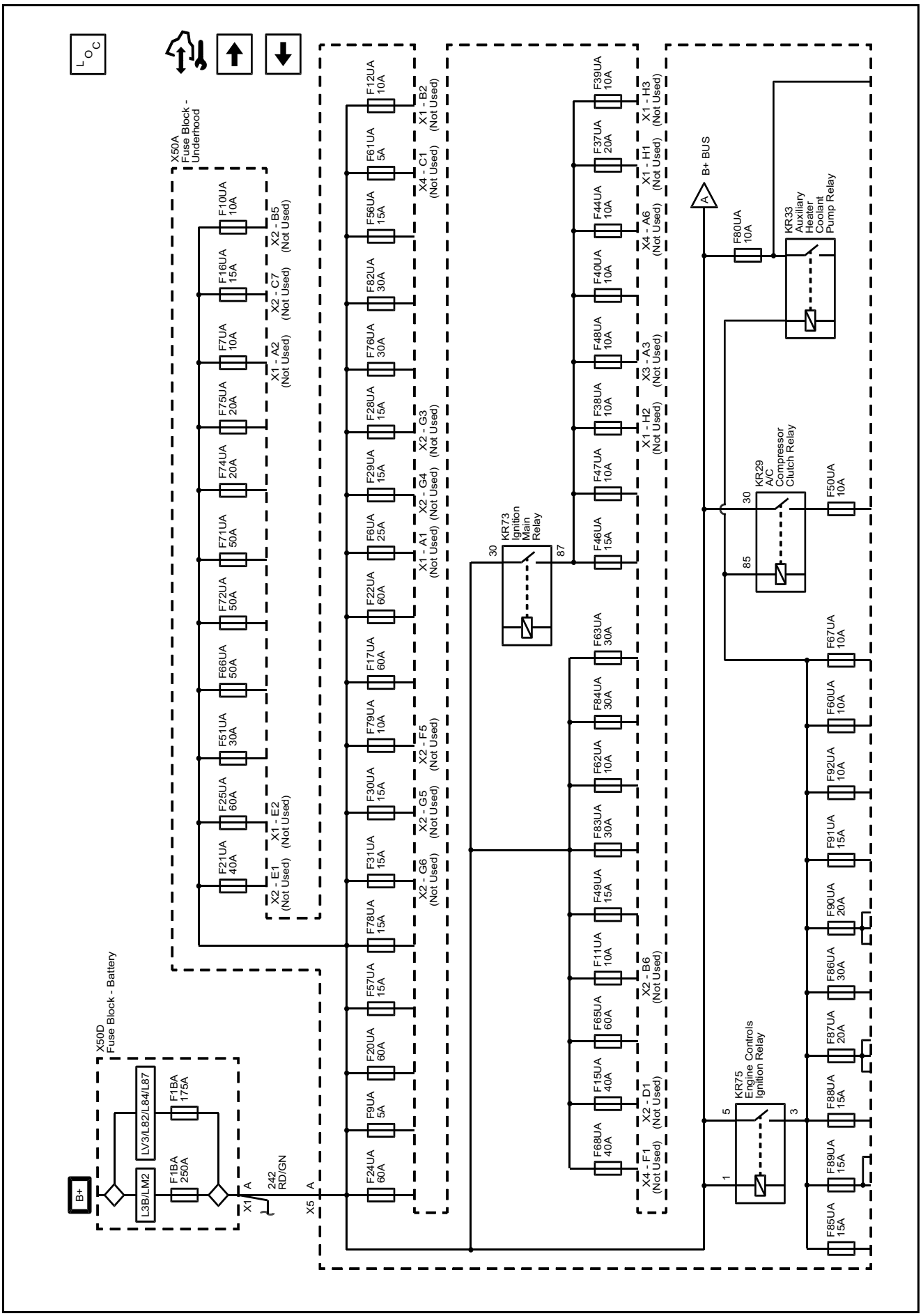
# Wiring Systems and Power Management

## Schematic and Routing Diagrams

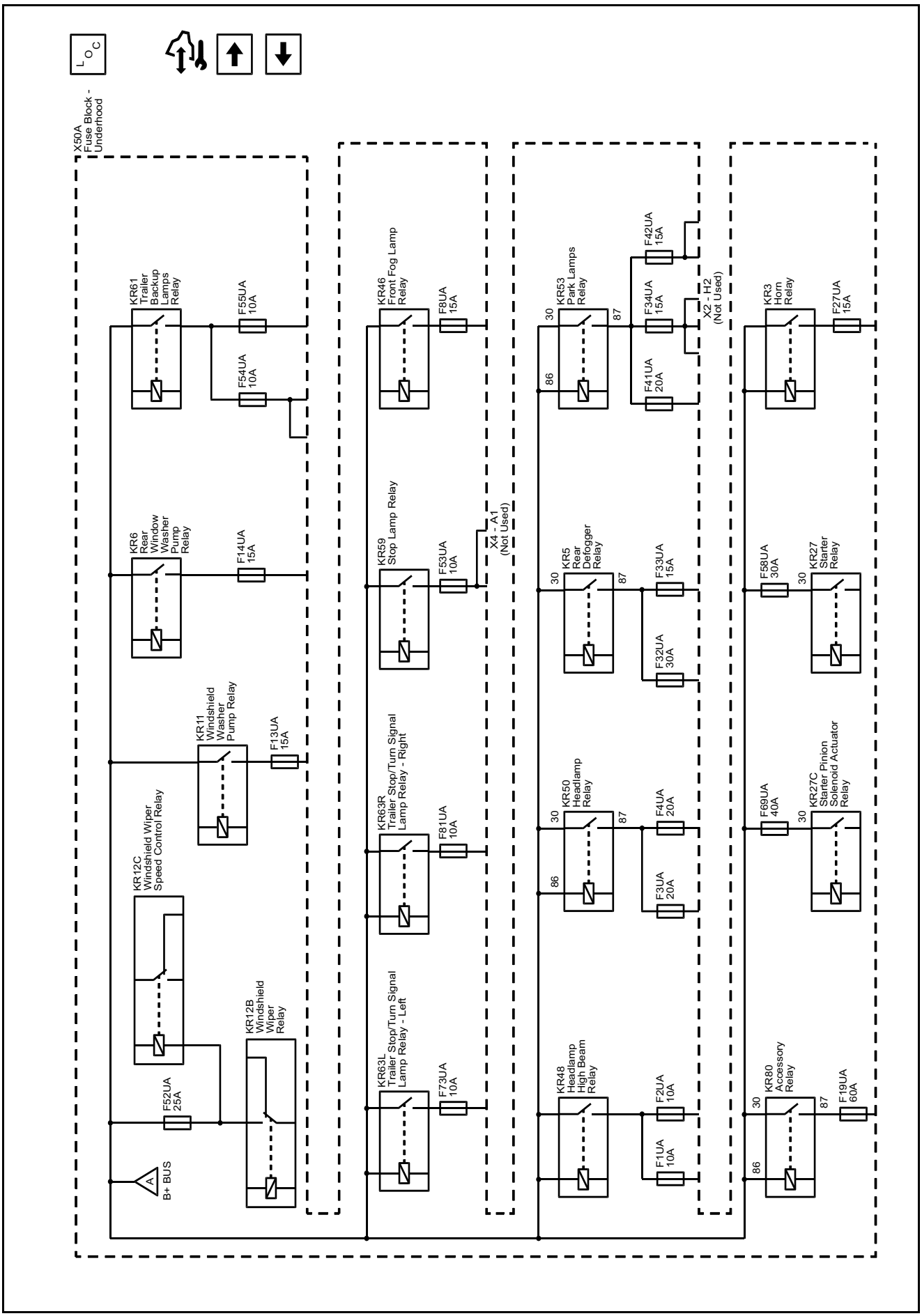
## Power Distribution Schematics (X50D Battery Fuse Block and Spot Lamp Fuse Holders (7X2/7X3/7X6/7X7))



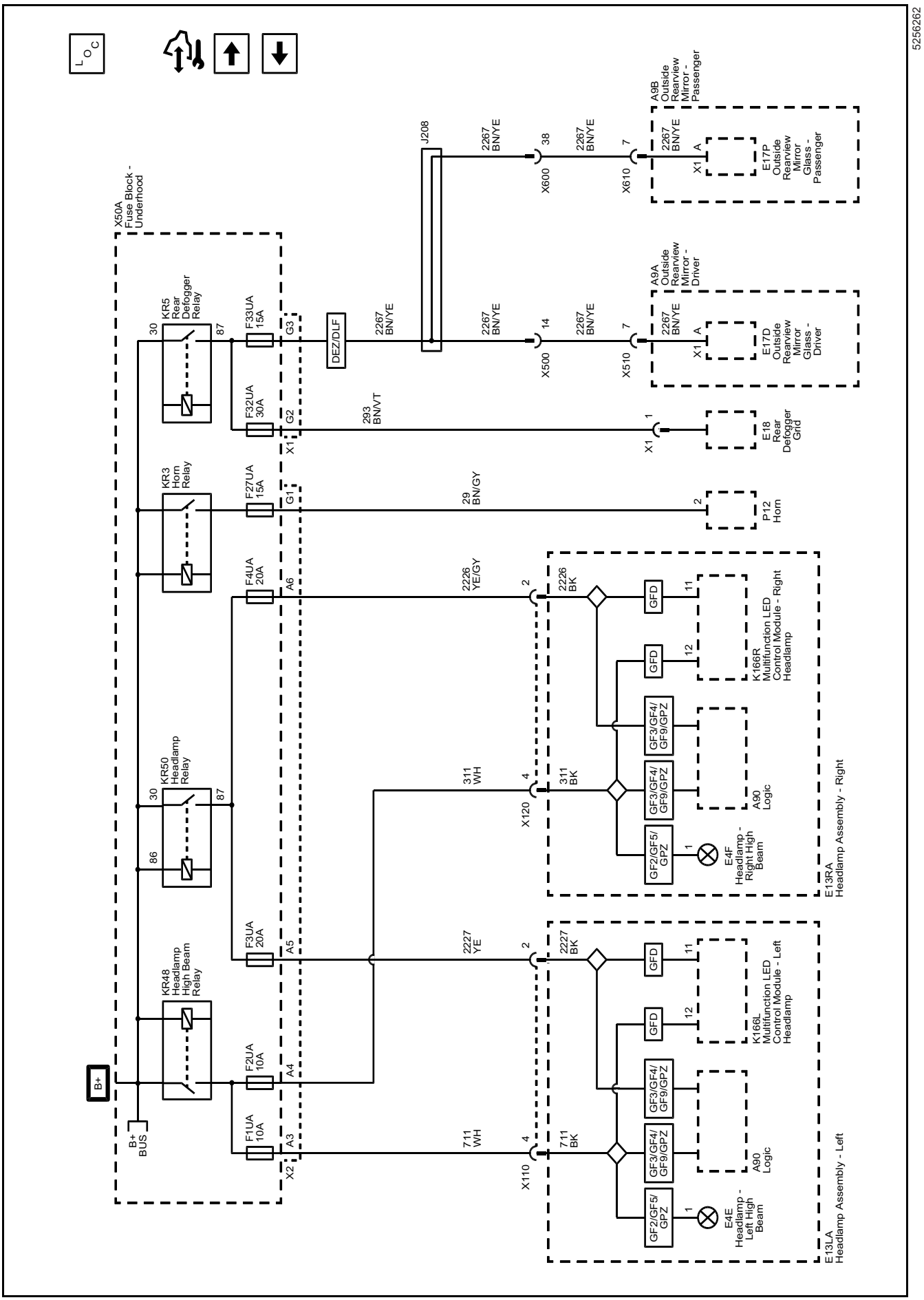
## Power Distribution Schematics (X50A Underhood Fuse Block Bussing (1 of 2))



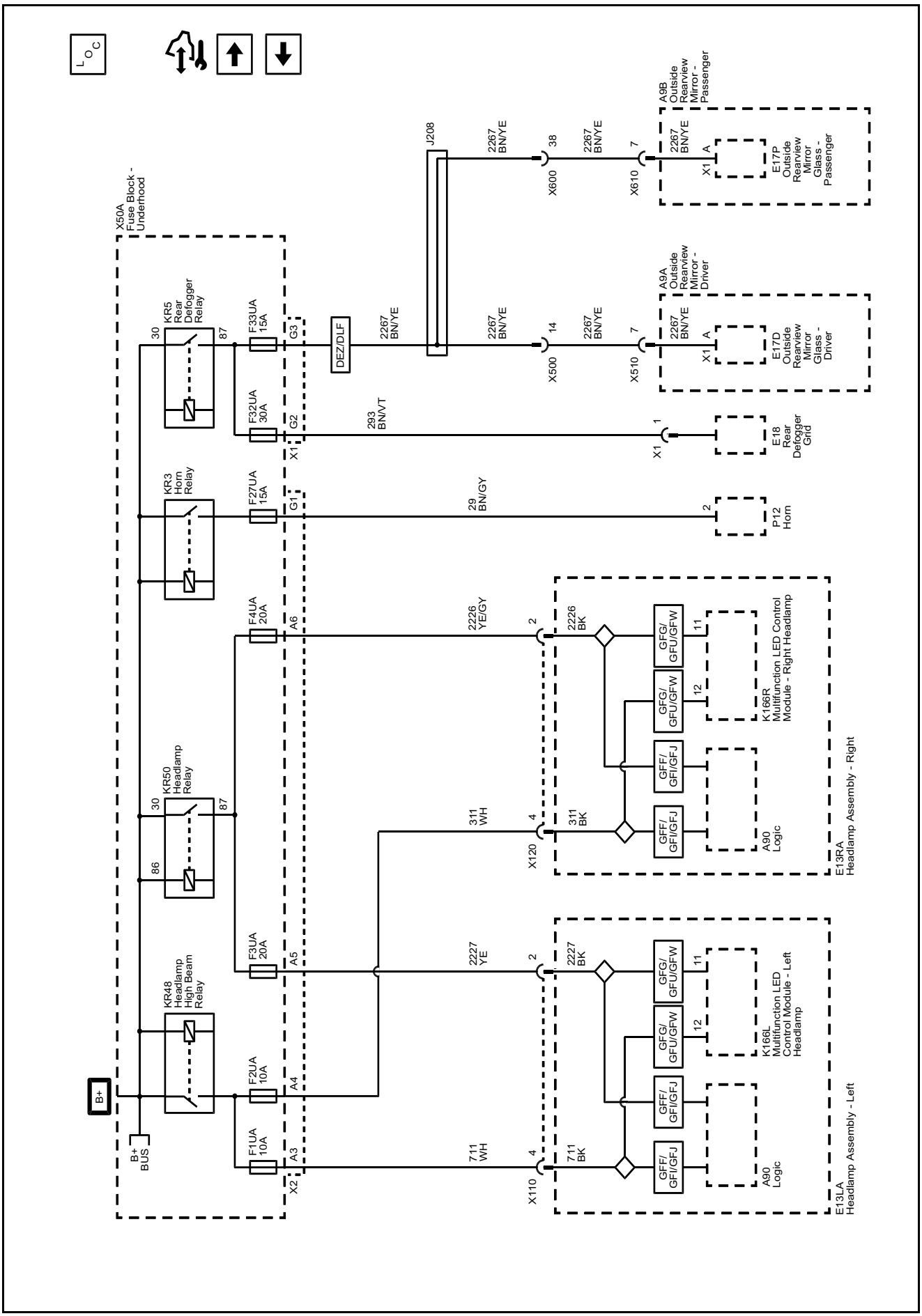
## Power Distribution Schematics (X50A Underhood Fuse Block Bussing (2 of 2))



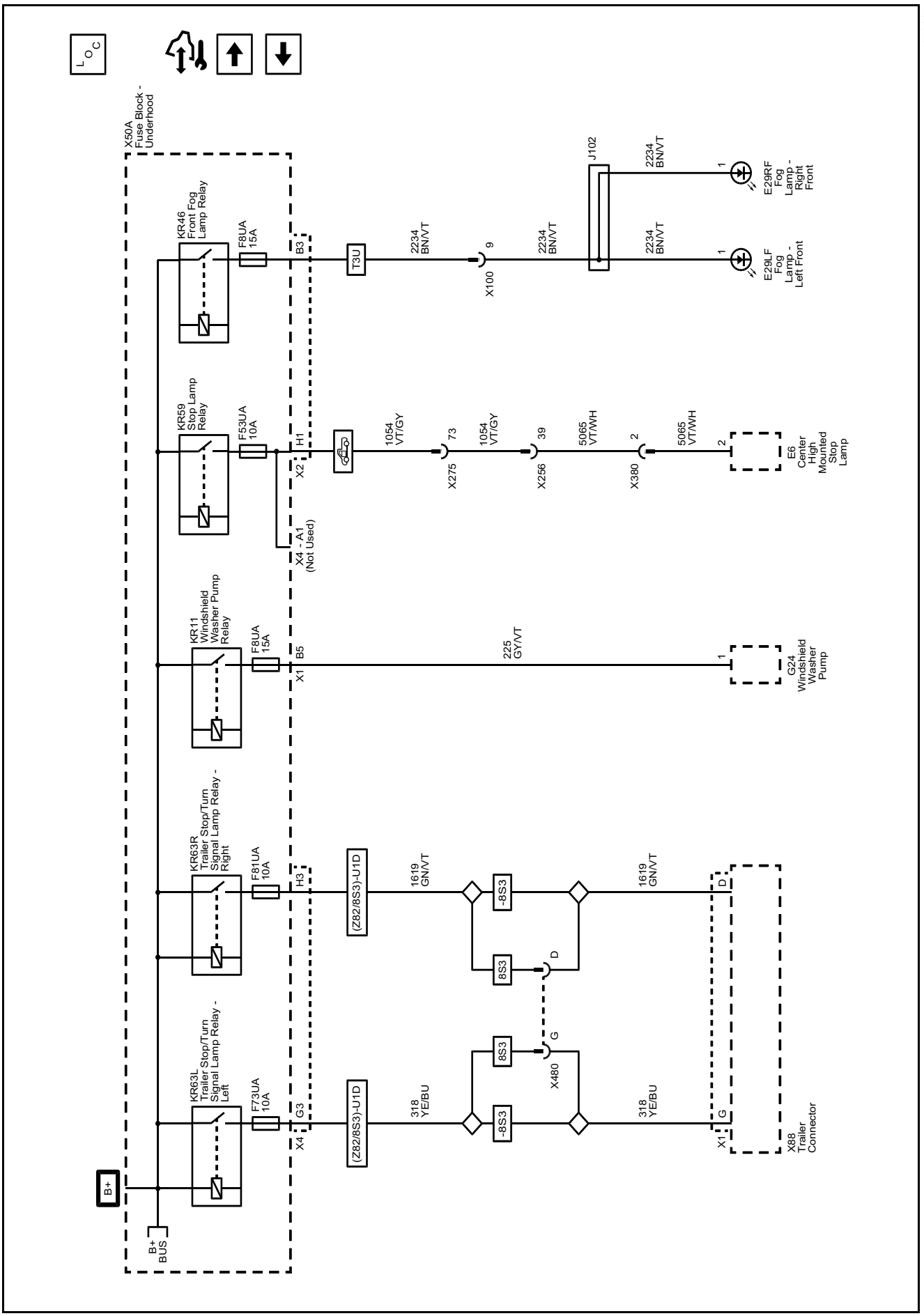
## Power Distribution Schematics (F1UA, F2UA, F3UA, F4UA, F27UA, F32UA, and F33UA Fuses (X88))



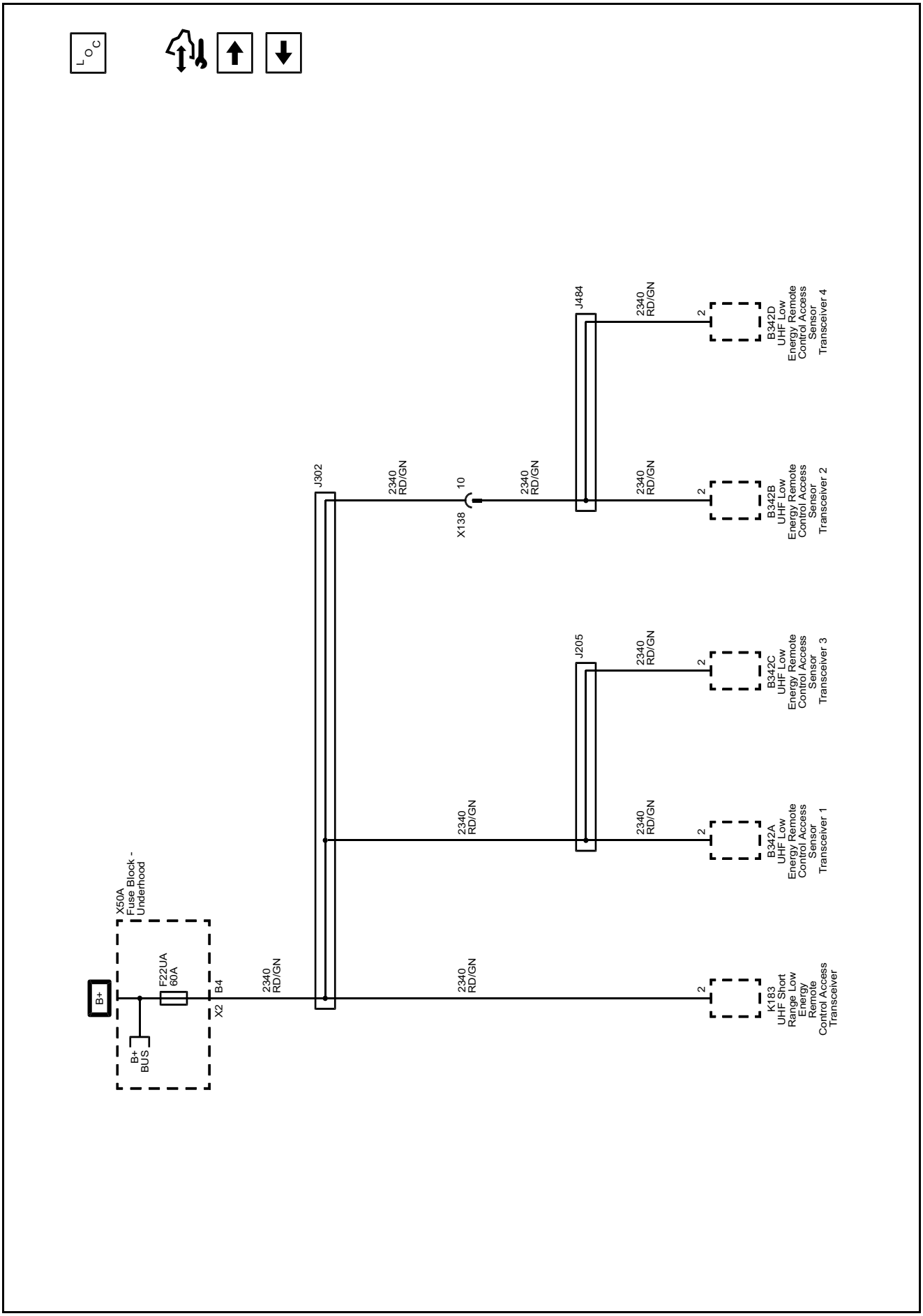
## Power Distribution Schematics (F1UA, F2UA, F3UA, F4UA, F27UA, F32UA, and F33UA Fuses (Z88))



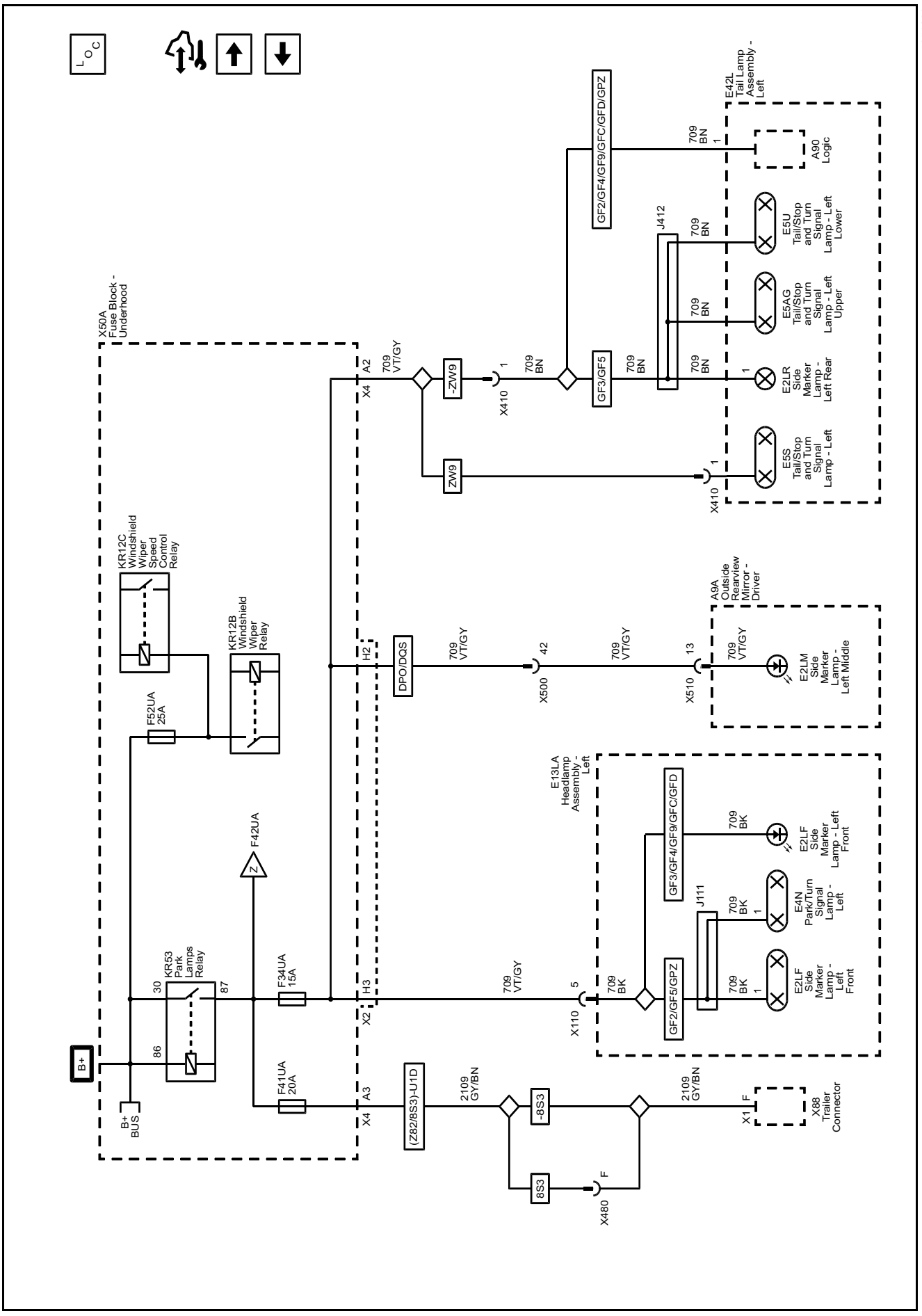
## Power Distribution Schematics (F8UA, F13UA, F53UA, F73UA, and F81UA Fuses)



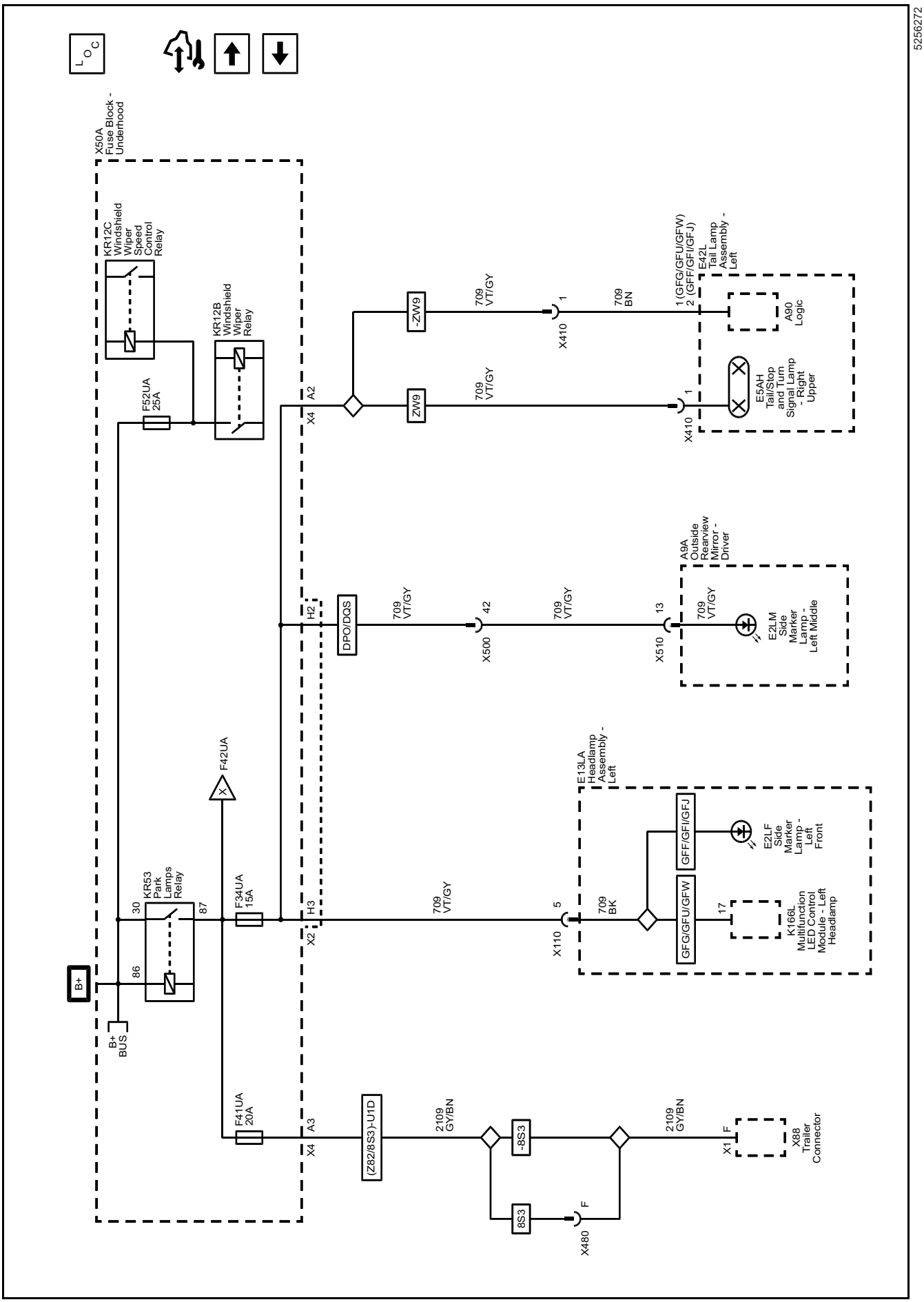
## Power Distribution Schematics (F9UA Fuse (BOP))



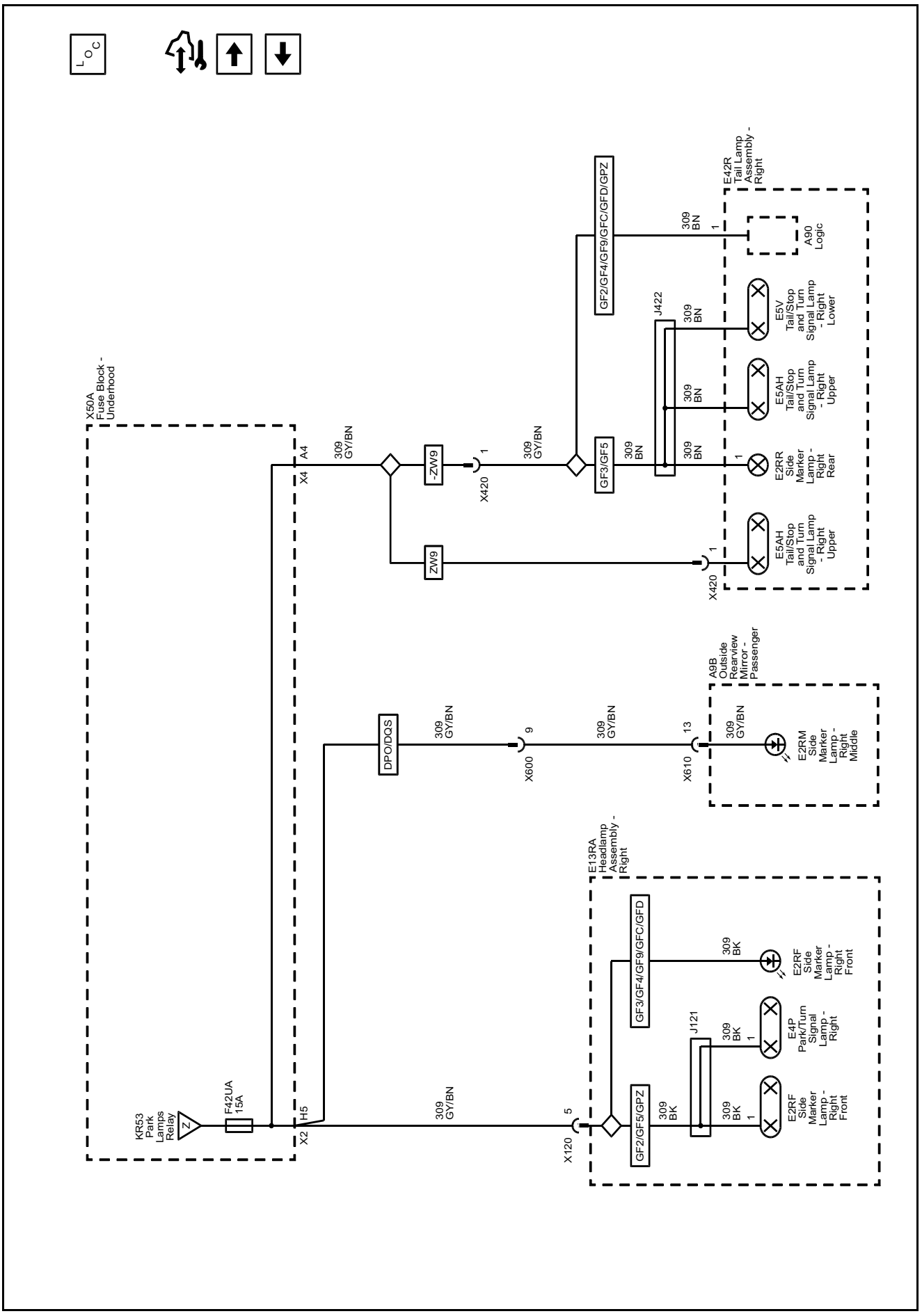
## Power Distribution Schematics (F34UA, F41UA, and F52UA Fuses (X88))



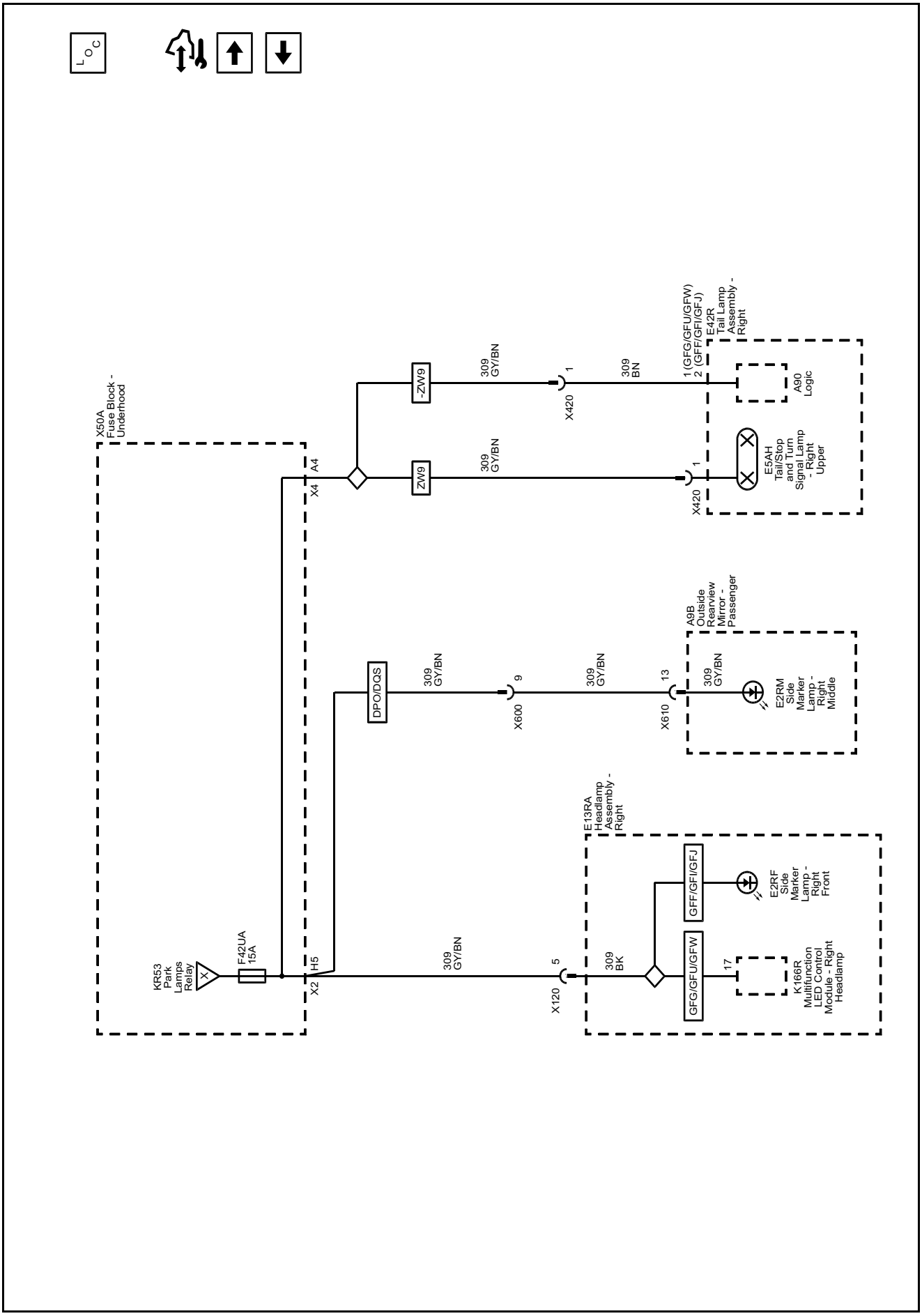
## Power Distribution Schematics (F34UA, F41UA, and F52UA Fuses (Z88))



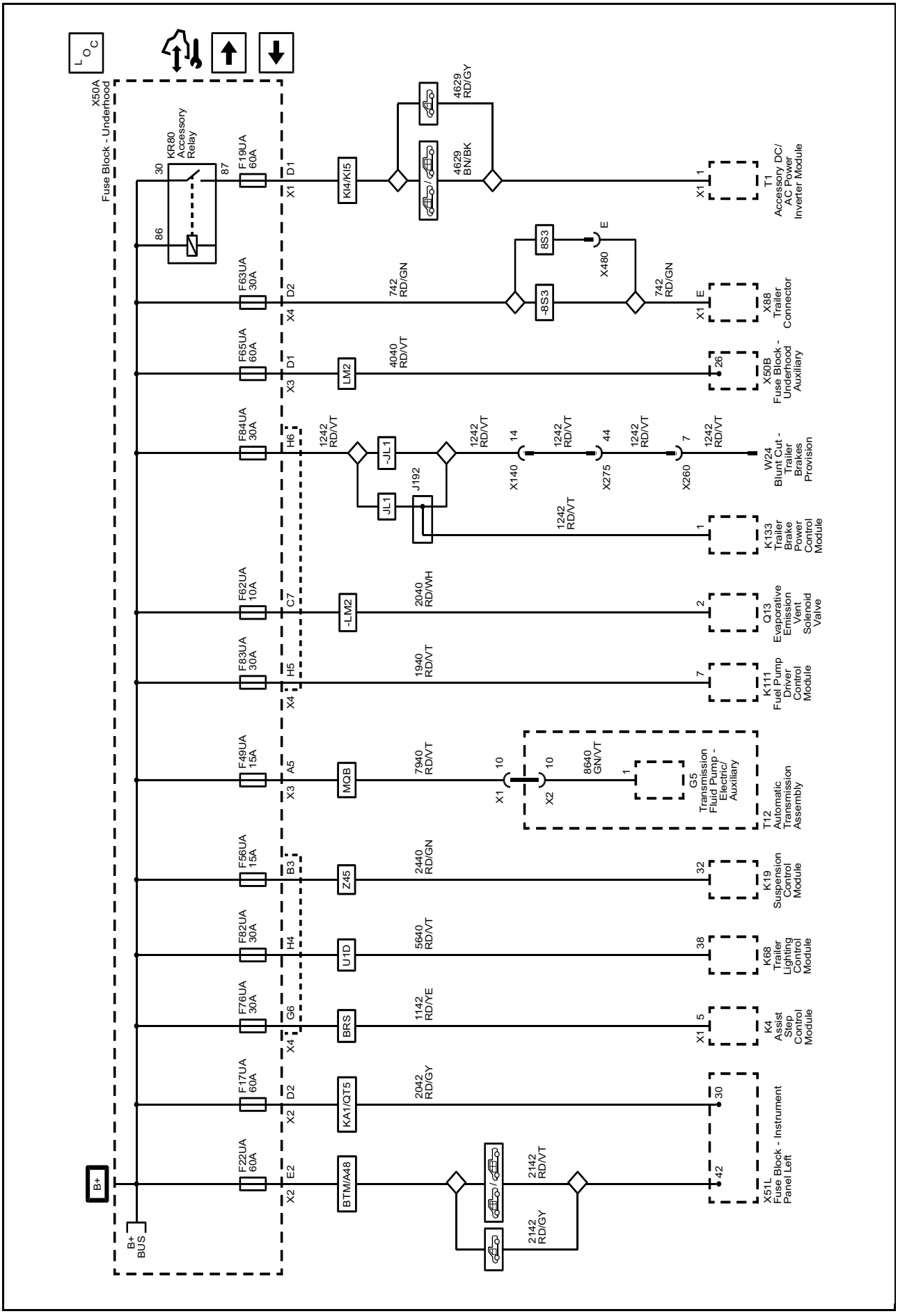
## Power Distribution Schematics (F42UA Fuse (X88))



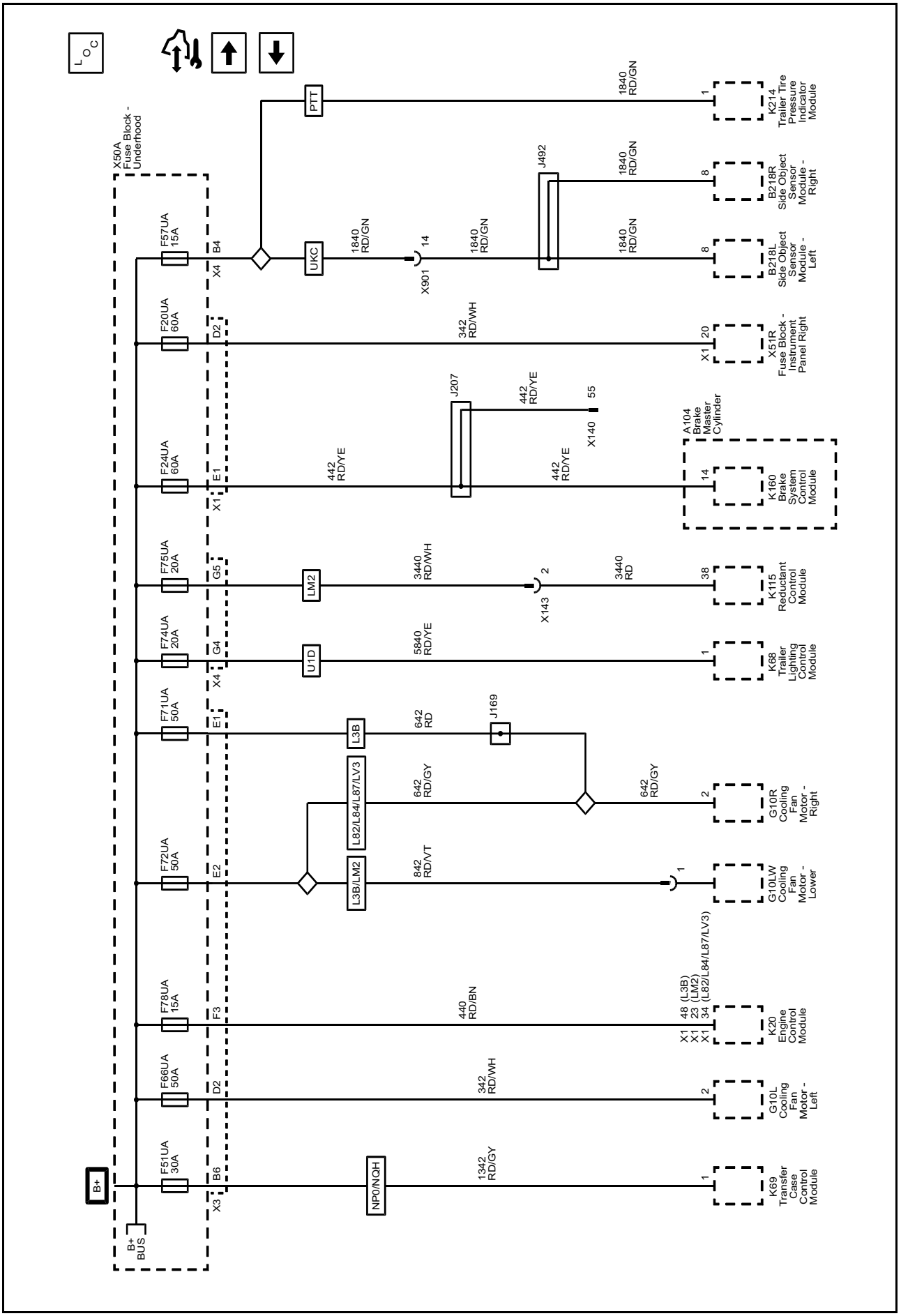
## Power Distribution Schematics (F42UA Fuse (Z88))



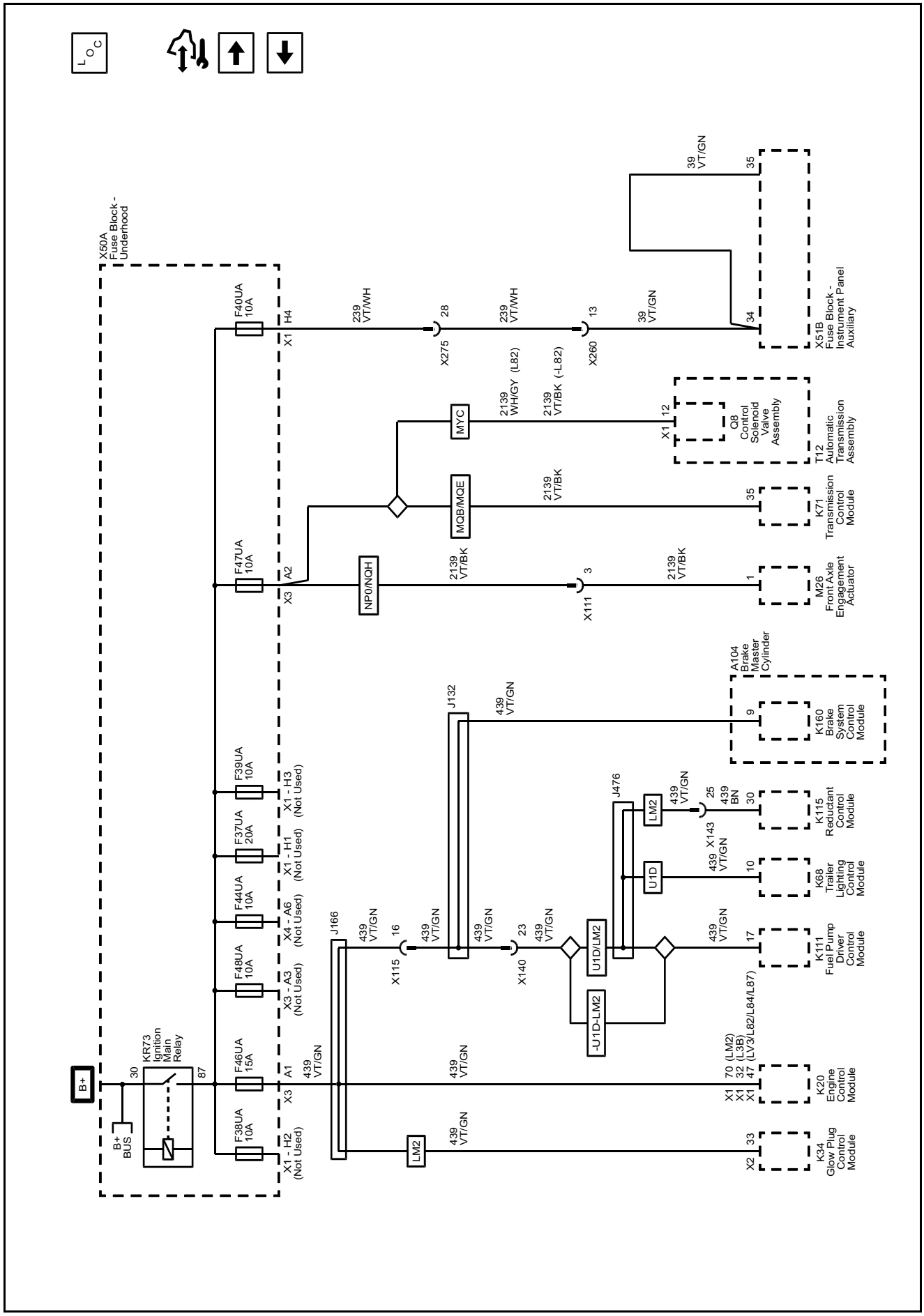
## Power Distribution Schematics (F17UA, F19UA, F22UA, F49UA, F56UA, F62UA, F63UA, F65UA, F76UA, F82UA, F83UA, and F84UA Fuses)



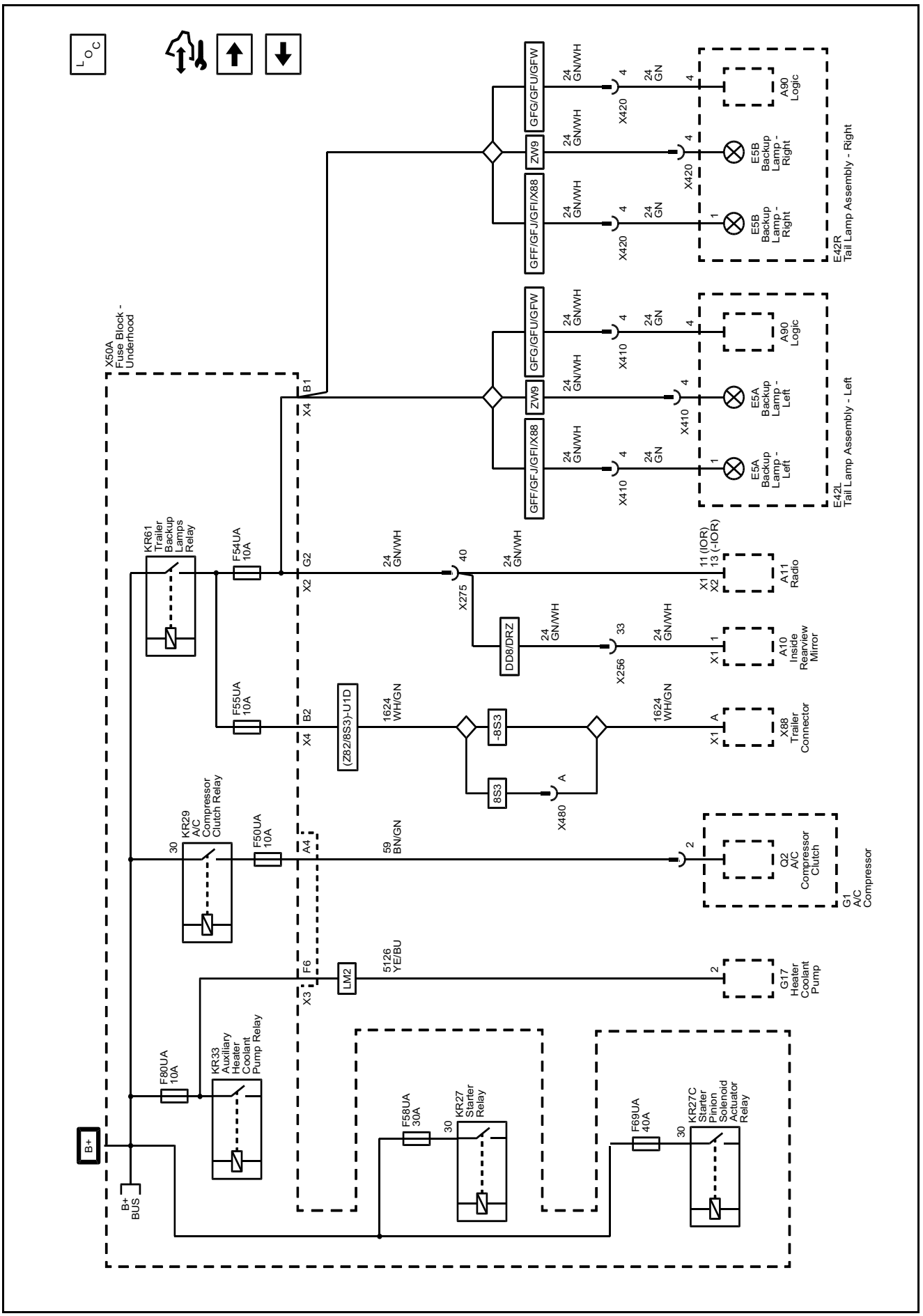
## Power Distribution Schematics (F20UA, F24UA, F51UA, F57UA, F66UA, F71UA, F72UA, F74UA, F75UA, and F78UA Fuses)



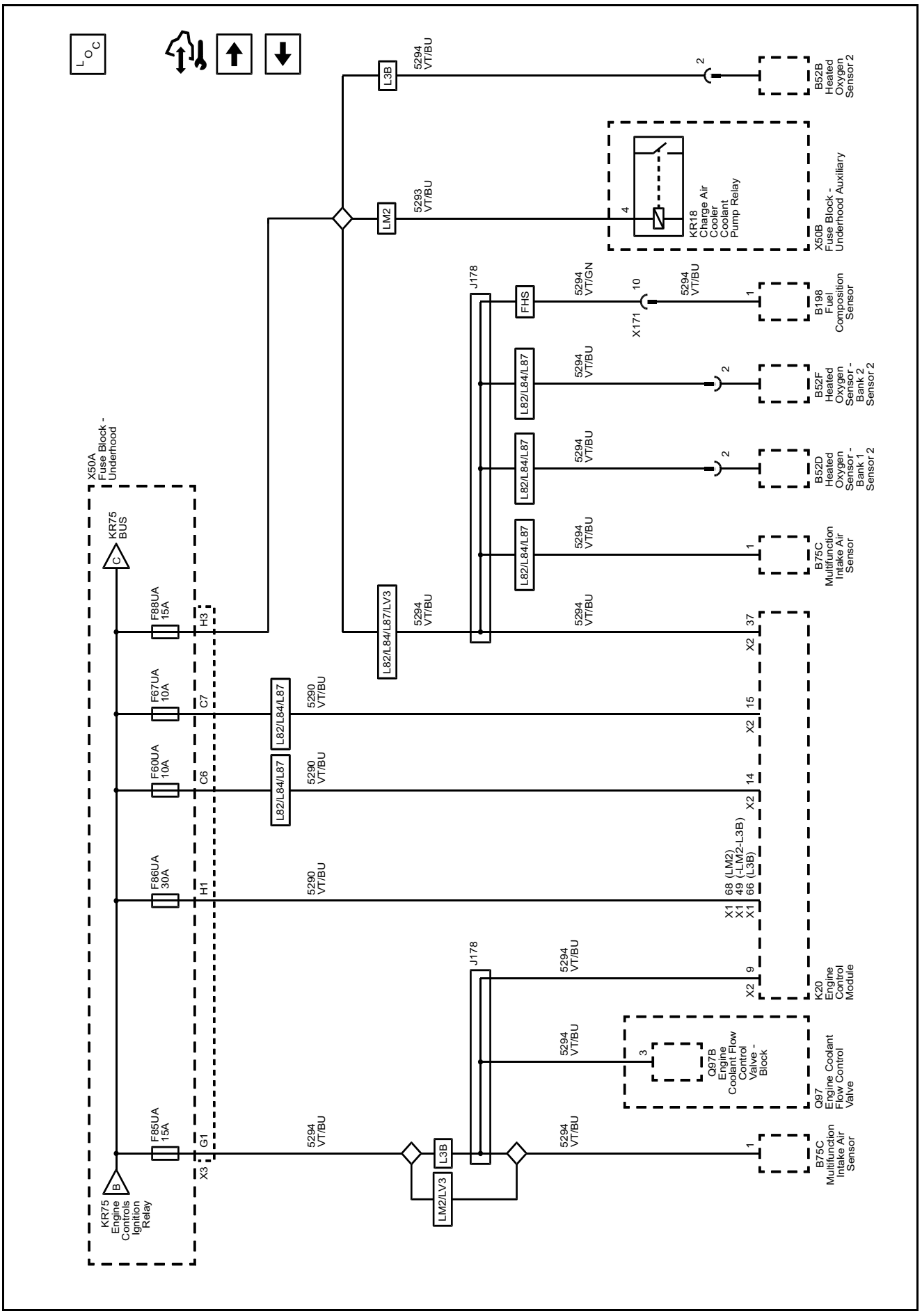
## Power Distribution Schematics (F37UA, F38UA, F39UA, F40UA, F44UA, F46UA, F47UA, and F48UA Fuses)



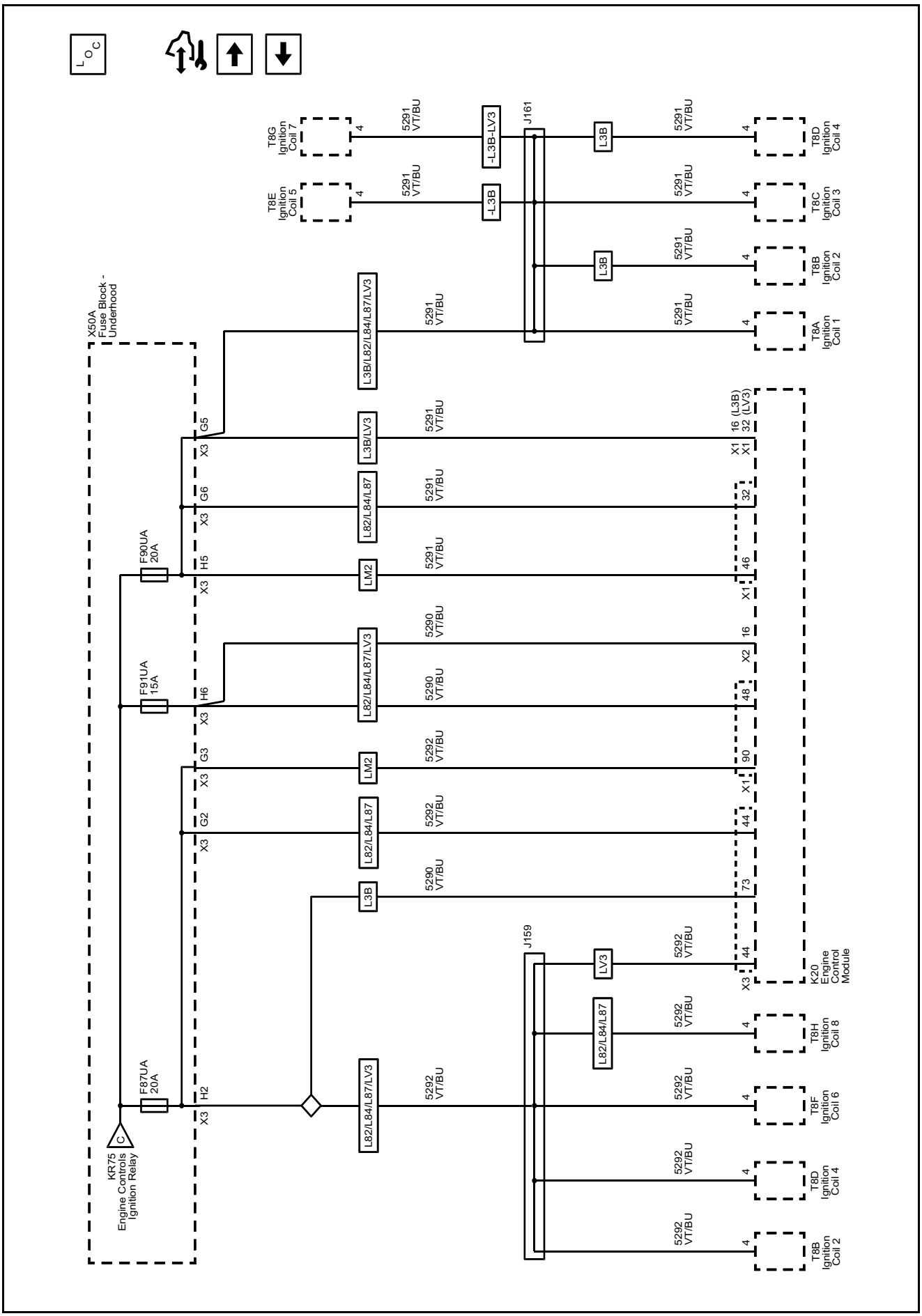
## Power Distribution Schematics (F50UA, F54UA, F55UA, F58UA, F69UA, and F80UA Fuses)



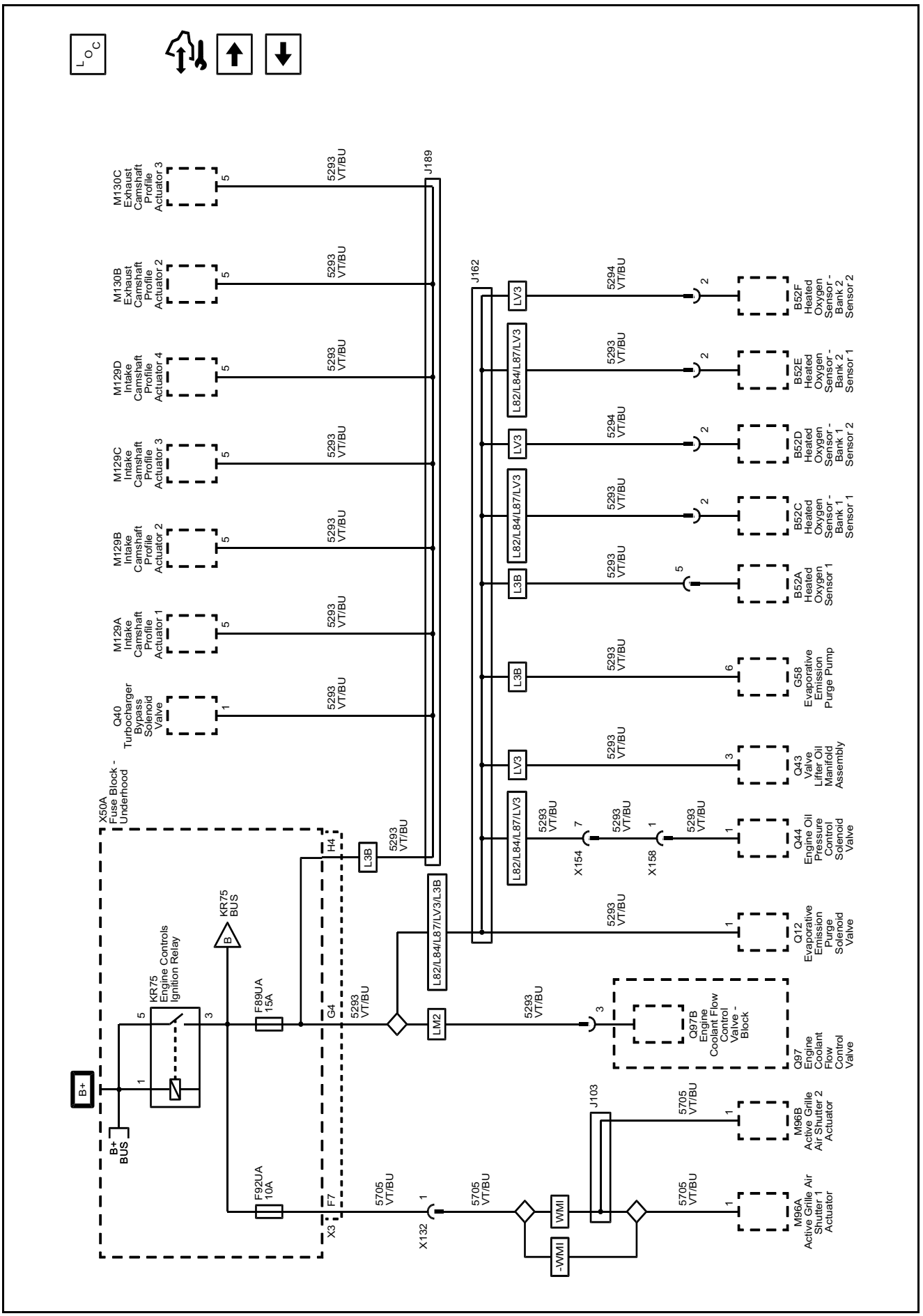
## Power Distribution Schematics (F60UA, F67UA, F85UA, F86UA, and F88UA Fuses)



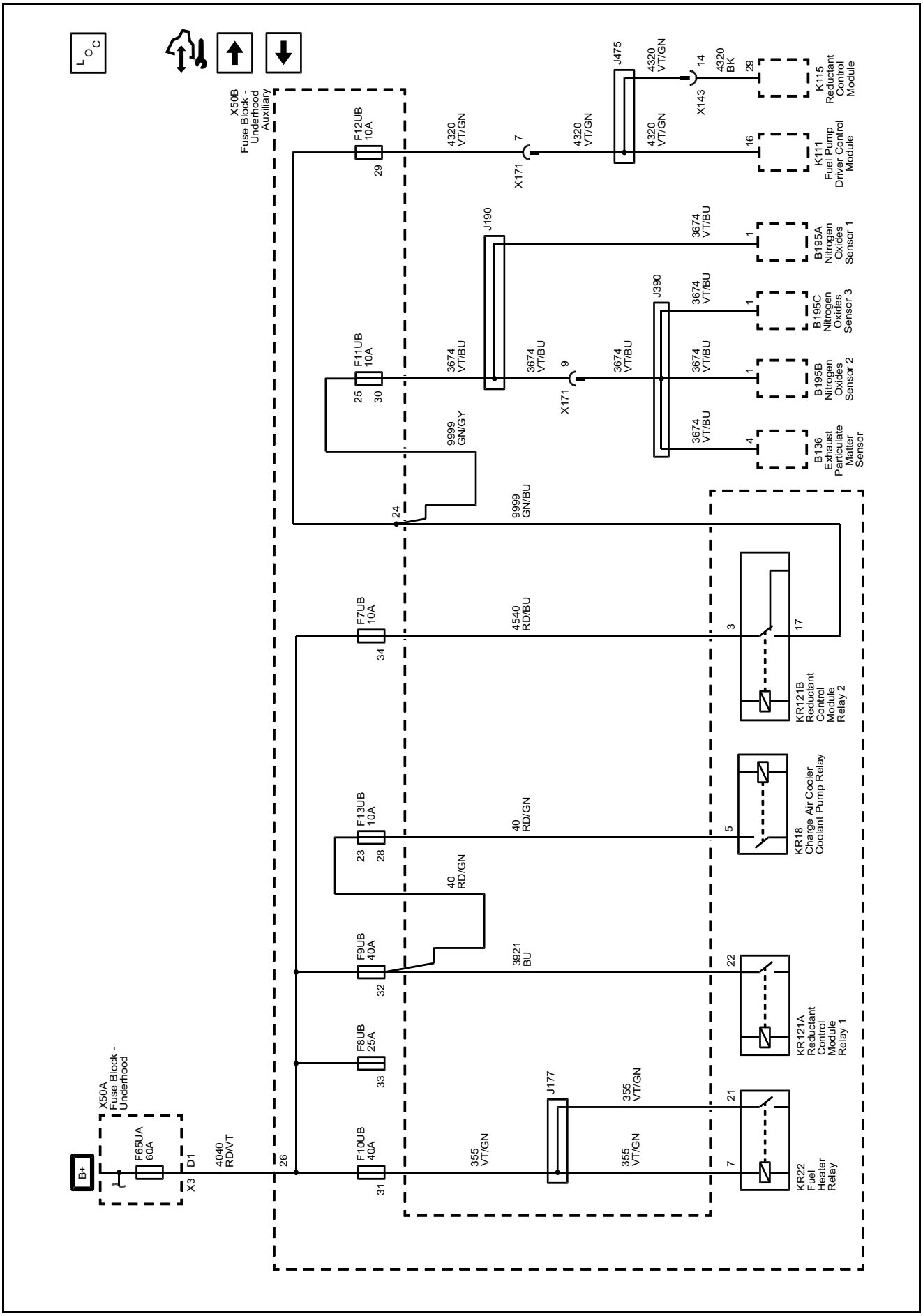
## Power Distribution Schematics (F87UA, F90UA, and F91UA Fuses)



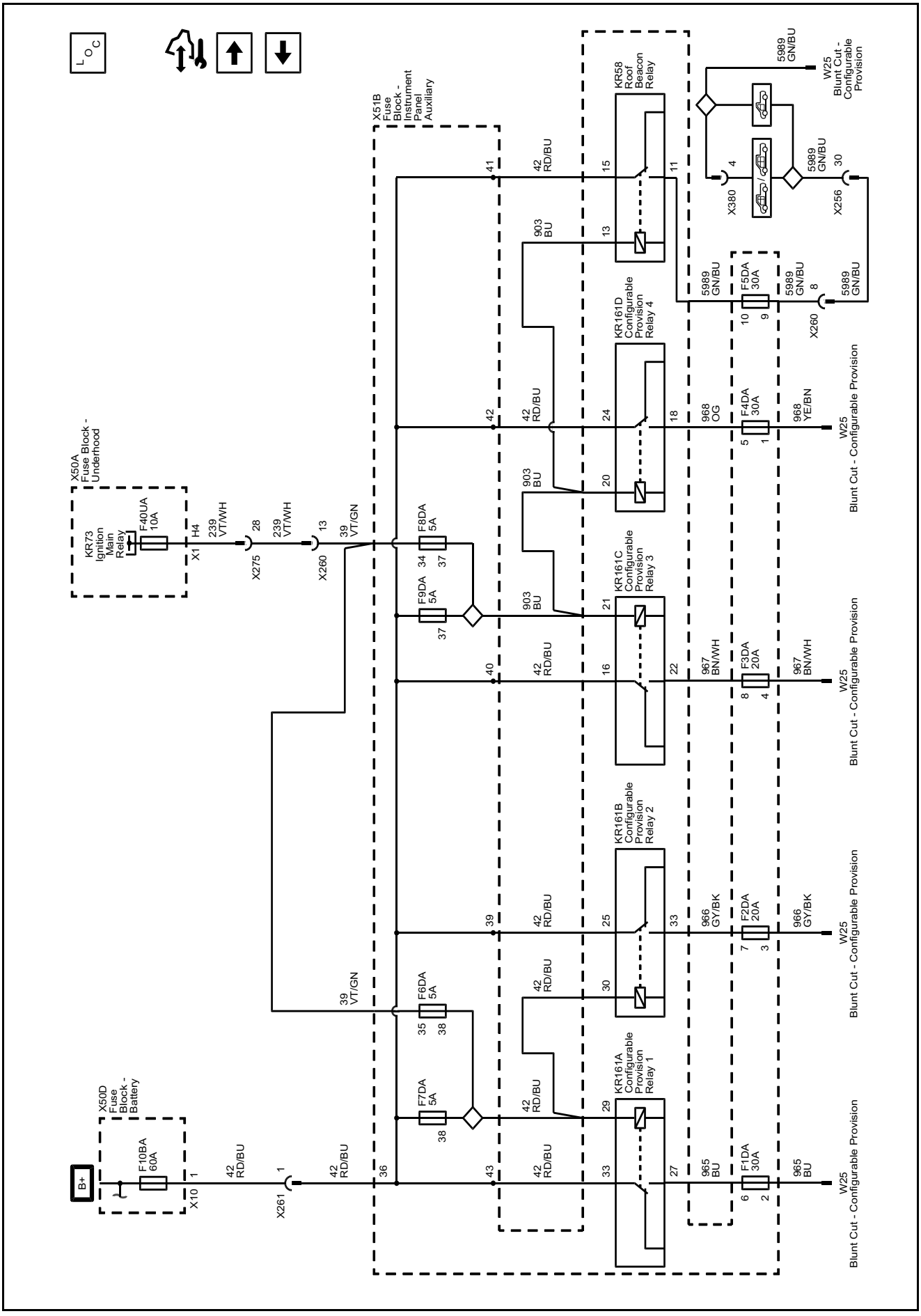
## Power Distribution Schematics (F89UA and F92UA Fuses)



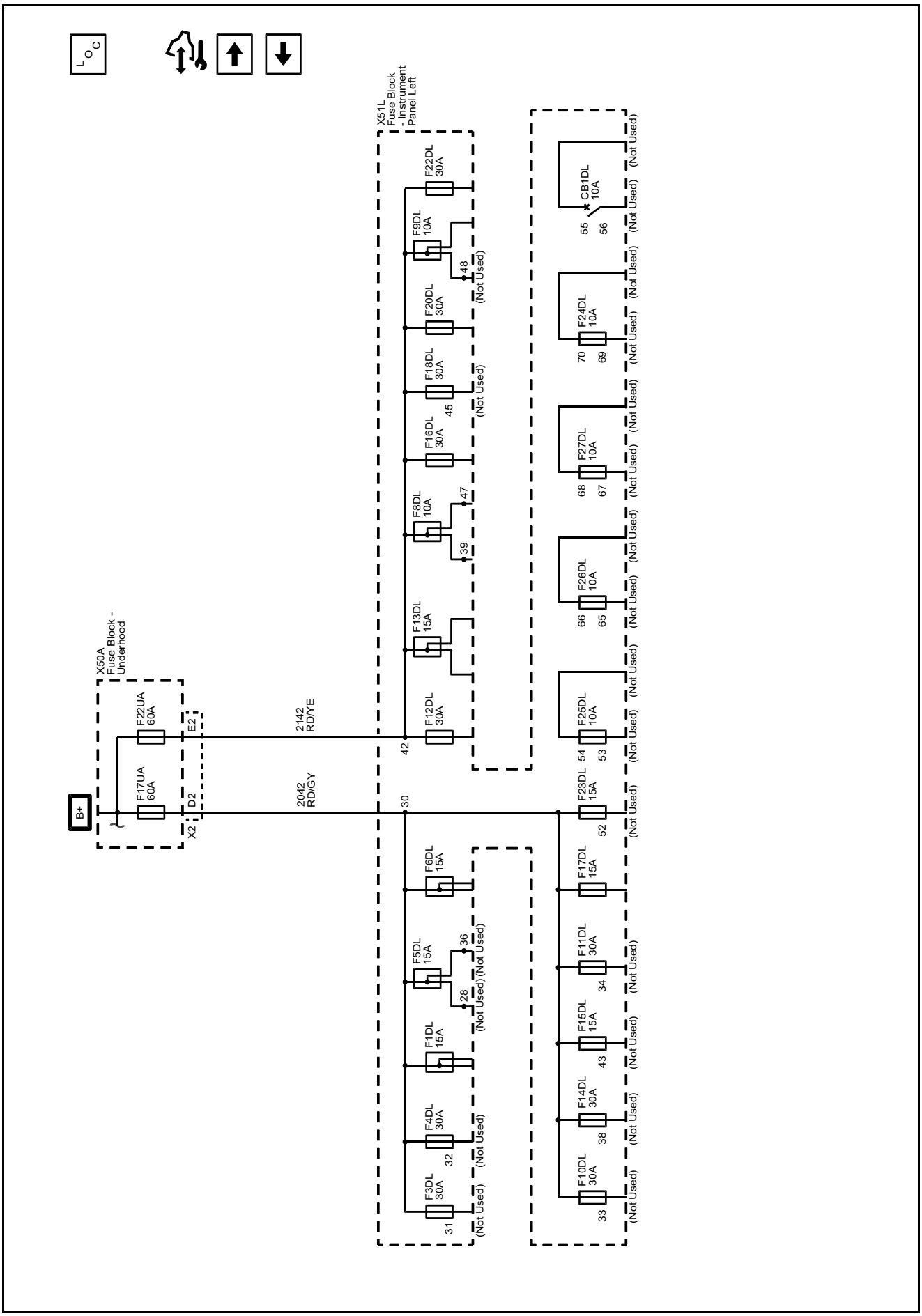
## Power Distribution Schematics (Auxiliary Underhood Fuse Block (LM2))



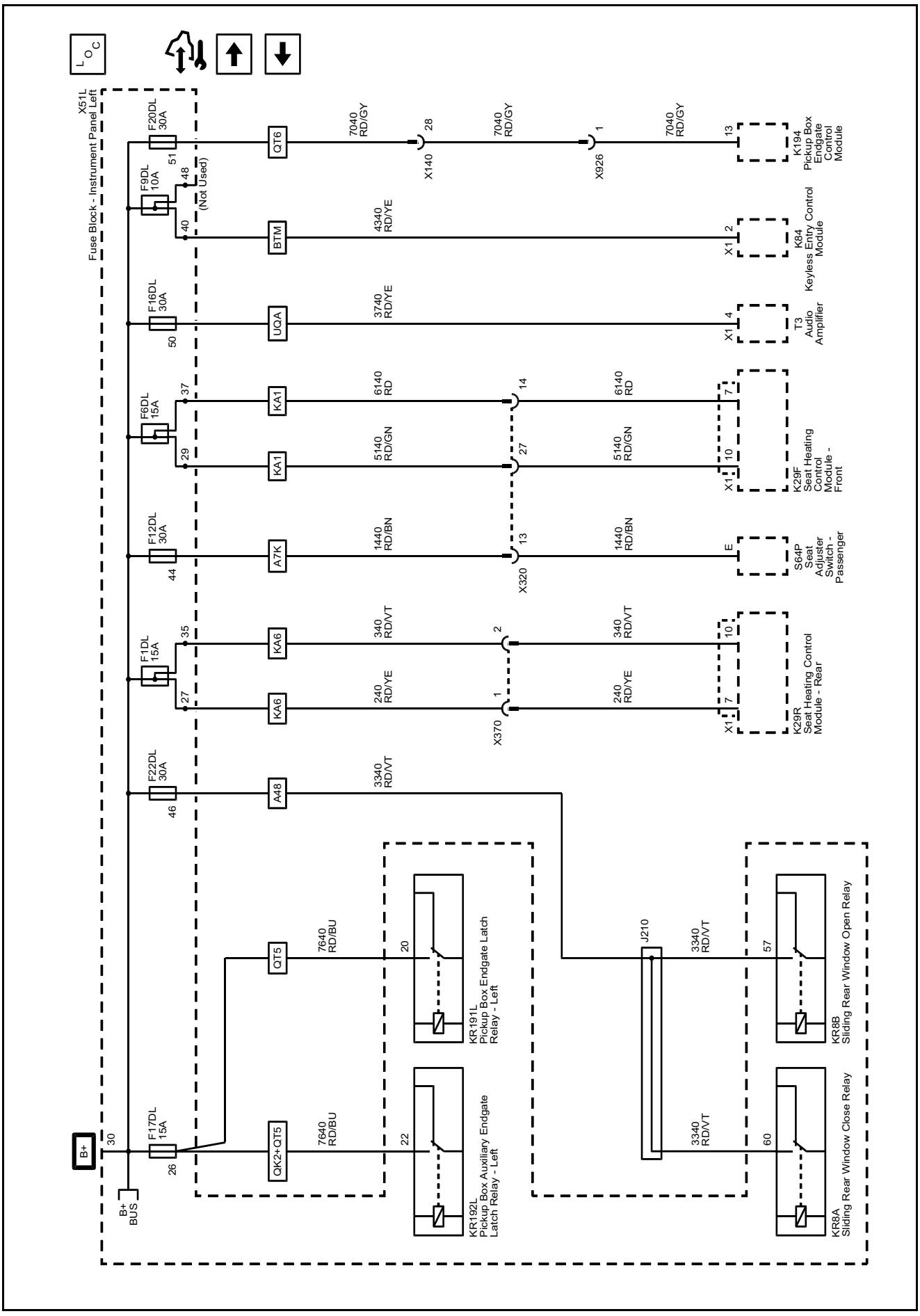
## Power Distribution Schematics (Auxiliary Instrument Panel Fuse Block (9L7))



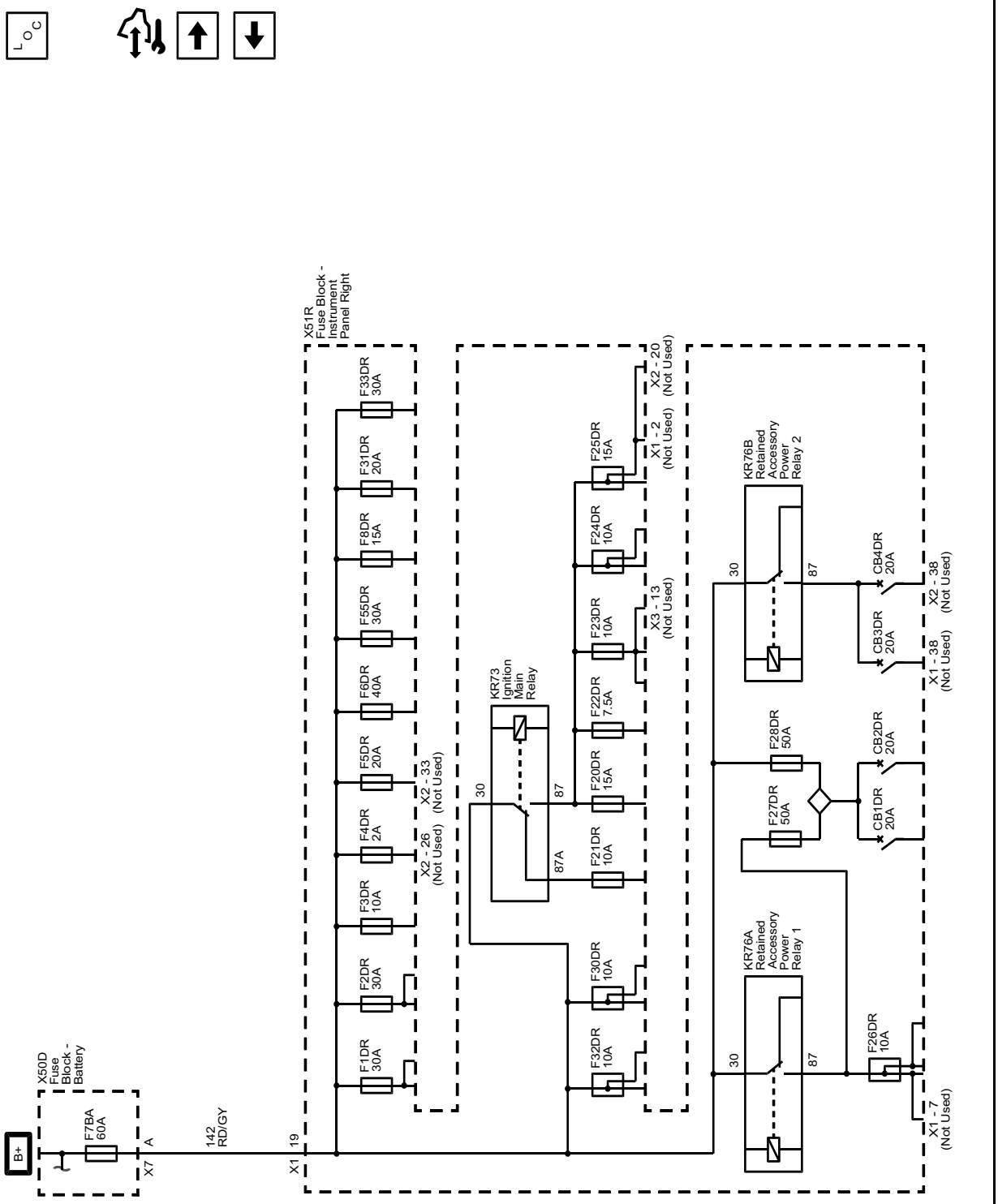
## Power Distribution Schematics (Instrument Panel Fuse Block Bussing - Left)



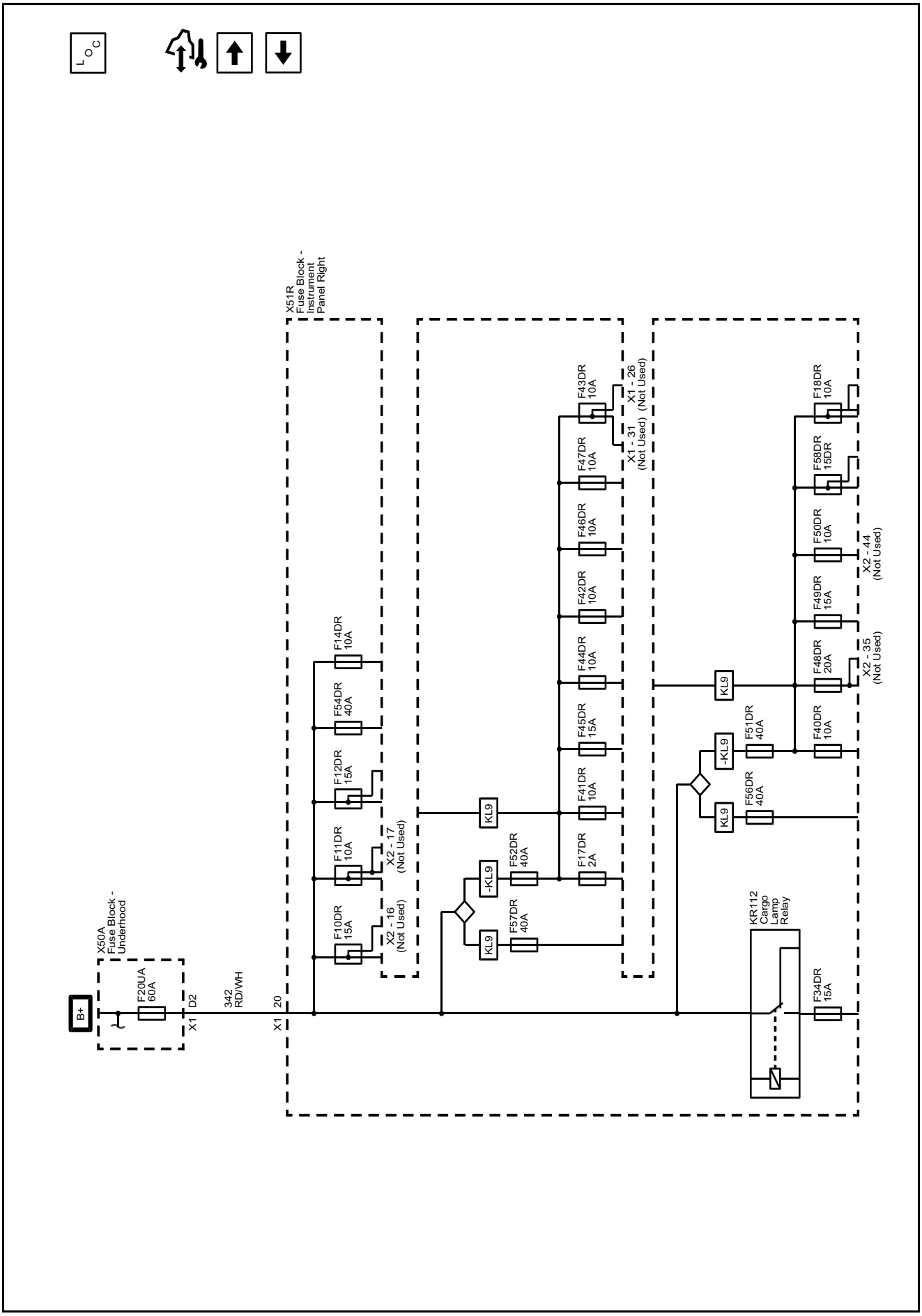
## Power Distribution Schematics (F1DL, F8DL, F9DL, F12DL, F16DL, F17DL, F20DL, and F22DL Fuses)



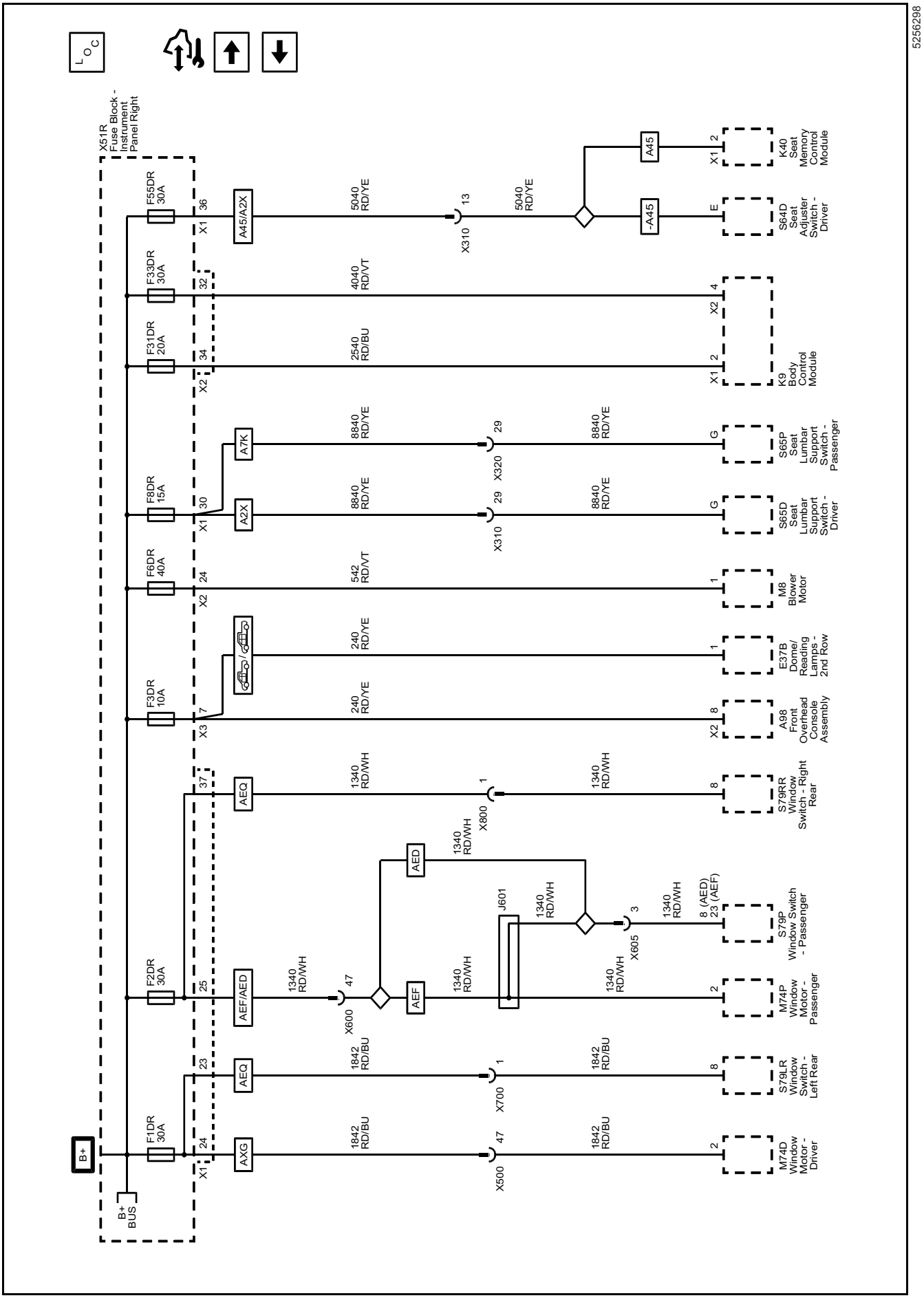
## Power Distribution Schematics (Instrument Panel Fuse Block Bussing - Right (1 of 2))



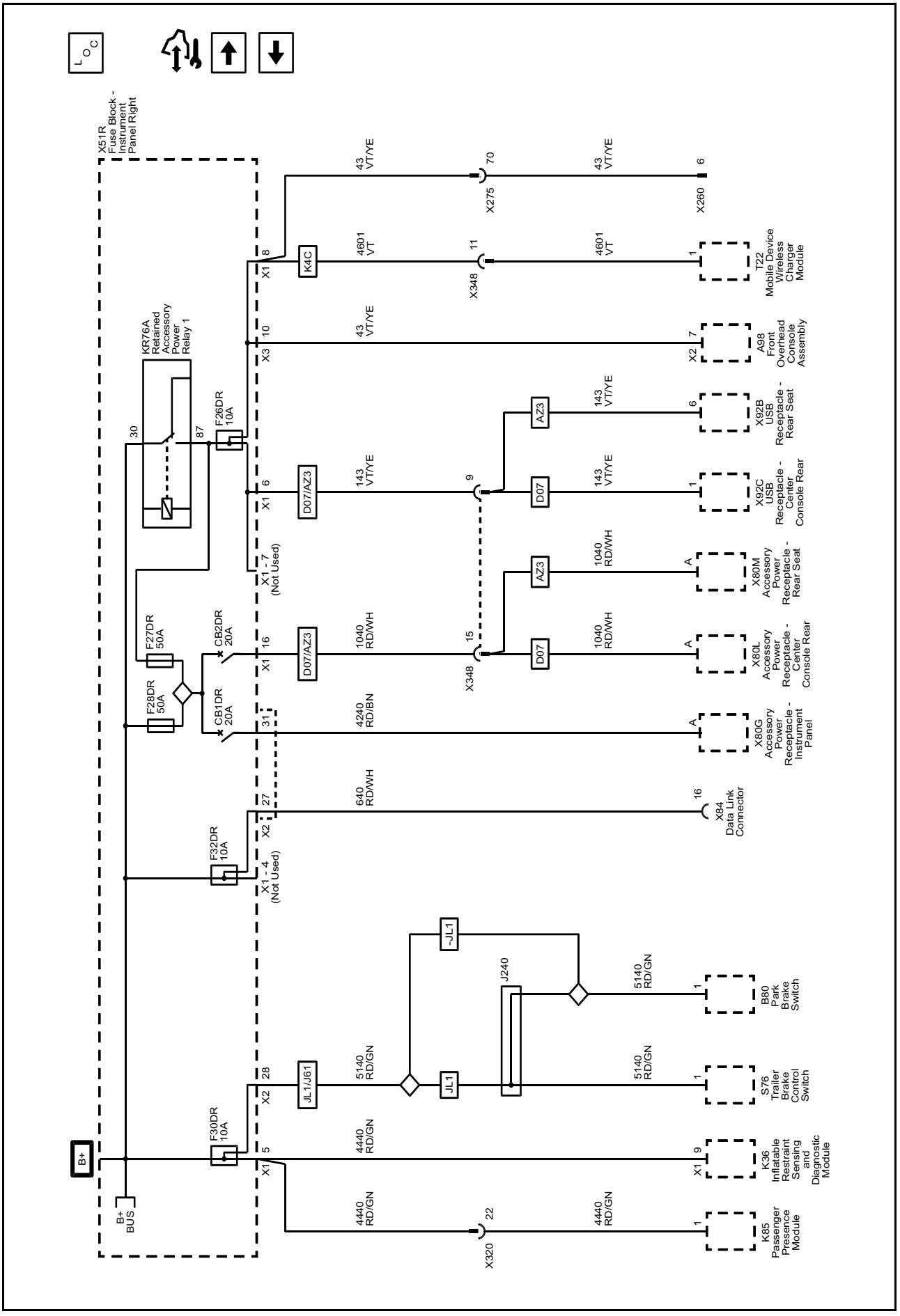
## Power Distribution Schematics (Instrument Panel Fuse Block Bussing - Right (2 of 2))



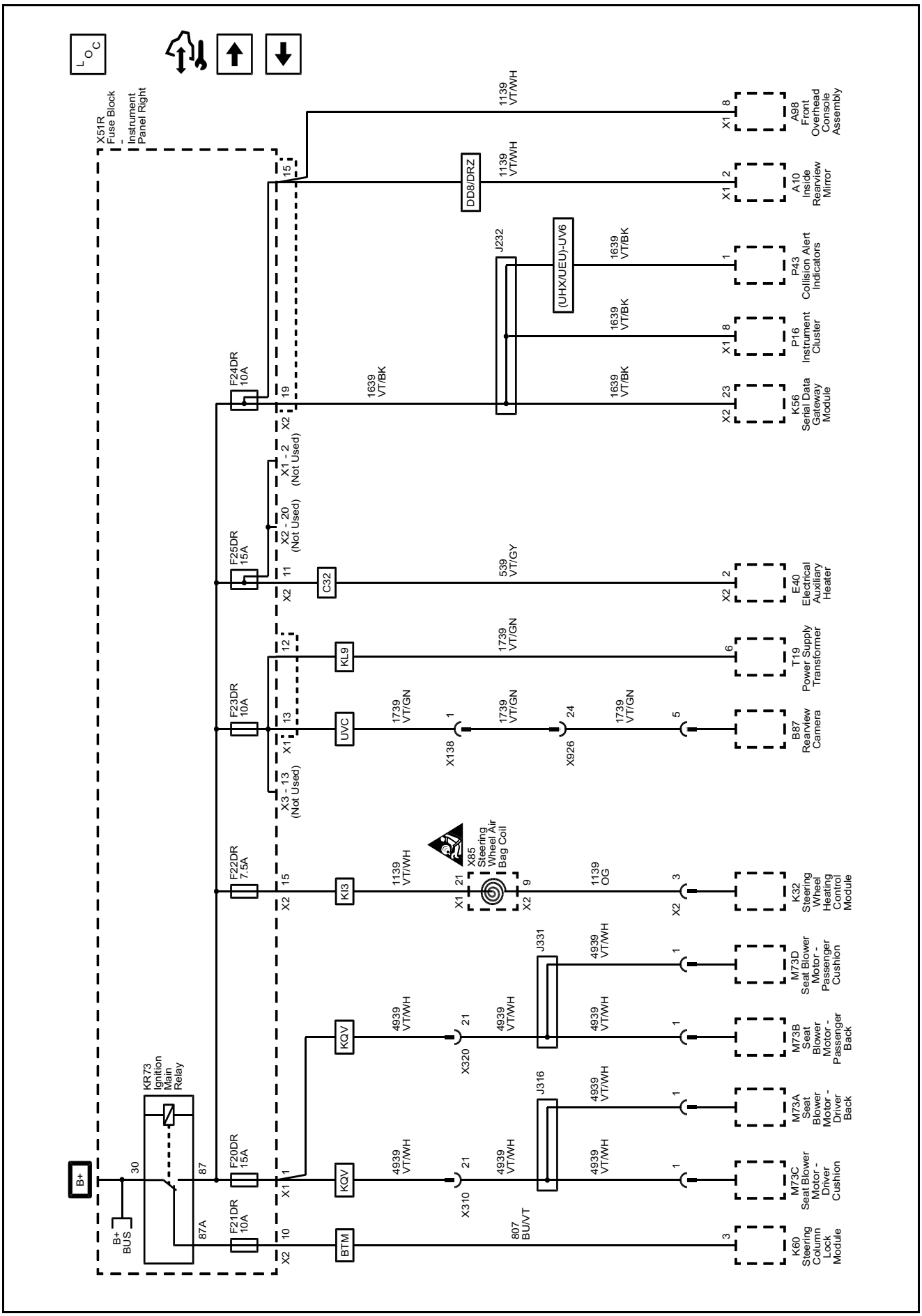
## Power Distribution Schematics (F1DR, F2DR, F3DR, F6DR, F8DR, F31DR, F33DR, and F55DR Fuses)



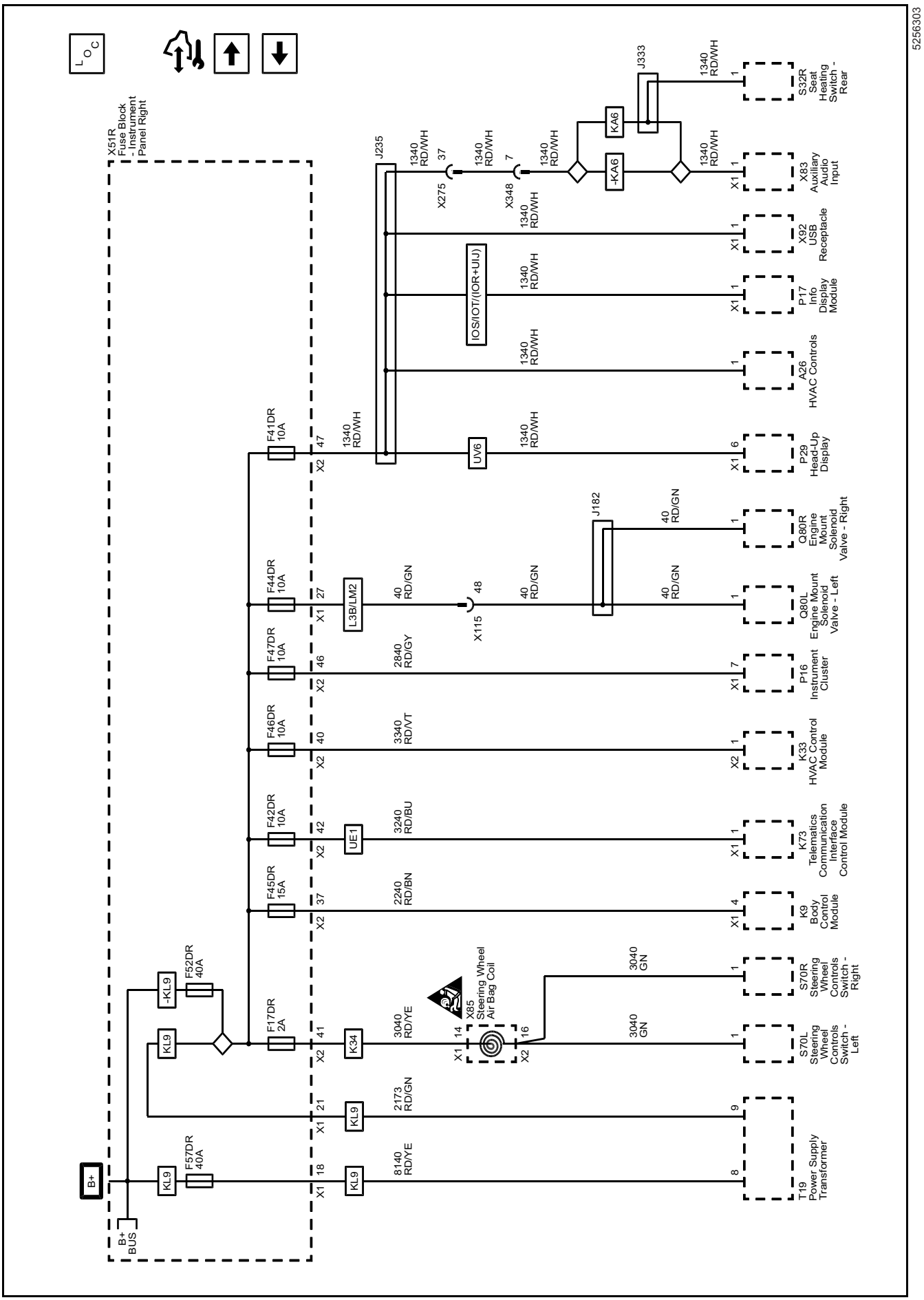
## Power Distribution Schematics (CB1DR and CB2DR Circuit Breakers, F26DR, F27DR, F28DR, 30DR. and F32DR Fuses)



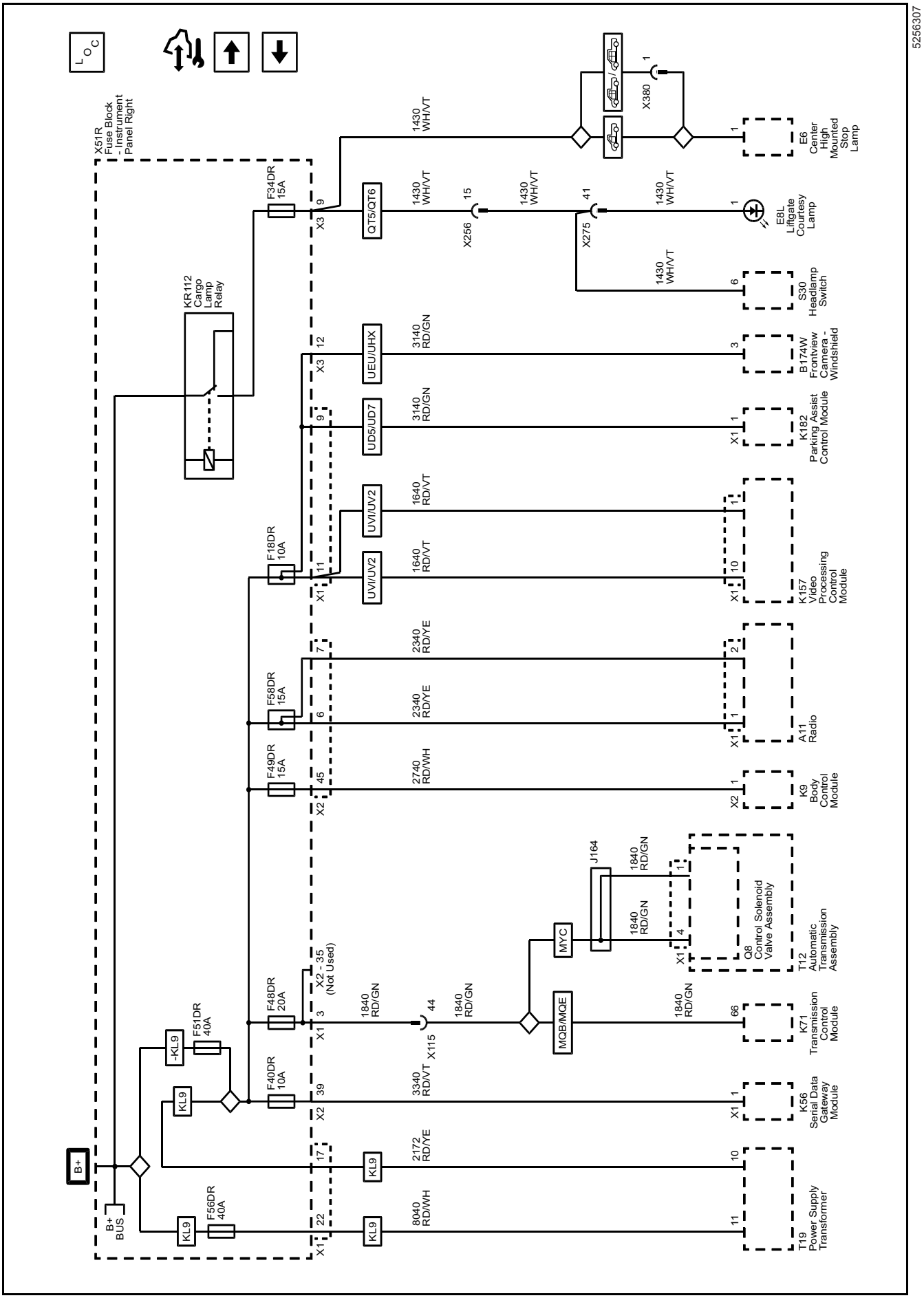
## Power Distribution Schematics (F20DR, F21DR, F22DR, F23DR, F24DR, and F25DR Fuses)



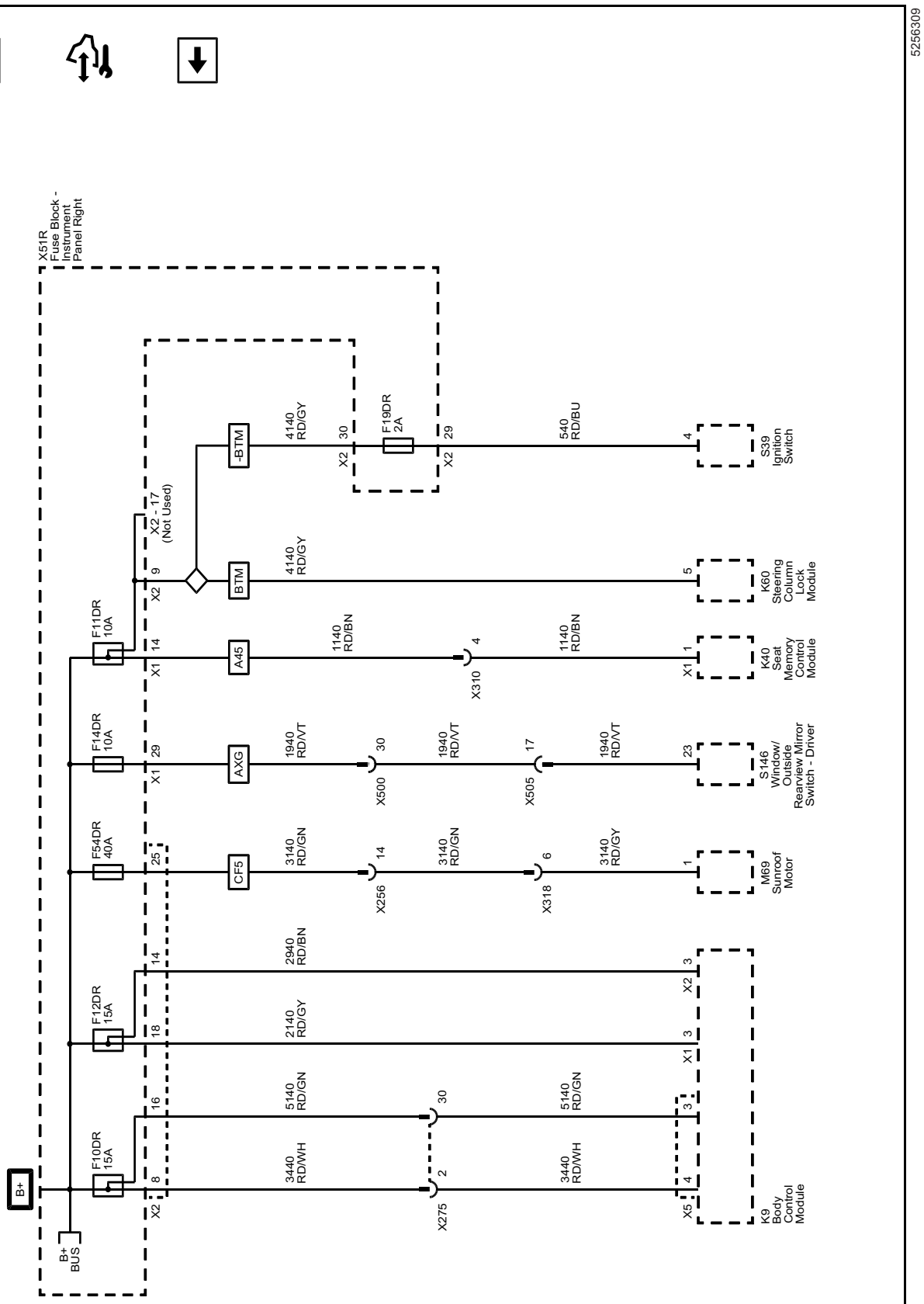
## Power Distribution Schematics (F17DR, F41DR, F42DR, F44DR, F45DR, F46DR, F47DR, F52DR, and F57DR Fuses)



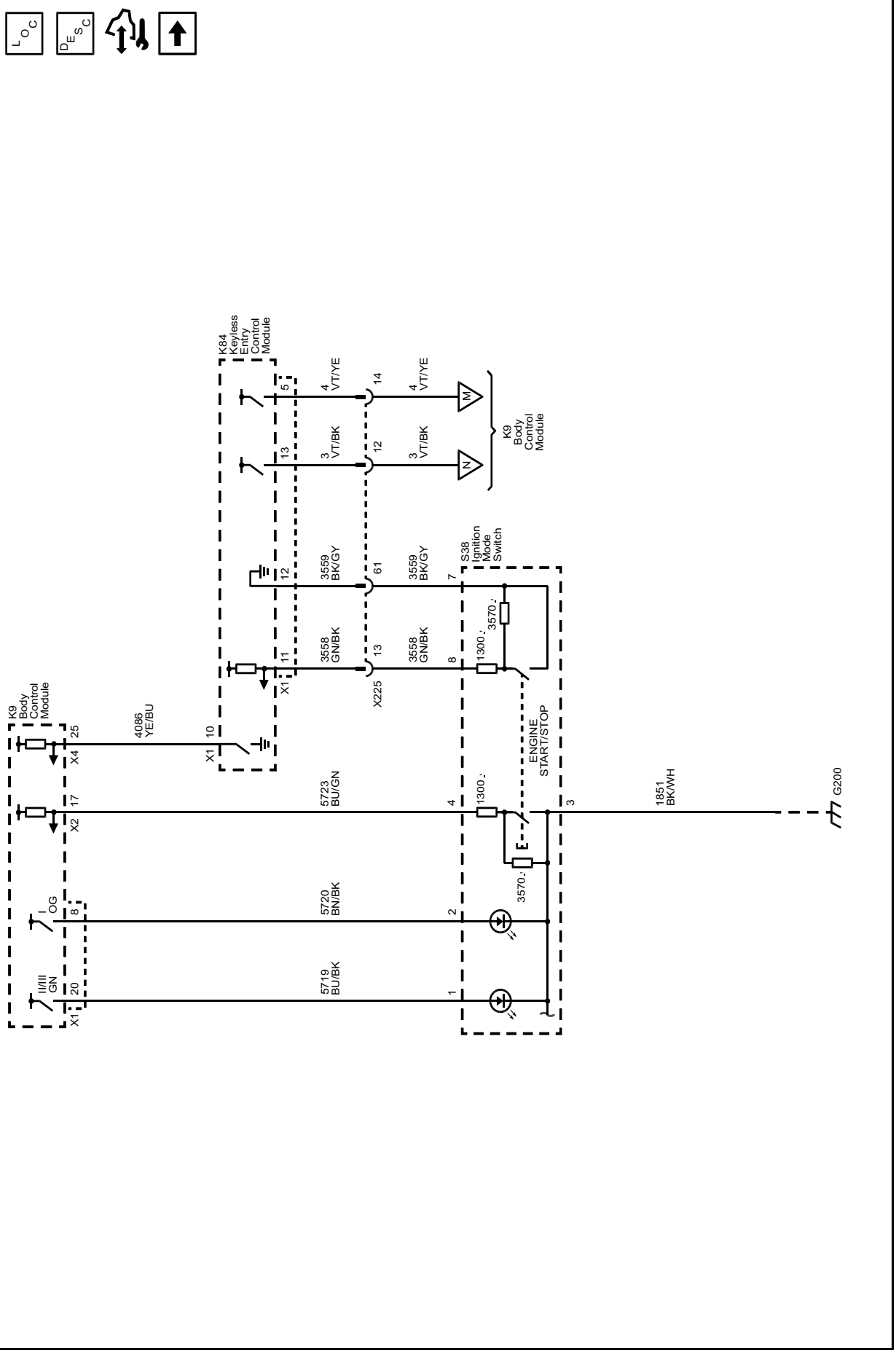
## Power Distribution Schematics (F18DR, F34DR, F40DR, F48DR, F49DR, F51DR, F56DR, and F58DR Fuses)



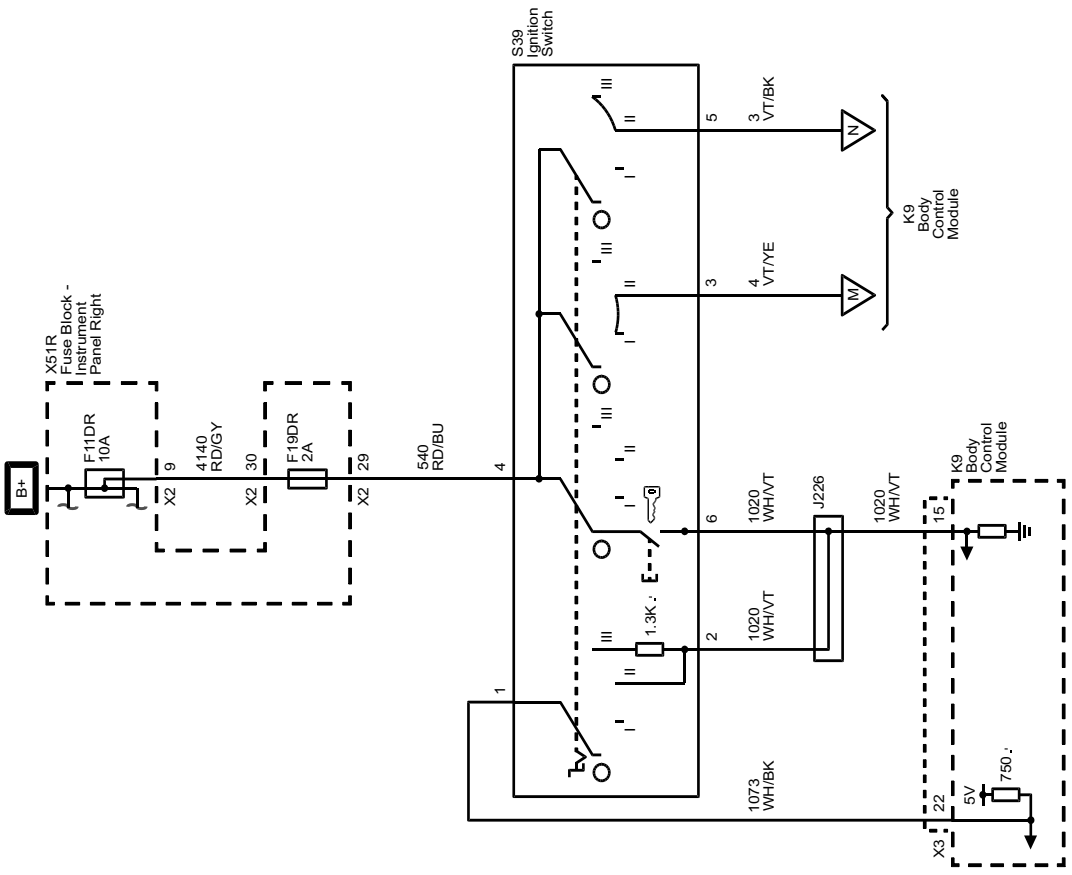
## Power Distribution Schematics (F10DR, F11DR, F12DR, F14DR, F19DR, and F54DR Fuses)



## Power Moding Schematics (Ignition Mode Switch (BTM))

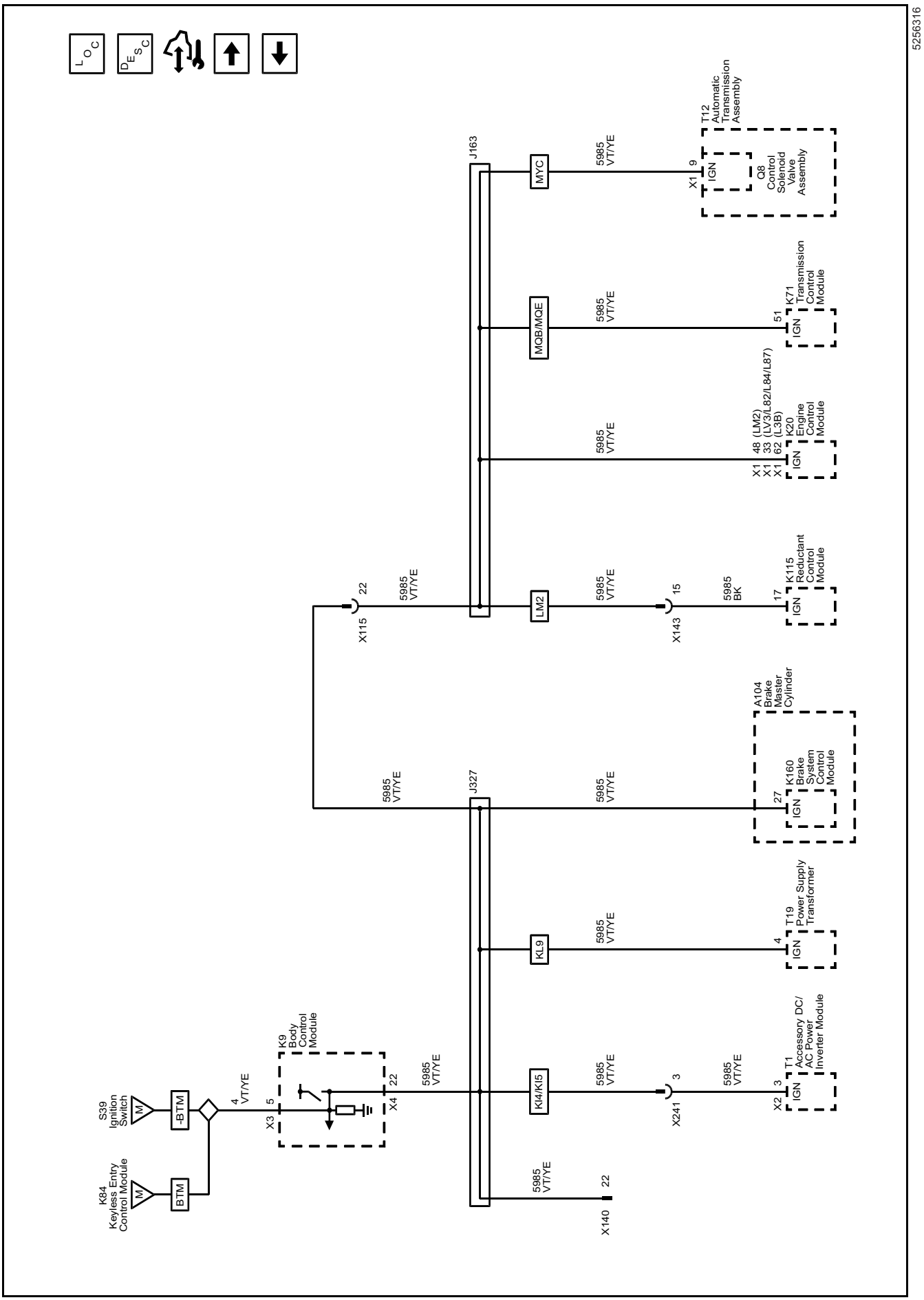


## Power Moding Schematics (Ignition Switch (without BTM))

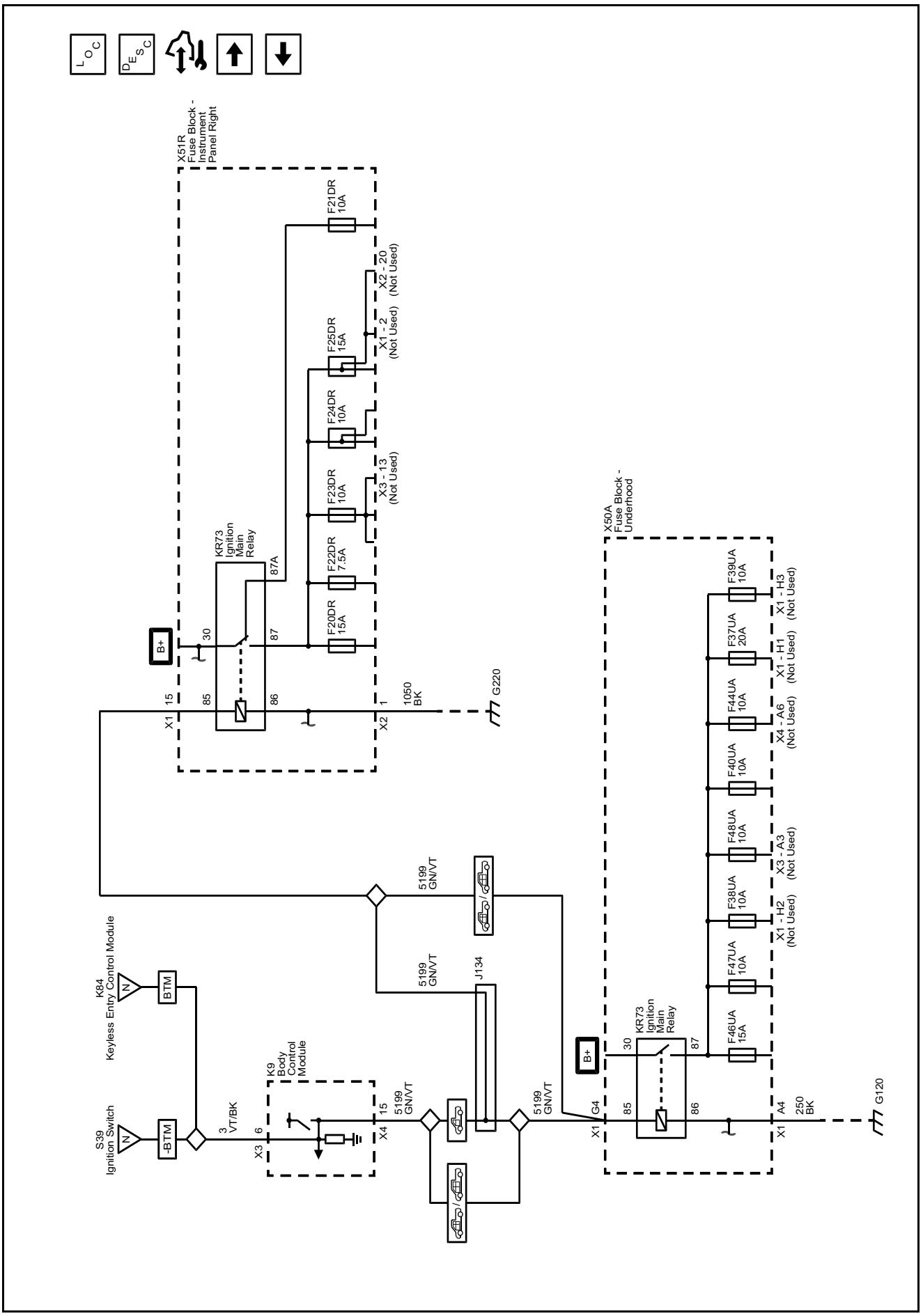



5256312

## Power Moding Schematics (Accessory Wakeup)

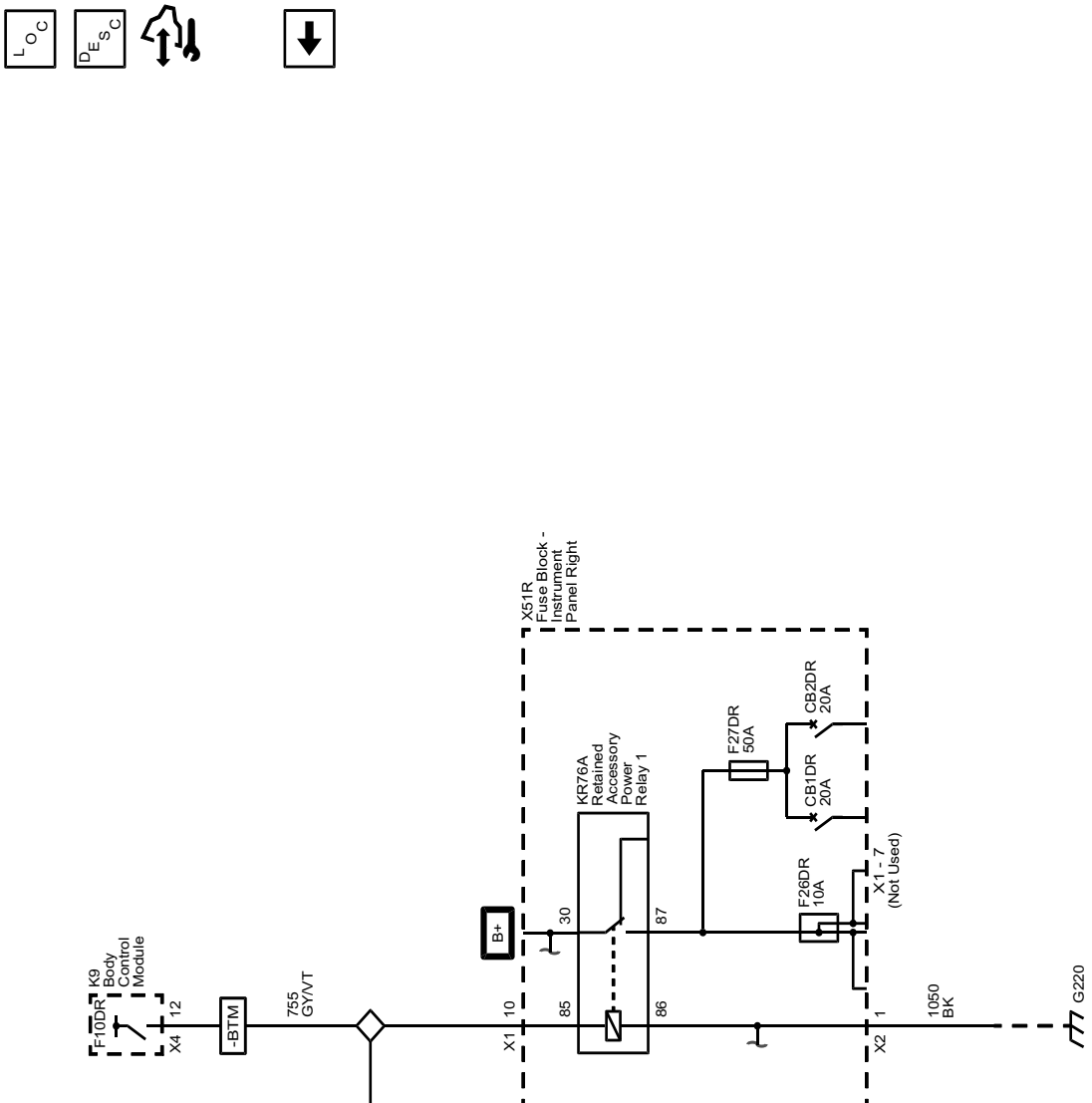


## Power Moding Schematics (Ignition Main Relays)



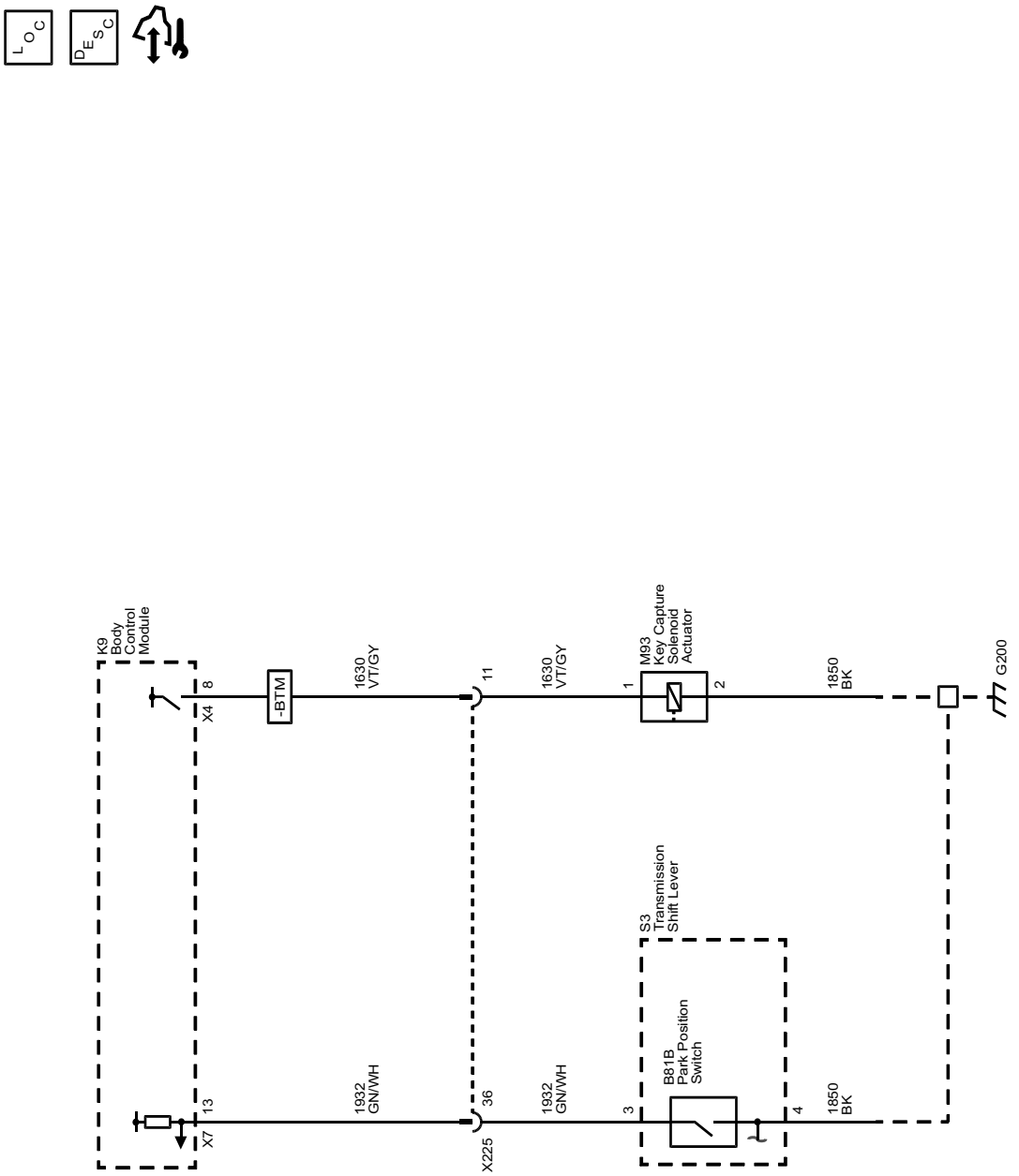

5256317

## Power Moding Schematics (Retained Accessory Power Relays)

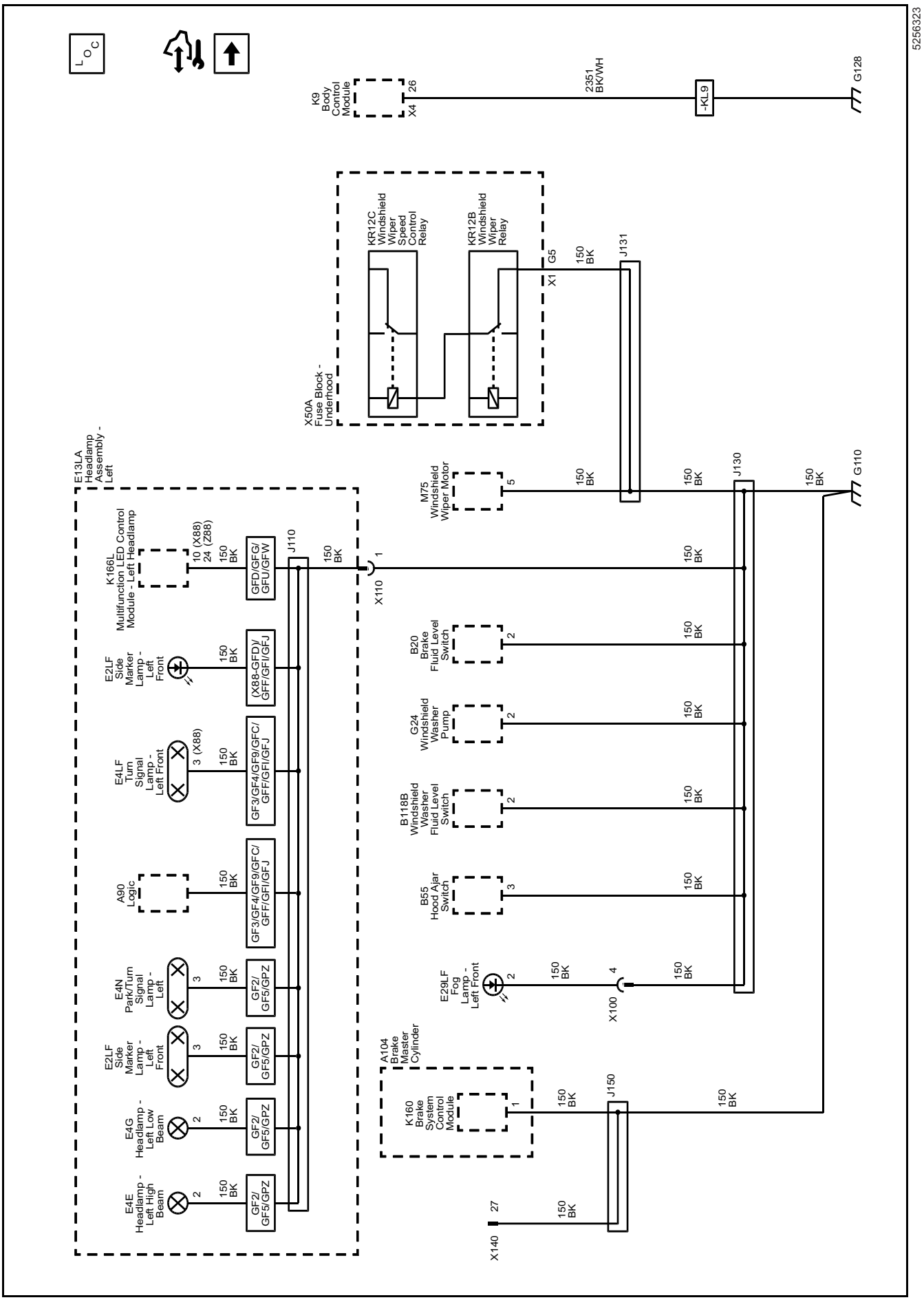



5256319

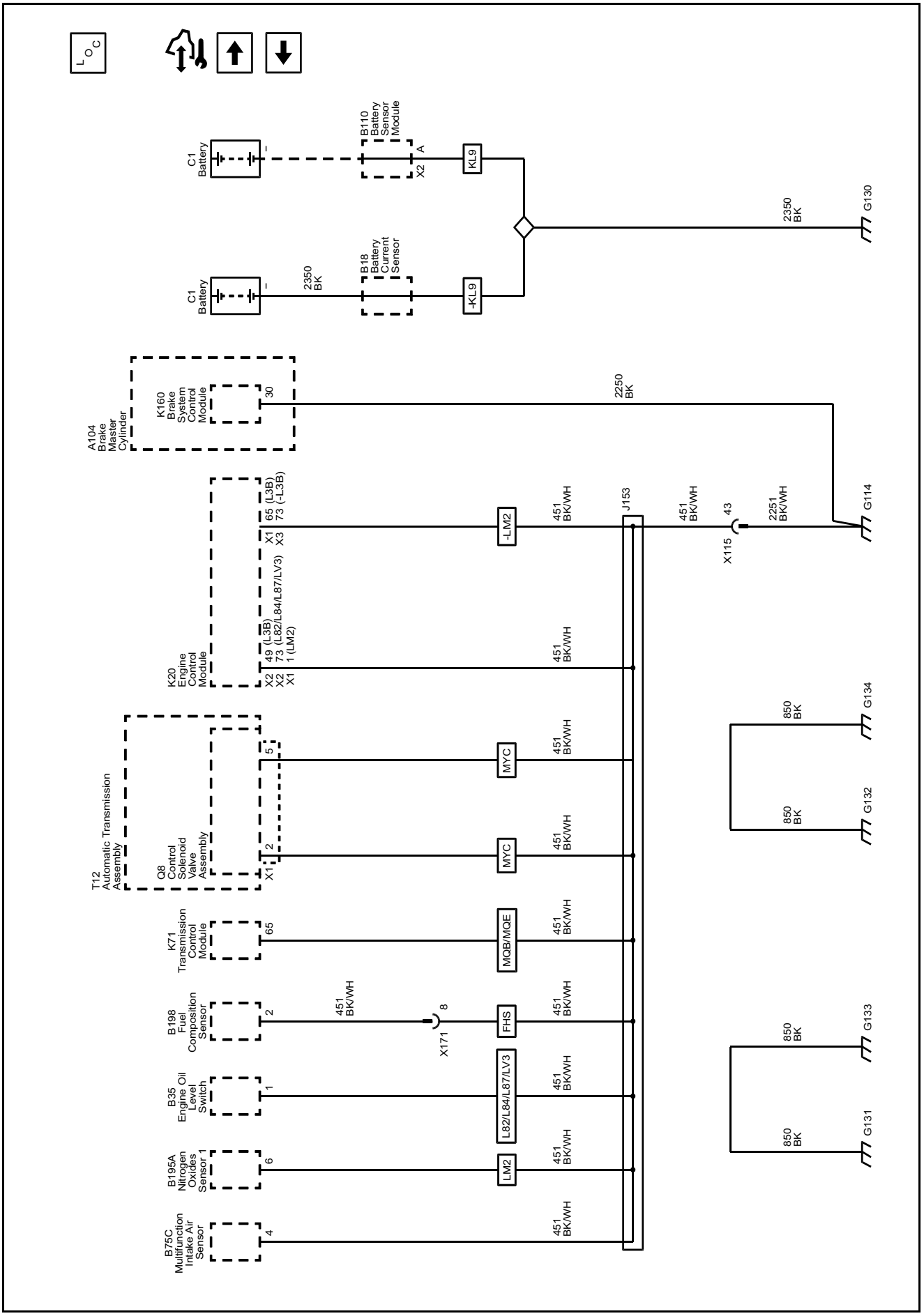
## Ignition Lock Schematics (Ignition Lock)



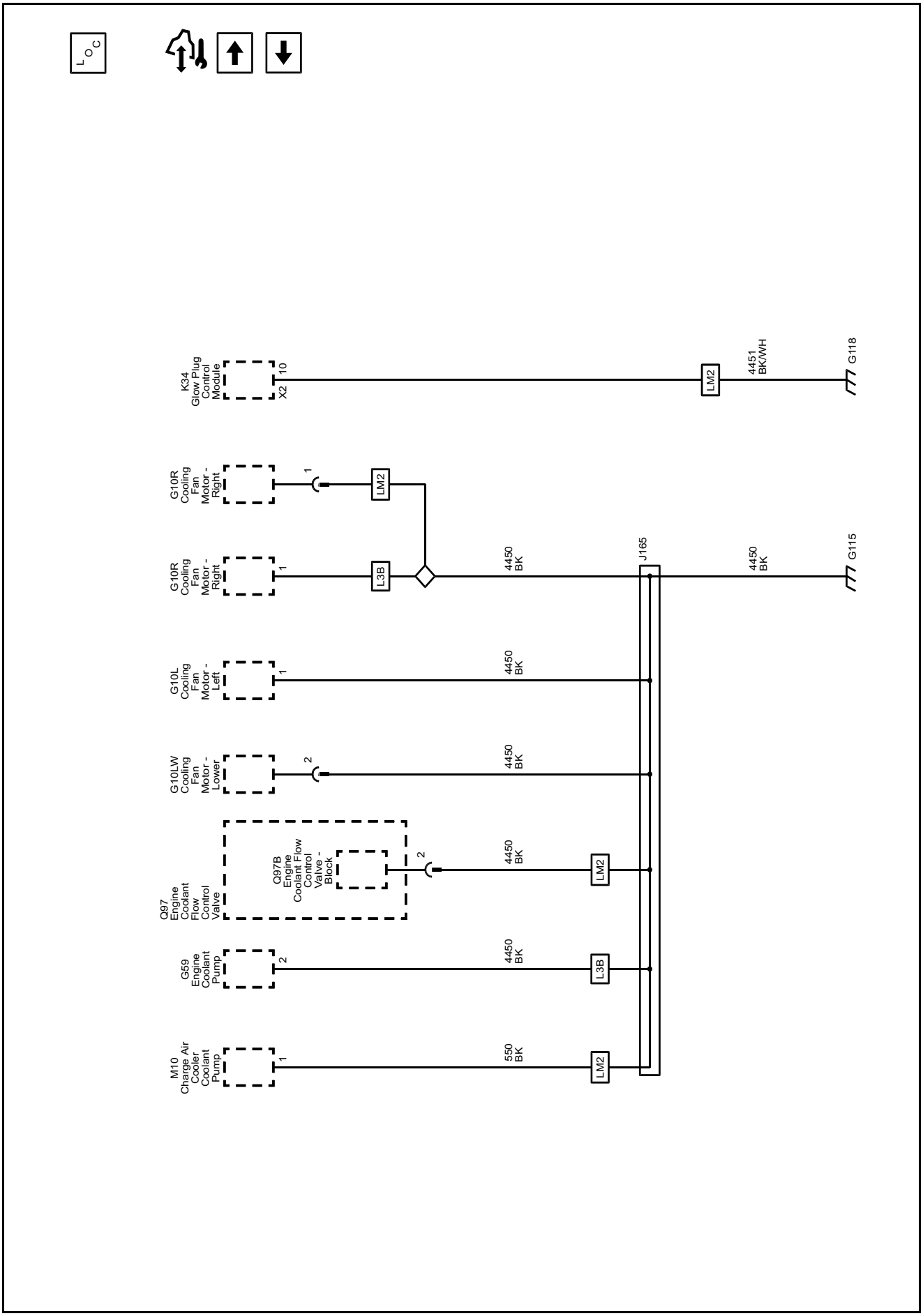
## Ground Distribution Schematics (G110 and G128)



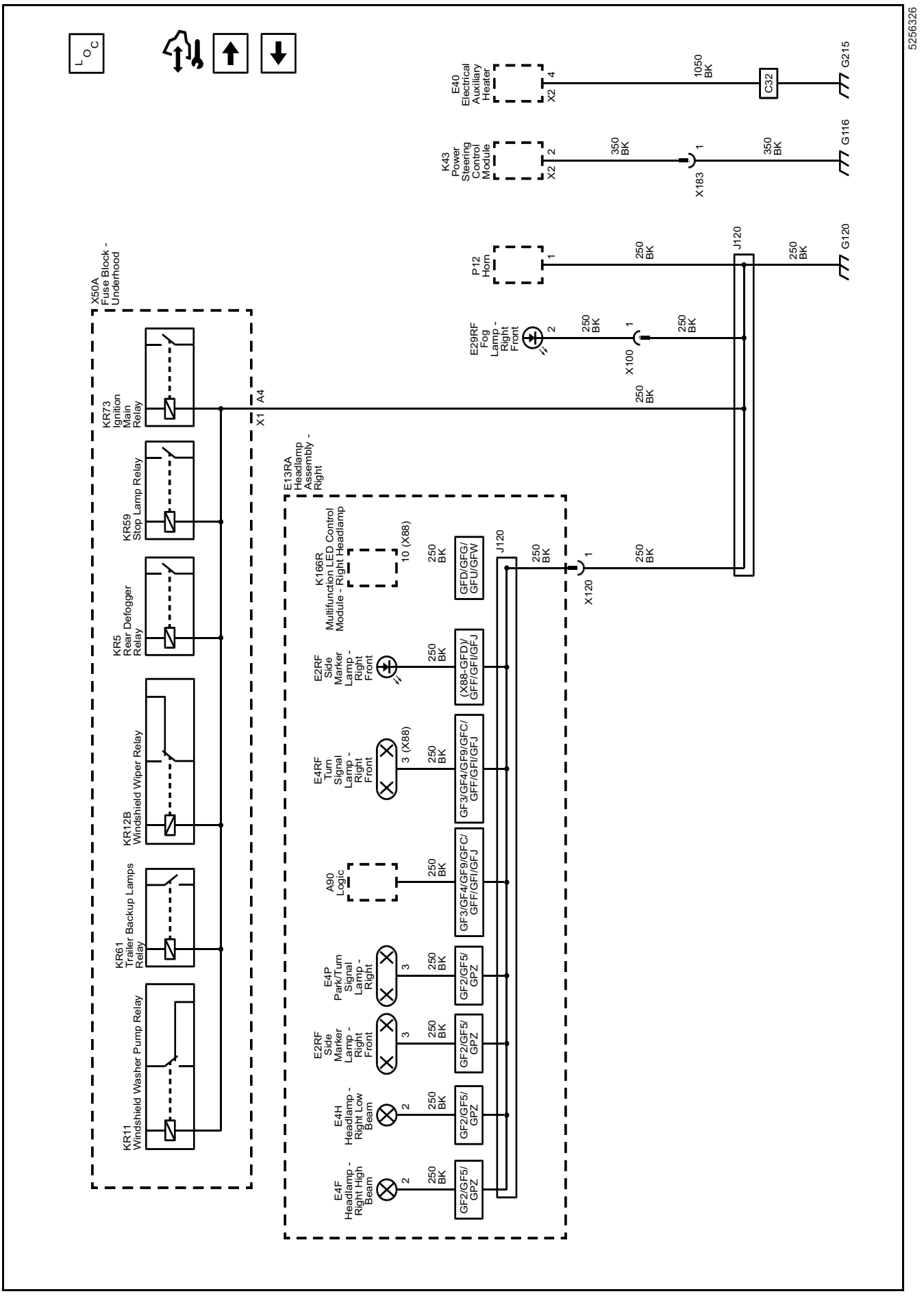
## Ground Distribution Schematics (G114, G130, G131, G132, G133, and G134)



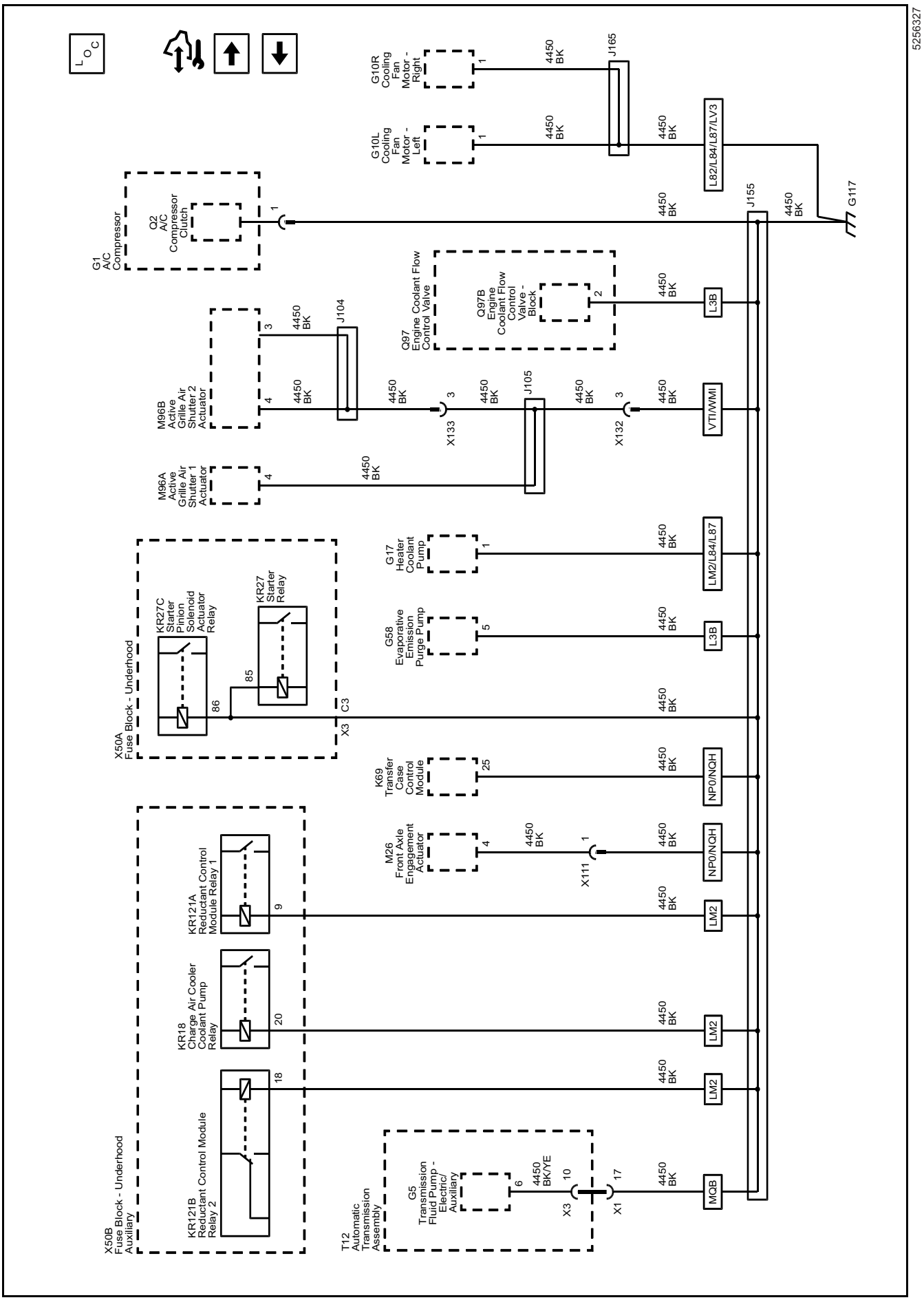
## Ground Distribution Schematics (G115 and G118 (L3B/LM2))



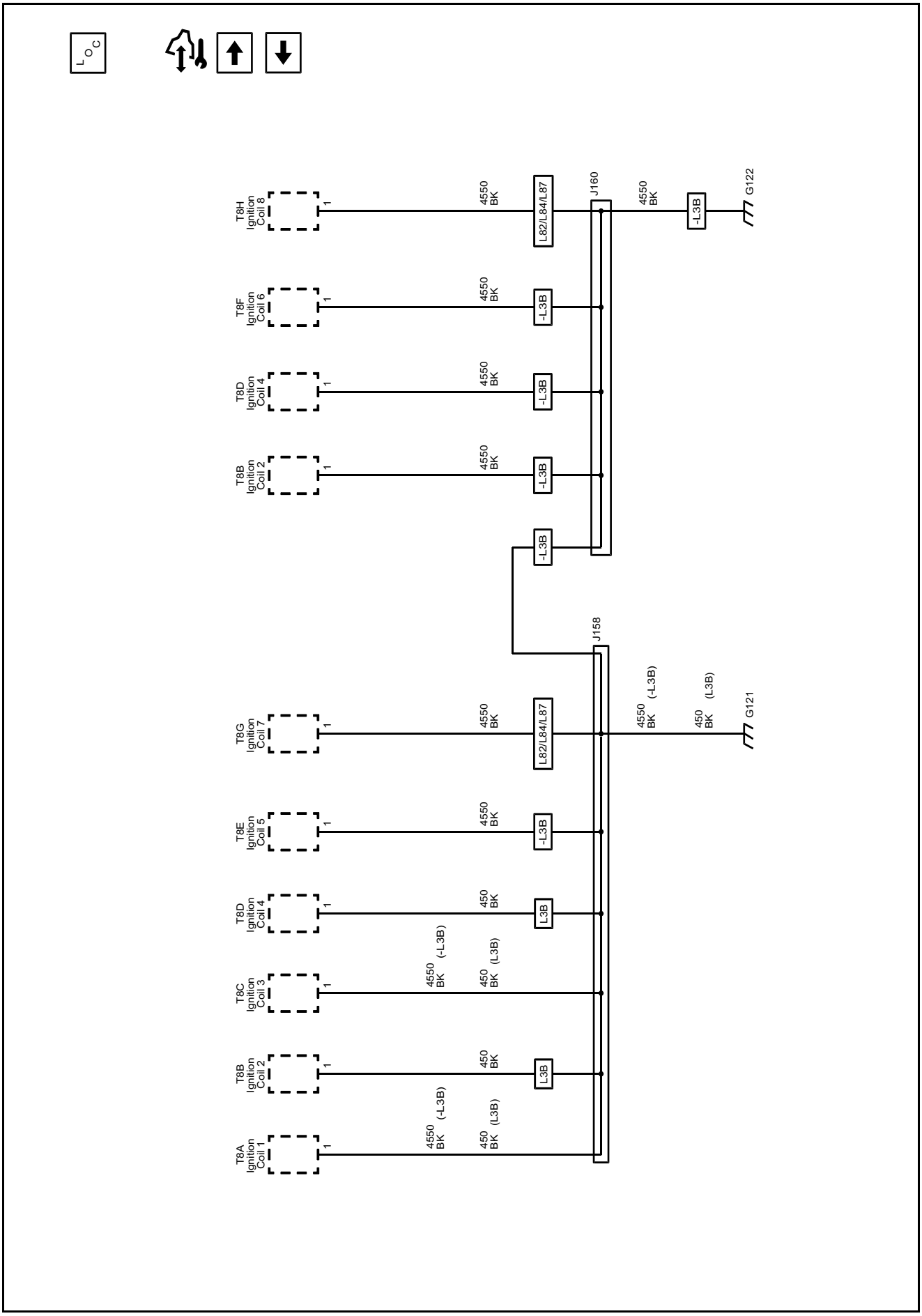
## Ground Distribution Schematics (G116, G120, and G215)



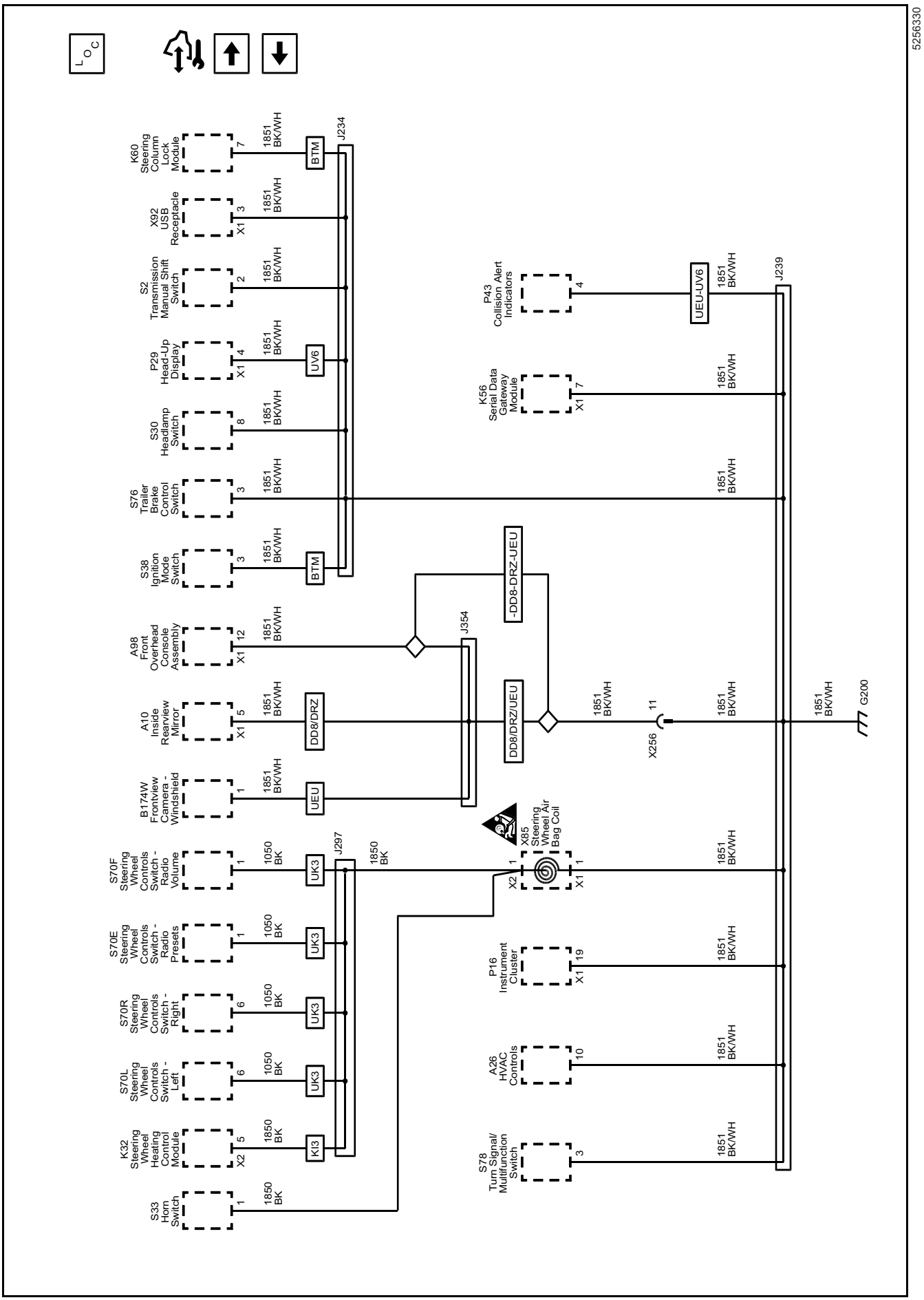
## Ground Distribution Schematics (G117)



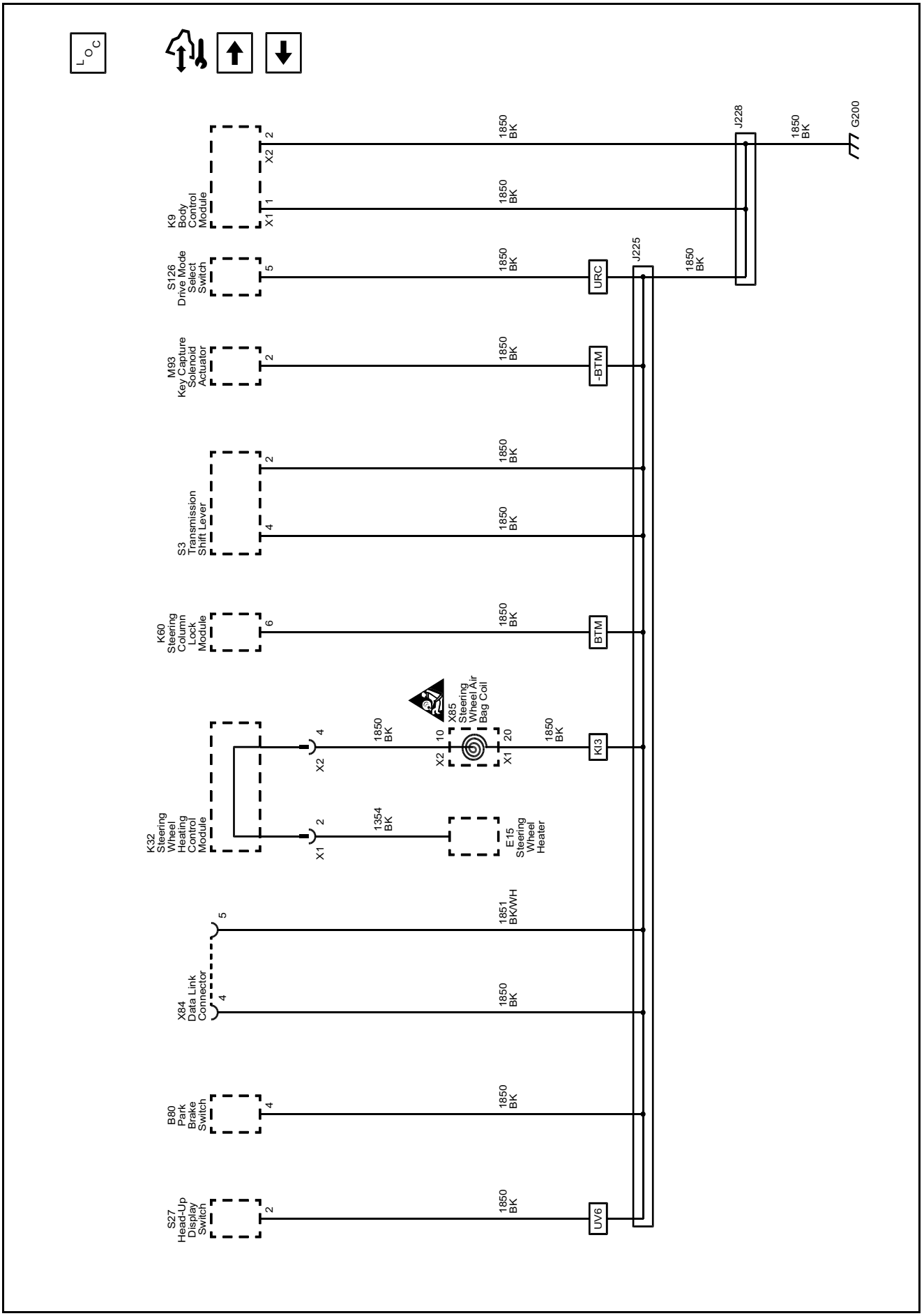
## Ground Distribution Schematics (G121 and G122 (-LM2))



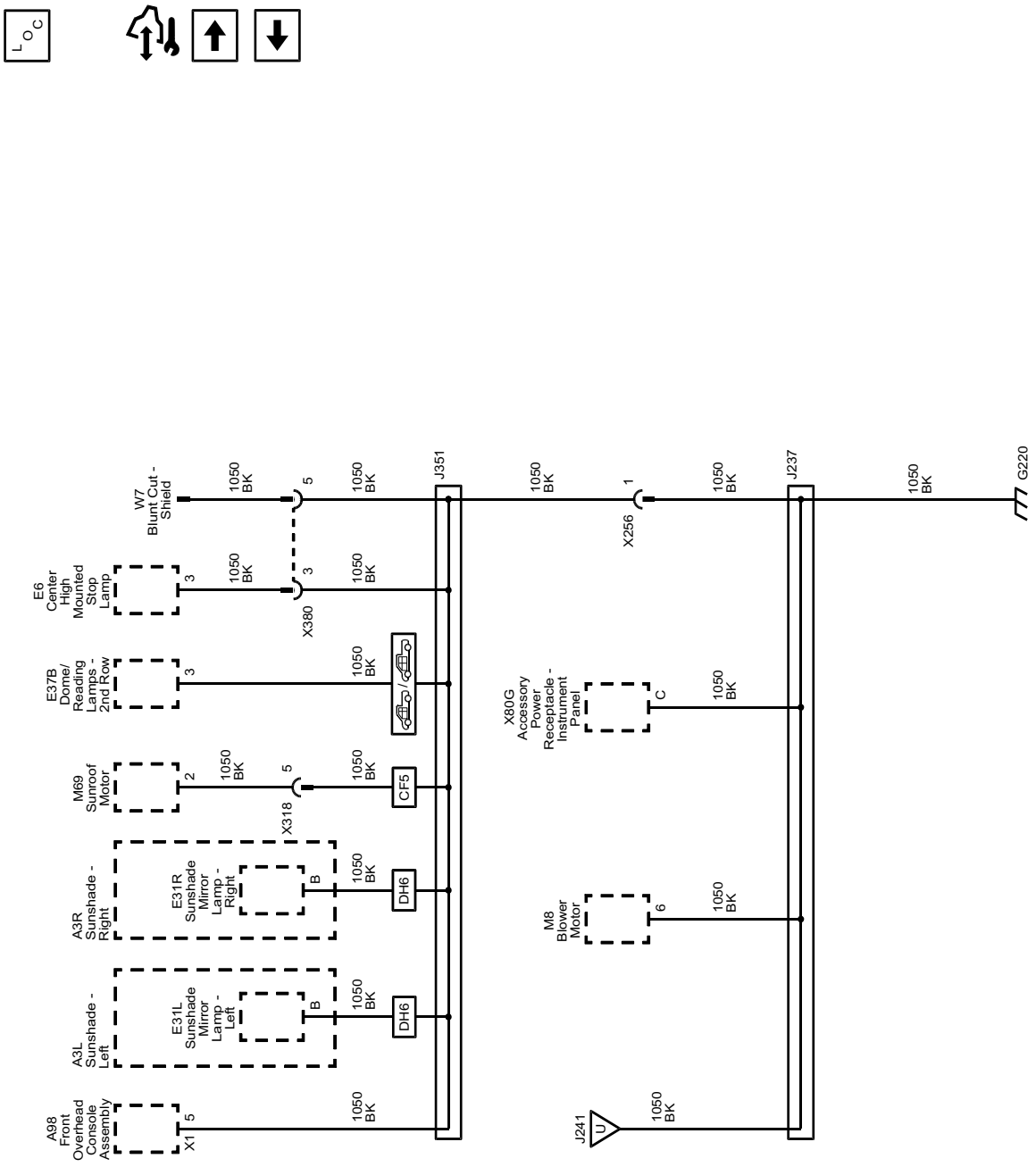
## Ground Distribution Schematics (G200 (1 of 2))



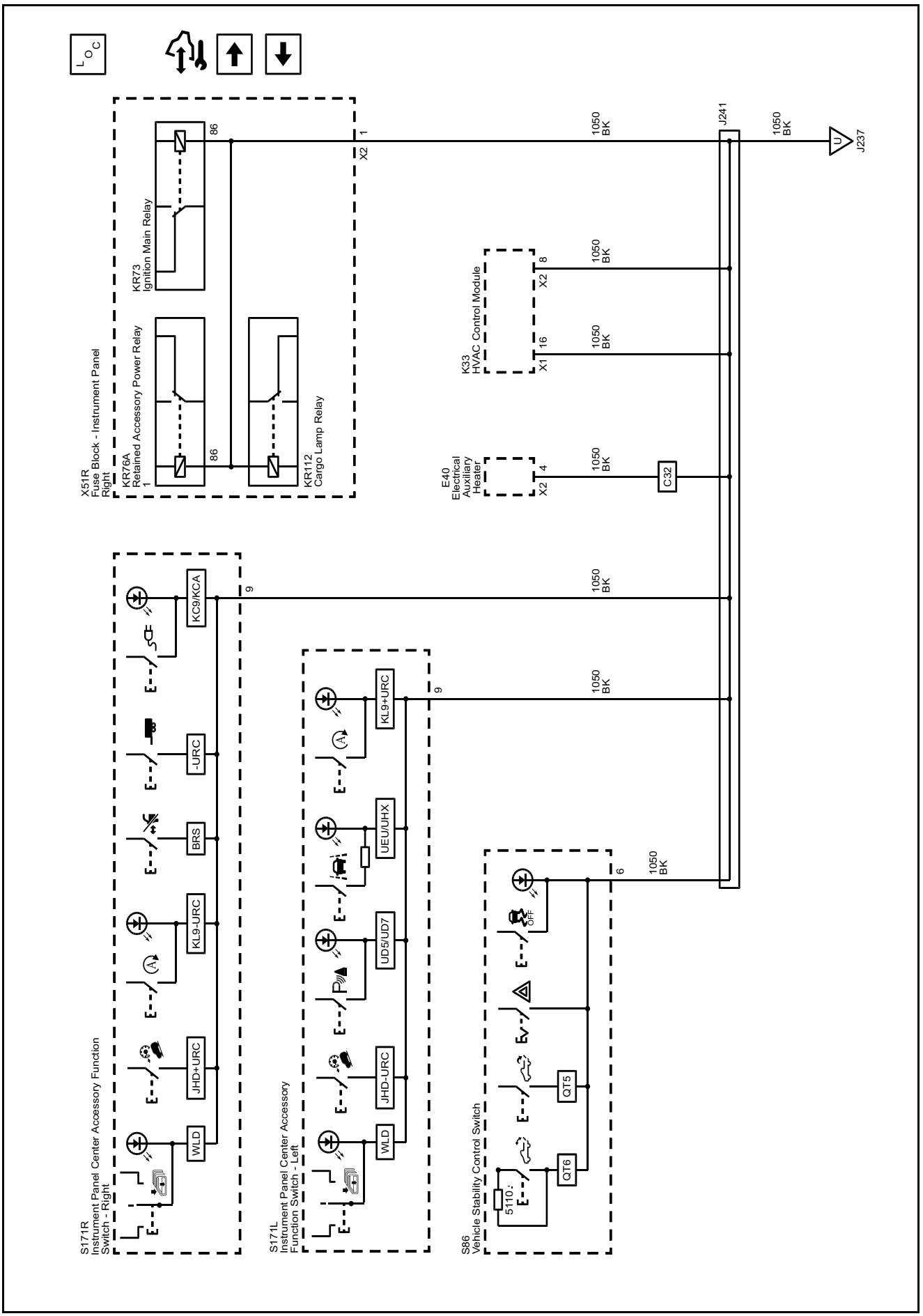
## Ground Distribution Schematics (G200 (2 of 2))



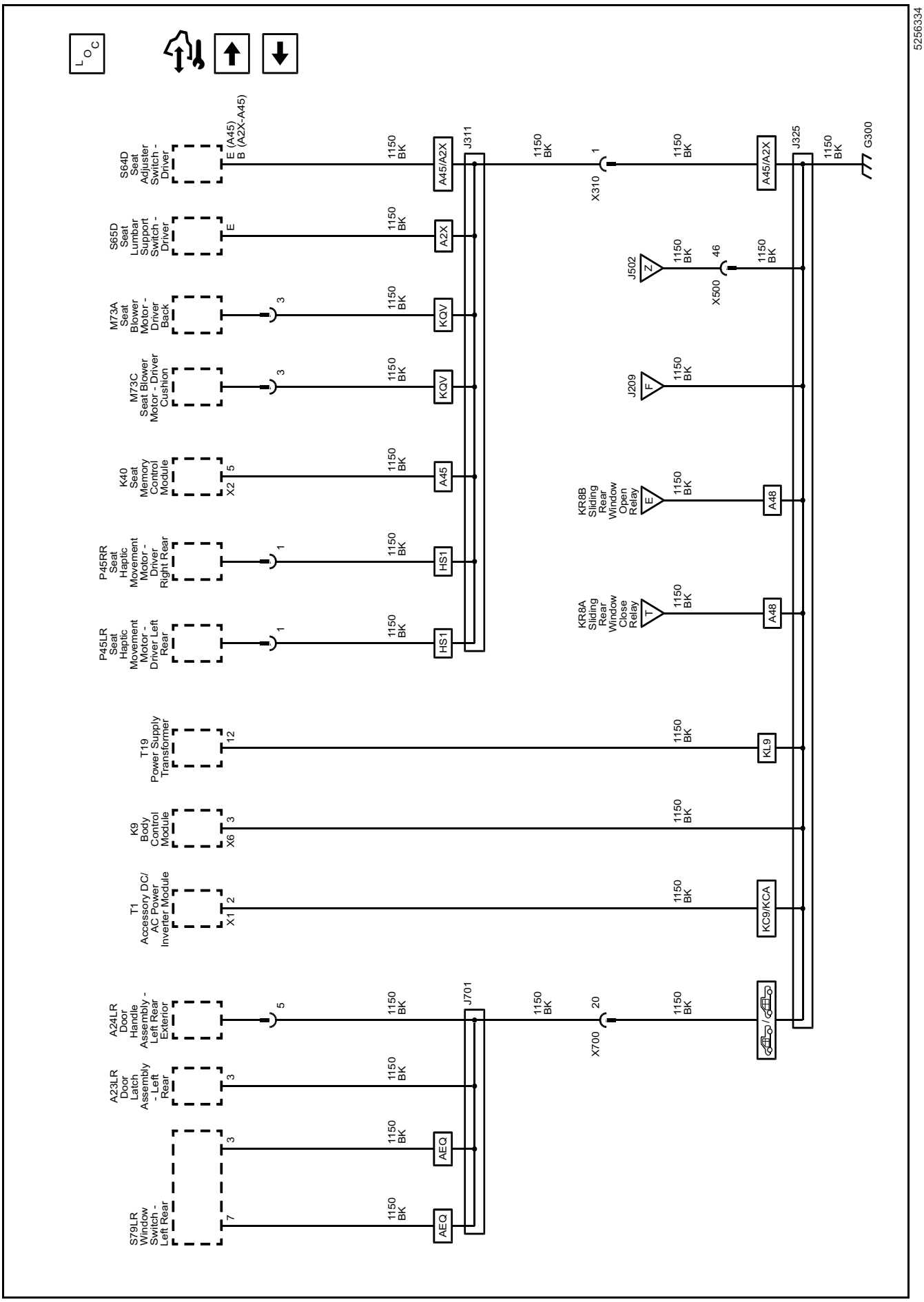
## Ground Distribution Schematics (G220 (1 of 2))



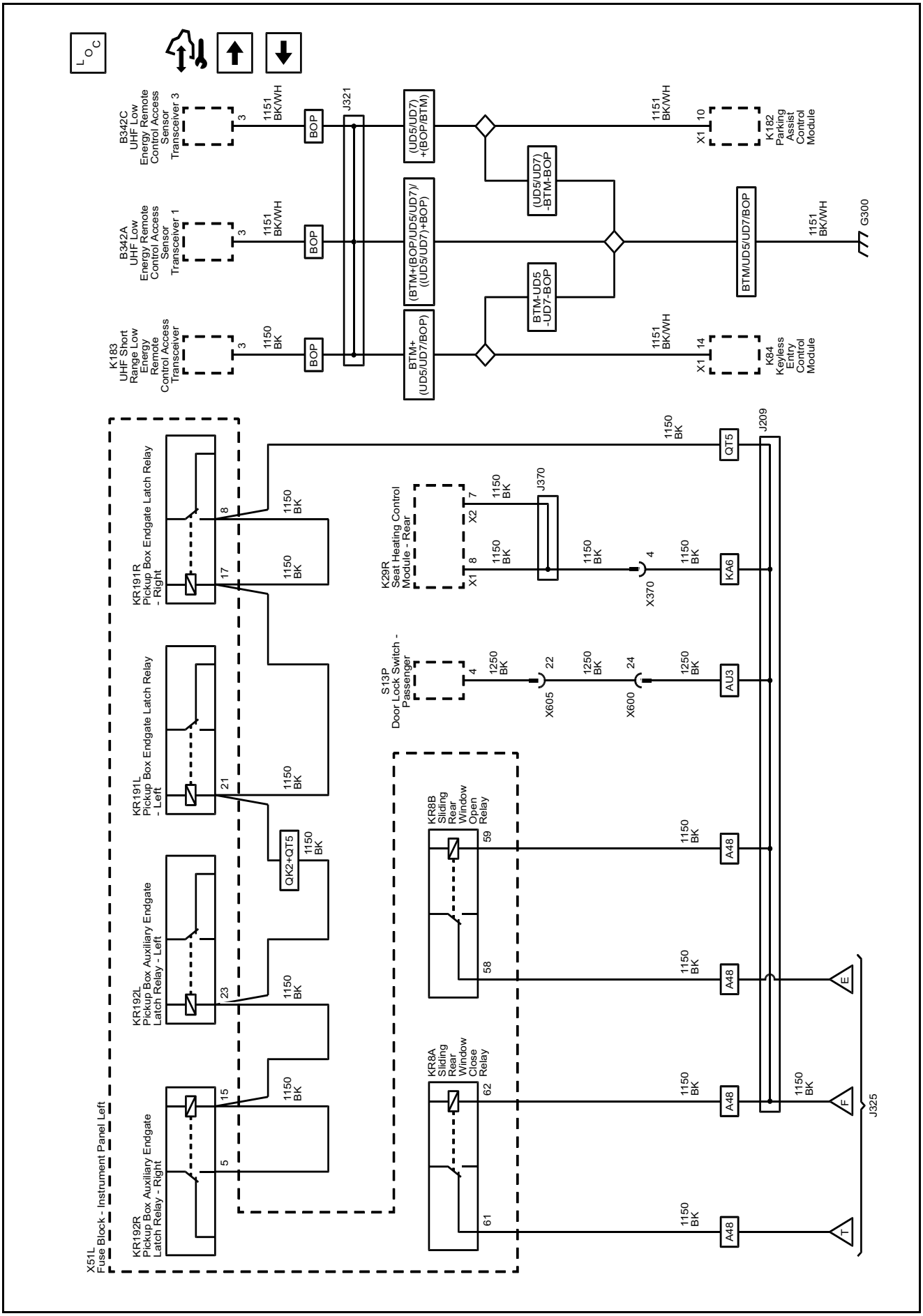
## Ground Distribution Schematics (G220 (2 of 2))



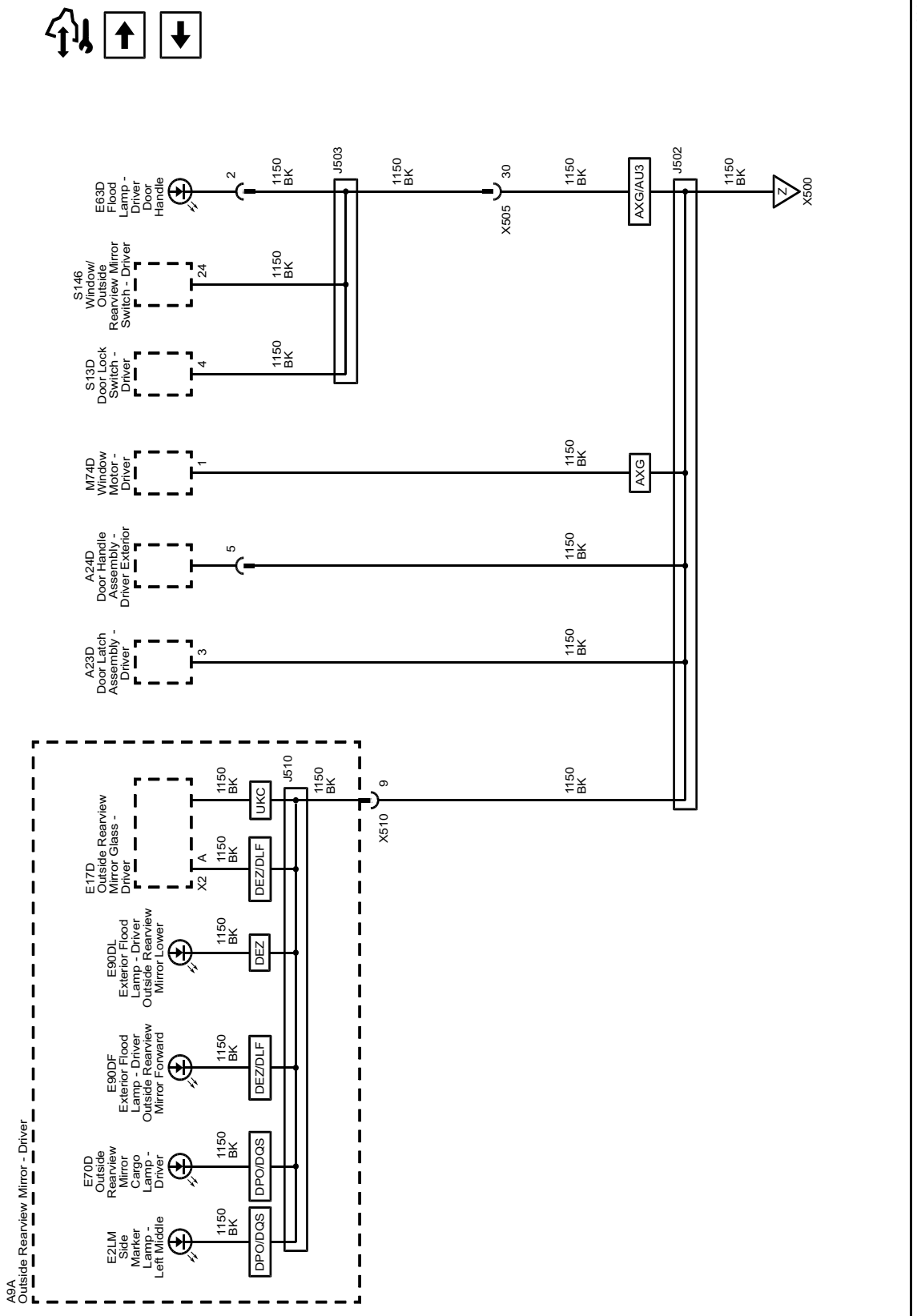
## Ground Distribution Schematics (G300 (1 of 3))



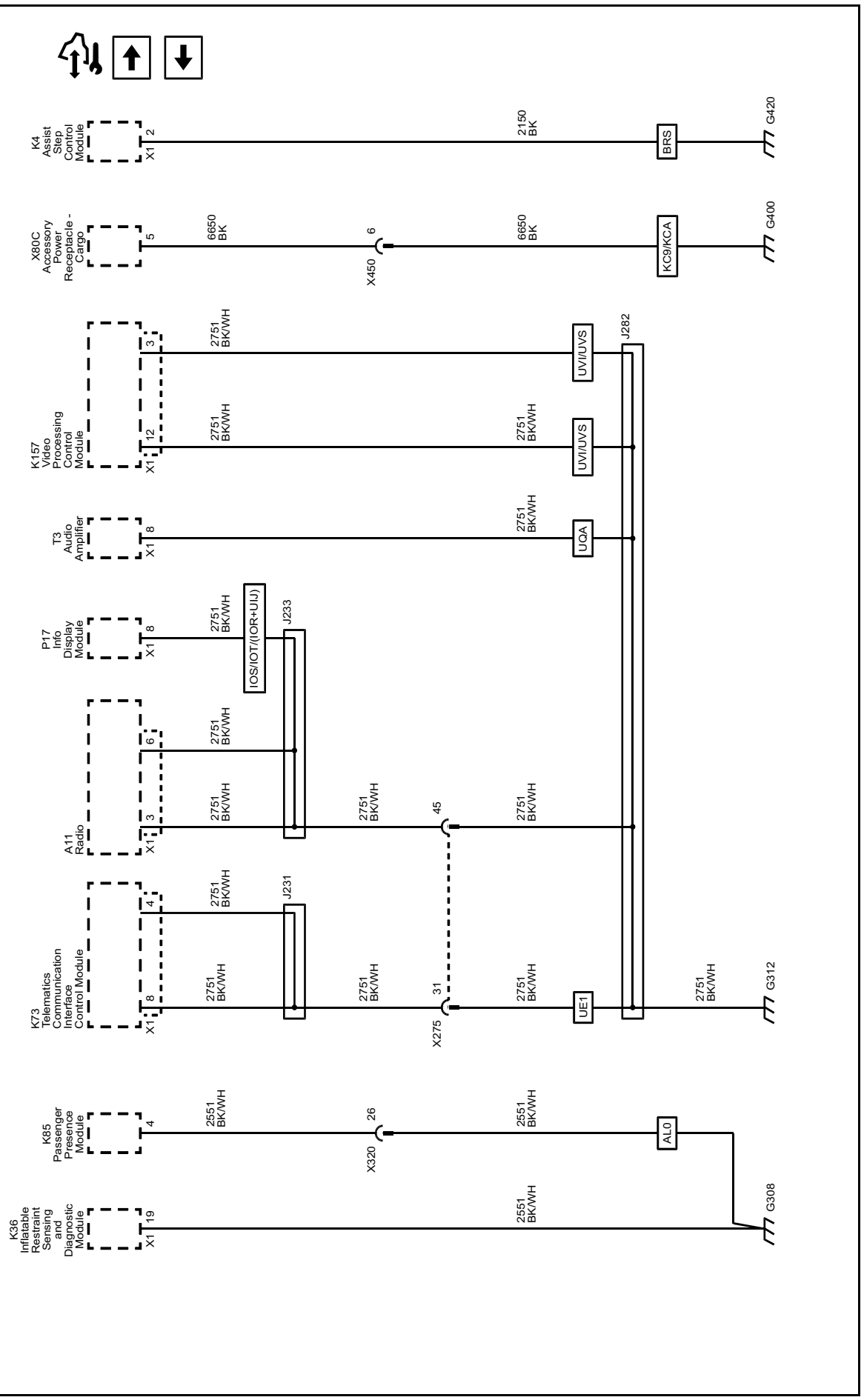
## Ground Distribution Schematics (G300 (2 of 3))



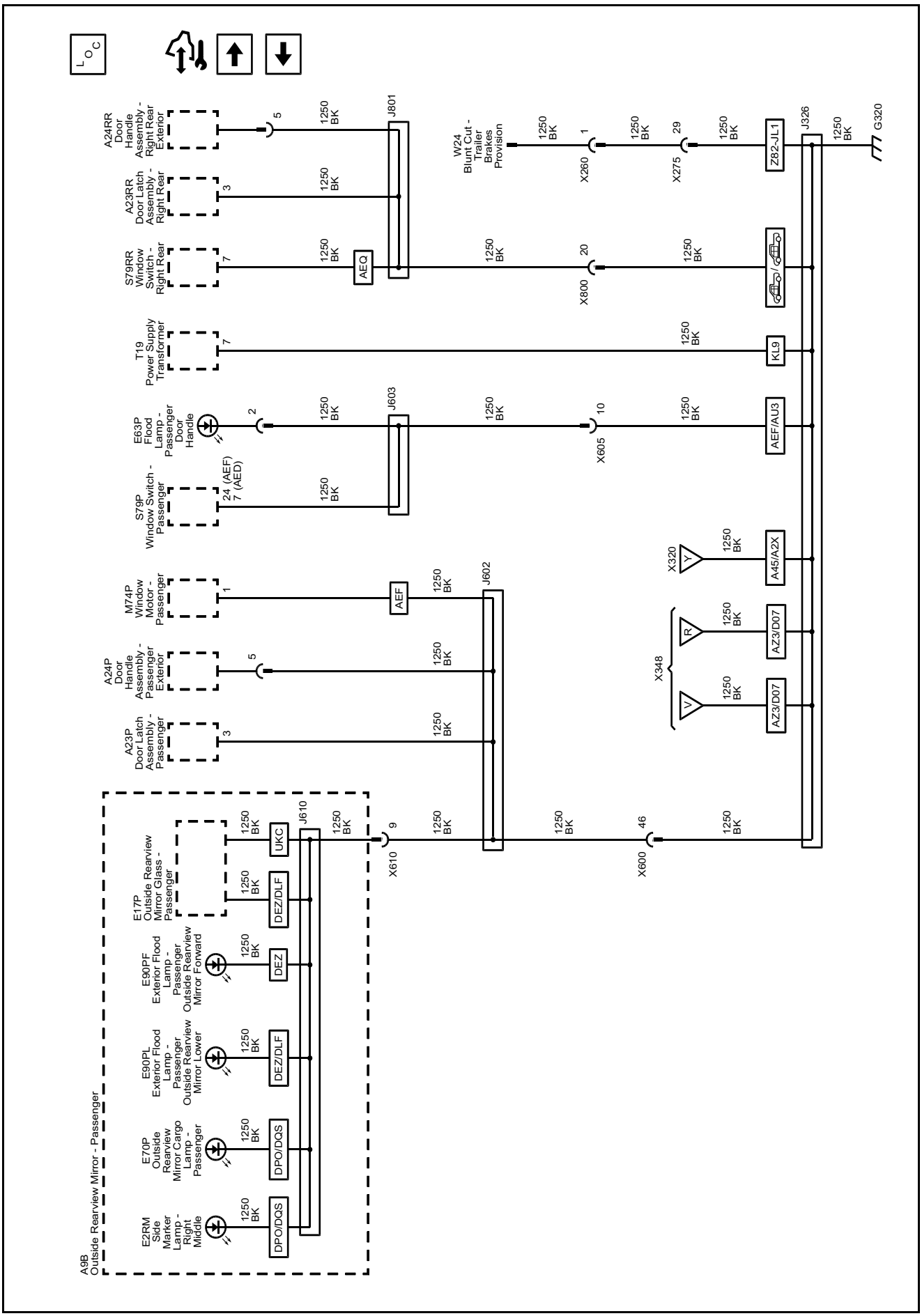
## Ground Distribution Schematics (G300 (3 of 3))



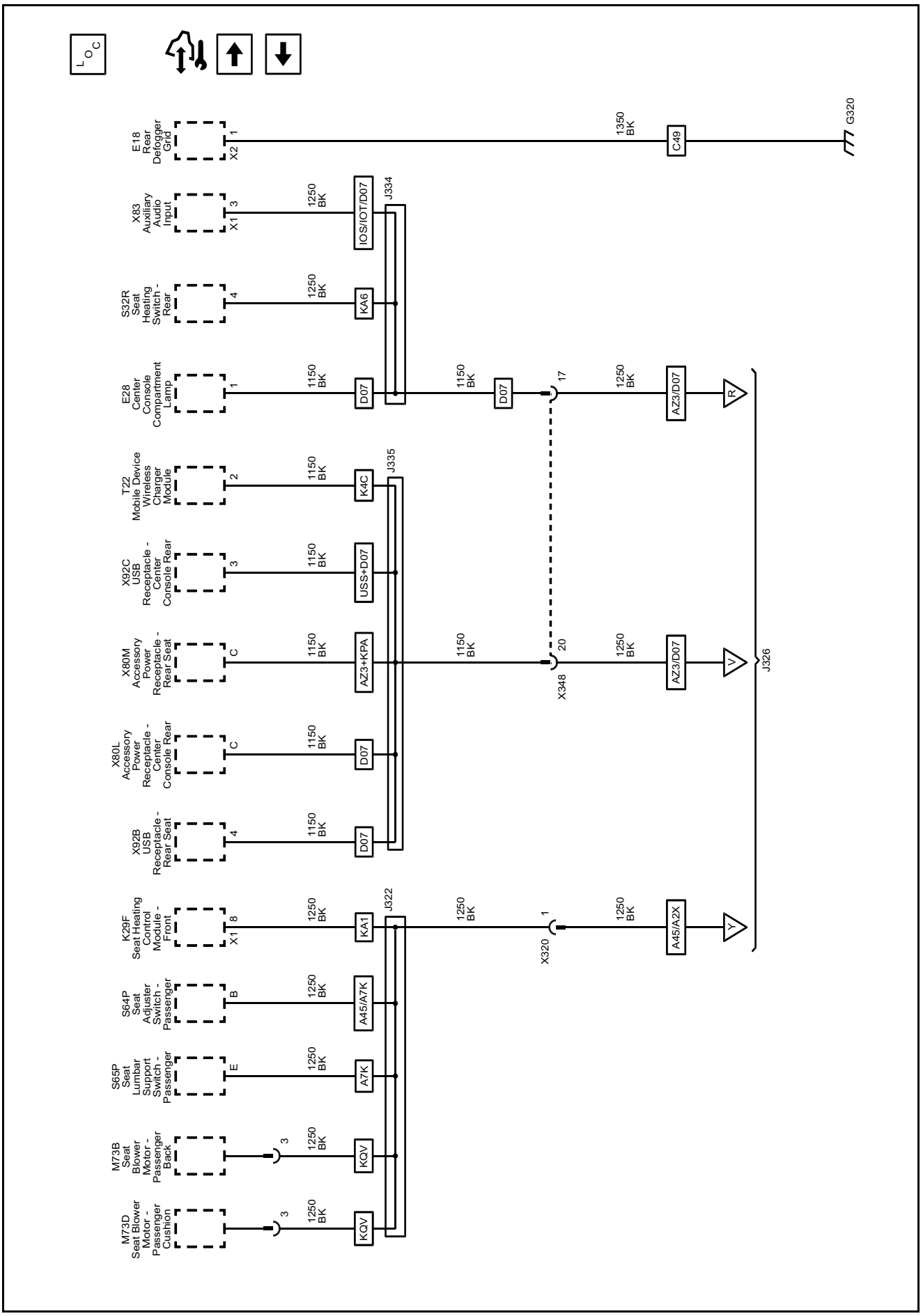
## Ground Distribution Schematics (G308, G312, G400, and G420)



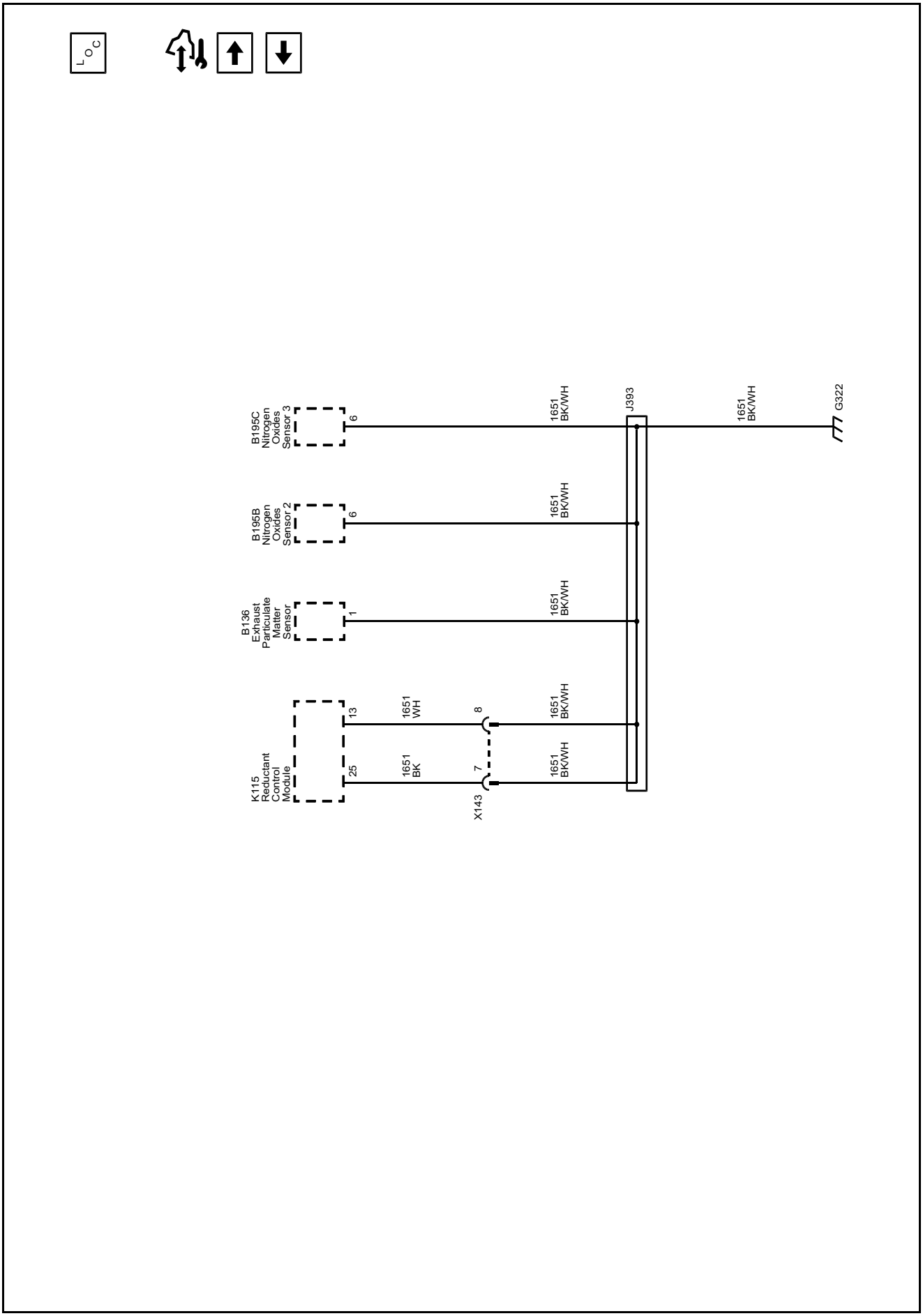
## Ground Distribution Schematics (G320 (1 of 2))



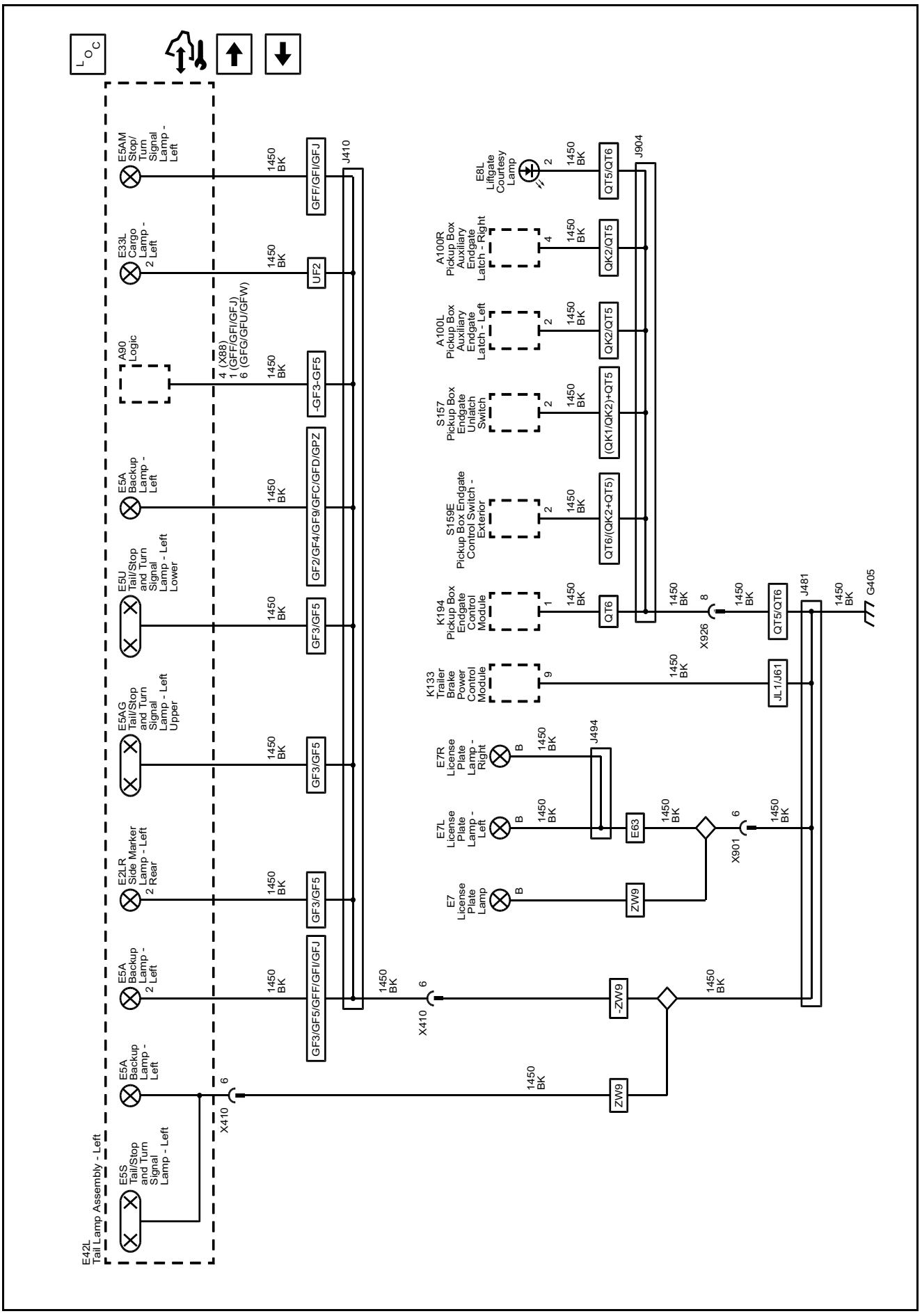
## Ground Distribution Schematics (G320 (2 of 2))



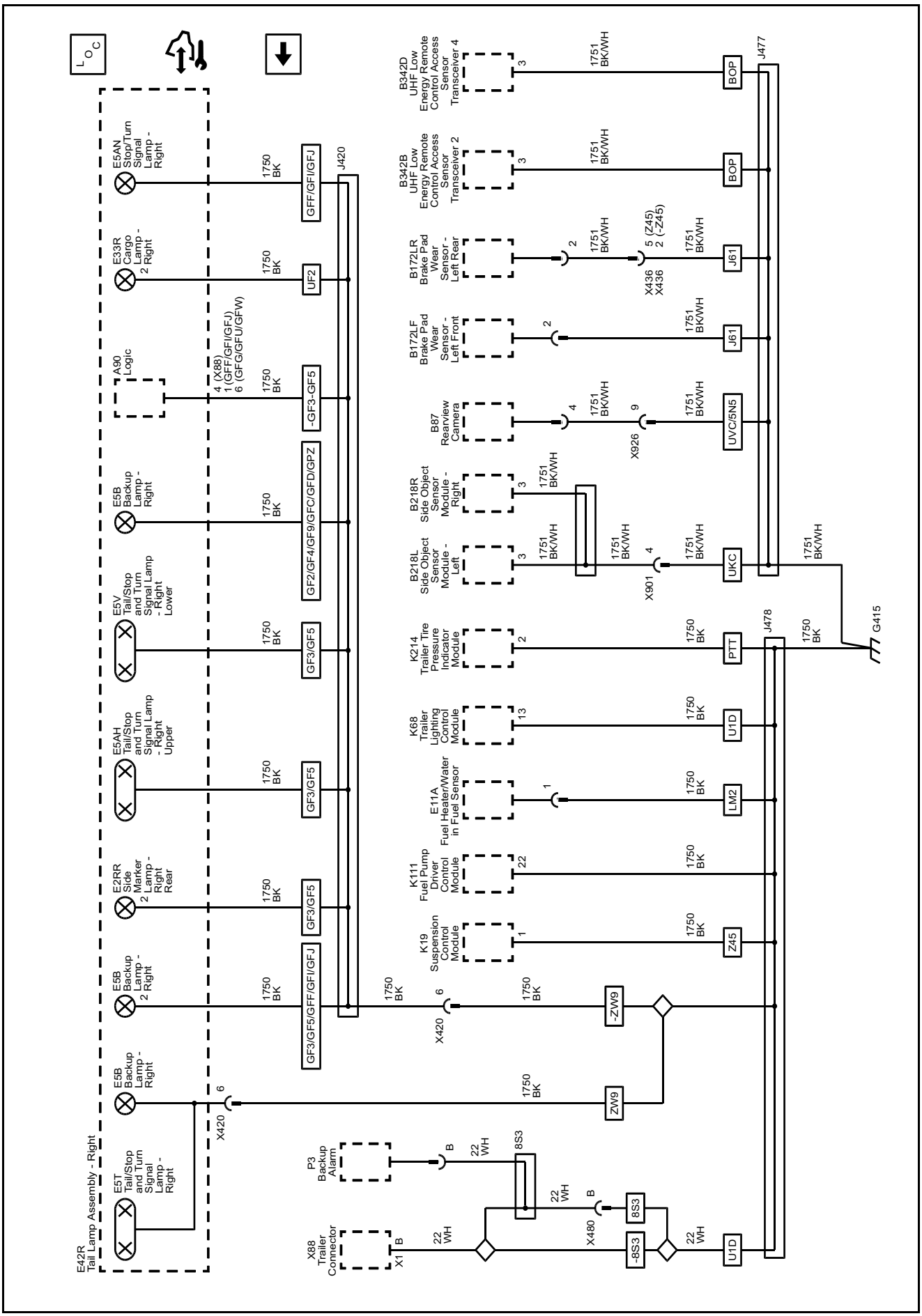
## Ground Distribution Schematics (G322 (LM2))



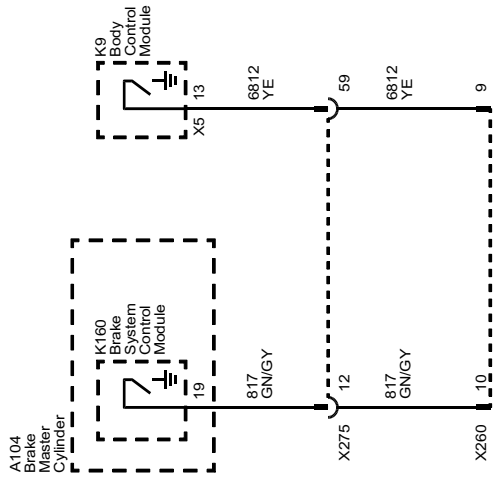
## Ground Distribution Schematics (G405)



## Ground Distribution Schematics (G415)

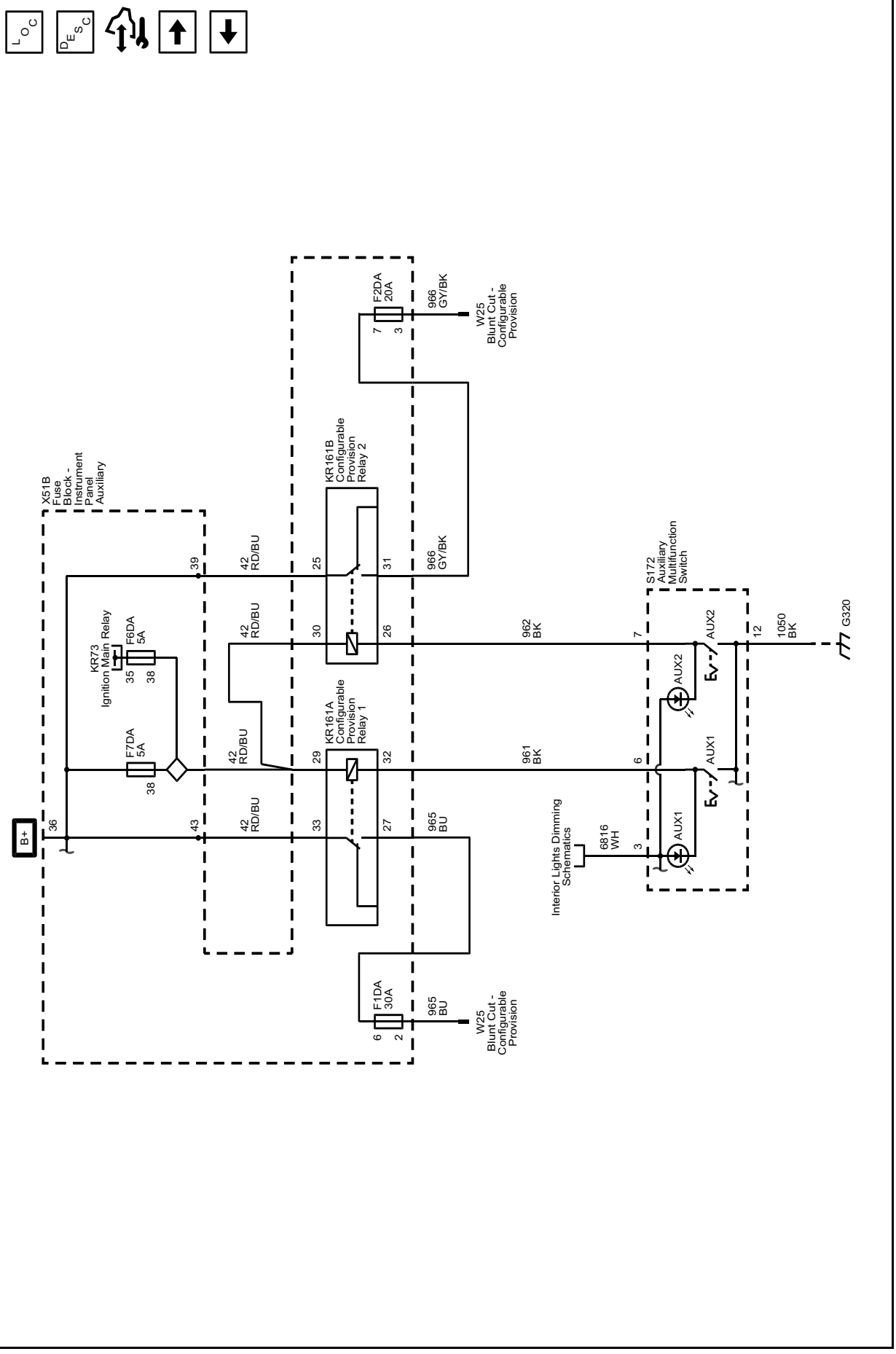


## Upfitter Provision Schematics (Upfitter Provisions - Signals)



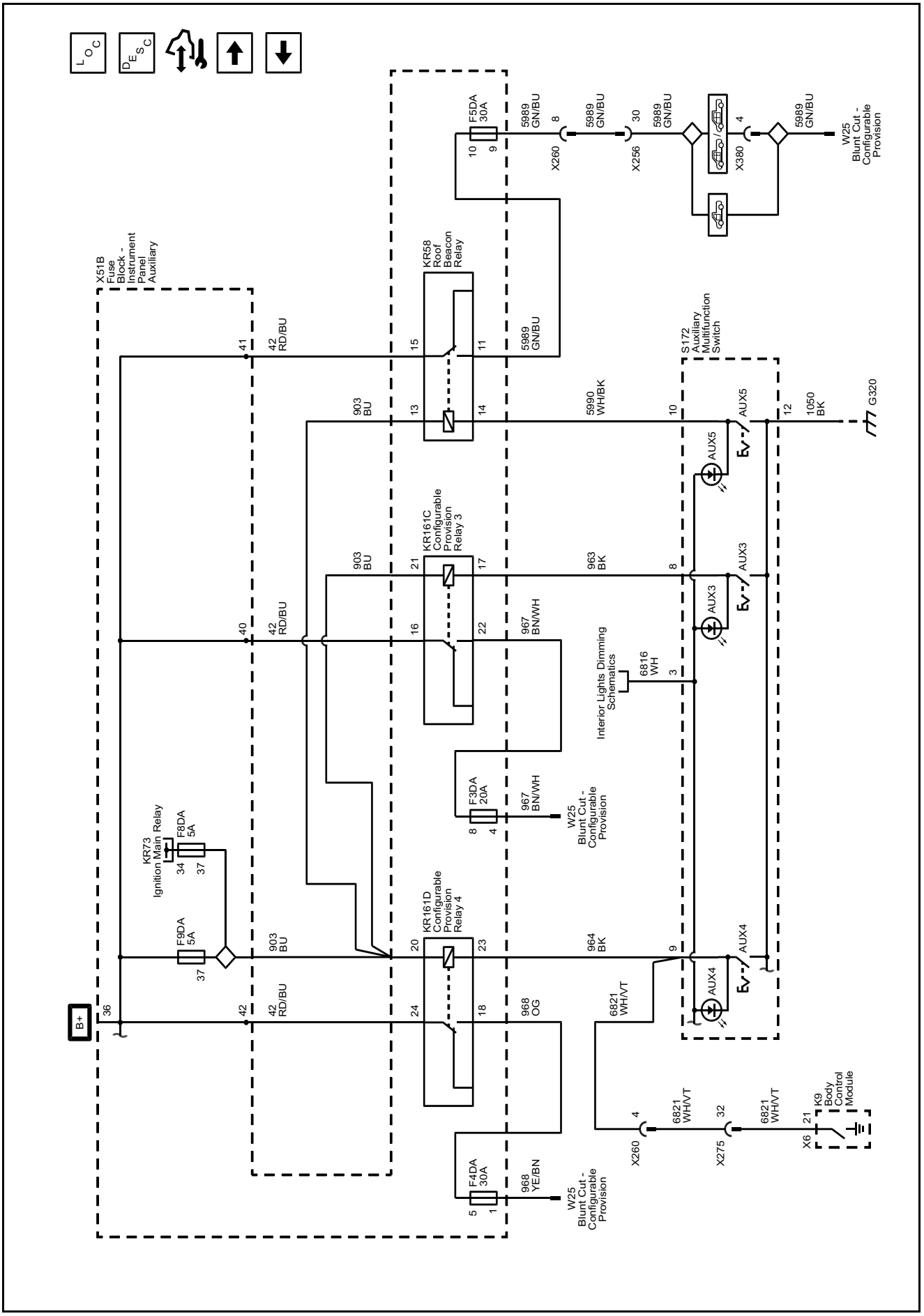

5256352

## Upfitter Provision Schematics (Upfitter Provisions - 1 of 2 (9L7))



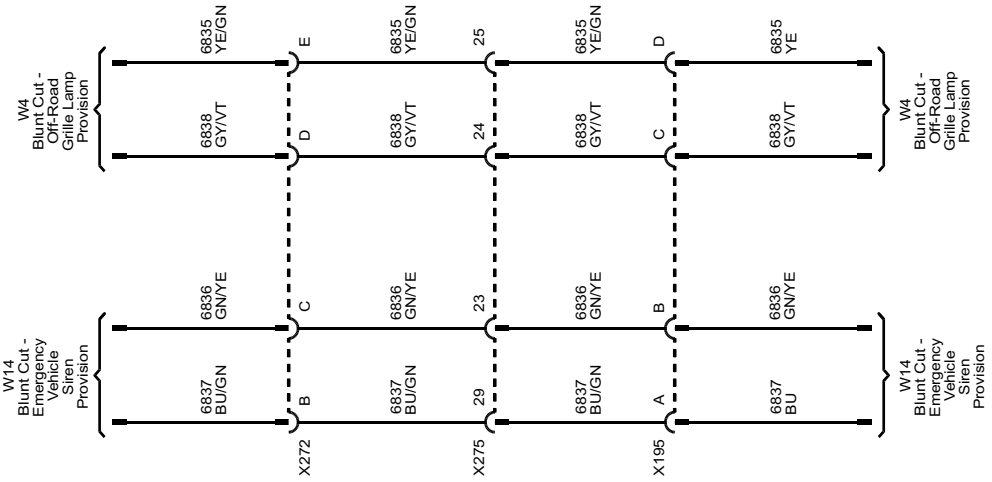

5256355

## Upfitter Provision Schematics (Upfitter Provisions - 2 of 2 (9L7))



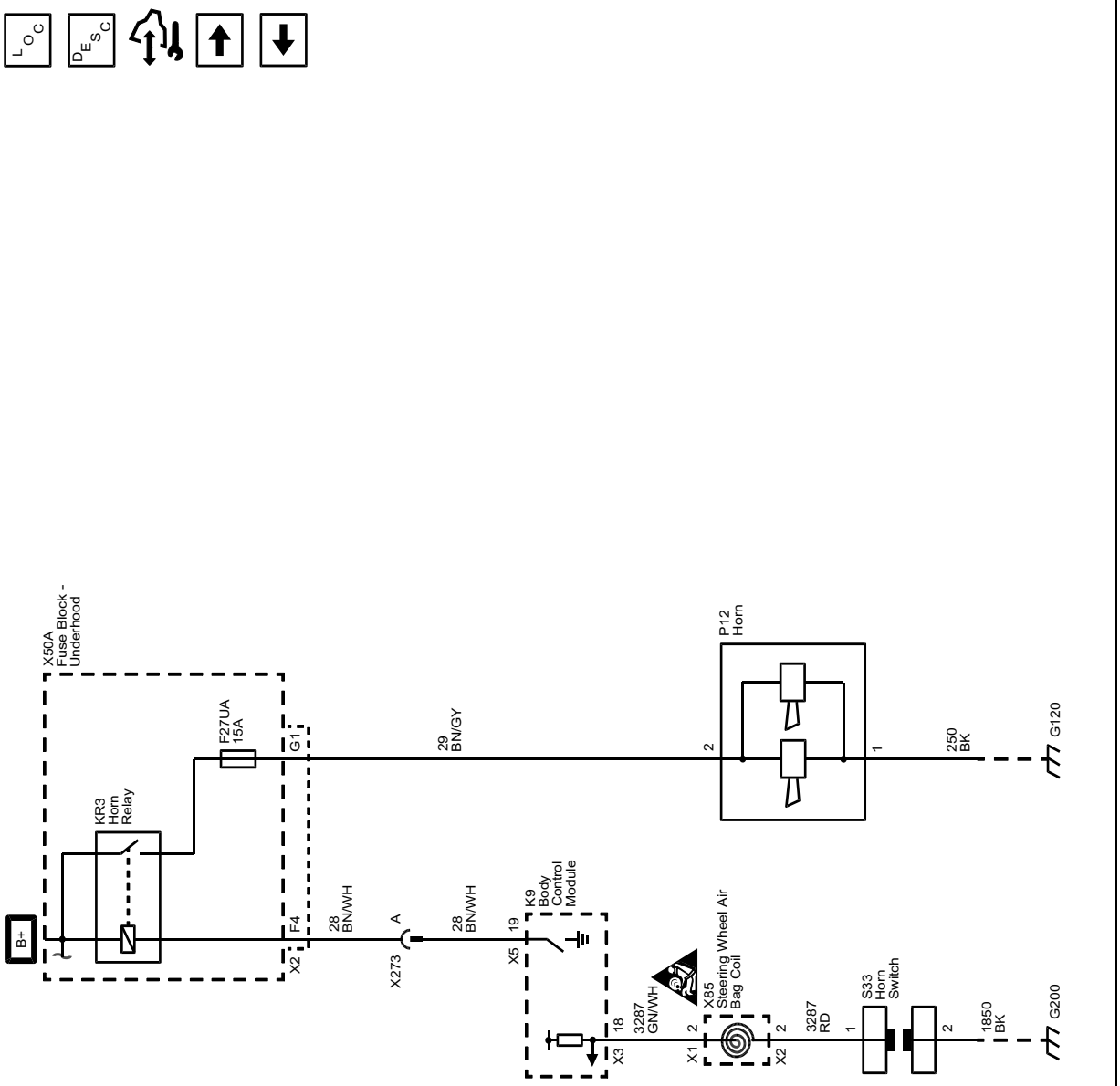
## Upfitter Provision Schematics (Grille Lights and Siren Provisions (6J3))



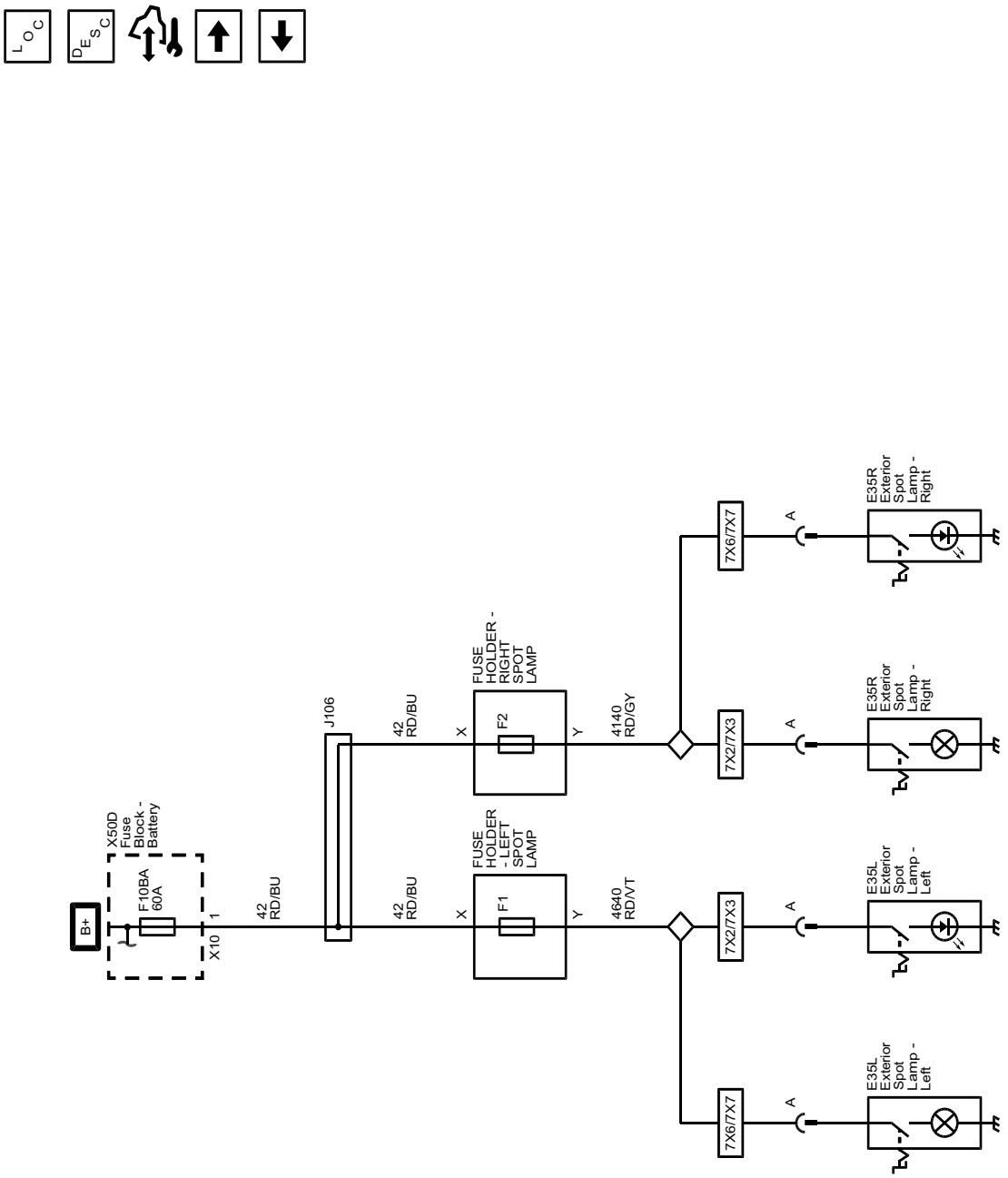



5299358

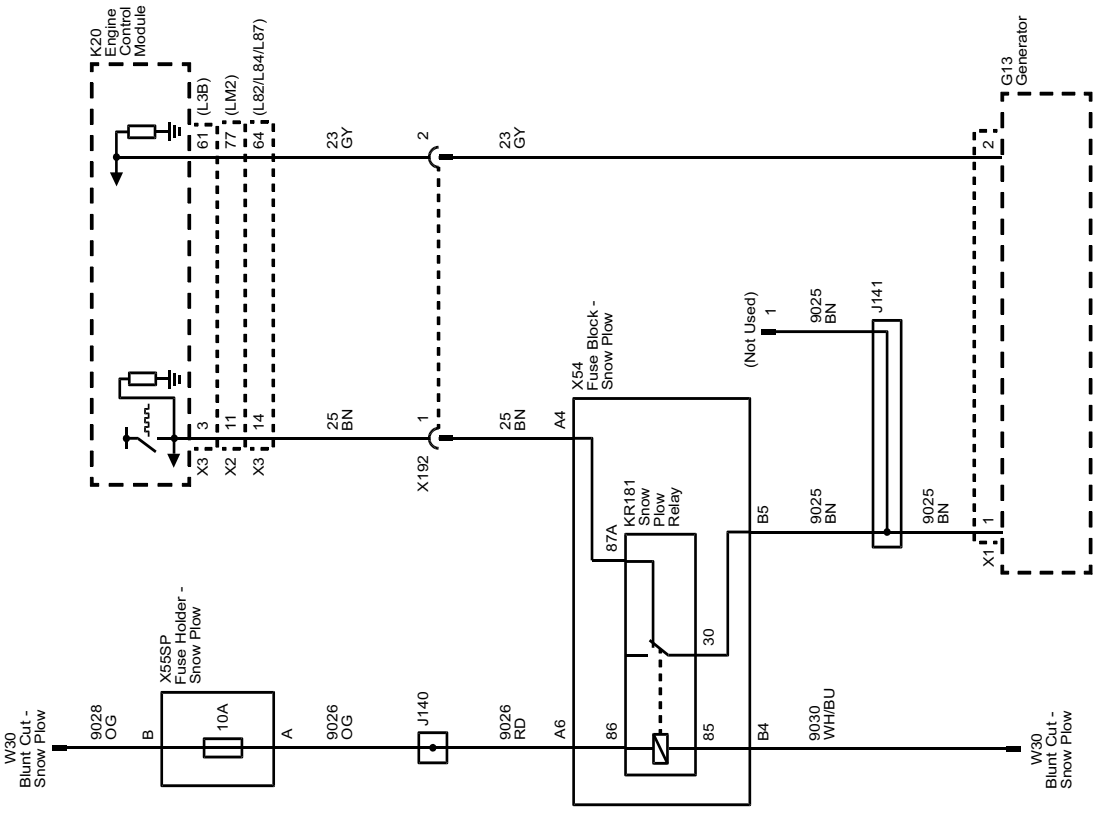
## Upfitter Provision Schematics (Horn Provision (6J4))



## Upfitter Provision Schematics (Spot Lamps (7X2/7X3/7X6/7X7))

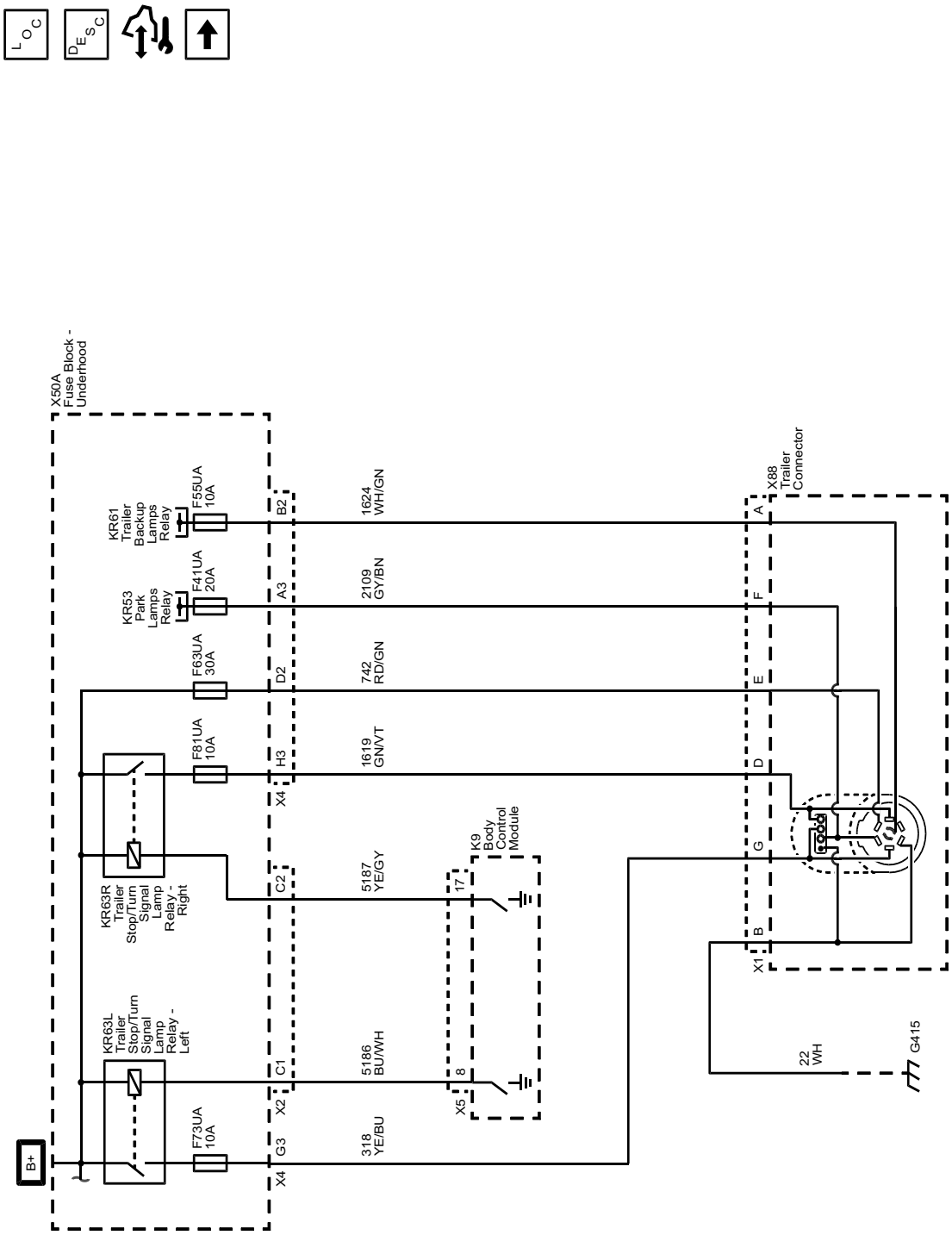


## Upfitter Provision Schematics (Snow Plow Provisions (VYU))

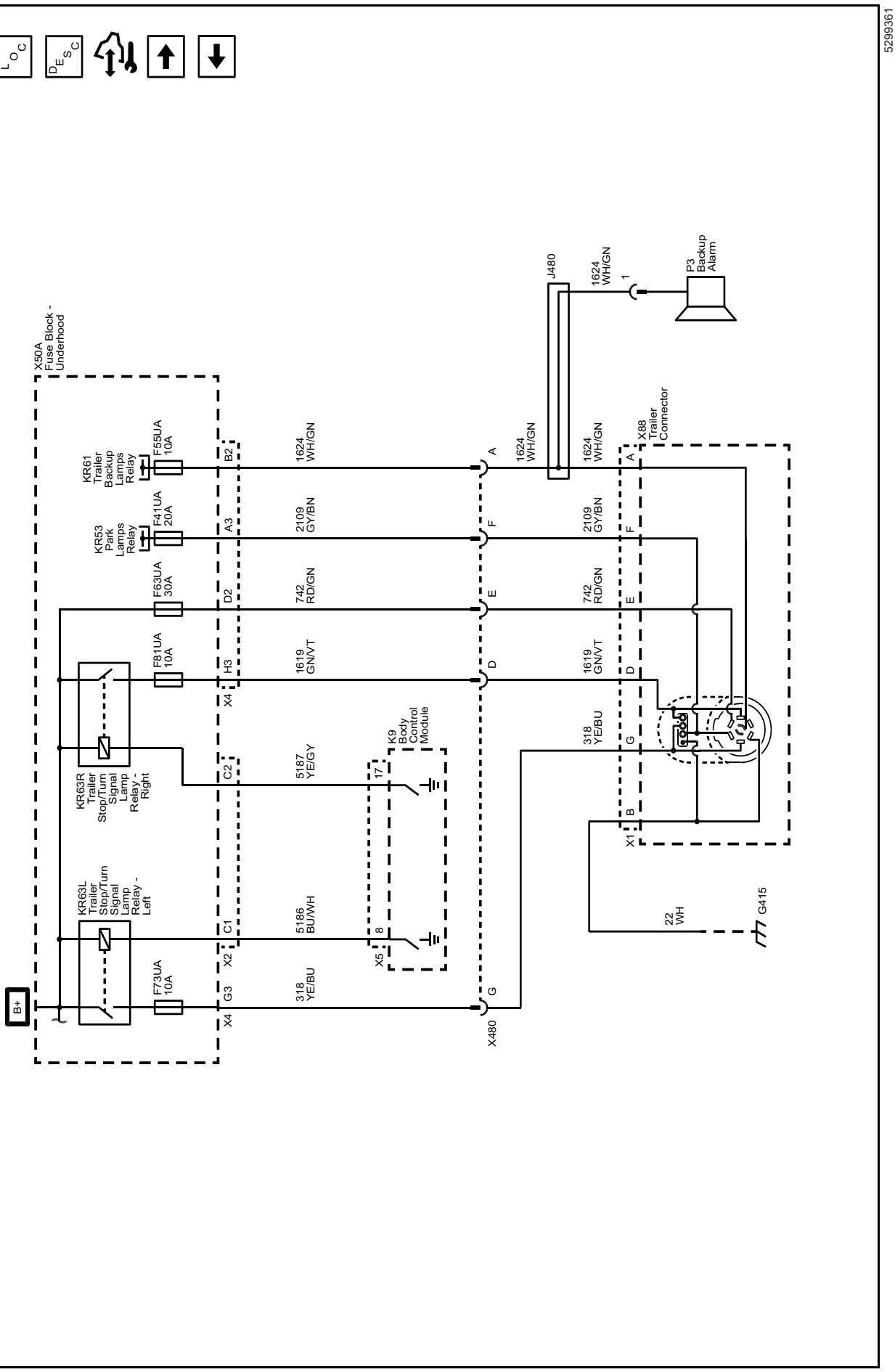



5300067

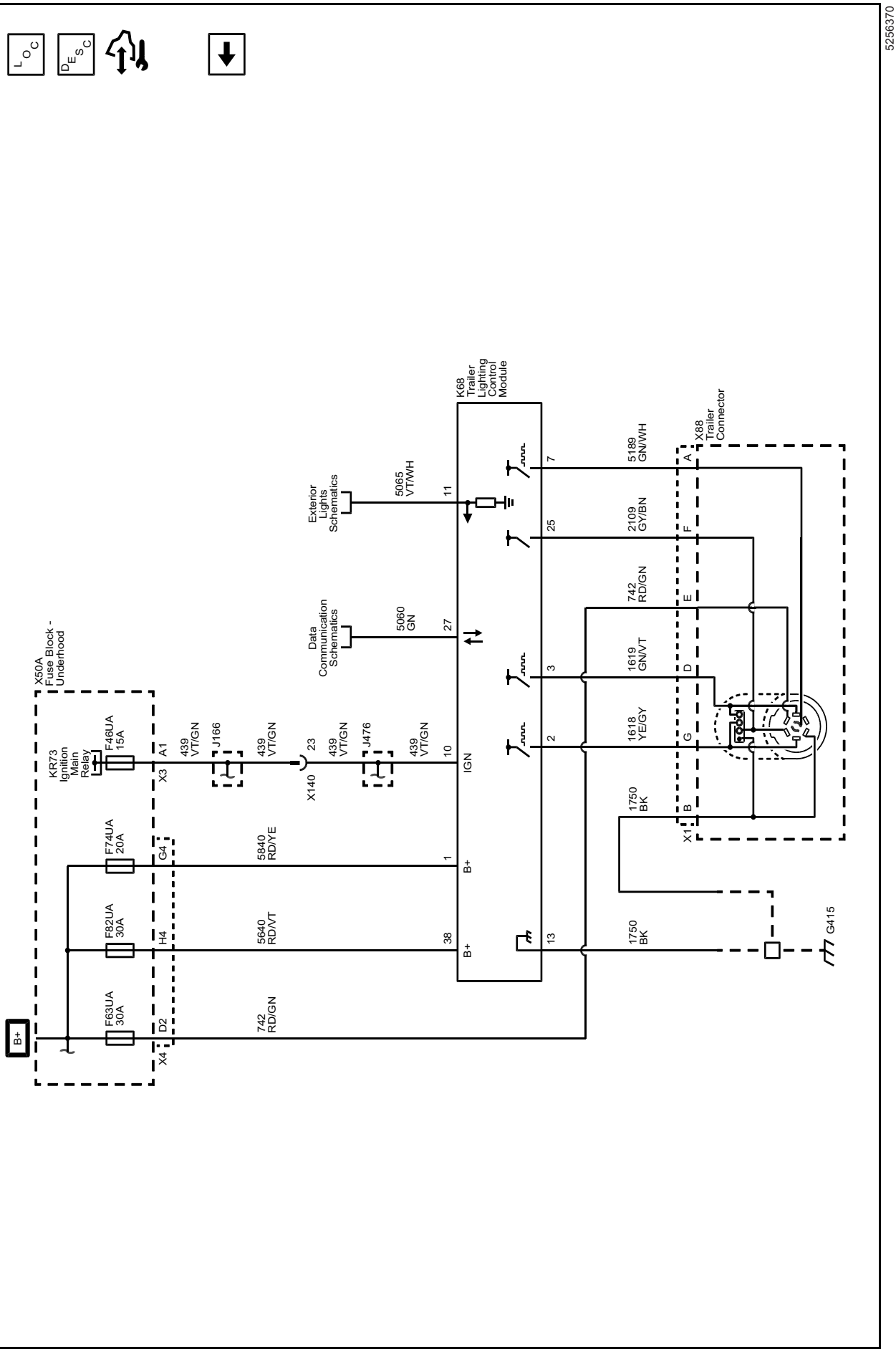
## Trailer Connector/Provision Schematics (Trailer Connector Pins: A, B, D, E, F, G (Z82-U1D))



## Trailer Connector/Provision Schematics (Trailer Connector Pins: A, B, D, E, F, G (8S3-U1D))



## Trailer Connector/Provision Schematics (Trailer Connector Pins: A, B, D, E, F, G (U1D))

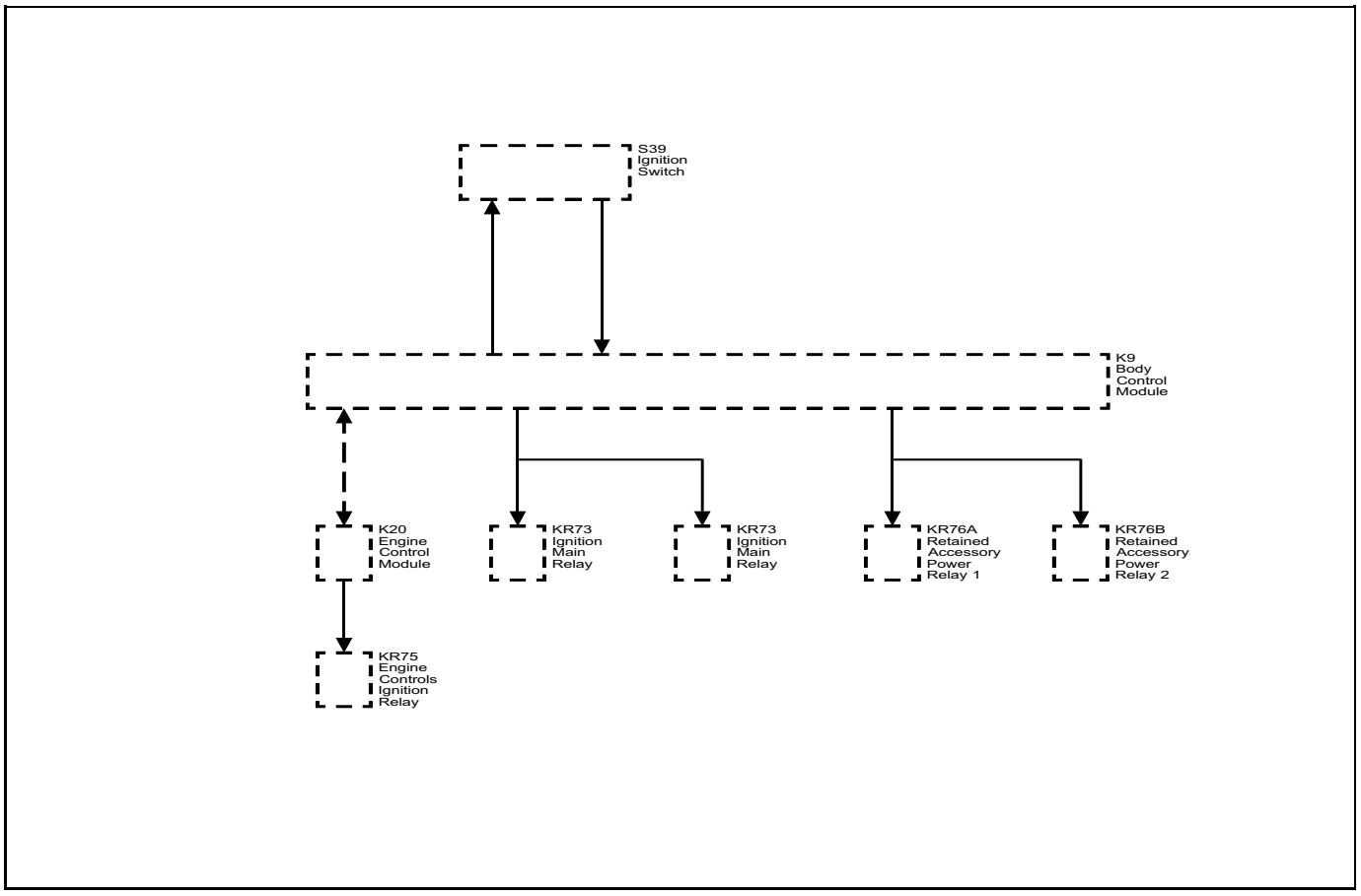


# Description and Operation

## Power Mode Description and Operation (Without BTM and/or ATH/ATS)

### Serial Data Power Mode Master

#### Power Moding Description and Operation Block Diagram




3282831

Power to many of this vehicles circuits is controlled by the module that is designated the power mode master. This vehicles power mode master is the body control module (BCM). The BCM has multiple B+ circuits that feed into it. Each of those circuits are partitioned within the controller to drive certain outputs of the vehicle's body functions. An open or short in any one of the B+ circuits may induce multiple codes/or a section of non-functionality within the BCM with the rest of the BCM functioning normally. In this case it is useful to refer to the power distribution schematics to determine if the non-functional partition of the controller shares a common B+ circuit. The ignition switch is a low current switch with multiple discrete ignition switch signals to the power mode master for determination of the power mode that will be sent over the serial data circuits to the other modules that need this information. The power mode master will also activate relays and other direct outputs of the power mode master as needed. The power mode master determines which power mode (Off, Accessory, Run, Crank Request) is required, and reports this information to other modules via serial data. Modules which have switched voltage inputs may operate in a default mode if the power mode serial data message does not match what the individual module can see from its own connections.

The power mode master receives ignition switch signals to identify the operators desired power mode. The Power Mode Parameter tables below illustrate the correct state of these input parameters (circuits) in correspondence to the ignition switch position:

**Power Mode Parameters**

| Ignition Switch Position | Power Mode Transmitted | Ign. Off/Run/Crank (Off/Run Crank Voltage Circuit) | Ignition Accessory/Run (Accessory Voltage Circuit) | Ignition Run/Crank (Ignition 1 Voltage Circuit) |
|---|---|---|---|---|
| Off Key Out | Off | Key Out / ACC | Inactive | Inactive |
| Off Key IN | Off | Key In / Off | Inactive | Inactive |
| Accessory | Accessory | Key Out / ACC | Active | Inactive |
| Run | Run | Run | Active | Active |
| Start | Crank Request | Crank | Inactive | Active |

## Relay Controlled Power Mode

The BCM uses the discrete ignition switch inputs Off/Run/Crank Voltage, Accessory Voltage, and Ignition 1 Voltage, to distinguish the correct power mode. The BCM, after determining the desired power mode, will activate the appropriate relays for that power mode.

The retained accessory power relay 1 and retained accessory power relay 2 remain on for a timed period after the Ignition key is removed. Refer to *Retained Accessory Power Description and Operation on page 7-755* for more information on the retained accessory power function.

## Battery Saver Mode (Transport Mode)

Battery saver mode (transport mode) reduces the parasitic load of some modules during overseas shipment or during vehicle storage conditions. This improves the drain time on the battery (up to 70 days without the battery going dead). When a vehicle is in transport/storage, some features may have reduced functionality while in the battery saver mode, such as disabling keyless entry, afterblow, and content theft features. Battery saver mode is initiated by turning on the hazard flashers, applying the brake pedal, and then turning the ignition key to the start position or pushing the ignition mode switch with the foot on the brake for greater than 15 seconds. The mode is disengaged by repeating the previous process. The driver information center (if equipped) will display Transport Mode is On when battery saver mode is enabled and Transport Mode is Off when battery saver mode is disabled. For vehicles not equipped with a driver information center, the battery indicator light will constantly flash on the Instrument Cluster when battery saver mode is enabled. This feature can be used as many times as necessary if the vehicle is to be stored for an extended period of time.

## BCM Awake/Sleep States

The BCM is able to control or perform all of the BCM functions in the awake state. The BCM enters the sleep state when active control or normal monitoring of system functions has stopped and a time limit has passed. The BCM must detect certain wake-up inputs before entering the awake state. The BCM monitors for these inputs during the sleep state.

The BCM will enter the awake state if any of the following wake-up inputs are detected:

- Activity on the serial data line
- Detection of a battery reconnect
- Any door open signal
- Headlamps ON
- Key-in-ignition
- Ignition ON
- Park lamps ON
- Keyless entry or remote start message

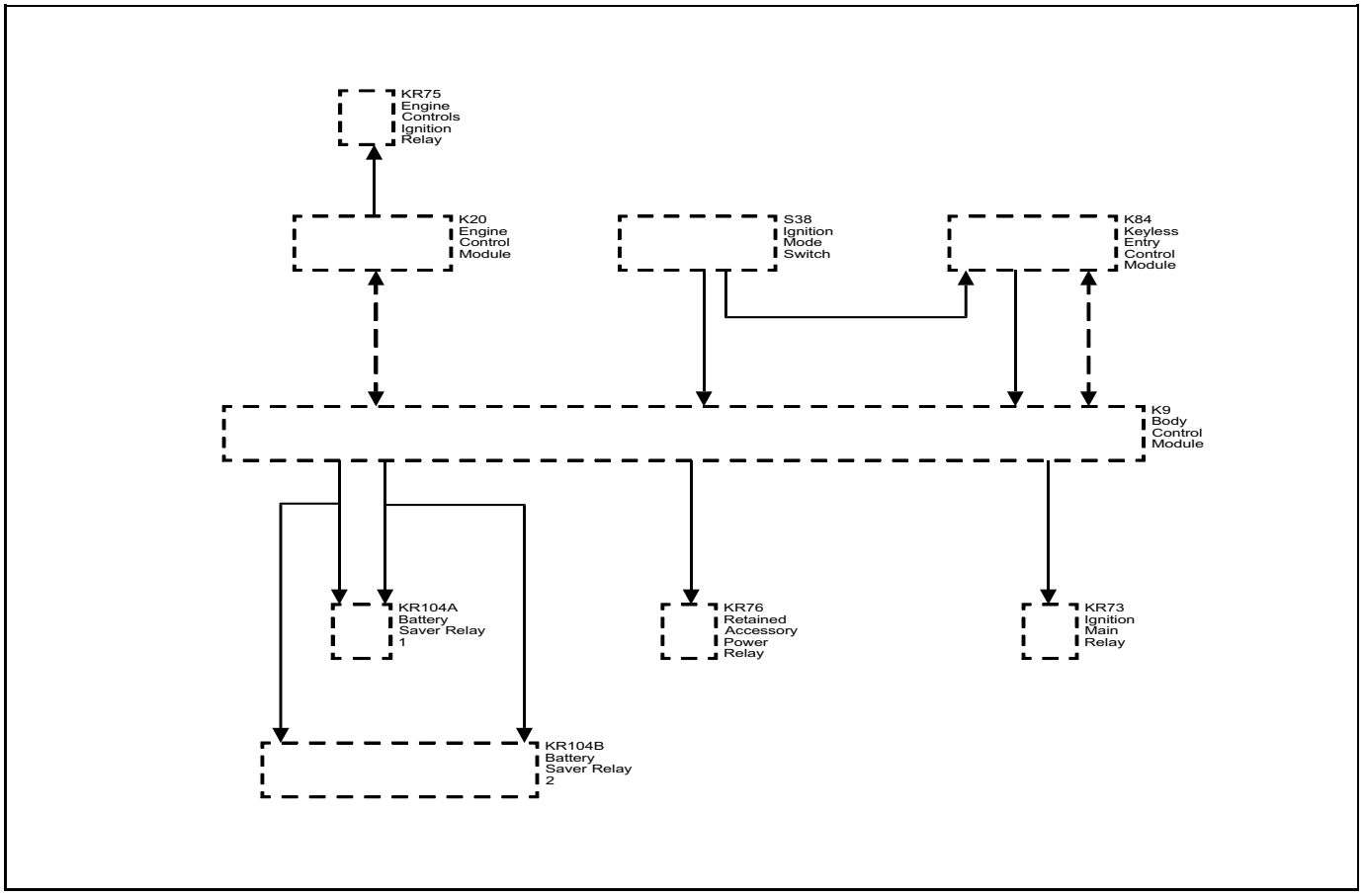
The BCM will enter a sleep state when all of the following conditions exist:

- The ignition switch is OFF, key out.
- Ignition OFF, transmitter is out of range
- No activity exists on the serial data line.
- No outputs are commanded.
- No delay timers are actively counting.
- No wake-up inputs are present.

If all these conditions are met, the BCM will enter a low power or sleep condition.

# Power Mode Description and Operation (BTM and/or ATH/ATS)

### Power Moding D&O Block Diagram




3418056

## Serial Data Power Mode Master

Power to many of this vehicles circuits is controlled by the module that is designated the power mode master. This vehicles power mode master is the body control module (BCM). The BCM has multiple B+ circuits that feed into it. Each of those circuits are partitioned within the controller to drive certain outputs of the vehicle's body functions. An open or short in any one of the B+ circuits may induce multiple codes/or a section of non-functionality within the BCM with the rest of the BCM functioning normally. In this case it is useful to refer to the power distribution schematics to determine if the non-functional partition of the controller shares a common B+ circuit. The ignition mode switch is a low current switch with a discrete ignition signal to the power mode master for determination of the power mode that will be sent over the serial data circuits to the other modules that need this information. The power mode master will also activate relays and other direct outputs of the power mode master as needed. The power mode master determines which power mode (Off, Accessory, Run/Start) is required, and reports this information to other modules via serial data. Modules which have switched voltage inputs may operate in a default mode if the power mode serial data message does not match what the individual module can see from its own connections.

The power mode master receives ignition mode switch signals to identify the operators desired power mode. The Power Mode Parameter table below illustrates the correct state of these input parameters in correspondence to the ignition mode switch with the transmitter to vehicle range:

**Power Mode Parameters**

| Power Mode | Power Mode Transmitted | Push Button Ignition Switch (Power Button Switch Circuit Input to the BCM) | Push Button Ignition Switch Voltage Push Button Ignition Switch Voltage Input to the BCM | Key in Cylinder Switch/Key Fob in Vehicle (Transmitter in Range to the BCM Signal) |
|---|---|---|---|---|
| Transmitter in Range | Off | Inactive | 9 V | Yes |
| Transmitter out of Range | Off | Inactive | 9 V | No |
| Vehicle On Power Mode, then Press the Power Button Switch (Foot on or off the Brake Pedal) Transmitter in Vehicle | Off | Active (pushed) / Inactive (not pushed) | 1.2–2.9 V (Pressed) 3.34–4.26 V (Released) | Yes |
| Vehicle Off Power Mode, then Press the Power Button Switch with foot off the Brake Pedal; Transmitter in Vehicle | Accessory Mode | Active (pushed) / Inactive (not pushed) | 1.2–2.9 V (Pressed) 3.34–4.26 V (Released) | Yes |
| Vehicle Off Power Mode, then Press the Power Button Switch with foot on the Brake Pedal; Transmitter in Vehicle | Vehicle in Run/Start Mode (Ignition ON engine running.) | Active (pushed) / Inactive (not pushed) | 1.2–2.9 V (Pressed) 3.34–4.26 V (Released) | Yes |
| Vehicle OFF Power Mode, then Press and Hold the Power Button Switch for 5 s with foot OFF the Brake Pedal; Transmitter in Vehicle | Vehicle in Run/Start Mode (Ignition ON without the engine running) | Active (pushed) / Inactive (not pushed) | 1.2–2.9 V (Pressed) 3.34–4.26 V (Released) | Yes |
| Vehicle OFF Power Mode, then Press and Hold the Power Button Switch for 10 s with foot OFF the Brake Pedal; Transmitter in Vehicle | Vehicle In Service Mode (Ignition ON without the engine running) | Active (pushed) / Inactive (not pushed) | 1.2–2.9 V (Pressed) 3.34–4.26 V (Released) | Yes |

## Relay Controlled Power Mode

The BCM uses discrete push button switch inputs, transmitter in range status, current power mode state, and brake pedal position state to distinguish the correct power mode (Off, Accessory Mode, Vehicle in Run/ Start Mode). The BCM, after determining the desired power mode, will activate the appropriate relays for that power mode.

The retained accessory power relay remains on for a timed period after the Ignition key is removed. Refer to *Retained Accessory Power Description and Operation on page 7-755* for more information on the retained accessory power function.

## Push Button Start

The S38 Ignition Mode Switch has two LEDs that indicate the vehicle power mode. When the vehicle is in the Off ignition mode, both LEDs will be off.

With the vehicle in the OFF ignition mode, momentarily pressing and releasing the S38 Ignition Mode Switch with the brake pedal not pressed the vehicle will enter into the Accessory ignition mode and the amber LED will illuminate. The Accessory mode has a predetermined time-out to prevent battery drain. For details, refer “Ignition Positions” in the vehicle owner manual.

With the vehicle in the OFF ignition mode, pressing and holding the S38 Ignition Mode Switch for greater than 10 s with the brake pedal not pressed the vehicle will enter into Service Mode ignition mode and the green LED will illuminate. In this mode, the vehicle will be in the Run ignition mode without the engine running. Service Mode is used for vehicle service and diagnostics that does not required the engine to be running. Service Mode will remain on until the vehicle is manually turned OFF by pressing and releasing the S38 Ignition Mode Switch. There is not battery run-down protection and leaving the vehicle in Service Mode may result is a depleted battery.

With the vehicle in the OFF ignition mode, momentarily pressing and releasing the S38 Ignition Mode Switch with the brake pedal pressed the vehicle will start and the green LED will illuminate. Upon engine starting, the vehicle will remain in the Run ignition mode. If the vehicle is left in PARK with the engine running, the vehicle will automatically turn off after a predetermined amount of time. This time will vary depending if the

keyless entry transmitter was left in the vehicle. For details, refer “Extended Parking” in the vehicle owner manual.

With the vehicle in any ignition mode except Off, momentarily pressing and releasing the S38 Ignition Mode Switch the vehicle will enter the Off ignition mode.

Both LED’s have the voltage supplied from the body control module (BCM). The ignition mode switch sends the ignition mode switch status to the passive entry passive start module (PEPS) and to the BCM. The PEPS module sends a redundant signal to the BCM with the ignition mode switch status.

## Battery Saver Mode (Transport Mode) (If Equipped)

Battery saver mode (transport mode) reduces the parasitic load of some modules during overseas shipment or during vehicle storage conditions. This improves the drain time on the battery (up to 70 days without the battery going dead). When a vehicle is in transport/storage, some features may have reduced functionality while in the battery saver mode, such as disabling the Remote Function Actuator or content theft features. Battery saver mode is initiated by turning on the hazard flashers, applying the brake pedal, and then turning the ignition key to the start position or pushing the ignition mode switch with the foot on the brake for greater than 15 s. The mode is disengaged by repeating the previous process. The DIC (if equipped) will display Transport Mode is On when battery saver mode is enabled and Transport Mode is Off when battery saver mode is disabled. For vehicles not equipped with a DIC, the battery indicator light will constantly flash on the Instrument Cluster when battery saver mode is enabled. This feature can be used as many times as necessary if the vehicle is to be stored for an extended period of time.

Battery saver mode incorporates a latching relay that when enabled disconnects some modules from their ignition power or memory power sources. When battery saver mode is enabled and the vehicle is switched OFF, the BCM sends a momentary command to unlatch the relay disconnecting power up to 1 min after RAP is inactive. Every time the vehicle is switched ON the BCM will send a momentary command to latch the battery saver relay. This allows the use of all features when the ignition is ON. The BCM will send another command to unlatch the relay once the vehicle is switched OFF and RAP is inactive.

## BCM Awake/Sleep States

The BCM is able to control or perform all of the BCM functions in the awake state. The BCM enters the sleep state when active control or normal monitoring of system functions has stopped and a time limit has passed. The BCM must detect certain wake-up inputs before entering the awake state. The BCM monitors for these inputs during the sleep state.

The BCM will enter the awake state if any of the following wake-up inputs are detected:

- Activity on the serial data line
- Detection of a battery reconnect
- Any door open signal
- Headlamps ON
- Key-in-ignition
- Ignition ON
- Park lamps ON
- Keyless entry or remote start message

The BCM will enter a sleep state when all of the following conditions exist:

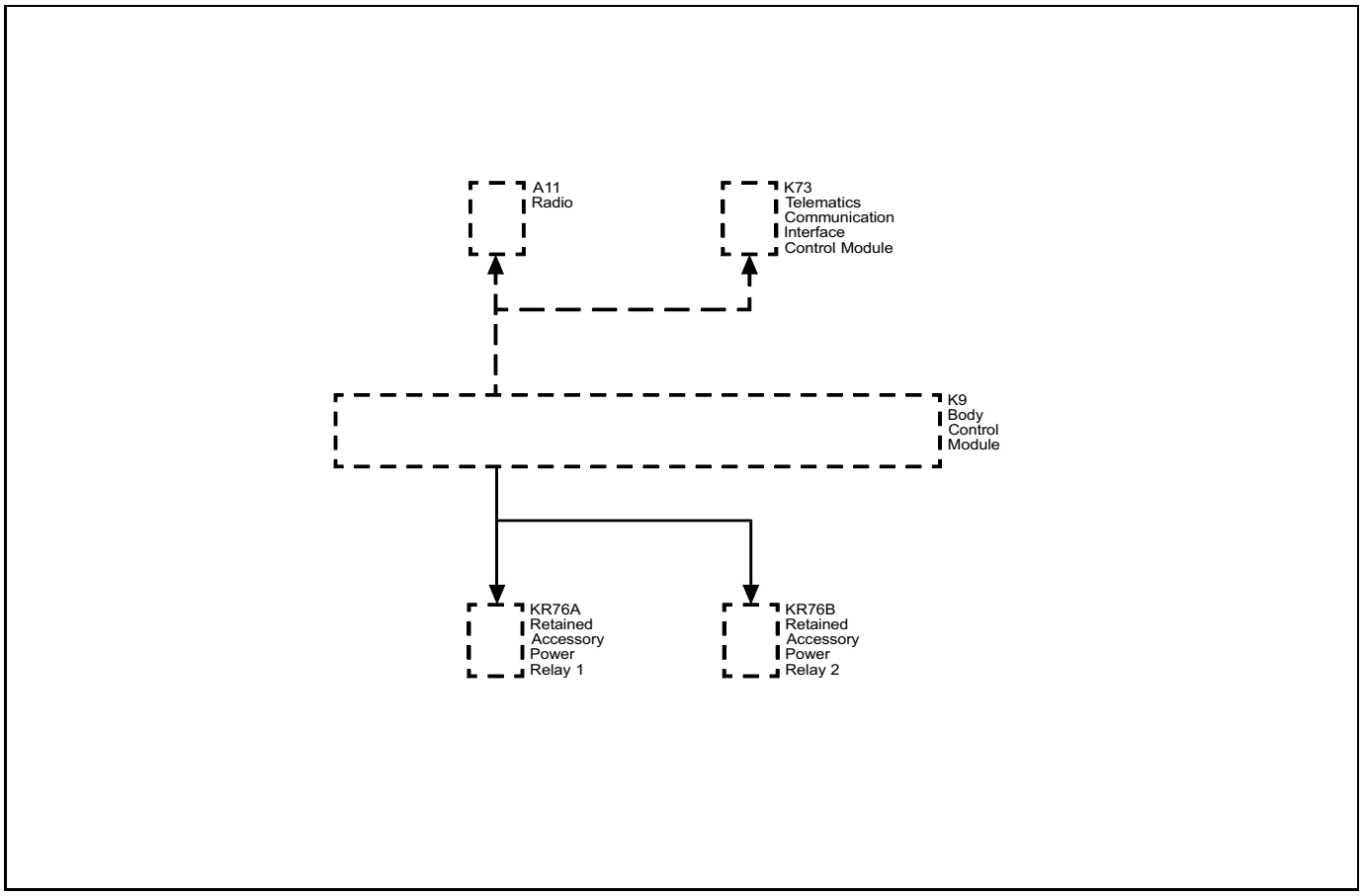
- The ignition switch is OFF, key out.
- Ignition OFF, transmitter is out of range
- No activity exists on the serial data line.
- No outputs are commanded.
- No delay timers are actively counting.
- No wake-up inputs are present.

If all these conditions are met, the BCM will enter a low power or sleep condition.

# Retained Accessory Power Description and Operation

## Retained Accessory Power

### RAP Description and Operation Block Diagram




3282830

The body control module (BCM) monitors the ignition switch position, battery condition, and each door ajar/ open switch status to determine whether the retained accessory power should be initiated or terminated. Retained accessory power is controlled by two different methods; relay control and serial data. Some modules receive a retained accessory power message from the BCM over the serial data circuits. Serial data controlled retained accessory power is deactivated as required by their modules retained accessory power mode operation. Other subsystems are activated directly by the BCM through a relay. Components and systems that are active in retained accessory power are also activated anytime the ignition is any position other than OFF regardless of the door switch signals.

## Relay Controlled Retained Accessory Power

The BCM keeps the retained accessory power relay 1 and retained accessory power relay 2 energized during all power modes, except Off-Awake and Crank. The retained accessory power relay 1 and retained accessory power relay 2 are also energized for approximately 10 minutes after shutting the ignition OFF and removing the key, providing no door is opened.

Relay controlled retained accessory power will end when one of the following conditions is met:

- The BCM receives an input from any door ajar or open switch indicating the opening of any door after the ignition key is out of the ignition.

  **Note:** If the BCM is receiving any door ajar or open signal from those switches when the ignition key is turned OFF, retained accessory power will not initiate.

- The BCM internal timer for the retained accessory power expires after approximately 10 minutes.
- The BCM detects a decrease in battery capacity below a prescribed limit.

Systems powered by the retained accessory power relay 1 and retained accessory power relay 2 during the retained accessory power mode are as follows:

**Note:** The vehicle may not be equipped with all components as listed below.

- Accessory Power Receptacle
- Cigarette Lighter Receptacle
- Sunroof Control Module
- Sunroof Switch

- Sliding Rear Window Switch
- Mobile Device Wireless Charger Module

## Serial Data Controlled Retained Accessory Power

Retained accessory power systems controlled by serial data are as follows:

### Radio

Radio retained accessory power activation / termination is the same as relay operation with one exception; the only door switch that will turn off the radio during retained accessory power is the driver door open switch.

### Vehicle Communication Interface Module (VCIM) (Onstar®) (If Equipped)

VCIM RAP activation/termination is the same as radio operation with 1 exception; if there is an active call when the ignition key is turned off the VCIM will remain in RAP mode, and keep the radio in RAP mode until the call is terminated.

# Trailering Description and Operation

## Trailering System Overview

Begin the trailering system diagnosis with Diagnostic System Check - Trailering. The Diagnostic System Check - Trailering will provide a complete strategy to locate and repair a vehicle trailering electrical fault. Not following this strategy may cause additional diagnostic time and/or misdiagnosis.

The trailering system consists of the following:

- Trailer Battery Charging System, refer to Trailer Battery Charging Malfunction for additional diagnostic information.
- Trailer Brakes, refer to *Trailer Brake Controls Description and Operation on page 3-6* for additional information.
- Trailer Detection, refer to Trailer Detection Malfunction for additional diagnostic information.
- Trailer Lighting, refer to *Exterior Lighting Systems Description and Operation on page 2-47* for additional information.
- Trailer Tire Pressure Monitoring System (TTPMS), refer to Trailer Tire Pressure Monitor Description and Operation for additional information.
- Trailer Theft Detection.

When a trailer is connected to the X88 Trailer Connector on a vehicle equipped with side blind zone detection, rear park assist, and/or rear cross traffic alert, the vehicle will automatically turn these features off. These features are turned off to prevent false detections due to the trailer obstructing the view of the sensors.

## Connecting Aftermarket Accessories

- Some aftermarket accessories that connect to the X88 Trailer Connector will be recognized by the vehicle as a trailer connected, even if the accessory is not a trailer. As a result, side blind zone detection, rear park assist, and/or rear cross traffic alert will be turned off anytime the vehicle detects a trailer/accessory is connected.
- Vehicles equipped with U1D have trailer theft detection that constantly monitors trailer connected status when enabled. This is done by periodically pulsing the lighting circuits of the trailer when the vehicle is parked. As a result, some aftermarket accessories may be turned ON/OFF when connected to the vehicle with theft detection enabled.
- Vehicles equipped with U1D use pulse width modulation voltage (PWM) for trailer lighting functions. Some aftermarket accessories are incompatible with PWM and may not function correctly when connected to the trailer lighting circuits of the vehicle.

## Trailer Battery Charging System

Trailer battery charging is accomplished through constant battery voltage from the X50A Fuse Block – Underhood to the X88 Trailer Connector. Battery voltage is supplied to terminal E at the X88 Trailer Connector at all times. If equipped, the trailer battery will constantly be charged by the vehicle's electrical system anytime the trailer is connected. Some trailers require the B+ circuit to the X88 Trailer Connector for the trailer brakes to function.

## Trailer Detection

### With U1D

The K68 Trailer Lighting Control Module is supplied with battery voltage as well as ignition voltage and is permanently grounded. The trailer lighting control module constantly monitors for trailer connection status, this is accomplished through the lighting circuits of the trailer to determine if a trailer is connected. With the key OFF, the K68 Trailer Lighting Control Module will periodically pulse the lighting circuits of the trailer to verify it is still connected. Depending on the configuration of the trailer lights, the trailer lights may periodically flash as part of the trailer theft deterrent function. These flashes correspond to when the K68 Trailer Lighting Control Module pulses the lighting circuits to ensure the trailer is still connected and is considered normal. When a trailer is connected, the K68 Trailer Lighting Control Module senses the trailer connection and alerts the driver by requesting a trailer profile setup through the Trailering App, which is displayed on infotainment screen (P17 Info Display Module). If a trailer is disconnected with the ignition ON, the vehicle will display multiple trailer lighting message faults until a trailer is reconnected or the ignition is cycled.

### With JL1, without U1D

Vehicles without U1D are not equipped with a K68 Trailer Lighting Control Module. Vehicles without U1D monitor trailer connection status through the trailer brake system. The K133 Trailer Brake Power Control

Module constantly monitors the trailer auxiliary control circuit from Terminal C at the X88 Trailer connector. When a trailer is connected with trailer brakes, the K133 Trailer Brake Power Control Module senses the connection and alerts the driver with a Trailer Connected message. If the K133 Trailer Brake Power Control Module senses a fault, or the trailer becomes disconnected, the vehicle will alert the driver with a Check Trailer Wiring message.

## Trailer Lighting (With U1D)

The K68 Trailer Lighting Control Module is supplied with battery voltage as well as ignition voltage and is permanently grounded. For lighting operation, the K68 Trailer Lighting Control Module receives serial data messages from the K9 Body Control Module (BCM) indicating what lamps have been activated on the vehicle. The K68 Trailer Lighting Control Module responds by applying pulse width modulated voltage (PWM) to the appropriate control circuits for the requested lamps illuminating the lamps on the attached trailer. The K68 Trailer Lighting Control Module constantly monitors for trailer connection status, trailer lighting faults, and trailer theft deterrent purposes. This is accomplished through the lighting circuits of the trailer to determine if a trailer is connected. With the key OFF, the K68 Trailer Lighting Control Module will periodically pulse the lighting circuits of the trailer to verify it is still connected. The lights on the trailer may flash at different intervals with the key OFF depending on which type of lights the trailer is built with. If a trailer is disconnected with the key ON, the vehicle will display a trailer disconnected message until a trailer is reconnected or the ignition is cycled.

### Backup Lamps

With the engine running and the transmission in the reverse position, the transmission control module (TCM) sends a serial data message that indicates the gear selector is in the reverse position. The K68 Trailer Lighting Control Module responds by applying PWM voltage to the X88 Trailer Connector on the trailer backup lamps control circuit when a trailer is connected. Once the driver moves the gear selector out of the reverse position, a message is sent by the TCM via serial data requesting the K68 Trailer Lighting Control Module to remove battery voltage from the backup lamp control circuit.

### Park Lamps

When the headlamp switch is placed in the HEAD or PARK position, ground is applied to the park lamp switch ON signal circuit to the K9 Body Control Module (BCM). The BCM responds by sending a serial data message to the K68 Trailer Lighting Control Module. The K68 Trailer Lighting Control Module responds by applying PWM voltage to the X88 Trailer Connector on the trailer park lamp control circuit when a trailer is connected.

### Stop Lamps

The brake pedal position sensor is used to sense the action of the driver application of the brake pedal. The brake pedal position sensor provides an analog voltage signal that will increase as the brake pedal is applied. The K9 Body Control Module (BCM) provides a low reference signal and a 5 V reference voltage to the brake pedal position sensor. When the variable signal reaches a voltage threshold indicating the brakes have been applied, the BCM energizes the stop lamp relay circuit by applying voltage to the stop lamp relay control circuit. The K68 Trailer Lighting Control Module senses the voltage on the stop lamp relay circuit and responds by applying PWM voltage to the X88 Trailer Connector on the left and right trailer stop/turn signal lamp control circuits when a trailer is connected.

### Turn Signal Lamps

Ground is applied at all times to the turn signal/ multifunction switch. The turn signal lamps may only be activated with the ignition switch in the ON or START positions. When the turn signal/multifunction switch is placed in either the turn right or turn left position, ground is applied to the K9 Body Control Module (BCM) through either the right turn or left turn signal switch signal circuit. The BCM responds by sending a serial data message to the K68 Trailer Lighting Control Module. The K68 Trailer Lighting Control Module responds by applying PWM voltage to the X88 Trailer Connector on either the left or right trailer stop/turn signal lamp control circuits when a trailer is connected.

## Trailer Lighting (Without U1D)

### Backup Lamps

For backup lamp operation, the backup lamp relay is supplied with battery voltage at all times. With the engine running and the transmission in the reverse position, the transmission control module (TCM) sends a serial data message to the K9 Body Control Module (BCM). The message indicates that the gear selector is in the reverse position. The BCM energizes the backup lamp relay by applying battery voltage to the backup lamp relay control circuit. When the backup lamp relay is energized, the relay switch contacts close and battery voltage is applied through the backup lamp fuses to the backup lamp control circuits which illuminates the backup lamps. Once the driver moves the gear selector out of the reverse position, a message is sent by the TCM via serial data requesting the BCM to remove battery voltage from the backup lamp relay control circuit.

### Park Lamps

When the headlamp switch is placed in the HEAD or PARK position, ground is applied to the park lamp switch ON signal circuit to the K9 Body Control Module (BCM). The BCM responds by applying voltage to the park lamps, tail lamps, license lamps, and trailer park lamps control circuits illuminating the park, tail, license, and trailer park lamps.

### Stop Lamps

For stop lamp operation, the left and right trailer stop/ turn signal lamp relay's are supplied with battery voltage at all times. The brake pedal position sensor is used to sense the action of the driver application of the brake pedal. The brake pedal position sensor provides an analog voltage signal that will increase as the brake pedal is applied. The K9 Body Control Module (BCM) provides a low reference signal and a 5 V reference voltage to the brake pedal position sensor. When the variable signal reaches a voltage threshold indicating the brakes have been applied, the BCM energizes the

left and right trailer stop/turn signal lamp relay's by applying voltage to the left and right stop lamp relay control circuits. With the left and right trailer stop/turn signal lamp relay's energized, the relay switch contacts close and battery voltage is applied through the left and right trailer stop/turn signal fuse's to the trailer stop lamp control circuits which illuminates the trailer stop lamps.

### Turn Signal Lamps

For turn signal lamp operation, the left and right trailer stop/turn signal lamp relay's are supplied with battery voltage at all times. Ground is applied at all times to the turn signal/multifunction switch. The turn signal lamps may only be activated with the ignition switch in the ON or START positions. When the turn signal/multifunction switch is placed in either the turn right or turn left position, ground is applied to the K9 Body Control Module (BCM) through either the right turn or left turn signal switch signal circuit. The BCM responds to the turn signal switch input by applying a pulsating voltage to the left and right trailer stop/turn signal lamp relay control circuits energizing the relay's in an ON and OFF cycle. With the left and right trailer stop/turn signal lamp relay's energized, the relay switch contacts cycle ON and OFF applying battery voltage through the left and right trailer stop/turn signal fuse's to the trailer turn signal lamp control circuits which illuminates the trailer turn signal lamps in an ON and OFF cycle.

## Trailer Messages

The driver information center (P16 Instrument Cluster) or infotainment screen (P17 Info Display Module) may display one or more of the following messages to the user related to trailering.

| Trailering Message | Description |
|---|---|
| Check Left Trailer Turn Signal Lamp | The K68 Trailer Lighting Control Module detects a fault on the left trailer stop/turn lamp control circuit |
| Check Right Trailer Turn Signal Lamp | The K68 Trailer Lighting Control Module detects a fault on the right trailer stop/turn lamp control circuit |
| Check Trailer Rear Lamp | The K68 Trailer Lighting Control Module detects a fault on the trailer park lamp control circuit. |
| Check Trailer Reversing Lamp | The K68 Trailer Lighting Control Module detects a fault on the trailer backup lamp control circuit. |
| Check Trailer Wiring | The K133 Trailer Brake Power Control Module detects a fault on the trailer brake control circuit or the trailer was disconnected. |
| Lane Change Alert Off | Reminder to the user that lane change alerts are turned off anytime a trailer is detected. |
| Rear Cross Traffic Alert Off | Reminder to the user that rear cross traffic alerts are turned off anytime a trailer is detected. |
| Rear Park Assist Off | Reminder to the user that rear park assist is turned off anytime a trailer is detected. |
| Remember to turn On Tow/Haul Mode | Reminder to the user to turn ON Tow/Haul Mode when towing. |
| Service Trailer Brake System | The K133 Trailer Brake Power Control Module detects a fault on the trailer brake control circuit. |
| Service Trailer Tire Monitor System | The K214 Trailer Tire Pressure Indicator Module detects one or more issues with the trailer tire pressure monitoring system. |
| Trailer Connected | The K68 Trailer Lighting Control Module detects that a trailer has been connected to the X88 Trailer Connector. |
| Trailer Detected (With U1D) | The K68 Trailer Lighting Control Module detects a trailer has been connected to the X88 Trailer Connector. |

| Trailering Message | Description |
|---|---|
| Trailer Detected (Without U1D) | The K133 Trailer Brake Power Control Module detects a trailer with trailer brakes has been connected to the X88 Trailer Connector. |
| Trailer Disconnected Check Connection | The K68 Trailer Lighting Control Module detects a trailer has been disconnected from the X88 Trailer Connector. |
| Trailer Tire Pressure High | The K214 Trailer Tire Pressure Indicator Module detects one or more of the trailer tire pressures is high. |
| Trailer Tire Pressure Low | The K214 Trailer Tire Pressure Indicator Module detects one or more of the trailer tire pressures is low. |
| Trailer Tire Sensor Fault | The K214 Trailer Tire Pressure Indicator Module detects one or more of the trailer tire pressure sensors has a fault. |
| Trailer Tire Temperature High | The K214 Trailer Tire Pressure Indicator Module detects one or more of the trailer tire temperatures is too high. |

## Trailer Theft Detection (With U1D Only)

Trailer theft monitoring can be turned ON and OFF through the vehicle Trailer App. Anytime the vehicle theft deterrent system is armed, the trailer lighting circuits are constantly monitored to determine if a trailer is connected for trailer theft deterrent purposes. With the key OFF, the K68 Trailer Lighting Control Module will periodically pulse the lighting circuits of the trailer to verify it is still connected by monitoring the voltage drop of the circuit. Depending on the configuration of the trailer lights, the trailer lights may periodically flash as part of the trailer theft deterrent function. These flashes correspond to when the K68 Trailer Lighting Control Module pulses the lighting circuits to ensure the trailer is still connected and is considered normal. If the trailer is disconnected while the vehicle theft deterrent system is armed, the vehicle will flash the exterior lights and cycle the horn to alert of a trailer theft event. Refer to Theft Systems Description and Operation for more information on the vehicle theft deterrent system.

## Trailering Diagnostic Tools

In some situations when diagnosing trailer tire pressure monitoring, trailer lighting, or integrated trailer brakes, it may be necessary to connect the vehicle to a trailer to confirm proper operation. Performing this activity may prove difficult in the service environment since trailers are not often available for diagnostic use, may have existing electrical issues outside of the issues a technician is attempting to diagnose, or simply may be too unwieldily to connect for diagnosis.

With all this in mind, it may be helpful to build or create a tool that can be plugged into the vehicle's 7-way trailer connector and simulate a connected trailer. This tool would include park lamps, stop lamps, and a reverse lamp for lighting and trailer tire pressure monitoring diagnosis. It can be expanded to include trailer brake magnets to diagnose integrated trailer brake concerns. Also, an additional lamp can be included to diagnose the B+ circuit to the trailer.

Trailer issues are NOT covered under warranty, but these tools may be used to verify the vehicle is functioning properly and to help the customer understand and correct any trailer related issues if they so choose.

## Available Trailer Presence Simulator Tool

| Illustration | Tool Number/Description |
|---|---|
|  5166189 | *EL-52641* Trailer Presence Simulator Tool |

## Simulated Trailer Lighting

Creating a tool to simulate a connected trailer can be used to diagnose issues with trailer lighting, trailer brake (if equipped), the Trailering App (if equipped), and trailer tire pressure monitoring system (if equipped).

If the vehicle is equipped with a K68 Trailer Lighting Control Module, the K68 Trailer Lighting Control Module monitors the current on the lighting circuits to determine a trailer has been connected. The K68 Trailer Lighting Control Module pulses current on the trailer lighting circuits every 10–15 s to monitor for a connected trailer. If a greater than 15mA draw is detected, the K68 Trailer Lighting Control Module recognizes this as a connected trailer. This will enable any trailer lighting controlled by the K68 Trailer Lighting Control Module. If the vehicle is also equipped with trailer tire pressure monitoring, the K68 Trailer Lighting Control Module will also use this trailer detection as a cue to enable the Trailering App and trailer tire pressure monitoring functions.

If the vehicle is not equipped with a K68 Trailer Lighting Control Module, the K9 Body Control Module controls the trailer lighting. The K9 Body Control Module does not actively monitor for a connected trailer. Instead, the K9 Body Control Module controls the trailer lights much like a parallel circuit with the vehicle lights.

**Creating a Simulated Trailer Lighting Tool**

Parts needed:

- 7-way RV trailer connector Qty: 1

  **Note:** The combination trailer park/stop/turn lamp must draw at least 15mA of current to be detected as a trailer. Some LED combination lamps will not draw enough current. If an LED combination lamp is used, make sure it draws at least 15mA. A load resistor can be added in series if necessary to obtain the correct load.

- Combination trailer park/stop/turn lamp (greater than 15mA drawn when on) Qty: 2
- Reverse lamp Qty: 1
- 12 gauge wire and terminals/connectors Qty: As needed
- 18 gauge wire and terminals/connectors Qty: As needed
- Mounting board Qty: 1

1. Connect a 12 gauge wire to the ground terminal of the 7-way trailer connector and the ground circuit of each combination trailer park/stop/turn lamp and the reverse lamp in parallel.
2. Connect an 18 gauge wire between the park lamp terminal of the 7-way trailer connector and the park lamp circuit of each combination trailer park/stop/turn lamp in parallel.
3. Connect an 18 gauge wire between the left turn/stop lamp terminal of the 7-way trailer connector and the turn/stop lamp circuit of left trailer park/stop/turn lamp.
4. Connect an 18 gauge wire between the right turn/stop lamp terminal of the 7-way trailer connector and the turn/stop lamp circuit of right trailer park/stop/turn lamp.
5. Connect an 18 gauge wire between the reverse lamp terminal of the 7-way trailer connector and the reverse lamp.

   **Note:** A combination trailer lighting and trailer brake tool can be created on the same mounting board.

6. Mount the left combination trailer park/stop/turn lamp, right combination trailer park/stop/turn lamp, and reverse lamp to the mounting board.
7. Plug the 7-way RV trailer connector to the vehicle and verify functionality.

## Simulated Trailer Brakes

Creating a tool to simulate trailer brakes can be used to diagnose trailer brake issues.

The trailer brake control system is compatible with two types of trailer brake systems: electromagnetic or electro-over hydraulic trailer brakes. The Brake System Control Module must determine which type of brakes the trailer is equipped with so the system can output correctly for the trailer's brake system. Because the Brake System Control Module has to determine the type of trailer brake system that is being used, it can be sensitive to a variety of trailer wiring issues.

The Trailer Brake Power Control Module continuously sends a test pulse out on the trailer brake control circuit (circuit 47) to determine if a trailer with trailer brakes has been connected. How the pulse reacts when a trailer is connected is how the Trailer Brake Power Control Module determines which type of braking system the trailer is equipped with.

Even after the system detects the trailer, Trailer Brake Power Control Module will continue to send this test pulse on the trailer brake control circuit, which now is monitoring both the truck and trailer circuitry. The trailer brake control circuit continues to be monitored for any faults so the driver can be notified of any issues that may occur within the truck or trailer, as well as, to determine when the trailer is disconnected from the truck.

**Creating a Simulated Trailer Brake Tool**

Parts needed:

- 7-way RV trailer connector Qty: 1
- Electric trailer brake magnets Qty: 2, 4, 6, or 8
- Reverse lamp Qty: 1
- Mounting board Qty: 1
- 12 gauge wire and terminals/connectors Qty: As needed

1. Connect a 12 gauge wire to the ground terminal of the 7-way trailer connector.
2. Connect a 12 gauge wire to the brake controller output terminal of the 7-way trailer connector.

   **Note:** The trailer brake magnets must be connected in parallel. Connecting in series will create an excessive current draw and disable the trailer brake system.

3. Connect the trailer brake magnets to the 12 gauge wires from the 7-way trailer connector in parallel.

   **Note:** A combination trailer lighting and trailer brake tool can be created on the same mounting board.

4. Mount the trailer brake magnets to the mounting board.
5. Plug the 7-way RV trailer connector to the vehicle and verify functionality.

# Section 8

# Safety and Security

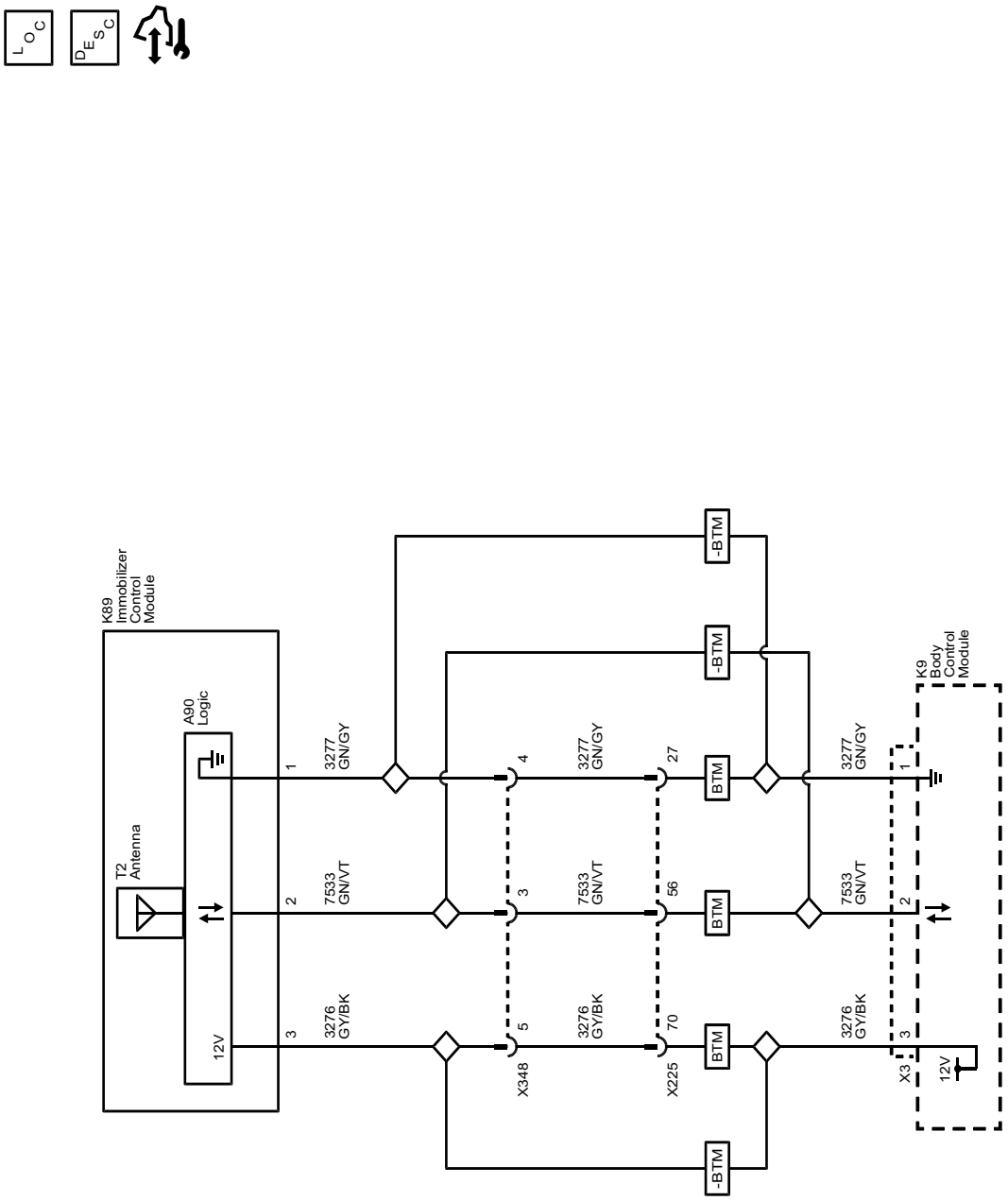
**Immobilizer** ..... 8-3
**Schematic and Routing Diagrams** ..... 8-3
Immobilizer Schematics ..... 8-4
**Description and Operation** ..... 8-5
Immobilizer Description and Operation ..... 8-5
**Parking Assistance Systems** ..... 8-7
**Schematic and Routing Diagrams** ..... 8-7
Parking Assistance Systems Schematics ..... 8-8
**Description and Operation** ..... 8-11
Parking Assist Description and Operation (UD7) ..... 8-11
Parking Assist Description and Operation (UD5) ..... 8-12
**Remote Functions** ..... 8-14
**Schematic and Routing Diagrams** ..... 8-14
Remote Function Schematics ..... 8-15
**Description and Operation** ..... 8-19
Garage Door Opener Description and Operation ..... 8-19
Keyless Entry System Description and Operation ..... 8-19

**BLANK**

# Immobilizer

## Schematic and Routing Diagrams

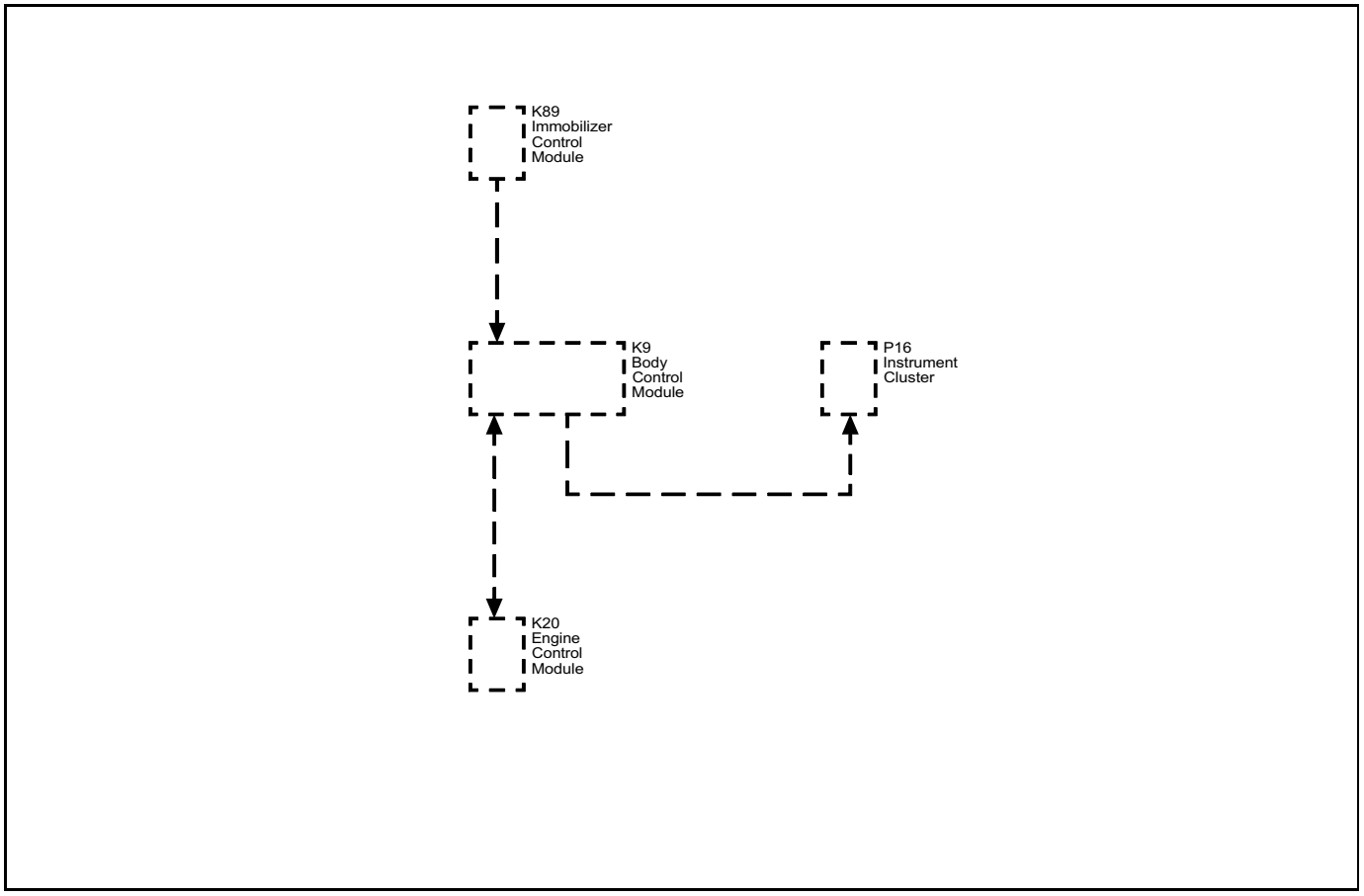
## Immobilizer Schematics (Immobilizer)




5256399

# Description and Operation

## Immobilizer Description and Operation




3510923

The immobilizer system functions are provided by the body control module (BCM) and the engine control module (ECM), as well as any control modules which store and report the environment identifier.

When an ignition key is inserted into the ignition lock cylinder and the ignition is switched ON, the transponder in the key is energized by the immobilizer coil surrounding the ignition lock cylinder. This immobilizer coil is part of the immobilizer control module. The transponder transmits a signal that contains its unique value, which is received by the BCM through the immobilizer coil. The BCM then compares this value to a value stored in memory. The BCM also monitors various control modules to determine if the stored environment identifiers match.

If both the environment identifier and the value received from the transponder match, the BCM will send the prerelease password via serial data to the ECM. If the encrypted code's unique value is incorrect or the environment identifier does not match, the BCM will send the start disable message to the ECM which will prevent the vehicle starter and fuel pump from operating.

When the ECM receives the BCM prerelease password, the ECM will challenge the password. The ECM sends this challenge to the BCM via serial data. Both the ECM and BCM perform a calculation on this challenge. If the BCM calculated response to the challenge equals the calculation performed by the ECM, the ECM will allow vehicle starting.

The components of the theft system are as follows:

- BCM
- ECM
- Immobilizer control module
- Ignition key
- Security indicator
- Various control modules which store and report the environment identifier

### Body Control Module (BCM)

The immobilizer system is an integral part of the BCM and is controlled internally within the BCM. The BCM can learn up to 8 keys (transponder values).

The BCM uses the following inputs:

- Environment identifier exchange with various modules
- Encrypted code from the vehicle key, received by the immobilizer control module

The BCM uses the following outputs:

- Prerelease password communication with ECM
- Challenge/response with ECM

When an ignition key is inserted into the ignition lock cylinder and the ignition is switched ON, the encrypted code in the key is energized by the immobilizer control module surrounding the ignition lock cylinder. The energized transponder transmits a signal that contains its unique value, which is received by the BCM. The BCM then compares this value to the learned key code stored in memory. The BCM then performs one of the following functions:

- If the encrypted code value matches the values stored in the BCM memory, the BCM will send the prerelease password to the ECM via serial data.
- If the encrypted code unique value does not match the value stored in the BCM, the BCM will send the start disable message to the ECM via serial data.
- If the BCM is unable to measure the ignition key encrypted code value, the BCM will not send any messages to the ECM.

## Engine Control Module (ECM)

When the ECM receives the BCM prerelease password, the ECM will challenge the password. The ECM sends this challenge to the BCM via the serial data circuit. Both the ECM and BCM perform a calculation on this challenge. If the calculated response from the BCM equals the calculation performed by the ECM, the ECM will allow vehicle starting.

The ECM will disable vehicle starting if any of the following immobilization conditions occur:

- The prerelease password is invalid.
- The start disable password is sent by the BCM.
- No passwords are received. There is no communication with the BCM.
- The BCM calculated response to the challenge does not equal the calculation performed by the ECM.

## Immobilizer Control Module

The immobilizer control module contains an immobilizer coil which surrounds the ignition cylinder. The coil passively powers the transponder located in the ignition key when the key is in the ignition. When powered, the key transmits its unique value to the immobilizer control module, which is then relayed to the BCM via a discrete serial data circuit. The immobilizer control module also receives B+ and ground from the BCM.

The immobilizer control module is used to:

1. Learn keys
2. To start the vehicle

## Ignition Key

Each ignition key contains a transponder with a unique encrypted value. The transponder's encrypted value is fixed and unable to be changed. The immobilizer system uses the ignition key transponder value to determine if a valid ignition key is being used to start the vehicle.

## Environment Identifier

Various modules throughout the vehicle learn a specific environment identifier during the module programming process. The environment identifier is learned by each individual module and matches the environment identifier stored in the BCM. Prior to starting after a battery disconnect, each of the modules which store a environment identifier will compare their identifier to that of the identifier stored in the BCM. If all the identifiers match, the engine starting process will continue. If the environment identifiers do not match, engine starting will be disabled.

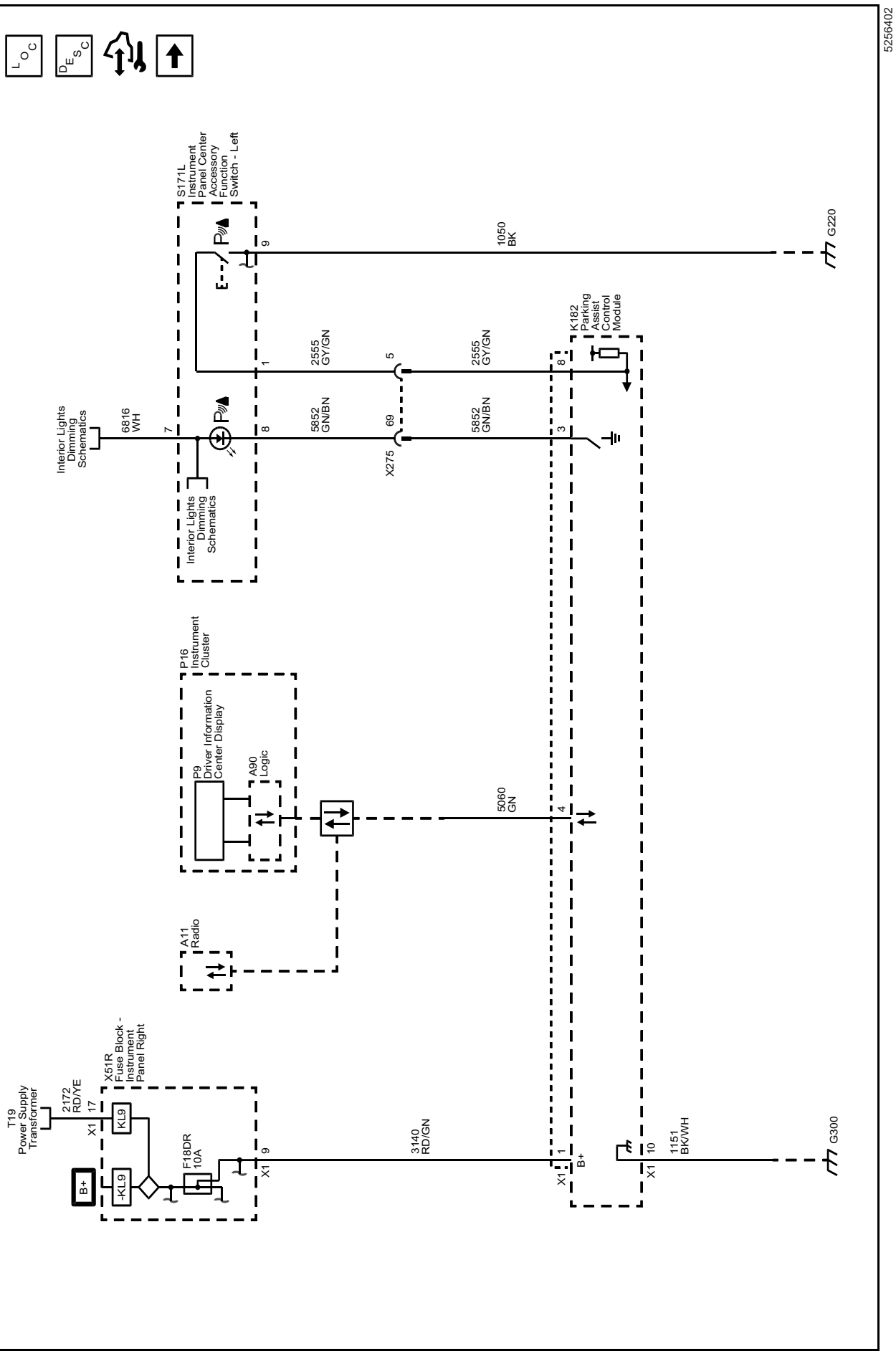
## Security Indicator

The BCM will command the instrument cluster to illuminate the security indicator when the ignition is in the ON position to indicate a fault has occurred within the immobilizer system and when the engine starting is disabled.

# Parking Assistance Systems

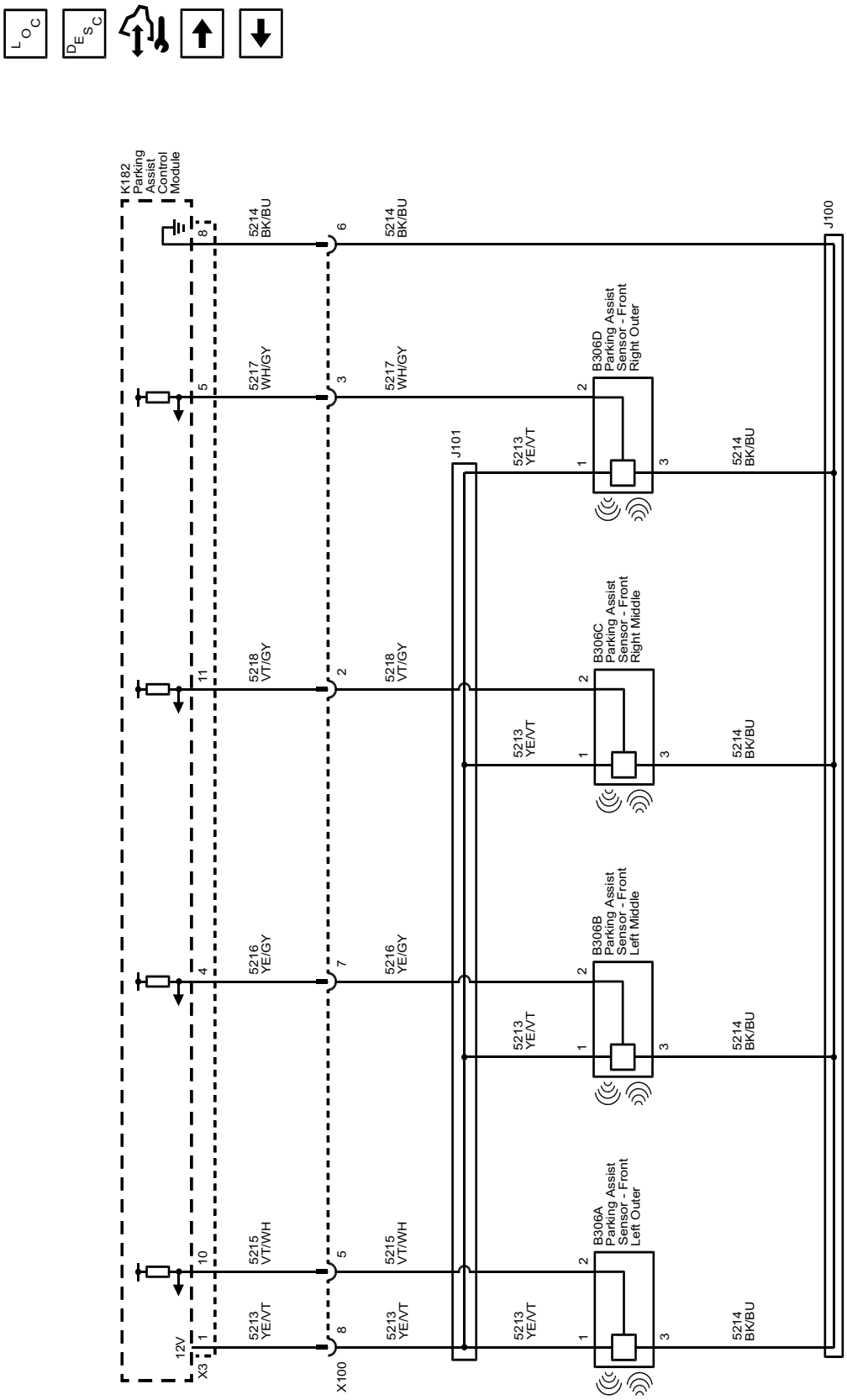
## Schematic and Routing Diagrams

## Parking Assistance Systems Schematics (Park Assist - Power, Ground, Serial Data, and Control (UD5/UD7))

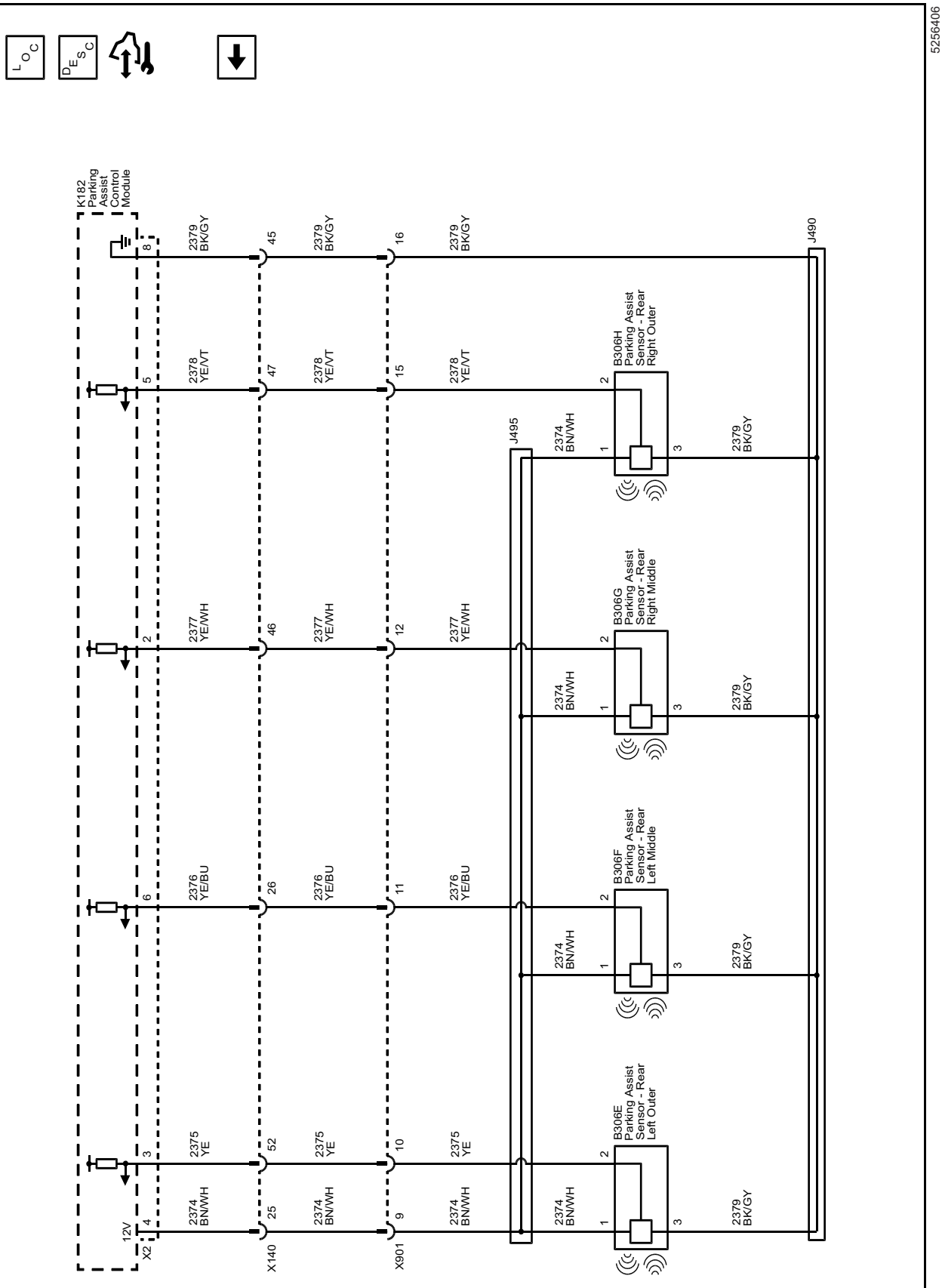



5256402

## Parking Assistance Systems Schematics (Park Assist - Front Sensors (UD5))



## Parking Assistance Systems Schematics (Park Assist - Rear Sensors (UD5/UD7))



# Description and Operation

## Parking Assist Description and Operation (UD7)

The parking assist system is designed to identify and notify the driver of an object in the vehicle path when reversing at speeds of less than 8 km/h (5 mph). The distance and location of the object is determined by four object sensors located in the rear fascia The parking assist system will notify the driver using audible beeps through the infotainment system. Some vehicles may also have a parking assist display on the infotainment screen or driver information center to graphically display the distance to an object.

The parking assist system is made up of the following components:

- K182 Parking Assist Control Module
- B306 Parking Assist Sensors
- Parking Assist Switch
- Parking Assist Switch Indicator
- Infotainment system

### K182 Parking Assist Control Module

The K182 Parking Assist Control Module provides a reference voltage and a low reference to the B306 Parking Assist Sensors. The K182 Parking Assist Control Module receives individual signals from each of the four B306 Parking Assist Sensors and determines the location and distance of an object based on these inputs. When an object is detected, the K182 Parking Assist Control Module will send a serial data message to the infotainment system requesting an audible alert.

### B306 Parking Assist Sensors

The B306 Parking Assist Sensors are located in the rear fascia of the vehicle. The sensors are used to determine the distance between an object and the bumper. Each sensor emits an ultrasonic frequency which is reflected off any object located behind the vehicle. These reflections are received by the sensors. The time difference between the emission of the frequency and when the reflection is received is known as sensor echo time; it is used to determine the distance to the object. The sensors report this information to the K182 Parking Assist Control Module.

### Parking Assist Switch

The parking assist system can be activated and deactivated by pressing the parking assist switch. The K182 Parking Assist Control Module applies voltage and monitors the parking assist switch signal circuit. The parking assist switch is a normally open switch. With the switch open, voltage seen at the K182 Parking Assist Control Module is high. When the parking assist switch is pressed, the switch is closed and the signal circuit is pulled to ground. With the switch closed, voltage seen at the K182 Parking Assist Control Module is low. The K182 Parking Assist Control Module will respond to this by activating or deactivating the parking assist function.

### Parking Assist Switch Indicator

When the parking assist system is enabled, the K182 Parking Assist Control Module will illuminate the indicator on the switch. The indicator receives voltage through a high control circuit from the K9 Body Control Module and is controlled through a low control circuit by the K182 Parking Assist Control Module.

### Infotainment System

The infotainment system controls the audible alert for the parking assist system. If the an object is detected the infotainment system will command beeps as an audible alert to the driver.

## Parking Assist Operation

When an object is within the measuring range of the B306 Parking Assist Sensors, the ultrasonic pulse is reflected and is received by the sending or a neighboring sensor. The sensor converts this signal into a voltage signal and sends this signal to the K182 Parking Assist Control Module. The K182 Parking Assist Control Module evaluates the received sensor signals. As soon as an object is within the measuring range, the K182 Parking Assist Control Module sends a message via serial data to the infotainment system to provide an audible alert signal.

The parking assist system can detect objects greater than 7.6 cm (3 in) wide and 25.4 cm (10 in) tall. The system cannot detect objects below the bumper or underneath the vehicle.

When the transmission is in R, parking assist is automatically activated, unless disable through vehicle personalization.

The K182 Parking Assist Control Module carries out a self test and monitors the sensors for electrical and mechanical faults. Monitored is the power supply of each sensor and the sensor signals. Mud, ice and snow may cause obstruction of the function of the sensors. The K182 Parking Assist Control Module also determines if the correct type of sensor is installed. If any of these tests fails, a DTC with corresponding symptom is set and the parking assist system is deactivated.

## Parking Assist System Messages

### SERVICE PARK ASSIST

The driver information center displays SERVICE PARK ASSIST when the K182 Parking Assist Control Module detects a malfunction in the parking assist system and the system is disabled. The driver information center also displays SERVICE PARK ASSIST when a loss of communication occurs with the K182 Parking Assist Control Module.

### PARK ASSIST OFF

The PARK ASSIST OFF message is displayed in the driver information center when the parking assist system is disabled due to conditions that disable or inhibit the system. The K182 Parking Assist Control Module requests the driver information center display PARK ASSIST OFF when it detects that one of the following conditions:

- The parking assist system is manually disabled.
- An object is attached to the rear of the vehicle, such as a trailer, bicycle rack, trailer hitch receiver, or tow bar. Also, an object extending beyond a lowered tailgate will disable the system.

- The parking assist sensors are covered by snow, mud, dirt, slush, or ice.
- The vehicle rear fascia is damaged.
- Excessive paint thickness on a replacement B306 Parking Assist Sensor.
- The B306 Parking Assist Sensors are disrupted by vibrations, like those caused by a large nearby vehicle or from heavy equipment such as a jackhammer.

## Parking Assist Description and Operation (UD5)

The parking assist system can help drivers avoid certain objects in their path during low-speed parking. The distance and location of the object is determined by 4 object sensors located in the rear fascia and 4 object sensors located in the front fascia. The parking assist system may not detect all children, pedestrians, bicyclists, animals or objects below the bumper. Drivers should remember to always check the area around the vehicle before moving forward or backing up. The parking assist system will not stop or slow down a vehicle. It does not engage a vehicle's throttle or braking. No safety system can take the place of an alert and engaged driver.

The parking assist system is made up of the following components:

- K182 Parking Assist Control Module
- B306 Parking Assist Sensors
- Parking Assist Switch
- Parking Assist Switch Indicator
- Safety Alert Seat (HS1)
- Infotainment system

### K182 Parking Assist Control Module

The K182 Parking Assist Control Module provides a reference voltage and a low reference to the B306 Parking Assist Sensors. The K182 Parking Assist Control Module receives individual signals from each of the four B306 Parking Assist Sensors and determines the location and distance of an object based on these inputs. When an object is detected, the K182 Parking Assist Control Module will send a serial data message to the infotainment system requesting an audible alert.

### B306 Parking Assist Sensors

The B306 Parking Assist Sensors are located in the front and rear fascia of the vehicle. The sensors are used to determine the distance between an object and the bumper. Each sensor emits an ultrasonic frequency which is reflected off any object located behind the vehicle. These reflections are received by the sensors. The time difference between the emission of the frequency and when the reflection is received is known as sensor echo time; it is used to determine the distance to the object. The sensors report this information to the K182 Parking Assist Control Module.

### Parking Assist Switch

The parking assist system can be activated and deactivated by pressing the parking assist switch. The K182 Parking Assist Control Module applies voltage and monitors the parking assist switch signal circuit. The parking assist switch is a normally open switch. With the switch open, voltage seen at the K182 Parking Assist Control Module is high. When the parking assist switch is pressed, the switch is closed and the signal circuit is pulled to ground. With the switch closed, voltage seen at the K182 Parking Assist Control Module is low. The K182 Parking Assist Control Module will respond to this by activating or deactivating the parking assist function.

### Parking Assist Switch Indicator

When the parking assist system is enabled, the K182 Parking Assist Control Module will illuminate the indicator on the switch. The indicator receives voltage through a high control circuit from the K9 Body Control Module and is controlled through a low control circuit by the K182 Parking Assist Control Module.

### Safety Alert Seat (HS1)

The K40 Seat Memory Control Module controls the P45 Seat Haptic Movement Motors. The P45 Seat Haptic Movement Motors provide haptic alert to the driver. If an object is detected, the K40 Seat Memory Control Module will command pulses to the P45 Seat Haptic Movement Motors as an alert to the driver.

### Infotainment System

The infotainment system controls the audible alert for the parking assist system. If the an object is detected the infotainment system will command beeps as an audible alert to the driver.

## Front and Rear Parking Assist Operation

The rear parking assist system uses 4 B306 Parking Assist Sensors located on the rear fascia and functions when the transmission is in REVERSE. When a driver is backing up at a low speed, below 8 km/h (5 mph), the B306 Parking Assist Sensors may detect objects up to 8 feet (2.4 m) behind the vehicle. When an object is within the measuring range of the B306 Parking Assist Sensors, the ultrasonic pulse is reflected and is received by the sending or a neighboring sensor. The sensor converts this signal into a voltage signal and sends this signal to the K182 Parking Assist Control Module. The K182 Parking Assist Control Module evaluates the received sensor signals.

When an object is first detected while backing up, the parking assist system emits low-pitched beeps from the rear speakers, or, if the vehicle is equipped with the Safety Alert Seat (HS1), the seat pulses 2 times on both sides of the seat. On some vehicles, the time between beeps may get shorter as the vehicle approaches the detected object . When an object is within 0.6 m (2 ft) of the bumper, 5 repeating low-pitched beeps are played from the rear speakers, or, if the vehicle is equipped with the Safety Alert Seat (HS1), it pulses 5 times on both sides. When an object is within 0.3 m (1 ft) of the bumper, repeating low-pitched beeps or a continuous low-pitched tone is played from the rear speakers, or, if the vehicle is equipped with the Safety Alert Seat (HS1), the seat pulses 5 times on both sides

The front parking assist system uses 4 B306 Parking Assist Sensors located on the front fascia and functions when the vehicle is moving forward at low speeds.

When a driver is driving forward at a low speed, below 8 km/h (5 mph), the B306 Parking Assist Sensors may detect objects up to 8 feet (2.4 m) in front og the vehicle. When an object is within the measuring range of the B306 Parking Assist Sensors, the ultrasonic pulse is reflected and is received by the sending or a neighboring sensor. The sensor converts this signal into a voltage signal and sends this signal to the K182 Parking Assist Control Module. The K182 Parking Assist Control Module evaluates the received sensor signals.

The front parking assist system uses a parking assist display with bars that show "distance to object," driving direction, and object location information for the parking assist system. As the vehicle gets closer to the detected object, distance-to-object information and caution triangles may be displayed that changes from yellow to amber to red.

When an object is within 0.3 m (1 ft) of the bumper, repeating low-pitched beeps or a continuous low-pitched tone is played from the rear speakers, or, if the vehicle is equipped with the Safety Alert Seat (HS1), the seat pulses 5 times on both sides

The parking assist system can be turned ON and OFF using the parking assist switch control or through driver information center.

The K182 Parking Assist Control Module carries out a self test and monitors the sensors for electrical and mechanical faults. Monitored is the power supply of each sensor and the sensor signals. Mud, ice and snow may cause obstruction of the function of the sensors. The K182 Parking Assist Control Module also determines if the correct type of sensor is installed. If any of these tests fails, a DTC with corresponding symptom is set and the parking assist system is deactivated.

## Parking Assist System Messages

### SERVICE PARK ASSIST

The driver information center displays SERVICE PARK ASSIST when the K182 Parking Assist Control Module detects a malfunction in the parking assist system and the system is disabled. The driver information center also displays SERVICE PARK ASSIST when a loss of communication occurs with the K182 Parking Assist Control Module.

### PARK ASSIST OFF

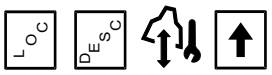
The PARK ASSIST OFF message is displayed in the driver information center when the parking assist system is disabled due to conditions that disable or inhibit the system. The K182 Parking Assist Control Module requests the driver information center display PARK ASSIST OFF when it detects that one of the following conditions:

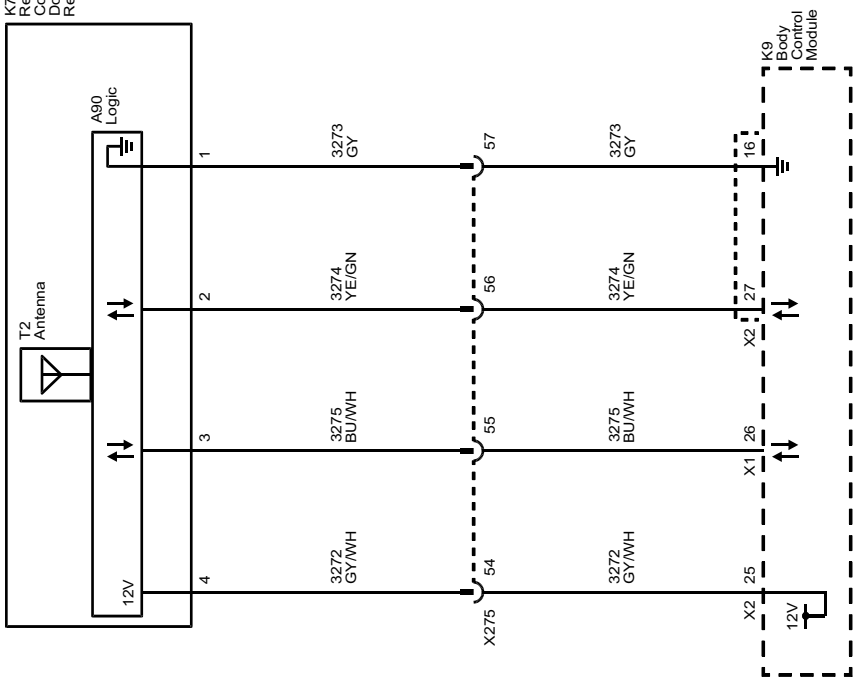
- The parking assist system is manually disabled.
- An object is attached to the rear of the vehicle, such as a trailer, bicycle rack, trailer hitch receiver, or tow bar. Also, an object extending beyond a lowered tailgate will disable the system.
- The B306 Parking Assist Sensors are covered by snow, mud, dirt, slush, or ice.
- The vehicle front or rear fascia is damaged.
- Excessive paint thickness on a replacement B306 Parking Assist Sensor.
- The B306 Parking Assist Sensors are disrupted by vibrations, like those caused by a large nearby vehicle or from heavy equipment such as a jackhammer.

# Remote Functions

## Schematic and Routing Diagrams

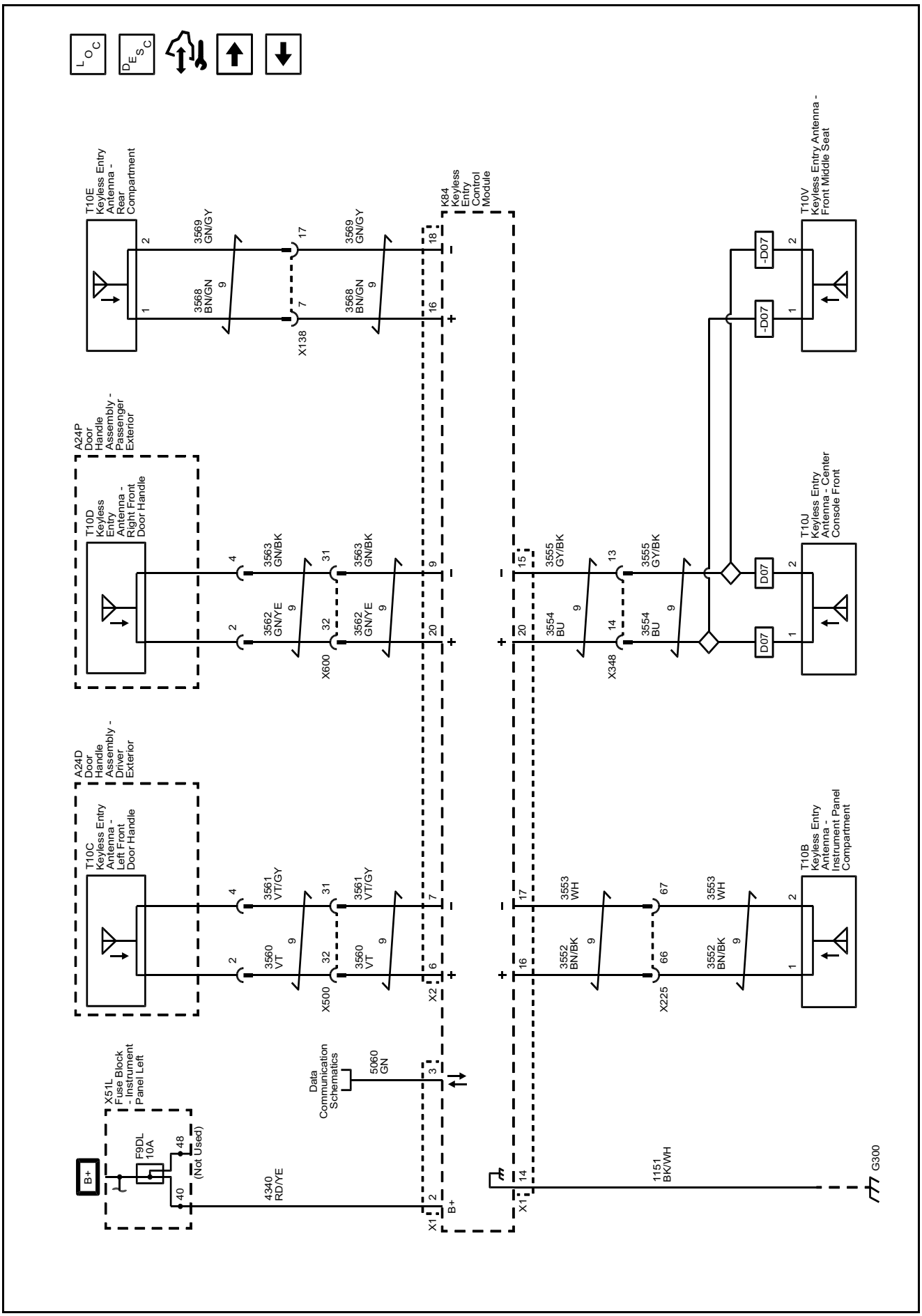
## Remote Function Schematics (Keyless Entry - Active)



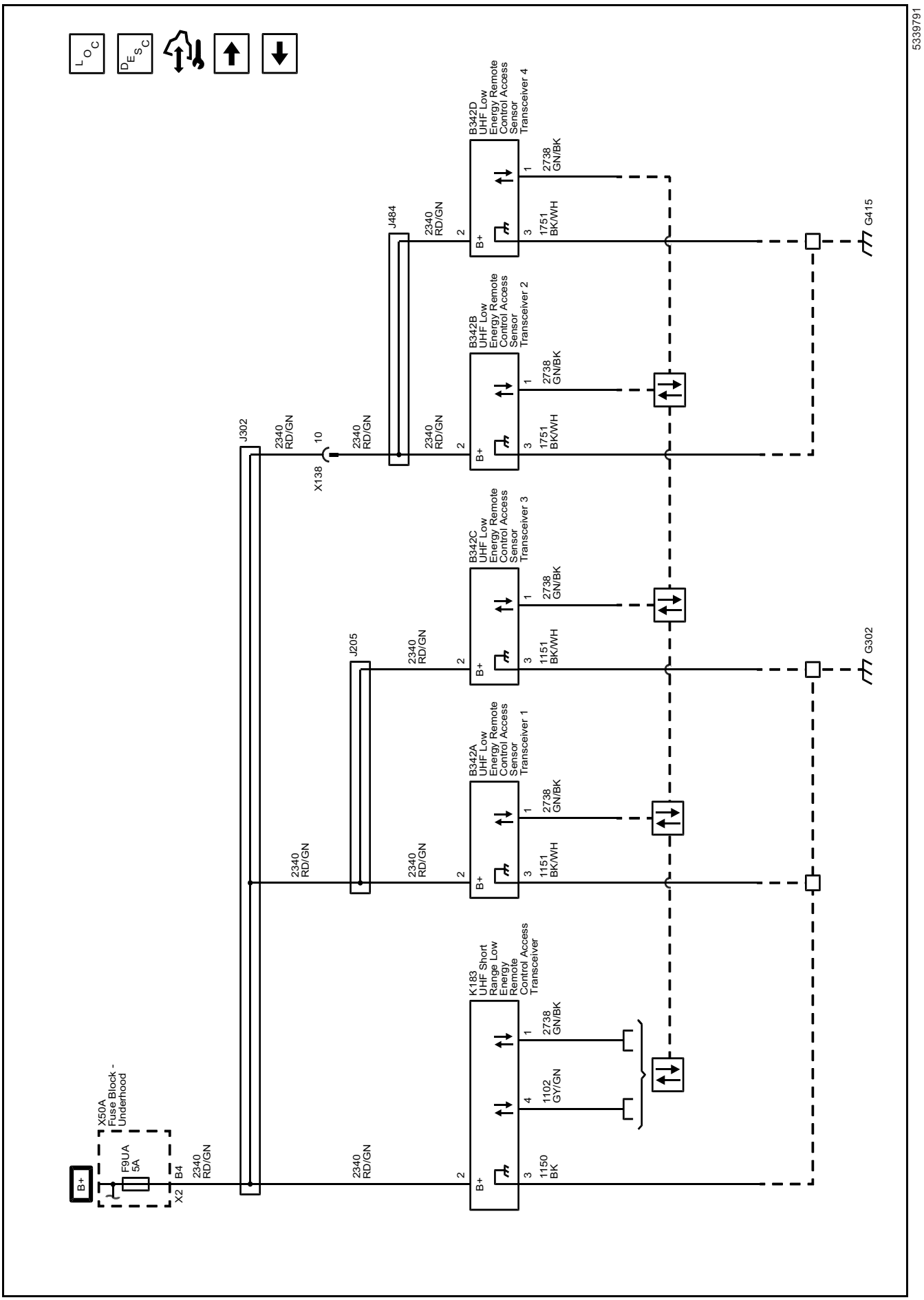



5256408

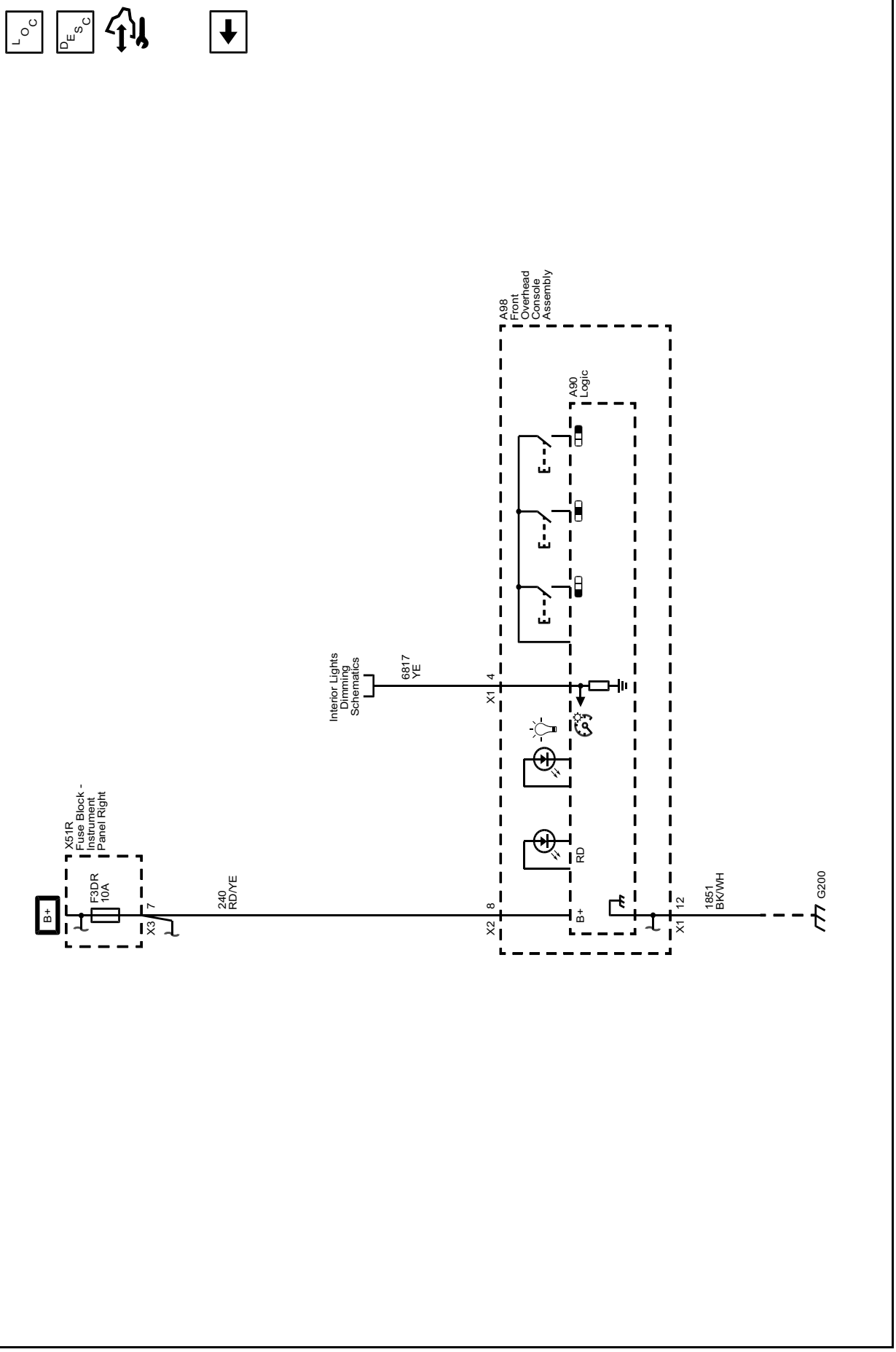
## Remote Function Schematics (Keyless Entry - Passive and Keyless Start)



## Remote Function Schematics (Keyless Entry - Virtual Key (BOP))



## Remote Function Schematics (Garage Door Opener (UG1))



# Description and Operation

## Garage Door Opener Description and Operation

The garage door opener is fixed and rolling code capable. Rolling code is a system that allows the code that the customers receiver receives from the garage door opener to change every time the garage door opener is used within operating range of the receiver. Rolling code programming requires the customer to push a learn/program button on the garage door opener receiver at their home. This button is usually located on the receiver unit under a cover (light cover) on one end of the unit. The customer must follow the garage door opener manufacturers instructions to program/learn the receiver to accept the Universal Home Remote System as an authorized opener for their unit . When the receiver and the garage door opener are initially programmed together, a code is established and a new code is created for every new transmission. The software in the receiver recognizes the garage door opener and accepts the new code.

The garage door opener is compatible with most, but not all types and brands of transmitters.

The garage door opener is a transmitter operating between 288–434 MHz. The power and range of the transmitter is limited to comply with laws governing the generation of radio frequency interference. The transmitter is programmed by the user to accept the signal generated by the user's transmitters.

The garage door opener has 3 buttons that may be programmed for individual transmitter/receiver combinations to control up to 3 garage door openers, security gates, lighting systems, etc. Each button represents a transmitter code section of the transmitter, which operates separately from any other button, and may be considered a separate transmitter. Operation consists of simply pressing a button to activate the corresponding transmitter.

**Note:** Do not use the garage door opener (GDO) with any garage door opener that does not have the stop and reverse safety feature. This includes any garage door opener model manufactured before April 1, 1982.

## Keyless Entry System Description and Operation

The keyless entry system is a vehicle entry device. The keyless entry system is used in conjunction with the door locks to unlock the vehicle. Keyless entry will lock/unlock the vehicle doors or open the rear compartment lid when a corresponding button on the keyless entry transmitter is pressed. This is accomplished by the transmitter sending a radio frequency to the remote control door lock receiver antenna that has a direct link to the body control module (BCM). The BCM interprets the signal and activates the requested function or request the appropriate control module to activate the function via a serial data message. A low transmitter battery or radio frequency interference from aftermarket devices, such as 2-way radios, power inverters, computers, etc., may cause a system malfunction. High radio frequency traffic areas, such as gas stations that use pay-at-the-pump radio frequency transponders, may also cause interference that could lead to a malfunction. Keyless entry allows you to operate the following features:

- Door lock/unlock
- Liftgate lock/unlock, if equipped
- Trunk release, if equipped
- Power liftgate, if equipped
- Panic alarm/vehicle locator
- Remote vehicle starting, if equipped

The keyless entry system has the following components:

- Keyless entry transmitters
- Body control module
- Remote control door lock receiver

### Keyless Entry Transmitters

**Note:** When the vehicle key is in the ignition, keyless entry functions from all keyless entry transmitter are disabled.

The keyless entry transmitters are used to perform various entry functions while away from the immediate are of the vehicle. Keyless entry functions may work at up to 20 m (65 ft) away from the vehicle. Ambient conditions may affect the performance of the keyless entry transmitter and reduce the range at which keyless entry functions operate. Up to eight transmitters may be programmed to a single vehicle. The keyless entry transmitter is an integral part of the vehicle key.

### OnStar® Remote Link (if equipped)

A vehicle operator may have the ability to perform some of the keyless entry functions using applications on personal devices such as a smart phone. Unwanted or inadvertent door lock/unlock activation may be requested by the OnStar® Remote Link application. It is possible that a customer may be unaware of account usage, resulting in an unwanted or phantom door lock/unlock. If normal system diagnosis results in an inability to verify the customer’s concern, contact Technical Assistance Center (TAC).

### Body Control Module (BCM)

The BCM is a multifunction module that operates the keyless entry system. When a radio frequency message is received from a keyless entry transmitter, the BCM interprets this signal and performs the specific function, i.e. door lock, door unlock, or vehicle locate.

### Remote Control Door Lock Receiver

The remote control door lock receiver acts as an antenna for the keyless entry system and communicates with the BCM through a dedicated serial data link. When a button is pressed on a keyless entry transmitter, the remote control door lock receiver receives this signal and sends the request to the BCM. The BCM interprets the signal and performs the specific function, i.e. door lock, door unlock, or vehicle locate.

## Unlock Doors

Momentarily press the transmitter UNLOCK button in order to perform the following functions:

- Unlock only the driver door or all doors and liftgate (if equipped); this is customized through the driver information center.
- Illuminate the interior lamps for a determined length of time or until the ignition is turned ON.
- Flash the exterior lights; this is customized through the driver information center.
- Disarm the content theft deterrent system, if equipped.
- Deactivate the content theft deterrent system when in the alarm mode.

## Lock All Doors

Press the transmitter LOCK button to perform the following functions:

- Lock all vehicle doors.
- Immediately turn OFF the interior lamps.
- Flash the exterior lights and/or sound the horn; this is customized through the driver information center.
- Arm the content theft deterrent system.

## Trunk Release, if equipped

Press the trunk release button on the transmitter to open the trunk.

## Power Liftgate, if equipped

Press and hold the power liftgate button to perform the following functions:

- Open or close the liftgate using the power liftgate function.
- Flash the tail lamps.
- Sound the interior power liftgate chime.

## Vehicle Locator/Panic Alarm

A single press of the panic button performs the following functions. Some functions may be dependent on personalization settings:

- Pulse the horn three times.
- Flash the exterior lamps three times.

A press and hold of the panic button performs the following functions:

- Illuminate the interior lamps.
- Pulse the horn and flash the exterior lamps for 30 seconds or until the following conditions occur:
  - The panic button is pressed.
  - The ignition switch is turned to the RUN position with a valid key.

## Remote Vehicle Start, if equipped

The remote vehicle start function allows engine starting while not in the vehicle. It also allows the vehicle HVAC system and other vehicle systems to enable, providing a comfortable vehicle upon entry. The remote vehicle start sequence begins by pressing and releasing the lock button and then pressing and holding the remote vehicle start buttons on the keyless entry transmitter. The turn signal lamps will illuminate to indicate the vehicle has received the remote start request. Each time a remote vehicle start is performed, the vehicle doors are locked, however they may then be unlocked/locked with the transmitter at any time. Only the first and second vehicle transmitters are able to control the remote vehicle start function. Any additional remote transmitters programmed to the vehicle will perform all other remote functions. Once activated, the engine is allowed to run for 10 minutes. The remote vehicle start time may be extended by an additional 10 minutes by again pressing and releasing the lock button and then pressing and holding the remote vehicle start buttons on the transmitter. This feature is called a remote vehicle start continue and allows a maximum of 20 minutes of engine running. If the remote vehicle start continue is performed at 7 minutes into the initial 10 minute time-out, a total of 17 minutes of engine running would occur. The remote vehicle start event may be suspended at any time by pressing only the remote vehicle start button on the transmitter or by entering the vehicle and turning ON the hazard lamps.

In between ignition cycles, only two remote vehicle start events may occur or be attempted. Once two events or attempts have been made, future remote vehicle start events will be suspended until the vehicle is started using the ignition.

## Enable/Disable Remote Vehicle Start

Using the driver information center, remote vehicle start may be enabled or disabled as a part of vehicle personalization. Refer to the vehicle owners manual for more information.

## Hood Ajar Switch

The hood switch provides status of the hood to the BCM for remote vehicle start purposes. The switch is integrated into the hood latch assembly.

## Remote Vehicle Start Circuit Description

The BCM receives a signal from the keyless entry transmitter indicating a remote vehicle start request. A message is then sent to the BCM which determines if a crank request message will be sent to the ECM to allow engine starting. To determine if conditions are correct for a remote vehicle start event, the BCM will ensure the following conditions are met:

- A valid hood ajar switch closed signal is present.
- The doors are locked.
- The low fuel warning light is off.
- The hazard switch is OFF.
- The vehicle power mode is correct.
- No content theft deterrent alarm triggers are present.

When the BCM determines all conditions meet those required for a remote vehicle start event, a message is sent via serial data to the ECM. The ECM relies on the remote vehicle start message from the BCM to enable remote vehicle start when the crank request signal is received. If the ECM does not receive a valid remote vehicle start message, it will not attempt to start the

engine. While the ECM is in remote vehicle start mode it will suspend engine operation if any of the following additional conditions occur:

- Vehicle speed is greater than 0
- Transmission is not in PARK
- Excessive engine coolant temperature
- Low oil pressure
- The malfunction indicator lamp (MIL) is commanded ON
- Engine crank time is greater than 30 seconds
- Excessive engine speed
- Accelerator pedal position too high
- Remote start timer equals 0
- Immobilizer system indicates tamper

## Keyless Entry Personalization

Vehicle lock/unlock functions and remote vehicle start settings may be personalized. For functional descriptions and personalization instructions, refer to the vehicle owners manual.

# BLANK

# Section 9

# Transmission

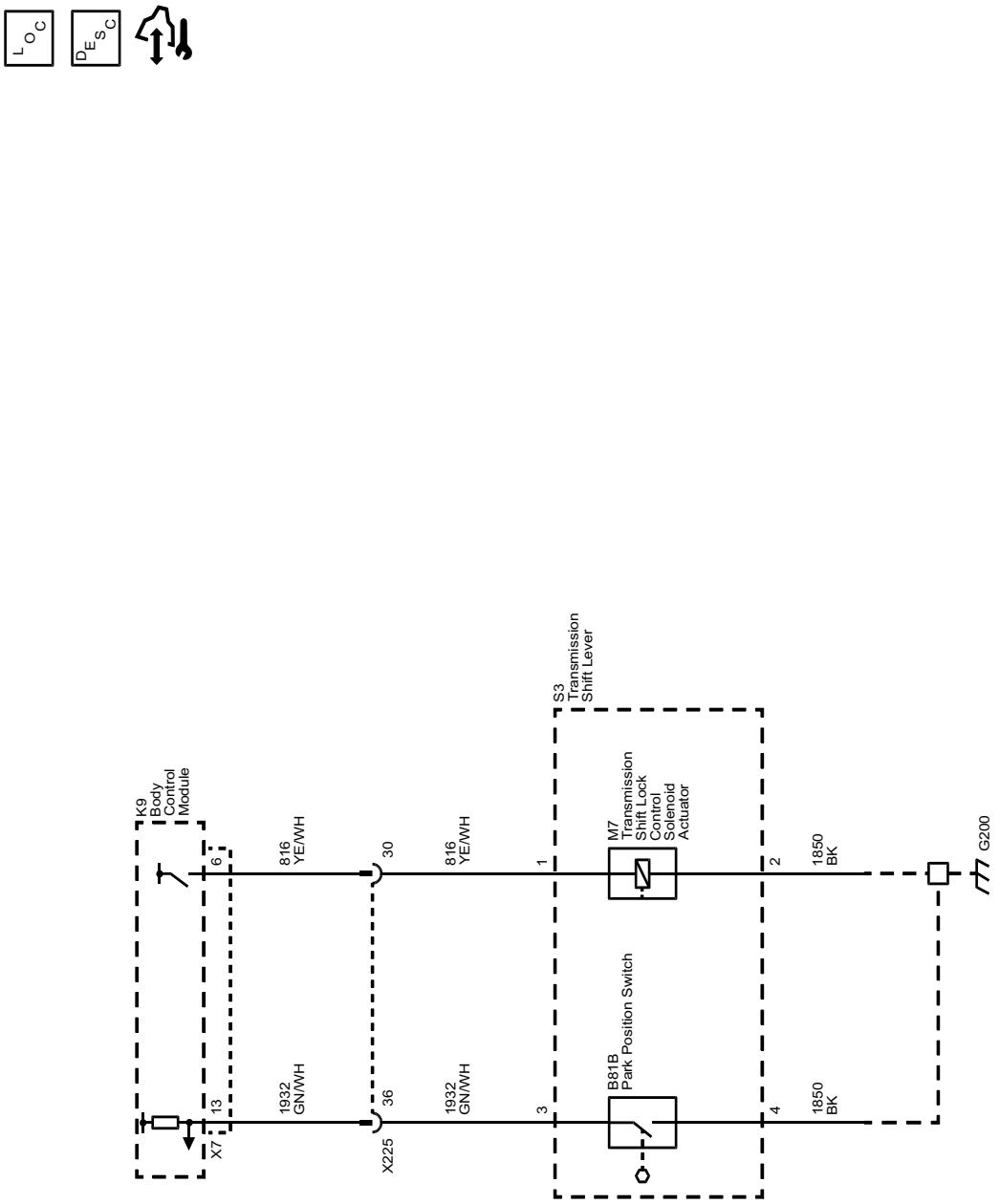
**Shift Lock Control** . . . . . 9-3
**Schematic and Routing Diagrams** . . . . . 9-3
Shift Lock Control Schematics . . . . . 9-4
**Description and Operation** . . . . . 9-5
Automatic Transmission Shift Lock Control Description and Operation . . . . . 9-5

# BLANK

# Shift Lock Control

## Schematic and Routing Diagrams

## Shift Lock Control Schematics (Shift Lock Control)




5256514

# Description and Operation

## Automatic Transmission Shift Lock Control Description and Operation

The Automatic Transmission Shift Lock Control System is a safety device that prevents an inadvertent shift out of PARK when the engine is running. The driver must press the brake pedal before moving the shift lever out of the PARK position. The system consists of the following components:

- The Automatic Transmission Shift Lock Solenoid (serviced as the Automatic Transmission Shift Lock Actuator)
- The Body Control Module (BCM)
- The Engine Control Module (ECM)

The BCM controls the voltage to the shift lock control solenoid though the shift lock control solenoid controlled voltage circuit. The following conditions must be met before the BCM will supply voltage to the shift lock control solenoid:

- The ignition is in the ON position.
- The ECM sends an input via GMLAN serial data to the BCM when the Transmission Control Module (TCM) indicates the transmission is in the PARK position.
- The BCM receives a brake applied input from the stop lamp switch.

Since the shift lock control solenoid is permanently grounded, the BCM supplies voltage to the automatic transmission shift lock control solenoid, releasing the mechanical lock on the shift lever as the solenoid energizes. The energized solenoid allows the driver to move the shift lever out of the PARK position. When the brake pedal is not applied, the BCM turns the control voltage output of the shift lock control solenoid OFF, de-energizing the shift lock control solenoid. When the transmission is in the PARK position, the de-energized shift lock control solenoid will prevent shifting as the lever is mechanically locked in the PARK position.

During remote start operation the BCM will de-energize the automatic transmission shift lock control circuit, locking the shift lever in the PARK position

# BLANK

## A

Automatic Day-Night Mirror
Description and Operation ..... 2-59
Automatic HVAC Description and
Operation ..... 6-11

## B

Battery
Description and Operation ..... 5-11

## C

Charging System
Description and Operation ..... 5-11
Component Connector End Views ..... 7-86

## D

Data Link Communications
Description and Operation ..... 7-24
Door Ajar Indicator
Description and Operation ..... 2-73

## E

Electrical Center Identification Views ..... 7-29
Electrical Power Management Description and
Operation ..... 5-15
Endgate
Description and Operation ..... 2-74, 2-75
Exterior Lighting Systems
Description and Operation ..... 2-47

## G

Garage Door Opener
Description and Operation ..... 8-19

## H

Horn
System Description and Operation ..... 2-17

## I

Immobilizer
Description and Operation ..... 8-5
Inline Harness Connector End Views ..... 7-476
Interior Lighting System
Description and Operation ..... 2-51

## K

Keyless Entry
System Description and Operation ..... 8-19

## L

Load Shed System
Description and Operation ..... 5-18

## M

Manual HVAC Description and Operation ..... 6-23
Mobile Device Wireless Charger
Description and Operation ..... 7-681

## O

Outside Mirror
Description and Operation ..... 2-59, 2-61

## P

Parking Assist
Description and Operation ..... 8-11, 8-12
Power Door Locks
Description and Operation ..... 2-76
Power Mode Description and
Operation ..... 7-750, 7-752
Power Outlets
Description and Operation ..... 7-682
Power Windows
Description and Operation ..... 2-12

## R

Rear Vision Camera
Description and Operation ..... 4-10
Rear Window Defogger
Description and Operation ..... 2-13
Rearview Camera
Camera Full Display Mirror Description and
Operation ..... 4-10
Retained Accessory Power
Description and Operation ..... 7-755
RPO Code List ..... 1-7

## S

Schematics
Body Control Systems ..... 7-20
Cigar Lighter/Power Outlet ..... 7-674
Data Communications ..... 7-4
Defogger ..... 2-11
Door Lock/Indicator ..... 2-64
Endgate ..... 2-69
Exterior Lamps ..... 2-26
Fog Lamps ..... 2-25
Ground Distribution ..... 7-721
Headlamps/Daytime Running Lamps ..... 2-19
Horns ..... 2-16
HVAC Systems - Automatic ..... 6-4
HVAC Systems - Manual ..... 6-16
Ignition Lock ..... 7-720
Image Display Cameras ..... 4-4
Immobilizer ..... 8-4
Inside Rearview Mirror ..... 2-54
Interior Lamps ..... 2-41
Interior Lamps Dimming ..... 2-43
Moveable Window ..... 2-4
Outside Rearview Mirror ..... 2-55
Parking Assistance Systems ..... 8-8
Power Distribution ..... 7-685
Power Moding ..... 7-715
Release Systems ..... 2-68
Remote Function ..... 8-15
Shift Lock Control ..... 9-4
Starting and Charging ..... 5-4

Schematics (cont'd)
Trailer Brake Control ..... 3-4
Trailer Connector/Provision ..... 7-747
Upfitter Provision ..... 7-740
Shift Lock Control
Description and Operation ..... 9-5
Starting System
Description and Operation ..... 5-19
Stop/Start System
Description and Operation ..... 5-21
Surround Vision Camera
Description and Operation ..... 4-10, 4-12

## T

Trailer Brake
Controls Description and Operation ..... 3-6
Trailering
Description and Operation ..... 7-756

## V

Vehicle Certification, Tire Placard, and Anti-Theft Label ..... 1-5
Vehicle, Engine and Transmission ID and VIN Location, Derivative and Usage ..... 1-3