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Section 1

General Information

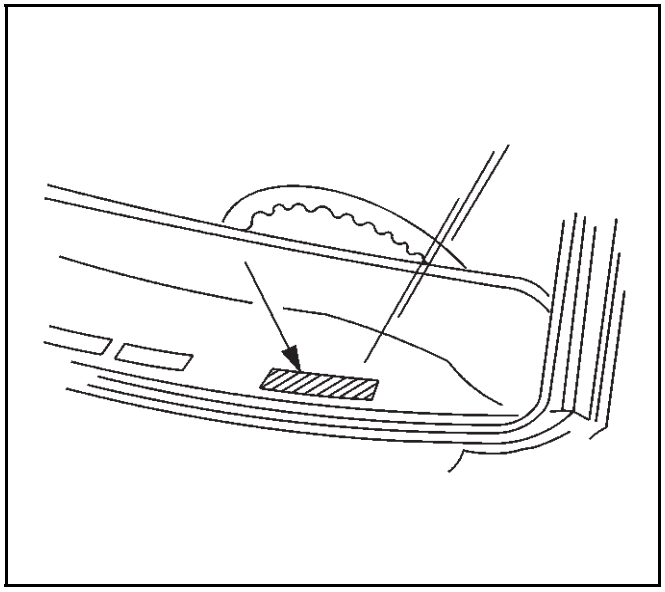
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General Information

Introduction

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



153729

The vehicle identification number (VIN) plate 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:

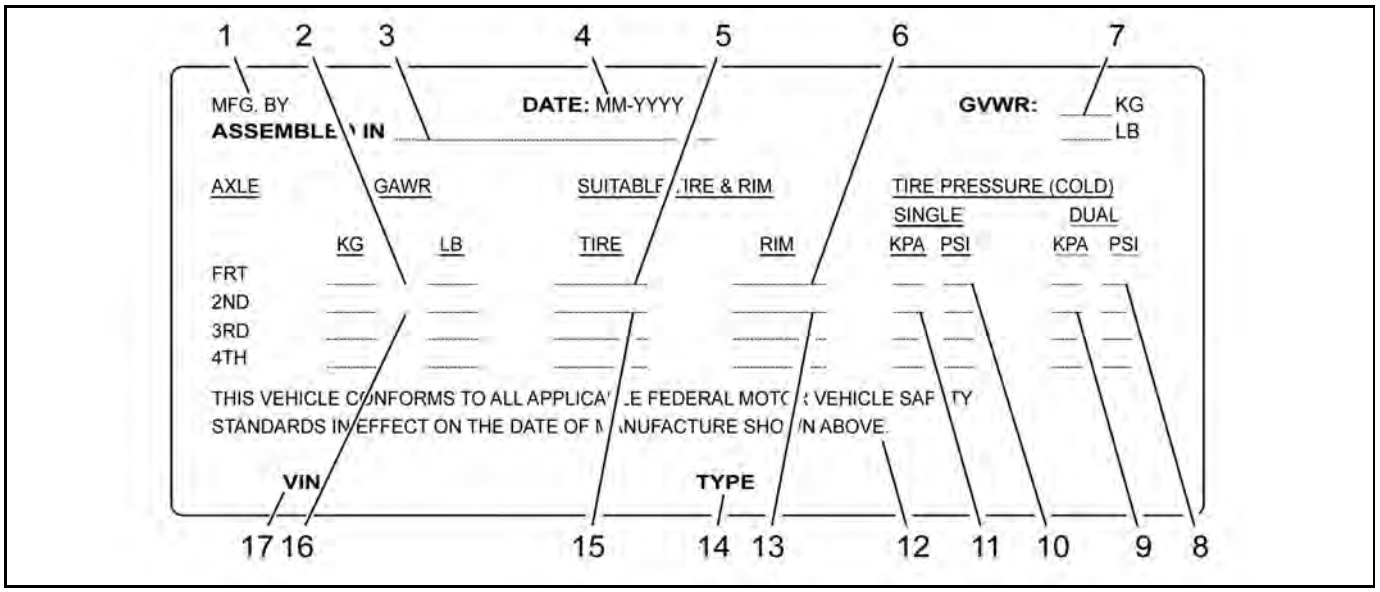
Vehicle Identification Number (VIN) System

Position	Definition	Character	Description
1	Country of Origin	1	United States
2	Manufacturer	H	Navistar, Inc.
3	Vehicle Brand/Type	A	Chevrolet Incomplete
4–5	Make/Model/Series/Type	KH	GM GM515 GM Conventional SFA 4x2
		KJ	GM GM515 GM Conventional SFA 4x4
6–7	Engine Type	PV	RPO L5D - Engine Diesel, 8 Cyl, 6.6L, DI, V8, Turbo, Duramax, GEN 5, VAR. 3
8	GVWR/Brake System	H	Class 4: 14,001 – 16,000 lbs./Hydraulic
		K	Class 5: 16,001 – 19,500 lbs./Hydraulic
		M	Class 6: 19,501 – 26,000 lbs./Hydraulic
9	Check Digit	0~9,X	Calculated by POMS
10	Model Year	K	2019
11	Plant Location	H	Springfield, Ohio
12–17	Plant Sequence Number	—	Plant Sequence Number

6.6L (L5D) Engine ID and VIN Derivative Location

Refer to *Engine Identification* in the Service Manual.

Vehicle Certification Label



4991554

Vehicle Certification Label

Callout	Description
A vehicle-specific Certification label is attached to the driver-side door frame and displays the following assessments:	
1	Name of Manufacturer
2	Gross Weight Rating of the Front Axle
3	Location Vehicle was Assembled In
4	Final Date of Manufacture (Month and Year MM/YY) 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.
5	Tire Size Front Axle
6	Rim Size Front Axle
7	Maximum Gross Vehicle Weight Rating (GVWR)
8	Tire Pressure Front Axle Dual (Cold)
9	Tire Pressure Rear Axle Dual (Cold)
10	Tire Pressure Front Axle Single (Cold)
11	Tire Pressure Rear Axle Single (Cold)
12	Certification Statement
13	Rim Size Rear Axle
14	Vehicle Class Type (Pass Car, etc.)
15	Tire Size Rear Axle
16	Gross Weight Rating of the Rear Axle
17	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
005	RATIO-4.56 (4 5/9)
008	RATIO-4.88

RPO	Description
01U	PRIMARY COLOR-EXTERIOR, SPECIAL (02)
02U	PRIMARY COLOR-EXTERIOR, SPECIAL, CHART NOT REQUIRED
066	RATIO-4.10 (4 1/10)
092	RATIO-4.3
1LT	PACKAGE-LT OPTION 1

RPO	Description
1WT	PACKAGE-WT OPTION 1
2TB	TIRE FRONT-225/70R19.5F 125/123L BW HWY VAR1
379	SEAT BELT COLOR-ORANGE (02)
3F9	SEAT BELT COLOR-RED (01)
3TB	TIRE REAR-225/70R19.5F 125/123L BW HWY VAR1
4AA	INTERIOR TRIM-JET BLACK
4D7	INTERIOR TRIM-JET BLACK/DK ASH
4TB	TIRE SPARE-225/70R19.5F 125/123L BW HWY VAR1
5D1	BUMPER FRT-PAINTED GRAY
5DX	PROVISIONS-ELEC - UPFITTER, REAR OF CAB
5DY	PROVISIONS-ELEC - UPFITTER, REAR OF FRAME
5H1	KEY-SINGLE KEY SYSTEM, 2 SPARE KEYS
5P0	PROVISIONS-ENGINE SHUTDOWN
6Y5	ORNAMENTATION-EXTR, EMBLEM, NON-INSTALLED
719	SEAT BELT COLOR-BLACK (10)
7Y7	BATTERY-1100 CCA, DUAL BATTERY SYSTEM
7Y8	BATTERY-1300 CCA, DUAL BATTERY SYSTEM
7Y9	BATTERY-2250 CCA, THREE BATTERY SYSTEM
8E4	FUEL-ADDITIONAL - 5 GALLONS
8E8	BUMPER FRT-PAINTED, BLACK
8H5	BUMPER FRT-NONE
9D9	MIRROR I/S R/V-(NONE)
9L3	TIRE SPARE-NONE
9L7	EQUIPMENT-ACSRY WRG JUNC BLK
A31	WINDOW-POWER OPERATED, ALL DOORS
A68	SEAT RR-SPLIT, FOLDING
A95	SEAT-FRT BKT, HIGH BACK, DRIVER & PASS RECL
AAC	PARTS PKG-SHIPPED LOOSE
ACO	IDENTIFICATION-ACCESSORY CATALOG OFFERING
AE7	SEAT-FRT SPLIT, DRIVER, PASS
AG1	ADJUSTER FRT ST-POWER, MULTI-DIRECTIONAL, DRIVER
AJ3	RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER, FRT
AK5	RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER & PASS FRT
AKO	WINDOW TYPE-PRIVACY
AKP	WINDOW TYPE-SOLAR ABSORBING
APL	SEAT PASSENGER-(NONE)

RPO	Description
AQQ	LOCK CONTROL, ENTRY-REMOTE ENTRY, EXTENDED RANGE
ATZ	SEAT RR-NONE
AU3	LOCK CONTROL-SIDE DR, ELEC
AZ3	SEAT-FRT SPLIT, DRIVER, PASS, FULL FEATURE CENTER
BG9	COVERING FLOOR-RUBBER
BTN	EQUIPMENT-POST BATTERY, THREADED
BTV	REMOTE START-ENGINE
C42	HVAC SYSTEM-HEATER, OUTSIDE AIR, DELUXE
C49	DEFOGGER-RR WINDOW, ELECTRIC
C5B	GVW RATING-15,000 LBS
C67	HVAC SYSTEM-AIR CONDITIONER FRT, ELECTRONIC CONTROLS
C7P	GVW RATING-16,000 LBS
C7R	GVW RATING-16,500 LBS
C99	SWITCH-INFL RST I/P MDL MAN SUPPRESSION
CV3	COUNTRY-MEXICO
D07	CONSOLE-FRT COMPT, FLOOR, CUSTOM
DD4	GVW RATING-17,000 LBS
DD5	GVW RATING-21,000 LBS
DD7	GVW RATING-23,500 LBS
DD8	MIRROR I/S R/V-LT SENSITIVE
DF2	MIRROR O/S-LH & RH, WIDE LOAD, FOLDING, STAINLESS STEEL
DH6	MIRROR I/S FRT VAN-LH & RH, SUNSHADE, ILLUM
DP9	MIRROR PROVISIONS-HOUSING, CHROME
DPN	MIRROR O/S-LH & RH, WIDE LOAD, VERTICAL GLASS, MAN EXTENDING,MAN FOLDING, HEATED, TURN SIG IND, REMOTE CONTROL
E01	STEPS-ASSIST
E0N	STEPS-ASSIST ALUMINUM
E20	HANDLE O/S DOOR-CHROME
E48	COVER-RADIATOR GRILLE OPG - COLD CLIMATE
ED5	WHEELBASE-201 INCH
ED9	WHEELBASE-165 INCH
EF7	COUNTRY-UNITED STATES OF AMERICA (USA)
EM1	WHEELBASE-199 INCH
EQB	WHEELBASE-219 INCH
ER2	WHEELBASE-189 INCH
F0C	AXLE END FRAME-49 INCH
F0D	AXLE END FRAME-63 INCH
F0G	AXLE END FRAME-83 INCH
F0I	AXLE END FRAME-75 INCH

RPO	Description
F0K	AXLE END FRAME-91 INCH
F59	STABILIZER SHAFT FRT-
F95	SUSPENSION FRONT-6,000 LB, TAPERED LEAF
FBC	WHEELBASE-243 INCH
FF3	SEAL-OIL, WHEEL FRT
FG0	HUB-FRONT, OIL FILLED SYNTHETIC
FHX	VEHICLE FUEL-DIESEL B20
FK6	SUSPENSION FRONT-7,000 LB, TAPERLEAF, I-BEAM
FN1	AXLE REAR-10,000 LB (4,536KG)
FNV	WHEELBASE-175 INCH
FPN	WHEELBASE-231 INCH
FQT	WHEELBASE-141 INCH
FRP	WHEELBASE-235 INCH
FSN	SUSPENSION FRONT-8,000 LB (3,629 KG), TAPERED LEAF
FTA	AXLE FRONT-7,000 LB., FRONT NON DRIVING
FTB	AXLE FRONT-7,500 LB., FRONT DRIVING
FTD	AXLE FRONT-6,000 LB., FRONT NON DRIVING
FTL	AXLE FRONT-8,000 LB., FRONT NON DRIVING
FTN	LUBRICANT-FRT AXLE, SYNTHETIC
FTO	LUBRICANT-RR AXLE, SYNTHETIC
FTV	SUSPENSION FRONT-7,500 LB, TAPERED LEAF, SHACKLE TYPE, PARABOLIC SPRING
FU7	SUSPENSION REAR-15,500 LB (7,031 KG), MULTILEAF
G1K	PRIMARY COLOR-EXTERIOR, SACR'E BLUE MET(409Y)
G2X	PRIMARY COLOR-EXTERIOR, HAVANA MET-1 (439C)
G40	SUSPENSION REAR-12,000 LB, AIR
G68	SHOCK ABSORBERS-RR, HD, TRUCK
G7C	PRIMARY COLOR-EXTERIOR, PULL ME OVER RED SOLID (130X)
G86	AXLE-LIMITED SLIP
GAN	PRIMARY COLOR-EXTERIOR, SWITCHBLADE SILVER MET (G) 636R
GAZ	PRIMARY COLOR-EXTERIOR, SUMMIT WHITE (G) 8624
GBA	PRIMARY COLOR-EXTERIOR, BLACK (G) 8555
GH5	EQUIPMENT ADDITIONAL-CANADA
GL4	AXLE REAR-11,000 LB (4,990 KG)
GP1	SUSPENSION REAR-13,500 LB, AIR
GP8	SUSPENSION REAR-15,500 LB, AIR
GPA	PRIMARY COLOR-EXTERIOR, GASOLINE MET-2 (457B)

RPO	Description
GR3	SUSPENSION REAR-11,000 LB (4,990 KG), MULTILEAF
GR4	SUSPENSION REAR-13,500 LB, MULTILEAF
GZG	GVW RATING-19,500 LBS
GZH	GVW RATING-21,500 LBS
GZJ	GVW RATING-18,000 LBS
GZX	GVW RATING-17,500 LBS
H0U	INTERIOR TRIM CONFIG-CLOTH, LEVEL 2, JET BLACK
H2Q	INTERIOR TRIM CONFIG-VINYL, LEVEL 1, JET BLACK /DK ASH
H2R	INTERIOR TRIM CONFIG-CLOTH, LEVEL 1, JET BLACK/ DK ASH
H2S	INTERIOR TRIM CONFIG-CLOTH, LEVEL 2, JET BLACK / DK ASH
HD1	AXLE REAR-15,000 LB (6,804 KG), DANA S130
HD2	AXLE REAR-13,500 LB (6,124 KG), DANA S110
I19	ENGINEERING YEAR-2019
IO3	RADIO-INFOTAINMENT SYSTEM - BASE HMI
IO5	RADIO-INFOTAINMENT SYSTEM - UPLEVEL HMI, ENHANCED CONNECTIVITY
IO6	RADIO-INFOTAINMENT SYSTEM - UPLEVEL HMI, ENHANCED CONNECTIVITY, EMBEDDED NAVIGATION
IOB	RADIO-INFOTAINMENT SYSTEM - MIDLEVEL HMI, MIDLEVEL CONNECTIVITY
ITT	MARKET BRAND-INTERNATIONAL TRUCK
J48	BRAKE SYSTEM-HYDRAULIC, HEAVY DUTY STSTEM, ABS
J69	BRAKE PARKING-MECHANICALLY OPERATED
JG1	SHAFT-PROP, ALUMINUM
JL1	CONTROL-INTEGRATED TRAILER BRAKE
JPY	AIR DRYER-HEATED
JPZ	VALVE-AIR SUSPENSION AIR RELEASE
JTR	PROVISIONS-TAIL LAMP - WIRING HARNESS SPECIAL
K05	HEATER ENG-BLOCK
K2N	PROVISIONS-2 WAY RADIO UNIT
K34	CRUISE CONTROL-AUTOMATIC, ELECTRONIC
K40	ENGINE BRAKE-EXHAUST
K4C	CHARGER-INDUCTIVE PORTABLE WIRELESS DEVICE
KA1	HEATER SEAT FRT-DRVR & PASS
KBG	SHIFT CONTROL-AUTOMATIC TRANSMISSION, FUEL SENSE BASIC
KBK	SHIFT CONTROL-AUTOMATIC TRANSMISSION, PERFORMANCE

RPO	Description
KG4	GENERATOR-150 AMP
KHB	GENERATOR-150 AMP AND 220 AMP, DUAL
KI4	RECEPTACLE-ELECTRICAL, ACCESSORY 110 VOLT
KL6	PROVISIONS-TAIL LAMP, LOCATION INSIDE OF FRAME
KT0	HOSE-HEATER, SILICONE
KUD	CLAMP-HEATER HOSE, BELLEVILLE WASHER TYPE
KUT	AIR COMPRESSOR-ACCESSORY DRIVE
KW5	GENERATOR-220 AMP
L5D	ENGINE-DIESEL, 8 CYL, 6.6L, DI, V8, TURBO, DURAMAX, GEN 5, VAR. 3
ME0	TRANSMISSION-AUTO 6 SPD, ALLISON, A1750MH, 3.10 1ST 1.80 2ND, 1.40 3RD, 1.00 4TH, 0.70 5TH, 0.60 6TH GEN 1
MF0	TRANSMISSION-AUTO 6 SPD, ALLISON, A2700MH, 3.10 1ST 1.80 2ND, 1.40 3RD, 1.00 4TH, 0.70 5TH, 0.60 6TH GEN 1
MG0	TRANSMISSION-AUTO 6 SPD, ALLISON, A2700EVS, 3.10 1ST 1.80 2ND, 1.40 3RD, 1.00 4TH, 0.70 5TH, 0.60 6TH GEN 1
MH1	TRANSMISSION-AUTO 6 SPD, ALLISON, A1700EVS, 3.10 1ST 1.80 2ND, 1.40 3RD, 1.00 4TH, 0.70 5TH, 0.60 6TH GEN 1
MHV	TRANSMISSION-AUTO 6 SPD, ALLISON, A1750EVS, 3.10 1ST 1.80 2ND, 1.40 3RD, 1.00 4TH, 0.70 5TH, 0.60 6TH GEN 1
MI0	TRANSMISSION-AUTO 6 SPD, ALLISON, A1750RDS, 3.10 1ST 1.80 2ND, 1.40 3RD, 1.00 4TH, 0.70 5TH, 0.60 6TH GEN 1
MIA	TRANSMISSION-AUTO 6 SPD, ALLISON, A2700RDS, 3.10 1ST 1.80 2ND, 1.40 3RD, 1.00 4TH, 0.70 5TH, 0.60 6TH GEN 1
MIU	TRANSMISSION-AUTO 6 SPD, ALLISON, A1700RDS, 3.10 1ST 1.80 2ND, 1.40 3RD, 1.00 4TH, 0.70 5TH, 0.60 6TH GEN 1
MIX	TRANSMISSION-AUTO 6 SPD, ALLISON, A1700MH, 3.10 1ST 1.80 2ND, 1.40 3RD, 1.00 4TH, 0.70 5TH, 0.60 6TH GEN 1
MJ0	TRANSMISSION-AUTO 6 SPD, ALLISON, A1750HS, 3.10 1ST 1.80 2ND, 1.40 3RD, 1.00 4TH, 0.70 5TH, 0.60 6TH GEN 1
MTZ	PROVISIONS-TAIL LAMP, LOCATION OUTSIDE OF FRAME
MWA	TRANSMISSION-AUTO 6 SPD, ALLISON, A1700HS, 3.10 1ST, 1.80 2ND, 1.40 3RD, 1.00 4TH, 0.70 5TH, 0.60 6TH, GEN 1
MWB	TRANSMISSION-AUTO 6 SPD, ALLISON, A2700HS, 3.10 1ST,1.80 2ND,1.40 3RD, 1.00 4TH,0.70 5TH,0.60 6TH, GEN 1
N12	EXHAUST SYSTEM-REAR EXIT
N2L	FUEL TANK-REAR TANK 40 GAL (151L)
N33	STEERING COLUMN-TILT TYPE
N4C	CERTIFICATION-EMISSION, USA 50 STATE
N4E	EMISSION SYSTEM-USA, 50 STATE

RPO	Description
NAV	PLANT CODE-NAVISTAR, SPRINGFIELD, OH, USA
NK5	STEERING WHEEL-STANDARD
NP5	STEERING WHEEL-LEATHER WRAPPED
NPJ	EXHAUST SYSTEM-SIDE EXIT, LH
NPK	EXHAUST SYSTEM-SIDE EXIT, RH
NPR	EXHAUST SYSTEM-SIDE EXIT, RH, LOCATION BEHIND REAR WHEEL
NQF	TRANSFER CASE-ELECTRIC SHIFT CONT, TWO SPEED, ALUM
NSQ	FUEL TANK-DUAL, FRONT 25 GAL (94.6L), REAR 40 GAL (151L)
NVK	FUEL TANK-FRONT, 25 GAL (94.6L)
NXG	FUEL-ADDITIONAL - 20 GALLON
NXO	FUEL-ADDITIONAL- 40 GALLONS
NZZ	SALES PACKAGE-SKID PLATE, "OFF ROAD" SPORT
P0D	GUARD-GRILLE SCREEN - INSECT PROTECTION
P0E	GUARD-GRILLE SCREEN - EMBER
PD7	WHEEL SPARE-(NONE)
PTO	ENGINE CONTROL-POWER TAKE OFF (PTO) CONTROLS
PTX	ENGINE CONTROL-POWER TAKE-OFF (PTO), CONTROLS - NONE
PWQ	WHEEL-19.5 X 6.75, J, STEEL, DESIGN 1
PWR	WHEEL-19.5 X 6.75, J, STEEL, DESIGN 2
PWS	WHEEL-19.5 X 6.75, J, STEEL, DESIGN 3
PWV	WHEEL-19.5 X 6.75, J, ALUMINUM, DESIGN 1
PWY	WHEEL SPARE-19.5 X 6.75, J, STEEL, DESIGN 1
Q91	CAP-VALVE, TIRE, AIR-THRU DESIGN 1
Q92	CAP-VALVE, TIRE, AIR-THRU DESIGN 2
RDI	ACCESSORY-KEYLESS ENTRY
RWI	ACCESSORY-BODY SIDE MOLDINGS - CHROME
RWK	ACCESSORY-BODY SIDE MOLDINGS - PAINTED
RWR	ACCESSORY-CAMERA - REAR VISION
RY7	ACCESSORY-DOOR HANDLES - ALTERNATE FINISH 1
S0P	ACCESSORY-INSERT - FLOOR CONSOLE
S6M	ACCESSORY-RADIO KIT - NAVIGATION
S6P	ACCESSORY-REMOTE START KIT
S6W	ACCESSORY-SEAT COVER - MUDDER (PROTECTIVE)
S6Z	ACCESSORY-SEAT COVER - TAILORED - ALTERNATE MATERIAL
SFJ	ACCESSORY-WINDOW SHADES - REFLECTIVE
SFV	ACCESSORY-WIRELESS NETWORK INTERFACE MODULE

RPO	Description
SIF	ACCESSORY-RSE - PORTABLE MEDIA CONNECTIVITY PACKAGE
SYT	ACCESSORY-SILL PLATES - ALTERNATE FINISH
T3A	BUMPER PROVISIONS-FRONT, 4" EXTENSION
T3U	LAMP FRT FOG-FRT FOG
TG5	PLAYER-COMPACT DISC AND MP3
TR1	LAMP-TAIL & STOP
TRW	PROVISIONS-LAMP, ROOF MOUNTED
U01	LAMP-FIVE, ROOF MARKER, TRUCK
U04	HORN-SINGLE NOTE
U05	HORN-DUAL
U19	SPEEDOMETER-INST, KILO & MILES, KILO ODOMETER
U2J	DIGITAL AUDIO SYSTEM-S-BAND - NONE
U2K	DIGITAL AUDIO SYSTEM-S-BAND
U73	ANTENNA-FIXED, RADIO
UDC	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (ONE COLOR GRAPHIC)
UDD	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (MULTI COLOR STANDARD GRAPHIC)
UE0	COMMUNICATION SYSTEM-VEHICLE - NONE
UE1	COMMUNICATION SYSTEM-VEHICLE, ONSTAR
UGE	LAMP-RR TAIL, LED
UK3	CONTROL-STEERING WHEEL, ACCESSORY
UMN	SPEEDOMETER-INST, MILES & KILO, MILES ODOMETER
UNL	EQUIPMENT-AUX, 3' FRONT HEAD/ TURN LAMP
UQ3	SPEAKER SYSTEM-ENHANCED AUDIO
UQ5	SPEAKER SYSTEM-4, DUAL FRT DR MTD, DUAL EXTD RGE QTR MNTD
UTJ	THEFT DETERENT-ELECTRICAL, UNAUTHORIZED ENTRY
UVC	VISION-REAR VIEW, MONO, ANALOG
UY7	WIRING HARNESS-TRUCK TRAILER, HD
UZF	ALARM B/U-ELECTRICAL,
UZI	EQUIPMENT-TRUCK TRAILER HD, SIDE TURN LAMPS

RPO	Description
V22	GRILLE-RADIATOR, CHROME
V33	TOOL KIT-ROAD, EMERGENCY
V46	BUMPER FRT-CHROME
V76	HOOK-TOW
V8C	VEHICLE STATEMENT-VEHICLE LABEL CONTENT - NO CERT STATEMENT
V8D	VEHICLE STATEMENT-VEHICLE LABEL CONTENT - U.S. FMVSS
VBJ	ACCESSORY-UNDERSEAT STORAGE
VK3	LICENSE PLATE FRONT-FRT MOUNTING PKG
VKW	ACCESSORY-ORGANIZER - FRONT CONSOLE
VKY	ACCESSORY-DOOR HANDLES - ALTERNATE FINISH - CHROME
VT7	OWNERS MANUAL-ENGLISH LANGUAGE
VTG	ACCESSORY-INTERIOR TRIM KIT
VTS	OWNERS MANUAL-SPANISH LANGUAGE
VV4	COMMUNICATION EQUIP-MOBILE INTERNET CONNECTIVITY
VWX	GRILLE-BASE VEHICLE
VXT	VEHICLE TYPE-INCOMPLETE
VYU	PROVISIONS-SNOW PLOW PREP
WMK	VIN MODEL YEAR-2019
WN9	PROCESSING-SPECIAL DELIVERY REQUSTED, NOT LEAD UNIT
WOJ	ACCESSORY-DOOR COVER - PET PROTECTOR - DESIGN 1
X88	MARKET BRAND-CHEVROLET
XL7	FREQUENCIES RATING-315 MHZ, LONG DISTANCE
YE9	PACKAGE, CONVENIENCE-COMFORT & DECOR LEVEL #3
YF2	SALES PACKAGE-AMBULANCE UPFITTER
YM8	IDENTIFICATION-LIMITED PERSONALIZATION OPTION (LPO)
ZY1	COLOR COMBINATION-SOLID
ZY2	COLOR COMBINATION-TWO TONE
ZY3	COLOR COMBINATION-TWO TONE, SPECIAL
ZY4	COLOR COMBINATION-TWO TONE, DELUXE

Section 2

Body Systems

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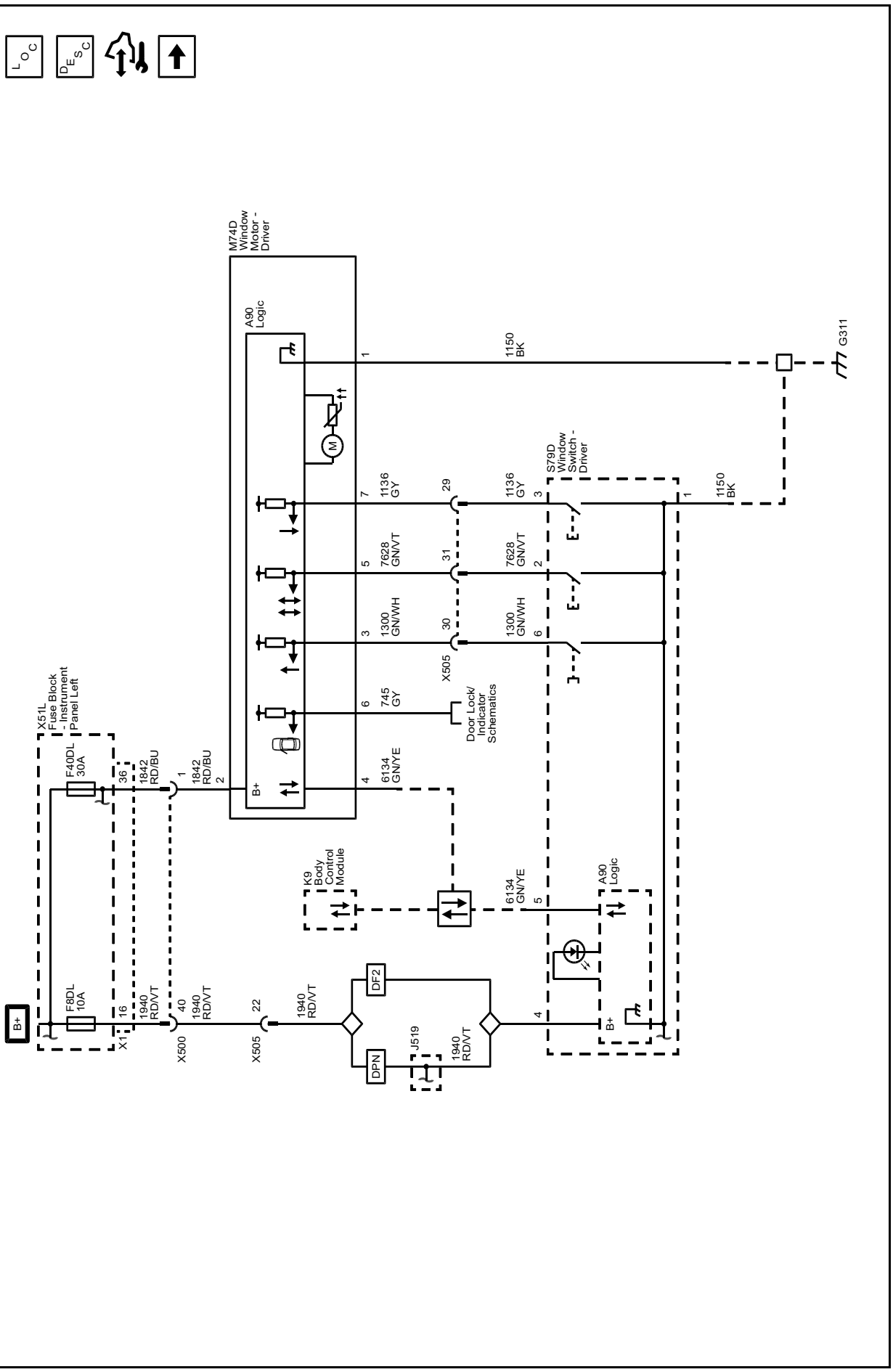
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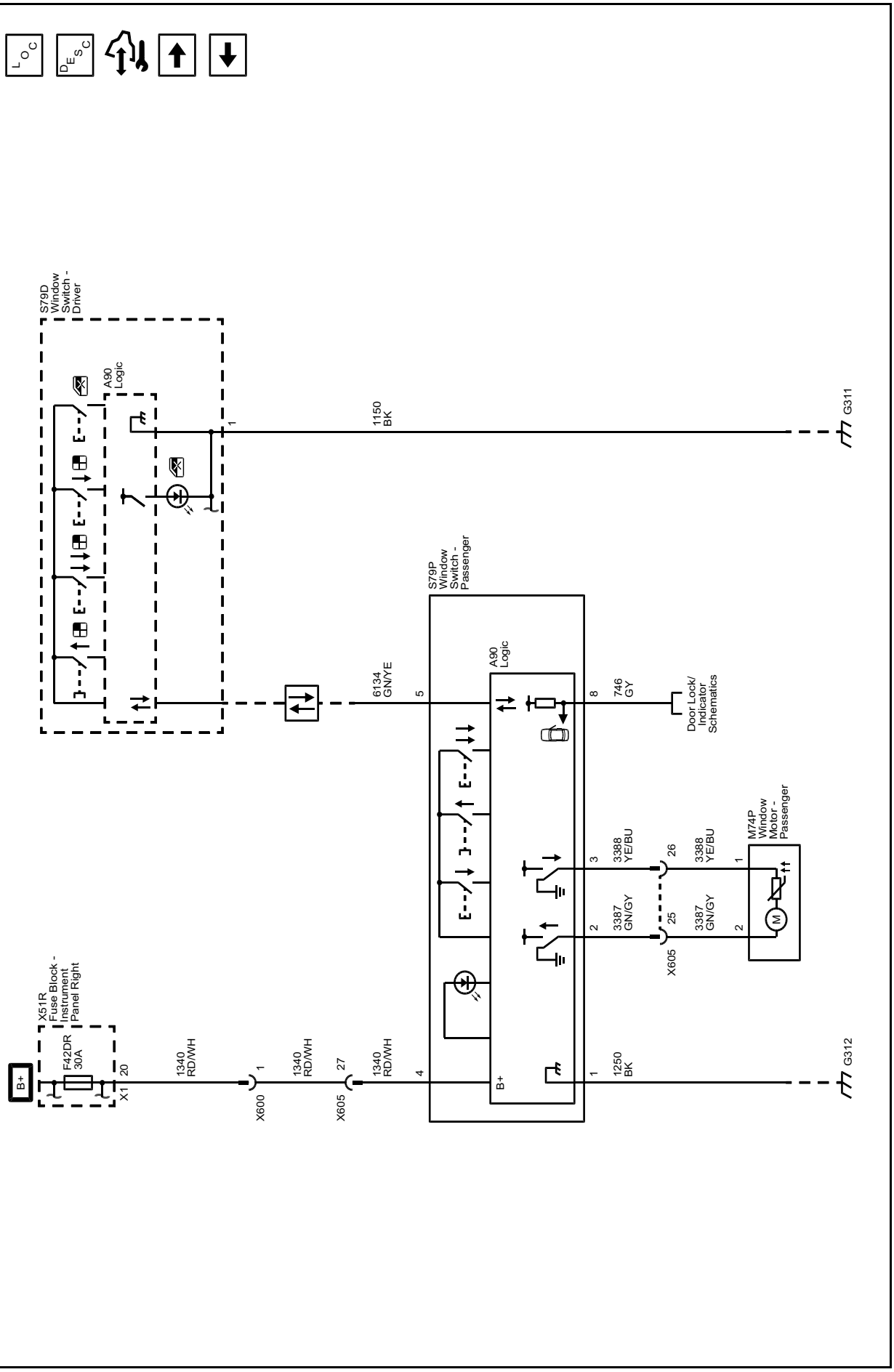
Fixed and Moveable Windows

Schematic and Routing Diagrams

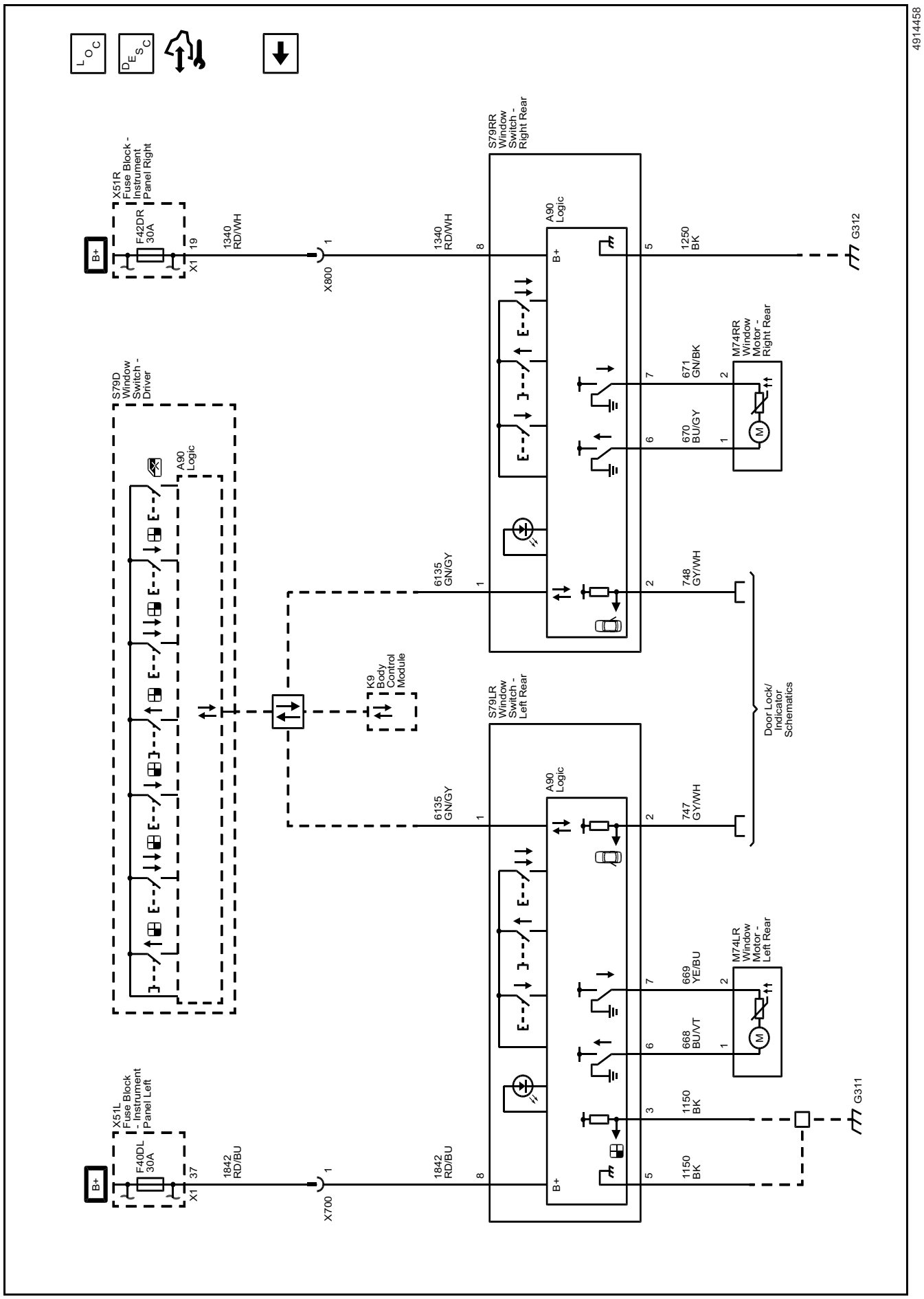
Moveable Window Schematics (Driver Door (A31))



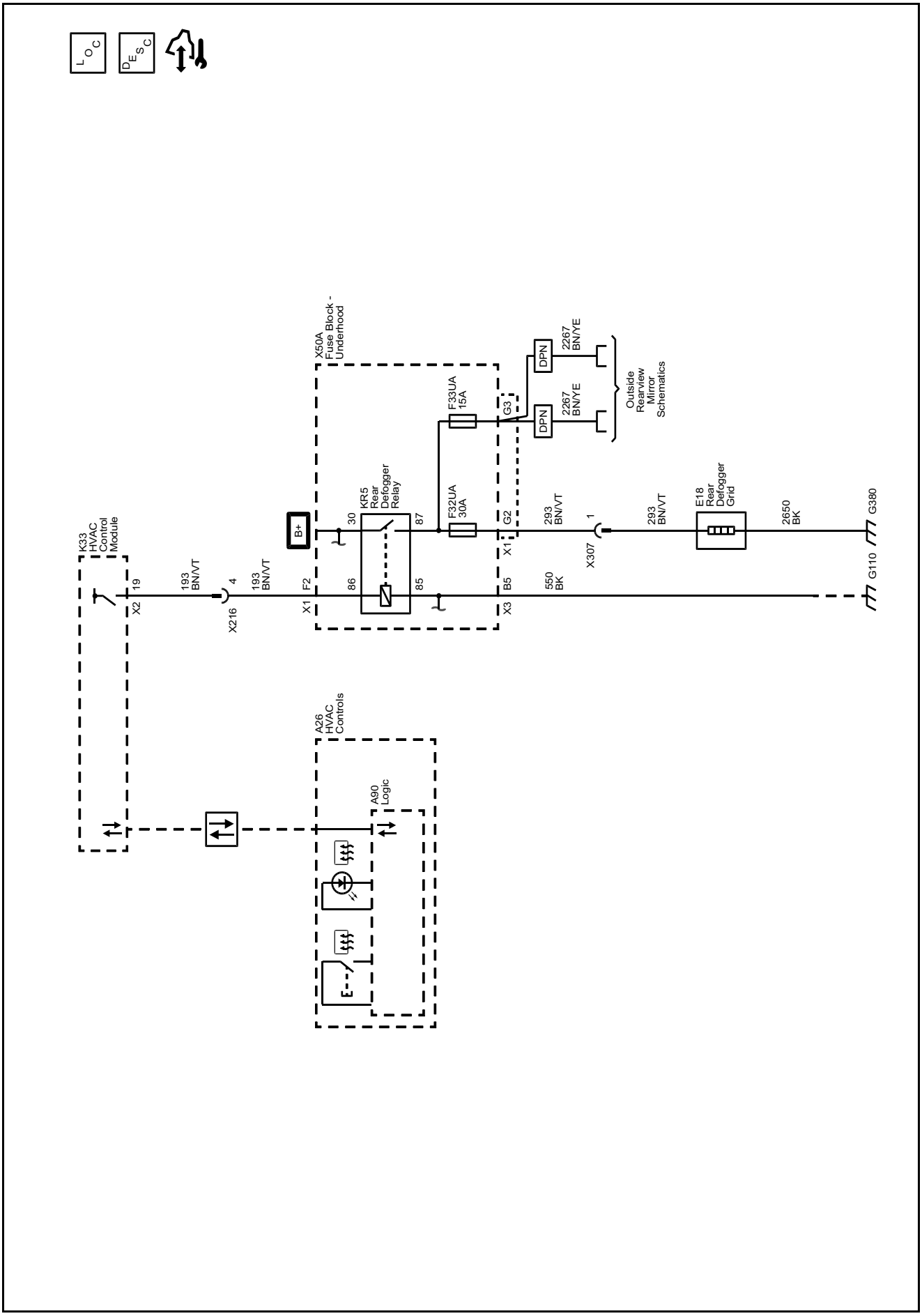
Moveable Window Schematics (Passenger Door (A31))



Moveable Window Schematics (Rear Doors (Crew Cab))



Defogger Schematics (Defogger (C49/DPN))



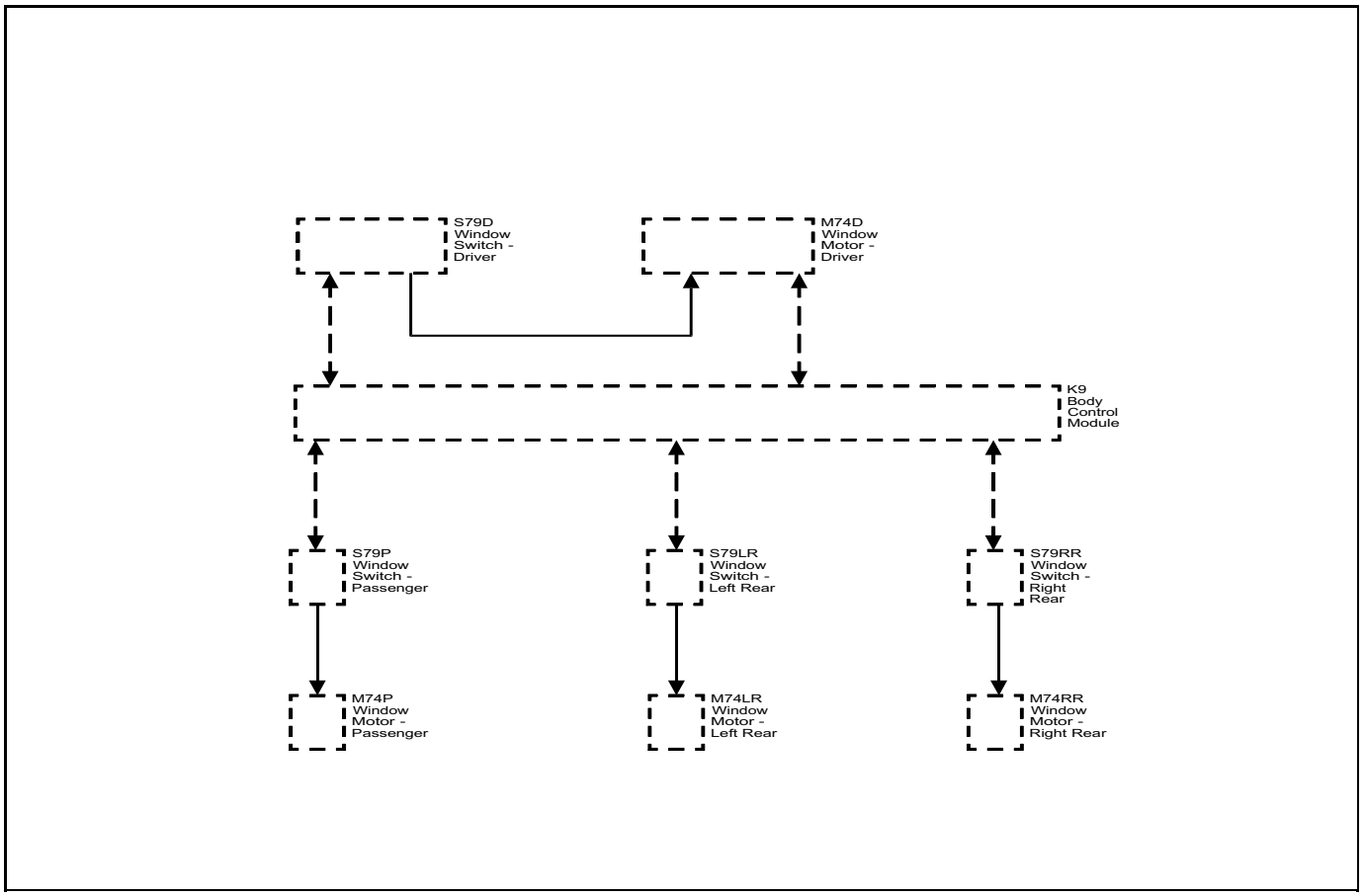
Description and Operation

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
- Right rear door latch
- Left rear door latch
- Window motors in each of the doors
- 30A Fuse
- Body control module (BCM)



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Driver Express Up and Express Down Power Window Motor

The driver door 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 driver window switch, the contacts close causing a voltage drop within the appropriate signal circuit. The driver window motor will detect the voltage drop and will command the window to move in the direction requested.

Passenger, Left Rear and Right Rear Express Down 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.

Each passenger and rear window switch 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.

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, the rear window switches will then ignore all functions when a passenger uses the rear window switch. The rear window motor commands will still function normally when the driver uses the appropriate switches on the driver window switch.

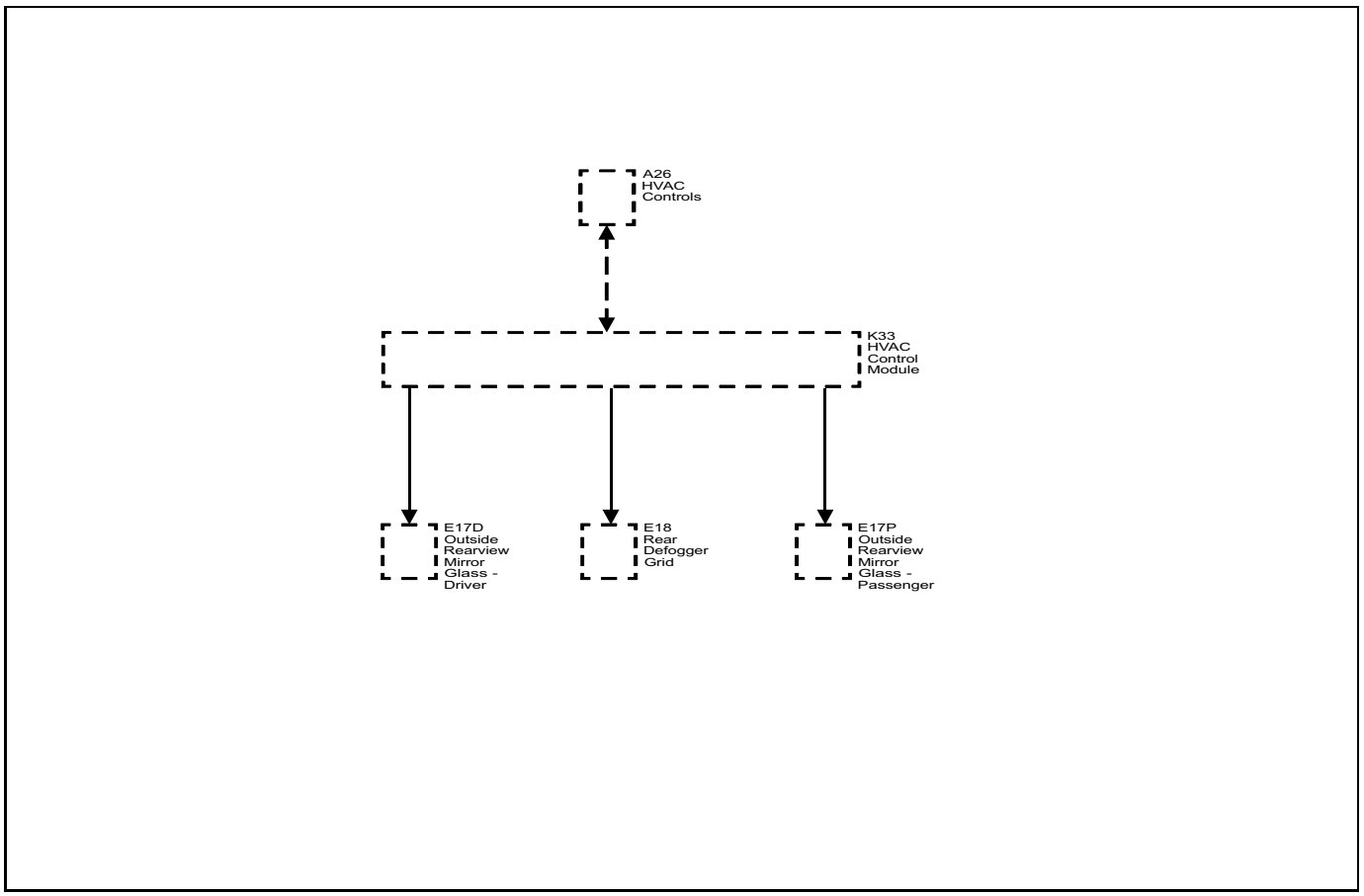
Rear Window Defogger Description and Operation

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



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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)

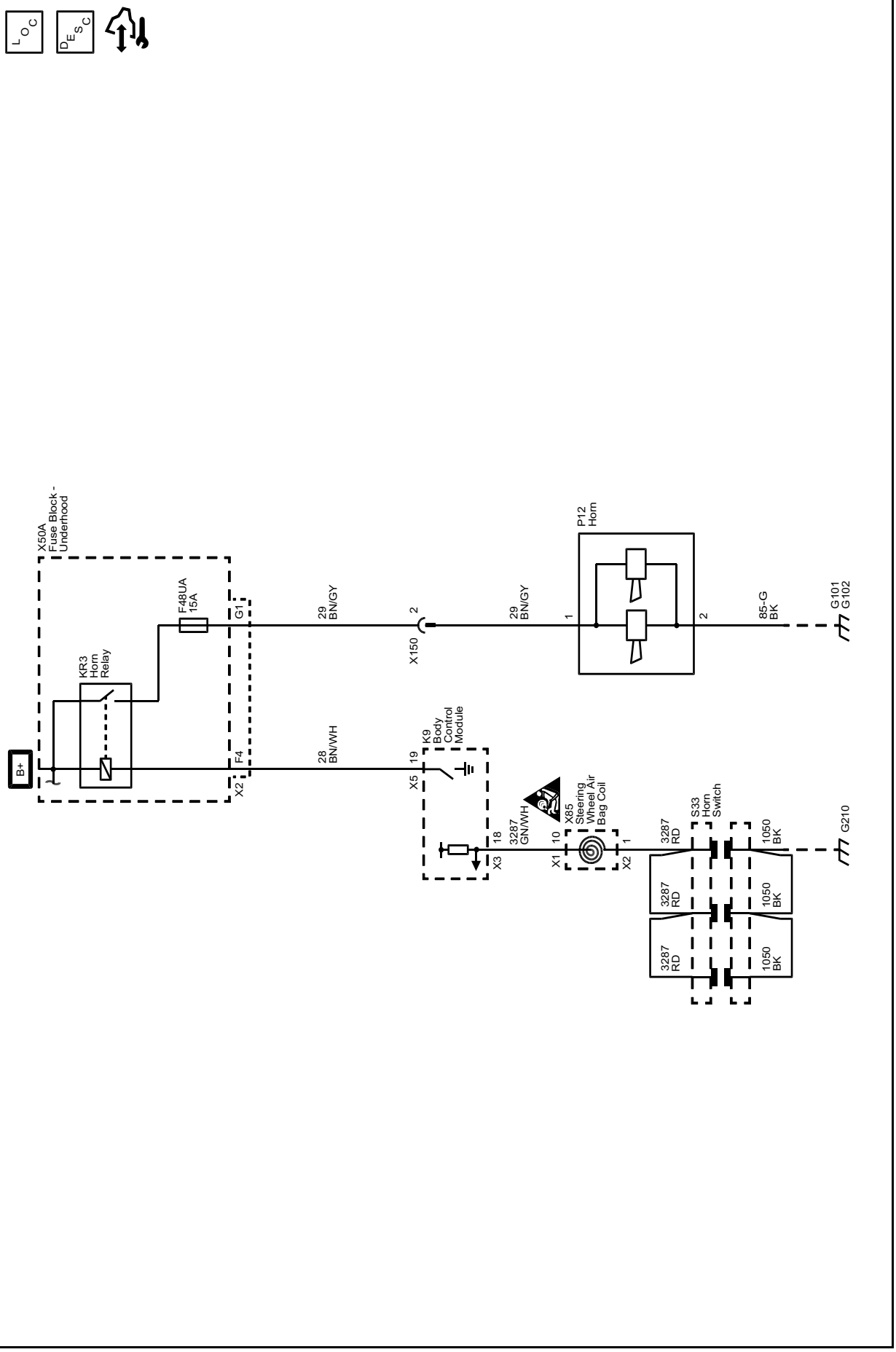
Heated Mirrors

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)



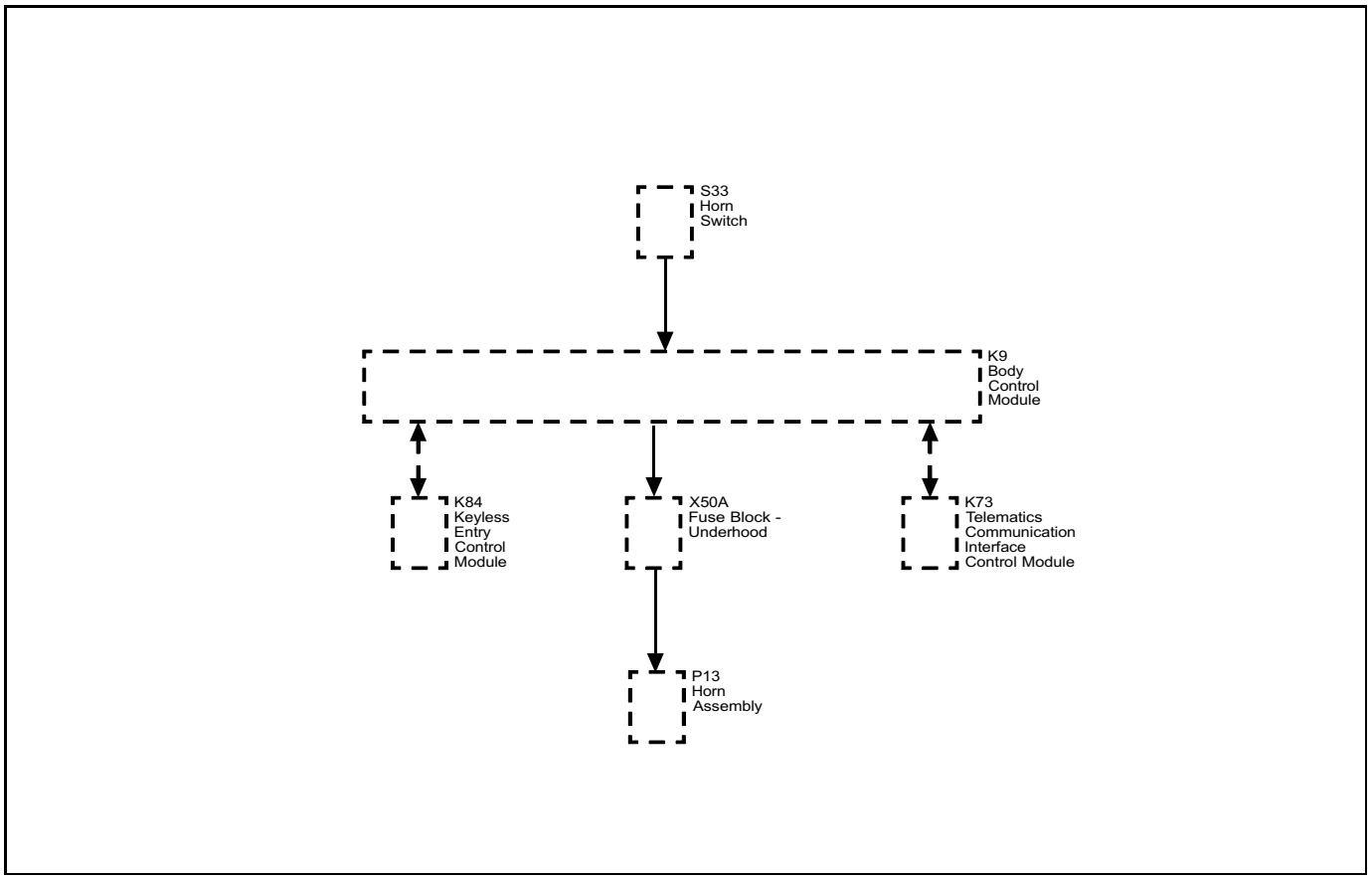
Description and Operation

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)



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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* in the Service Manual.
  - – 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 8-9*.
  - – 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 8-9*.
  - – When the OnStar® system is used to sound the horns if equipped—For further information, refer to *OnStar Description and Operation* in the Service Manual.

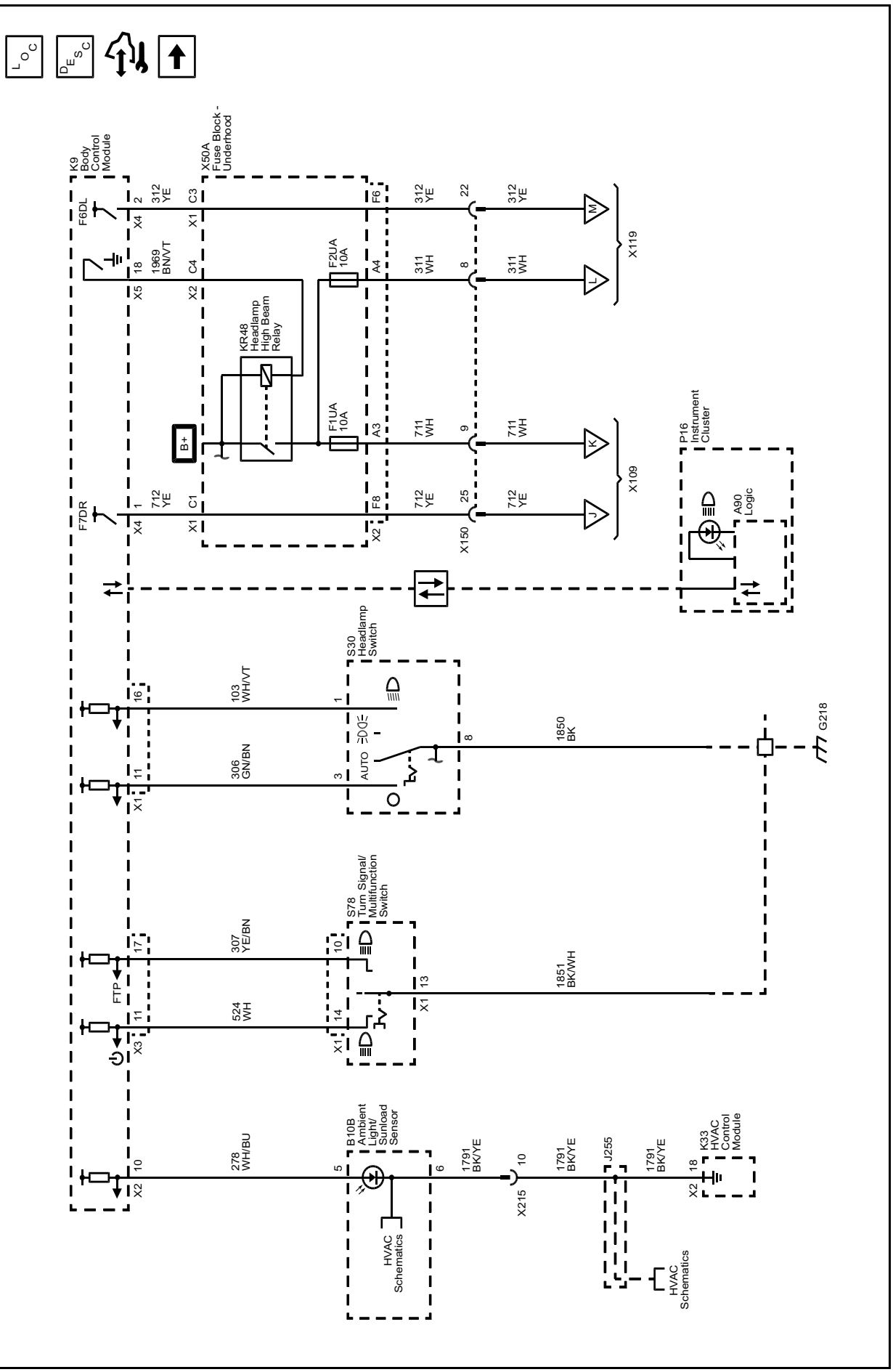
Circuit Operation

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.

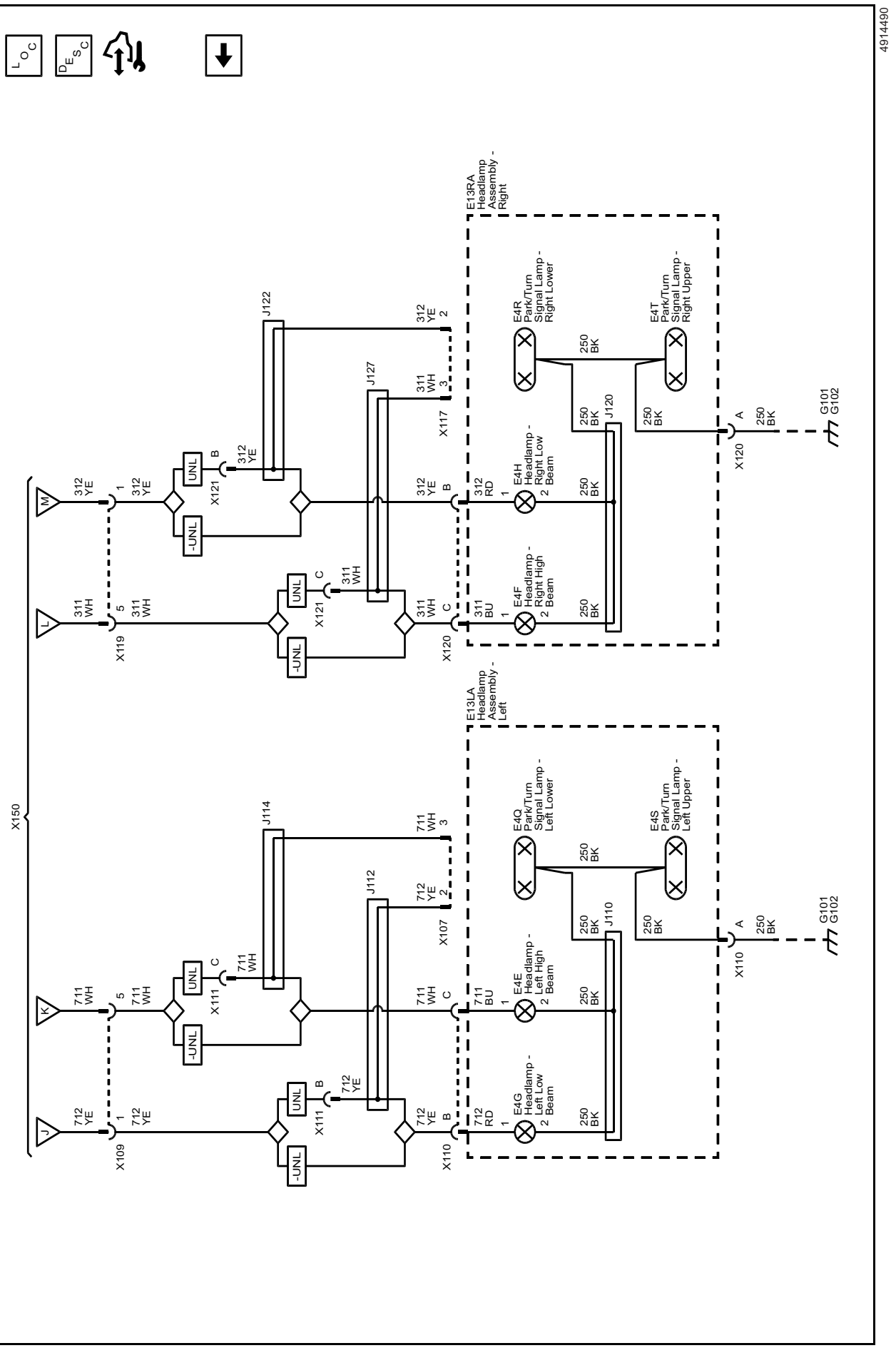
Lighting

Schematic and Routing Diagrams

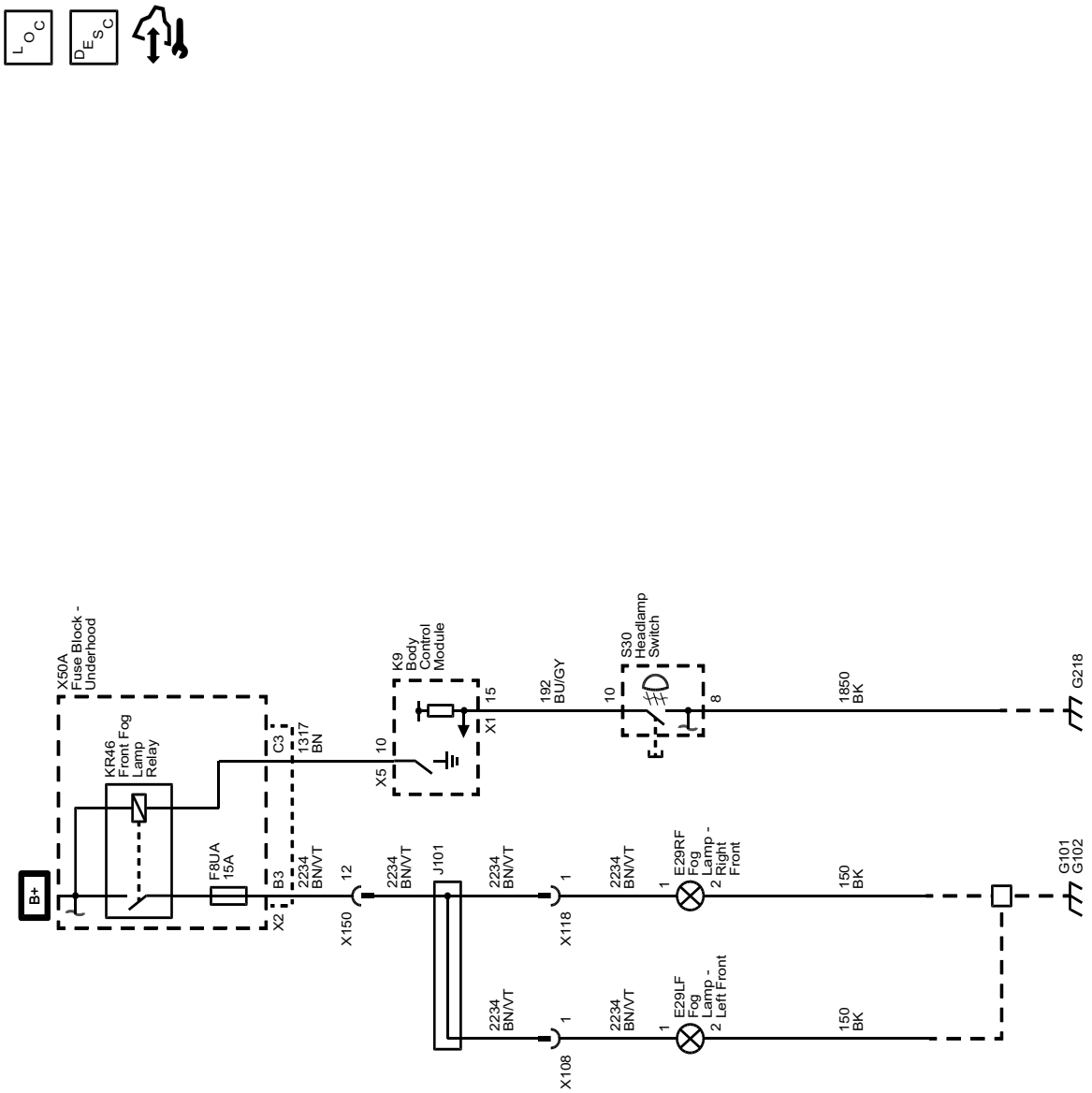
Headlights/Daytime Running Lights (DRL) Schematics (Headlight Controls)



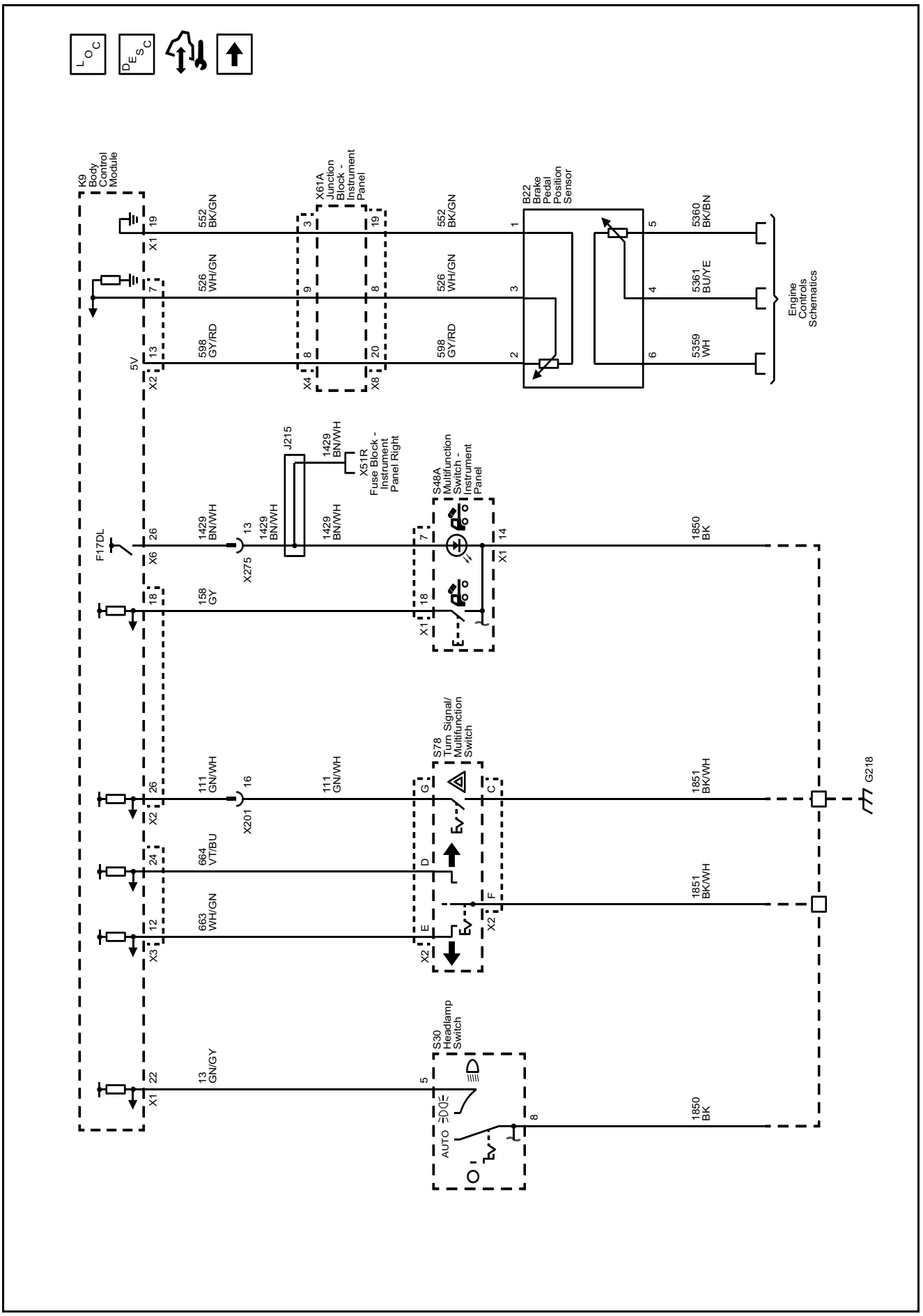
Headlights/Daytime Running Lights (DRL) Schematics (Headlamps)



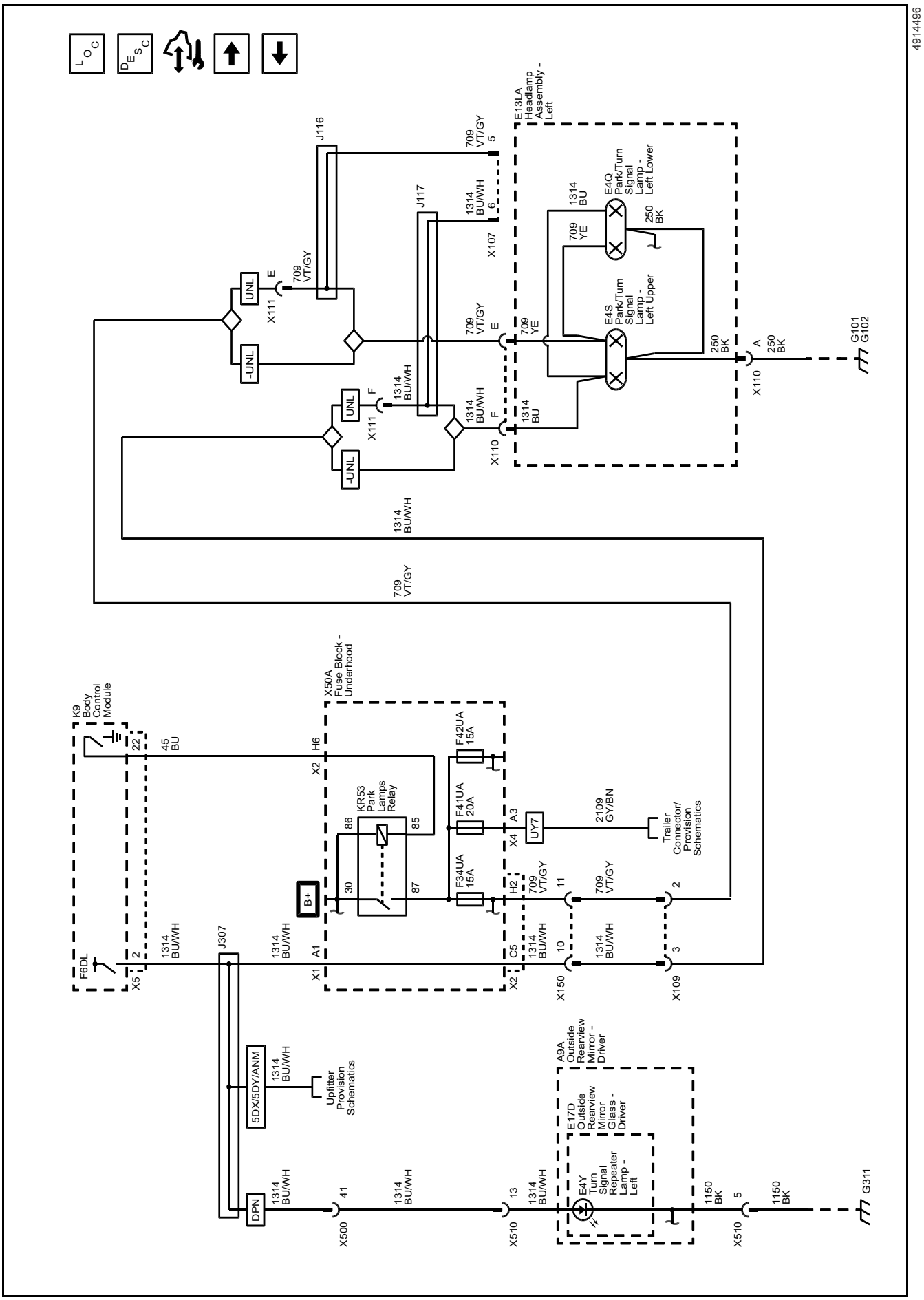
Fog Lights Schematics (Fog Lamps (T3U))



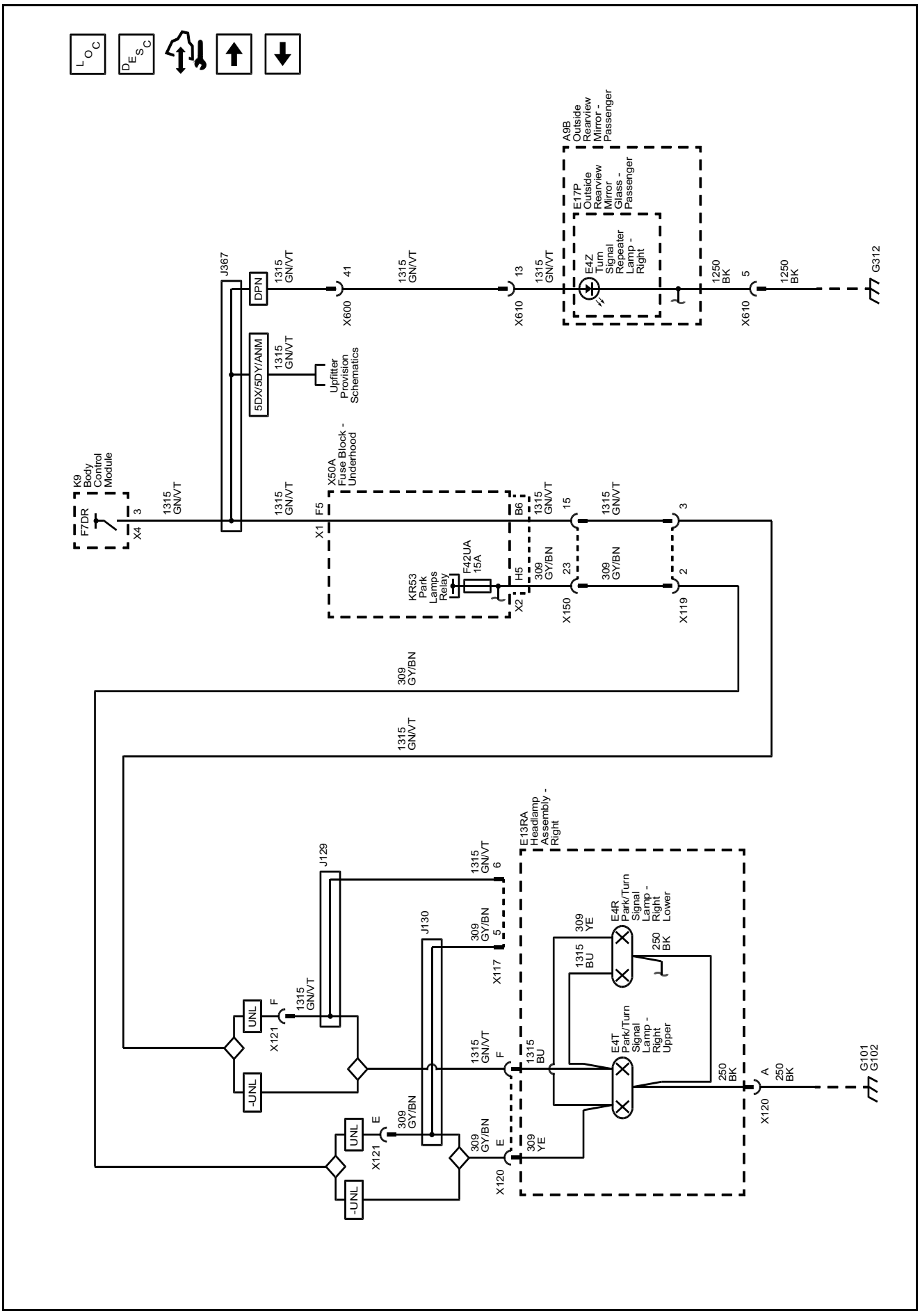
Exterior Lights Schematics (Exterior Lights Controls)



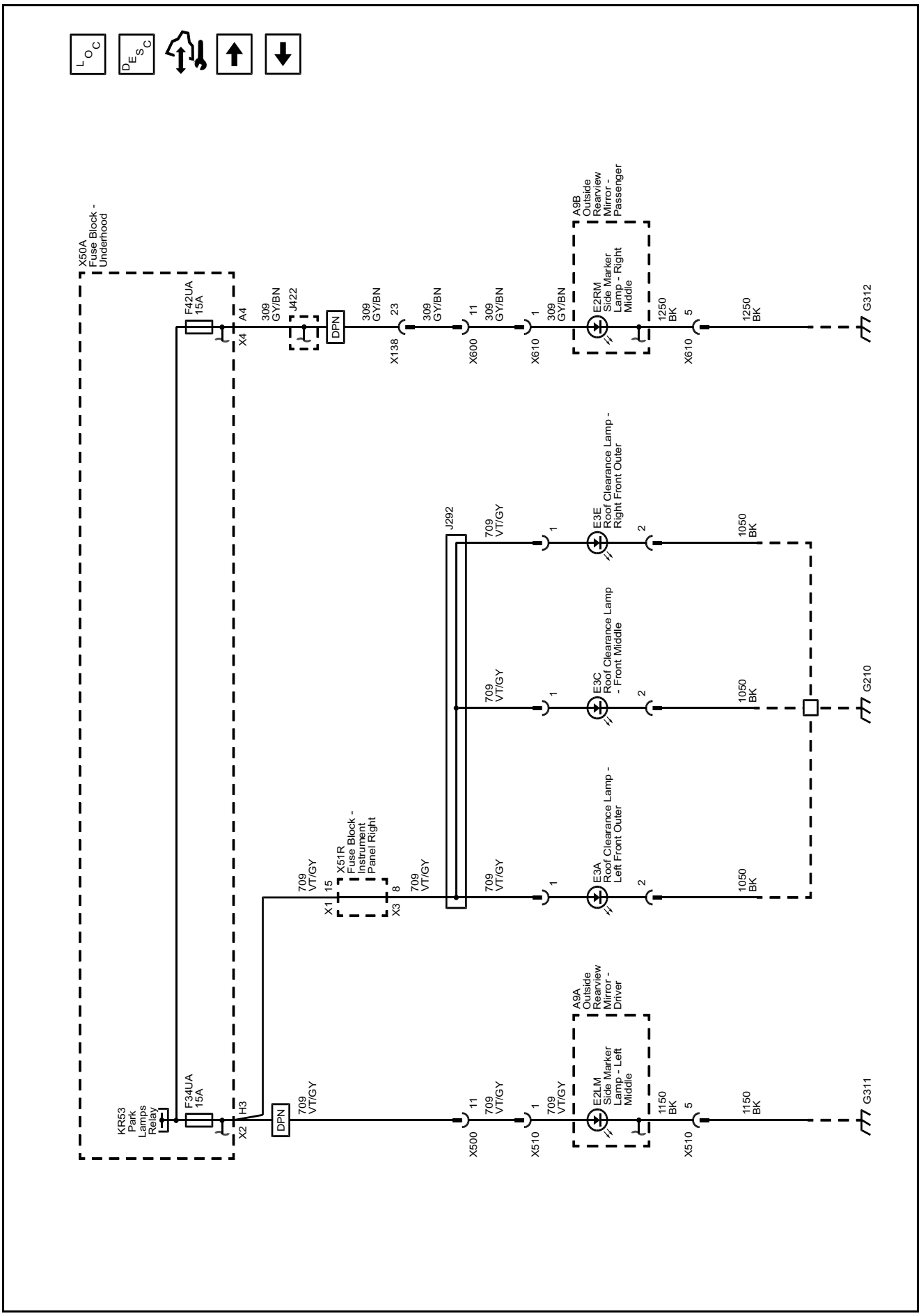
Exterior Lights Schematics (Park and Turn Signal Lamps - Left Front)



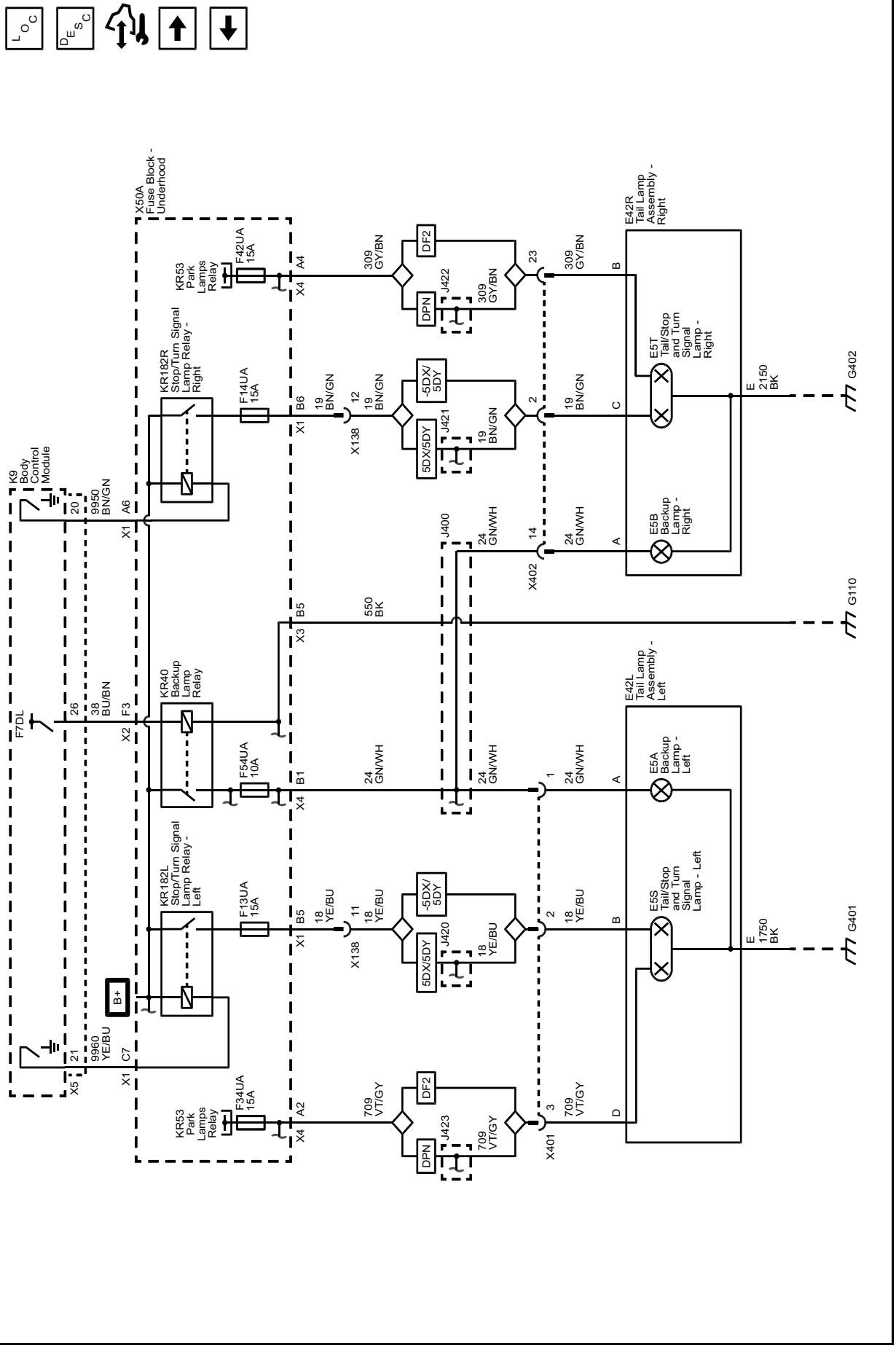
Exterior Lights Schematics (Park and Turn Signal Lamps - Right Front)



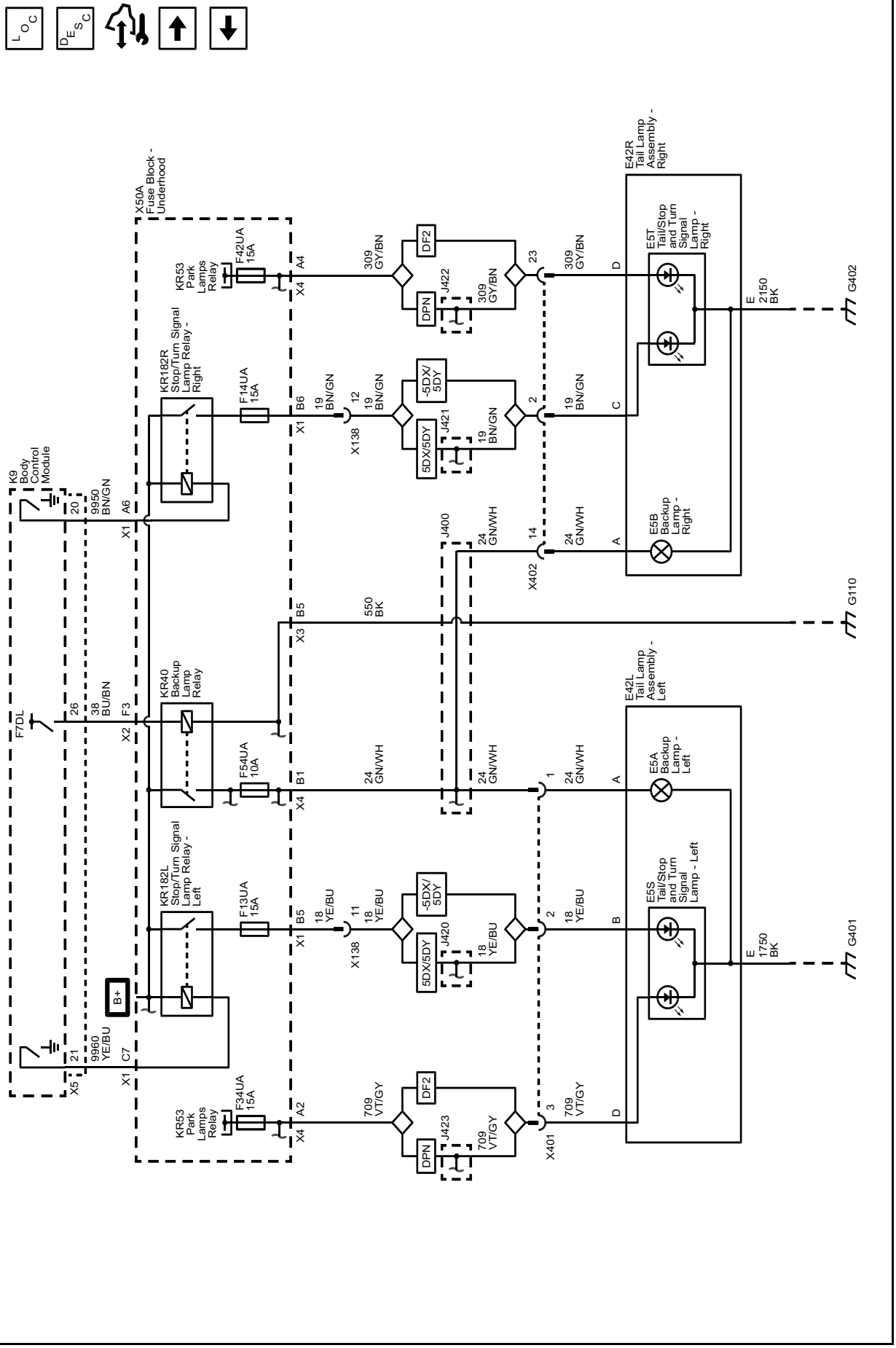
Exterior Lights Schematics (Park Lamps - Mirror (DPN) and Roof)



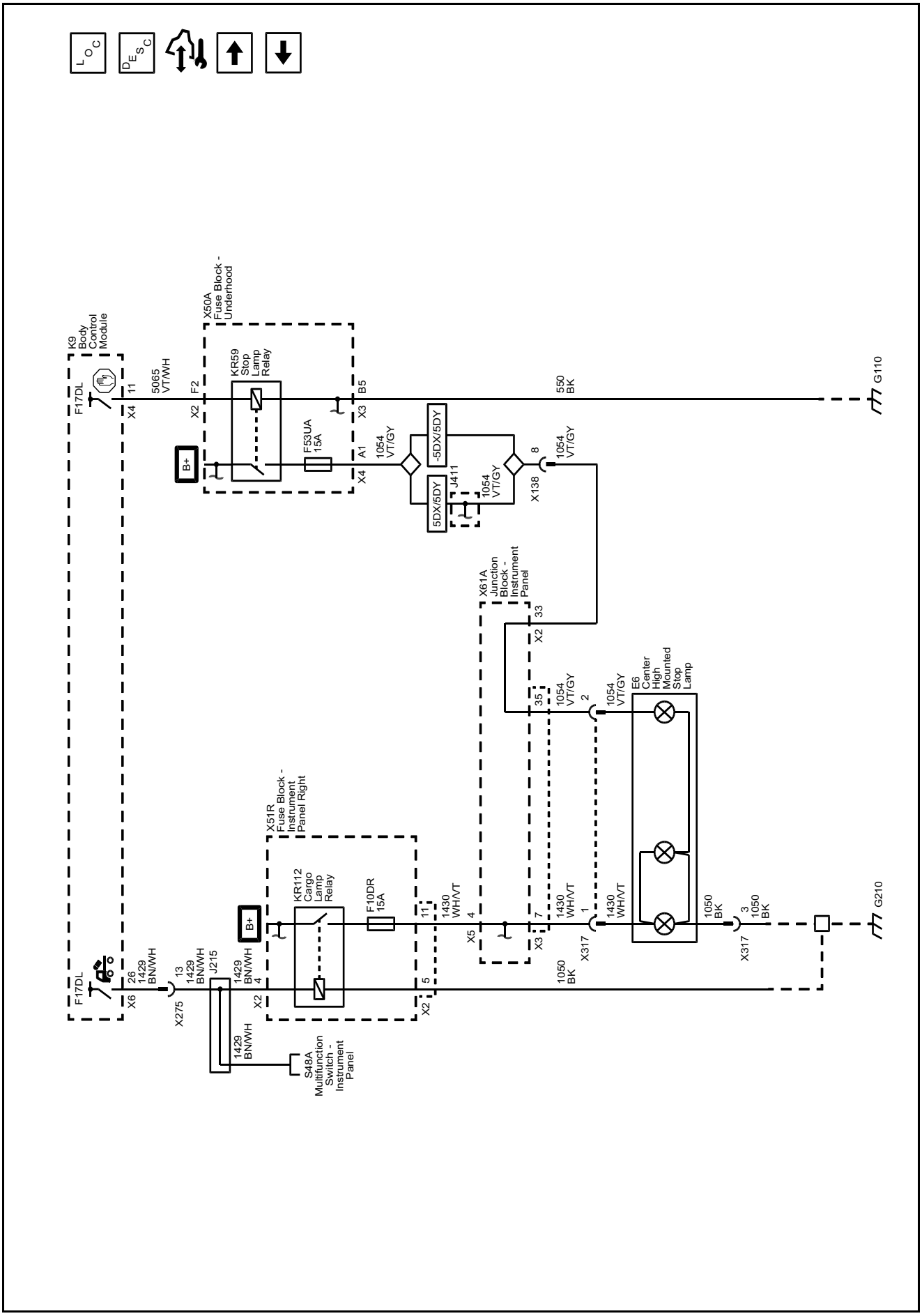
Exterior Lights Schematics (Tail Lamps - Incandescent (TR1))



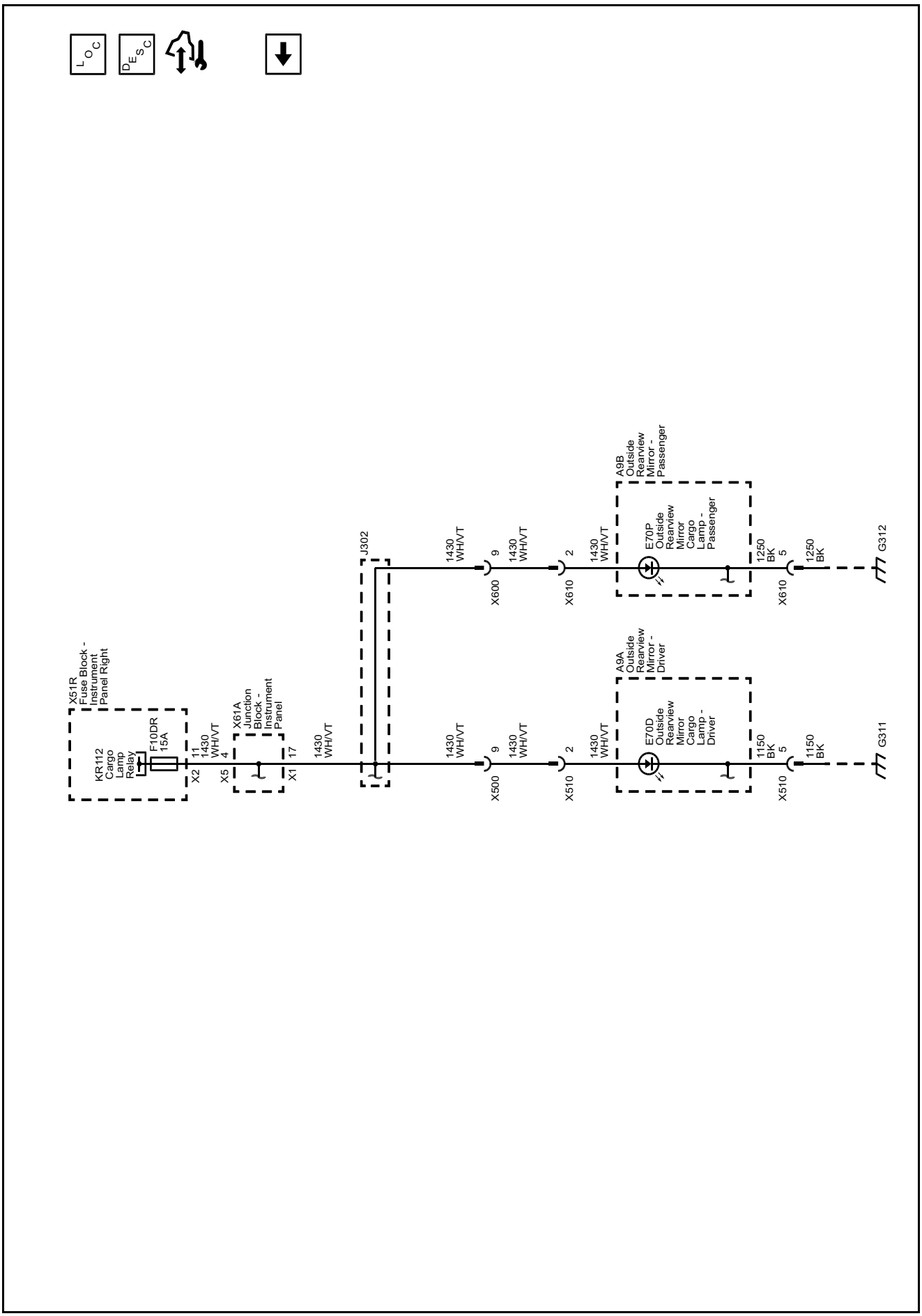
Exterior Lights Schematics (Tail Lamps - LED (UGE))



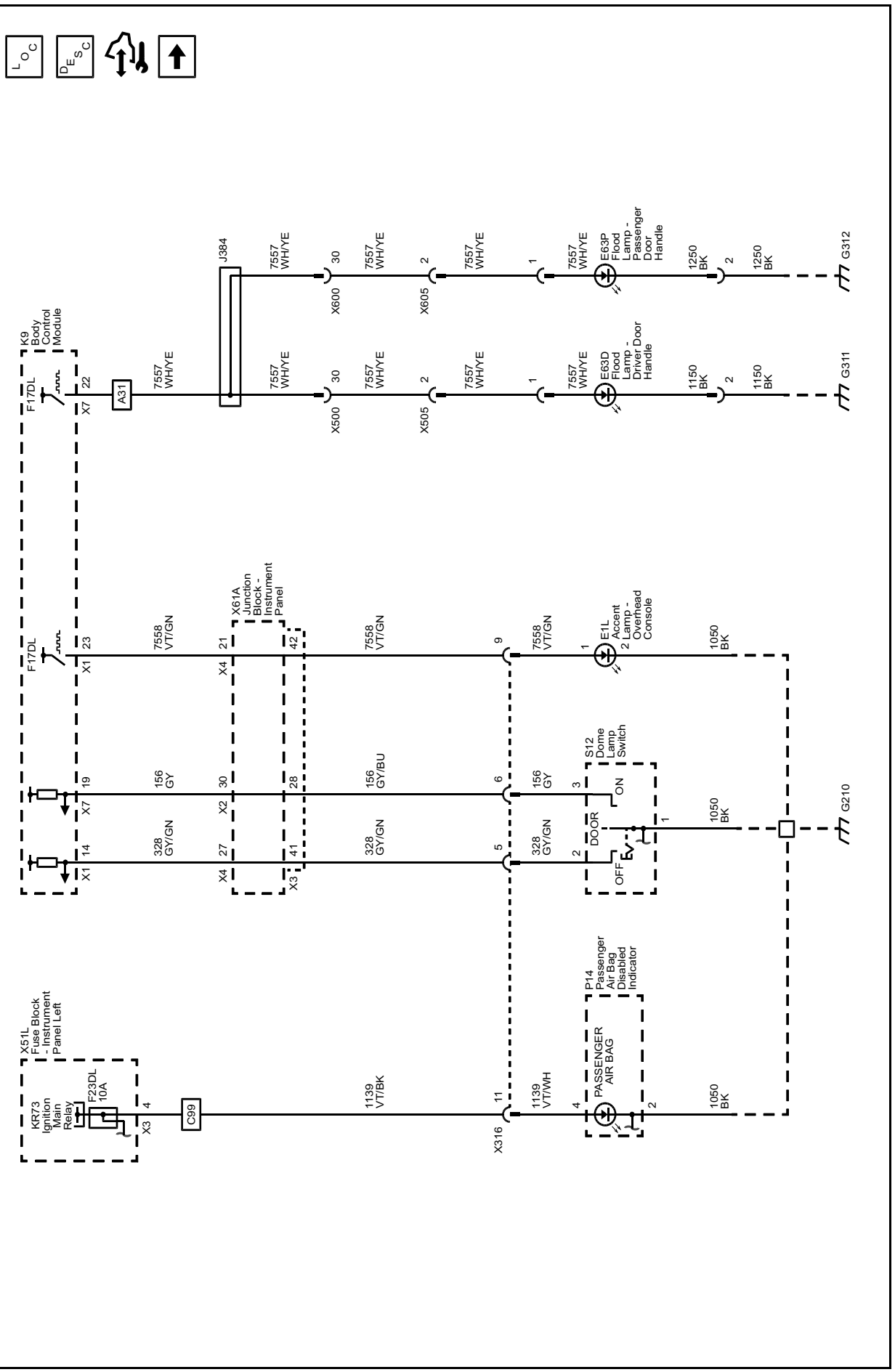
Exterior Lights Schematics (Roof Cargo and Center High Mounted Stop Lamps)



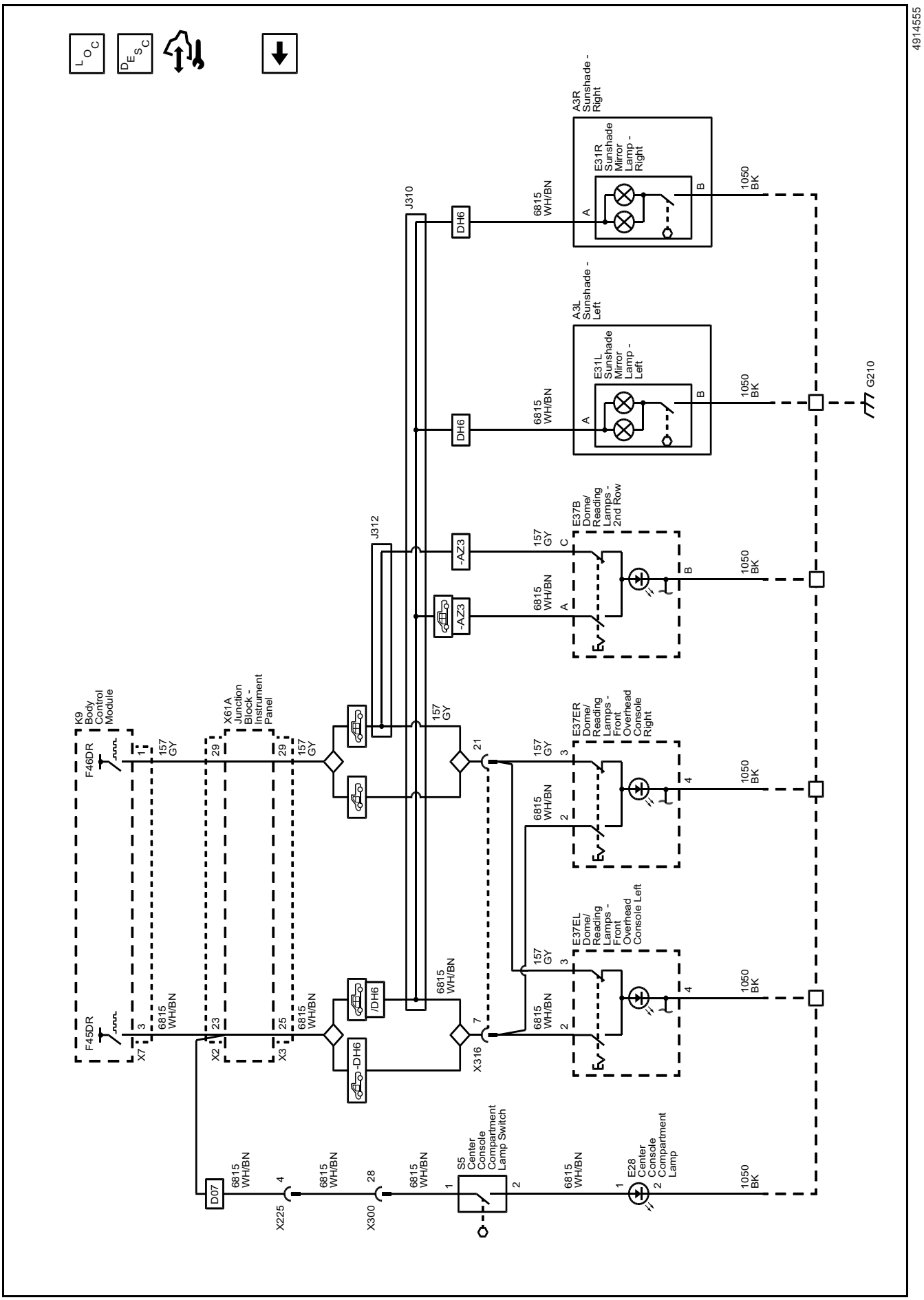
Exterior Lights Schematics (Mirror Cargo Lamps (DPN))



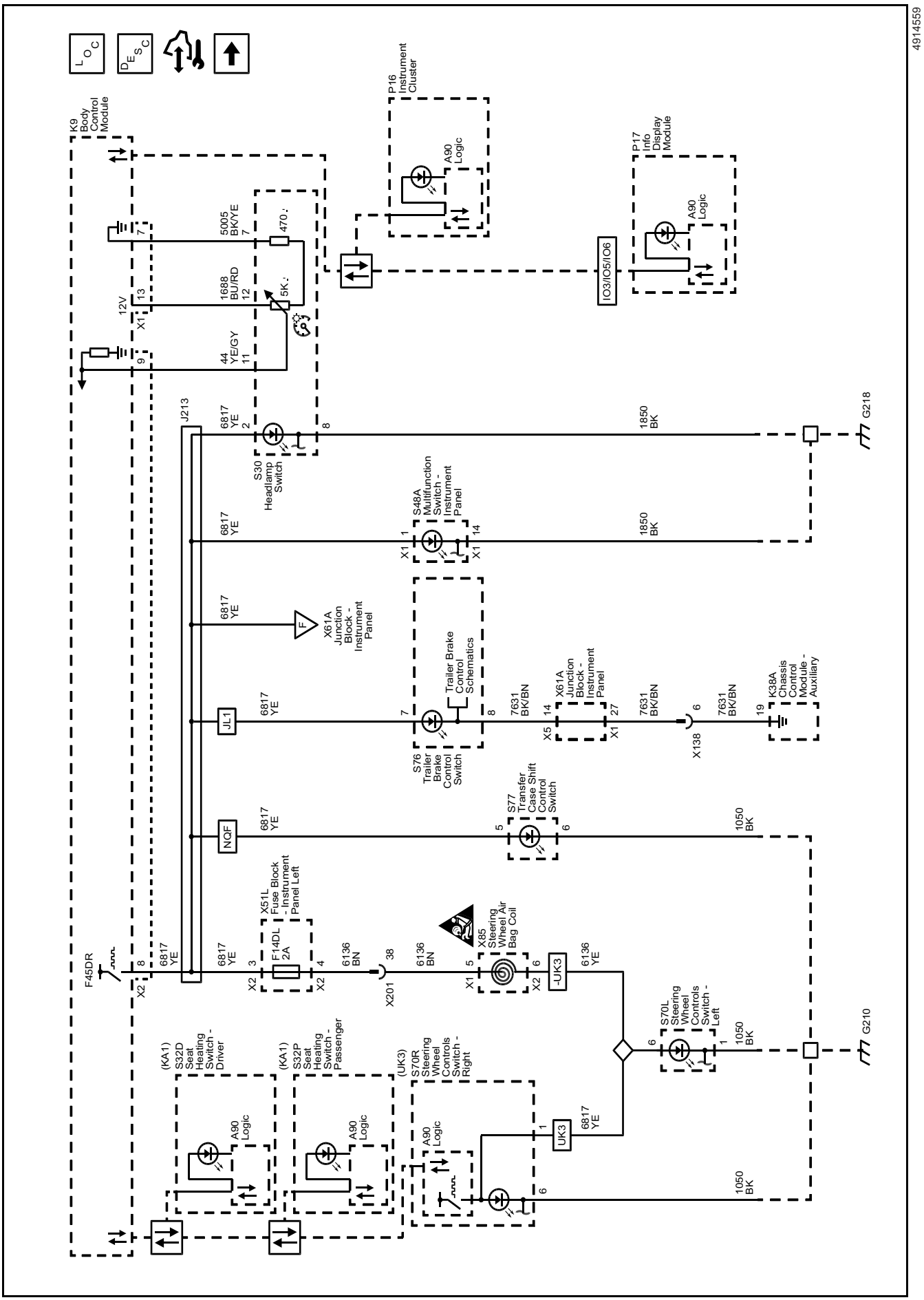
Interior Lights Schematics (Controls and Flood Lamps)



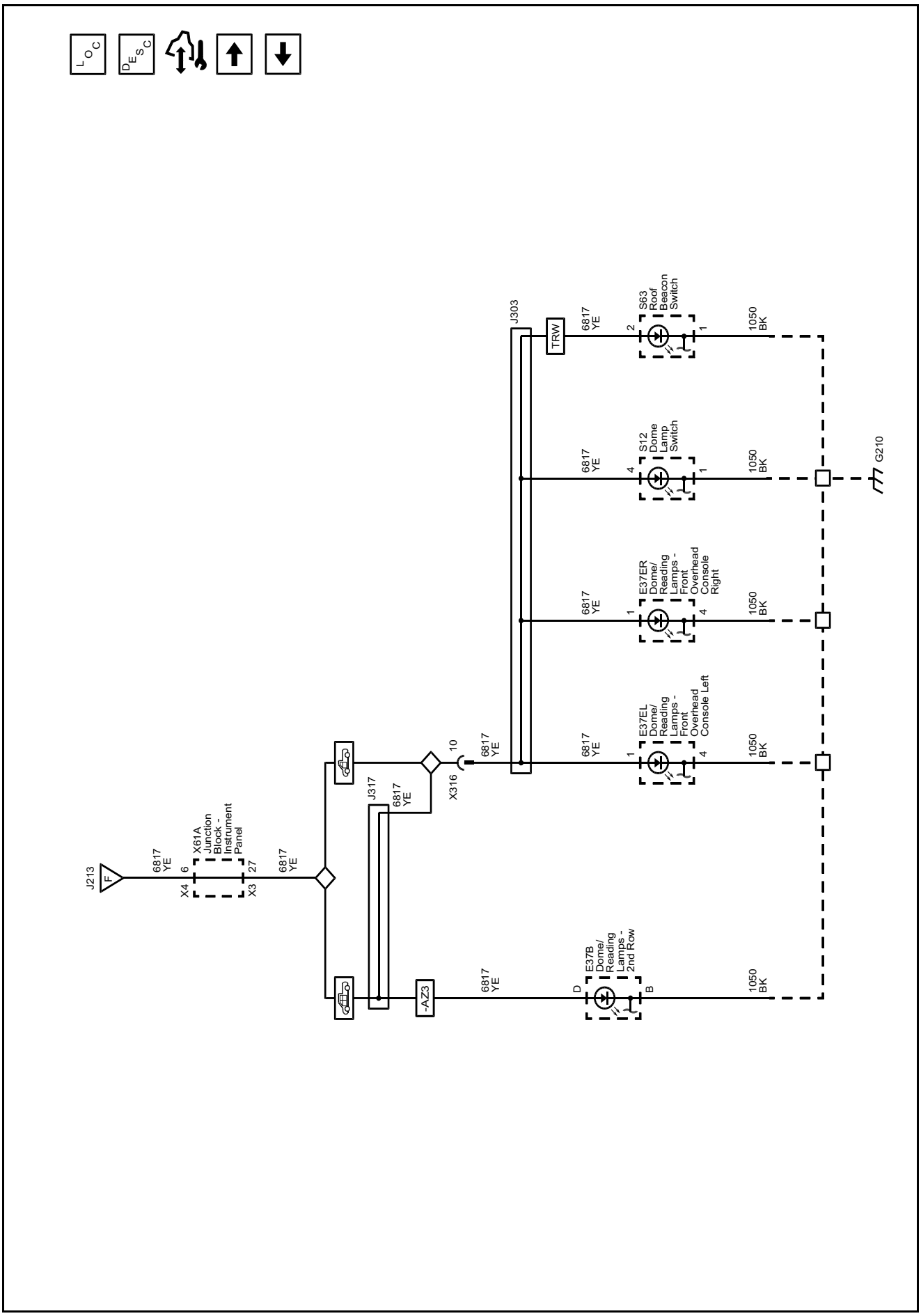
Interior Lights Schematics (Floor Console Compartment and Overhead Lamps)



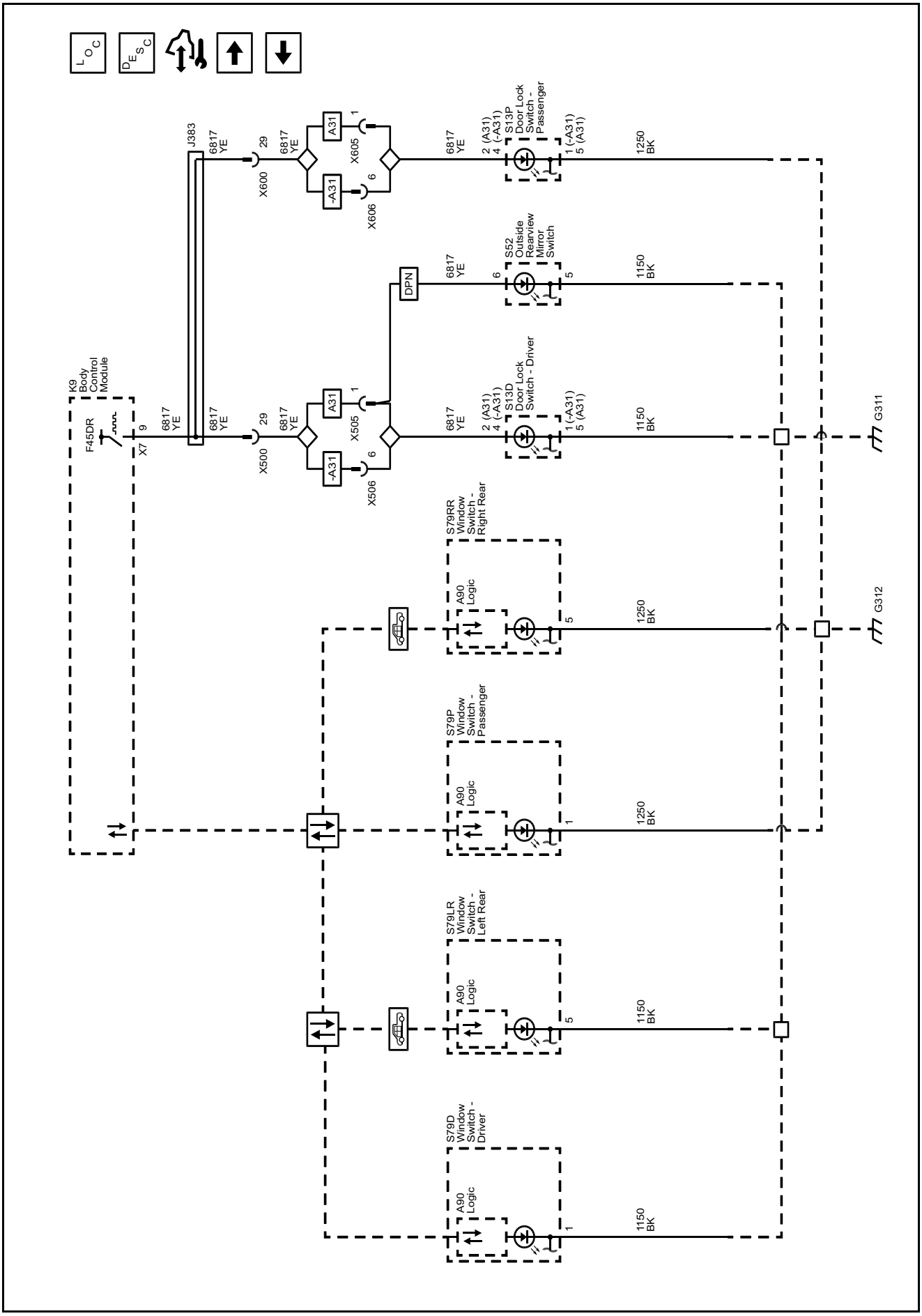
Interior Lights Dimming Schematics (Controls and Backlight - Instrument Panel)



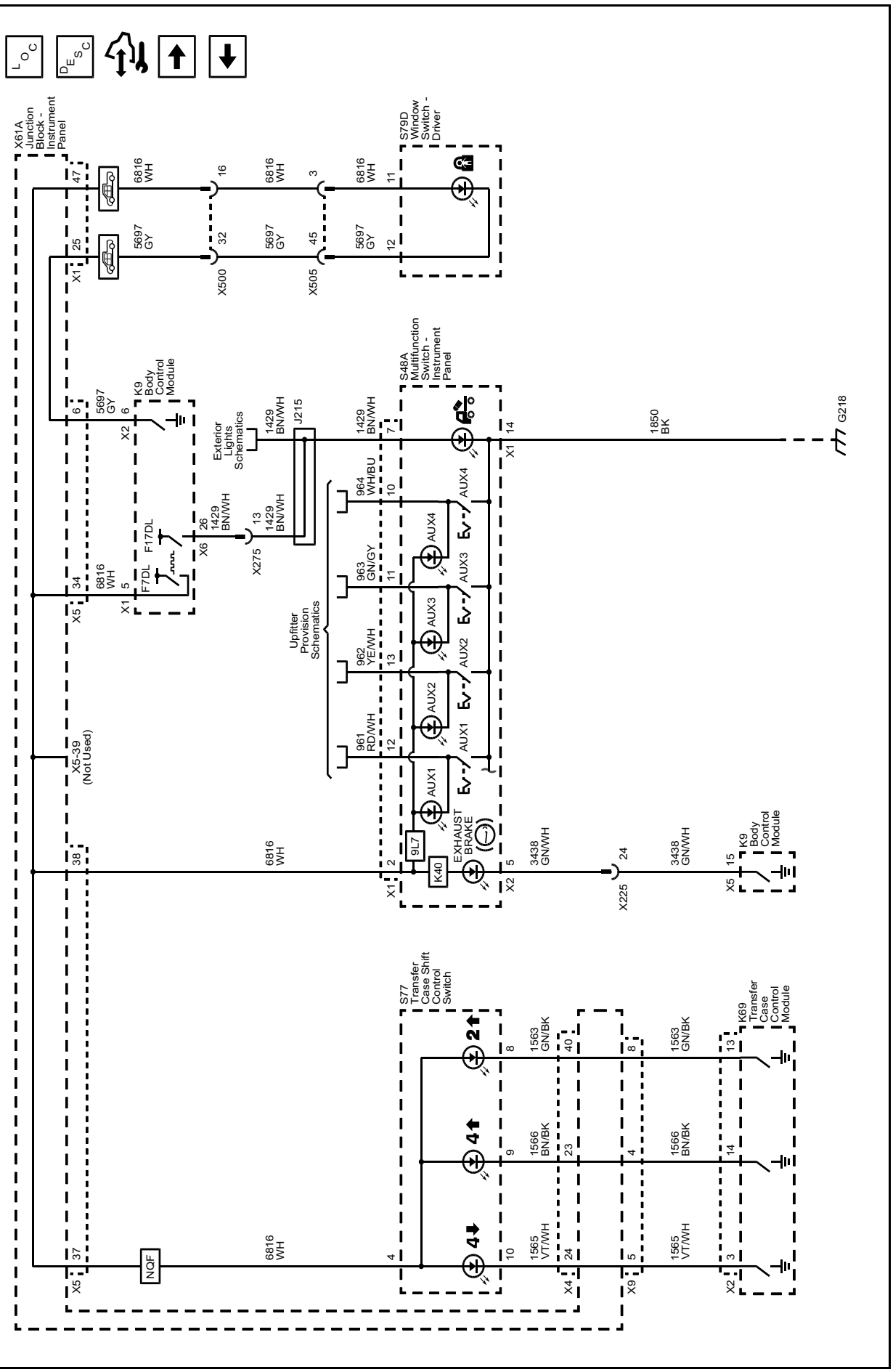
Interior Lights Dimming Schematics (Backlight - Overhead Lamps)



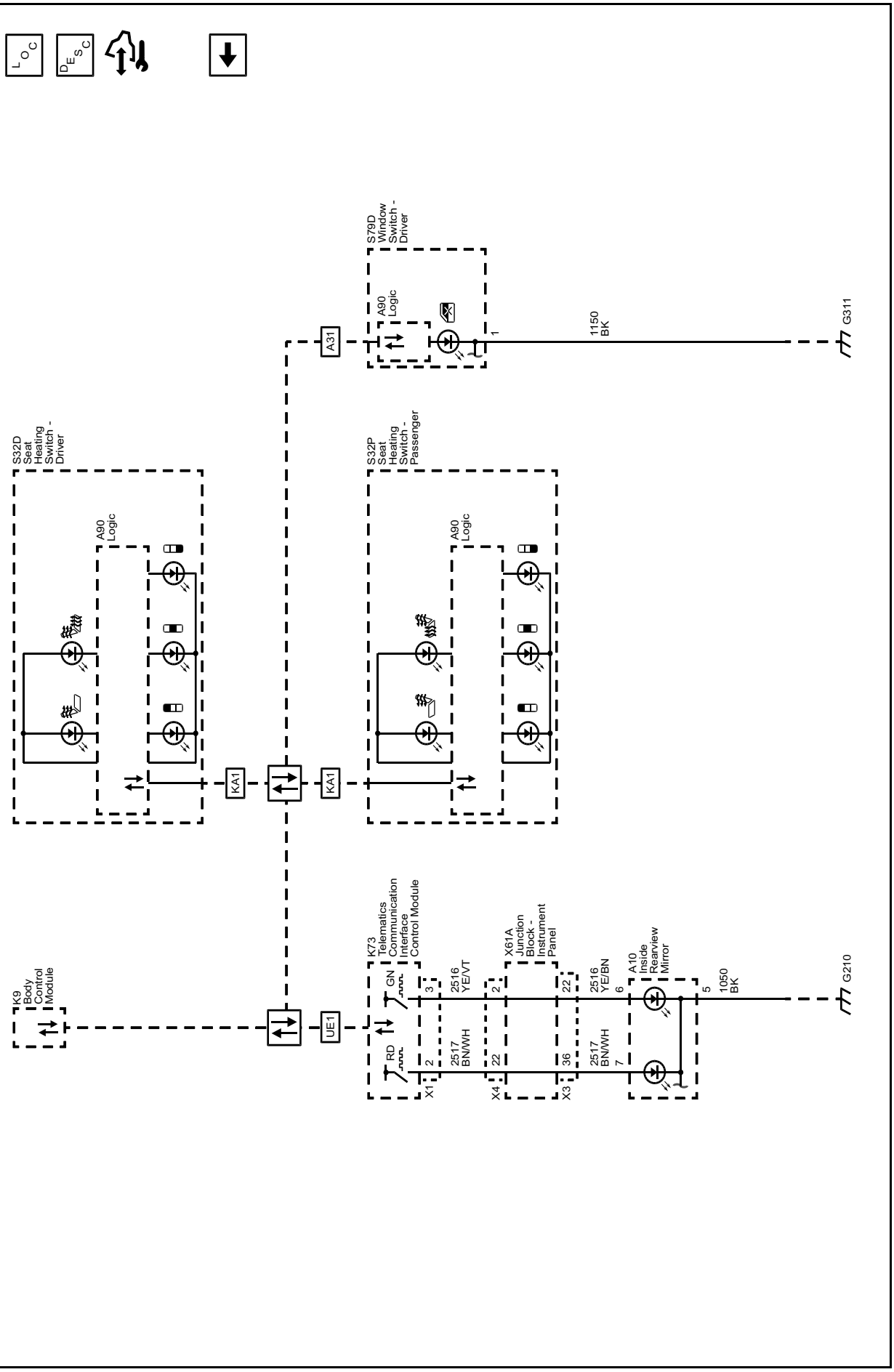
Interior Lights Dimming Schematics (Backlight - Doors)



Interior Lights Dimming Schematics (Indicators - Discrete)



Interior Lights Dimming Schematics (Indicators - Serial Data)



Description and Operation

Exterior Lighting Systems Description and Operation

The exterior lighting system consist of the following lamps:

- Backup 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 3 pin high beam fuse to the high beam control circuits illuminating the left and right high beam headlamps.

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.

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.

Trailer Lighting

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
- 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
- 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.

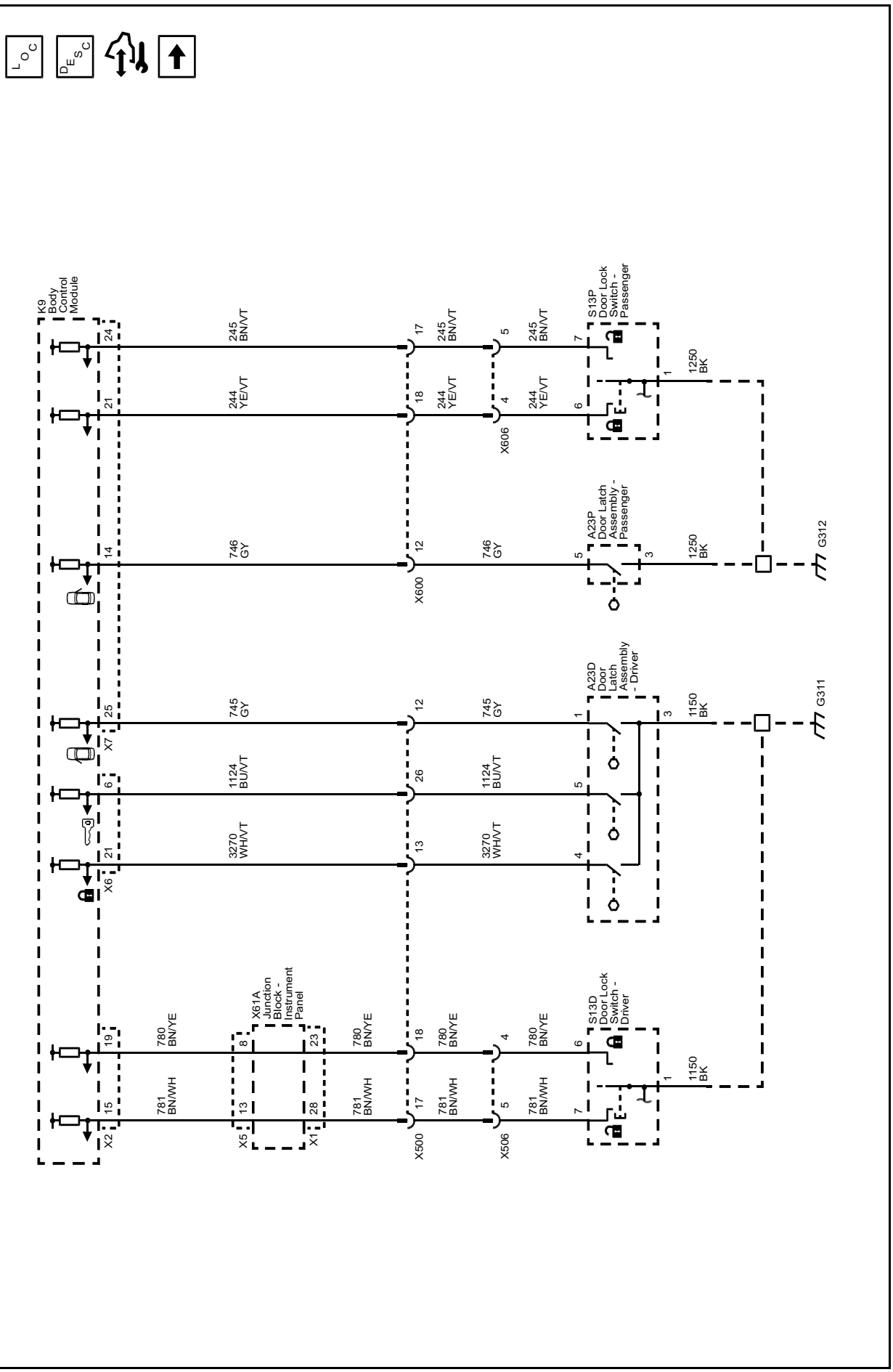
Battery Rundown Protection/ Inadvertent Power

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.

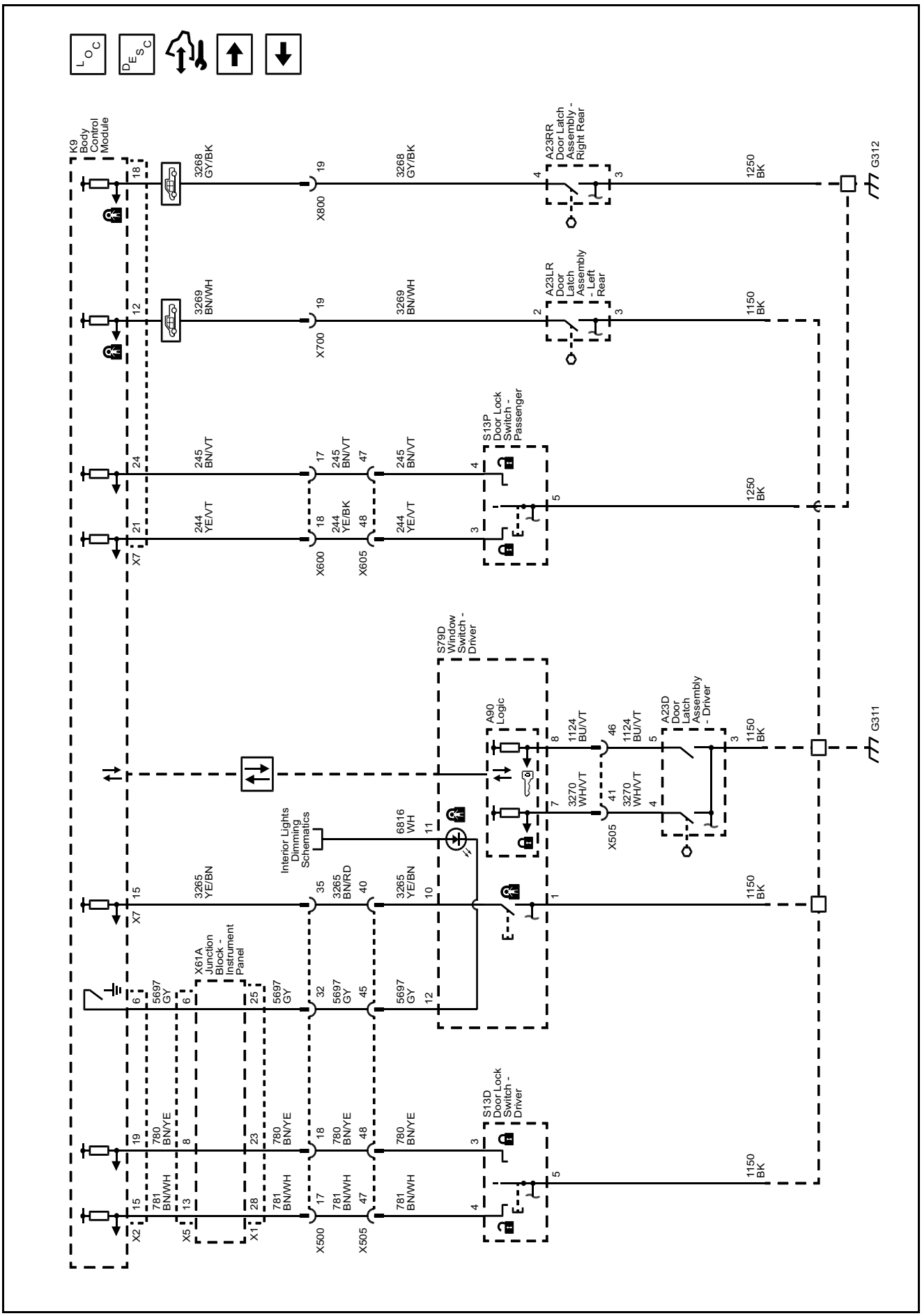
Vehicle Access

Schematic and Routing Diagrams

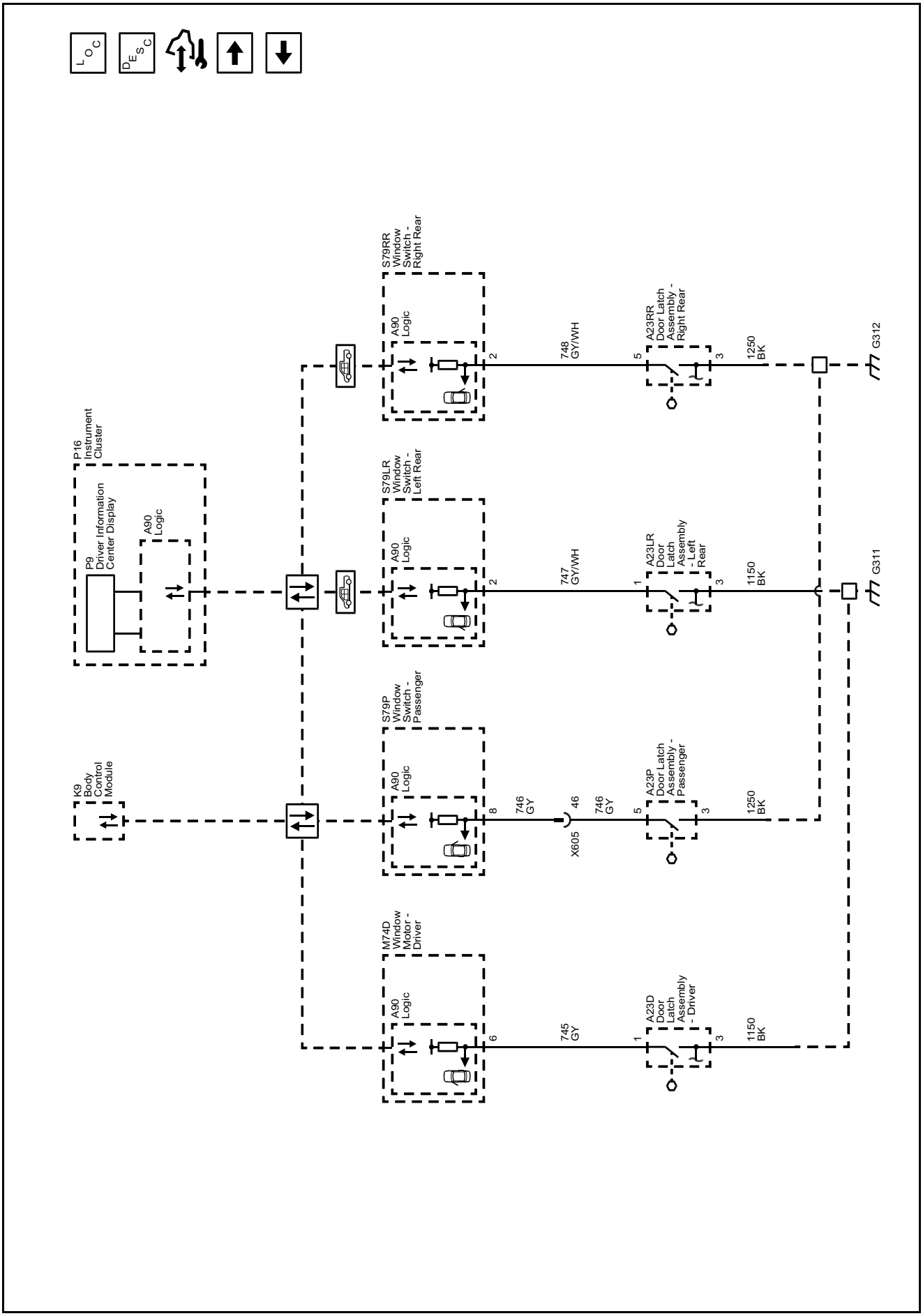
Door Lock/Indicator Schematics (Switches and Indicators (-A31))



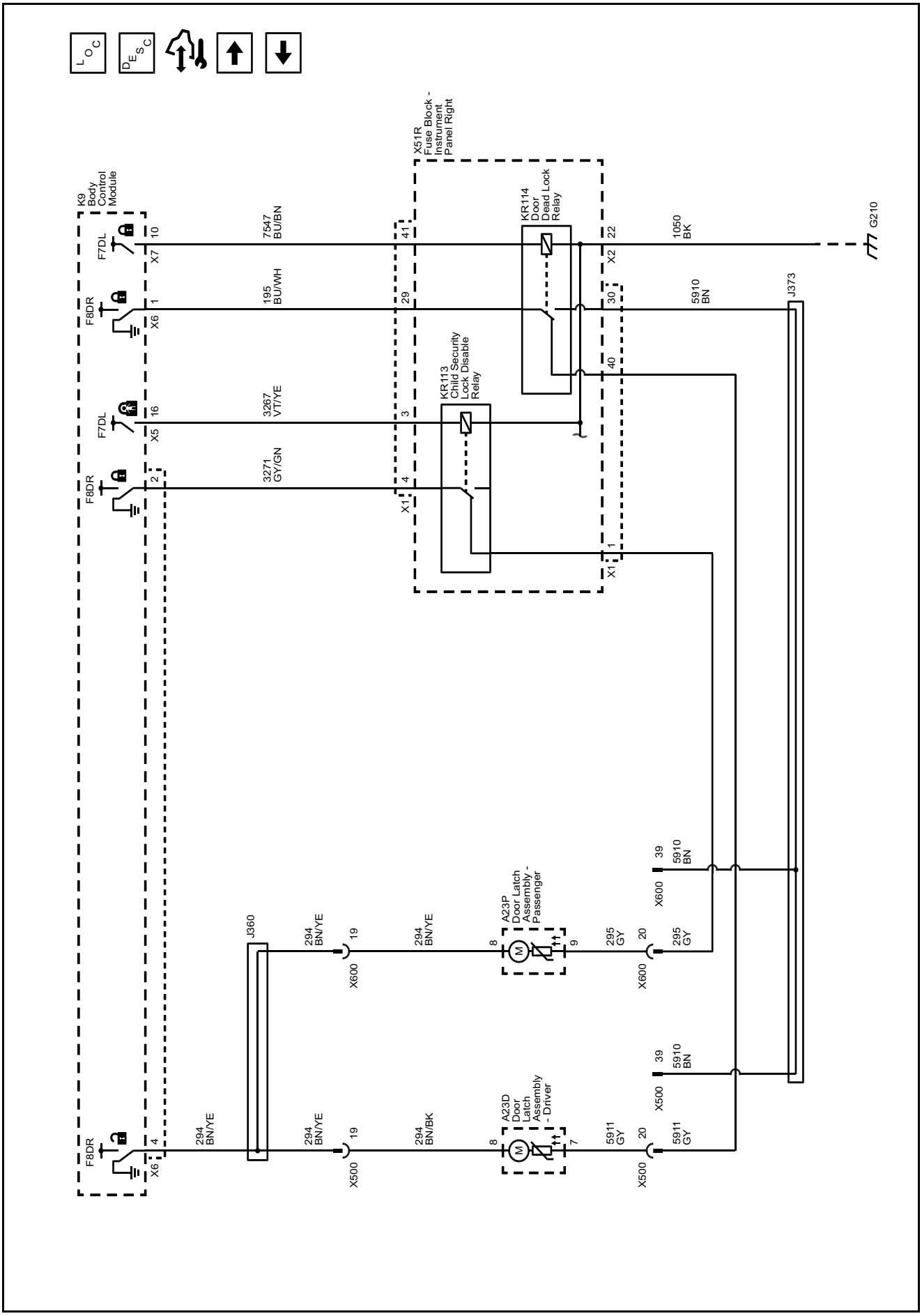
Door Lock/Indicator Schematics (Switches and Child Lock Status (A31))



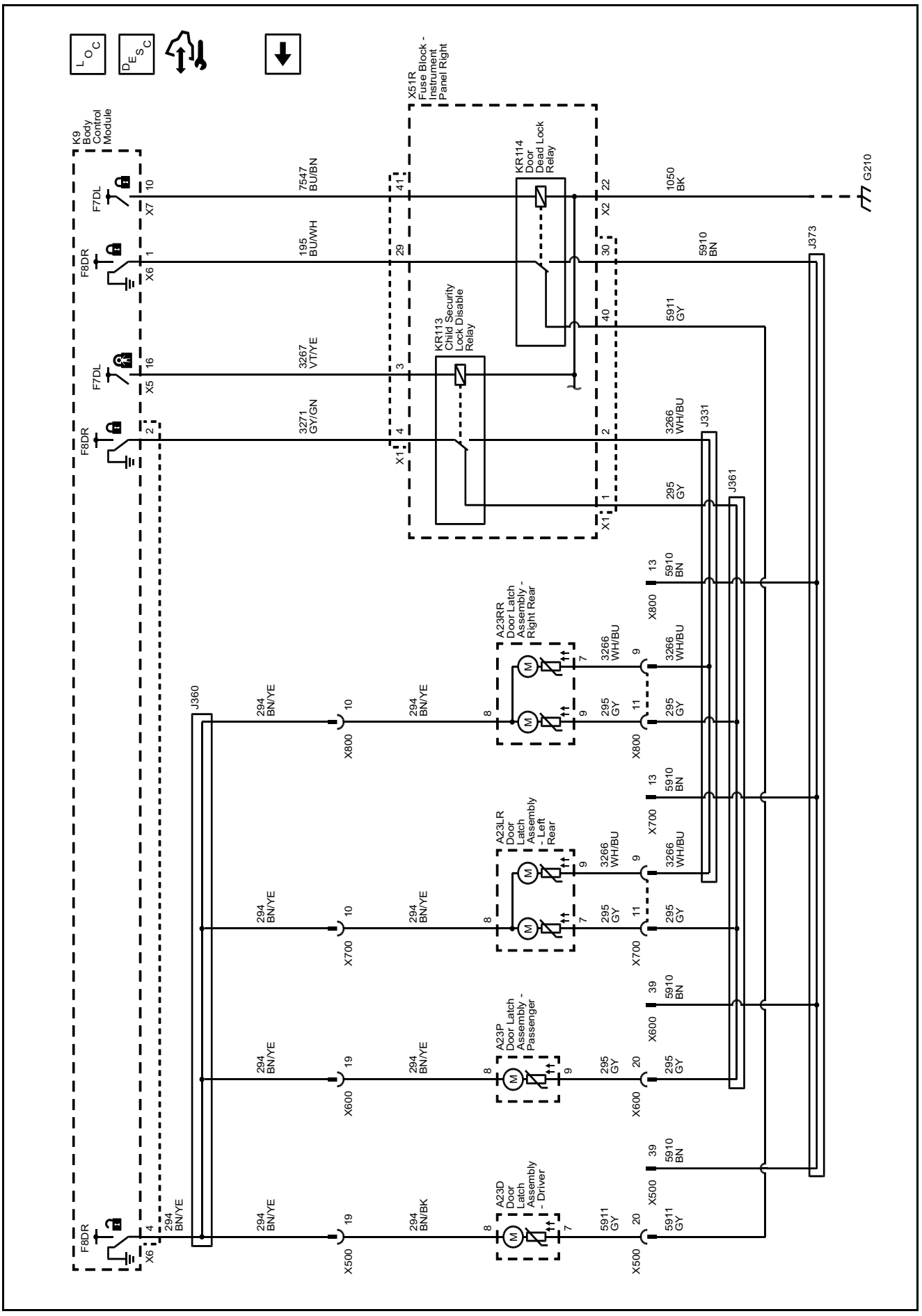
Door Lock/Indicator Schematics (Indicators (A31))



Door Lock/Indicator Schematics (Actuators (Standard Cab))



Door Lock/Indicator Schematics (Actuators (Crew Cab))



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 (A31)
- Passenger window switch (A31)
- Left rear window switch (A31)
- Right rear window switch (A31)

Door Ajar System

Depending upon if the vehicle is a standard cab, extended cab or crew cab and/or is equipped with power windows or without power windows affects how the driver and passenger door ajar signal circuits are configured and monitored.

Driver Door Ajar (With A31)

The driver window motor will provide a 12V signal to the driver door ajar switch within the door latch to indicate the status of the door. When the driver door is open, the contract within the ajar switch closes providing a ground part for the signal circuit. The driver 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.

Passenger and Rear Doors Ajar (With A31)

The 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 (Without A31)

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

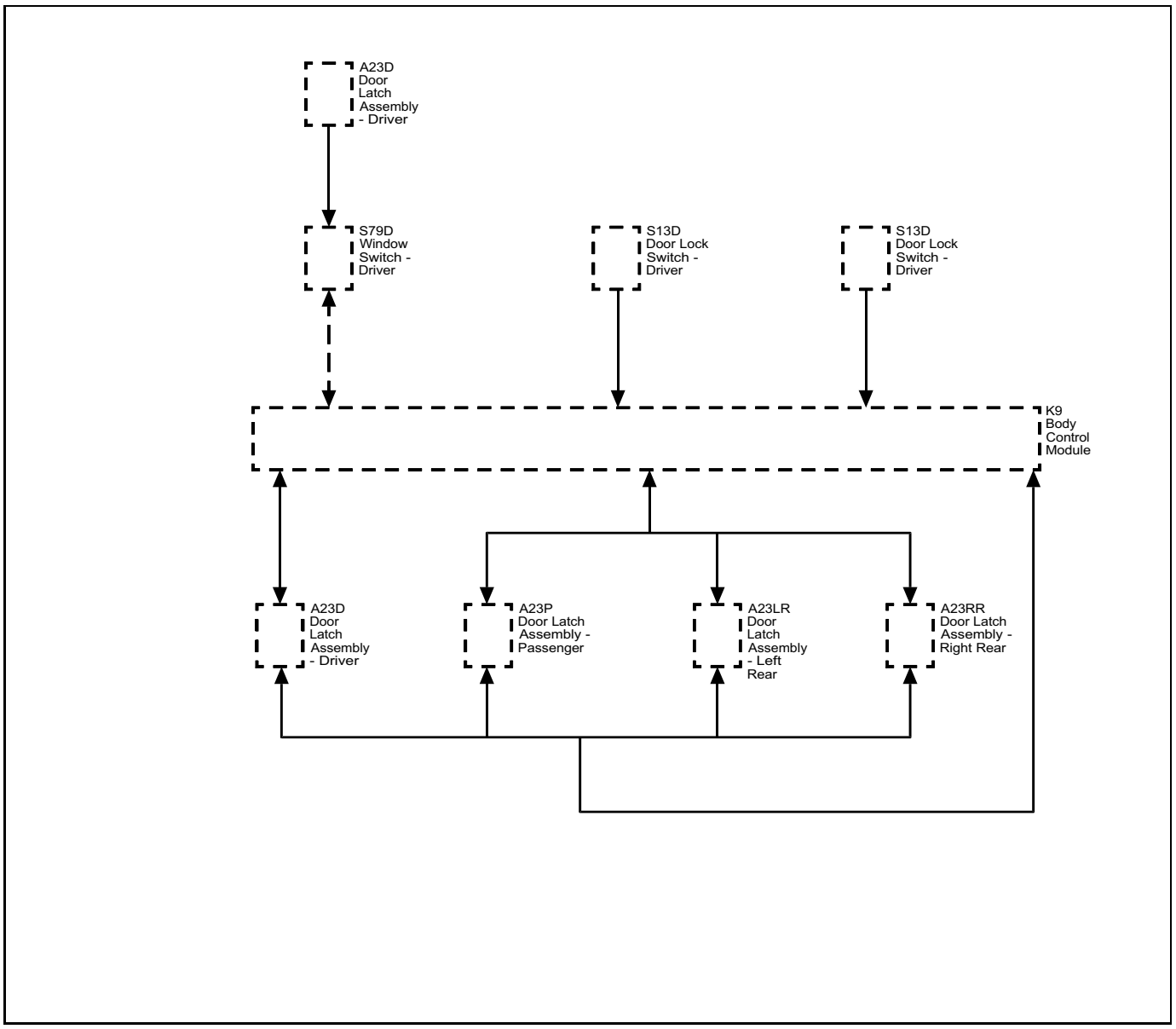
Power Door Locks Description and Operation

Door Lock System Components

The power door lock system consists of the following components:

- Driver door lock switch
- Child door lockout switch (Part of the driver window switch)
- Passenger door lock switch
- Front door lock actuators
- Rear door lock actuators (Extended and crew cab models)
- Body control module (BCM)
- Keyless entry control module
- Keyless entry transmitter
- Right instrument panel fuse block (Contains child security lock disable PCB relay)

Power Door Locks Block Diagram



3623709

Door Lock System Controls

The power door lock system can be controlled by any of the following:

- A door lock switch LOCK or UNLOCK activation
- A keyless entry transmitter activation

Door Lock Operation

The BCM supplies a 12 volt signal to the lock and unlock signal circuits of the driver and passenger door lock switches. When the appropriate switch is pressed, a contact within the door lock switch closes providing a ground path for the signal circuit. The BCM will detect the voltage drop in the signal and will command the doors to perform the lock or unlock functions.

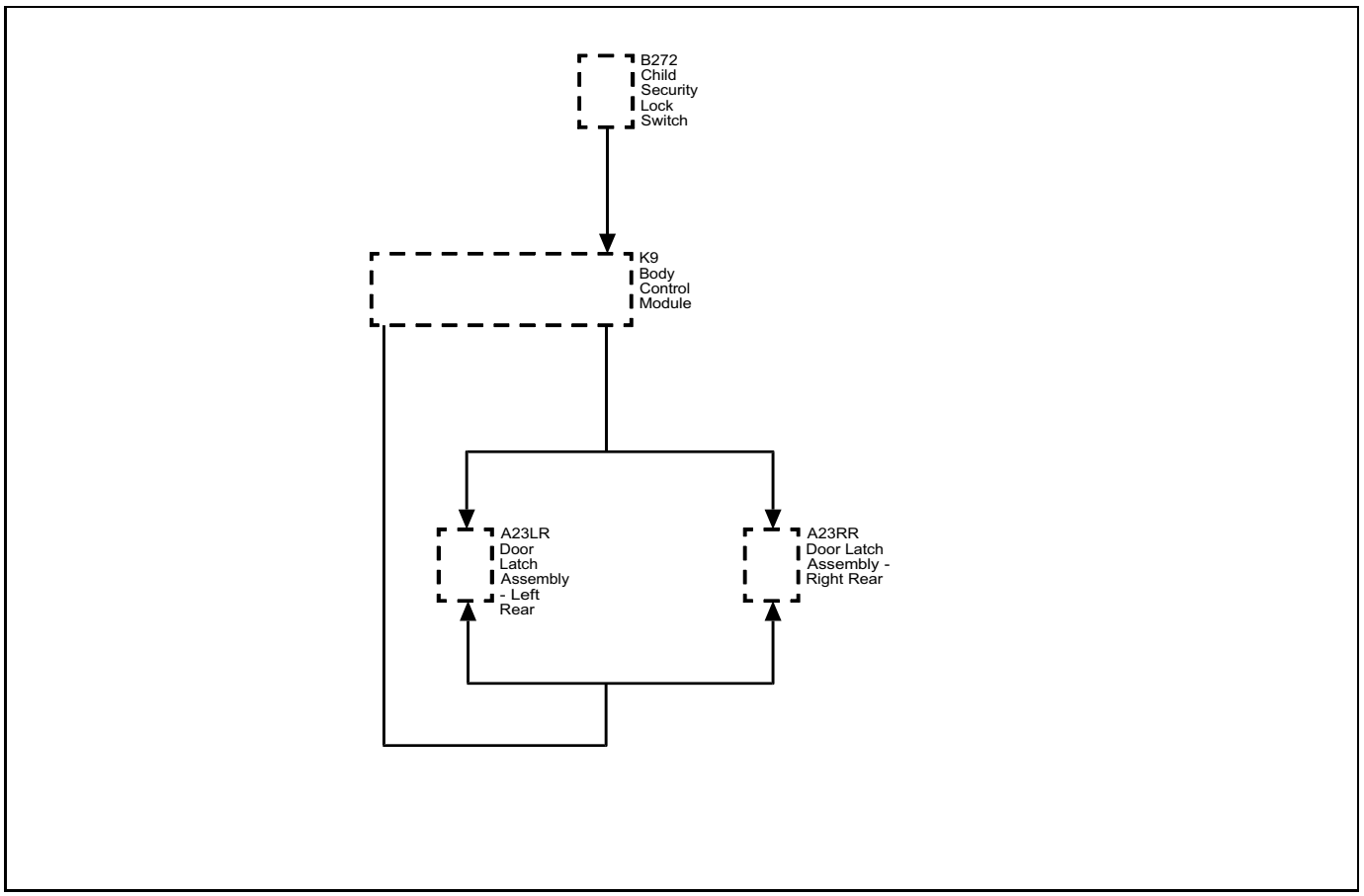
The BCM may also receive a LOCK or UNLOCK command from the keyless entry control module, refer to *Keyless Entry System Description and Operation on page 8-9* for information on the keyless entry system

The BCM, upon receipt of a lock switch lock or unlock signal, will supply 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 doors unlock
- All doors lock

Power Door Child Lock Block Diagram



3640353

Child Security Lockout System Operation

The child door lockout switch on the driver window switch controls the child locks on the rear doors. The lockout switch is an input to the body control module and the body control module controls the door lock security relay. When the body control module receives a command from the child door lockout switch, it will apply voltage to the child security lock disable relay coil, this will energize the relay and the contact within the relay will then direct the voltage to activate the left rear and right rear child locks and then isolate them from the normal door lock system to prevent the rear doors from being opened by using the interior rear door handles. An indicator will also illuminate to alert the driver that the child lockout system has been activated. Pushing the switch again will return normal function to the rear interior door handles and the indicator will go out.

The body control module monitors the voltage level of the child security motor status signal circuit, when the child locks have been activated, the contacts of the child security motor status switch (internal to the rear door latch) will close providing a ground path for the signal circuit pulling the voltage low. It is in this manner that the body control module is able to determine if the rear door latch has been successfully been locked out.

The body control module monitors the status of the child security lockout system, when the body control module detects a fault in the system, it will command the child lockout indicator to flash ON and OFF for 30 seconds to alert the driver that the child security lockout system may not be functioning properly.

The body control module will command the child lockout indicator to flash ON and OFF for the following reasons:

- An open/high resistance in either child security motor status signal circuit
- The body control module detects that one or both rear door latches have not activated and are not locked out
- The body control module detects a short to ground or an open/high resistance in the child security lock disable relay control circuit
- A malfunctioning child security lock disable relay
- An open/high resistance in the child security lock motor control circuit

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Section 3

Brakes

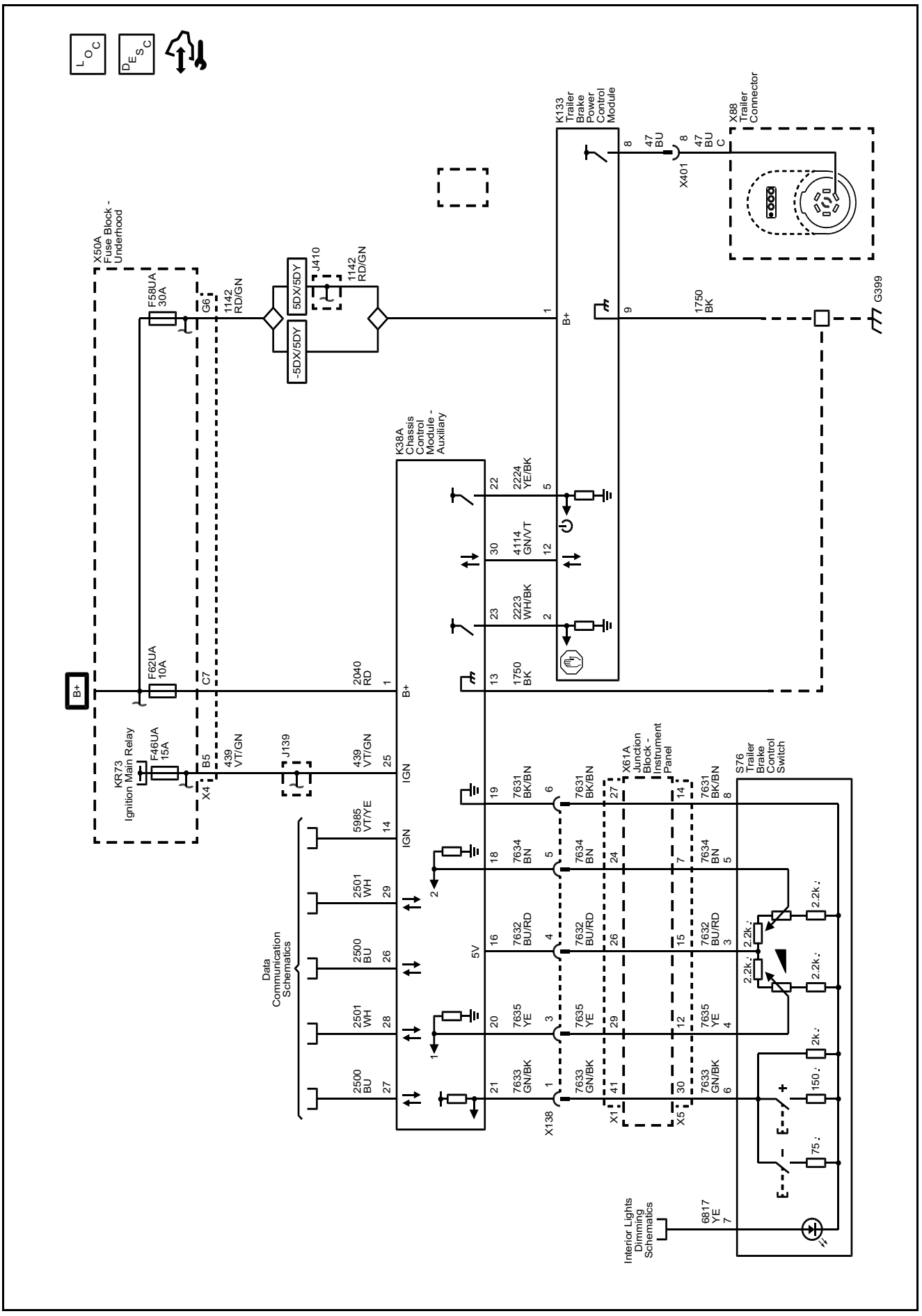
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Trailer Brake Controls Description and Operation 3-5

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Trailer Brake Controls

Schematic and Routing Diagrams

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. 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:

- K38A Chassis Control Module-Auxiliary
- K133 Trailer Brake Power Control Module
- S76 Trailer Brake Control Panel
- Manual Trailer Brake Apply
- Trailer Gain Adjustment
- Trailer Brake Driver Information Center Display

Chassis Control Module-Auxiliary

The K38A Chassis Control Module-Auxiliary is a serviceable GMLAN module. The chassis 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 CCM on a dedicated LIN bus.

Trailer Brake Control Panel

The S76 Trailer Brake Control Panel contains the trailer gain and manual apply switches. It is located on the instrument panel to the left of the steering column. Refer to the instrument panel overview 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 panel and switches are 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 Panel 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.

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Section 4

Driver Information and Entertainment

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Image Display Cameras

Schematic and Routing Diagrams

Image Display Camera Schematics (Rearview Camera (UVC+IOB/IO3))

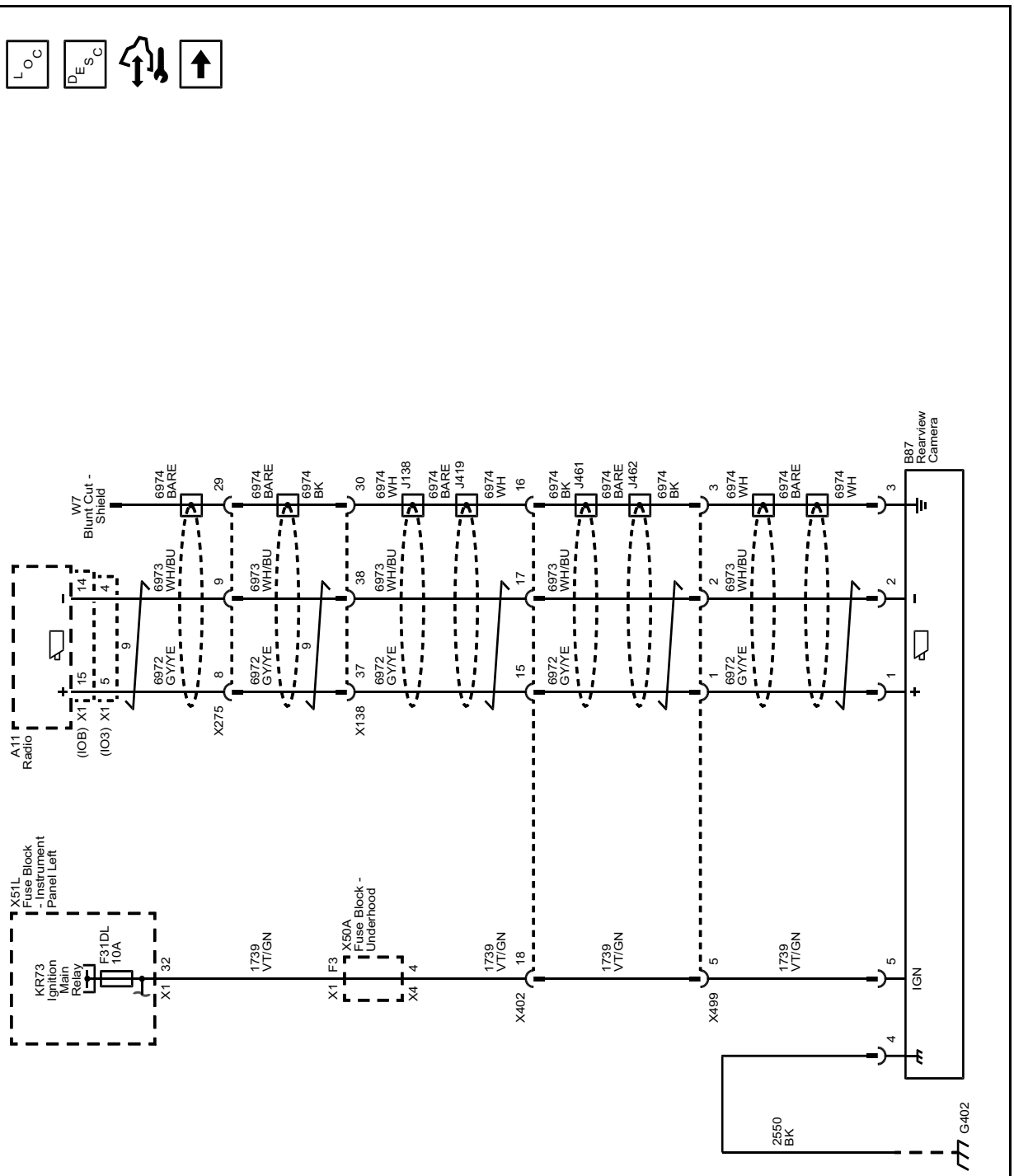
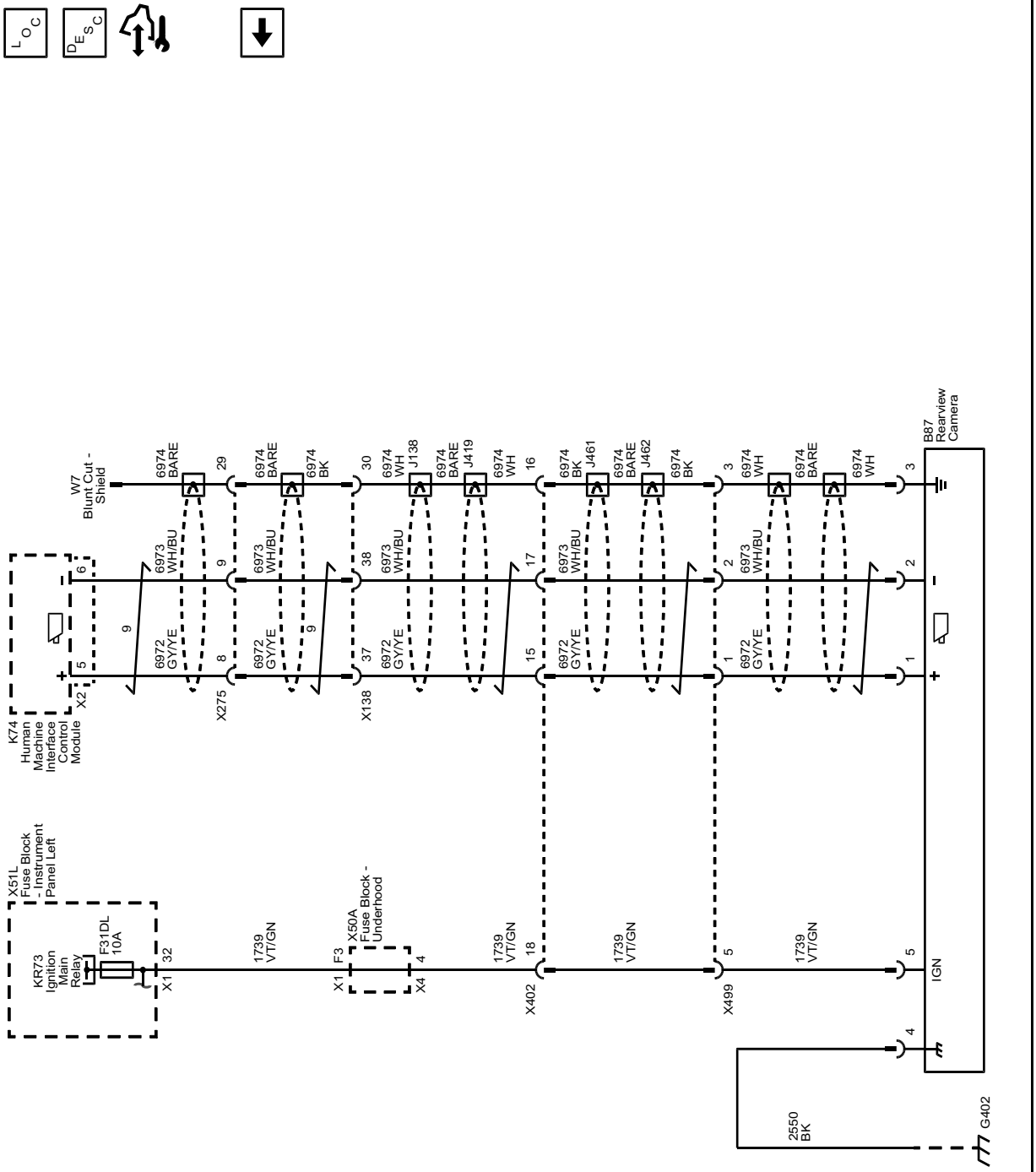


Image Display Camera Schematics (Rearview Camera (UVC+IO5/IO6))



Description and Operation

Rear Vision Camera Description and Operation (with IOB/IOR/IO3)

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 (with IO5/IO6)

Rear Vision Camera System Operation

The rear vision camera system consists of a video camera located at the rear of the vehicle and the Human Machine Interface Control Module.

When the transmission is placed into REVERSE, a signal indicates to the Human Machine Interface Control Module 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 Human Machine Interface Control Module. 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.

Section 5

Engine/Propulsion

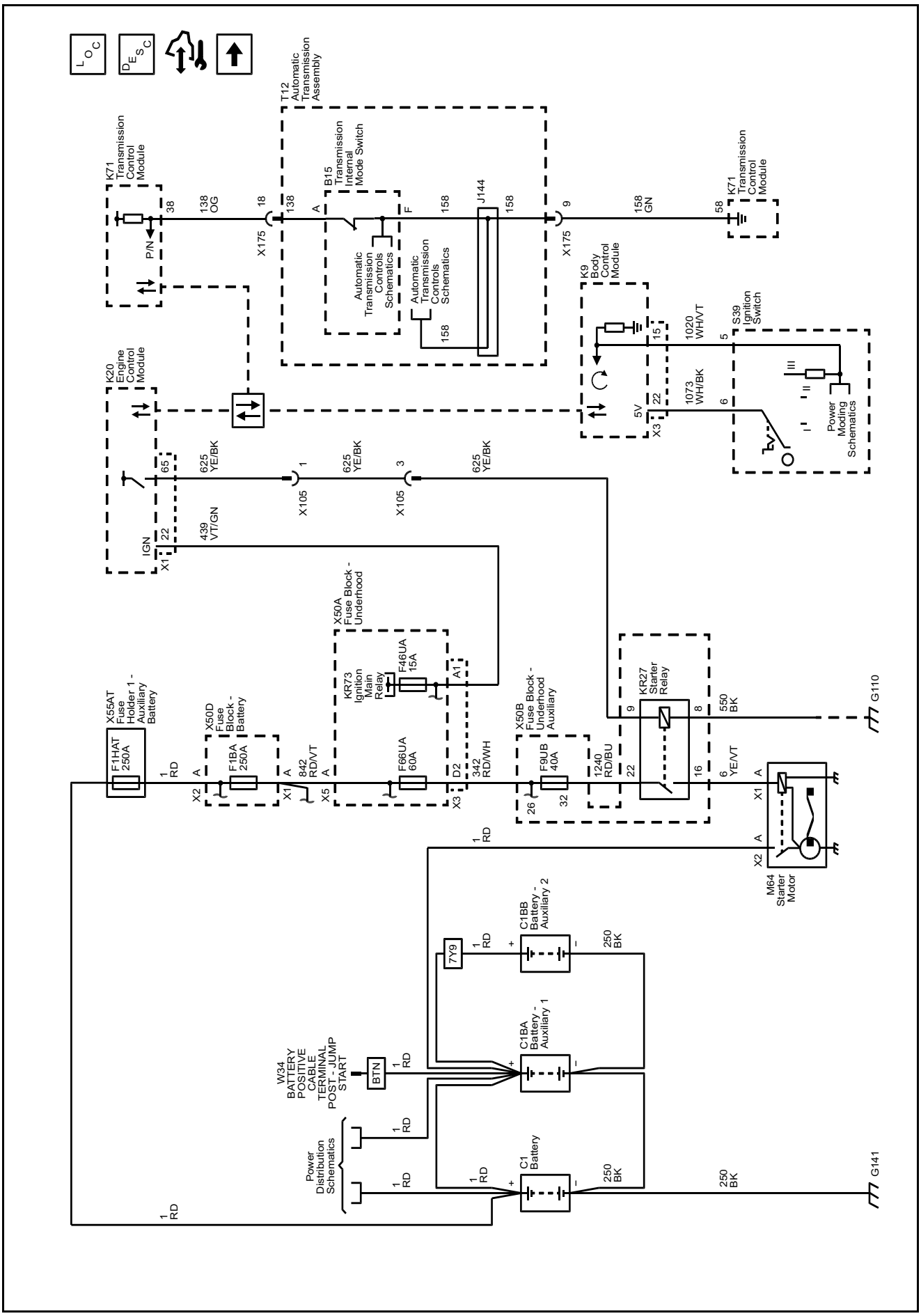
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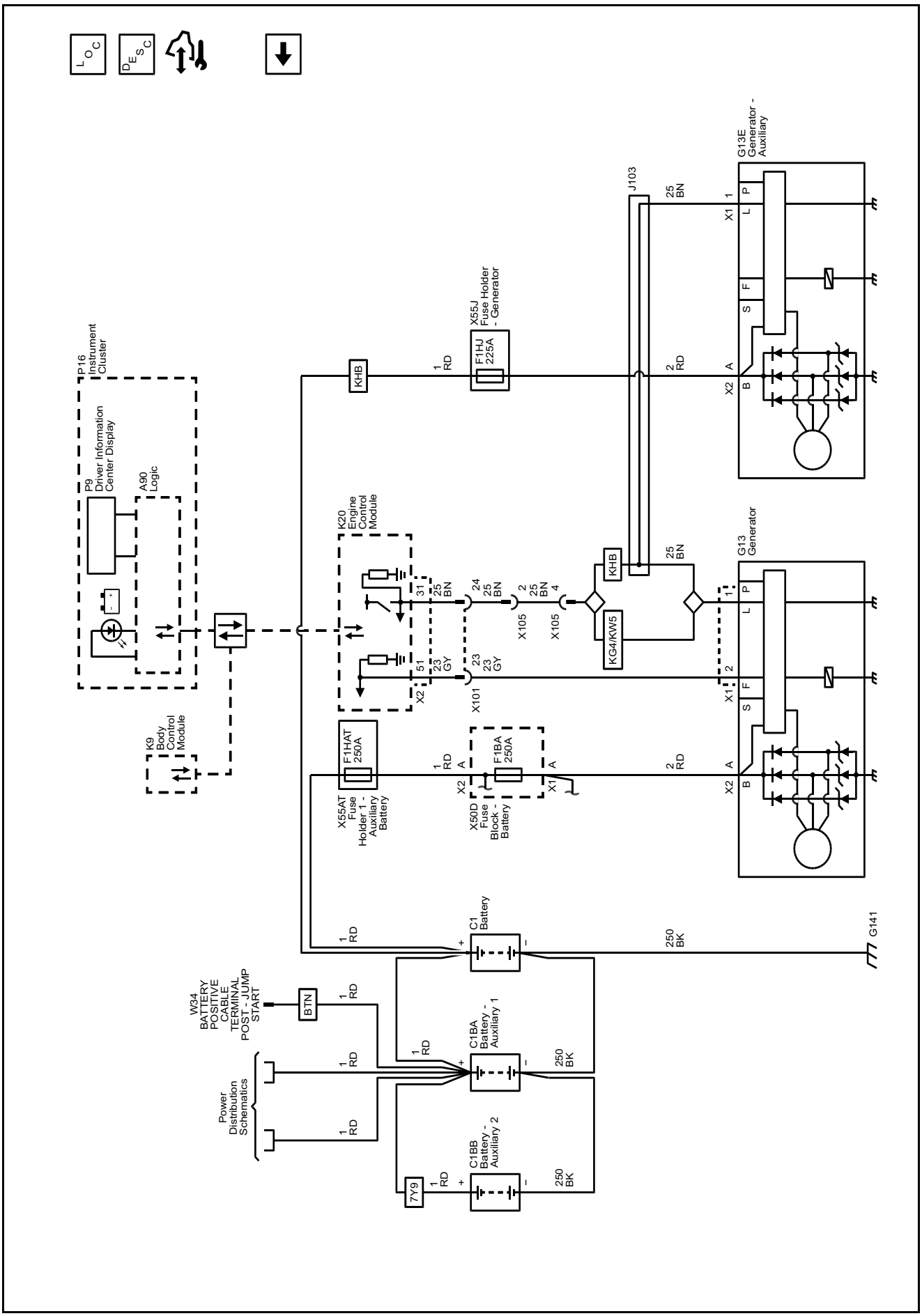
12 V Starting and Charging

Schematic and Routing Diagrams

Starting and Charging Schematics (Starting)



Starting and Charging Schematics (Charging)



Description and Operation

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

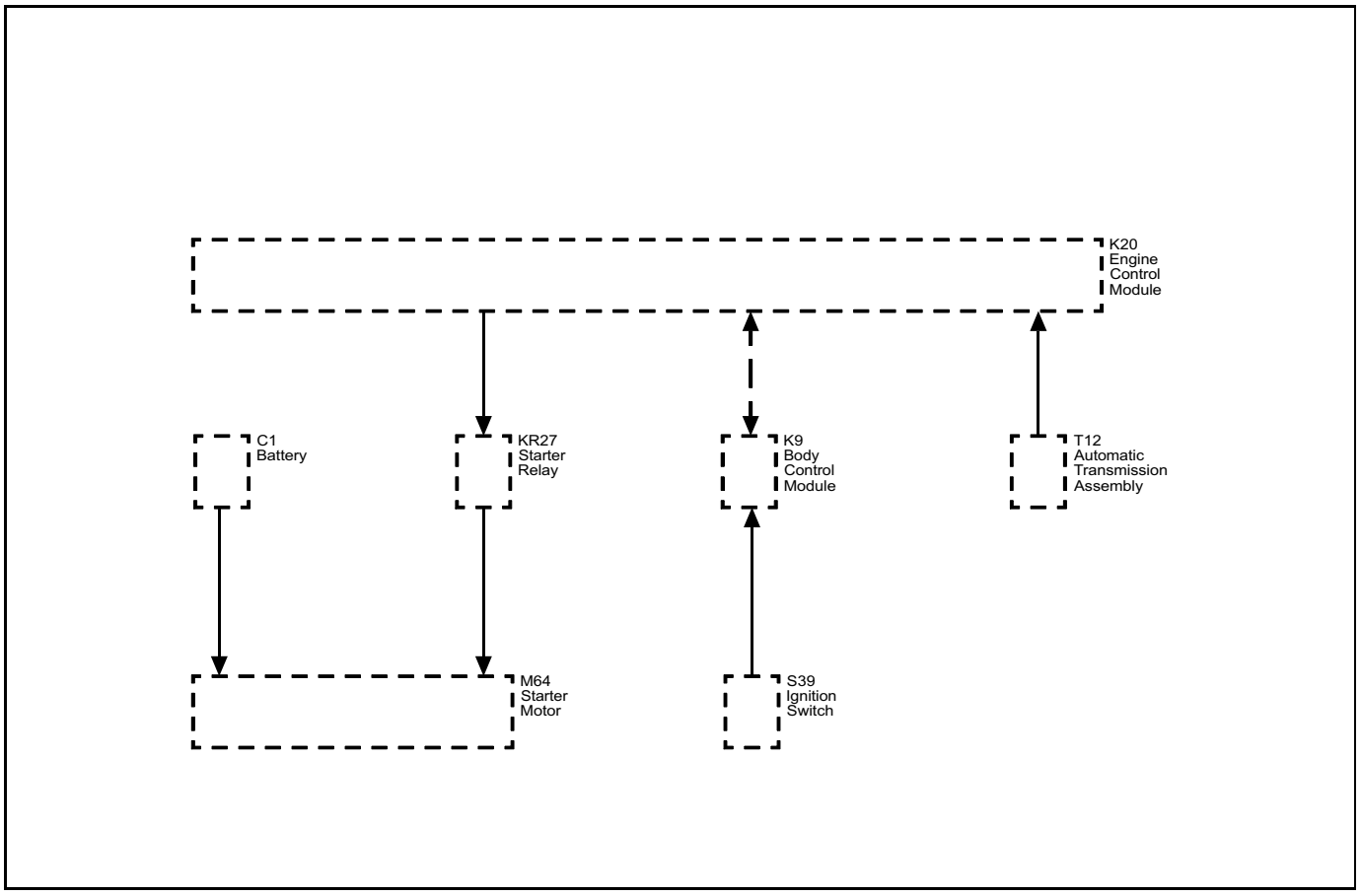
Keyless Start

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



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Section 6

HVAC

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Heating, Ventilation, and Air Conditioning

Description and Operation

Heating and Air Conditioning System Description and Operation

Engine Coolant

Engine coolant is the key element of the heating system. The engine thermostat controls the normal engine operating coolant temperature. Coolant pumped out of the engine enters the heater core through the inlet heater hose. The air flowing through the (Heating, Ventilation and Air Conditioning) HVAC module absorbs the heat of the coolant flowing through the heater core. The coolant then exits the heater core through the heater outlet hose and returns back to the engine block.

Auxiliary Electric Heater

Some Vehicles come with an auxiliary electric heater. This 12V electrically powered heating element is positioned directly behind the regular coolant flow based heater core in the HVAC case. All airflow goes through the regular heater core first, and then through the auxiliary electric heater. The auxiliary electric heater is active when the outside ambient temperature is below **8°C (46°F)** , the coolant temperature is below **75°C (167°F)** , and the temperature air mix door is near the full hot position.

A/C Cycle

Refrigerant is the key element in an air conditioning system. R-134a is presently the only approved refrigerant for this vehicle. R-134a is a very low temperature gas that can transfer the undesirable heat from the passenger compartment to the outside air.

The (Air Conditioning) A/C compressor is belt driven and operates when the magnetic clutch is engaged. The compressor builds pressure in the A/C system. Compressing the refrigerant also adds heat to the refrigerant. The refrigerant is discharged from the compressor through the discharge hose, and forced to flow to the condenser and then through the balance of the A/C system. The A/C system is mechanically protected with the use of a high pressure relief valve. If the high pressure A/C switch were to fail or if the refrigerant system becomes restricted and refrigerant pressure continued to rise, the high pressure relief will pop open and release refrigerant from the system.

Compressed refrigerant enters the condenser in a high temperature, high pressure vapor state. As the refrigerant flows through the condenser, the heat of the refrigerant is transferred to the ambient air passing through the condenser. Cooling the refrigerant causes the refrigerant to condense and change from a vapor to a liquid state.

The condenser is located in front of the radiator for maximum heat transfer. The condenser is made of aluminum tubing and aluminum cooling fins, which allows rapid heat transfer for the refrigerant. The semi-cooled liquid refrigerant exits the condenser and flows through the liquid line, to the (Thermal Expansion Valve) TXV.

The TXV is located at the evaporator inlet. The TXV is the dividing point for the high and the low pressure sides of the A/C system. As the refrigerant passes through the TXV, the refrigerant is lowered. Due to the pressure differential on the liquid refrigerant, the refrigerant will begin to boil at the TXV. The TXV also meters the amount of liquid refrigerant that can flow into the evaporator.

Refrigerant exiting the TXV flows into the evaporator core in a low pressure, liquid state. Ambient air is drawn through the HVAC module and passes through the evaporator core. Warm and moist air will cause the liquid refrigerant to boil inside the evaporator core.

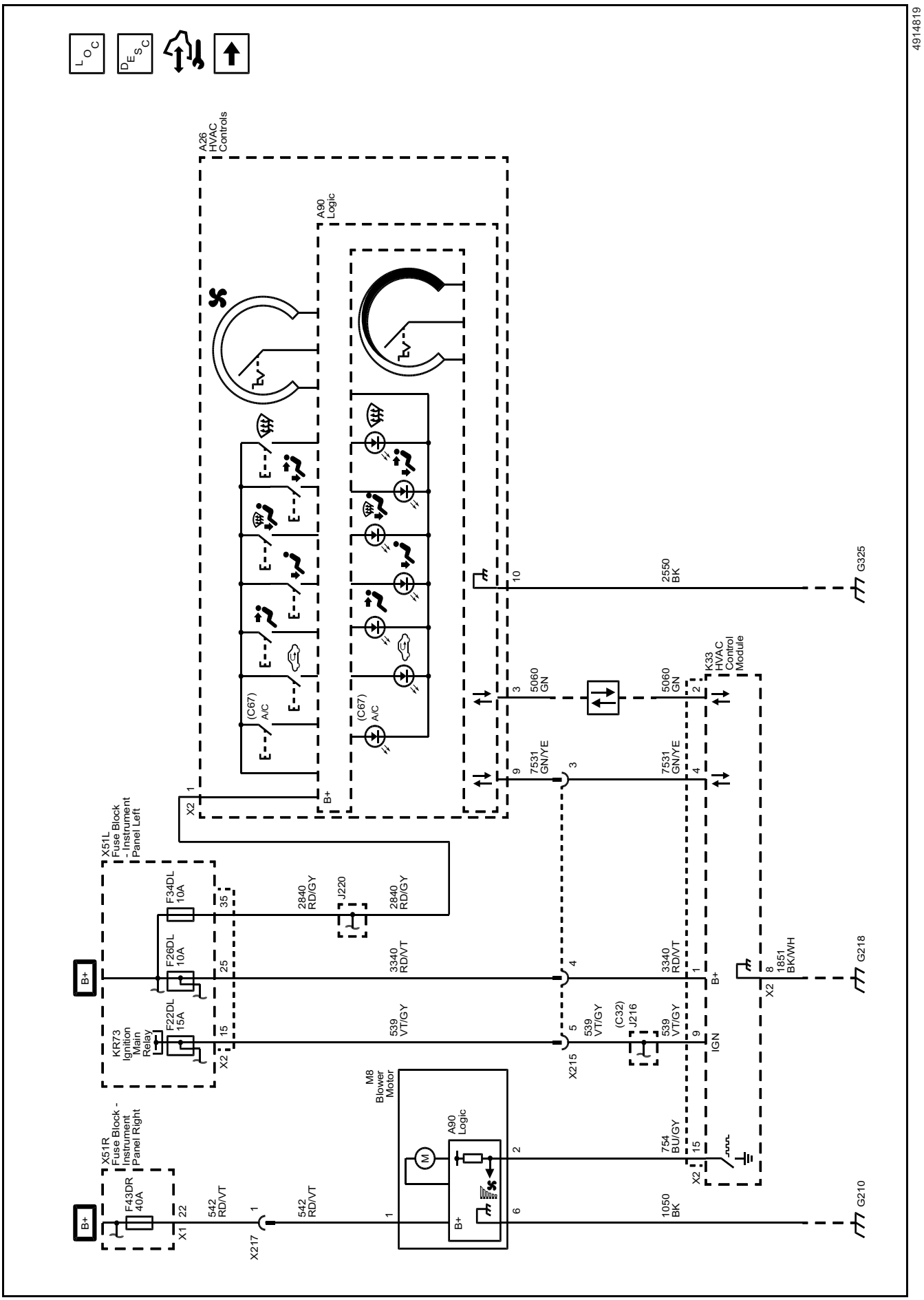
The boiling refrigerant absorbs heat from the ambient air and draws moisture onto the evaporator. The refrigerant exits the evaporator through the suction line and back to the compressor, in a vapor state. This completes the A/C cycle of heat removal. At the compressor, the refrigerant is compressed again and the cycle of heat removal is repeated.

The conditioned air is distributed through the HVAC module for passenger comfort. The moisture removed from the passenger compartment will also change form, or condense, and is discharged from the HVAC module as water.

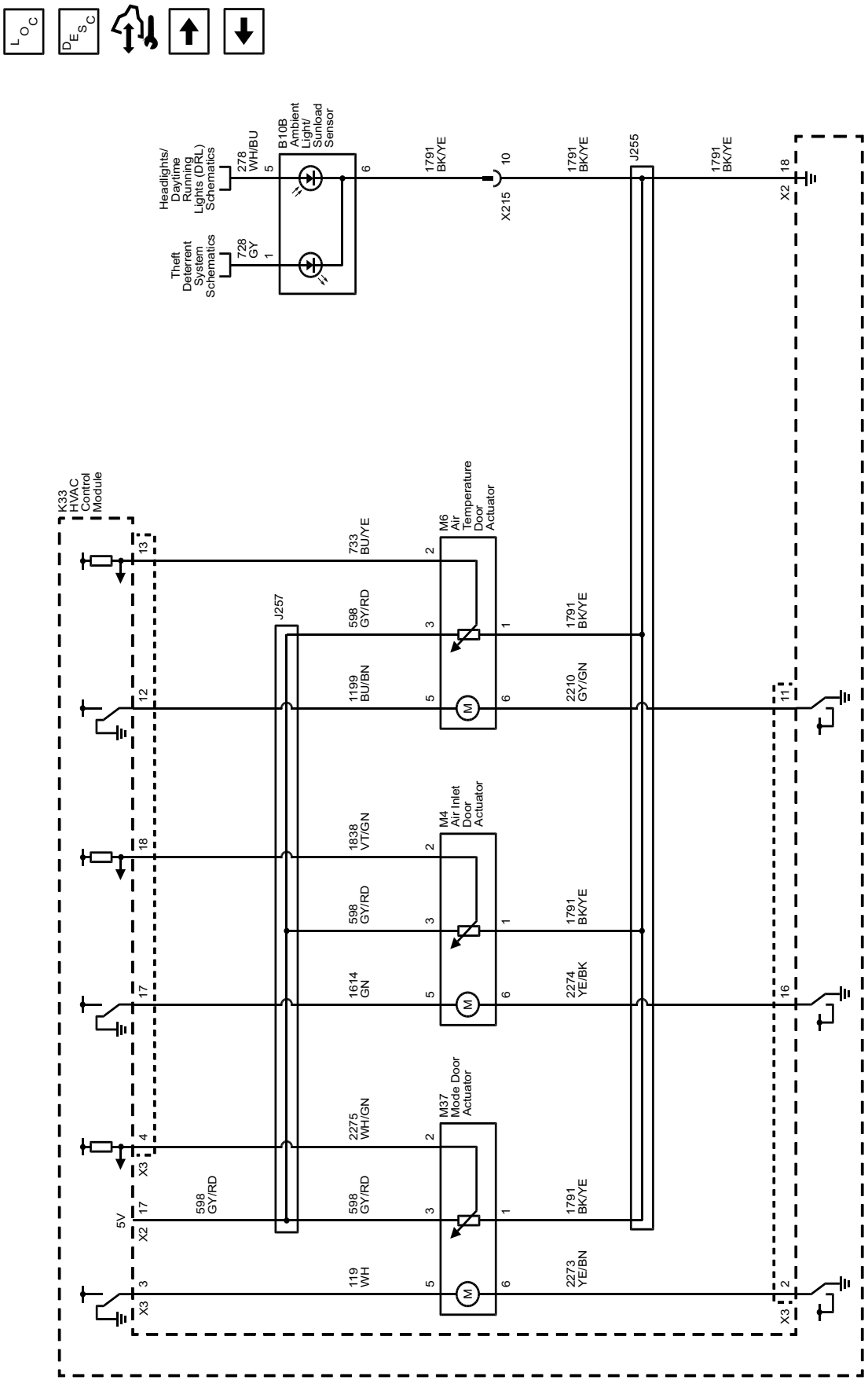
HVAC - Manual

Schematic and Routing Diagrams

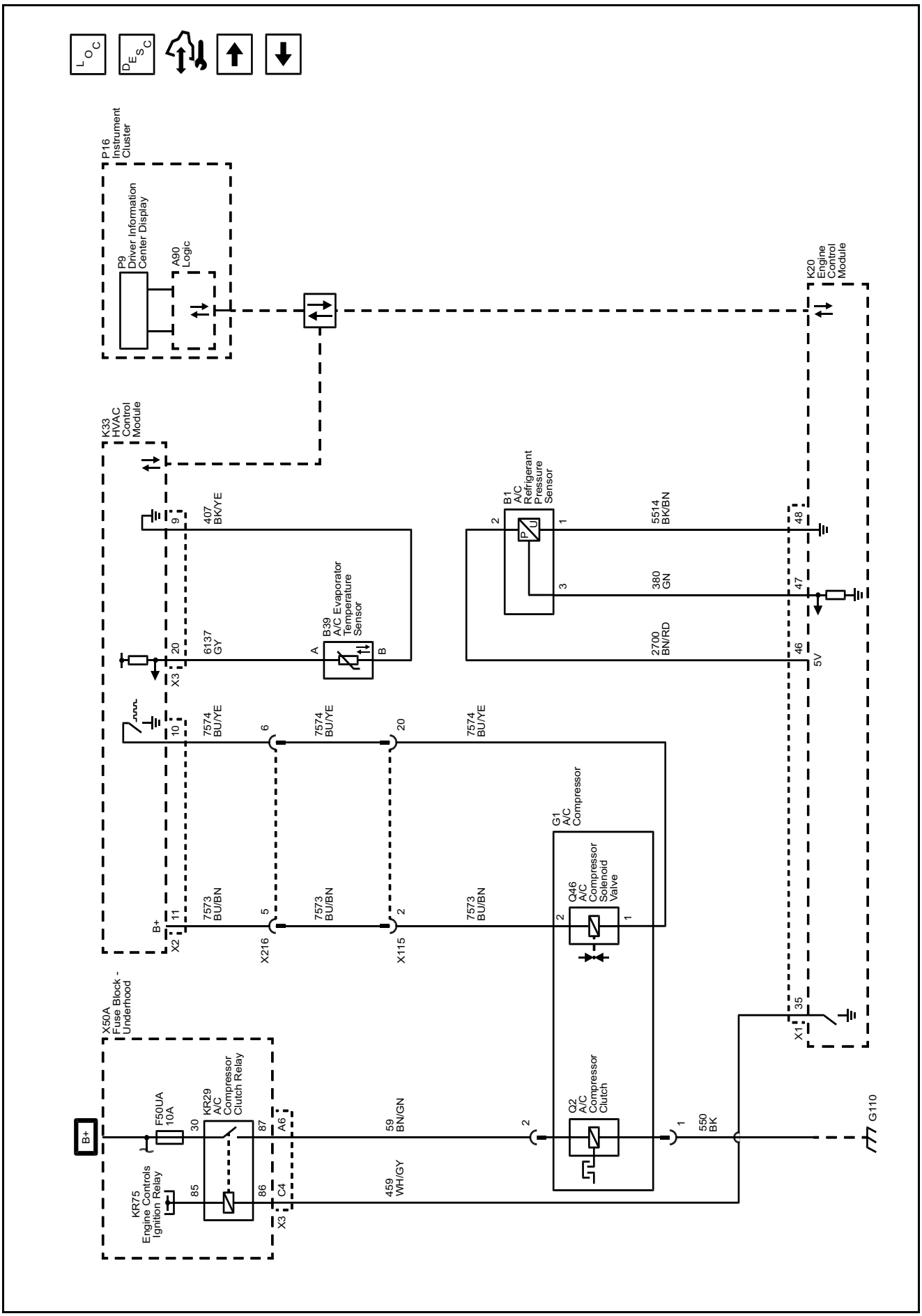
HVAC Schematics (Power, Ground, Serial Data and Controls)



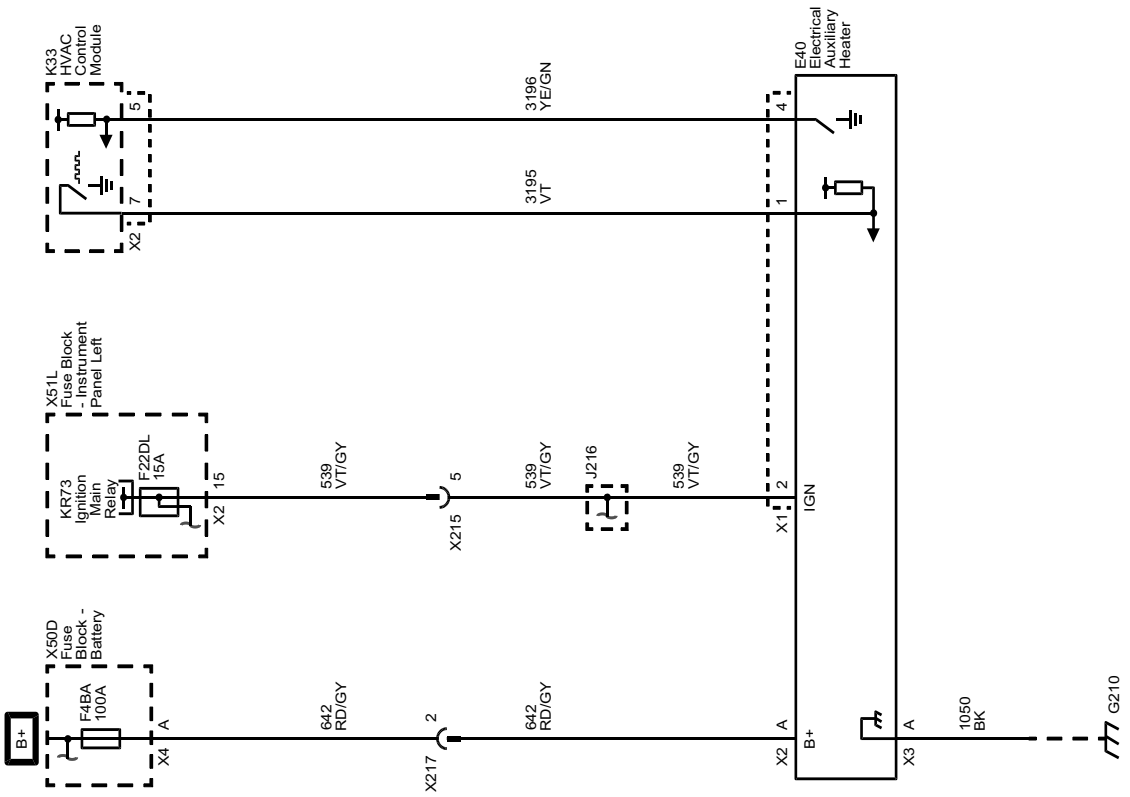
HVAC Schematics (Ambient Light/Sunload Sensor and Mode Doors)



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



HVAC Schematics (Auxiliary Heater (C32))



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Description and Operation

Manual 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
- Engine Coolant and A/C System Refrigerant

HVAC Control Components

HVAC Control

The HVAC control 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
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 bi-directional electric motor that incorporate a feedback potentiometer. The five circuits are, low reference, 5 V reference, actuator position signal, and two control circuits. The control circuits use either a ground or 12 V value to coordinate the actuator movement. In order to move the actuator, the HVAC control module grounds one of the control circuits while providing the other with 12 V. The HVAC control module reverses the polarity of the control circuits to move the actuator in the opposite direction.

When the actuator shaft rotates, the potentiometer's sliding contact changes the door position signal between 0–5 V. The HVAC control module converts the voltage signal to counts. The total range of the counts is 0–1024, with an operating range between 20–1000. The actual operating range of an actuator is determined during calibration. During calibration, the actuator is moved though its full range of travel and the module stores the minimum and maximum value. Based on the desired system operation, the module sets a commanded, or targeted, value for the actuators. The control circuits are operated to move the door to the required position, and the changing position signal is sent to the module. Once the actual position signal and the commanded value are the same, the module ceases operating the control circuits and the actuator (and door) remain in the desired position.

Blower Motor

The blower motor speed control signal from the HVAC Control Module, battery positive and ground circuits enable the blower motor to operate. The blower motor control circuitry is integrated within the blower motor assembly. The HVAC control module provides a low side pulse width modulation (PWM) signal to the blower motor to request a specific motor speed. The blower motor translates the PWM signal and drives the motor accordingly.

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 blower motor control circuitry is integrated within the blower motor assembly. The HVAC control module provides a low side pulse width modulation (PWM) signal to the blower motor 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.

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 on page 6-3*.

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Section 7

Power and Signal Distribution

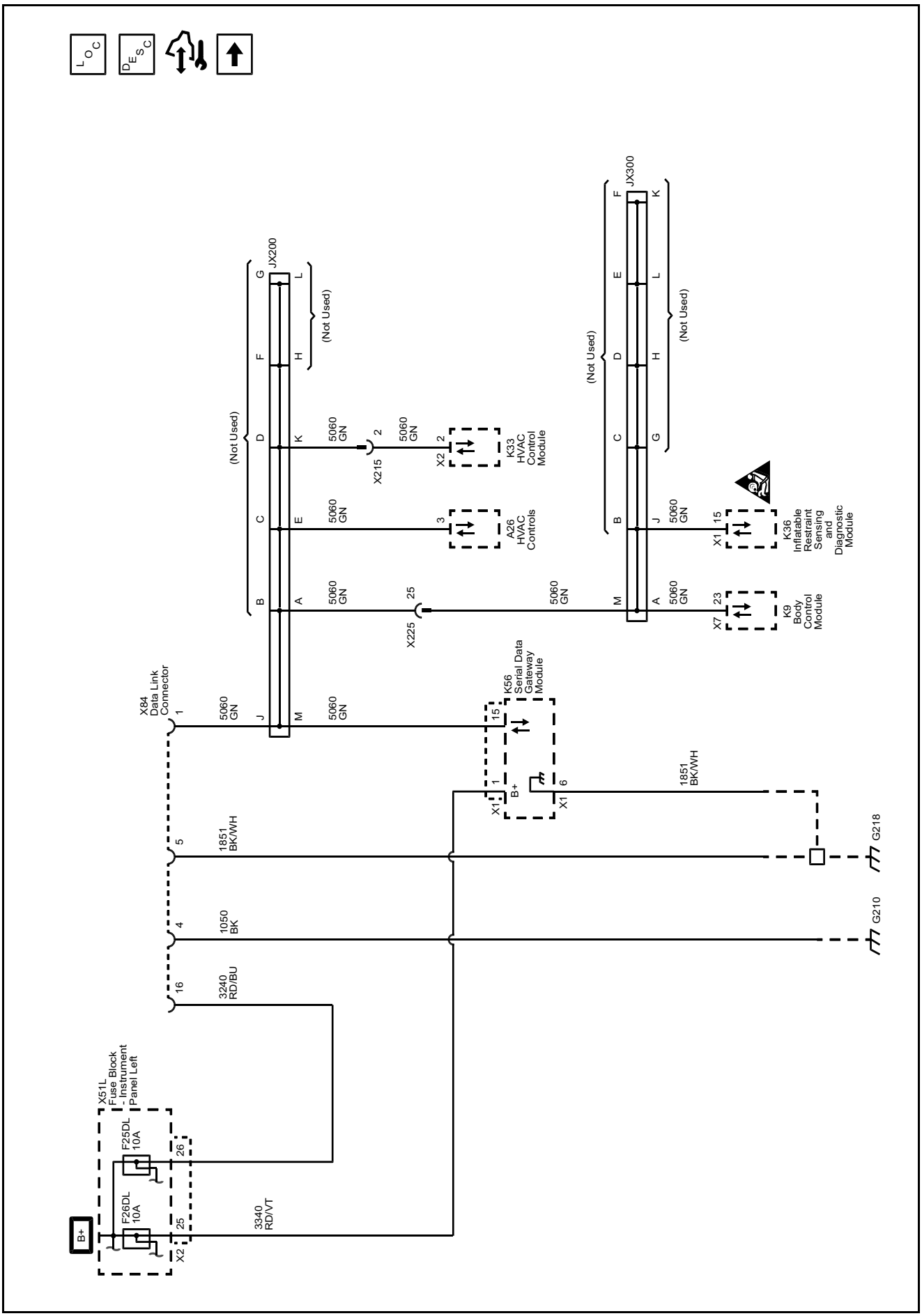
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Data Communications

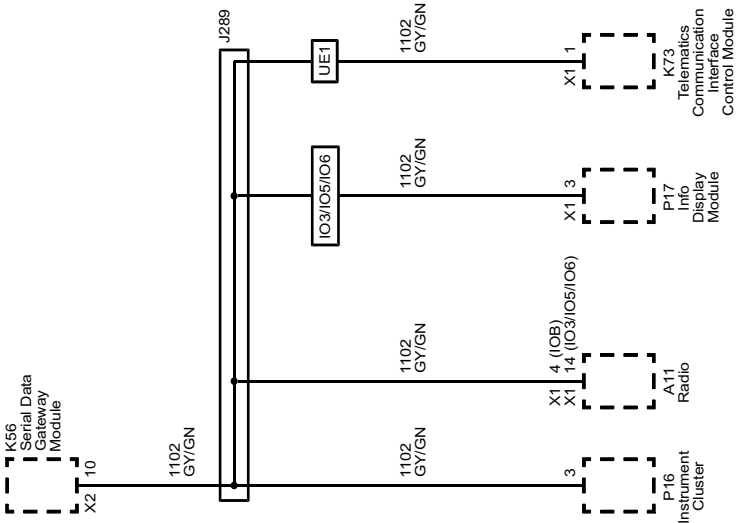
Schematic and Routing Diagrams

Data Communication Schematics (Data Link Power and Ground, and Low Speed GMLAN)



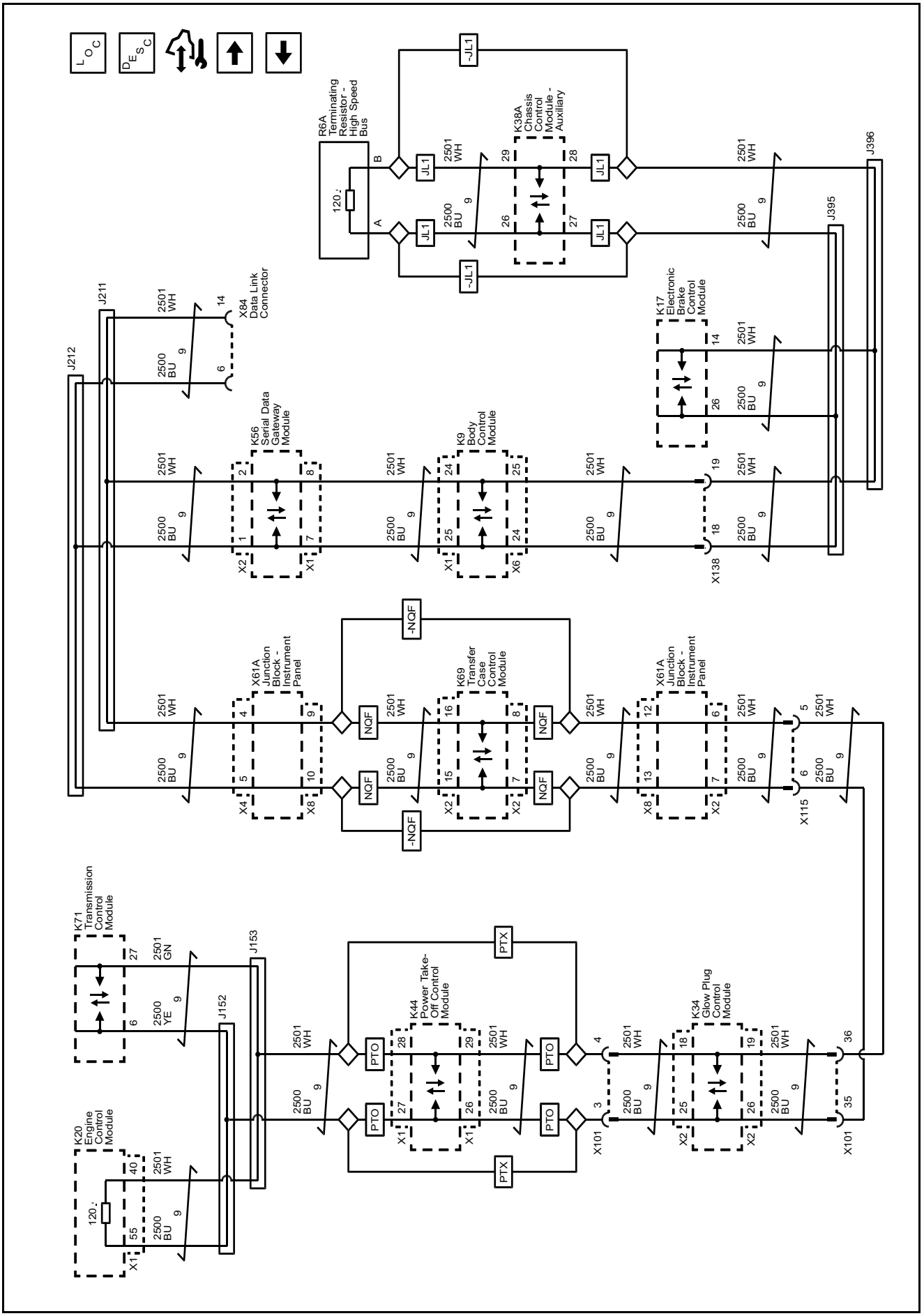
Data Communication Schematics (Gateway Isolated Low Speed GMLAN)



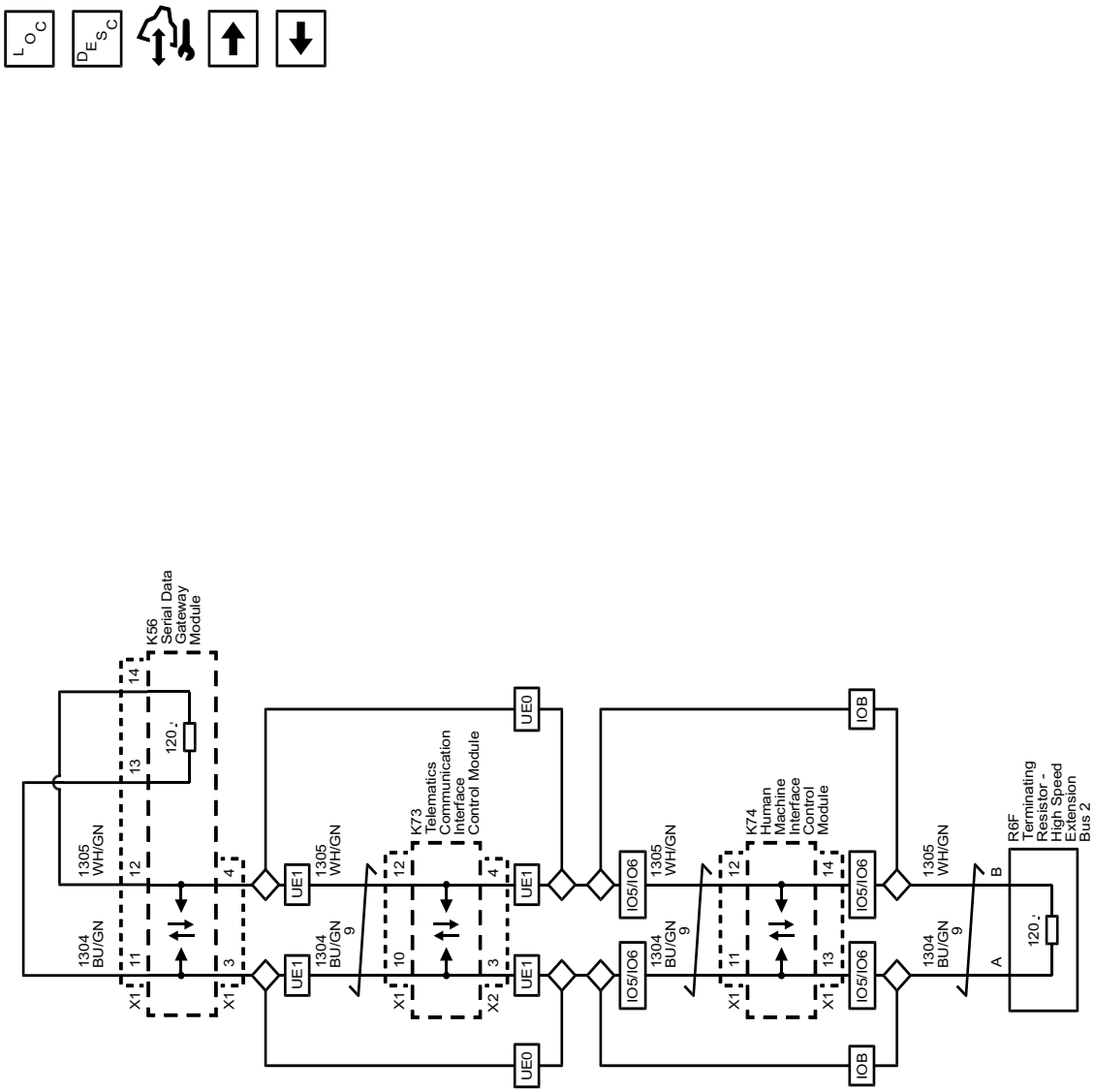


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Data Communication Schematics (High Speed GMLAN)

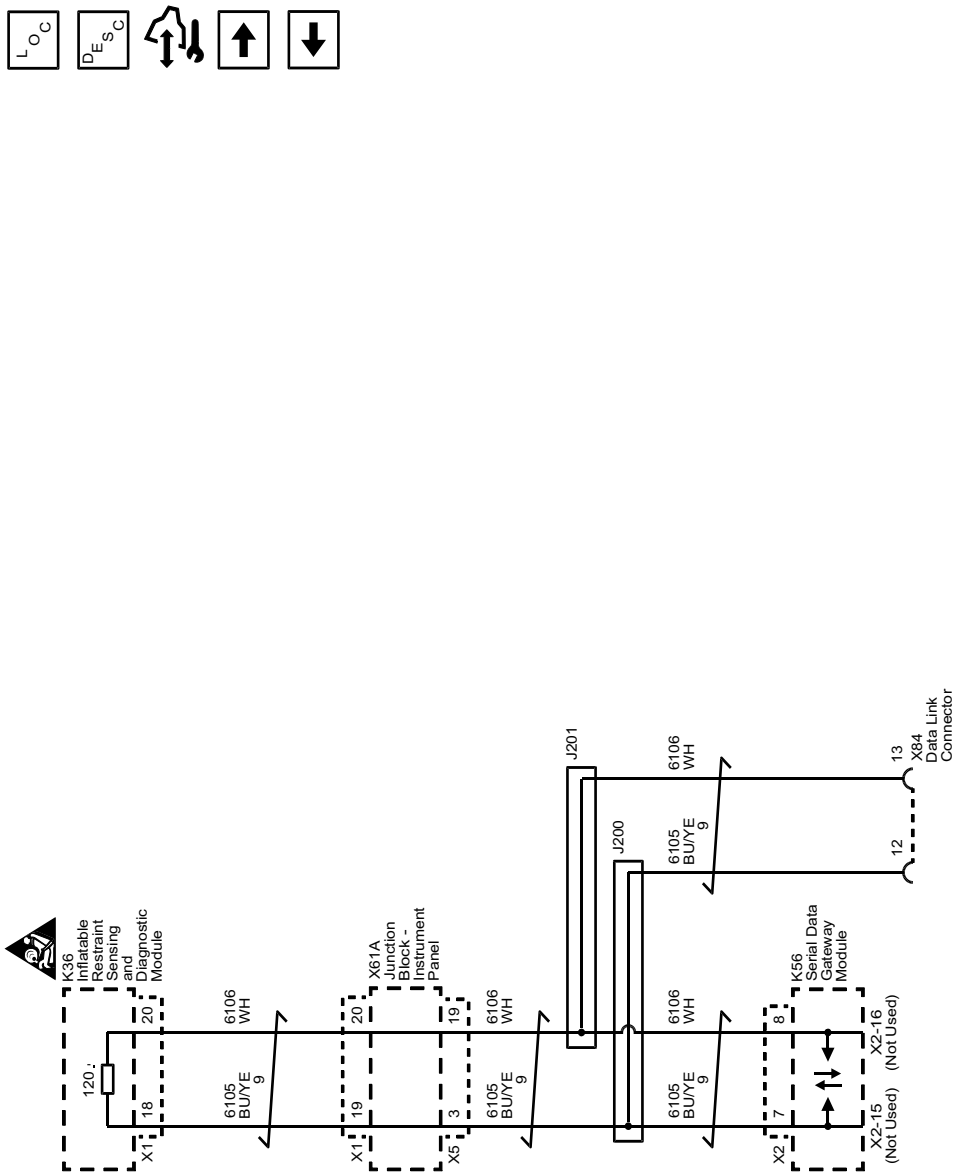


Data Communication Schematics (Gateway Isolated High Speed GMLAN)



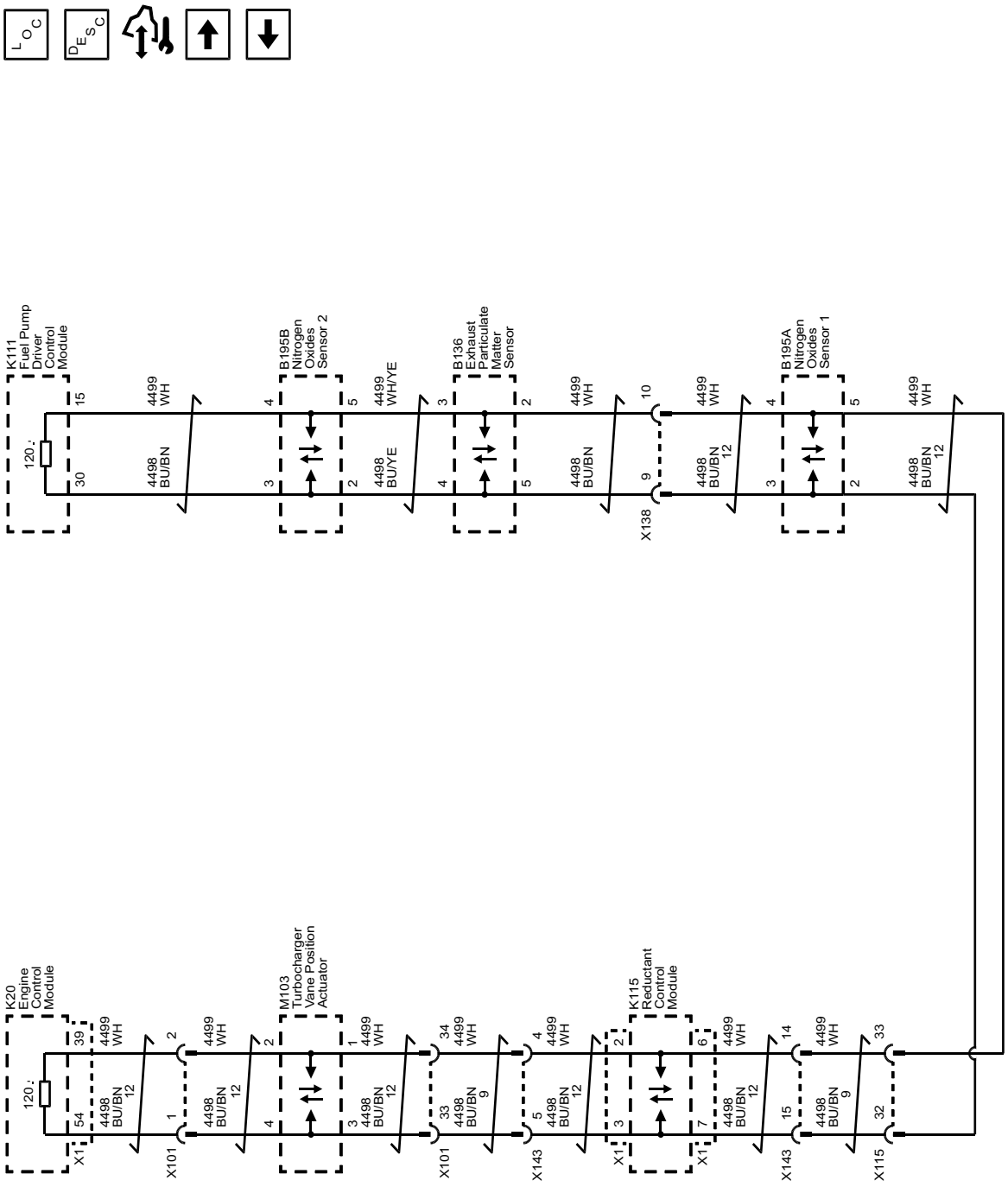
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Data Communication Schematics (Chassis Expansion Bus)

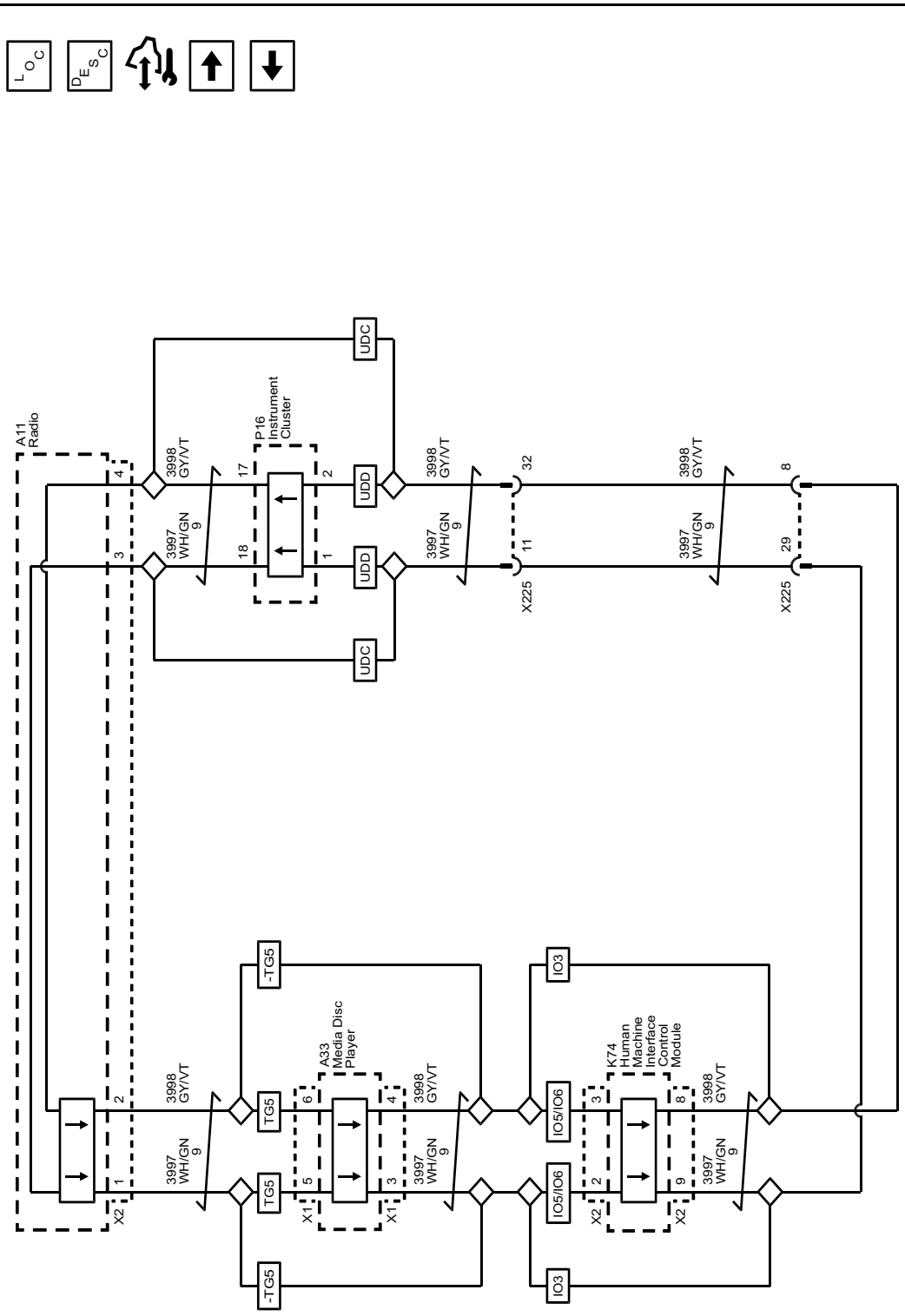


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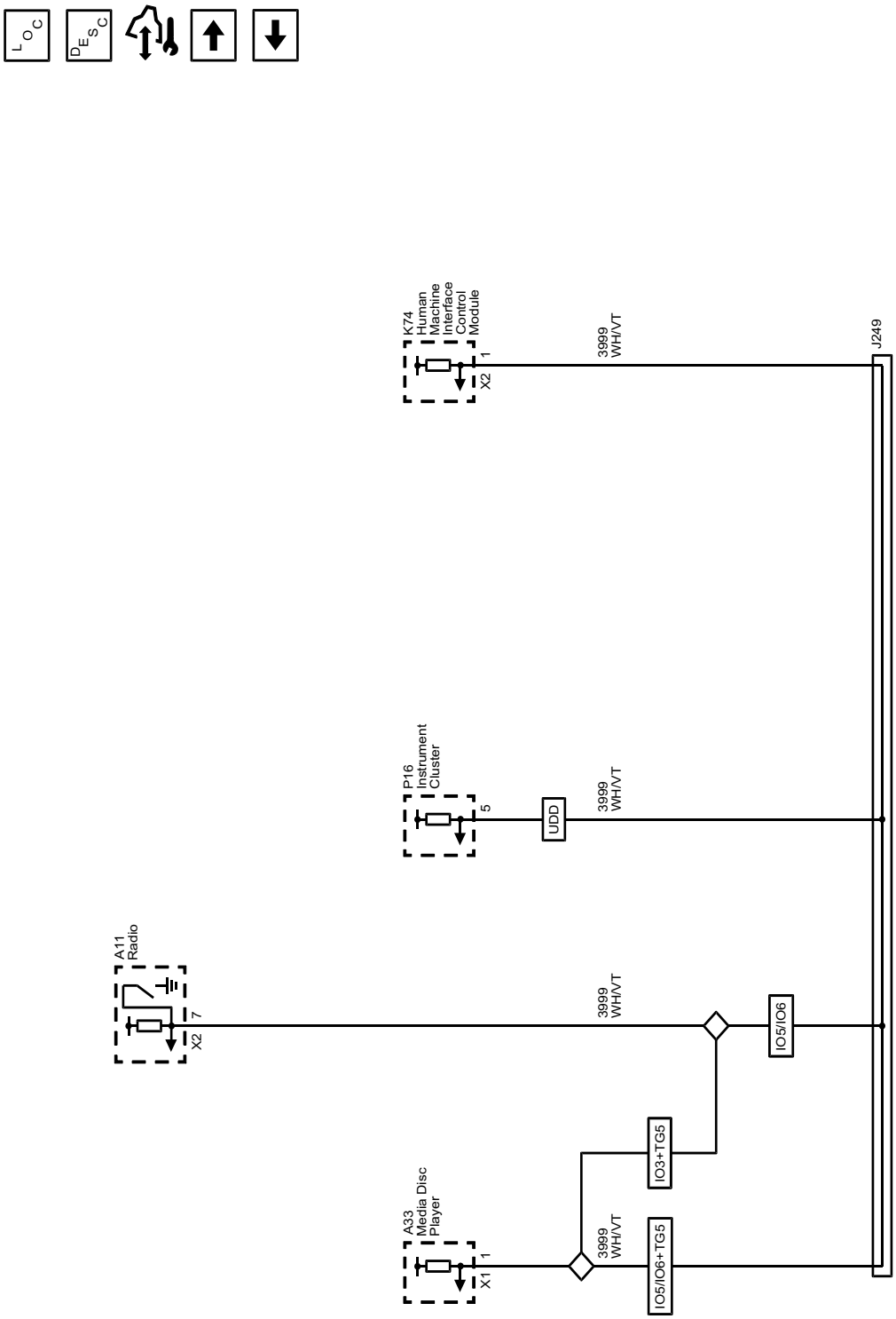
Data Communication Schematics (Powertrain Expansion Bus)



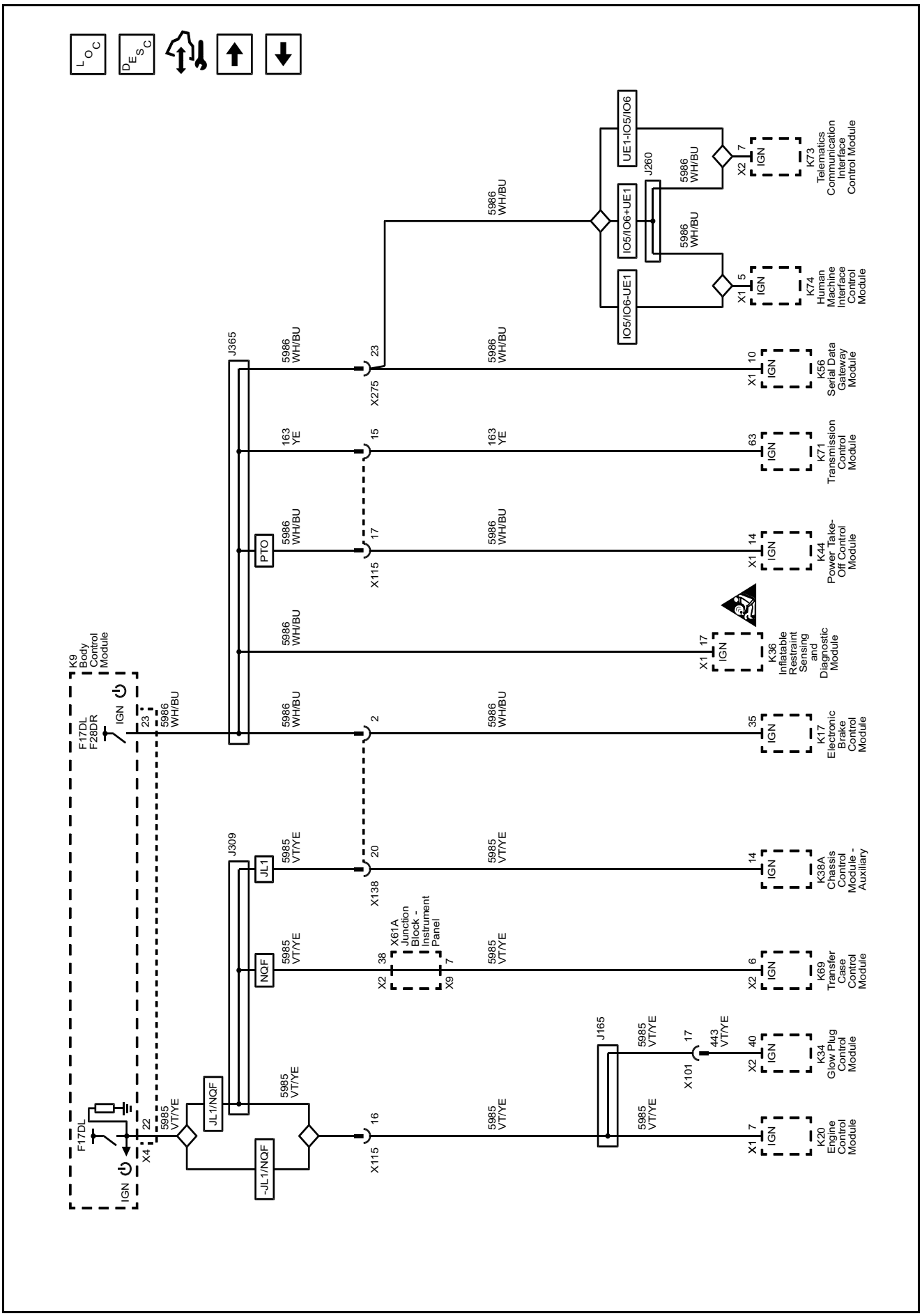
Data Communication Schematics (MOST Communication Bus)



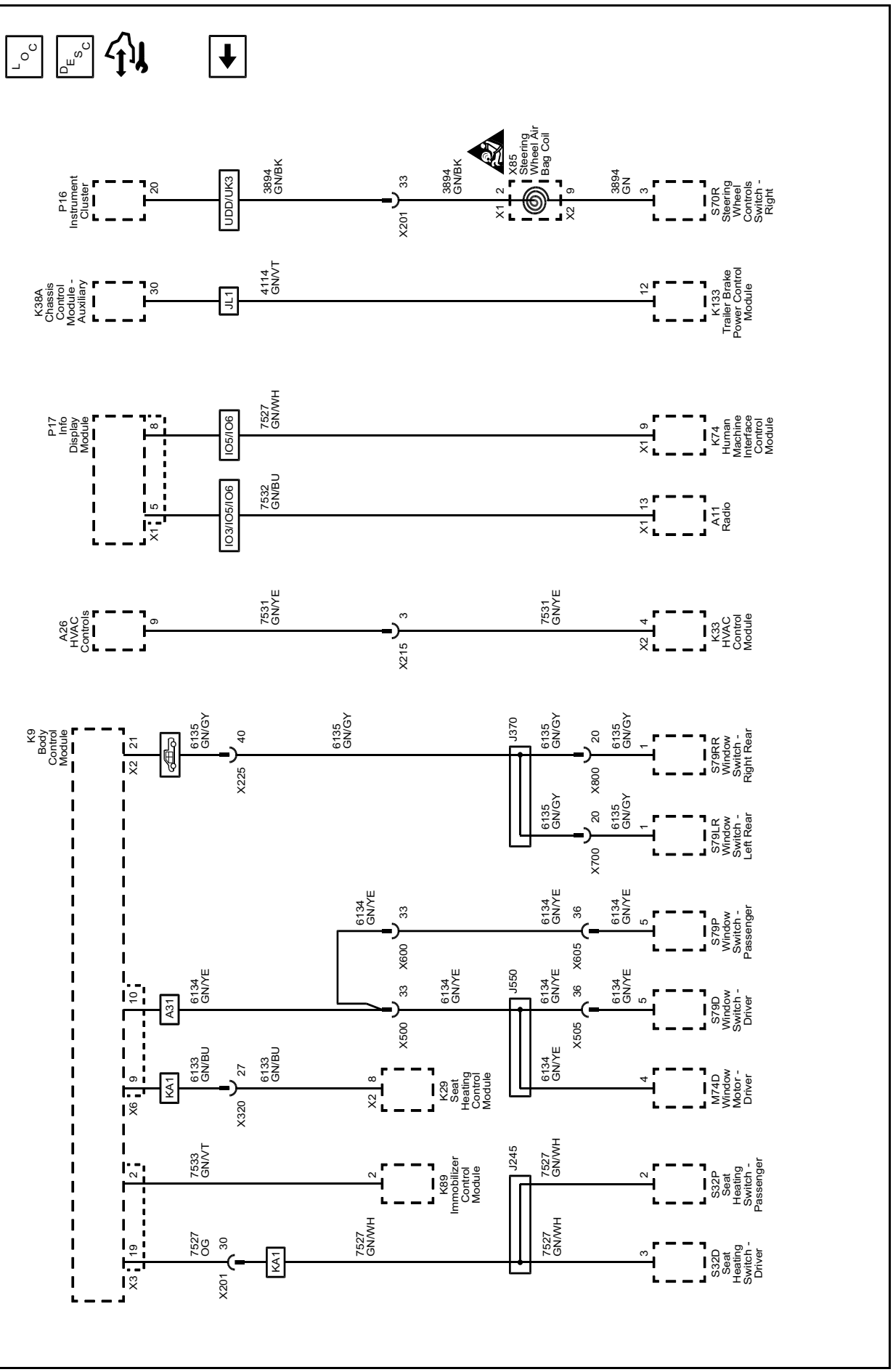
Data Communication Schematics (MOST Communication Enable)



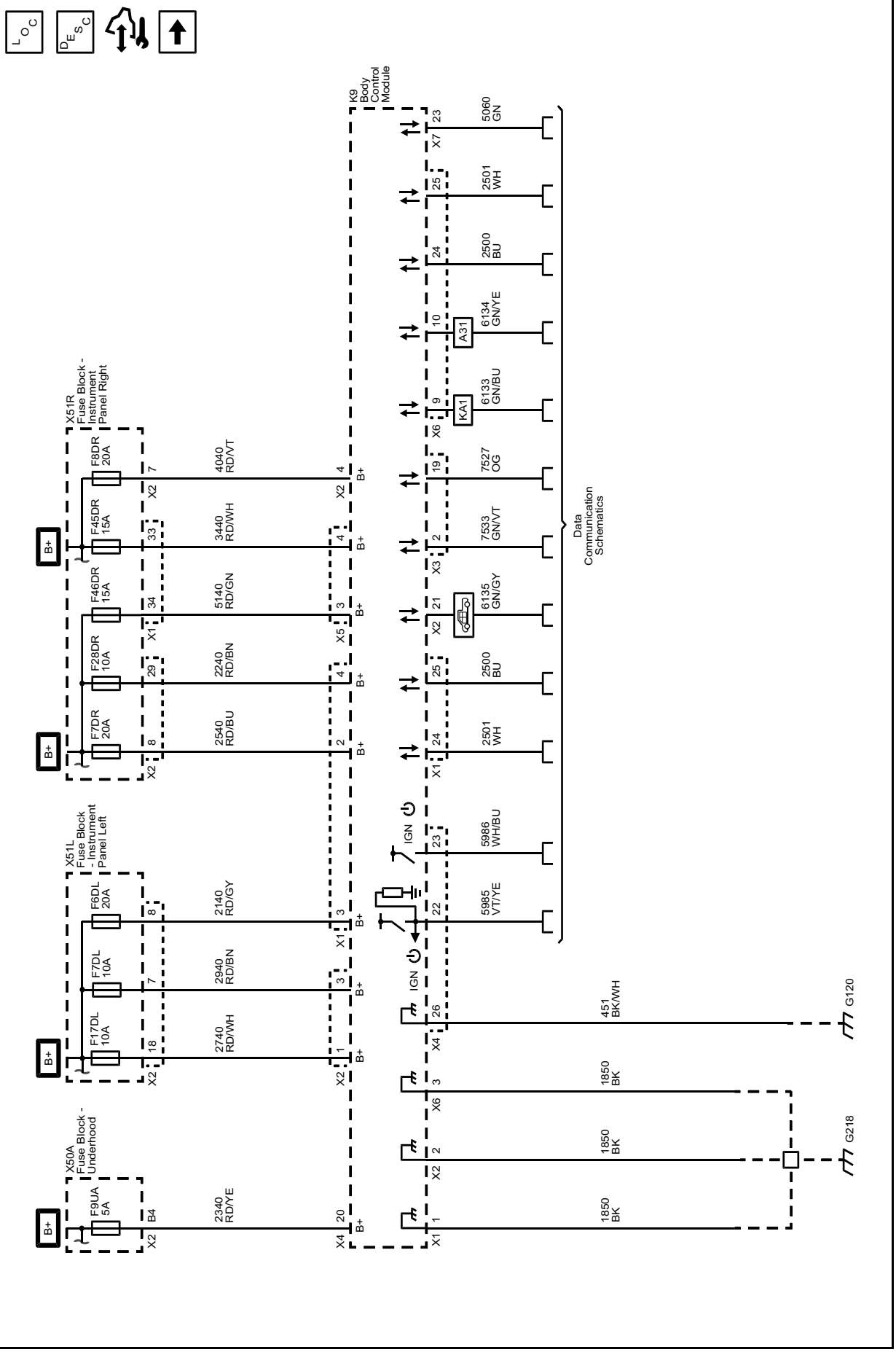
Data Communication Schematics (Accessory Wakeup and Communications Enable)



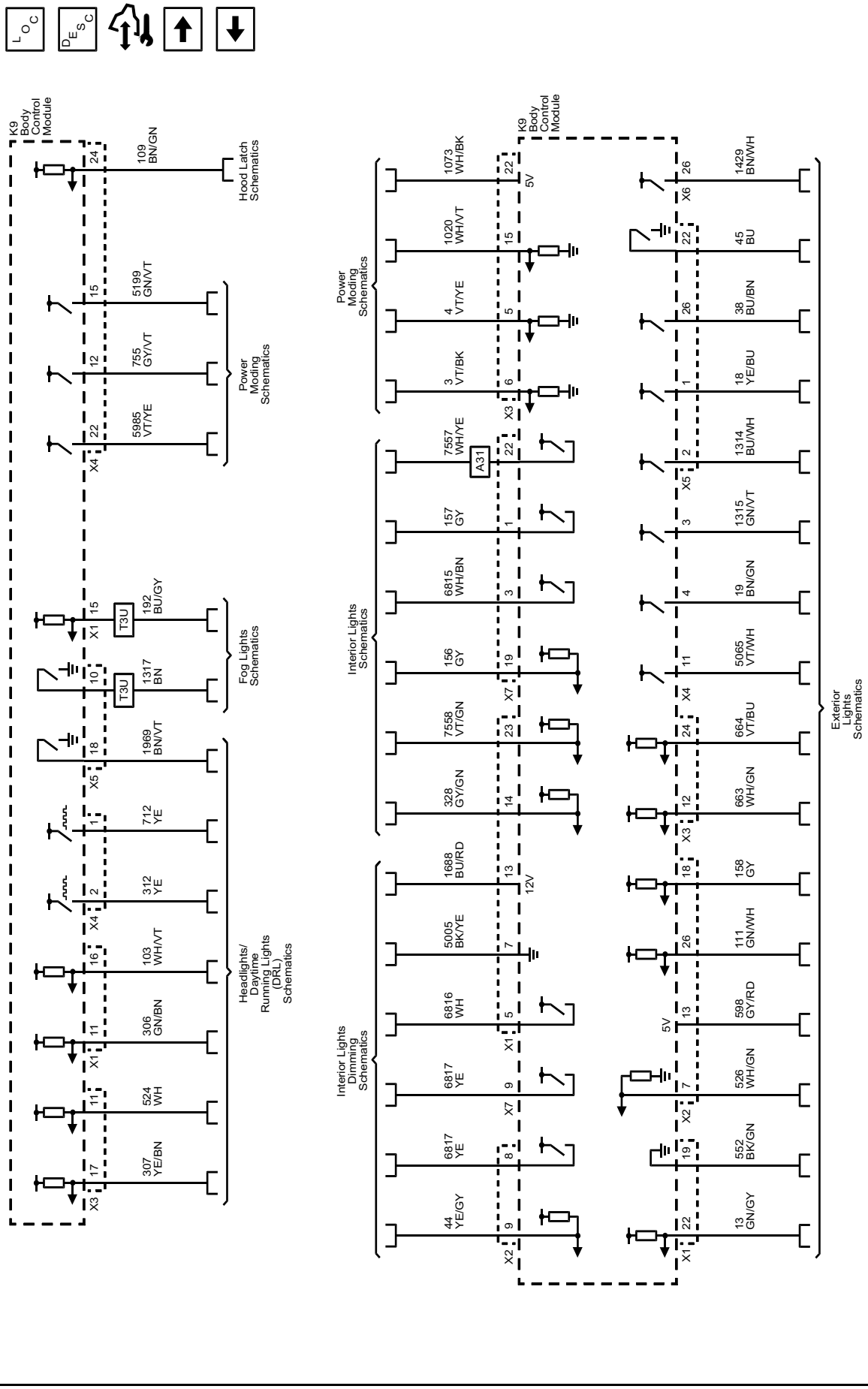
Data Communication Schematics (Local Interconnect Network)



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

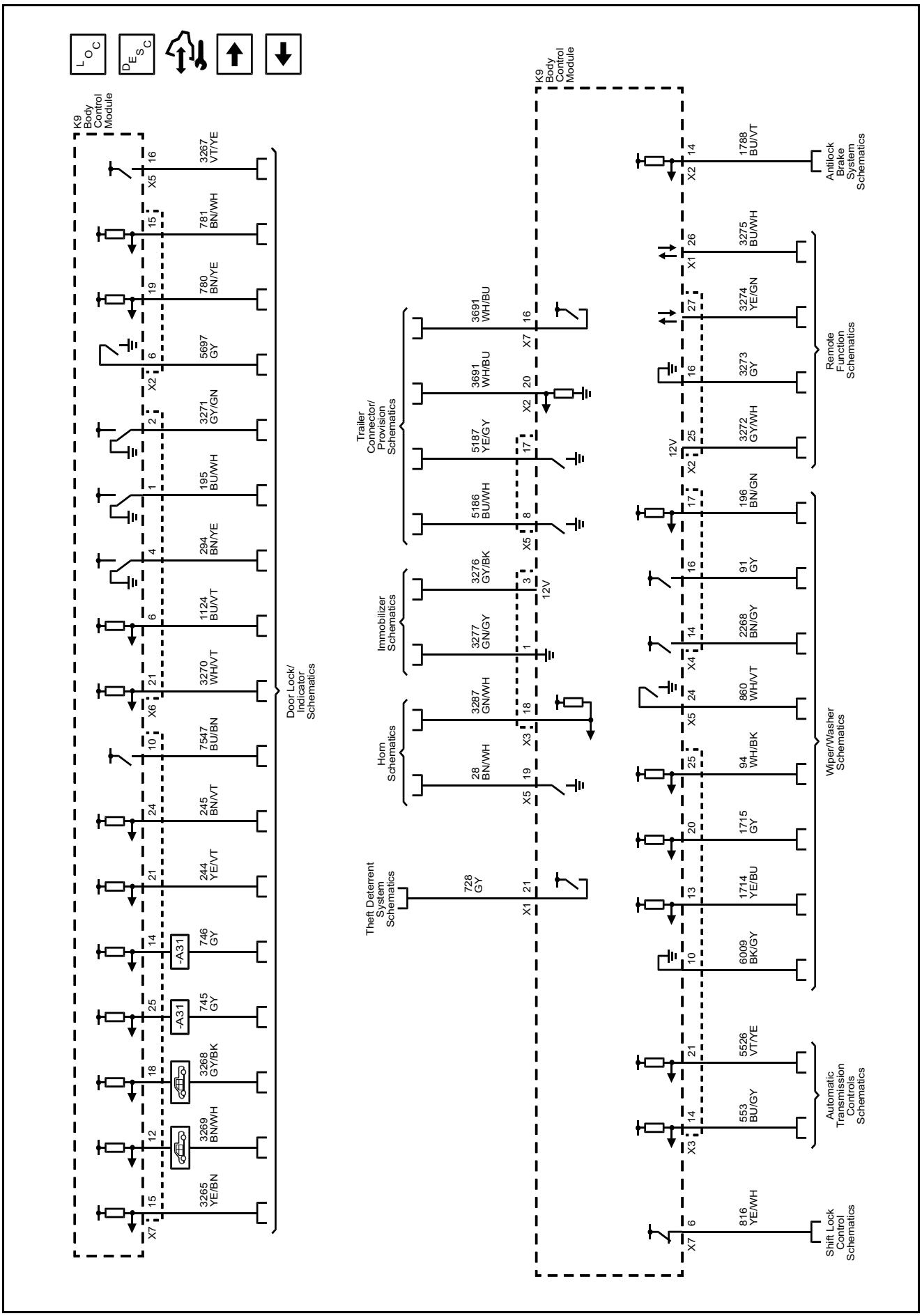


Body Control System Schematics (Subsystem References (1 of 3))

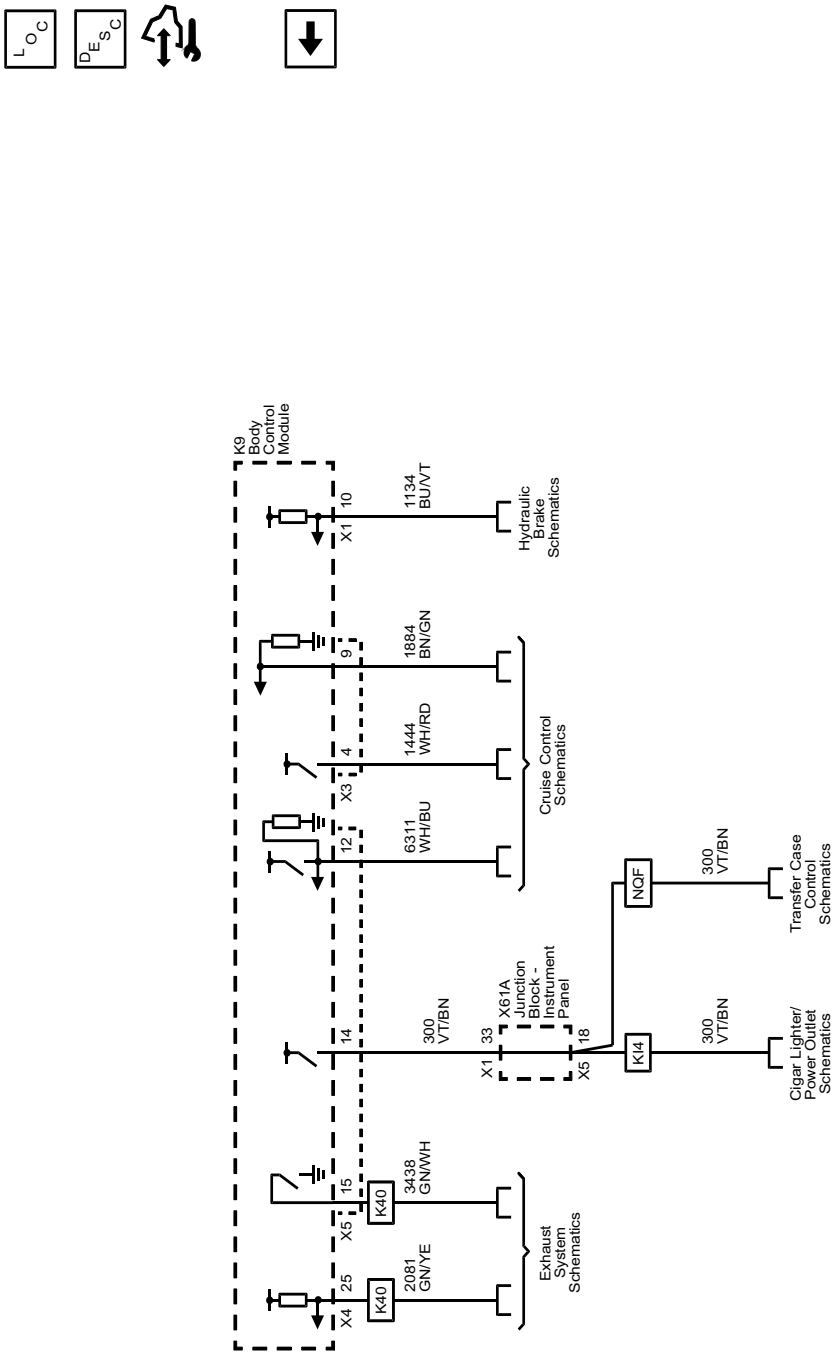


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Body Control System Schematics (Subsystem References (2 of 3))



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



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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.

Circuit Description

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 to indicate that the device it is expecting information from is no longer communicating.

High Speed GMLAN Circuit Description

A 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 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.

Chassis High Speed GMLAN Circuit Description

The GMLAN 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 Expansion Bus and the primary High Speed GMLAN Bus. This is accomplished by using the K17 Electronic Brake Control Module (EBCM) as the Gateway module. Since the High Speed GMLAN Chassis Expansion Bus and primary High Speed GMLAN Bus operate in the same manner, the diagnostics for each are similar.

Powertrain High Speed GMLAN Circuit Description

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

Media Oriented Systems Transport (MOST) Circuit Description

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.

Low Speed GMLAN Circuit Description

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.

Local Interconnect Network (LIN) Circuit Description

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 communication enable circuit. When the circuit voltage is high (around 12 V), communications are enabled. When the circuit is low, communications are disabled.

Data Link Connector (DLC)

The X84 Data Link Connector (DLC) 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 communications terminal
- Terminal 4 Scan tool power ground terminal
- Terminal 5 Common signal ground terminal
- Terminal 6 High speed GMLAN serial data bus (+) terminal
- Terminal 12 Chassis high speed GMLAN serial bus (+) terminal
- Terminal 13 Chassis high speed GMLAN serial bus (-) terminal
- Terminal 14 High speed GMLAN serial data bus (-) terminal
- 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* in the Service Manual for a list of devices and the buses they communicate with. Use schematics and specific vehicle build RPO codes to determine optional devices.

Serial Data Gateway Module Description and Operation

The K56 Serial Data Gateway Module is used to handle communications between multiple GMLAN busses 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 like Limited Ability Autonomous Driving and Enhanced Collision Avoidance (if equipped). The K56 Serial Data Gateway Module is used as a frame-to-frame gateway for all functional messages.

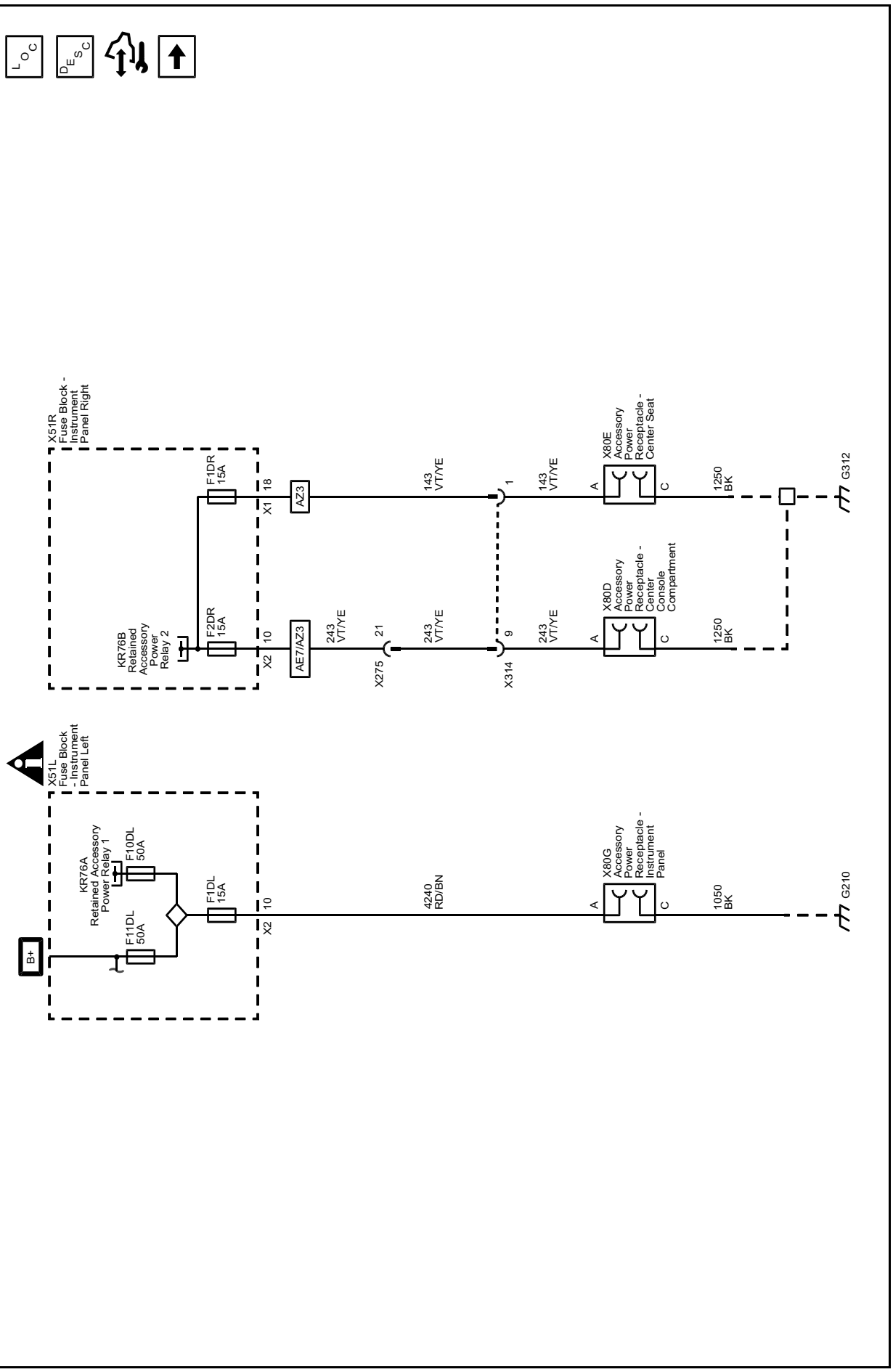
Depending on the vehicle contents, the K56 Serial Data Gateway Module is gating between primary High Speed GMLAN Bus, Gateway Expansion High Speed GMLAN Bus, Gateway Isolated High Speed GMLAN Bus, and Chassis High Speed GMLAN Bus. The K56 Serial Data Gateway Module is also gating between primary Low Speed GMLAN Bus and Gateway Isolated Low Speed GMLAN Bus.

Communication between the K56 Serial Data Gateway Module and a scan tool is done through the primary High Speed GMLAN Bus.

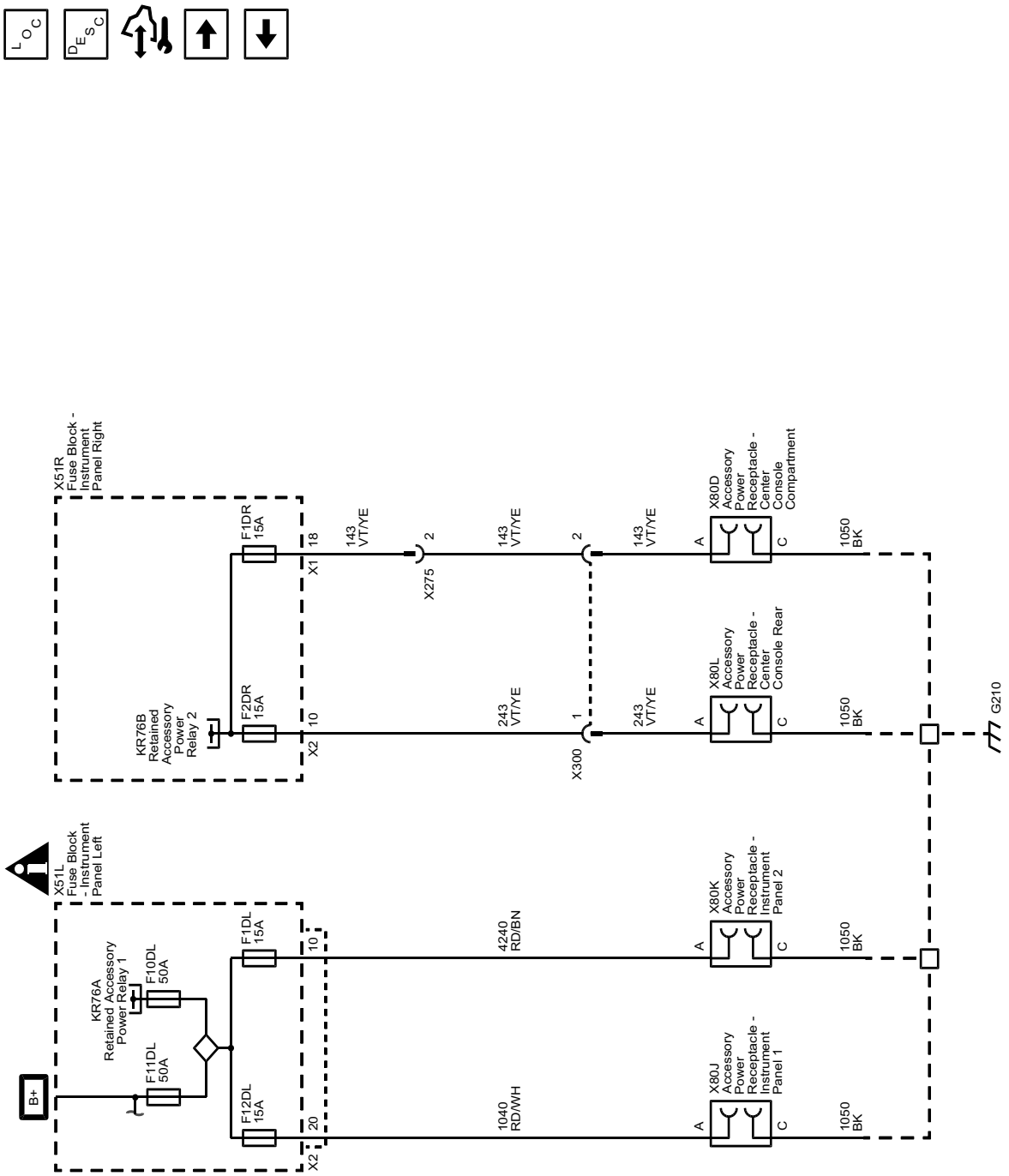
Power Outlets

Schematic and Routing Diagrams

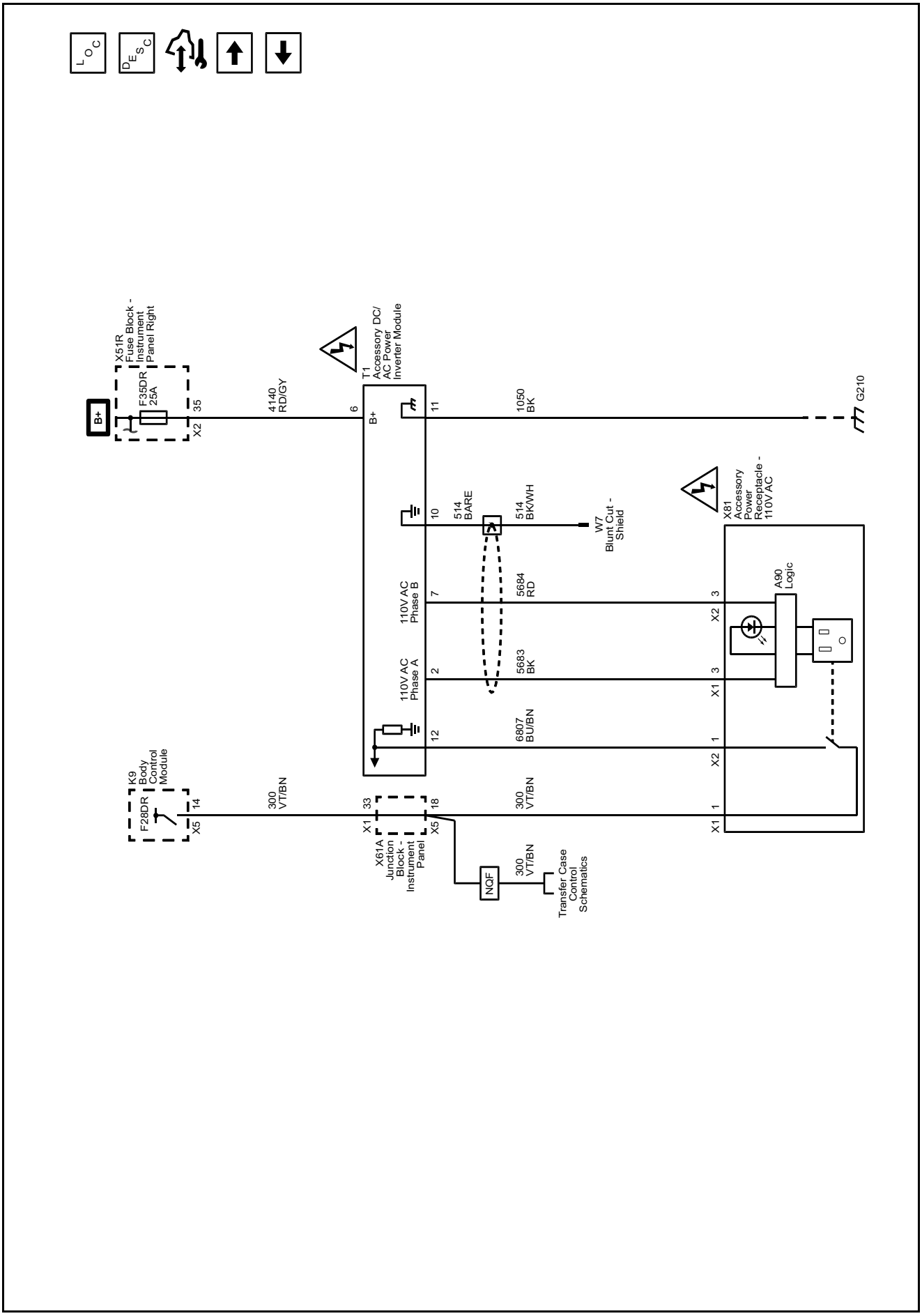
Cigar Lighter/Power Outlet Schematics (12-Volt DC Power Outlets - Bench Seat (-D07))



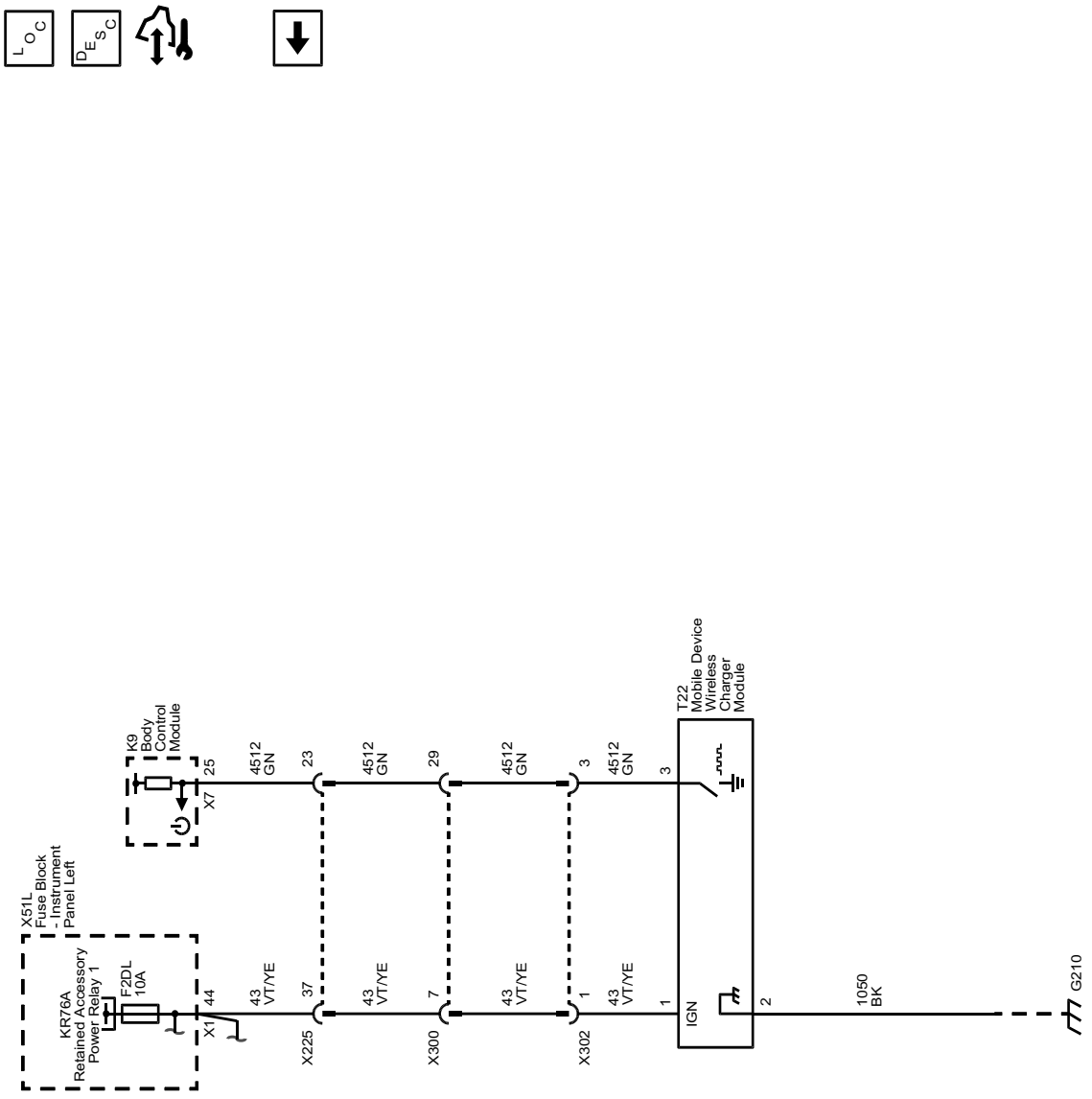
Cigar Lighter/Power Outlet Schematics (12-Volt DC Power Outlets - Floor Console (D07))



Cigar Lighter/Power Outlet Schematics (110-Volt AC Power Outlet (KI4))



Cigar Lighter/Power Outlet Schematics (Wireless Charging (K4C))

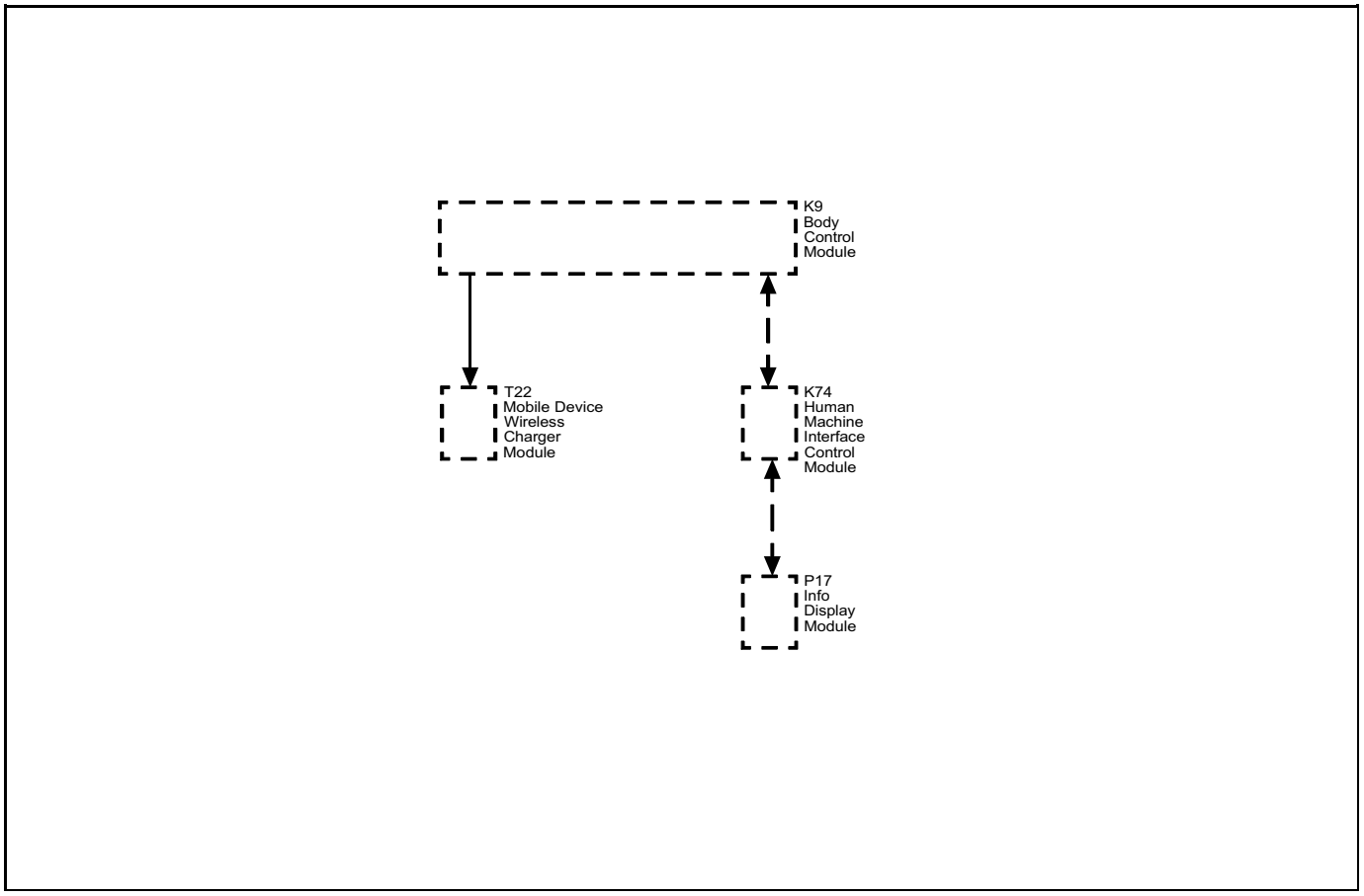


Description and Operation

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 infotainment owners manual.

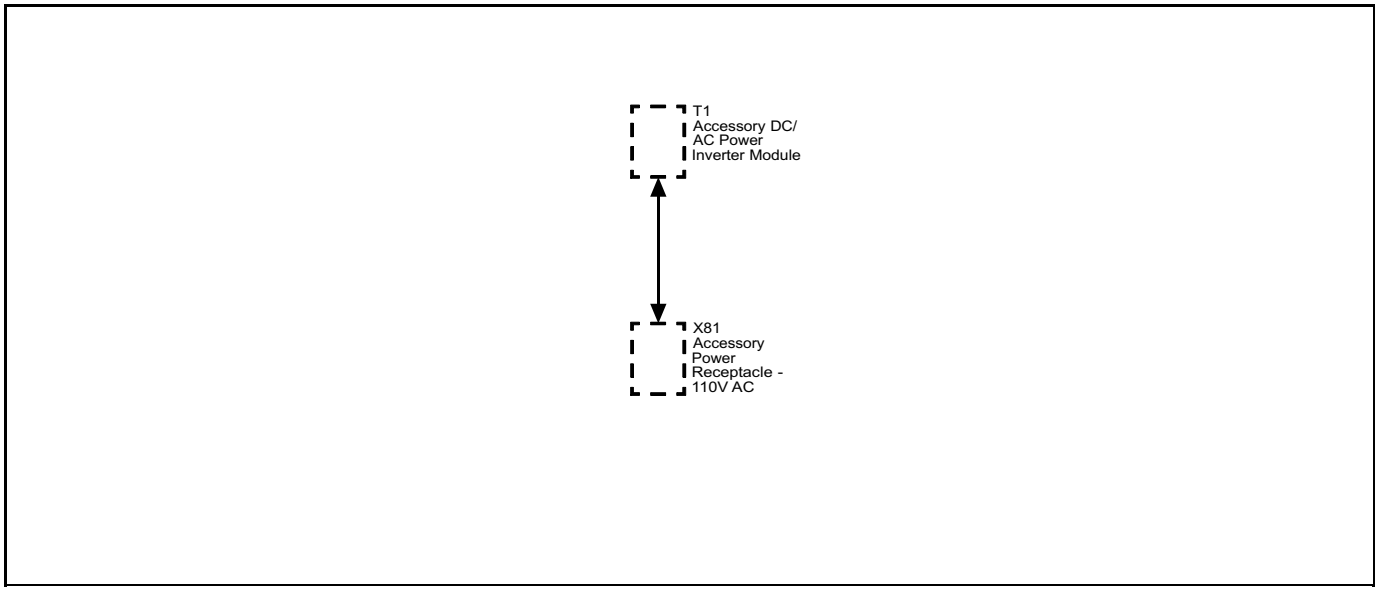
Power Outlets Description and Operation

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

Power Outlets Block Diagram



3403851

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 150 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.

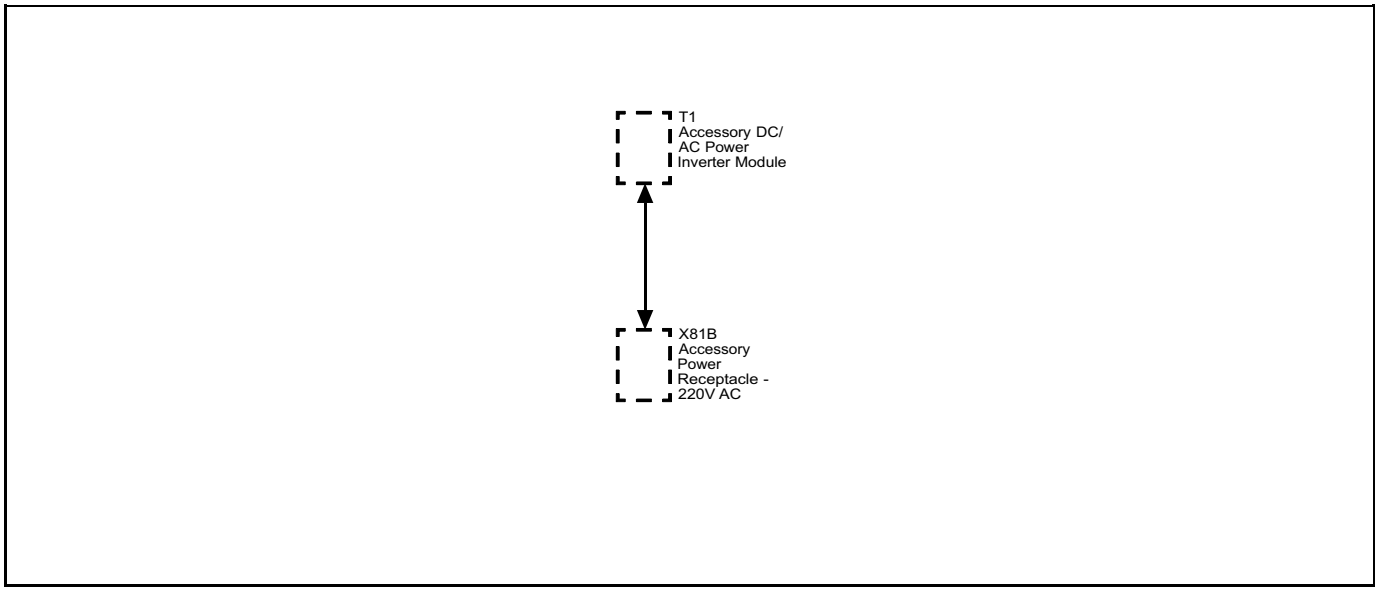
110 Volt Power Outlet Receptacle Internal Shutdown

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.

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230 Volt Power Outlet Receptacle System Description

Power Outlets Block Diagram



3403853

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 150 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.

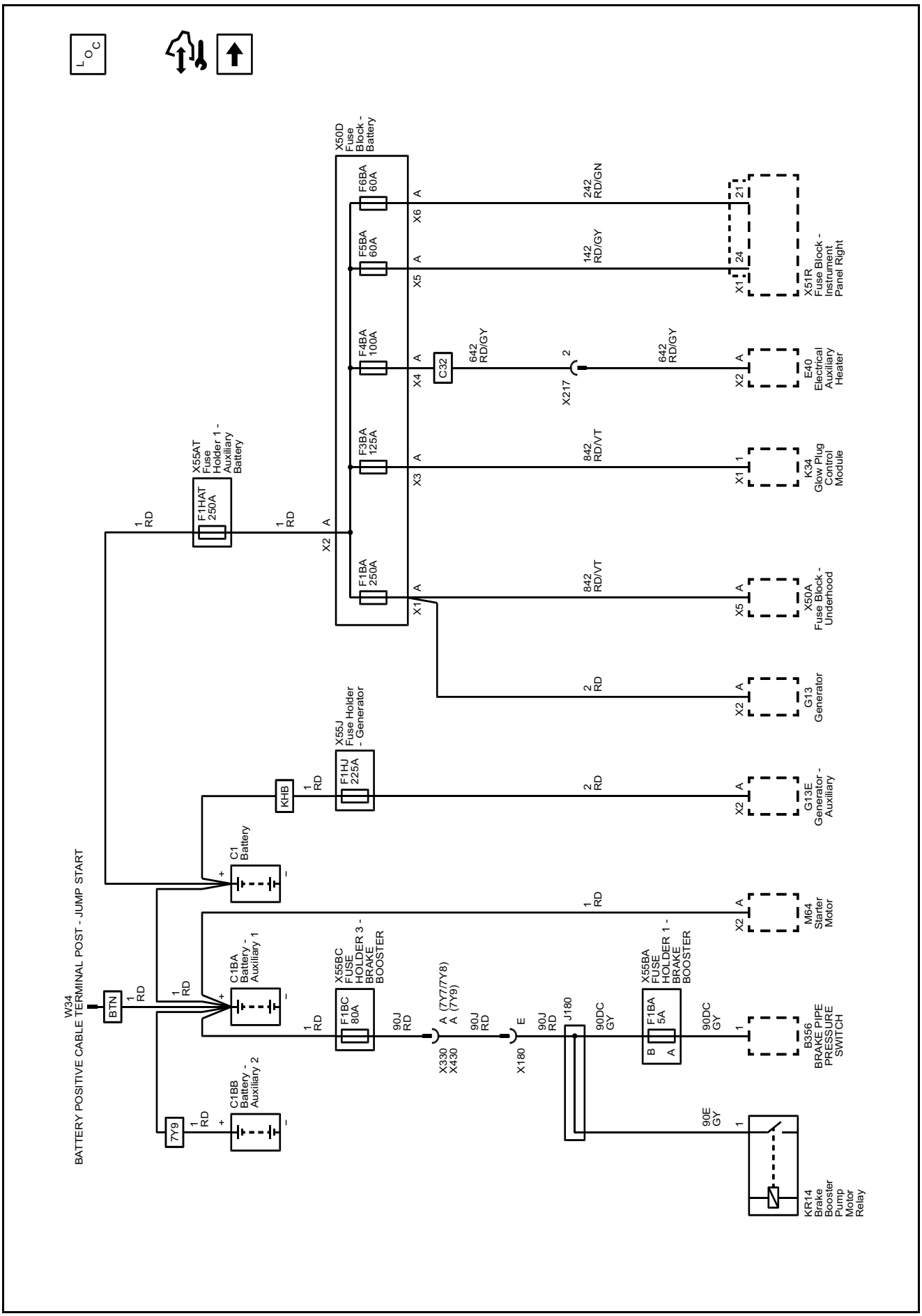
230 Volt Power Outlet Receptacle Internal Shutdown

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.

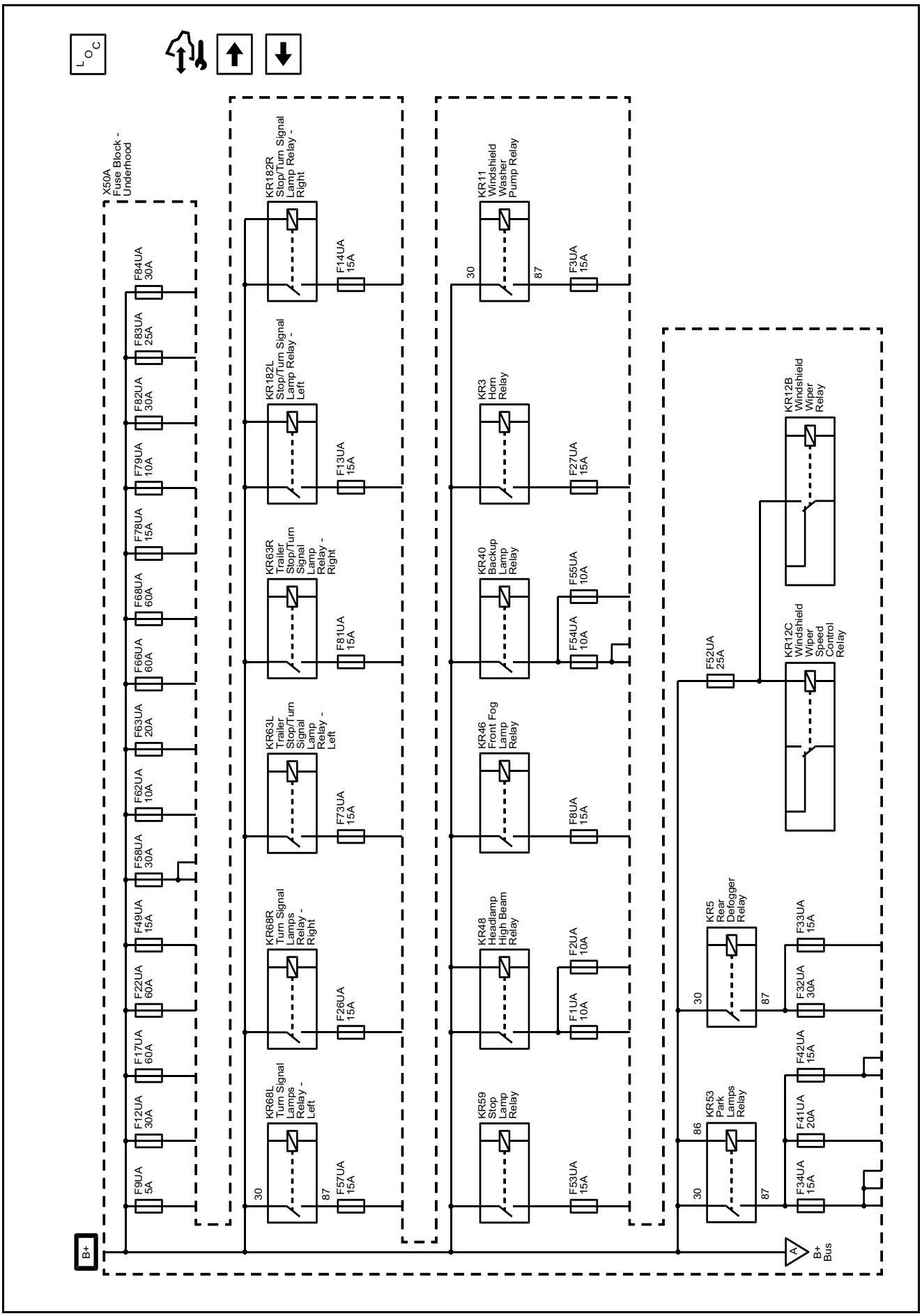
Wiring Systems and Power Management

Schematic and Routing Diagrams

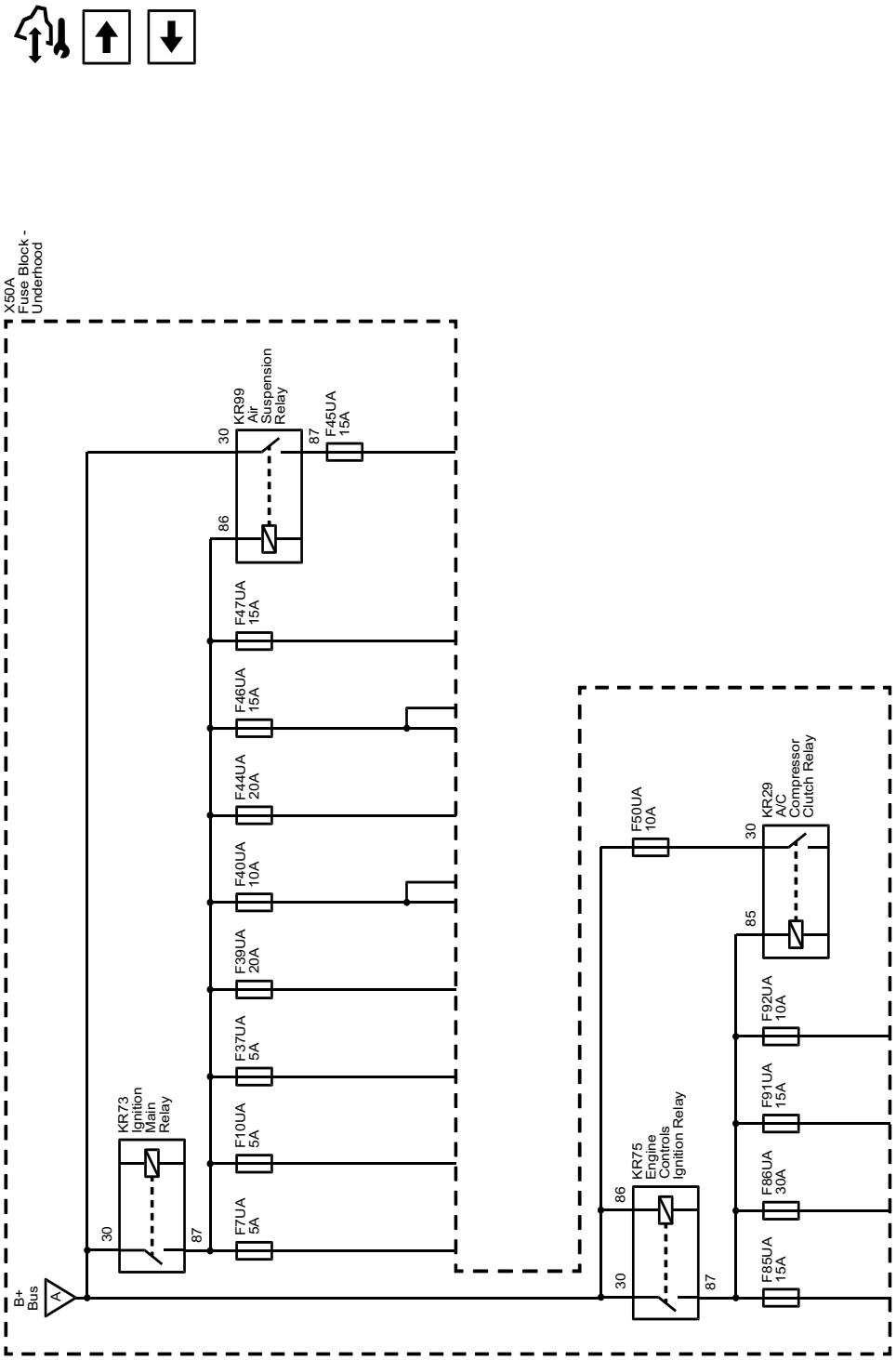
Power Distribution Schematics (X50D Fuse Block - Battery)



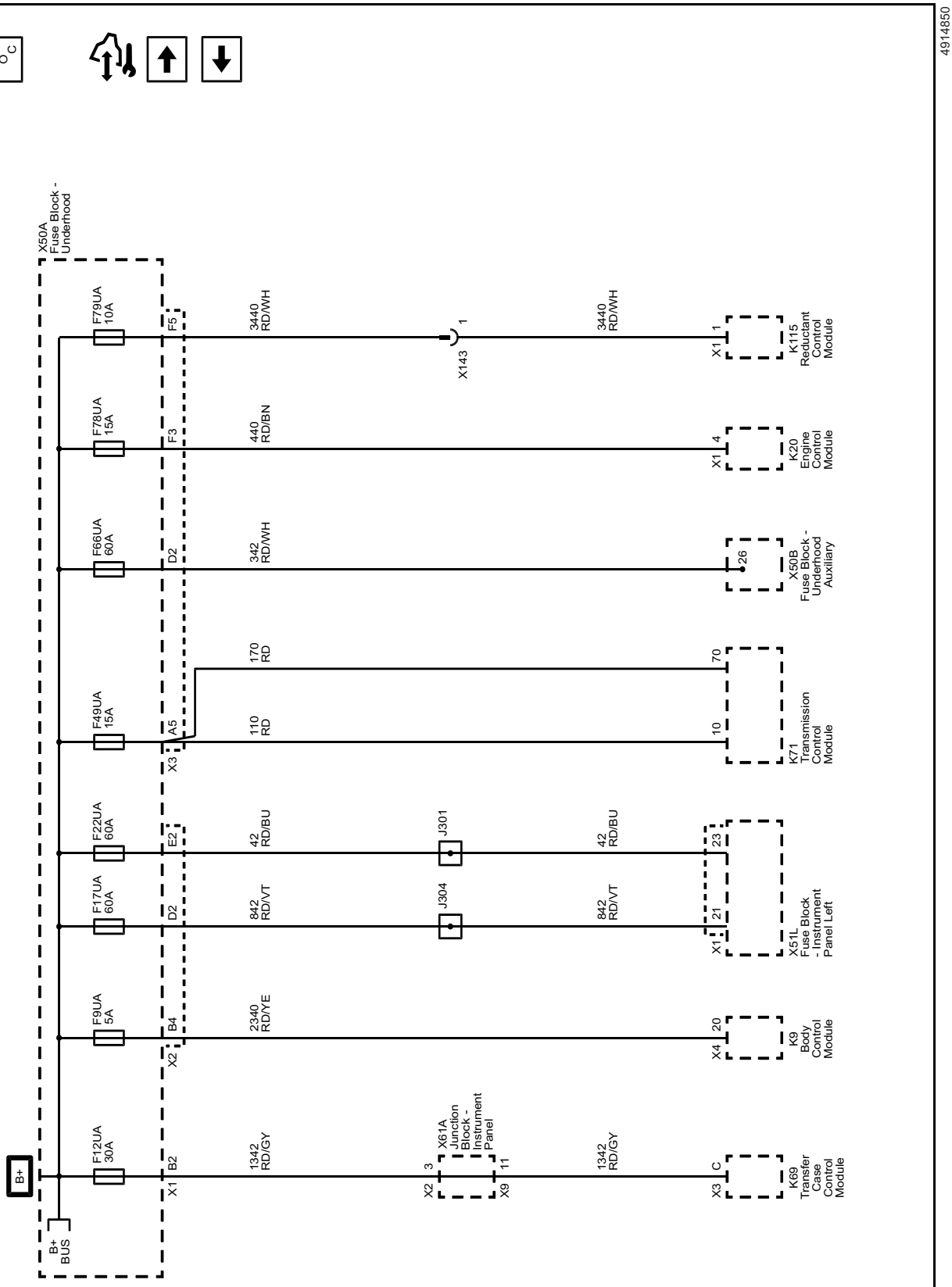
Power Distribution Schematics (B+ Bus X50A Fuse Block - Underhood 1 of 2)



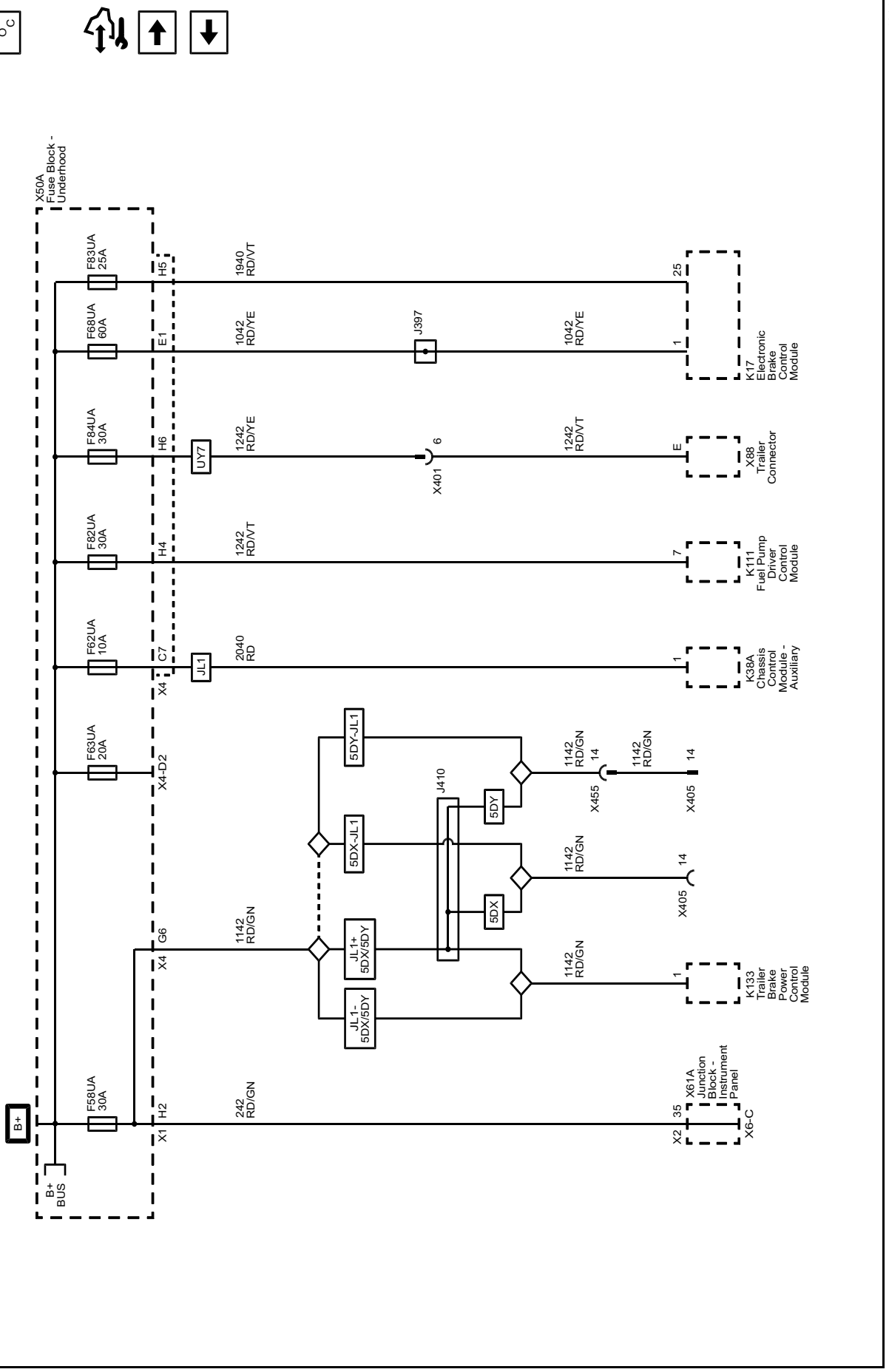
Power Distribution Schematics (B+ Bus X50A Fuse Block - Underhood 2 of 2)



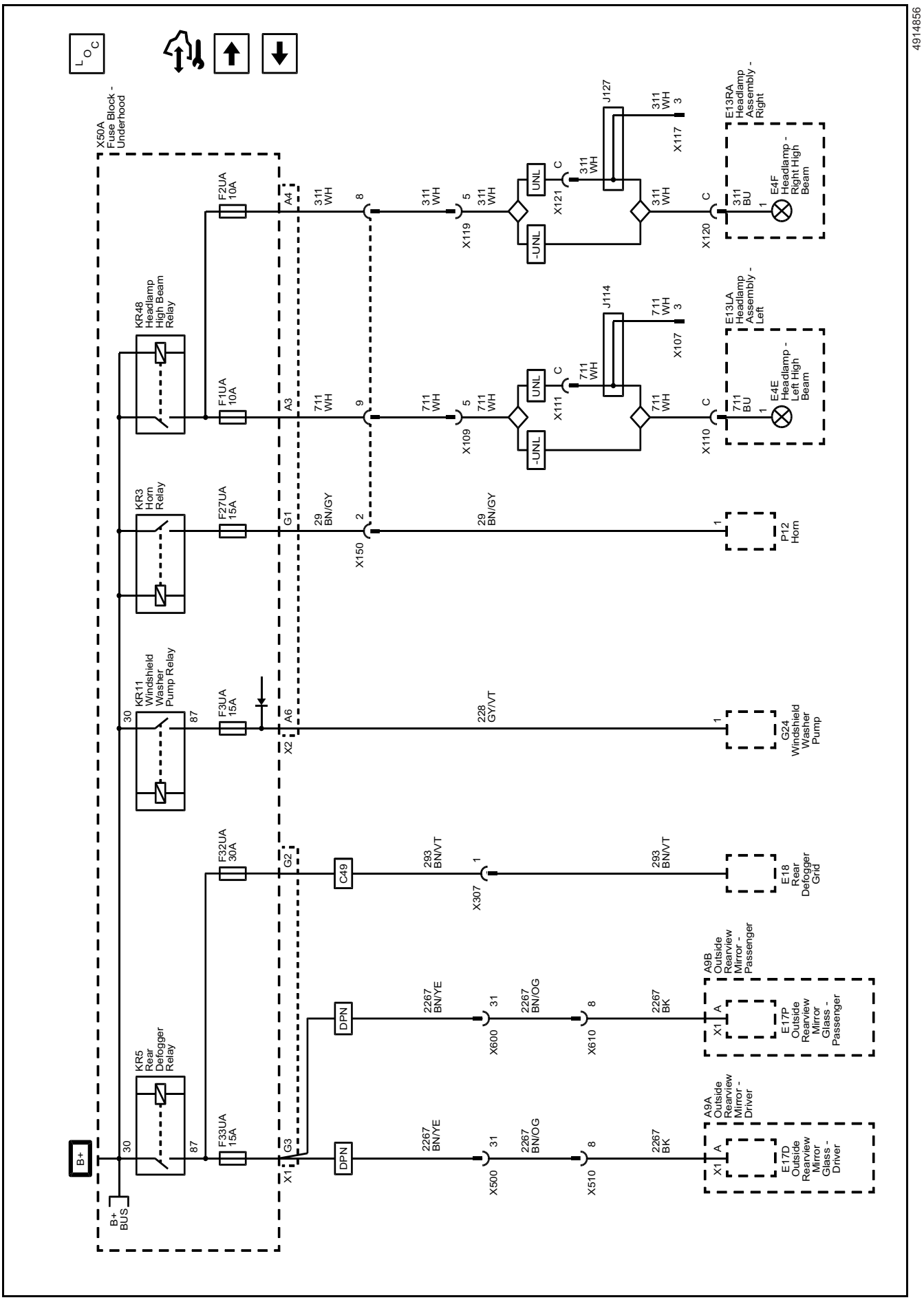
Power Distribution Schematics (F9UA, F12UA, F17UA, F22UA, F49UA, F66UA, F78UA, and F79UA Fuses)



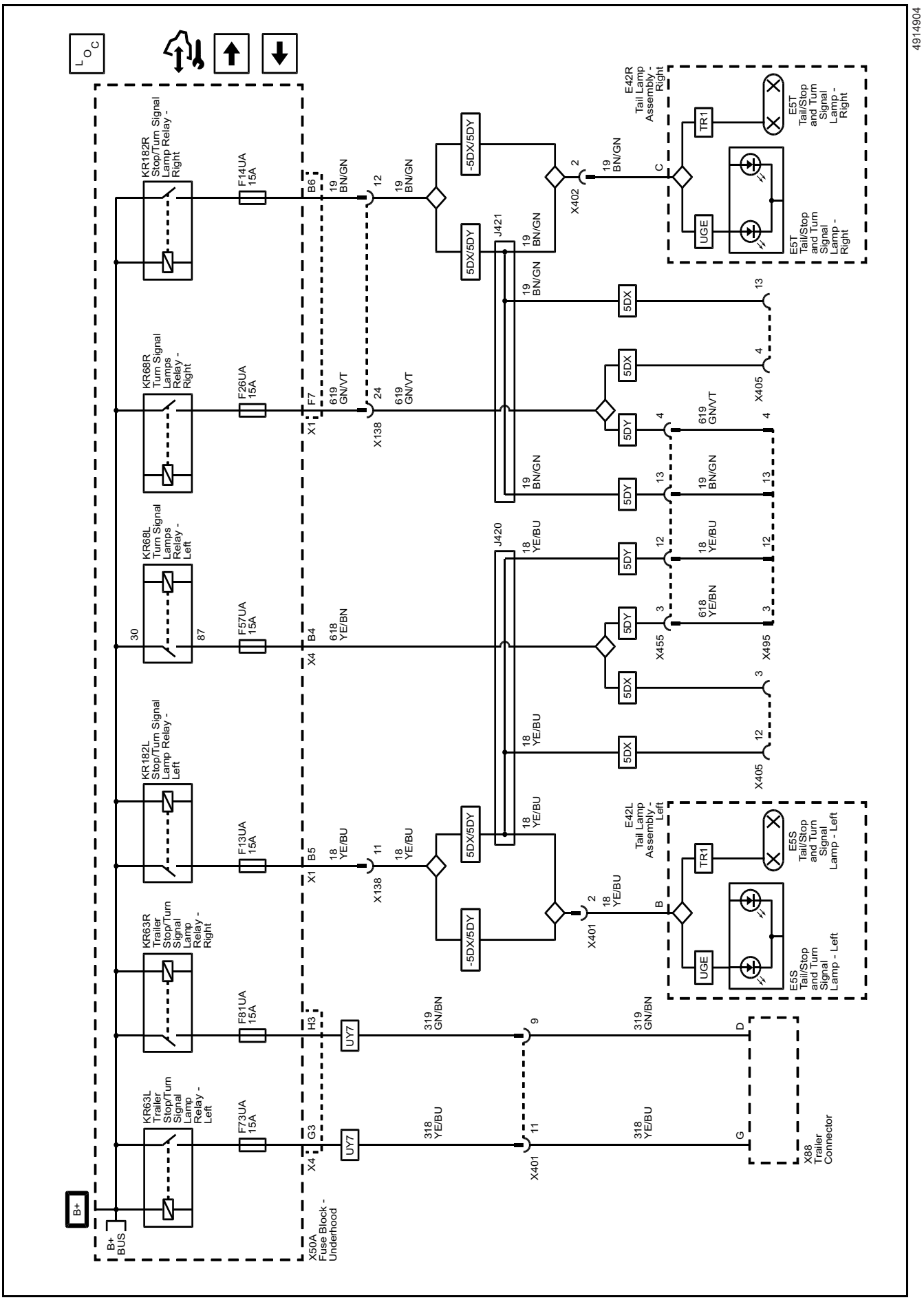
Power Distribution Schematics (F58UA, F62UA, F63UA, F68UA, F82UA F83UA and F84UA Fuses)



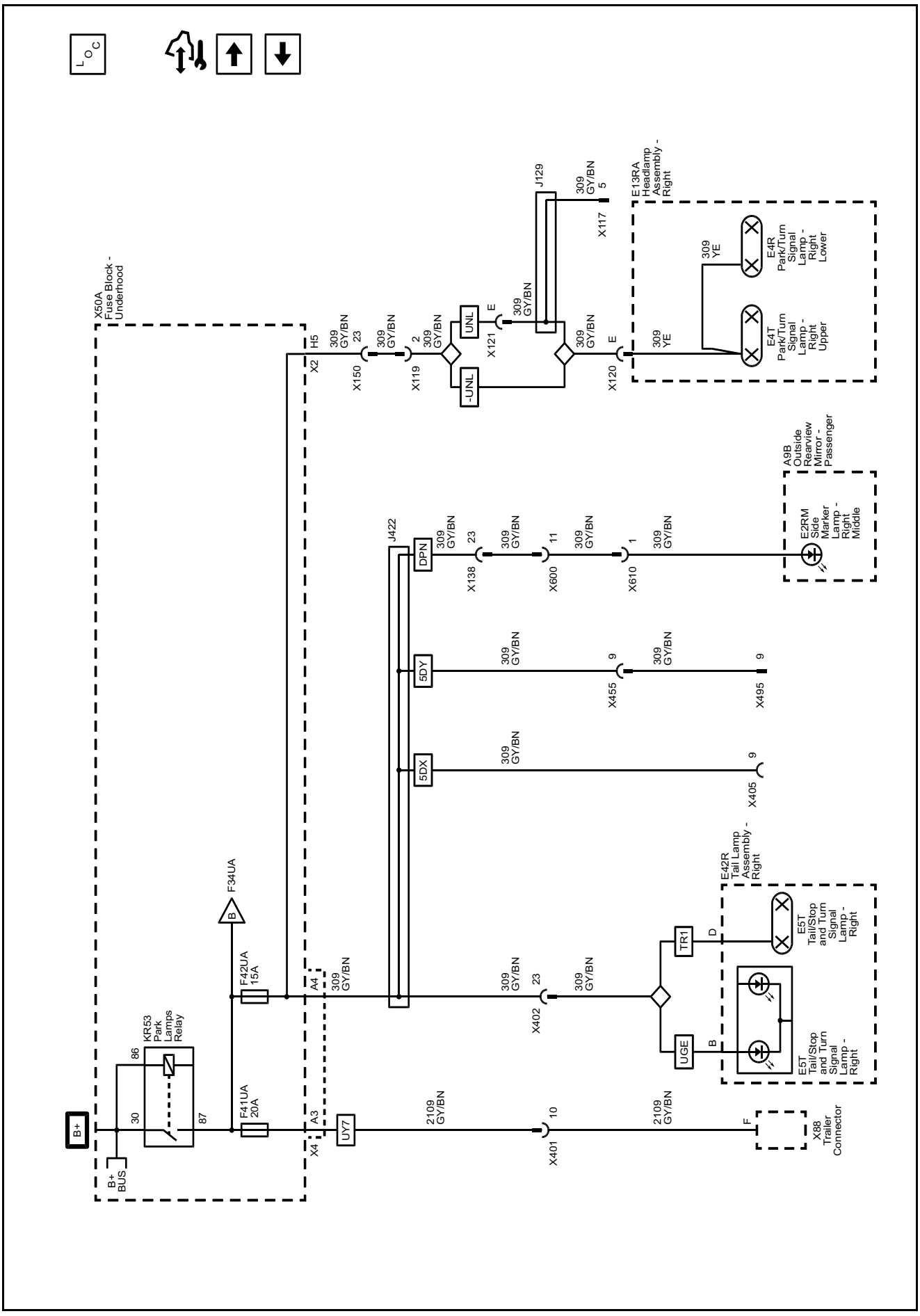
Power Distribution Schematics (F1UA, F2UA, F3UA, F27UA, F32UA and F33UA Fuses)



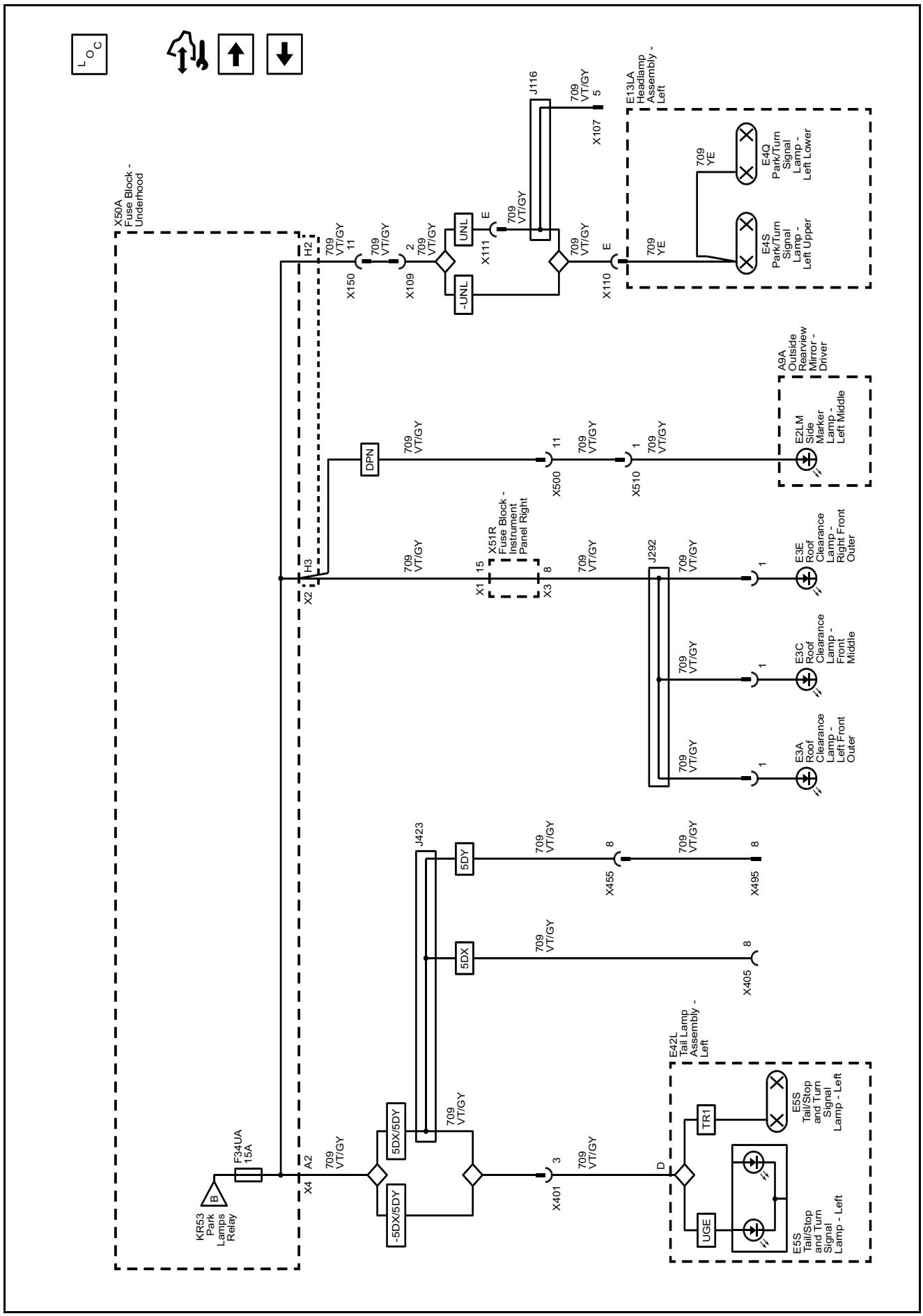
Power Distribution Schematics (F13UA, F14UA, F26UA, F57UA, F73UA and F81UA Fuses)



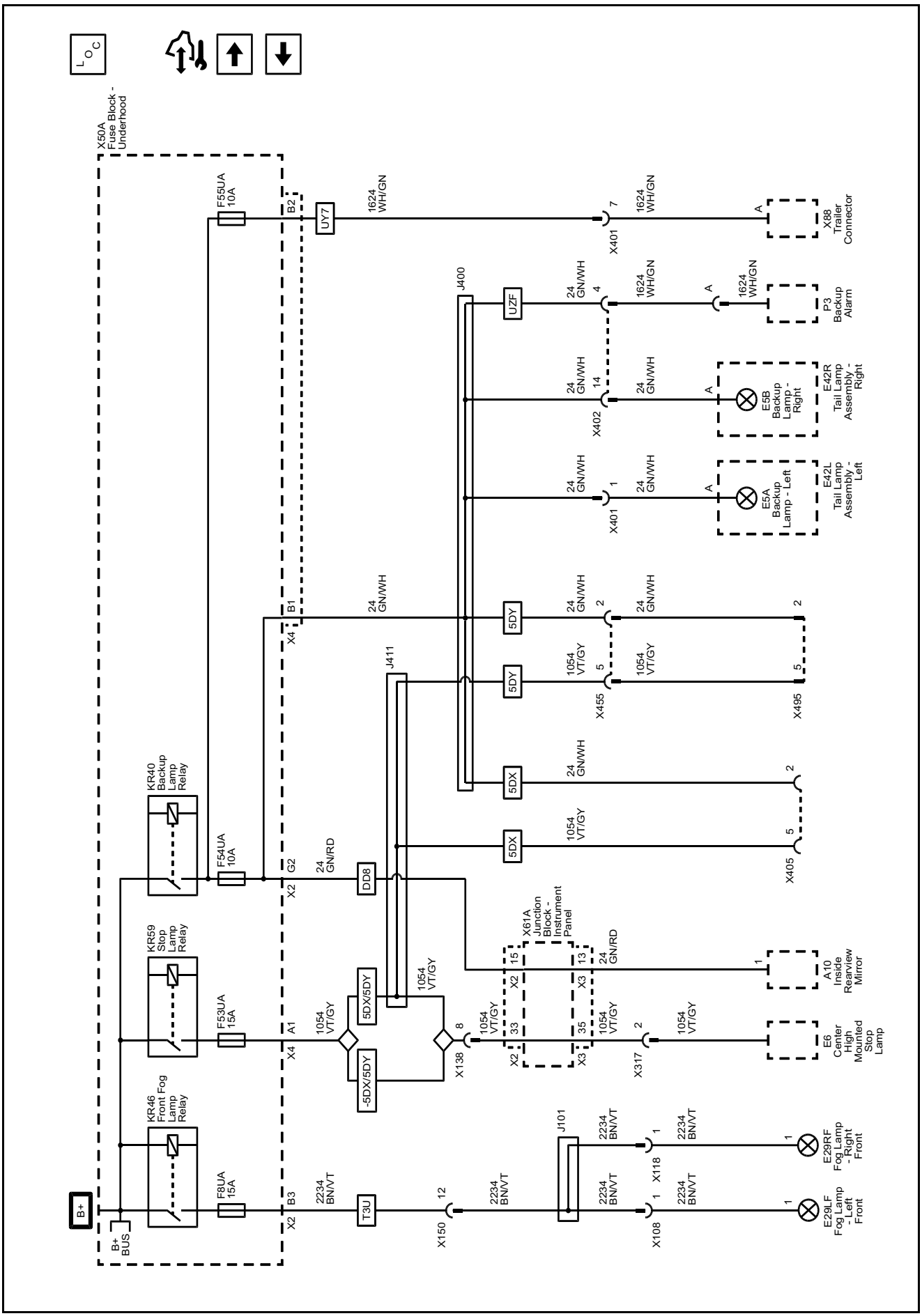
Power Distribution Schematics (F41UA and F42UA Fuses)



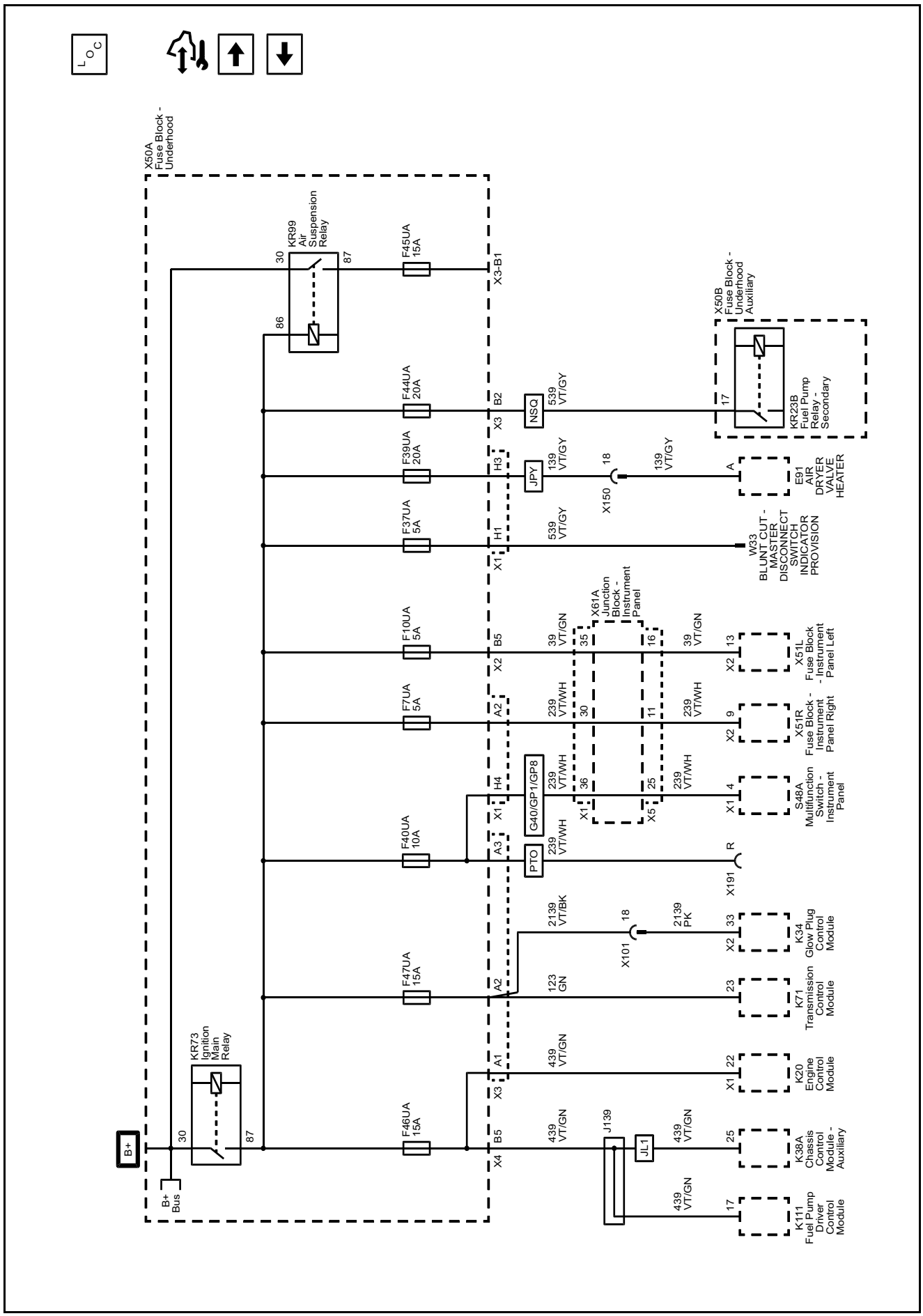
Power Distribution Schematics (F34UA Fuse)



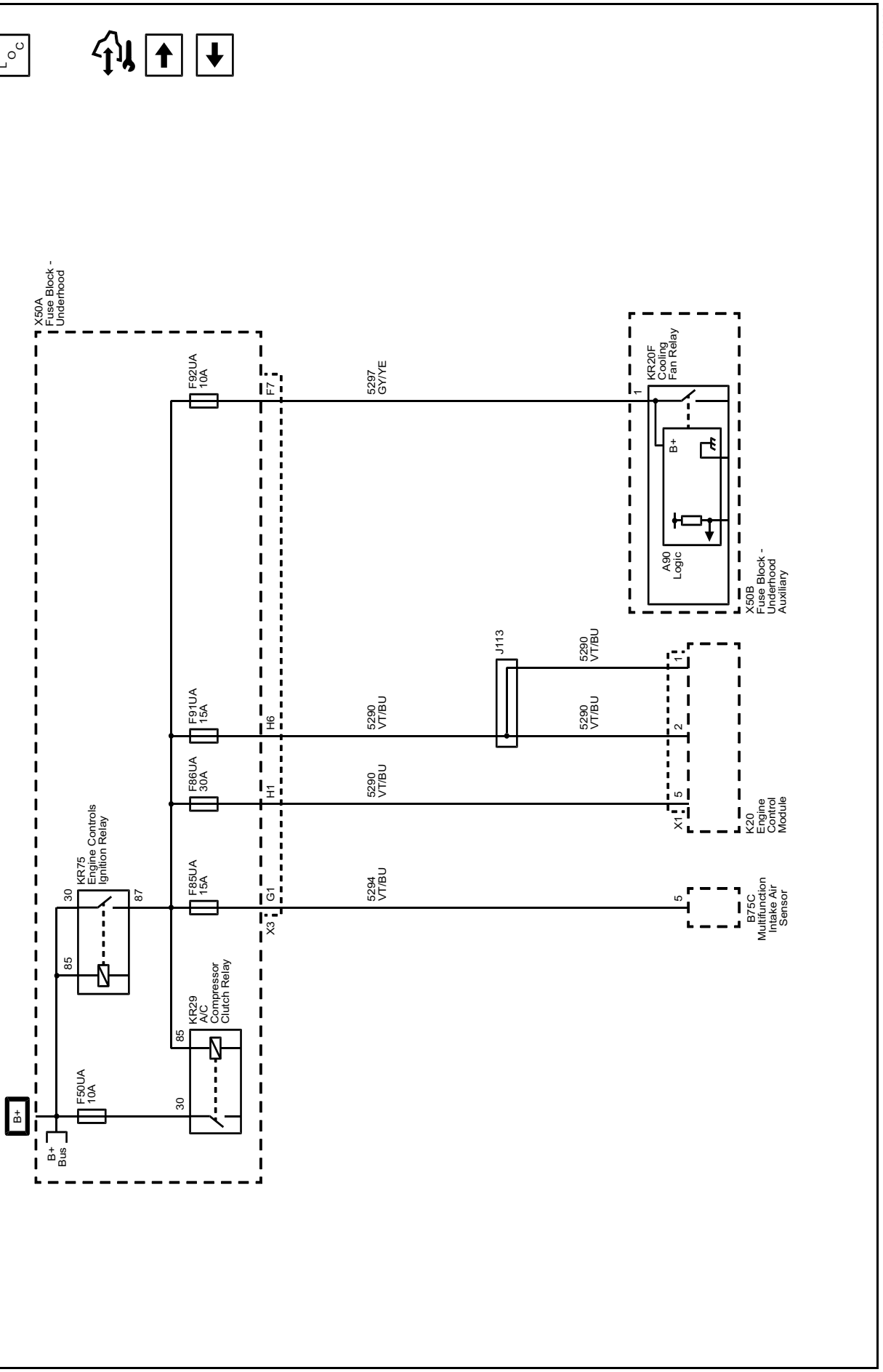
Power Distribution Schematics (F8UA, F53UA, F54UA and F55UA Fuses)



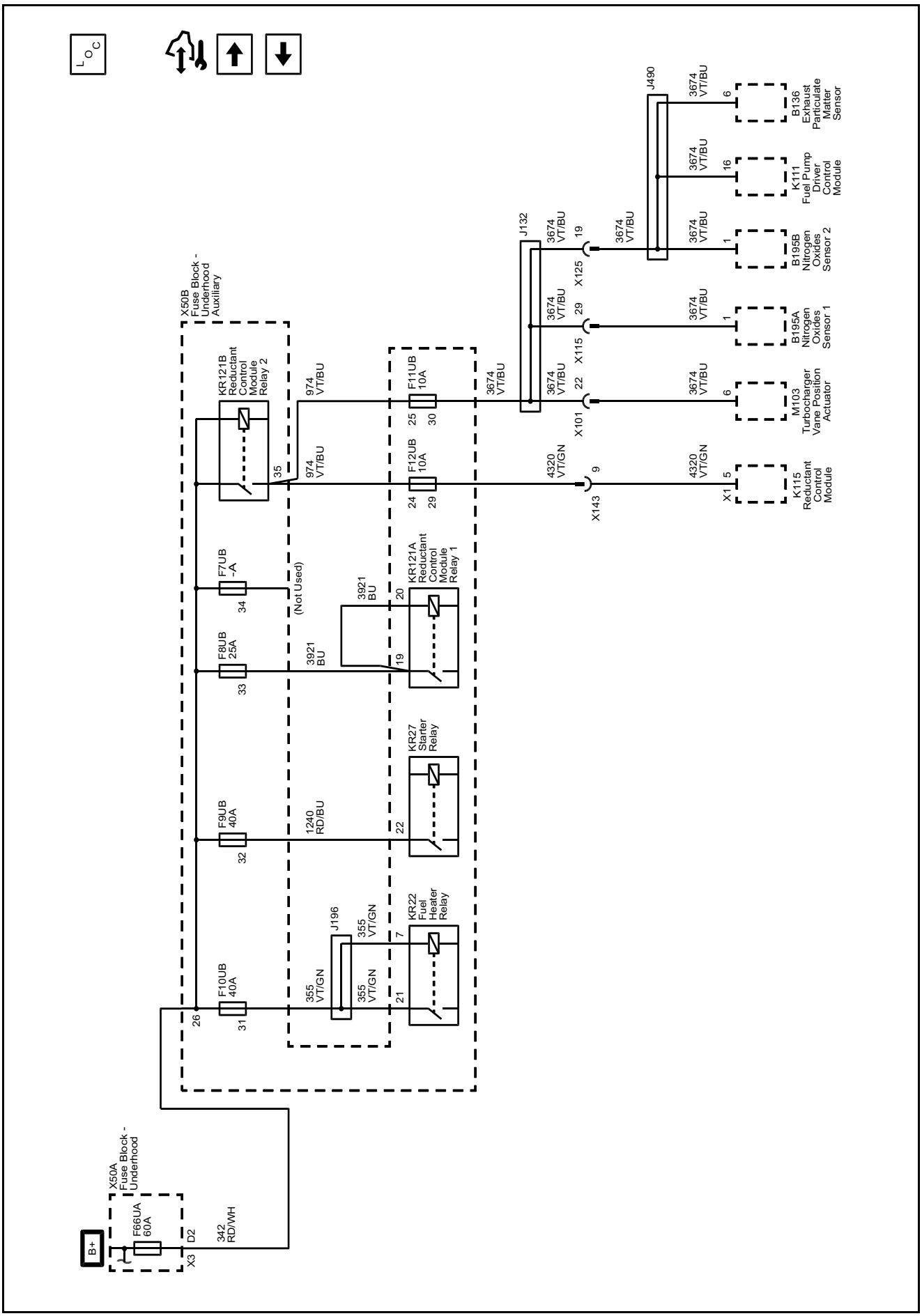
Power Distribution Schematics (F7UA, F10UA, F37UA, F39UA, F40UA, F44UA, F45UA, F46UA and F47UA Fuses)



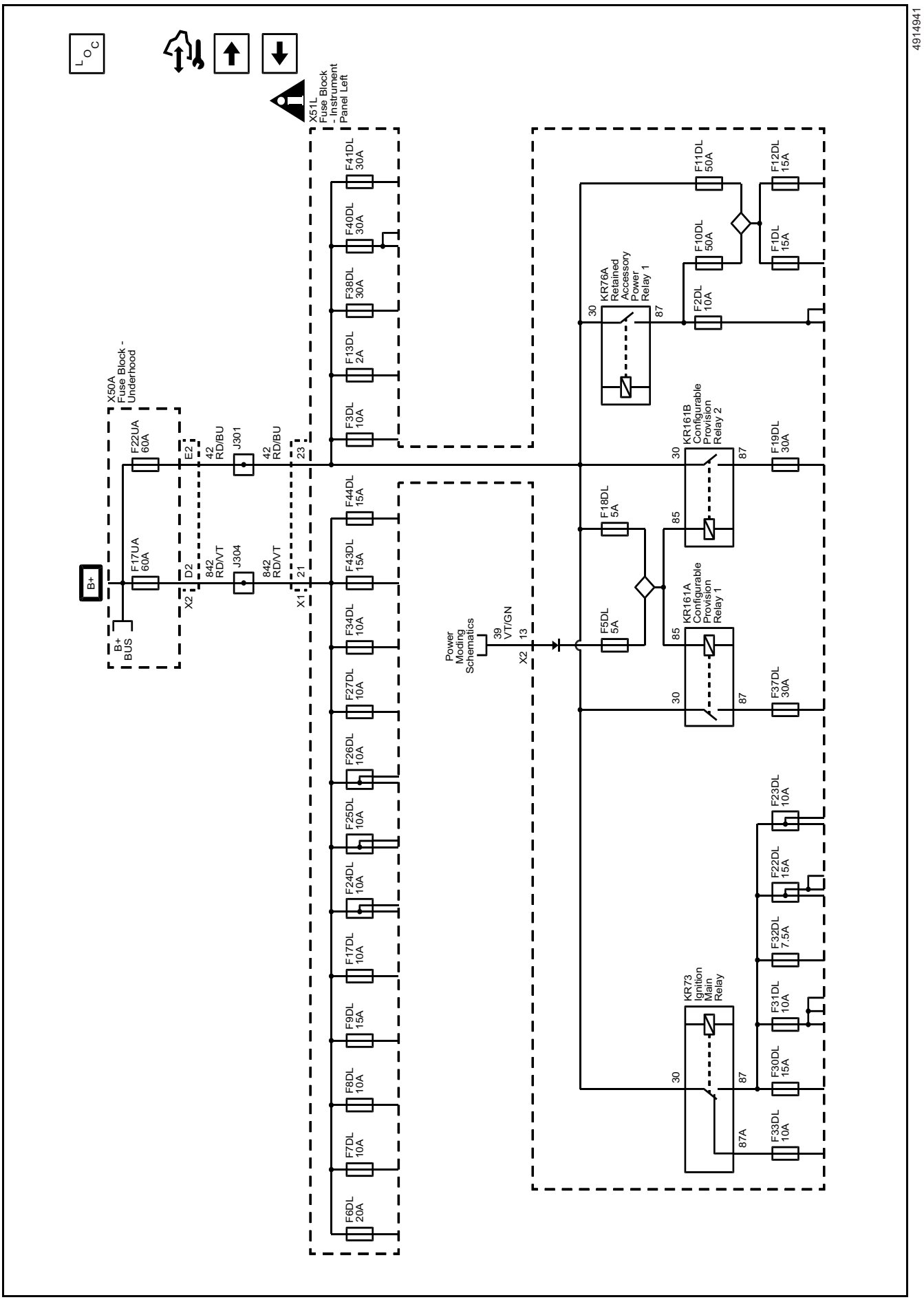
Power Distribution Schematics (F85UA, F86UA, F91UA and F92UA Fuses)



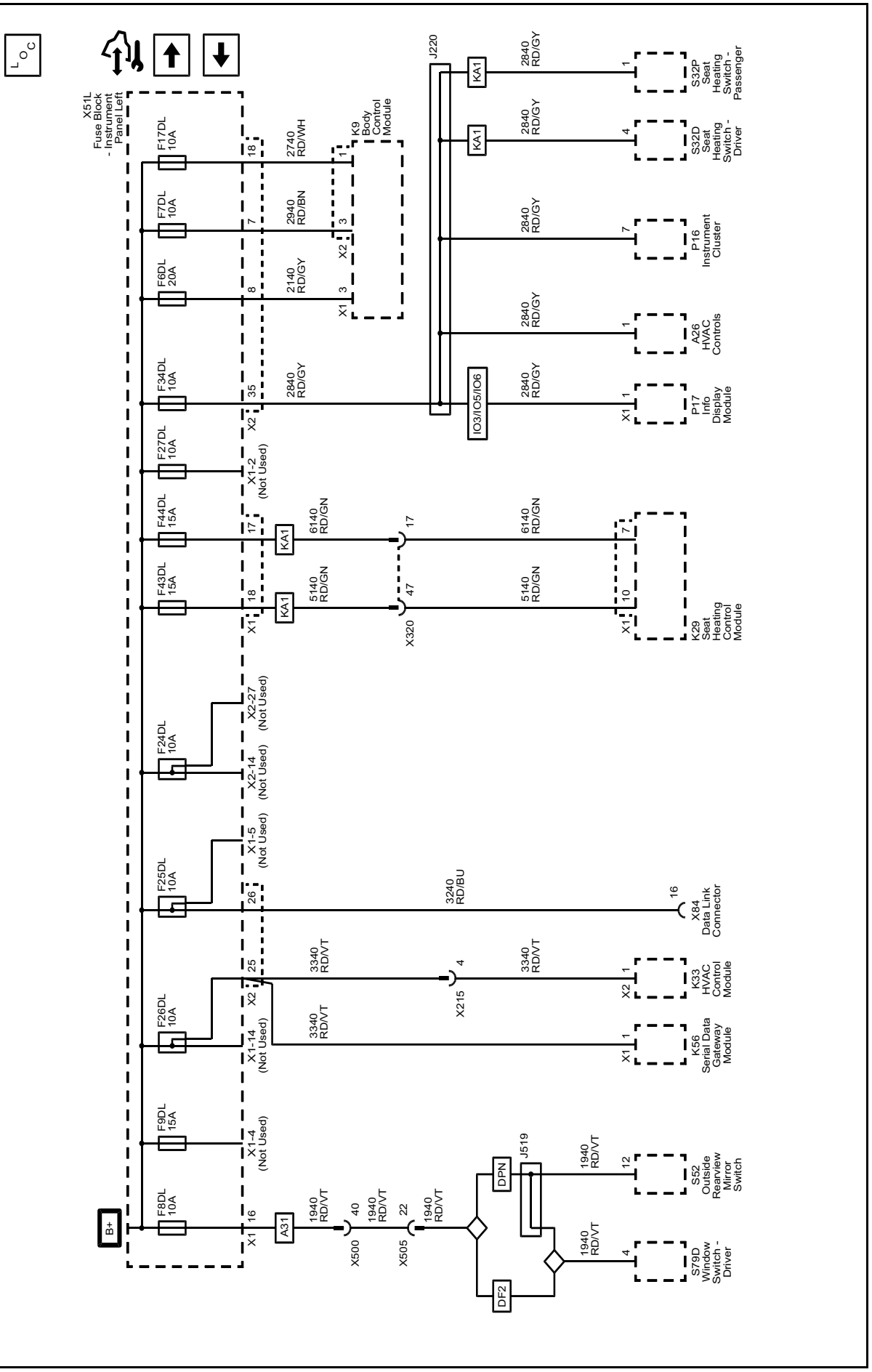
Power Distribution Schematics (F7UB, F8UB, F9UB, F10UB, F11UB and F12UB Fuses)



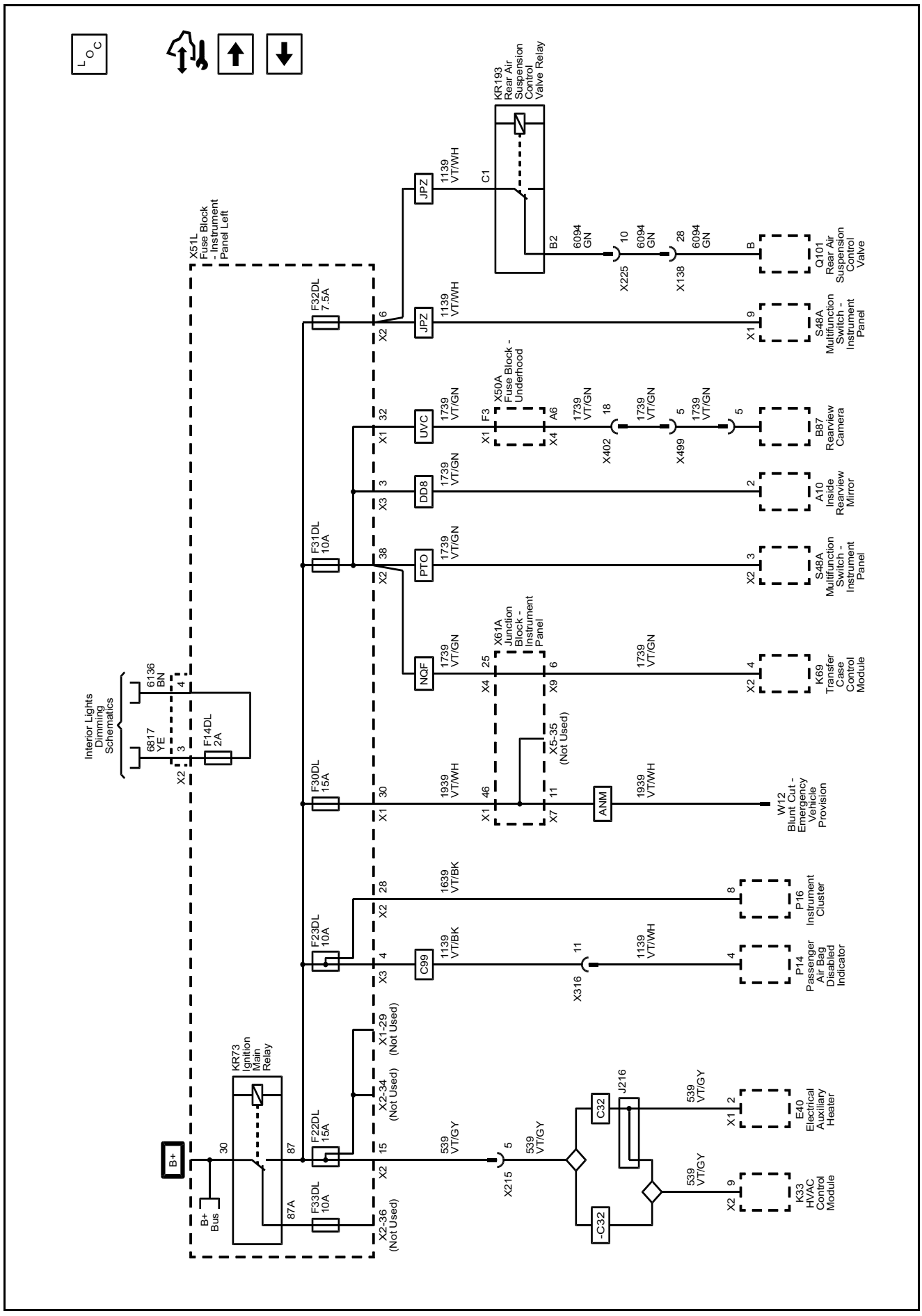
Power Distribution Schematics (B+ Bus X51L Fuse Block - Instrument Panel Left)



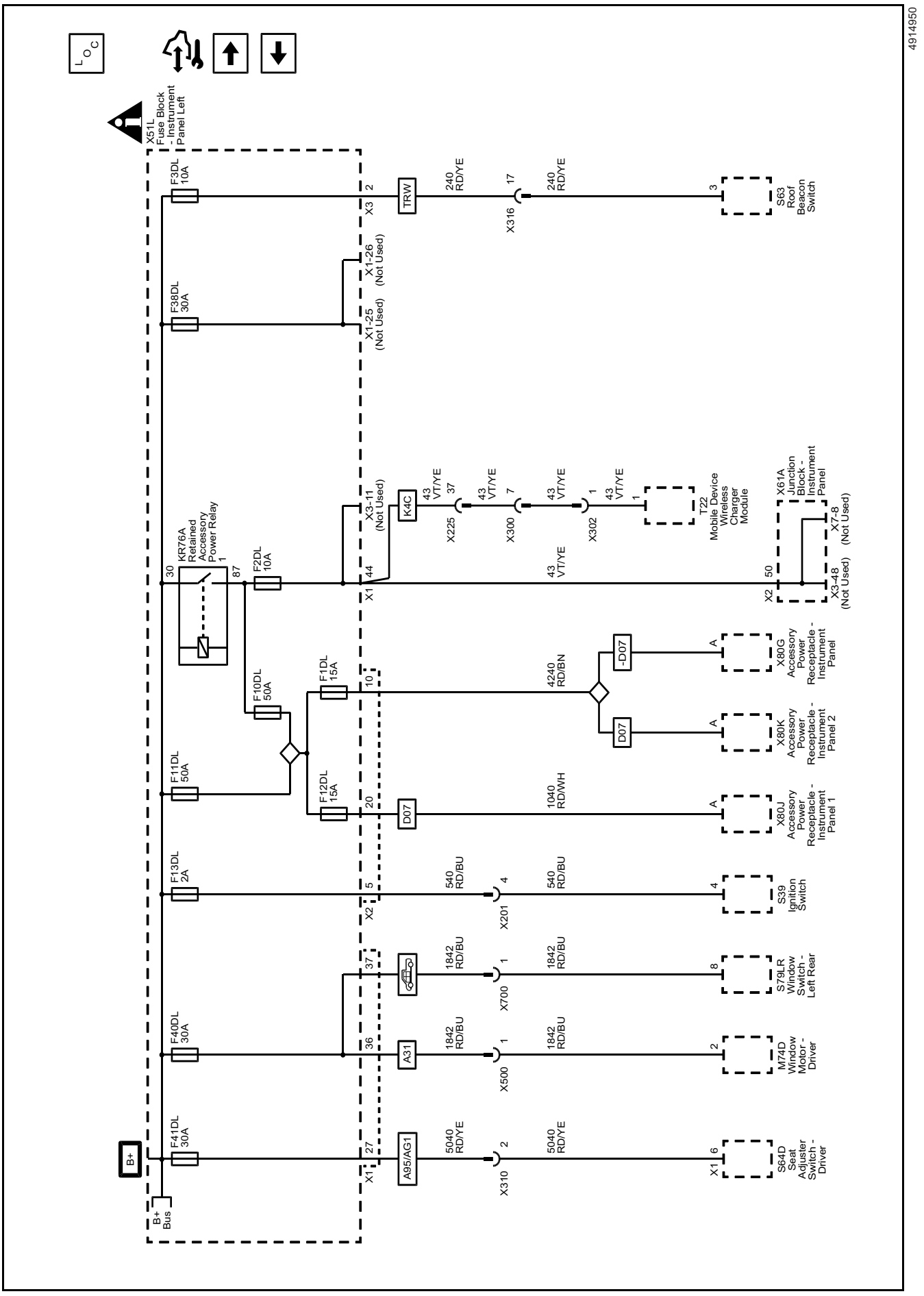
Power Distribution Schematics (F6DL, F7DL, F8DL, F9DL, F17DL, F24DL, F25DL, F26DL, F34DL, F43DL and F44DL Fuses)



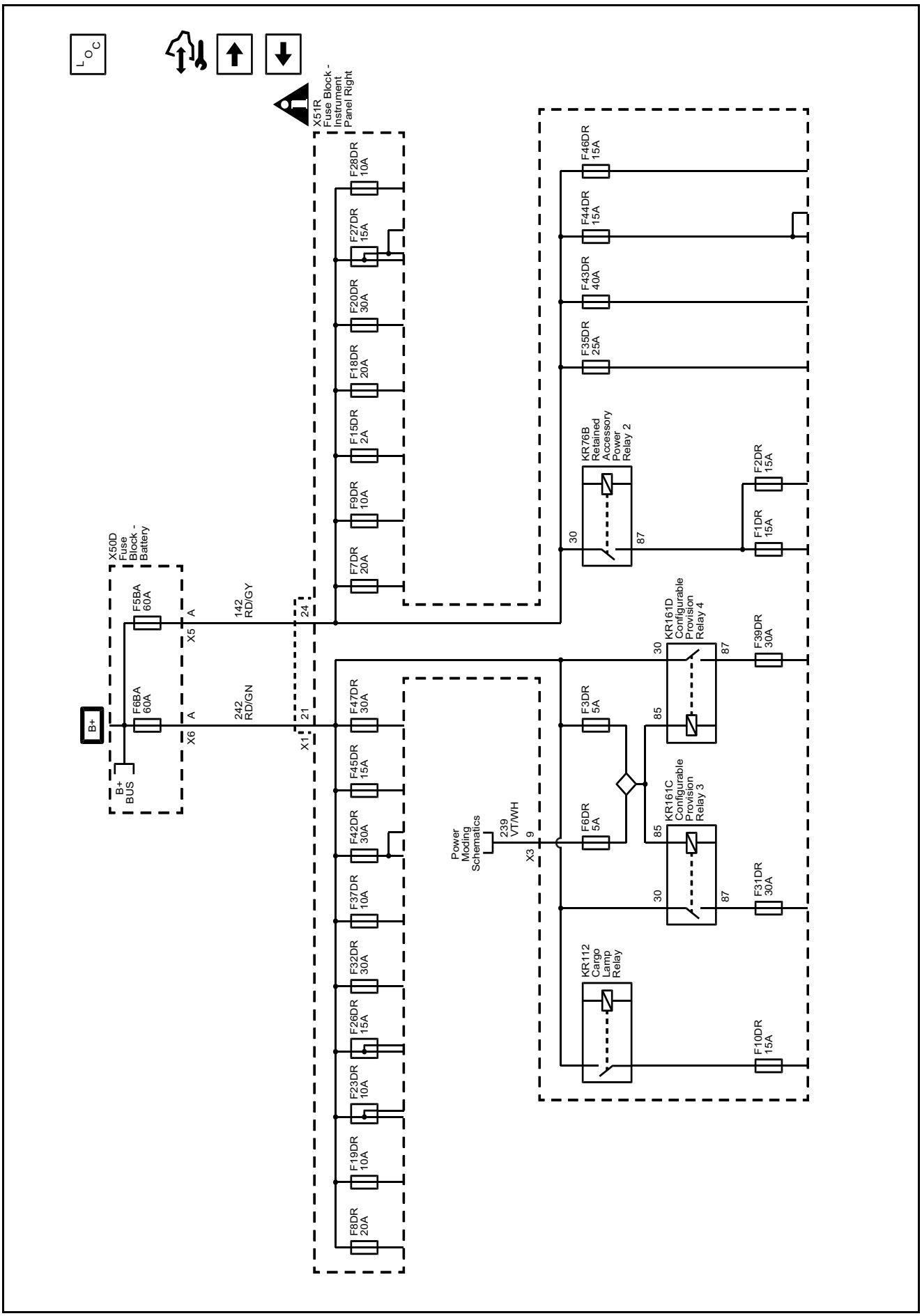
Power Distribution Schematics (F14DL, F22DL, F23DL, F30DL, F31DL, F32DL and F33DL Fuses)



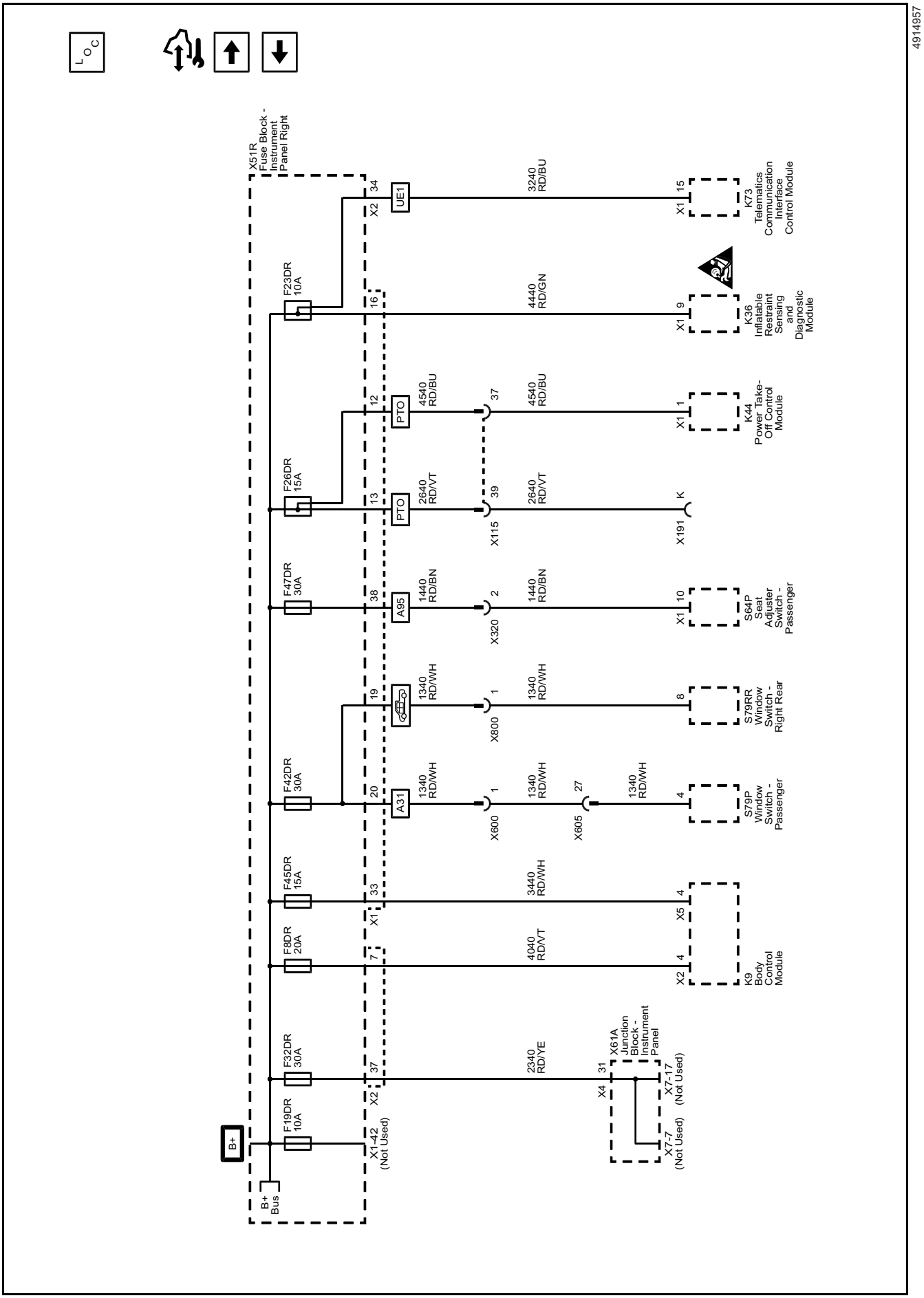
Power Distribution Schematics (F1DL, F2DL, F3DL, F10DL, F11DL, F12DL, F13DL, F38DL, F40DL and F41DL Fuses)



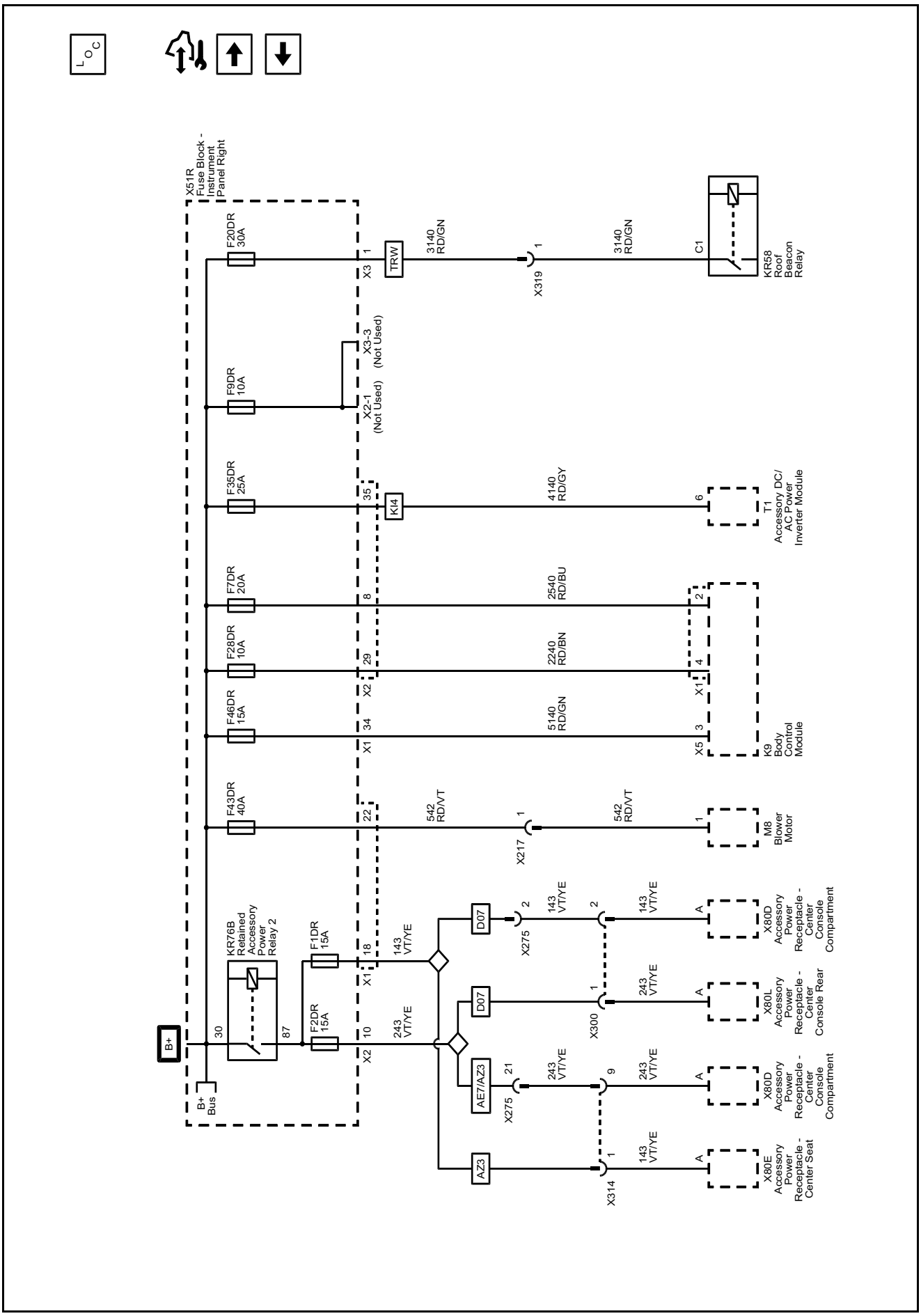
Power Distribution Schematics (B+ Bus X51R Fuse Block - Instrument Panel Right)



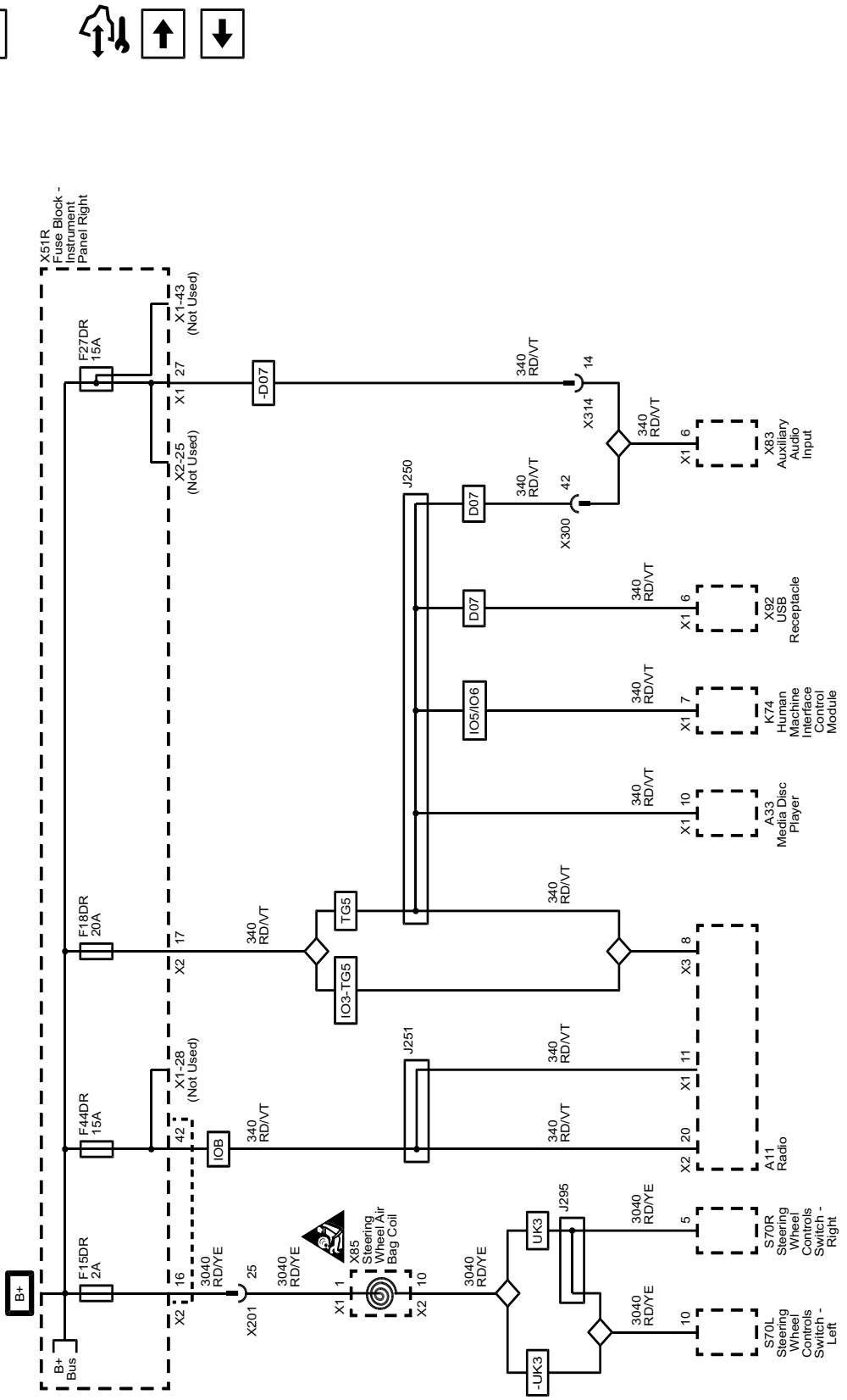
Power Distribution Schematics (F8DR, F23DR, F26DR, F32DR, F42DR, F45DR and F47DR Fuses)



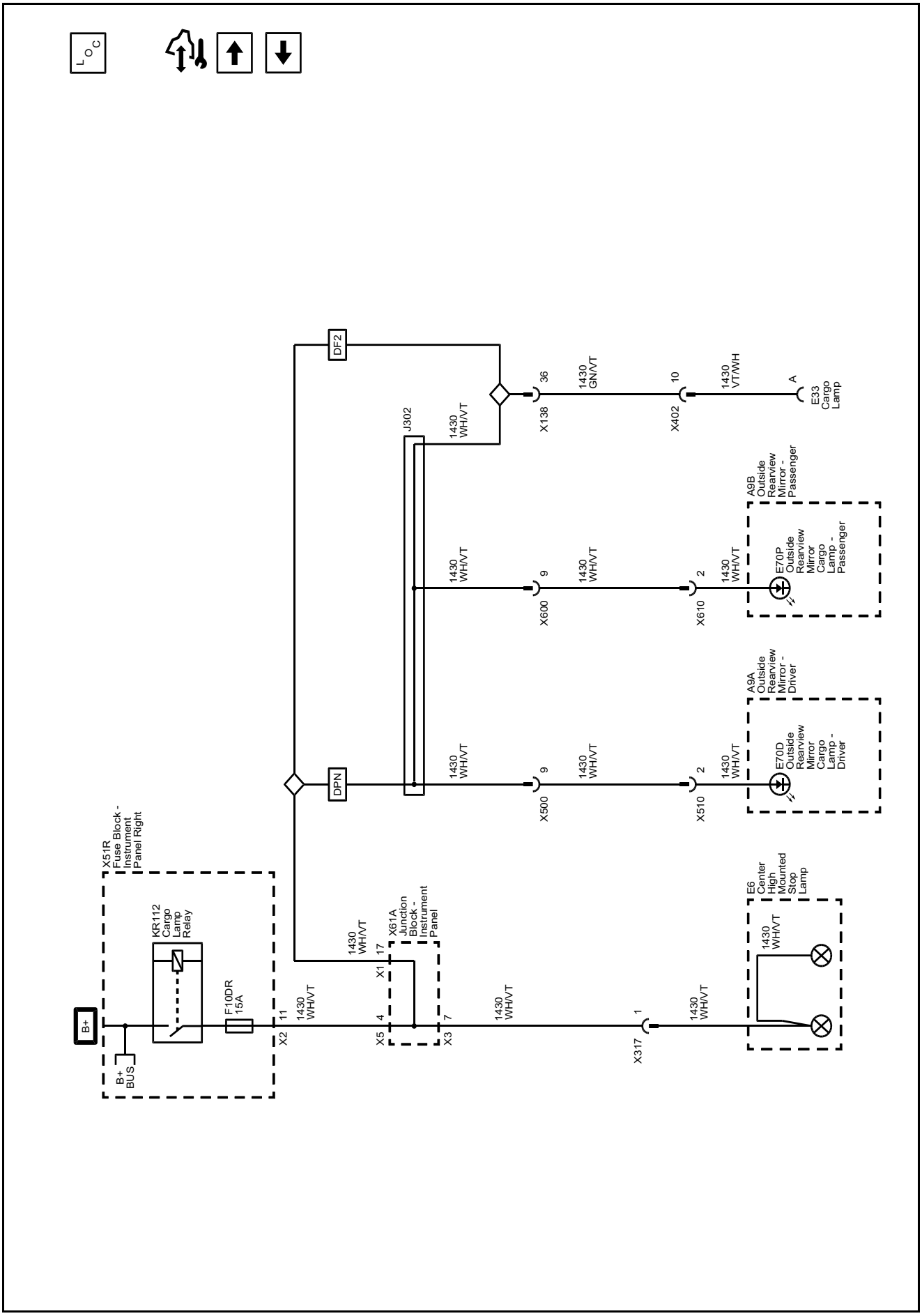
Power Distribution Schematics (F1DR, F2DR, F7DR, F9DR, F20DR, F28DR, F35DR, F43DR, F44DR and F46DR Fuses)



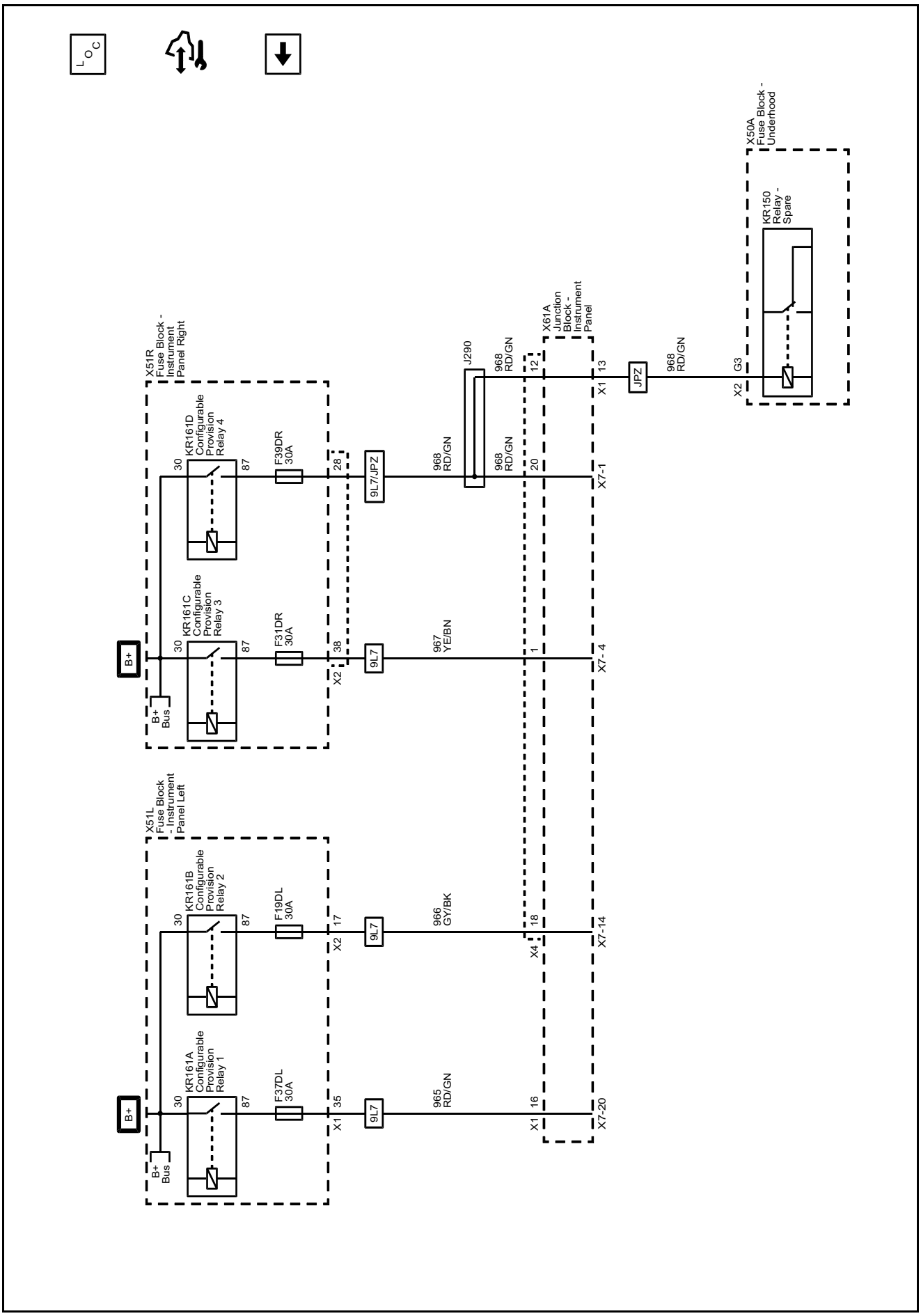
Power Distribution Schematics (F15DR, F18DR, F27DR and F44DR Fuses)



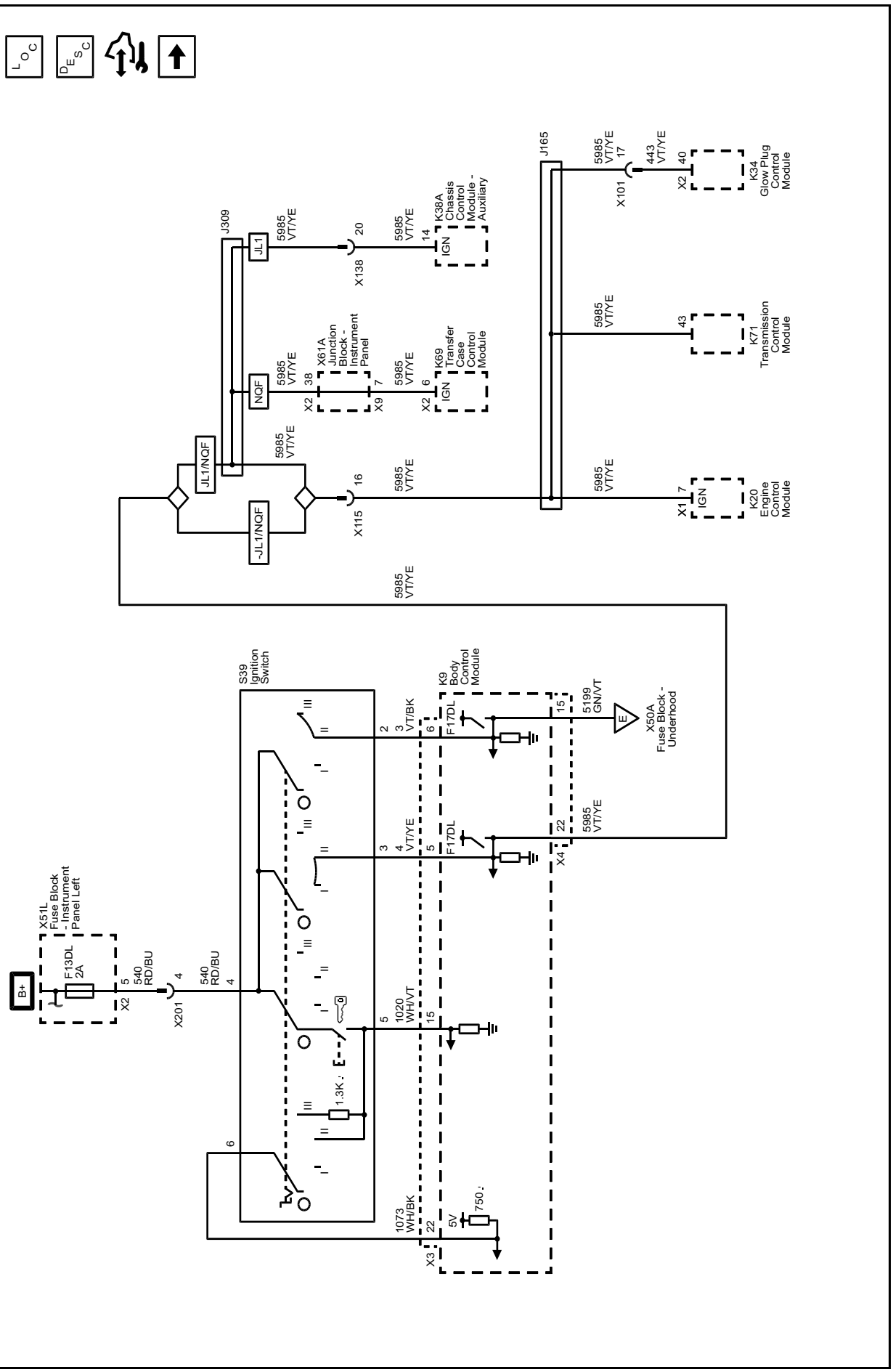
Power Distribution Schematics (F10DR Fuse)



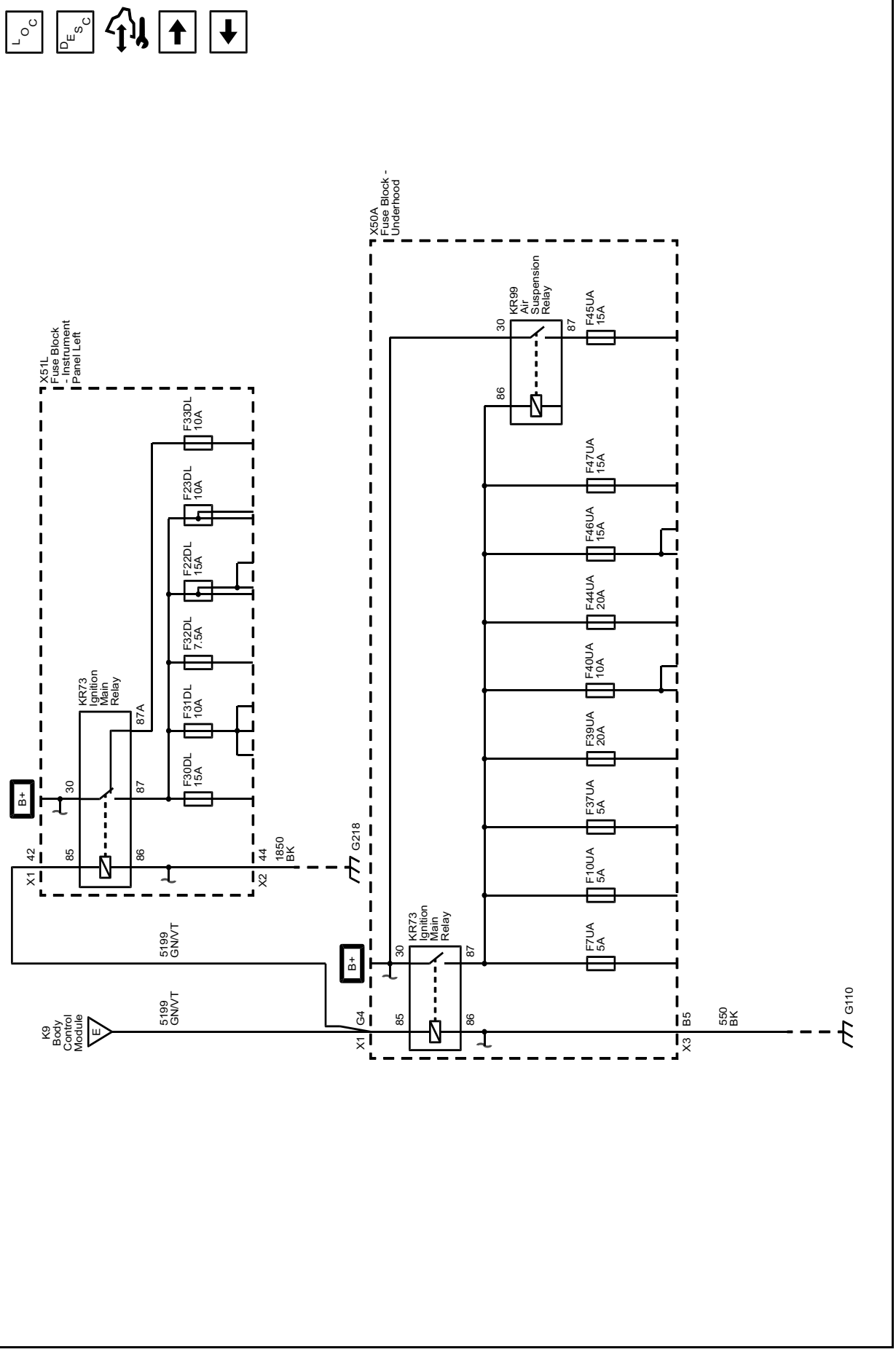
Power Distribution Schematics (F19DL, F31DR, F37DL and F39DR Fuses)



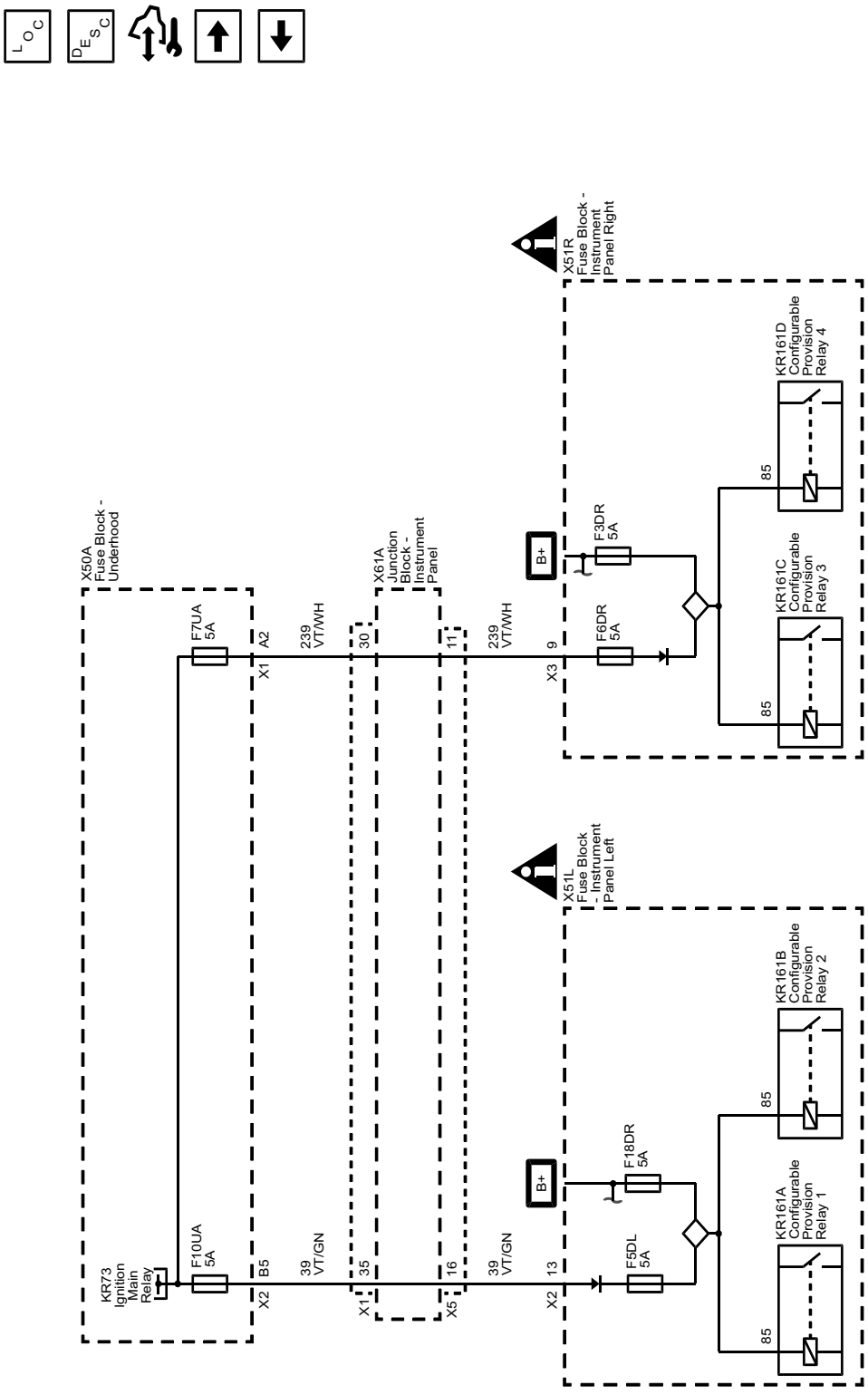
Power Moding Schematics (Ignition Switch and Ignition Power)



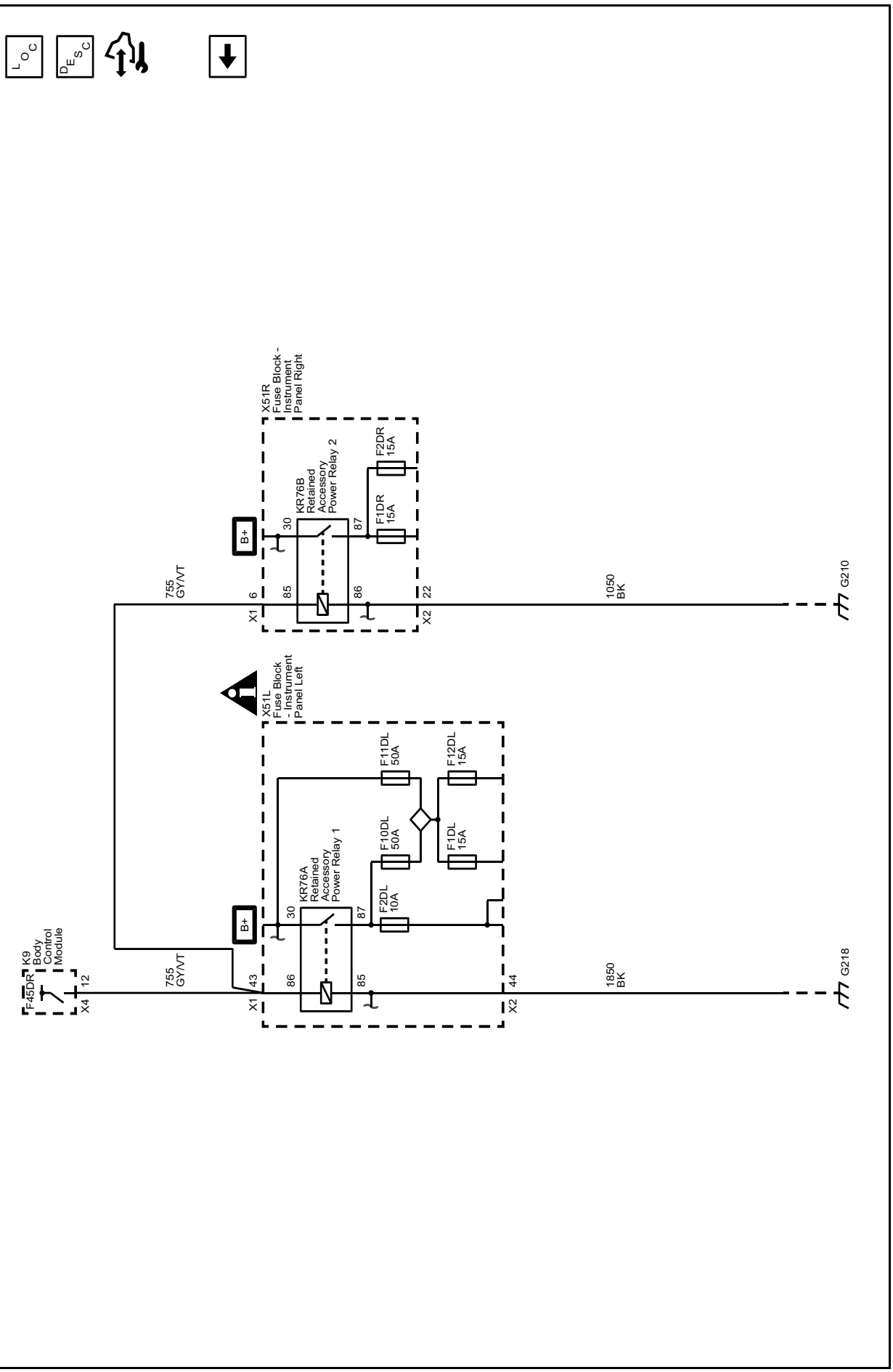
Power Moding Schematics (Ignition Main Relays)



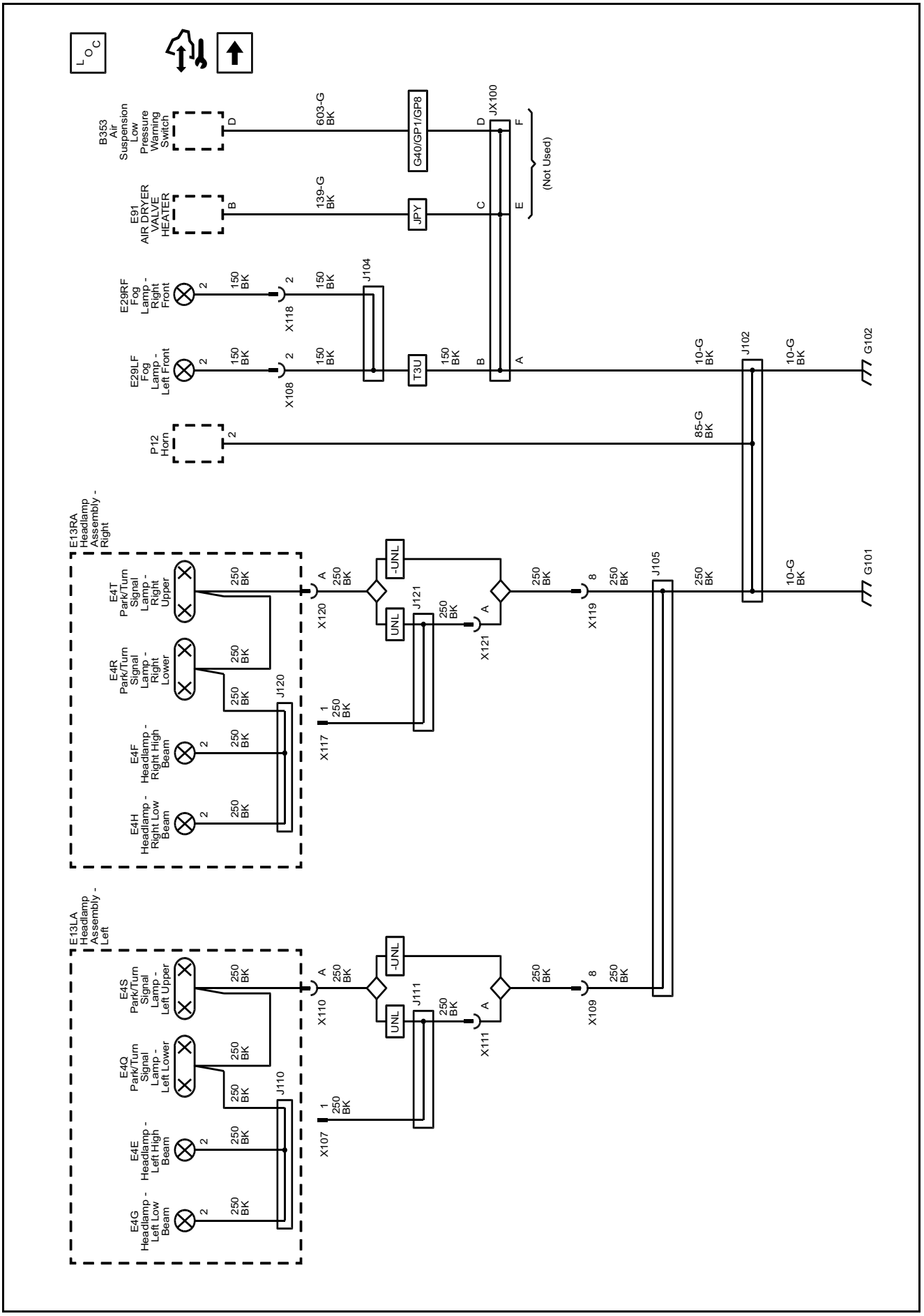
Power Moding Schematics (Ignition Power to Provisional Relays (9L7))



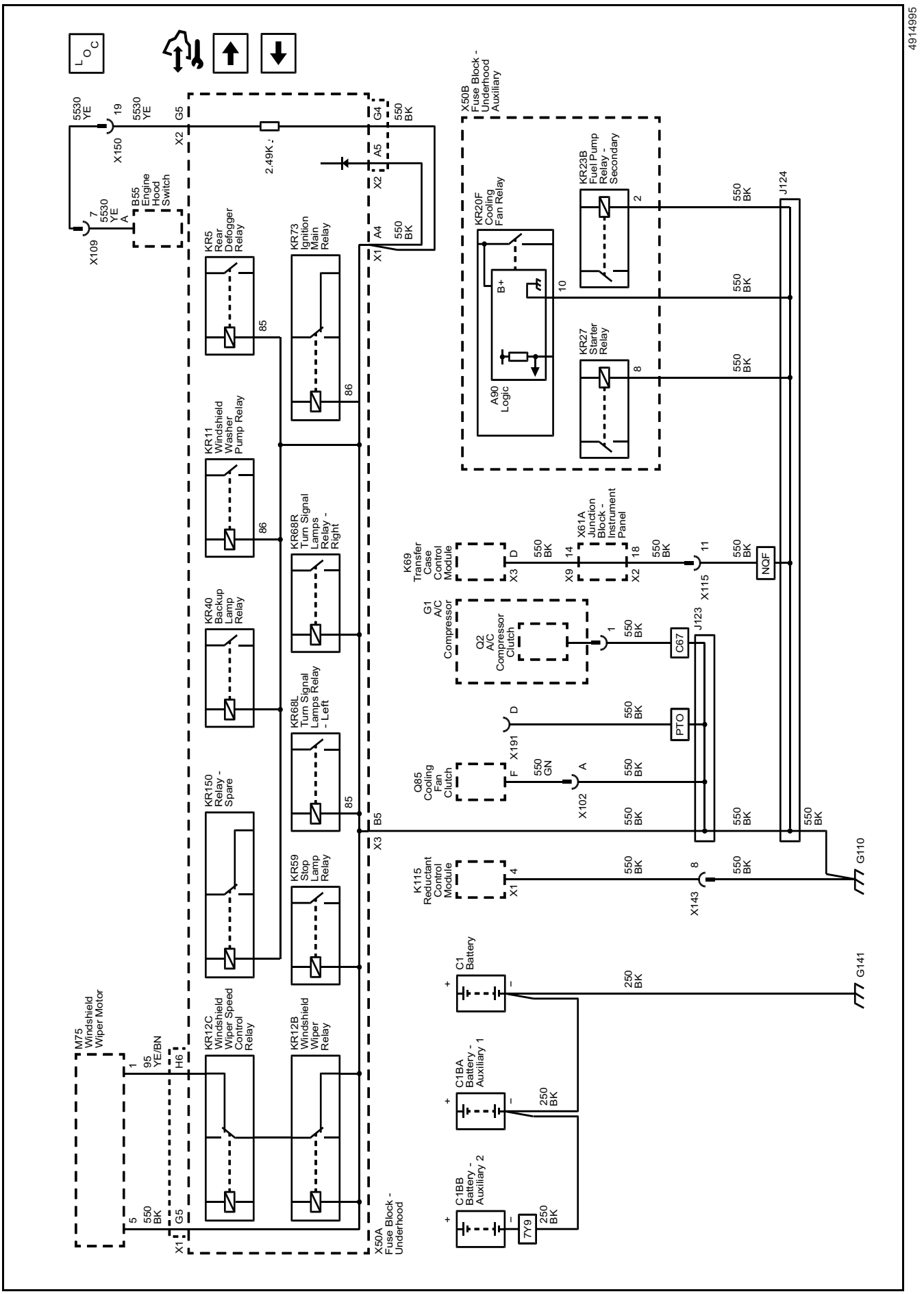
Power Moding Schematics (Retained Accessory Power Relays)



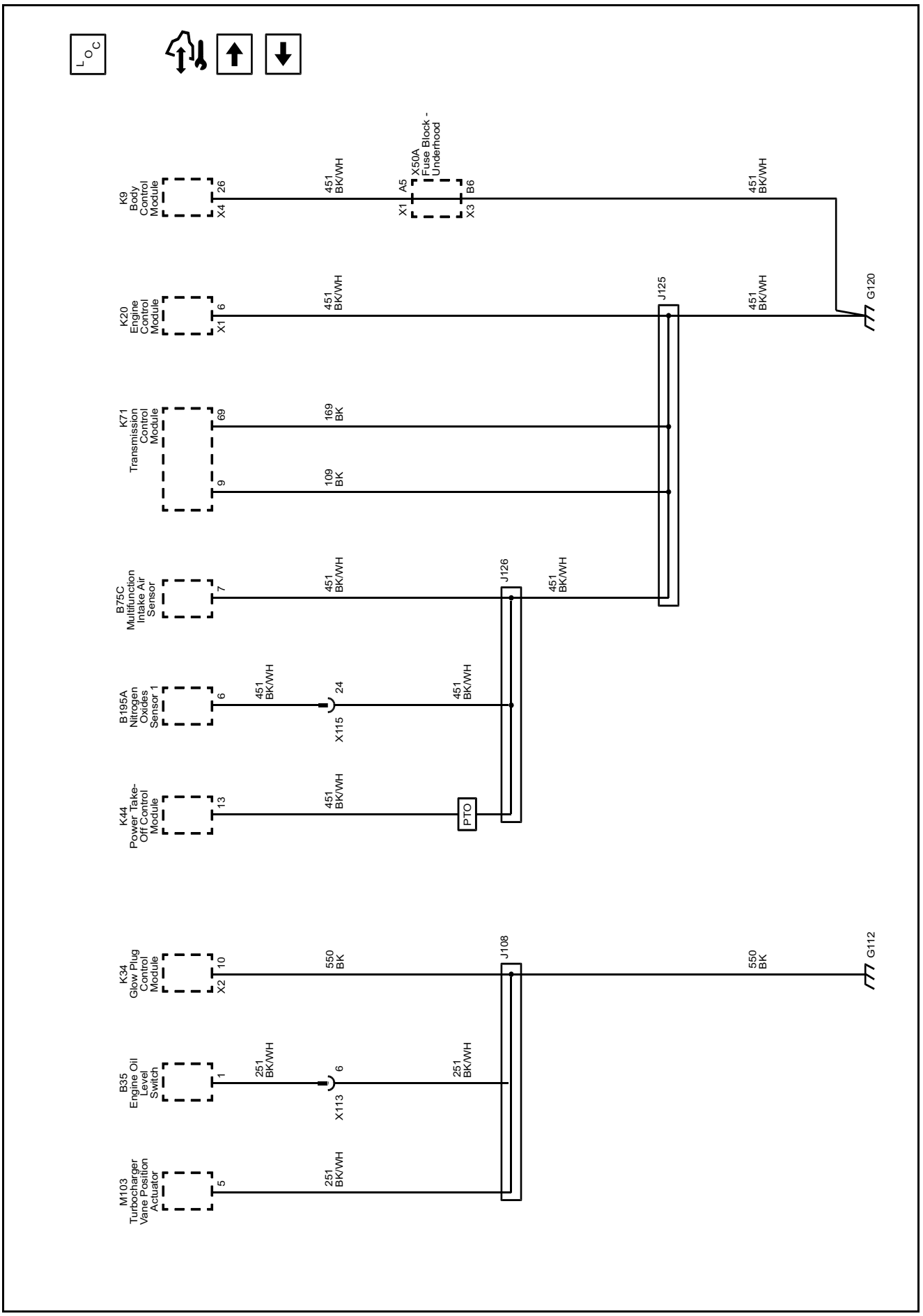
Ground Distribution Schematics (G101 and G102)

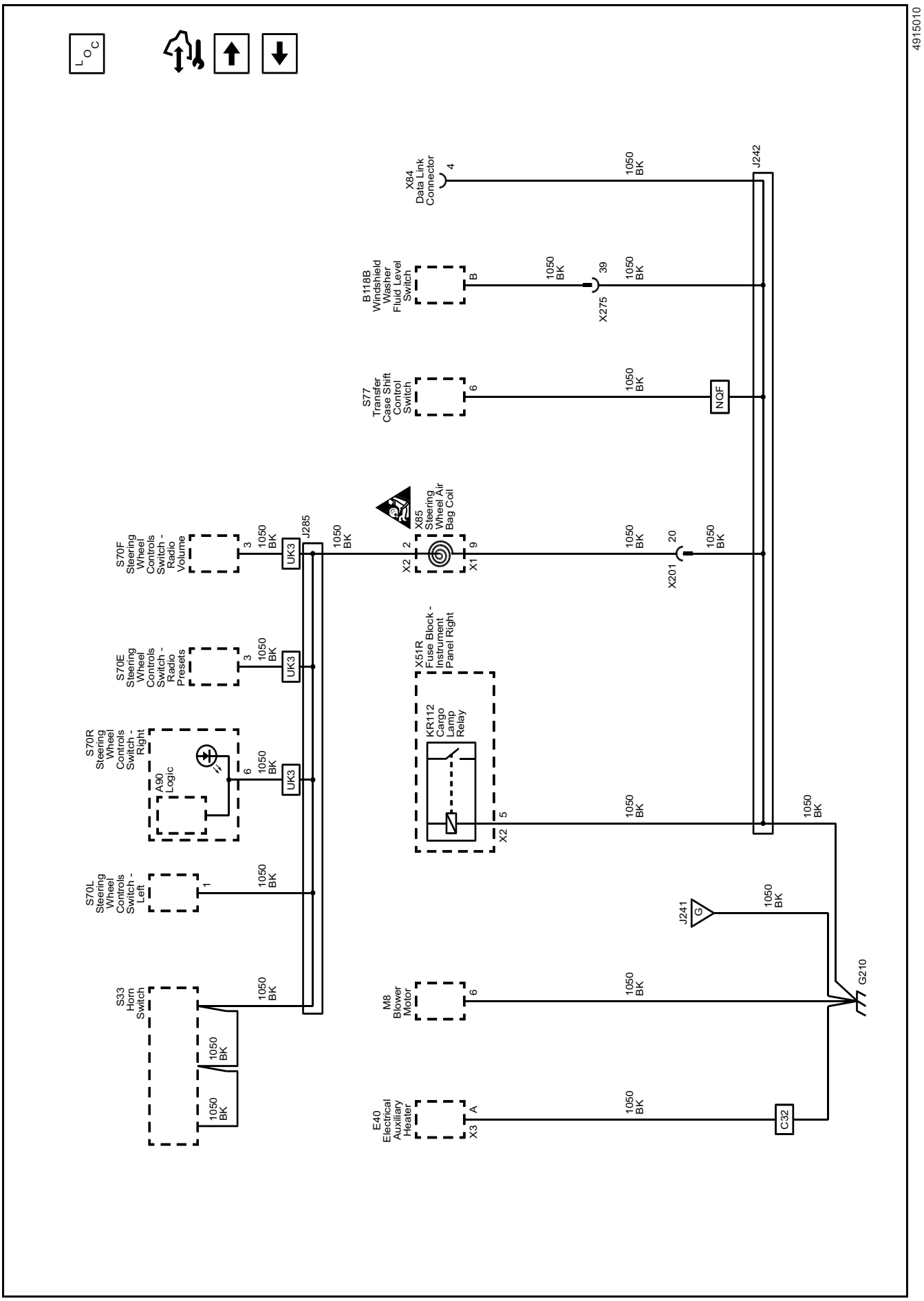


Ground Distribution Schematics (G110 and G141)

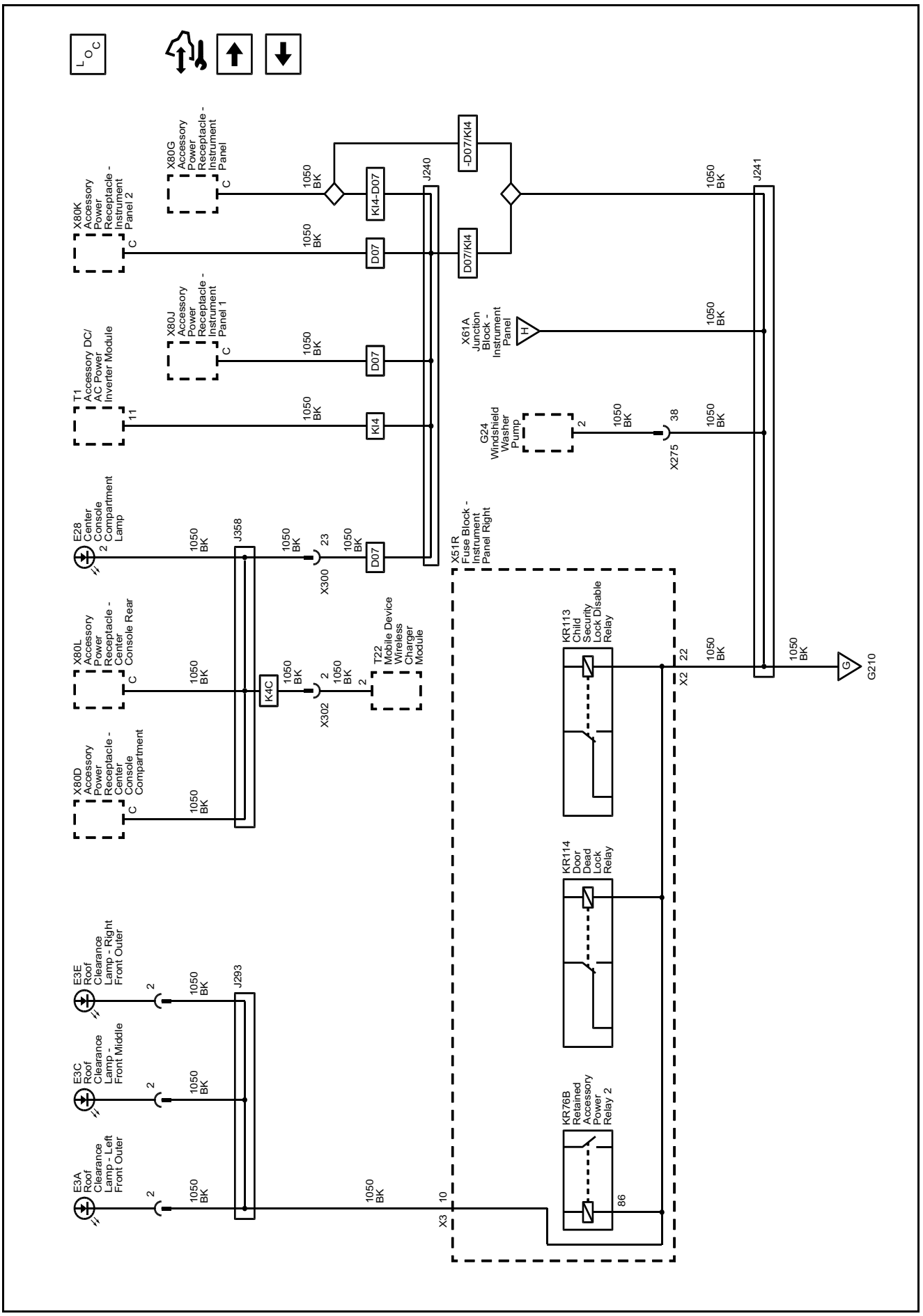


Ground Distribution Schematics (G112 and G120)

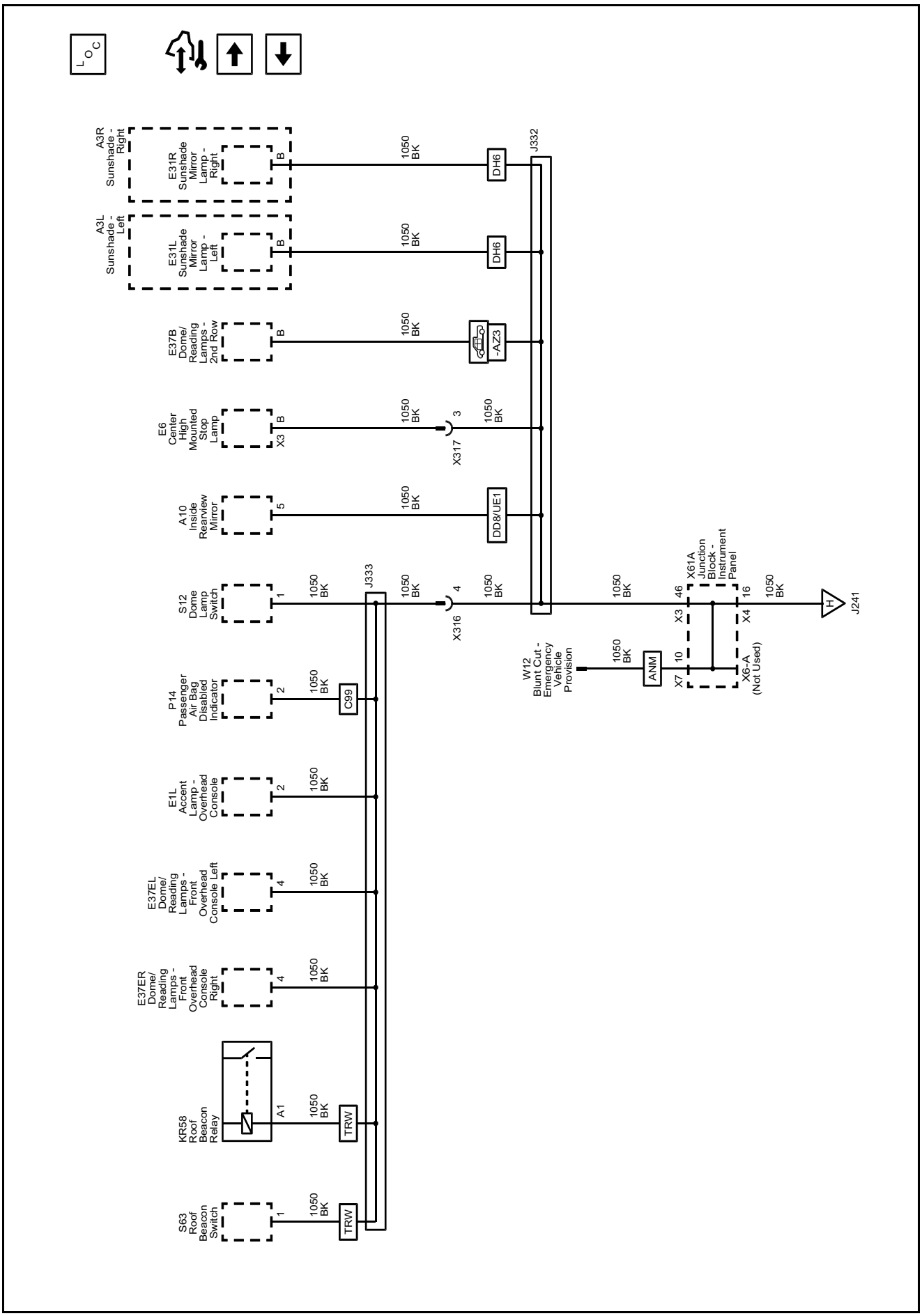



Ground Distribution Schematics (G210 1 of 3)
4915010
X84 Data Link Connector
4
1050 BK
J242
B118B Windshield Washer Fluid Level Switch
B
39
X275
S77 Transfer Case Shift Control Switch
6
NQF
X85 Steering Wheel Air Bag Coil
X2 2
X1 9
X201 20
S70F Steering Wheel Controls Switch - Radio Volume
3
UK3
J285
S70E Steering Wheel Controls Switch - Radio Presets
S70R Steering Wheel Controls Switch - Right
A90 Logic
6
S70L Steering Wheel Controls Switch - Left
1
X51R Fuse Block - Instrument Panel Right
KR112 Cargo Lamp Relay
X2 5
S33 Horn Switch
M8 Blower Motor
E40 Electrical Auxiliary Heater
X3 A
J241
G
C32
G210

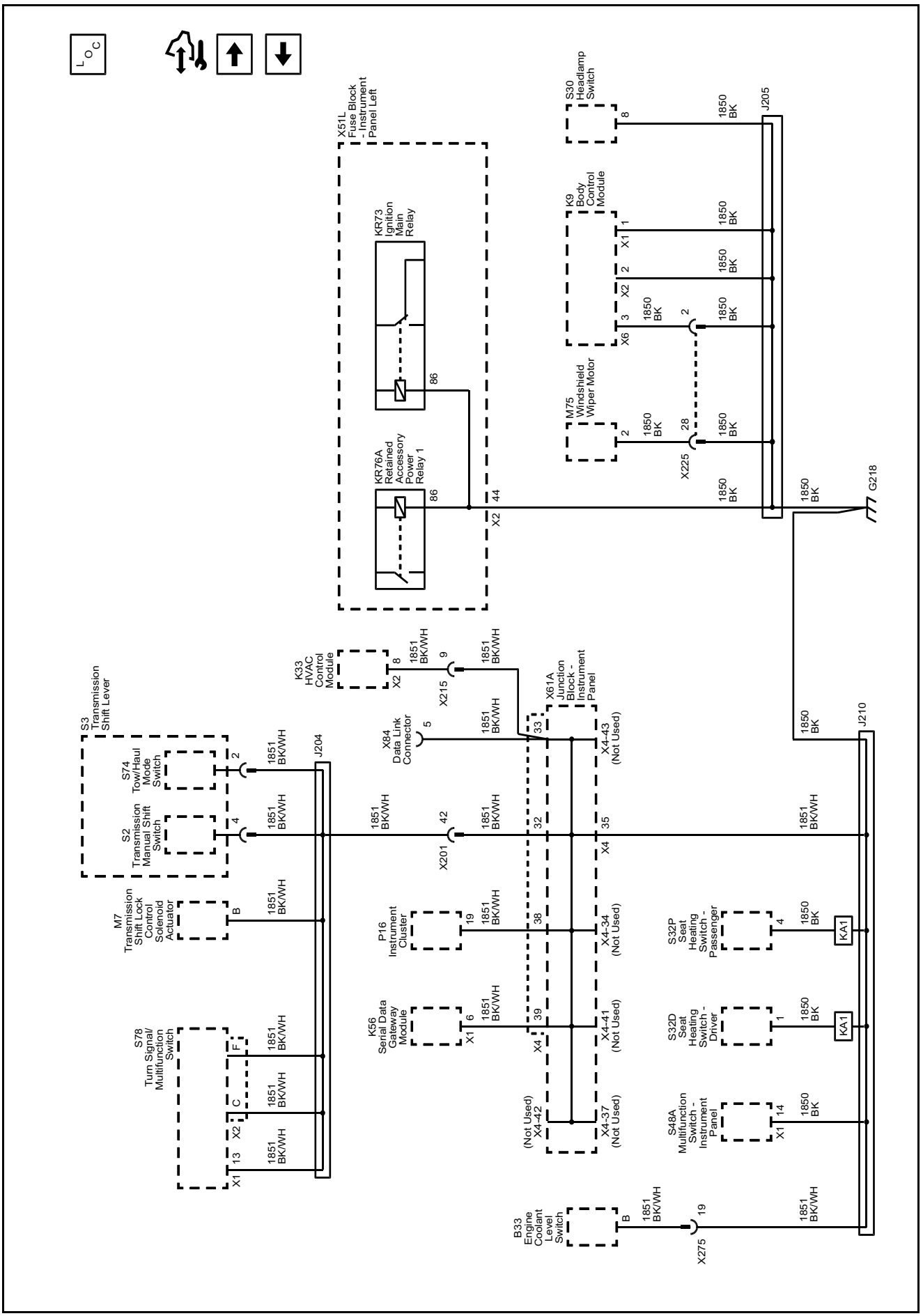
Ground Distribution Schematics (G210 2 of 3)



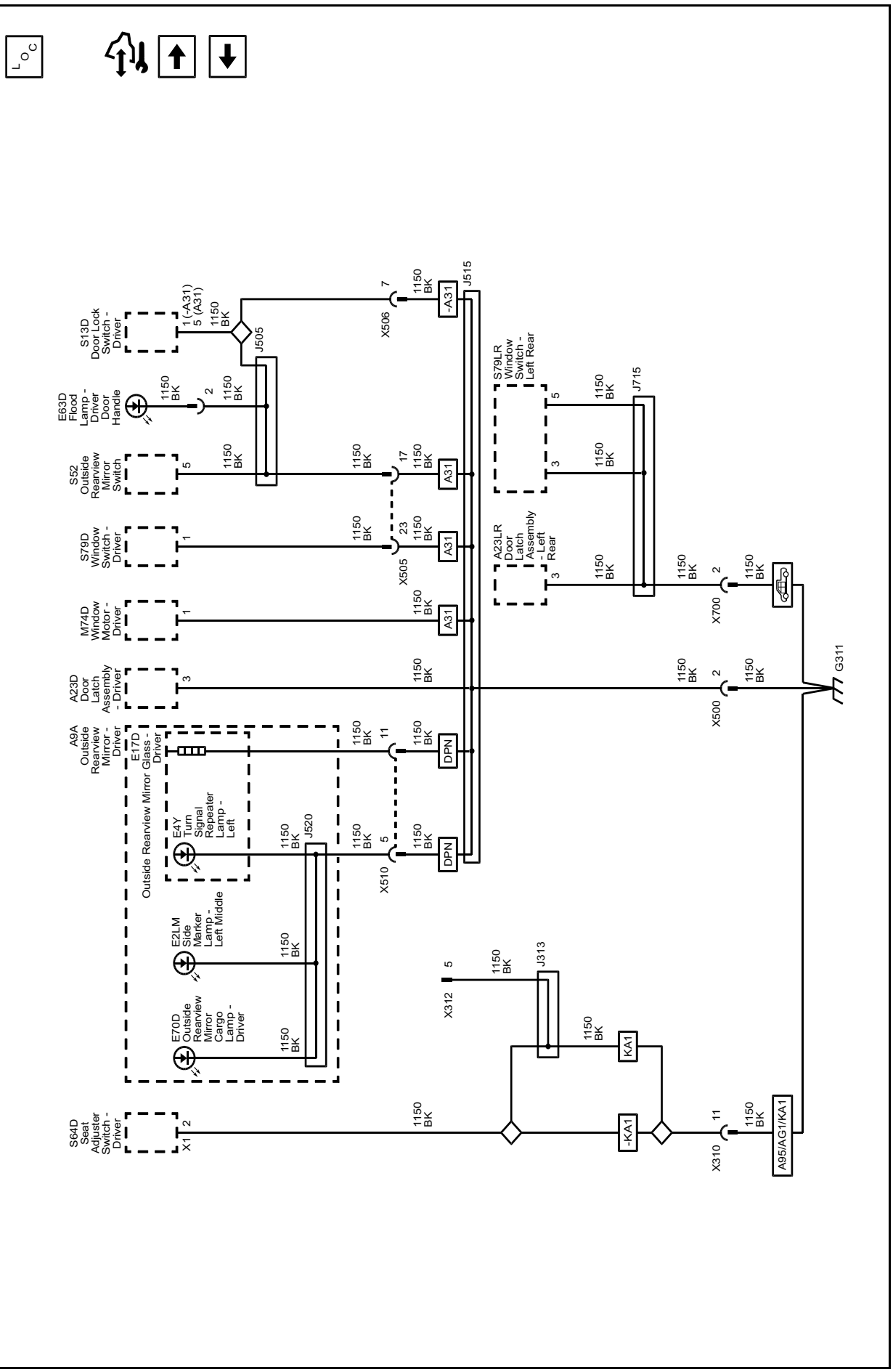
Ground Distribution Schematics (G210 3 of 3)



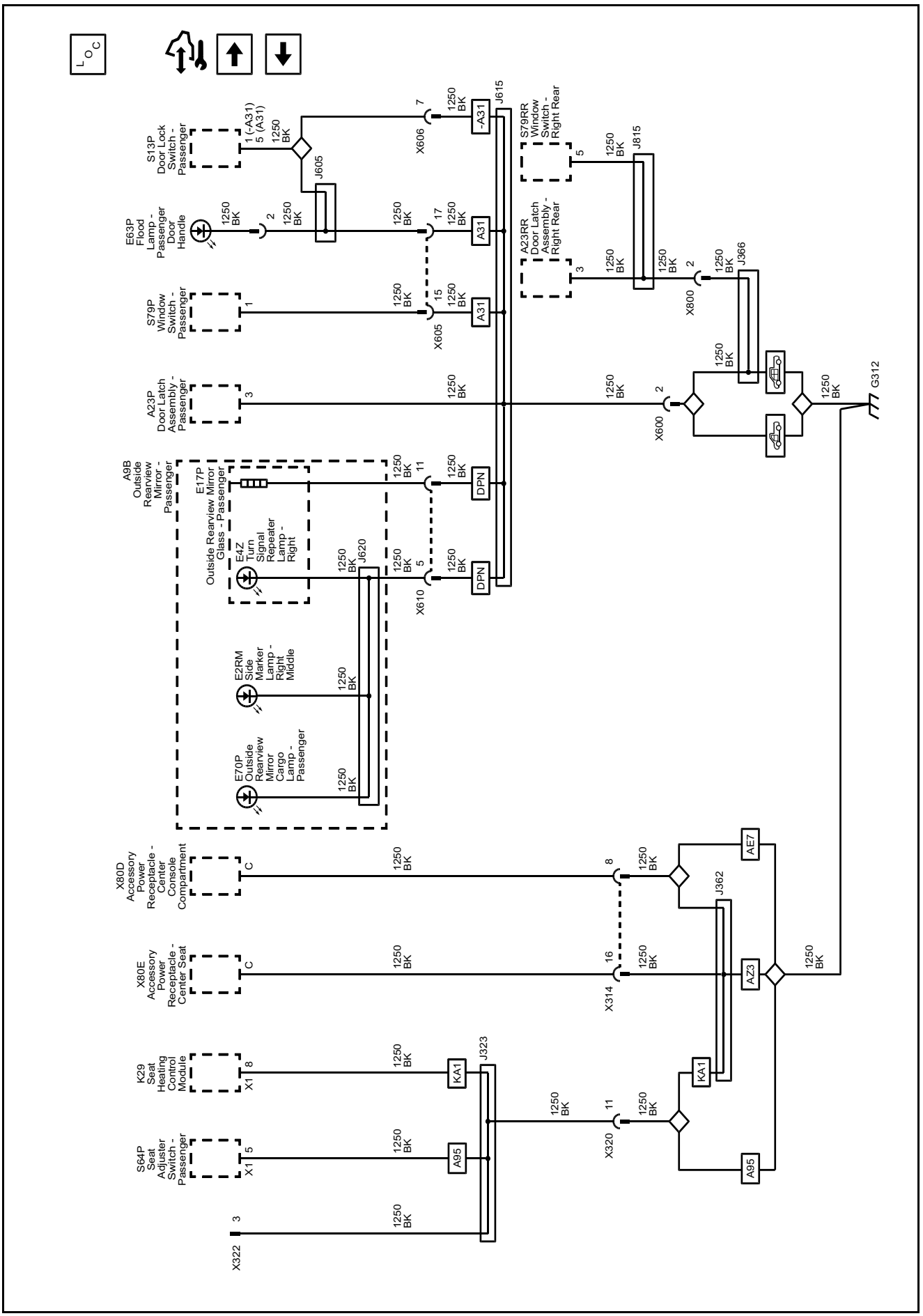
Ground Distribution Schematics (G218)



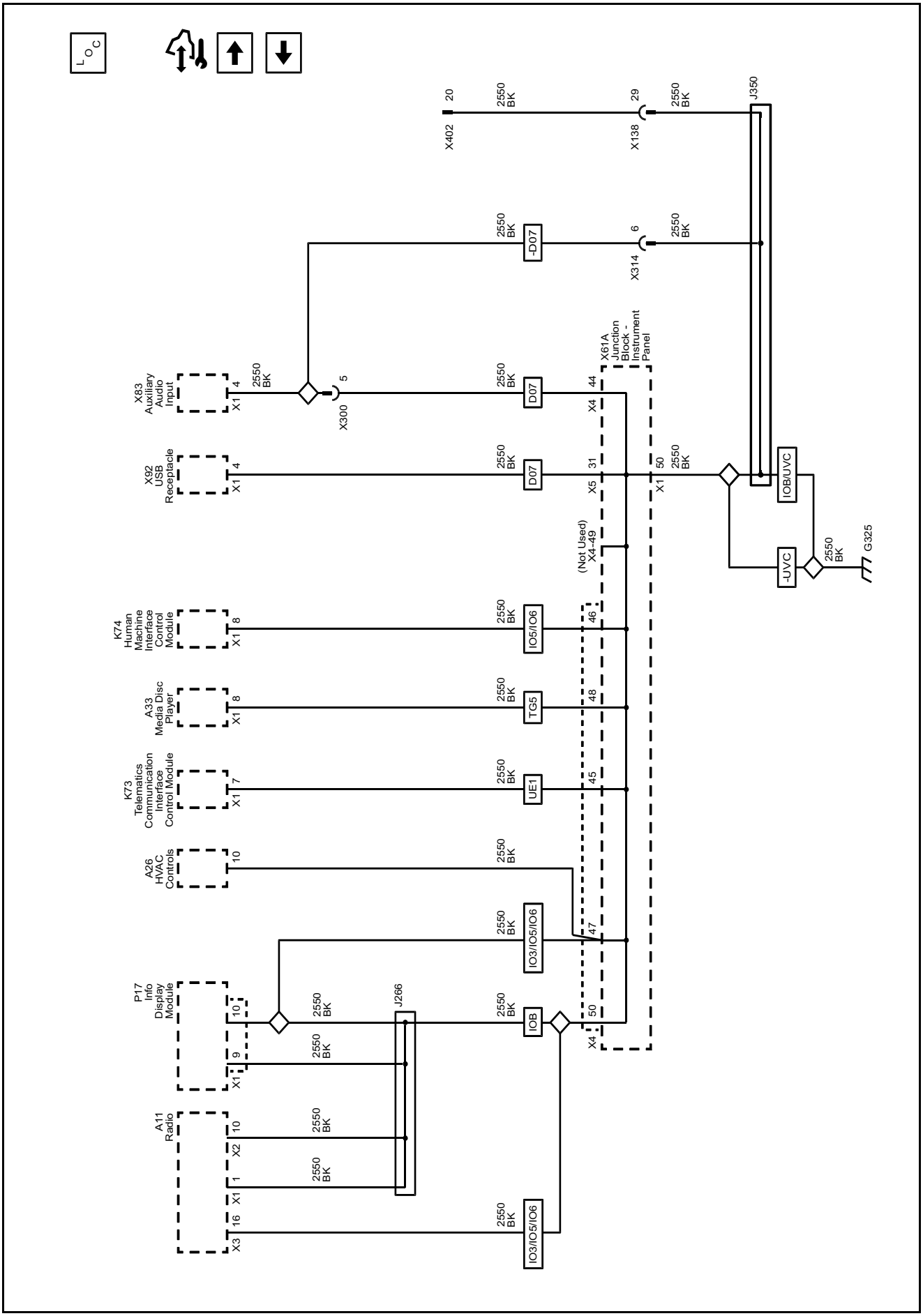
Ground Distribution Schematics (G311)



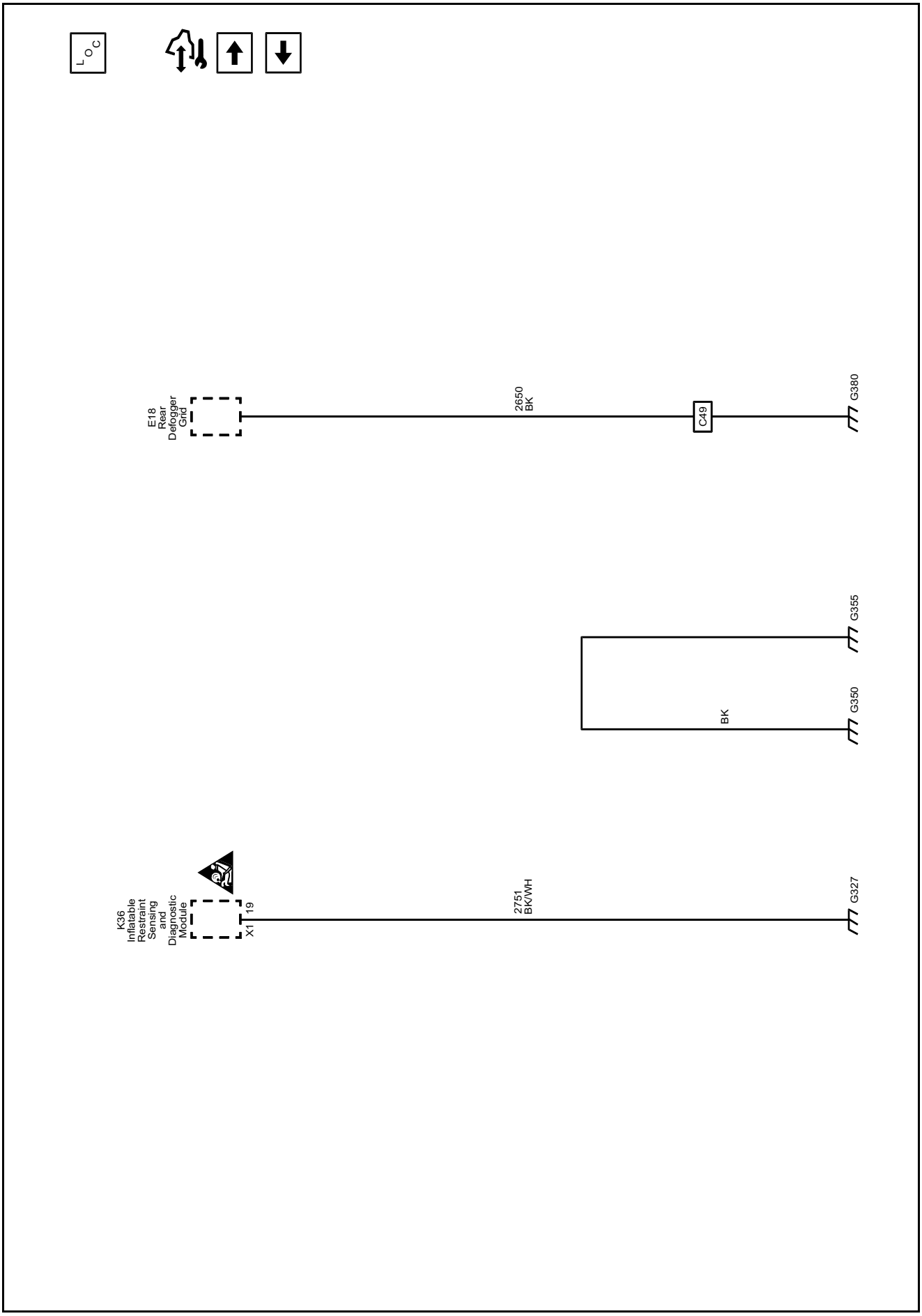
Ground Distribution Schematics (G312)



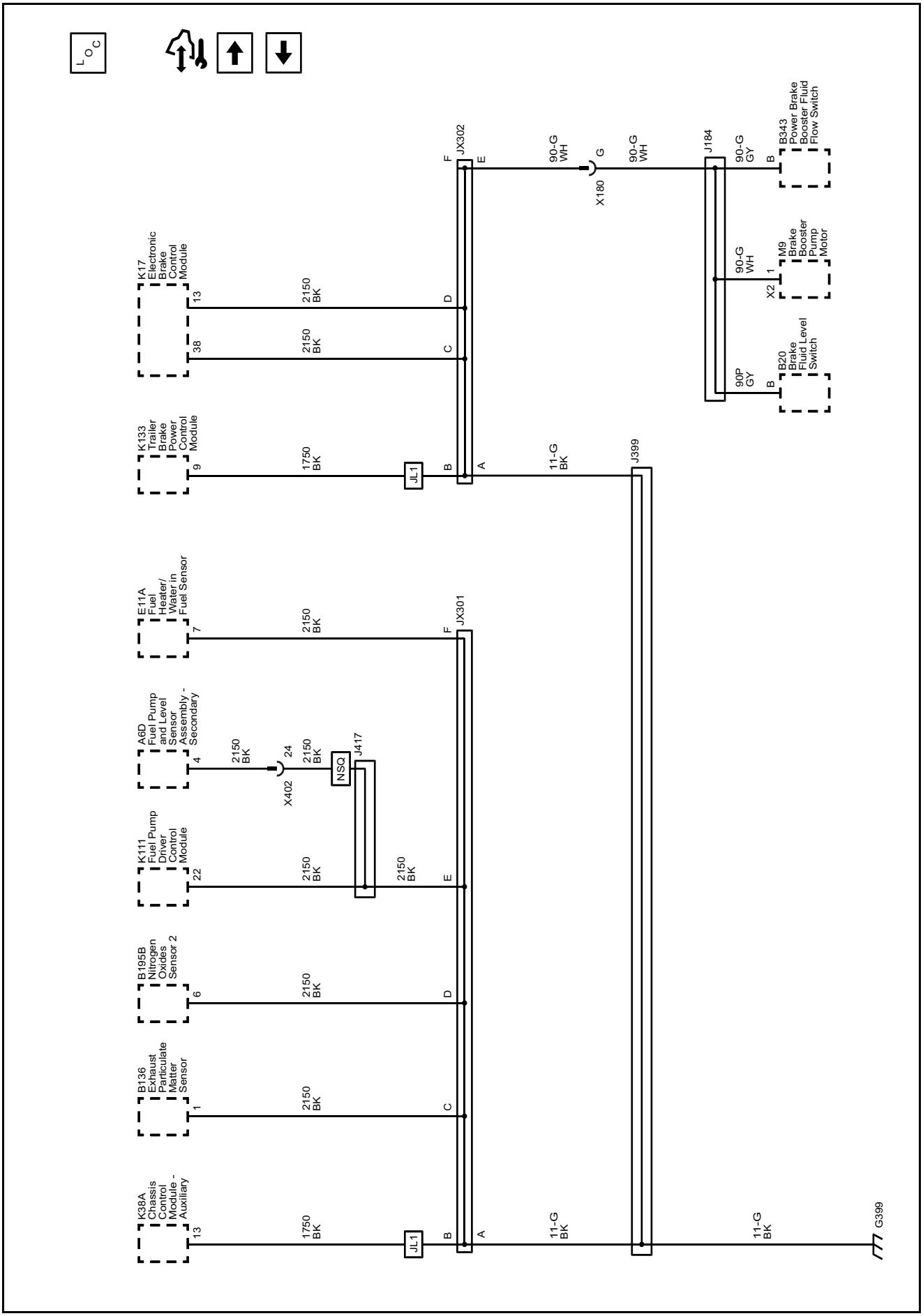
Ground Distribution Schematics (G325)



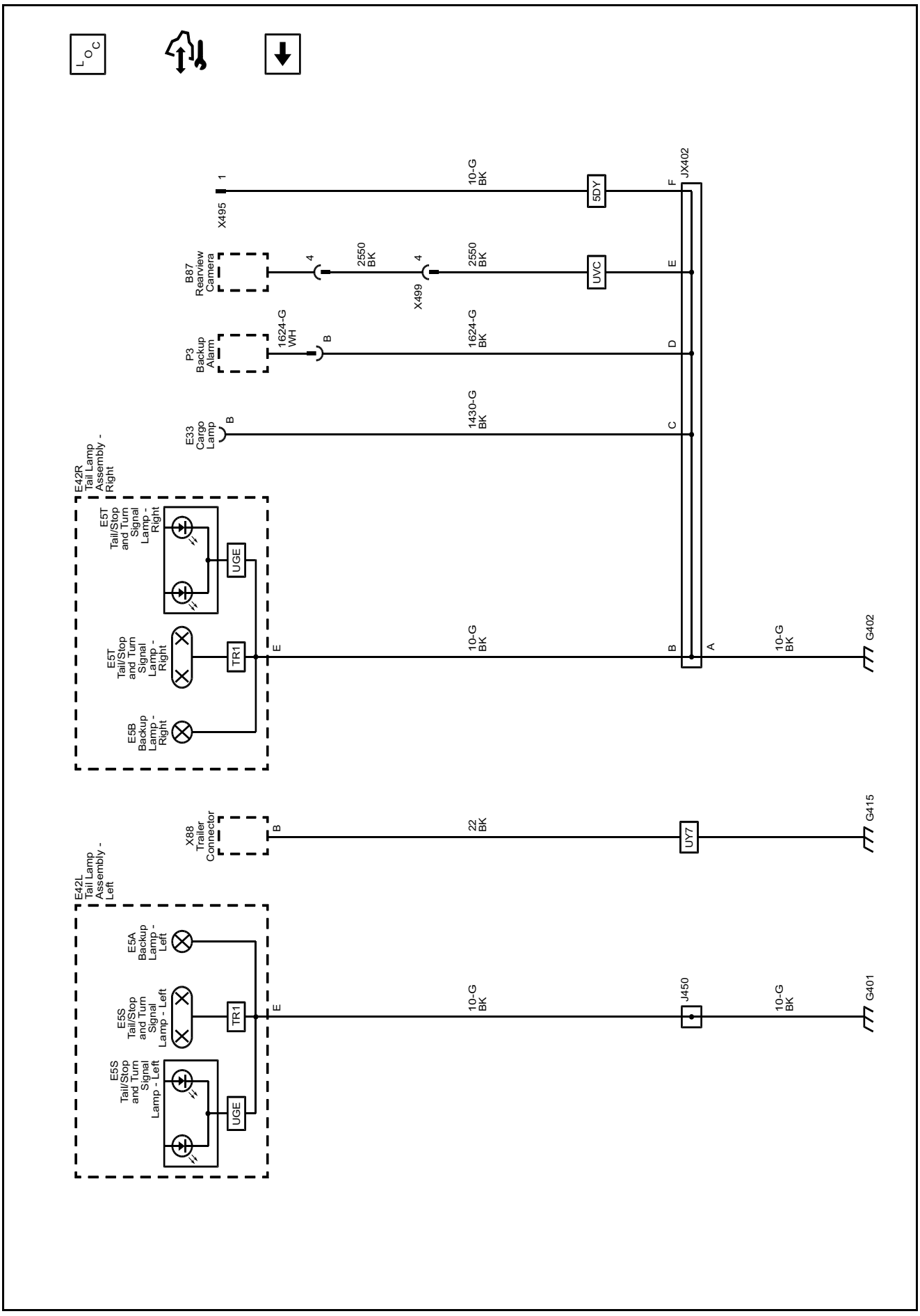
Ground Distribution Schematics (G327, G350, G355 and G380)



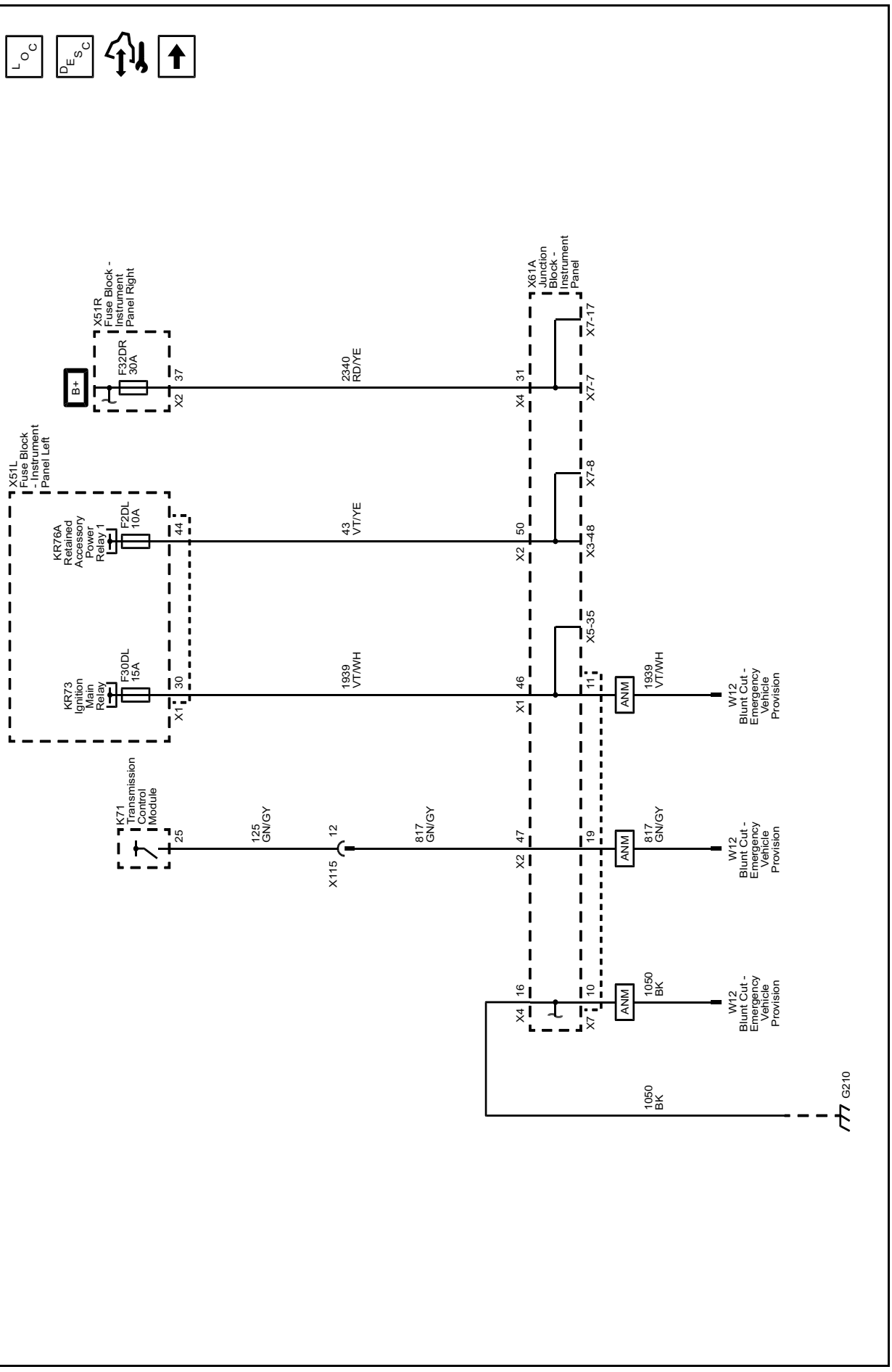
Ground Distribution Schematics (G399)



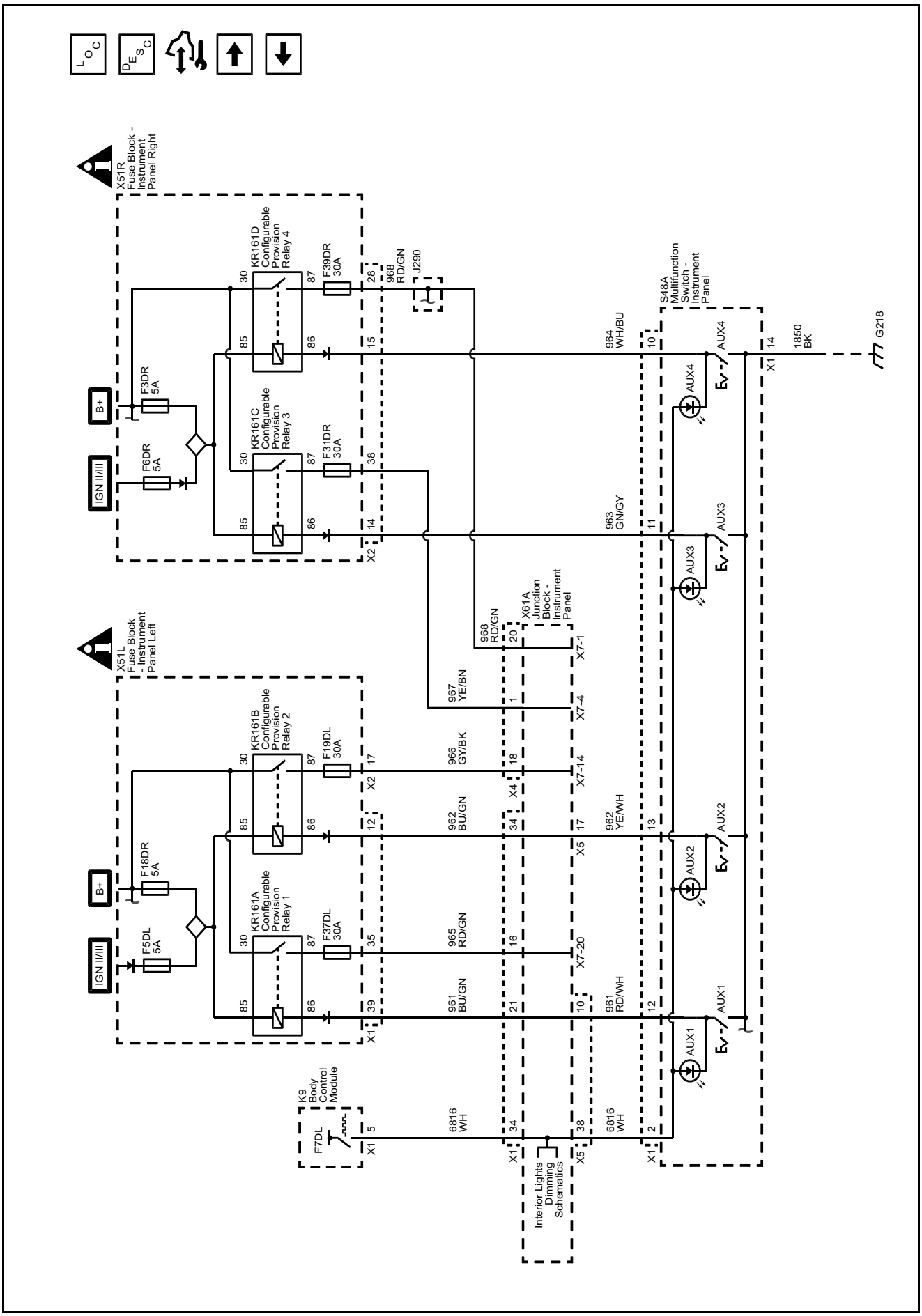
Ground Distribution Schematics (G401, G402 and G415)



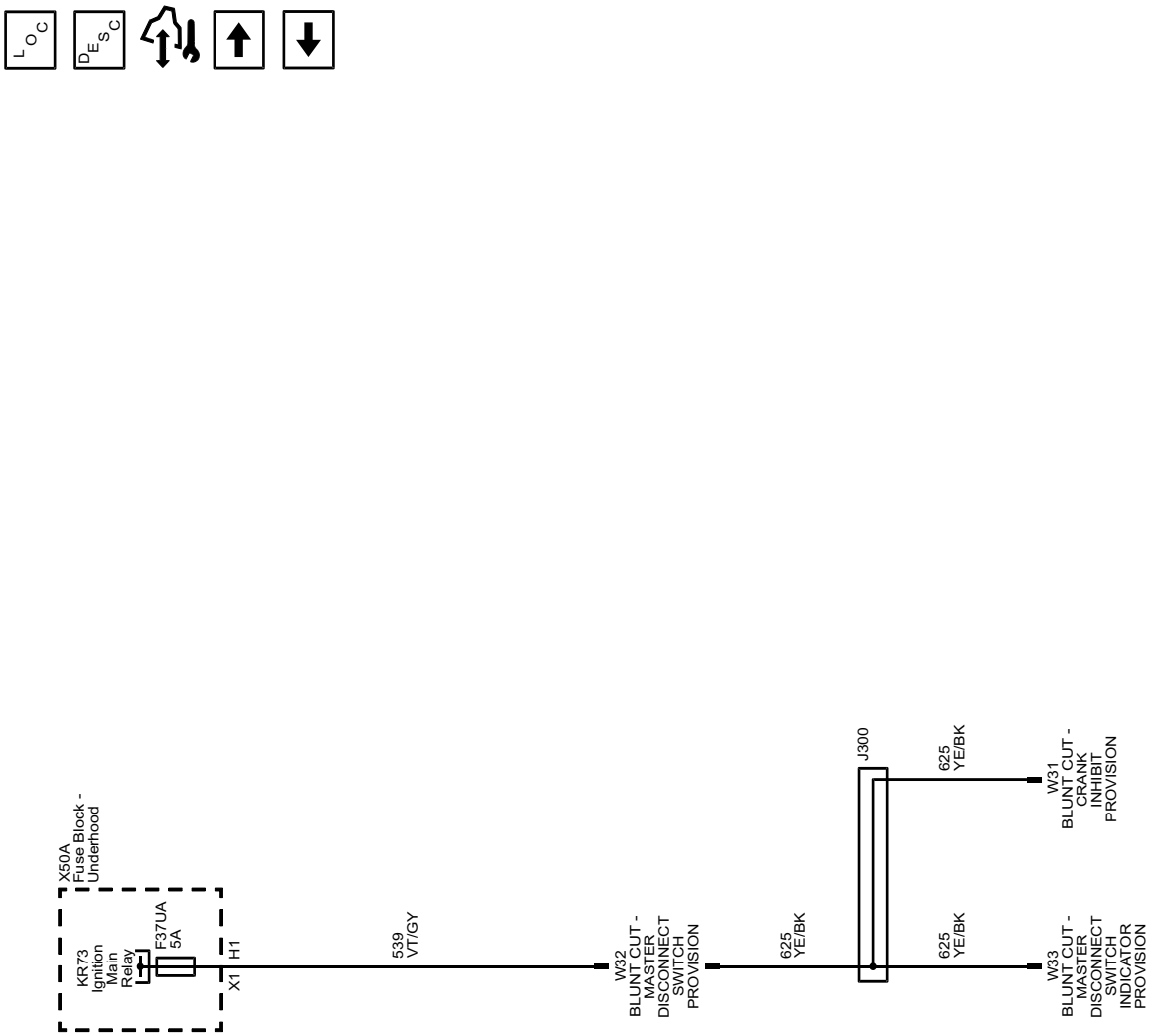
Upfitter Provision Schematics (Upfitter Provisions at Junction Block - Instrument Panel)



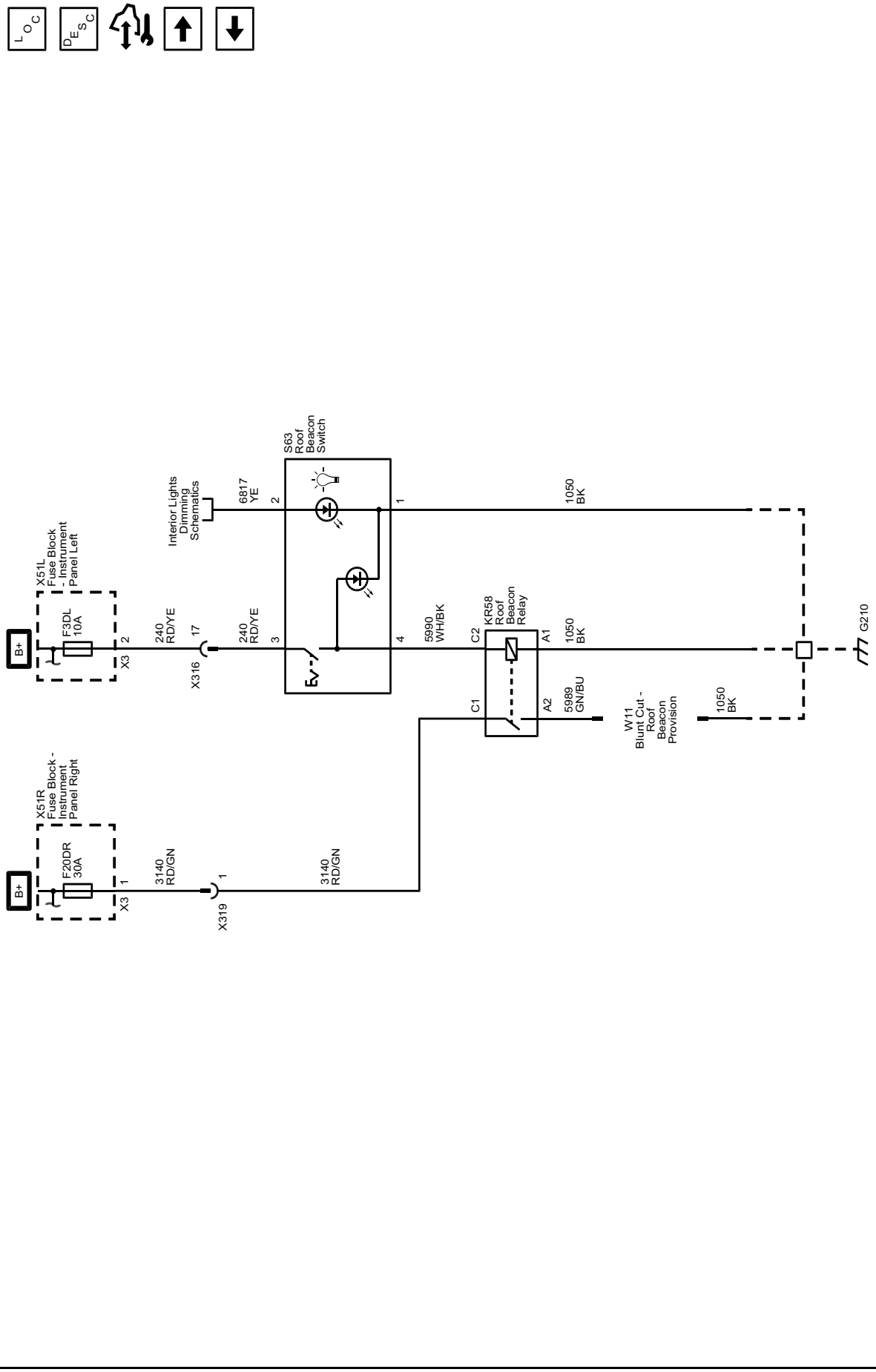
Upfitter Provision Schematics (Upfitter Provisions at Junction Block - Instrument Panel (9L7))



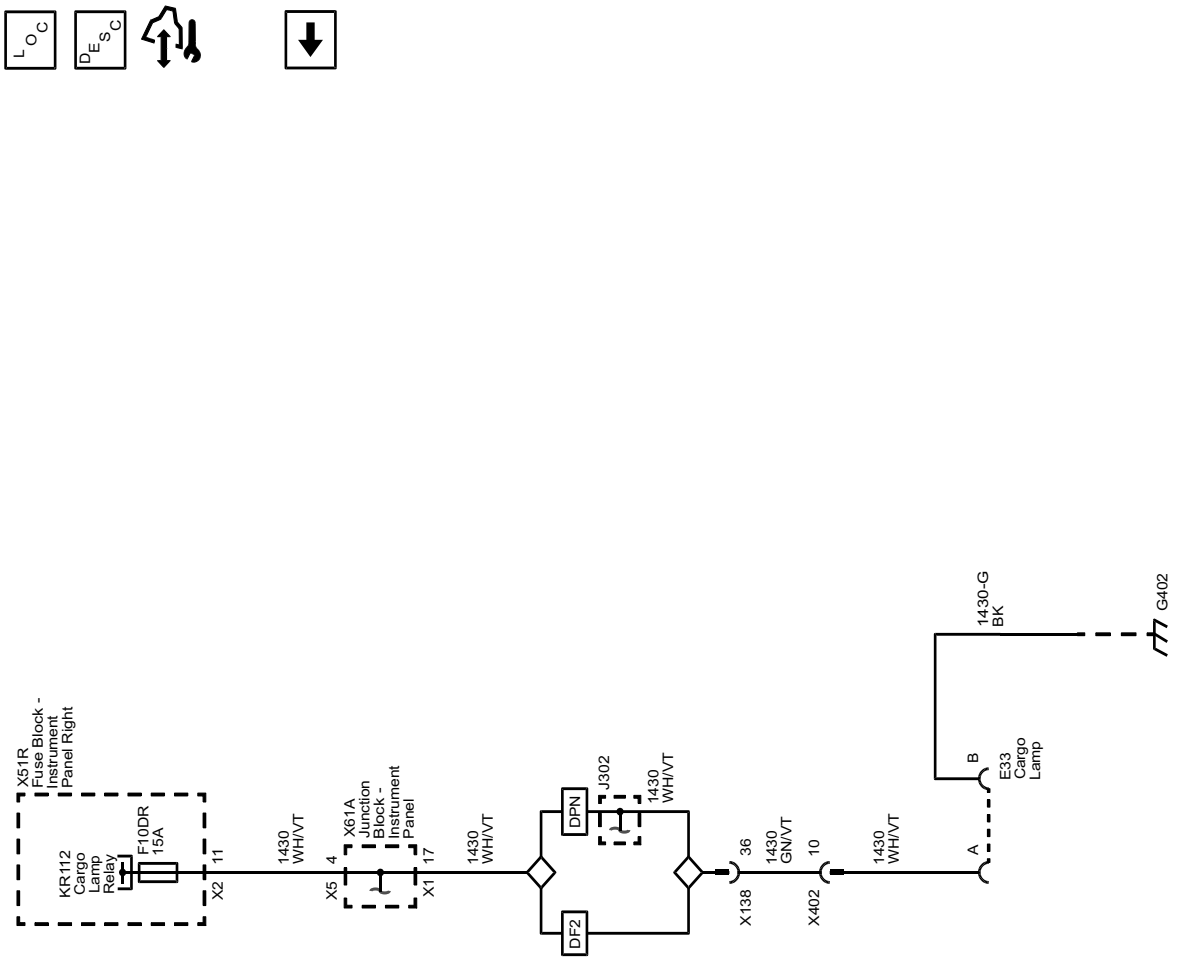
Upfitter Provision Schematics (Starter Interupt Provisions)



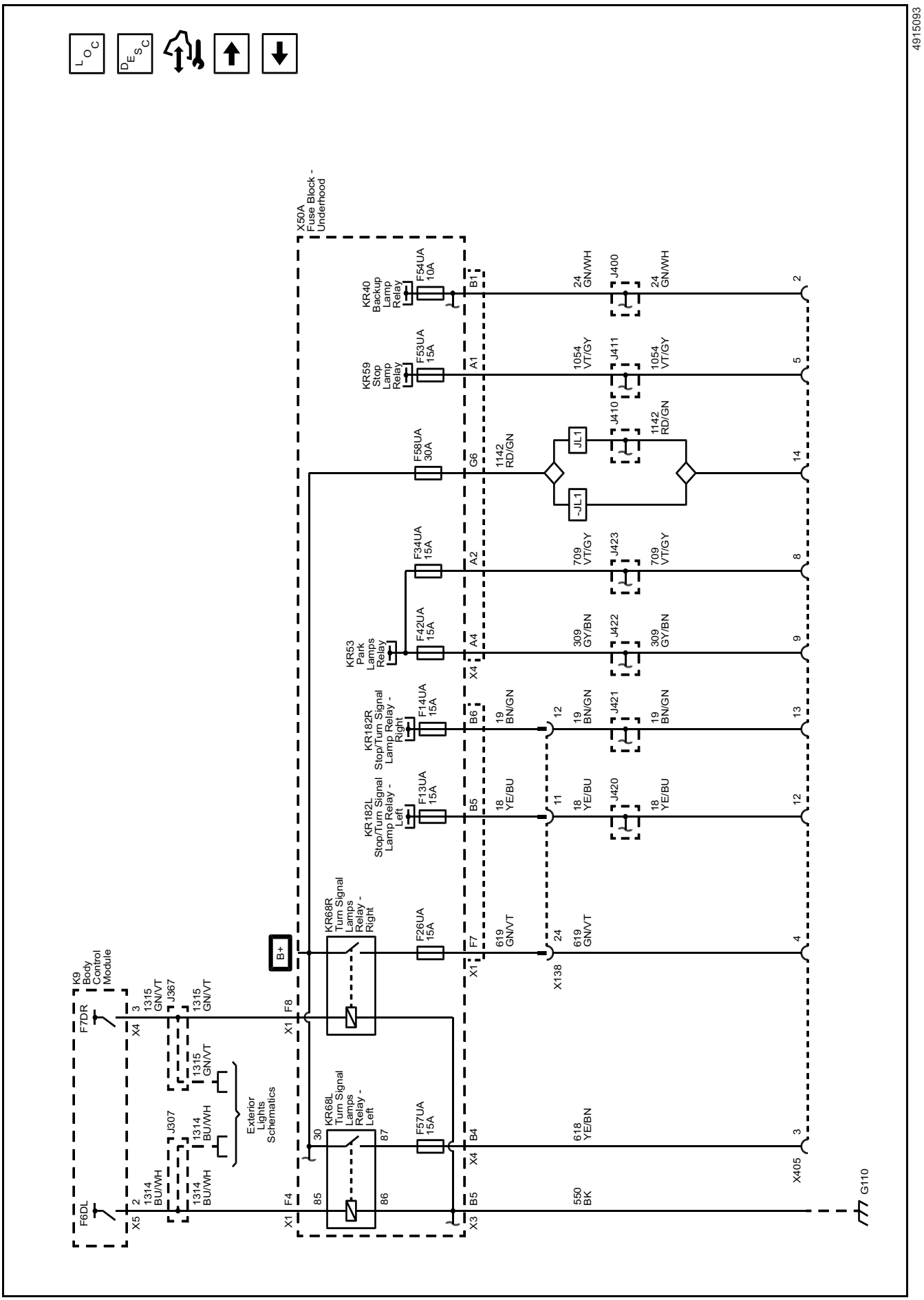
Upfitter Provision Schematics (Roof Beacon Provisions (TRW))



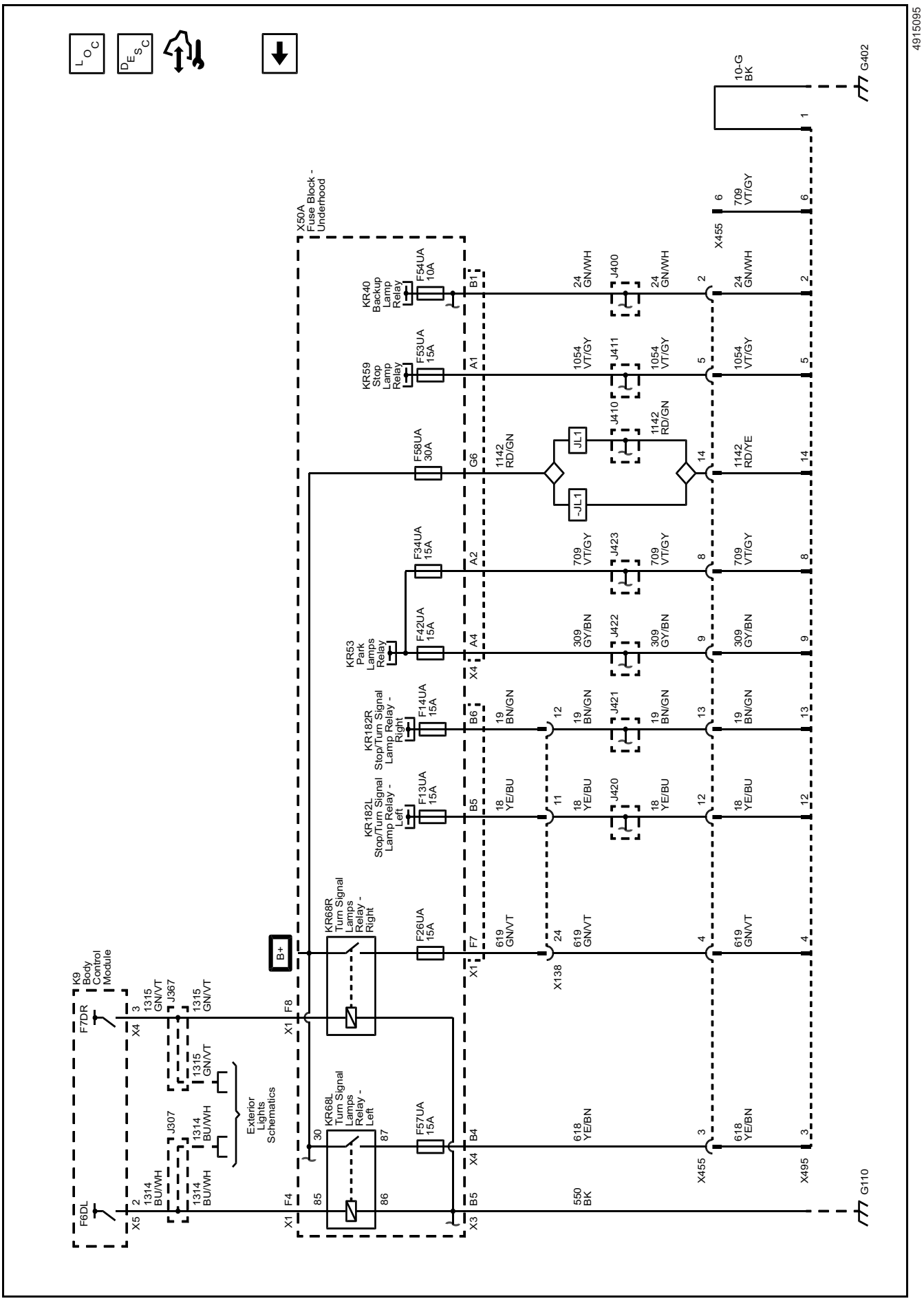
Upfitter Provision Schematics (Cargo Lamp Provision)



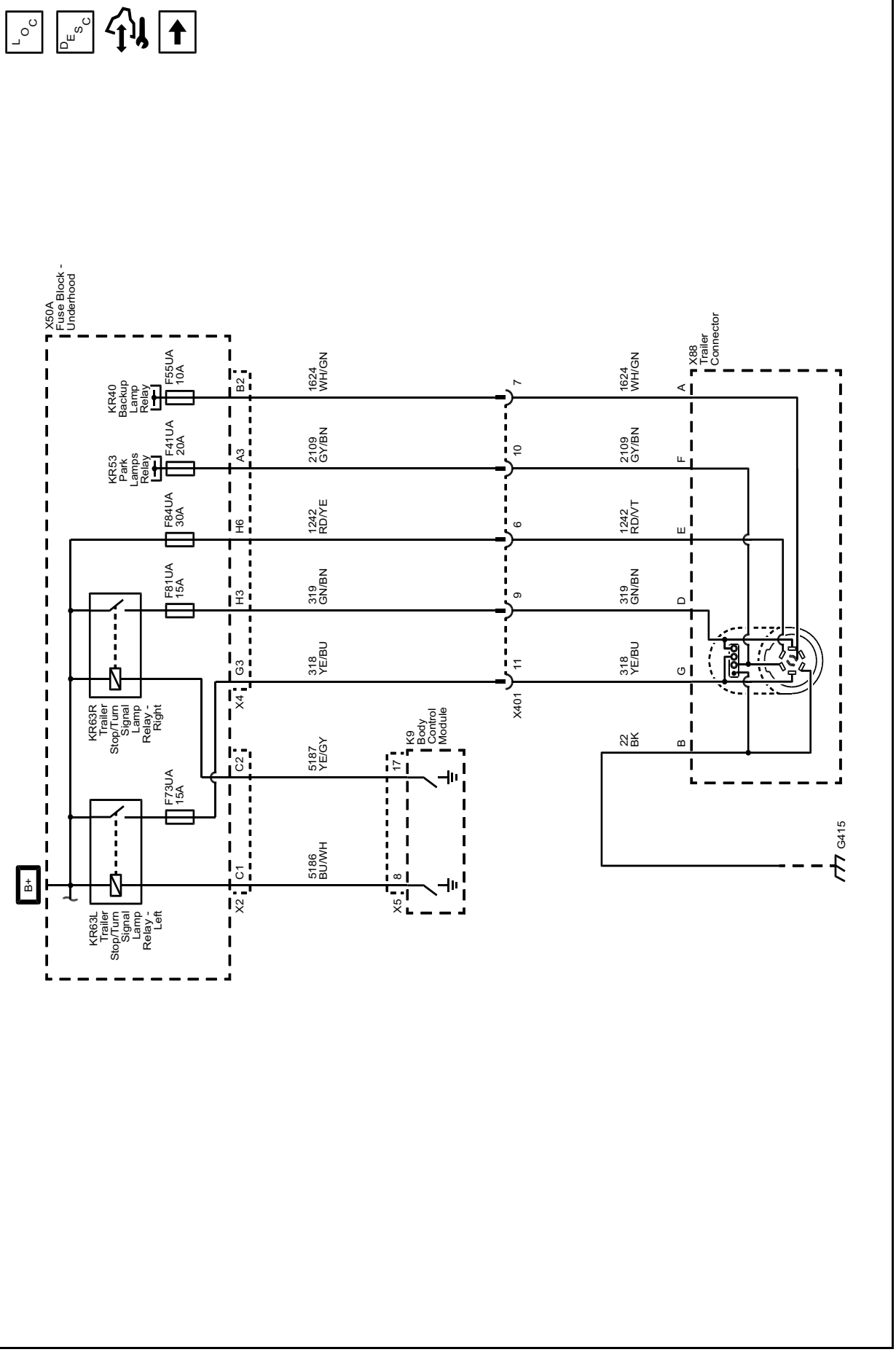
Upfitter Provision Schematics (Rear of Cab Provisions (5DX))



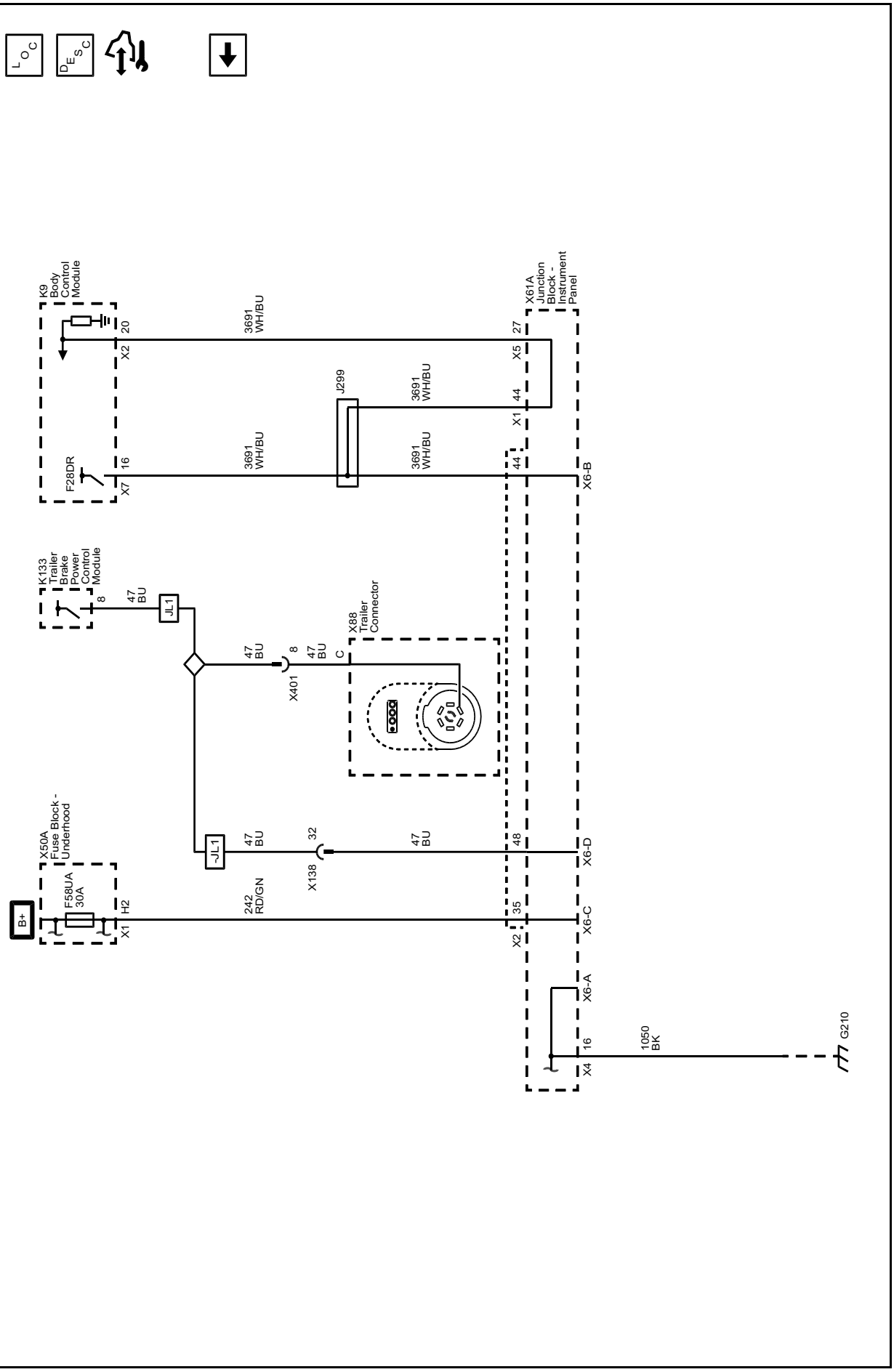
Upfitter Provision Schematics (Rear of Frame Provisions (5DY))



Trailer Connector/Provision Schematics (Trailer Connector Pins: A, B, D, E, F, G (UY7))



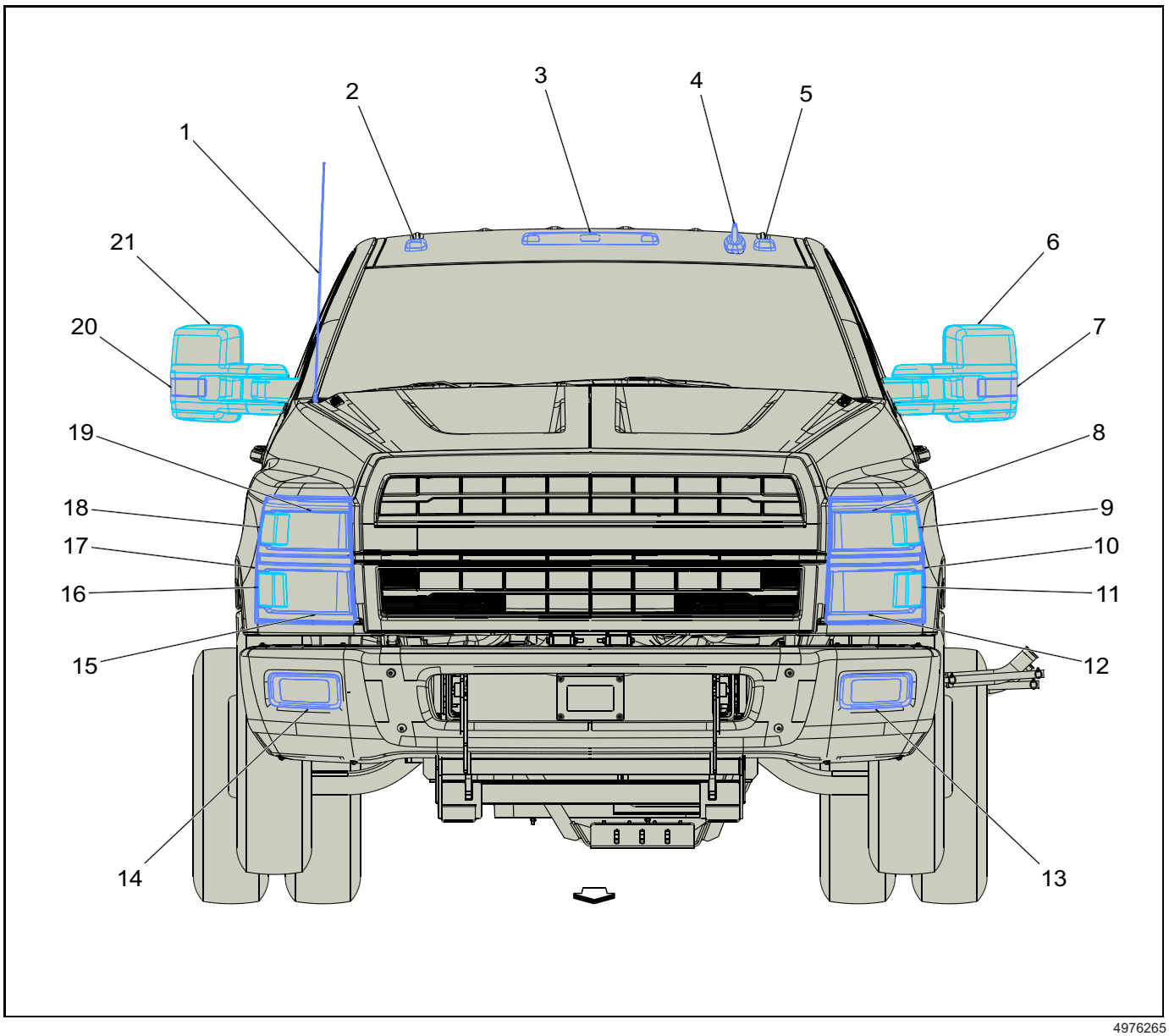
Trailer Connector/Provision Schematics (Trailer Connector Pin: C (UY7))



Component Locator

Front of Vehicle/Engine Compartment Component Views

Front of Vehicle Components



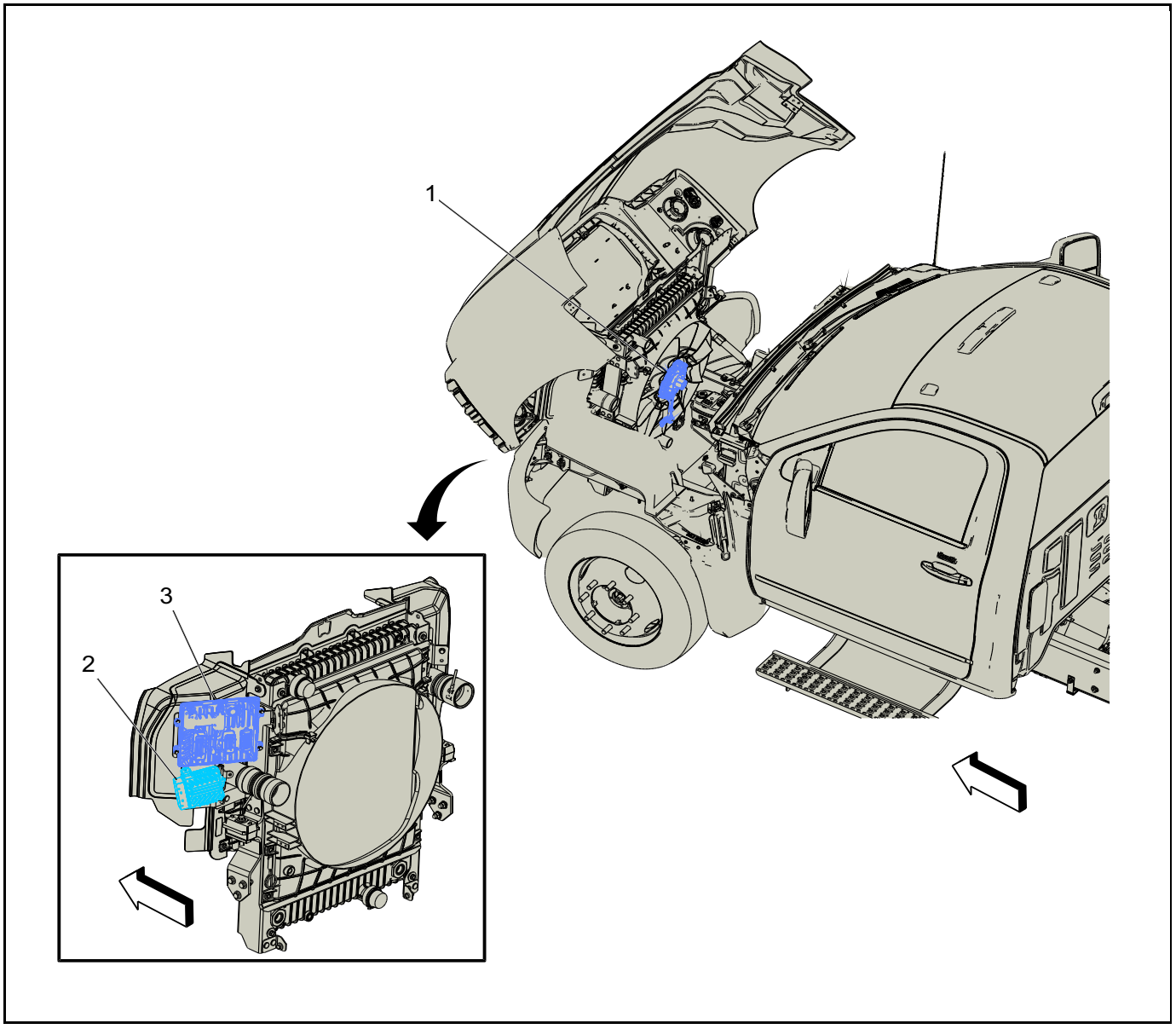
4976265

Items

(1) T4M Radio Antenna
(2) E3E Roof Clearance Lamp - Right Front Outer
(3) E3C Roof Clearance Lamp - Front Middle
(4) T2RF Antenna - Roof Front (IO6/U2K/UE1)
(5) E3A Roof Clearance Lamp - Left Front Outer
(6) A9A Outside Rearview Mirror - Driver
(7) E2LM Side Marker Lamp - Left Middle (DPN)
(8) E4G Headlamp - Left Low Beam
(9) E4S Park/Turn Signal Lamp - Left Upper
(10) E13LA Headlamp Assembly - Left
(11) E4Q Park/Turn Signal Lamp - Left Lower
(12) E4E Headlamp - Left High Beam
(13) E29LF Fog Lamp - Left Front (T3U)
(14) E29RF Fog Lamp - Right Front (T3U)
(15) E4F Headlamp - Right High Beam
(16) E4R Park/Turn Signal Lamp - Right Lower
(17) E13RA Headlamp Assembly - Right
(18) E4T Park/Turn Signal Lamp - Right Upper

(19) E4H Headlamp - Right Low Beam
(20) E2RM Side Marker Lamp - Right Middle (DPN)
(21) A9B Outside Rearview Mirror - Passenger

Radiator Support Components

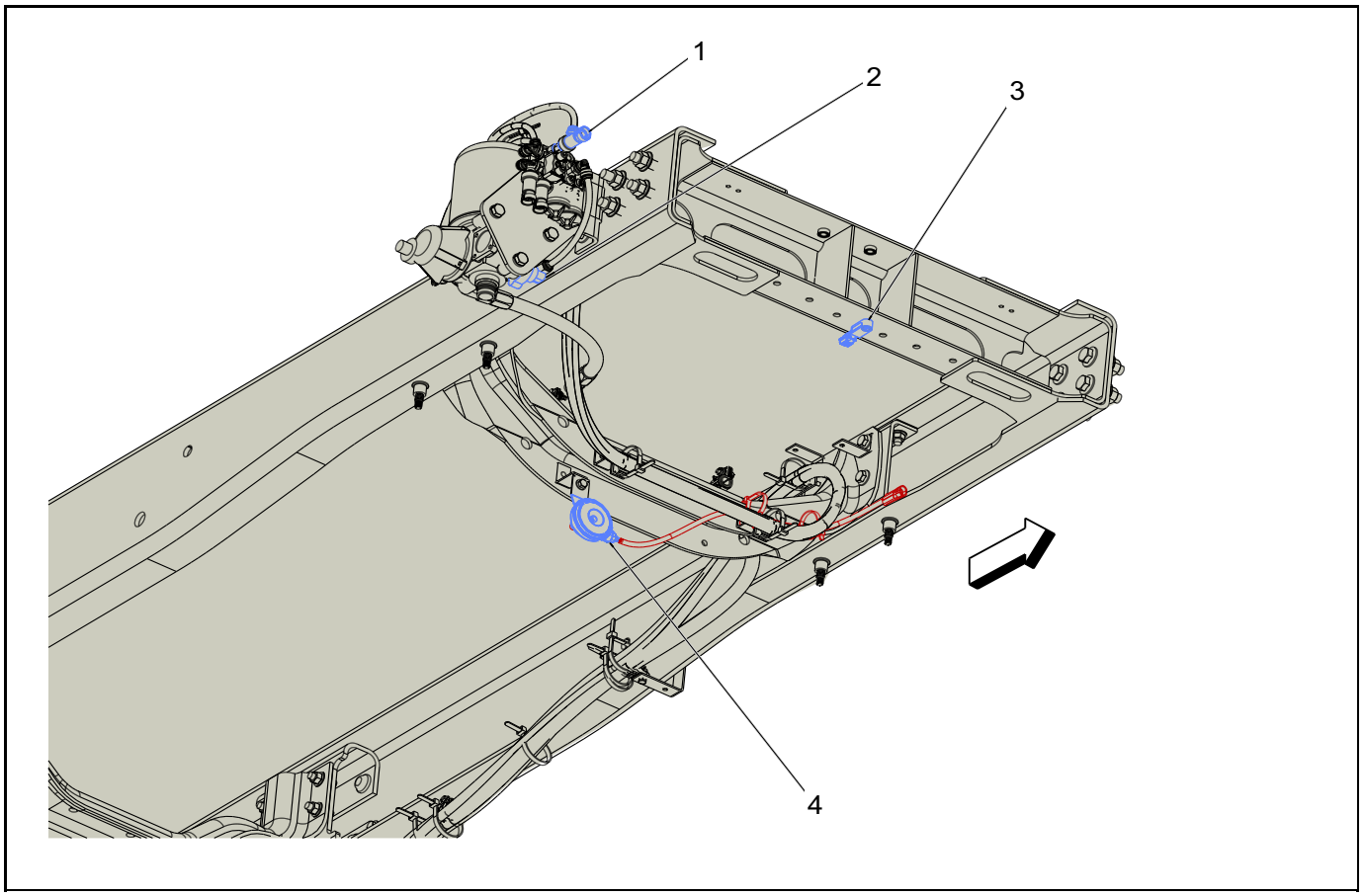


4975670

Items

(1) Q85 Cooling Fan Clutch
(2) K71 Transmission Control Module
(3) K20 Engine Control Module

Front of Frame Components



4992541

Items

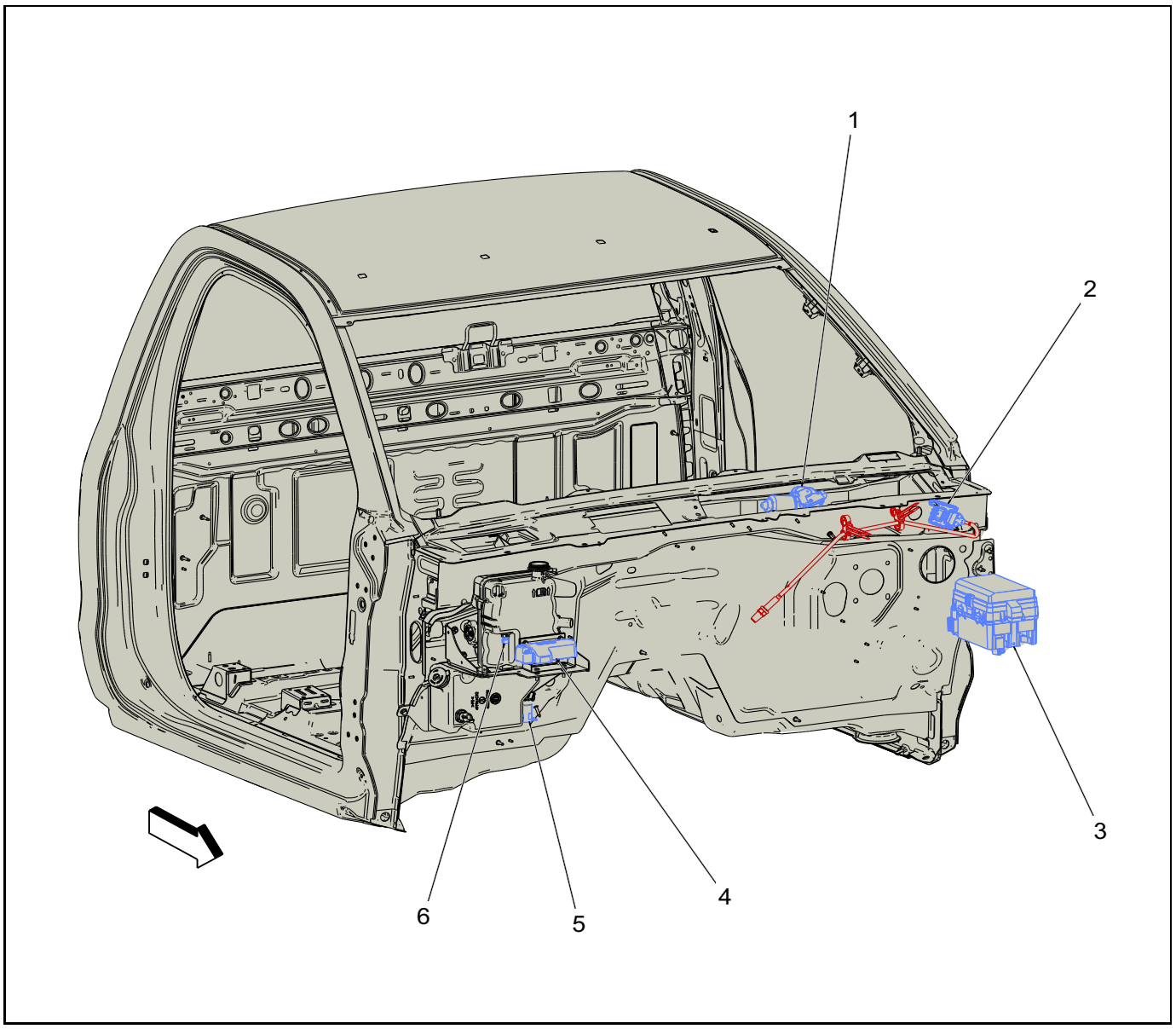
(1) B353 Air Suspension Low Pressure Warning Switch (G40/GP1/GP8)

(2) E91 Air Dryer Valve Heater (JPY)

(3) B59 Front Impact Sensor

(4) P12 Horn

Bulkhead Components - Engine Compartment

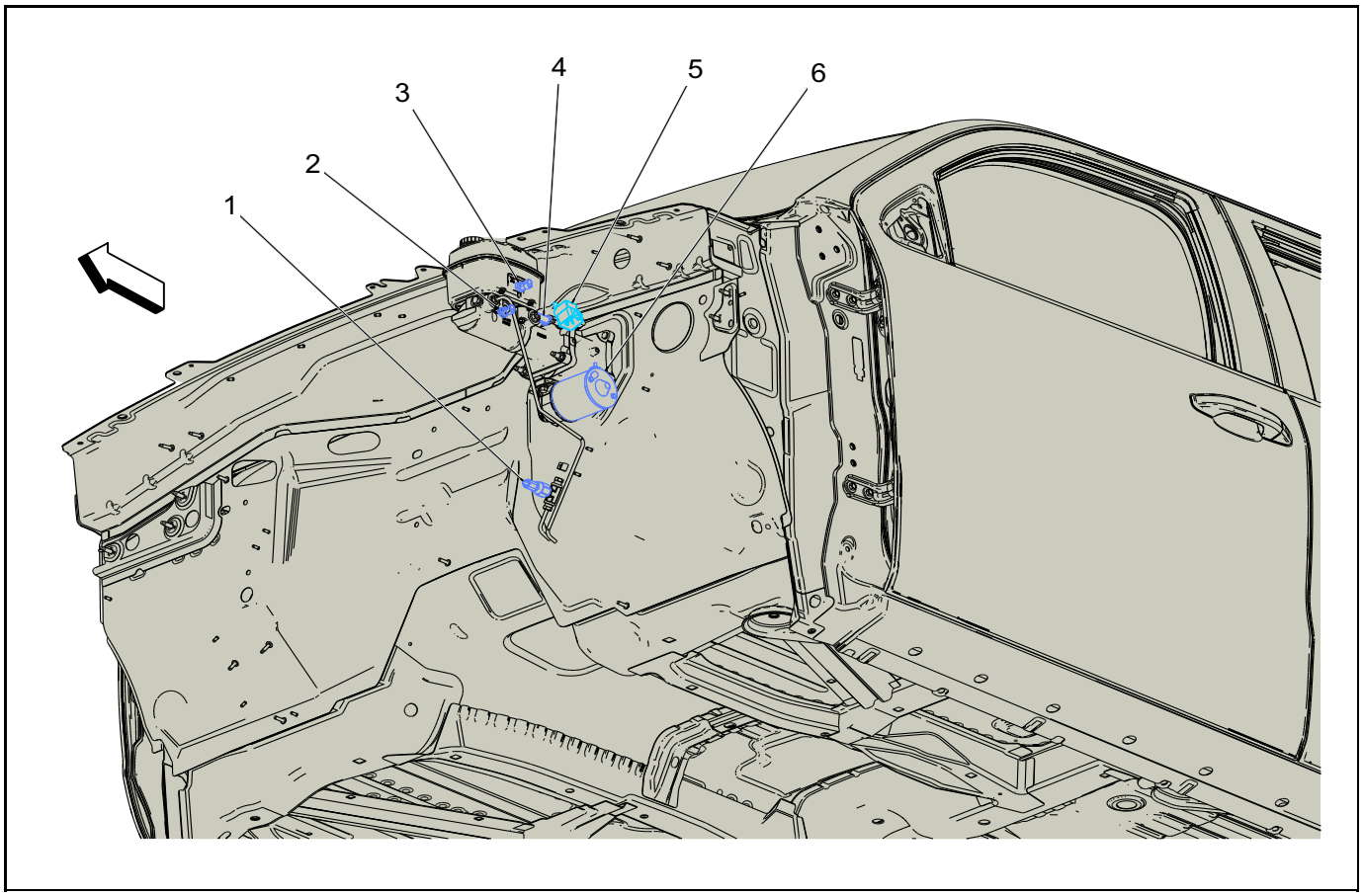


4992542

Items

(1) M75 Windshield Wiper Motor
(2) B195A Nitrogen Oxides Sensor 1
(3) X50A Fuse Block - Underhood
(4) X50D Fuse Block - Battery
(5) G24 Windshield Washer Pump
(6) B33 Engine Coolant Level Switch

Brake Booster Components



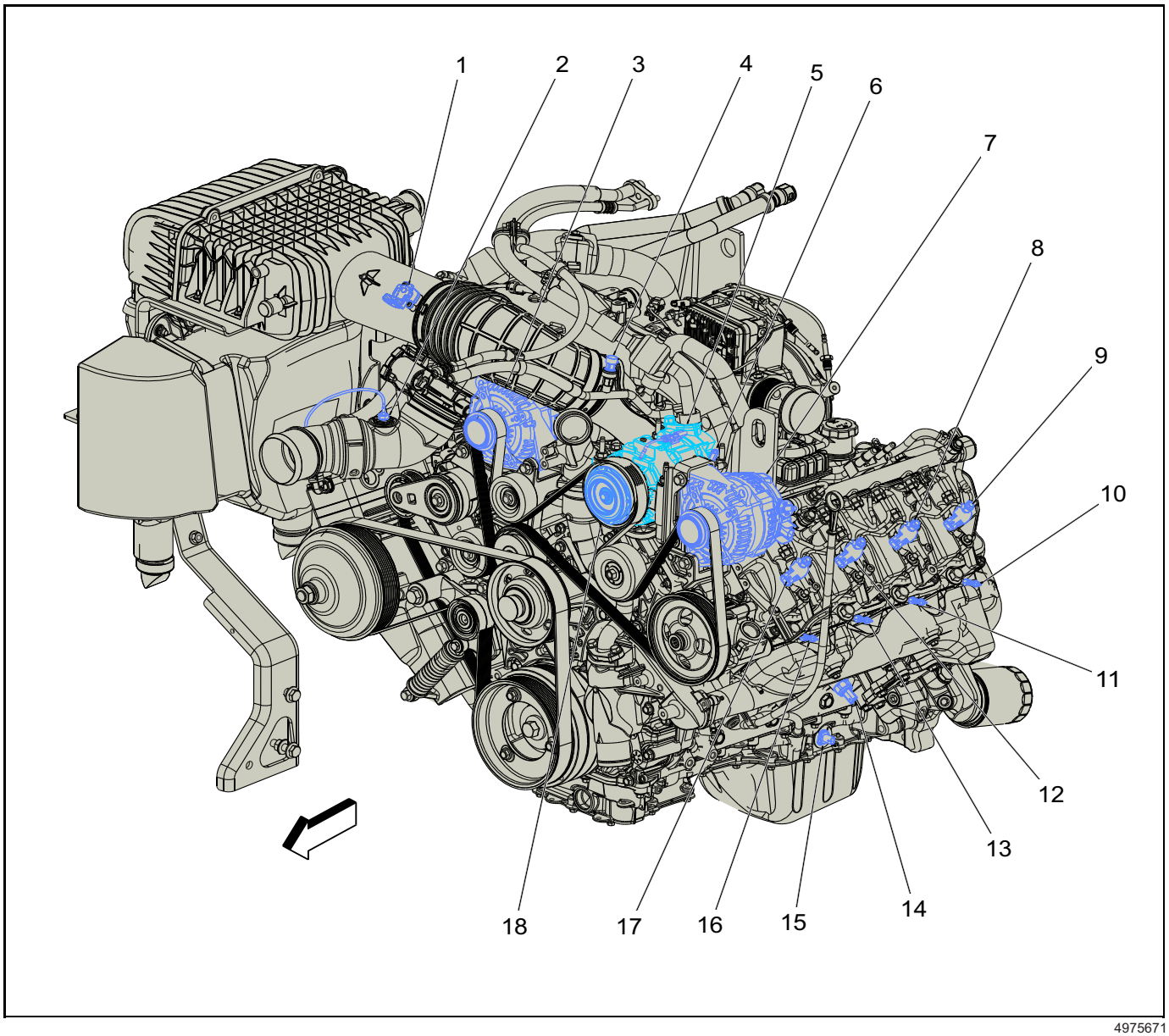
5084558

Items

(1) B356 Brake Pipe Pressure Switch
(2) B21C Brake Pressure Differential Switch
(3) B20 Brake Fluid Level Switch
(4) B343 Brake Booster Fluid Flow Switch
(5) KR14 Brake Booster Pump Motor Relay
(6) M9 Brake Booster Pump Motor

Powertrain Component Views

Left Front of Engine Components

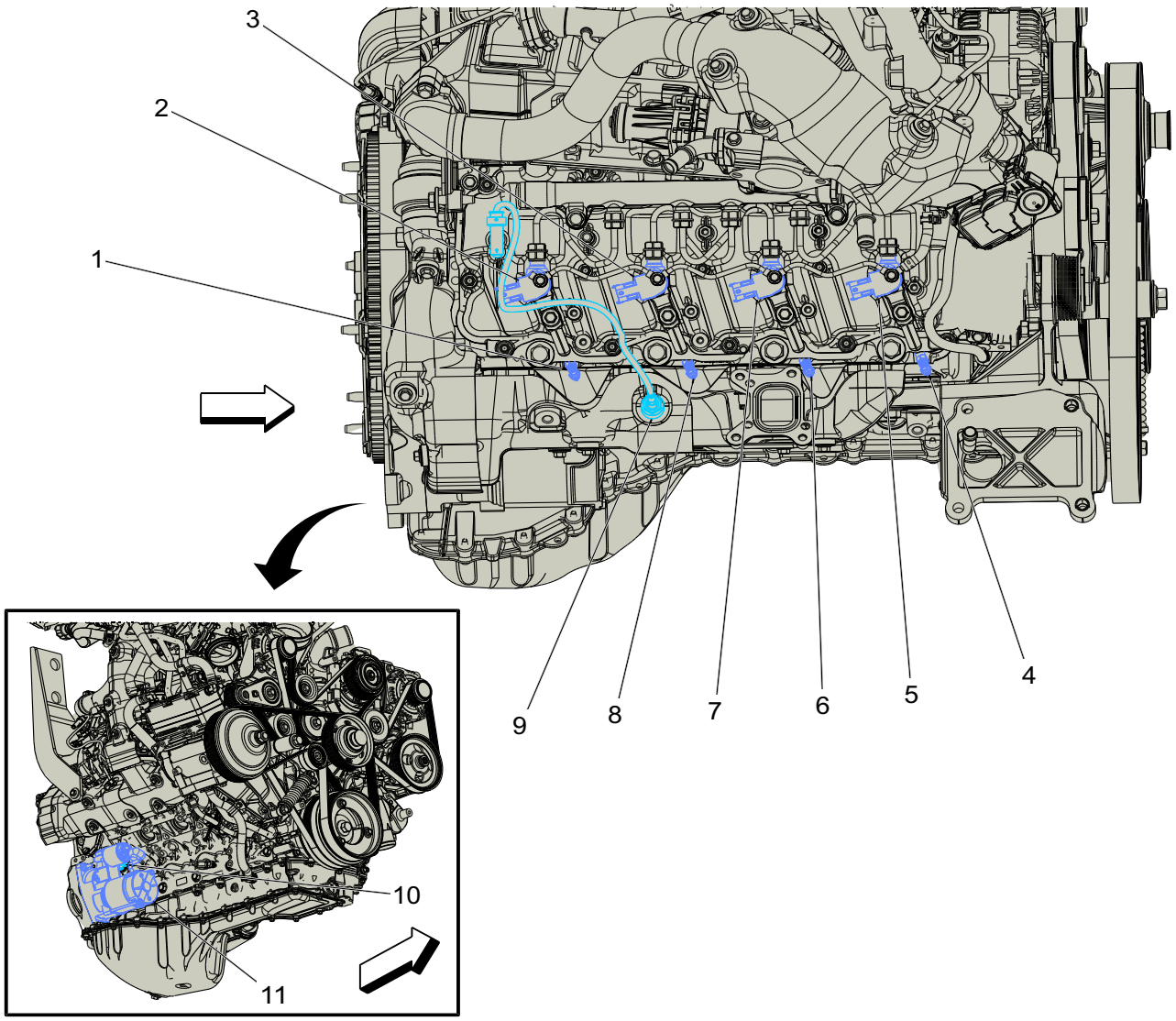


4975671

Items

(1) B75C Multifunction Intake Air Sensor
(2) B193B Charge Air Cooler Outlet Temperature Sensor
(3) G13 Generator
(4) B1 A/C Refrigerant Pressure Sensor (C67)
(5) G1 A/C Compressor (C67)
(6) Q46 A/C Compressor Solenoid Valve (C67)
(7) G13E Generator - Auxiliary (KHB)
(8) Q17F Fuel Injector 6
(9) Q17H Fuel Injector 8
(10) E12H Glow Plug 8
(11) E12F Glow Plug 6
(12) Q17D Fuel Injector 4
(13) E12D Glow Plug 4
(14) B37B Engine Oil Pressure Sensor
(15) B35 Engine Oil Level Switch
(16) E12B Glow Plug 2
(17) Q17B Fuel Injector 2
(18) Q2 A/C Compressor Clutch (C67)

Right Side of Engine Components

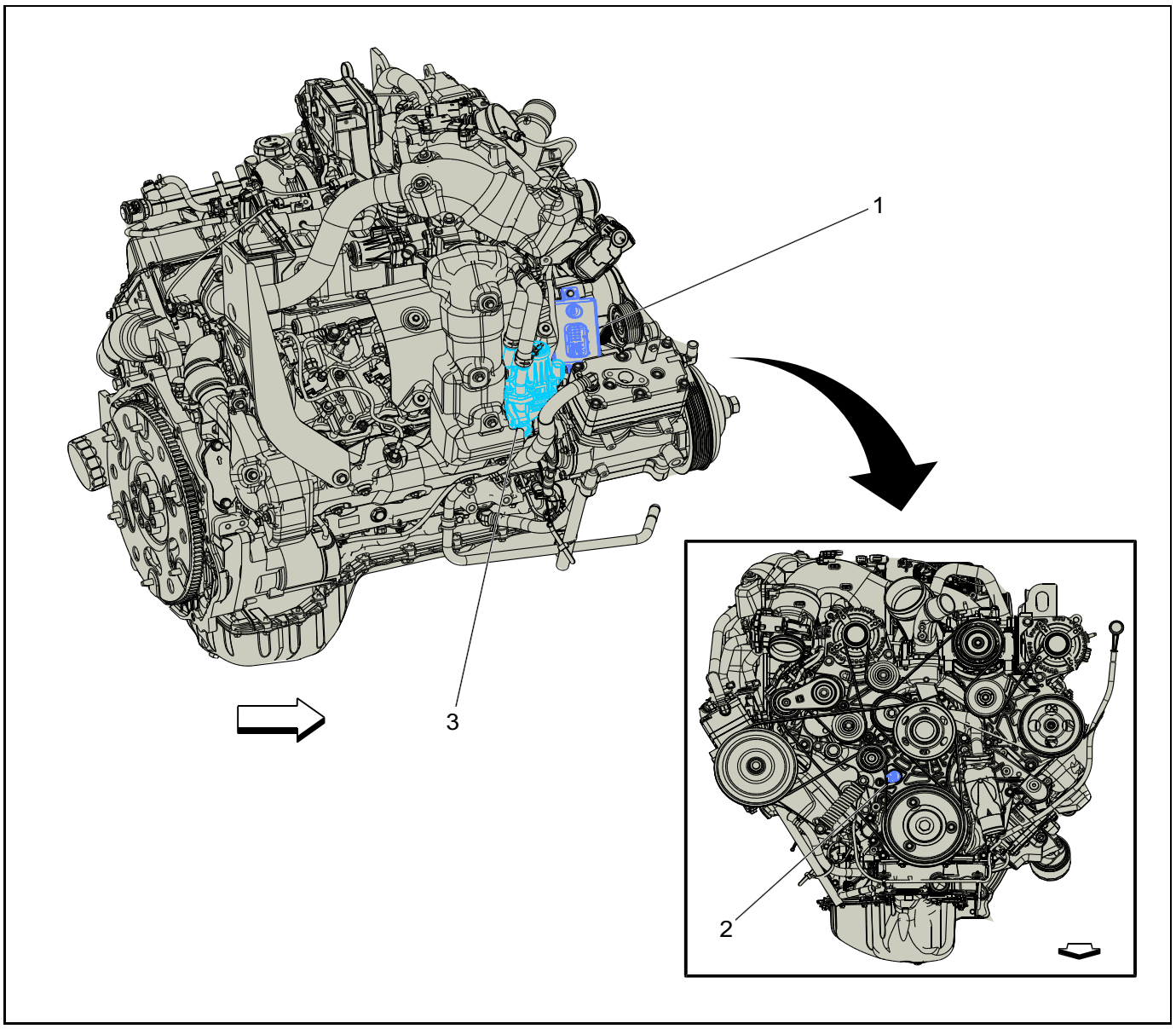


4975672

Items

(1) E12G Glow Plug 7
(2) Q17G Fuel Injector 7
(3) Q17E Fuel Injector 5
(4) E12A Glow Plug 1
(5) Q17A Fuel Injector 1
(6) E12C Glow Plug 3
(7) Q17C Fuel Injector 3
(8) E12E Glow Plug 5
(9) B130A Exhaust Gas Recirculation Temperature Sensor 1
(10) B26 Crankshaft Position Sensor
(11) M64 Starter Motor

Front of Engine Components

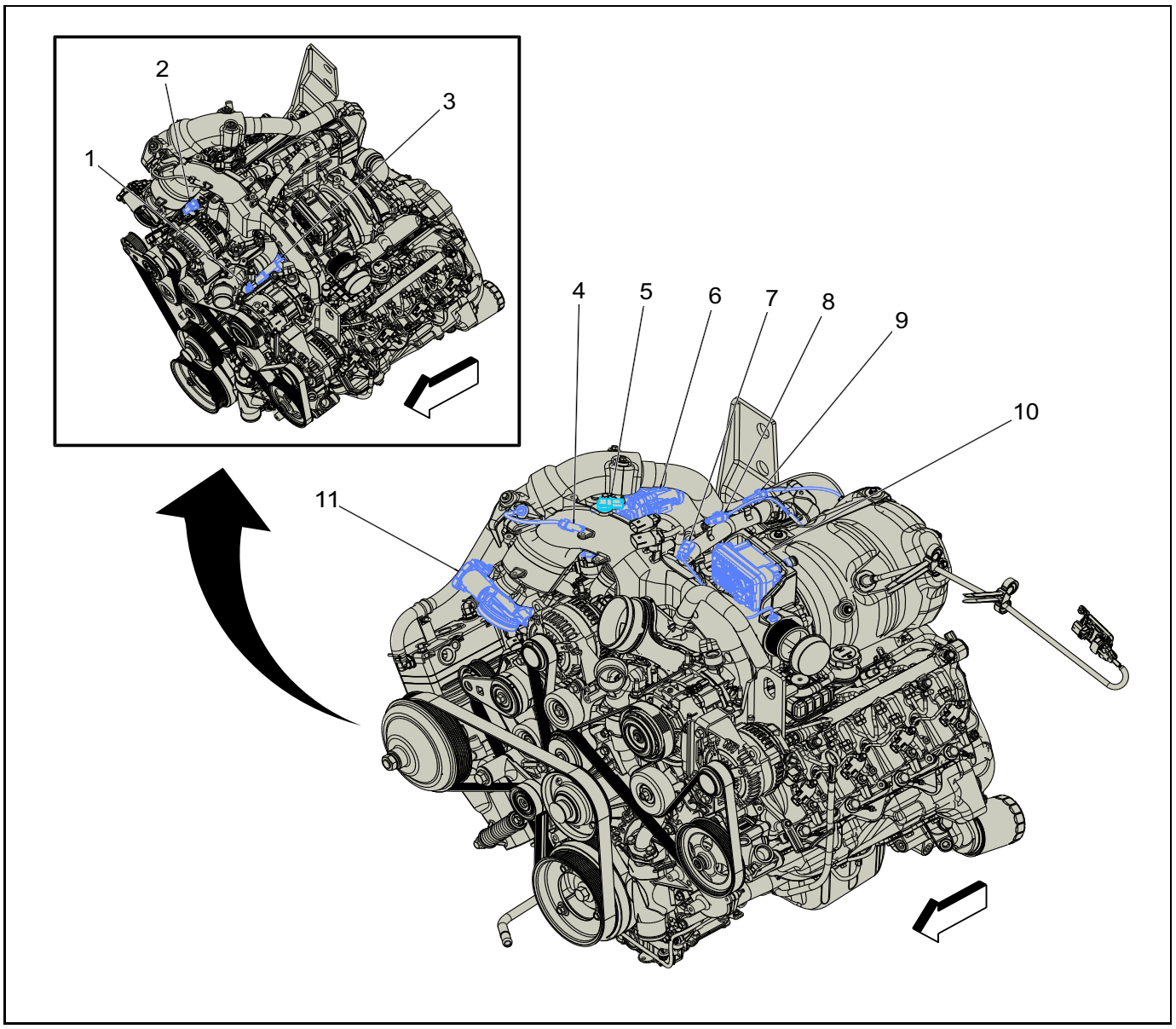


4975677

Items

(1) K34 Glow Plug Control Module
(2) B23 Camshaft Position Sensor
(3) Q14 Exhaust Gas Recirculation Valve

Top of Engine Components

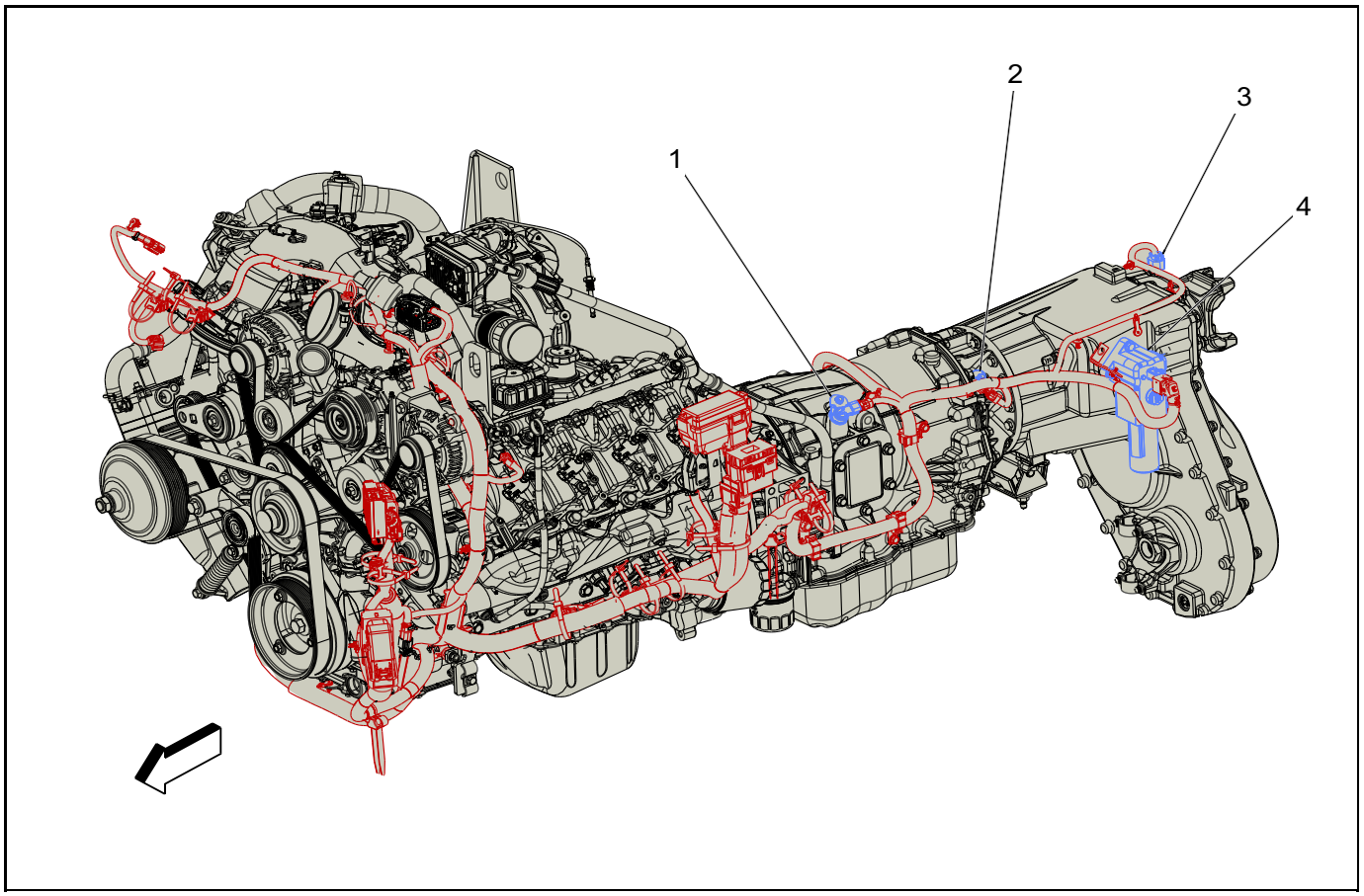


4975675

Items

(1) B34 Engine Coolant Temperature Sensor
(2) B47B Fuel Rail Pressure Sensor
(3) Q18A Fuel Pressure Regulator 1
(4) B130B Exhaust Gas Recirculation Temperature Sensor 2
(5) B65 Intake Manifold Pressure and Air Temperature Sensor
(6) M114 Exhaust Gas Recirculation Cooler Bypass Valve Actuator
(7) B193A Charge Air Cooler Inlet Temperature Sensor
(8) B131A Exhaust Temperature Sensor 1
(9) B131B Exhaust Temperature Sensor 2
(10) M103 Turbocharger Vane Position Actuator
(11) Q20 Intake Air Flow Valve

Transmission and Transfer Case Components



4975681

Items

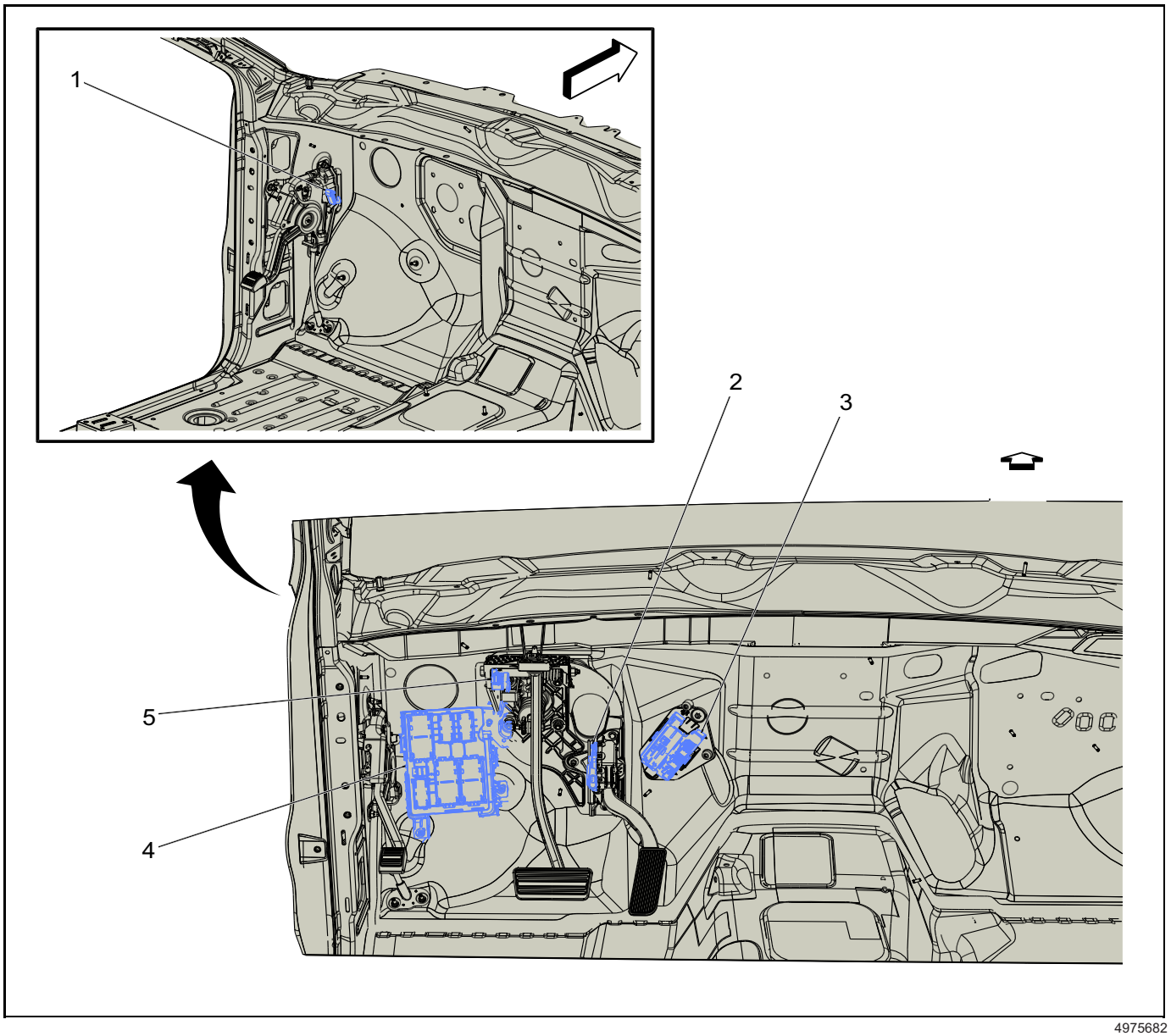
(1) B14B Transmission Turbine Speed Sensor

(2) B14A Transmission Output Shaft Speed Sensor

(3) A16 Transfer Case Motor (NQF)

Instrument Panel/Center Console Component Views

Bulkhead Components - Interior

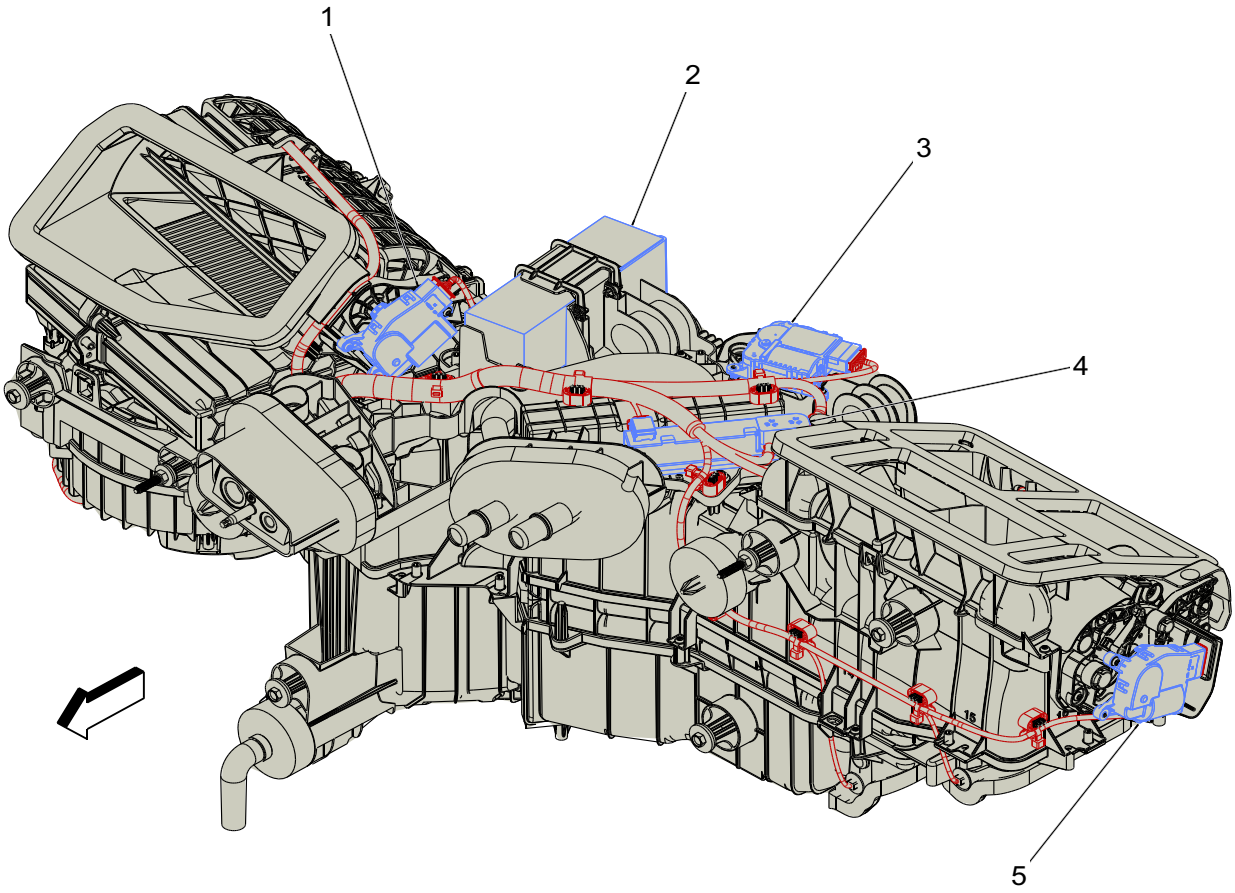


4975682

Items

(1) B80 Park Brake Switch
(2) B107 Accelerator Pedal Position Sensor
(3) K69 Transfer Case Control Module (NQF)
(4) X61A Junction Block - Instrument Panel
(5) B22 Brake Pedal Position Sensor

Front of HVAC Assembly Components

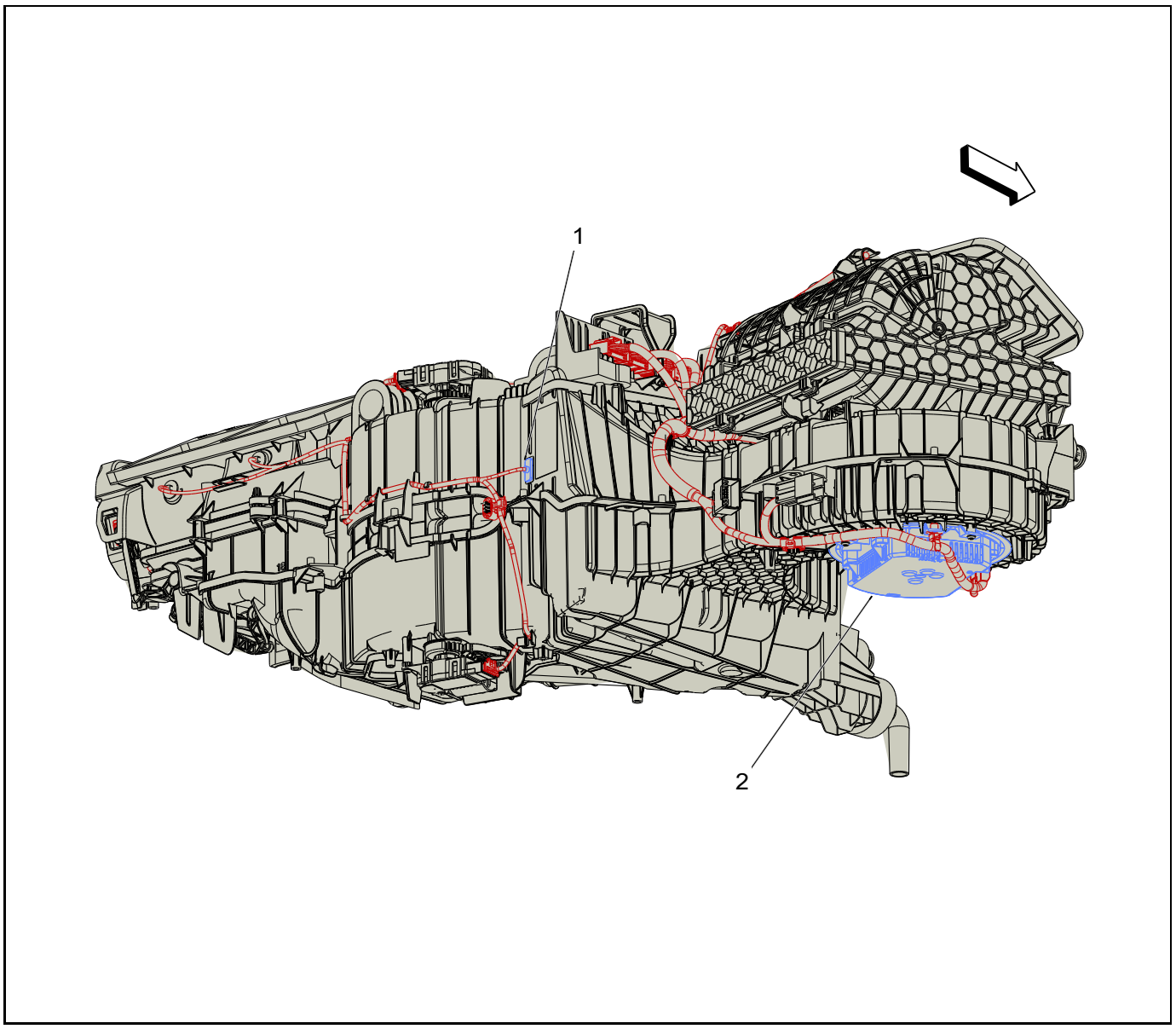


4975558

Items

(1) M4 Air Inlet Door Actuator
(2) K33 HVAC Control Module
(3) M6 Air Temperature Door Actuator
(4) E40 Electrical Auxiliary Heater (C32)
(5) M37 Mode Door Actuator

Back of HVAC Assembly Components



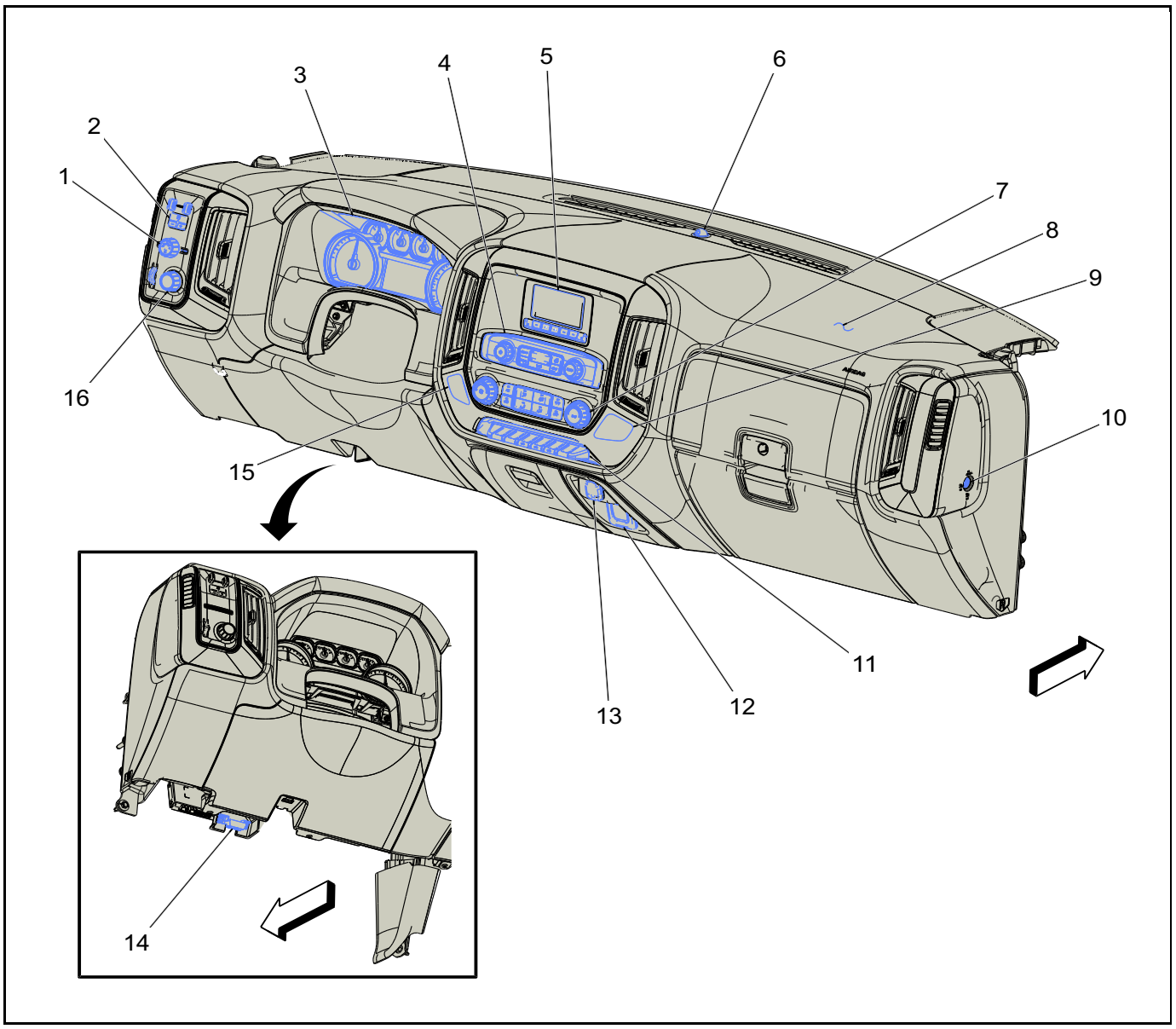
4975563

Items

(1) B39 A/C Evaporator Temperature Sensor (C67)

(2) M8 Blower Motor

Face of Instrument Panel Components

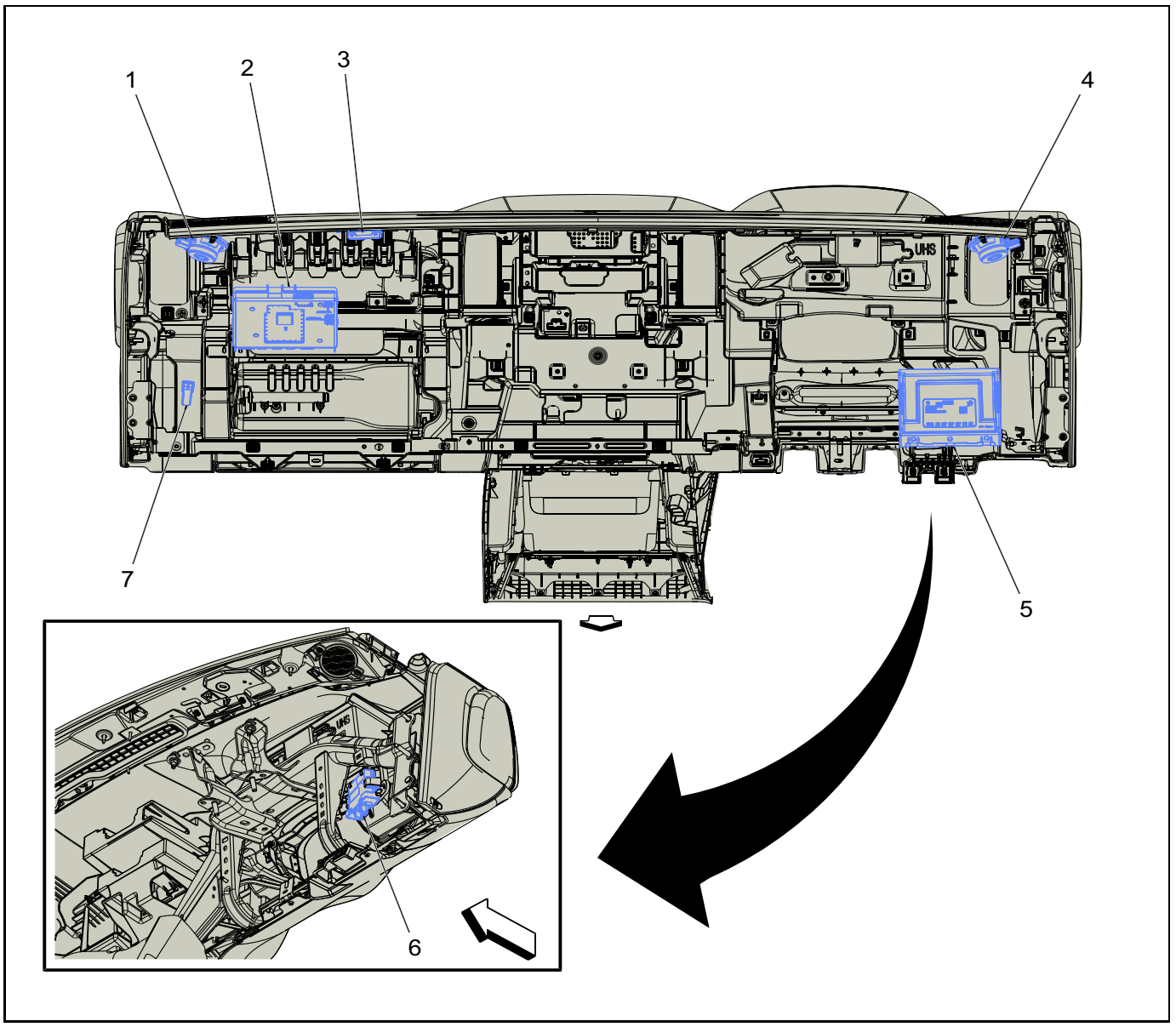


4975567

Items

(1) S77 Transfer Case Shift Control Switch (NQF)
(2) S76 Trailer Brake Control Switch (JL1)
(3) P16 Instrument Cluster
(4) A22 Radio Controls
(5) P17 Info Display Module
(6) B10B Ambient Light/Sunload Sensor
(7) A26 HVAC Controls
(8) F101 Passenger Instrument Panel Air Bag
(9) S32P Seat Heating Switch - Passenger (KA1)
(10) S40 Passenger Air Bag Disable Switch (C99)
(11) S48A Multifunction Switch - Instrument Panel
(12) X81 Accessory Power Receptacle - 110V AC (KI4)
(13) X80G Accessory Power Receptacle - Instrument Panel (except D07)
(14) X84 Data Link Connector
(15) S32D Seat Heating Switch - Driver (KA1)
(16) S30 Headlamp Switch

Backside of Instrument Panel Components



4975569

Items

(1) P19W Speaker - Right Instrument Panel

(2) K74 Human Machine Interface Control Module (IO5/IO6)

(3) T15 Navigation Antenna Signal Splitter (IO6 +UE1)

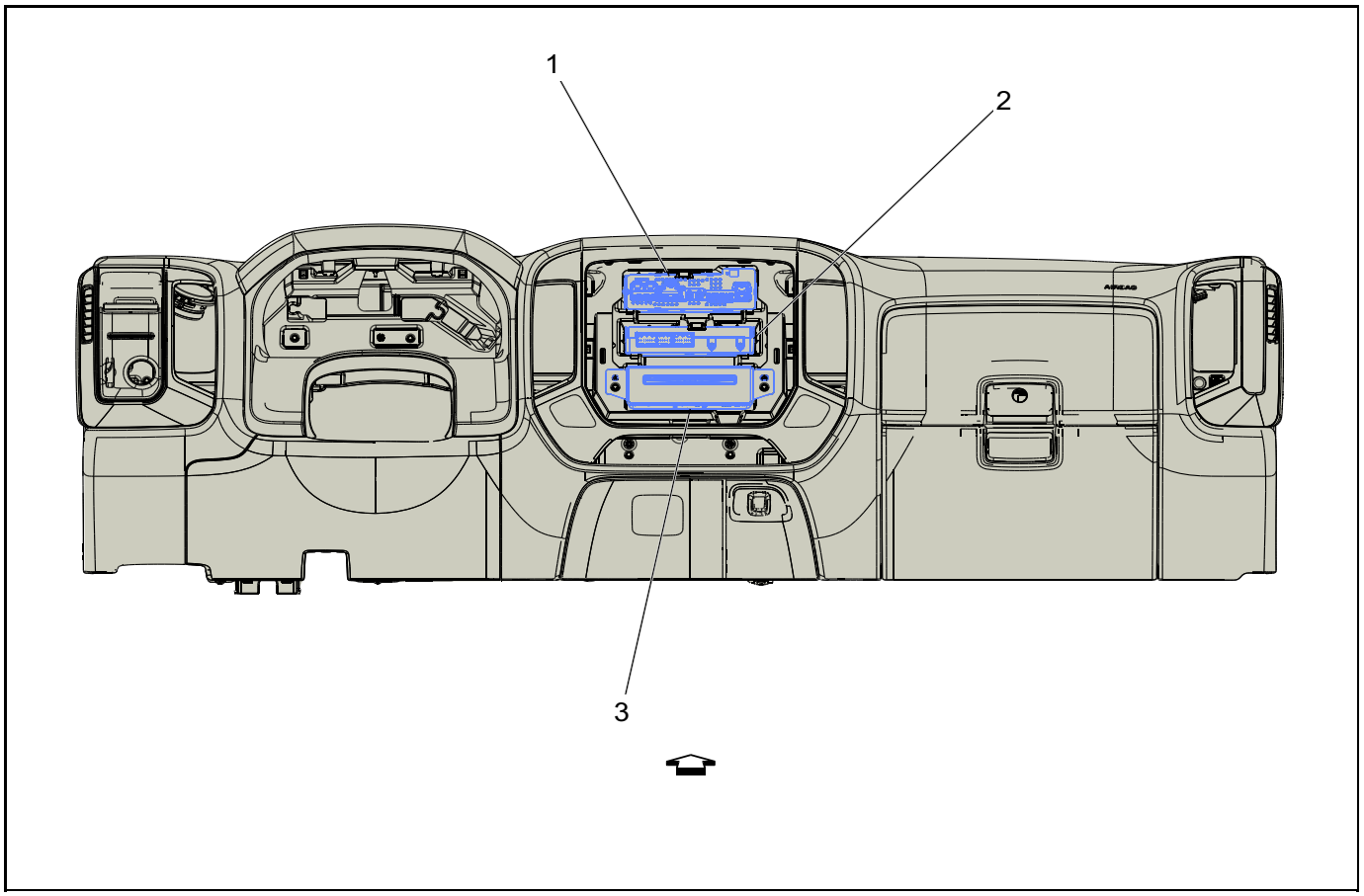
(4) P19J Speaker - Left Instrument Panel

(5) K9 Body Control Module

(6) K56 Serial Data Gateway Module

(7) R6F Terminating Resistor - High Speed Extension Bus 2 (IO5/IO6/UE1)

Inside Center of Instrument Panel Components



4975571

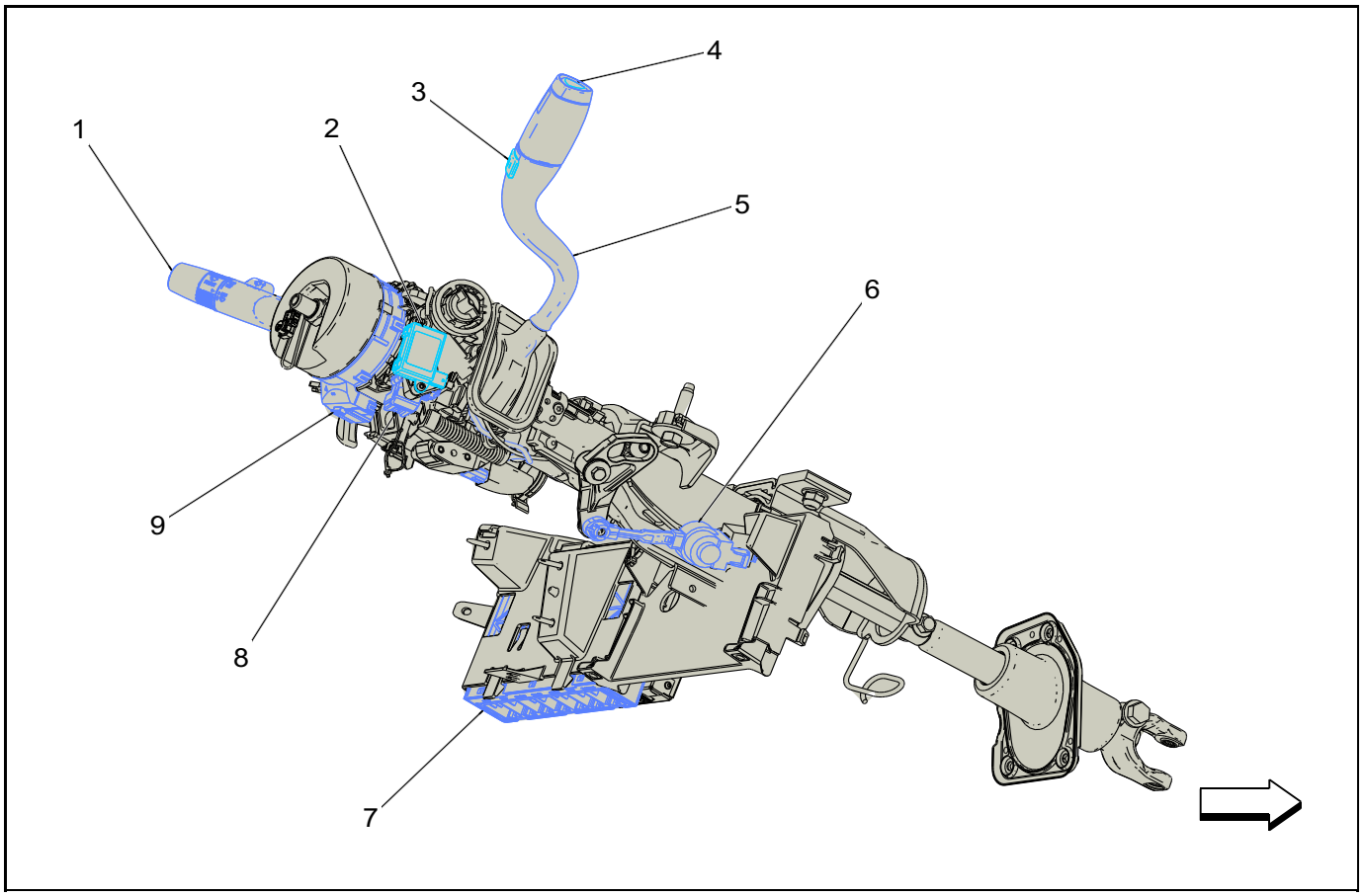
Items

(1) A11 Radio

(2) K73 Telematics Communication Interface Control Module (UE1)

(3) A33 Media Disc Player (TG5)

Steering Column Components

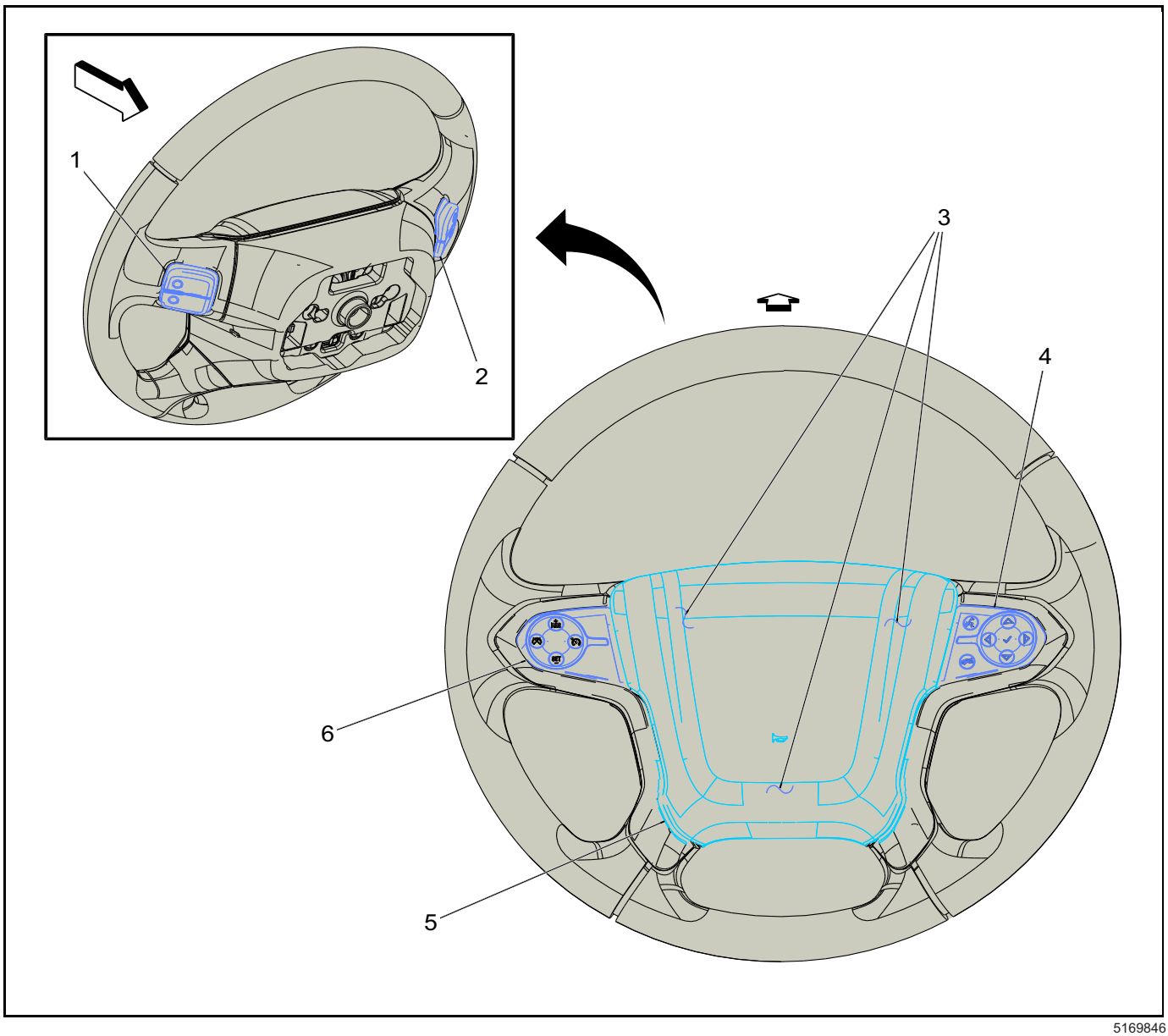


5132062

Items

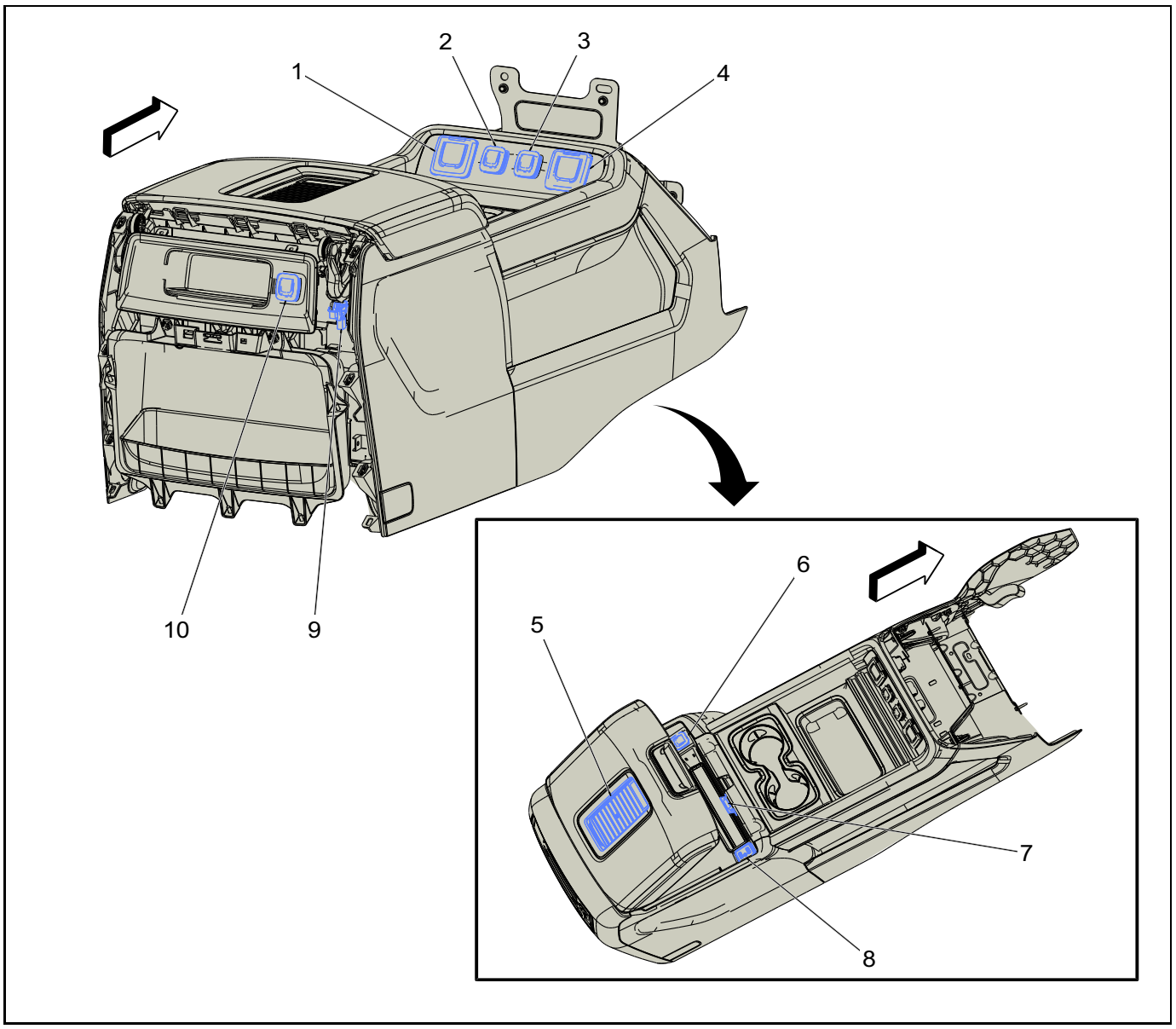
(1) S78 Turn Signal/Multifunction Switch
(2) K89 Immobilizer Control Module
(3) S2 Transmission Manual Shift Switch
(4) S74 Tow/Haul Mode Switch
(5) S3 Transmission Shift Lever
(6) M7 Transmission Shift Lock Control Solenoid Actuator
(7) K9 Body Control Module
(8) S39 Ignition Switch
(9) X85 Steering Wheel Air Bag Coil

Steering Wheel Components



5169846

Floor Console Components (D07)



4975573

Items

(1) X92 USB Receptacle (IO5/IO6)

(2) X80J Accessory Power Receptacle - Instrument Panel 1 (D07)

(3) X80K Accessory Power Receptacle - Instrument Panel 2 (D07)

(4) X81 Accessory Power Receptacle - 110V AC (KI4)

(5) T22 Mobile Device Wireless Charger Module (K4C)

(6) X80D Accessory Power Receptacle - Center Console Compartment

(7) E28 Center Console Compartment Lamp (D07)

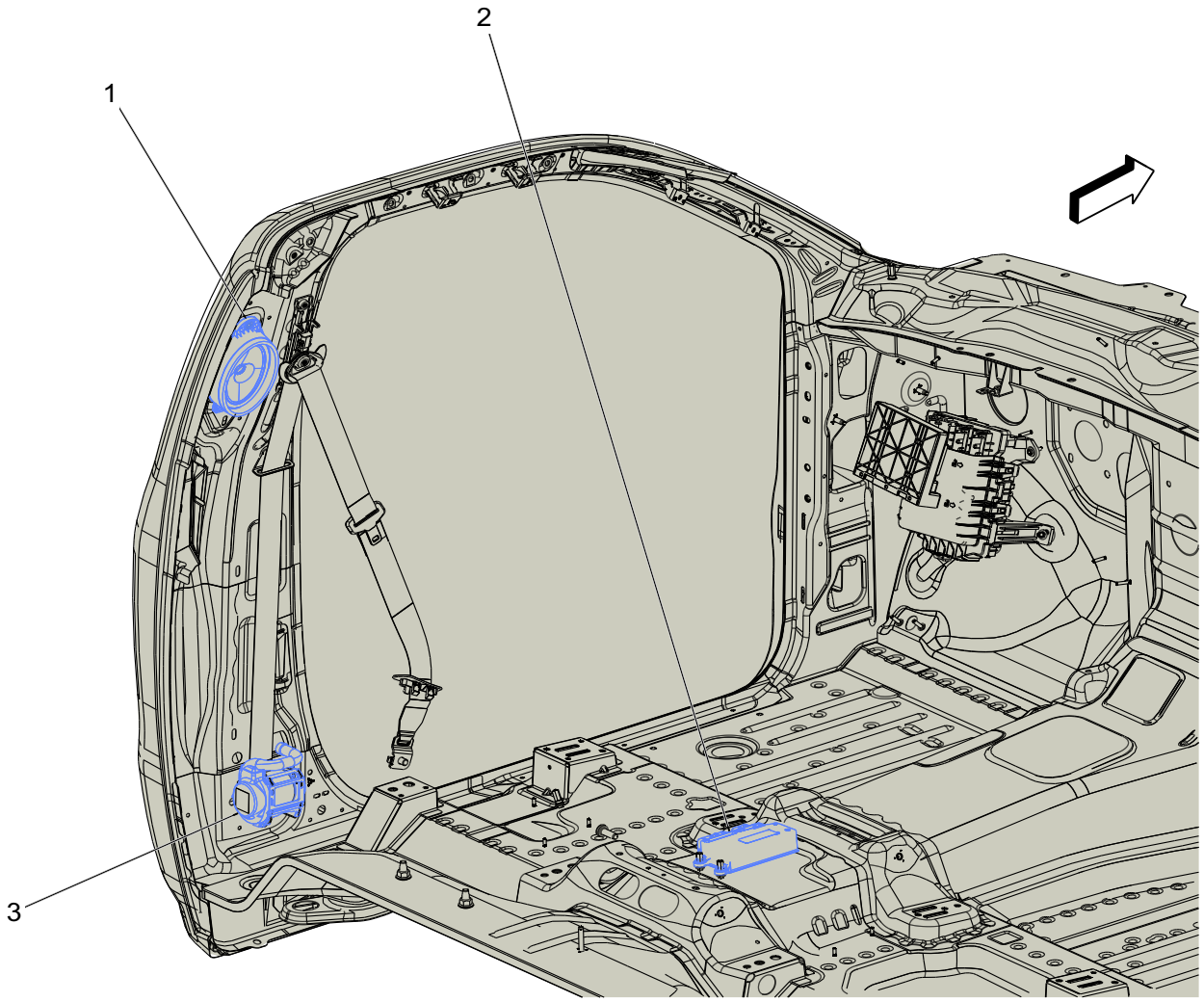
(8) X83 Auxiliary Audio Input

(9) S5 Center Console Compartment Lamp Switch (D07)

(10) X80L Accessory Power Receptacle - Center Console Rear (D07)

Passenger Compartment/Roof Component Views

Passenger Compartment Components - Left



4992543

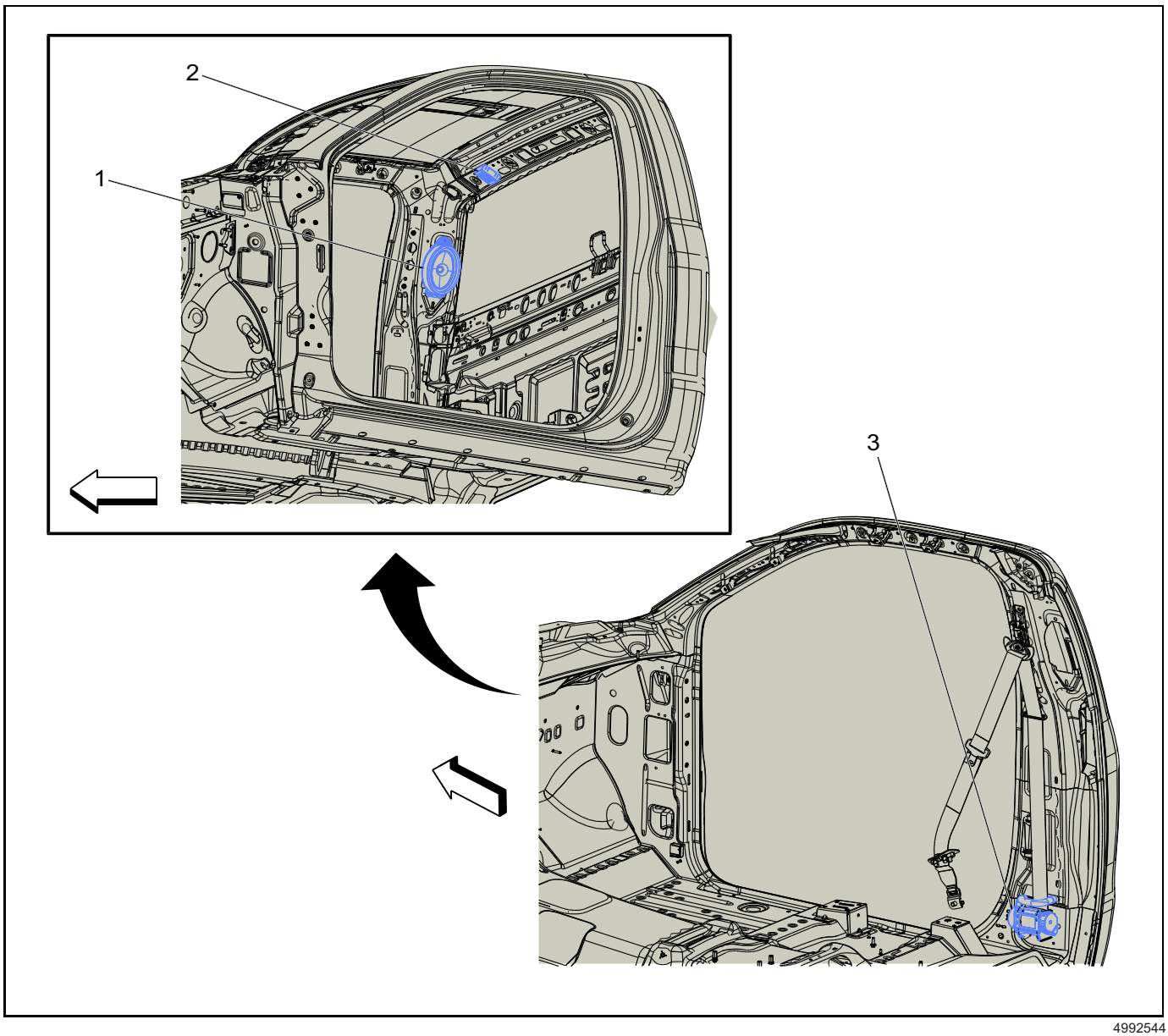
Items

(1) P19AN Speaker - Left Rear Trim Panel (Standard Cab)

(2) K36 Inflatable Restraint Sensing and Diagnostic Module

(3) F112D Seat Belt Retractor Pretensioner - Driver

Passenger Compartment Components - Right



4992544

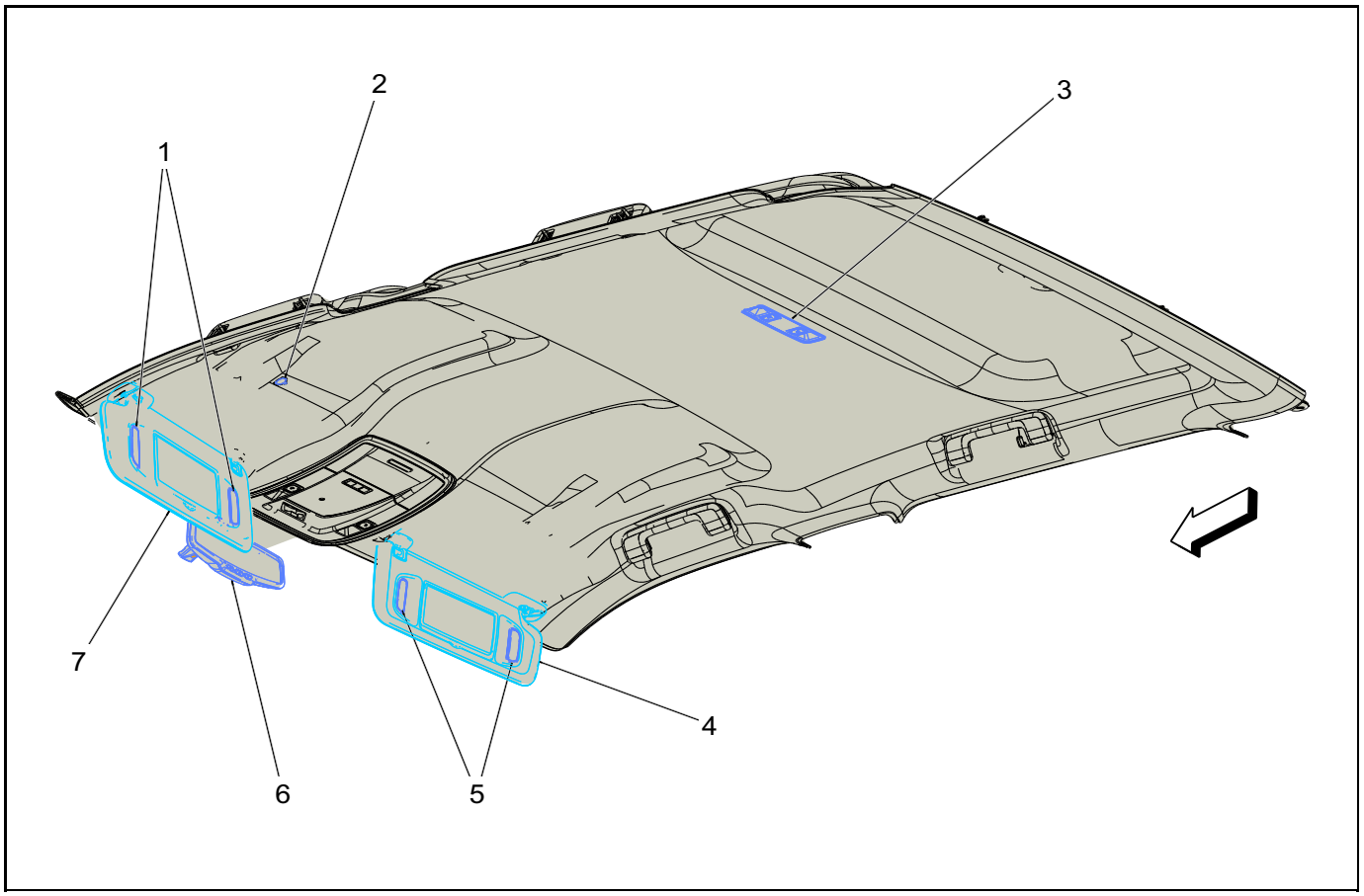
Items

(1) P19AP Speaker - Right Rear Trim Panel (Standard Cab)

(2) K77 Remote Control Door Lock Receiver

(3) F112P Seat Belt Retractor Pretensioner - Passenger

Headliner Components



4975683

Items

(1) E31L Sunshade Mirror Lamp - Left (DH6)

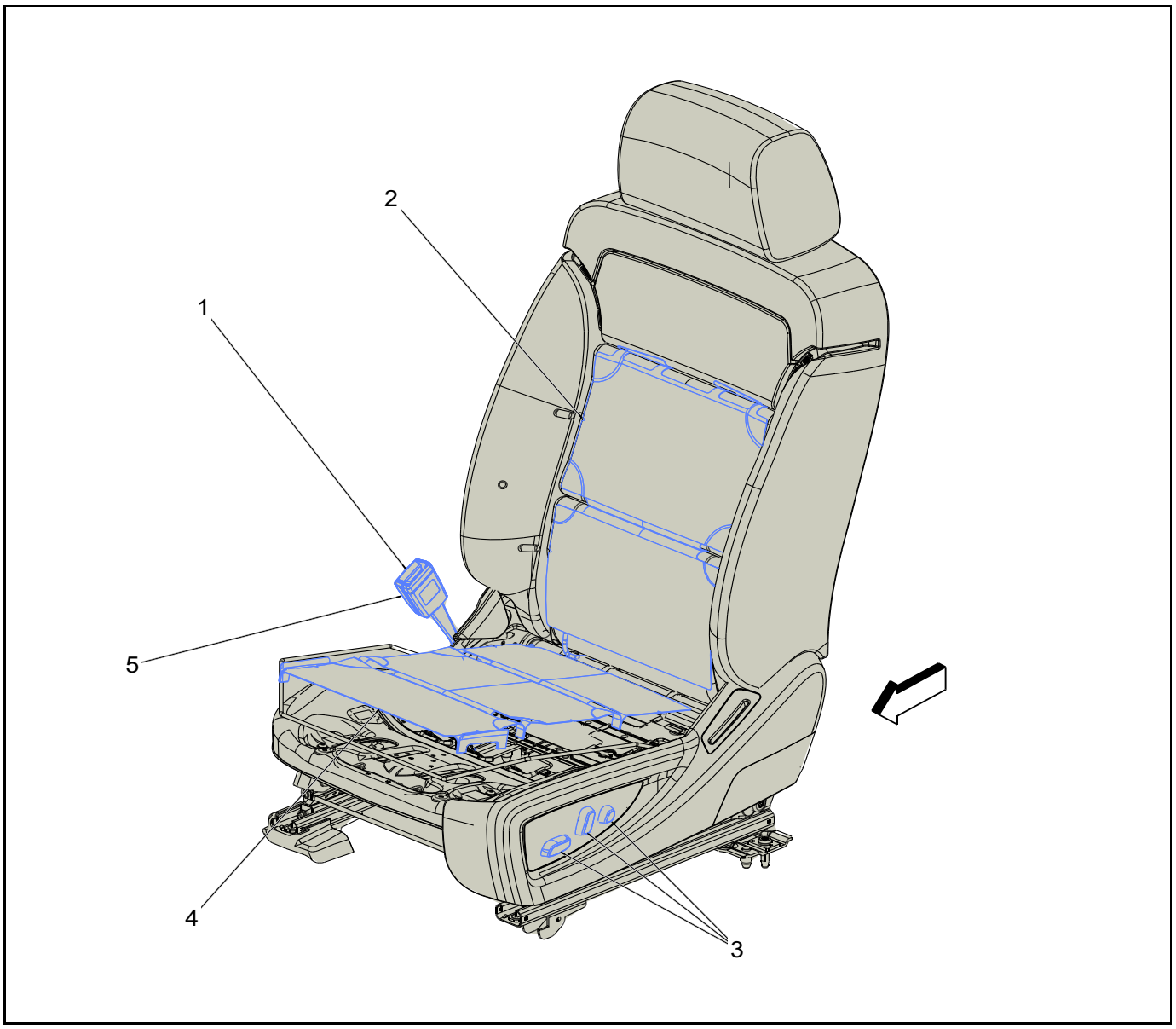
(2) B24 Mobile Telephone Microphone (IO5/IO6/IOB/UE1)

(3) E37B Dome/Reading Lamps - 2nd Row (Crew Cab-AZ3)

(4) E31R Sunshade Mirror Lamp - Right (DH6)

(5) A10 Inside Rearview Mirror (DD8/UE1)

Front of Driver Seat Components



4975685

Items

(1) B88D Seat Belt Switch - Driver

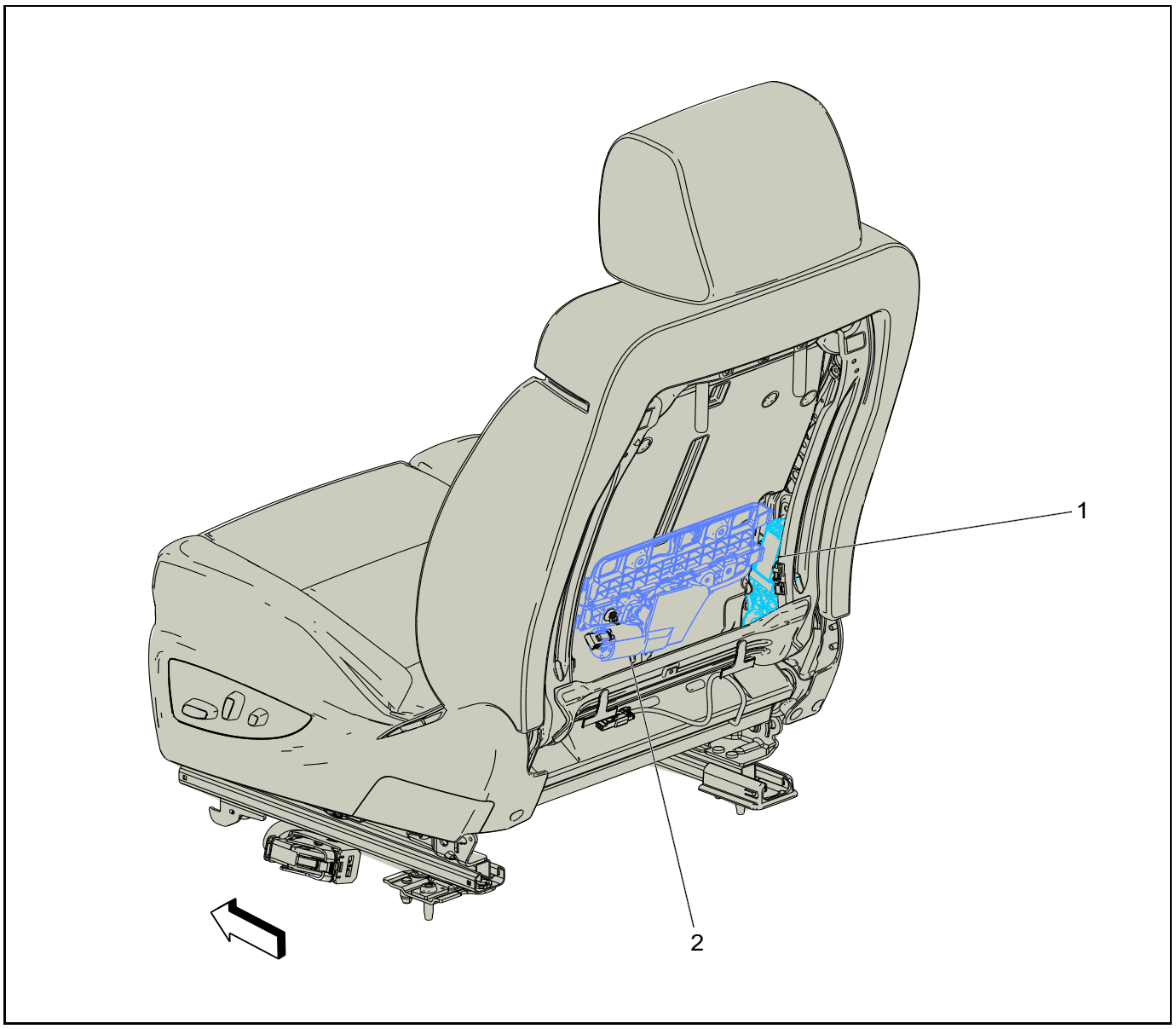
(2) E14A Seat Heating Element - Driver Back (KA1)

(3) S64D Seat Adjuster Switch - Driver (A95/AG1)

(4) E14B Seat Heating Element - Driver Cushion (KA1)

(5) B153D Seat Belt Buckle - Driver

Back of Driver Seat Components (A95/AG1)



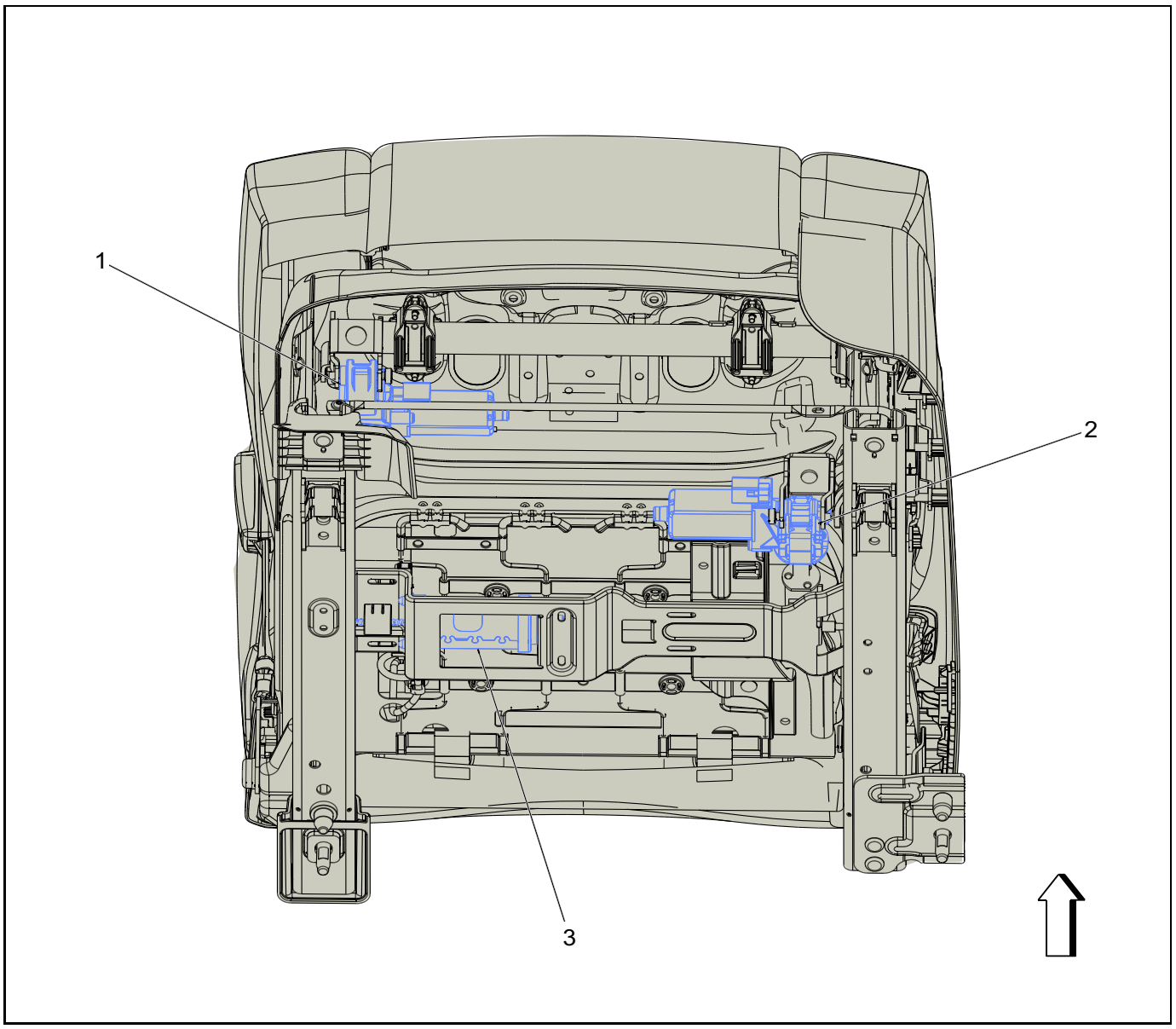
4975687

Items

(1) M56D Seat Recline Motor - Driver (A95/AG1)

(2) M52D Seat Lumbar Support Horizontal Motor - Driver (A95)

Bottom of Driver Seat Components (A95/AG1)



4975690

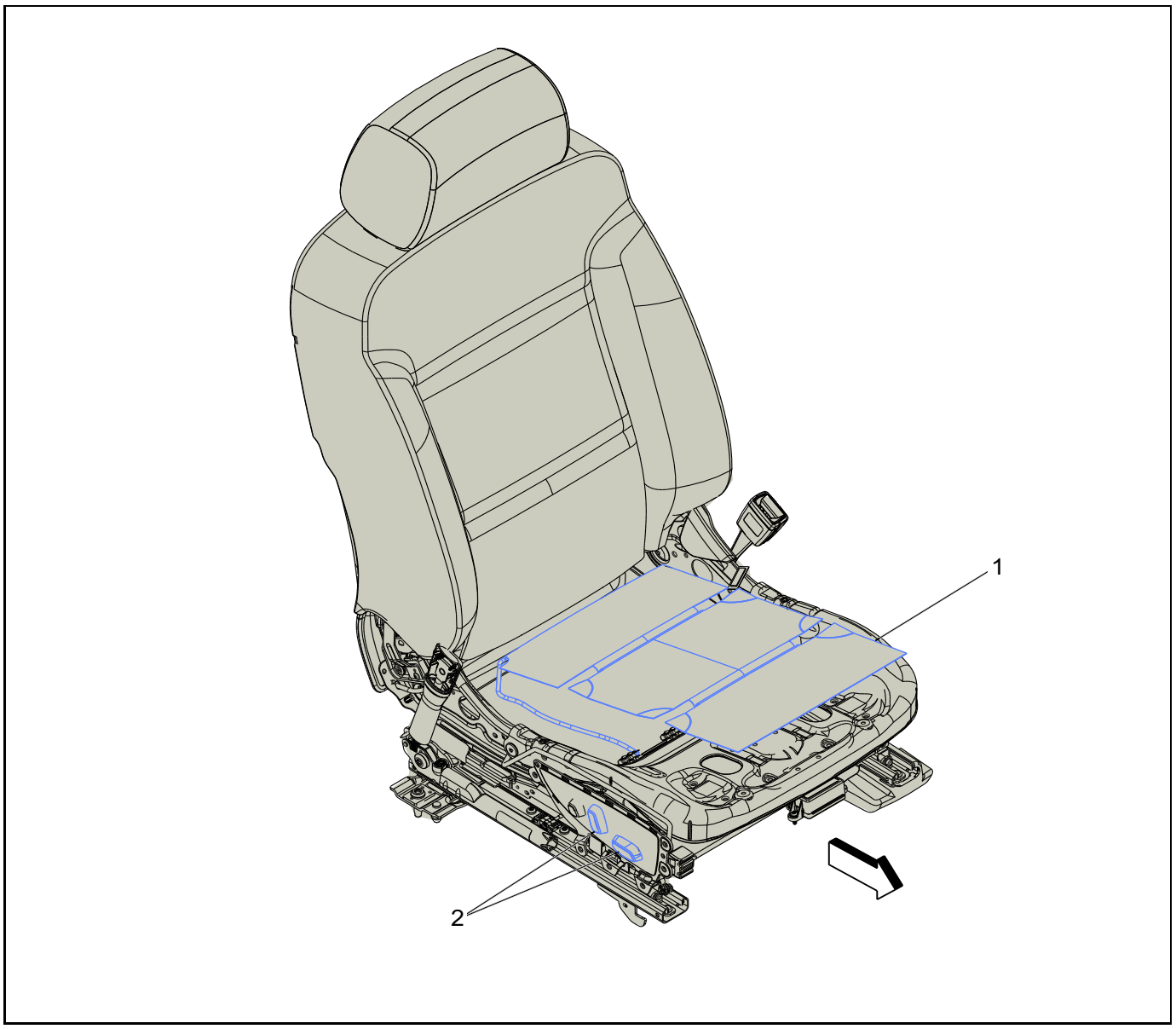
Items

(1) M50D Seat Front Vertical Motor - Driver (A95/AG1)

(2) M55D Seat Rear Vertical Motor - Driver (A95/AG1)

(3) M51D Seat Horizontal Motor - Driver (A95/AG1)

Front of Passenger Seat Components



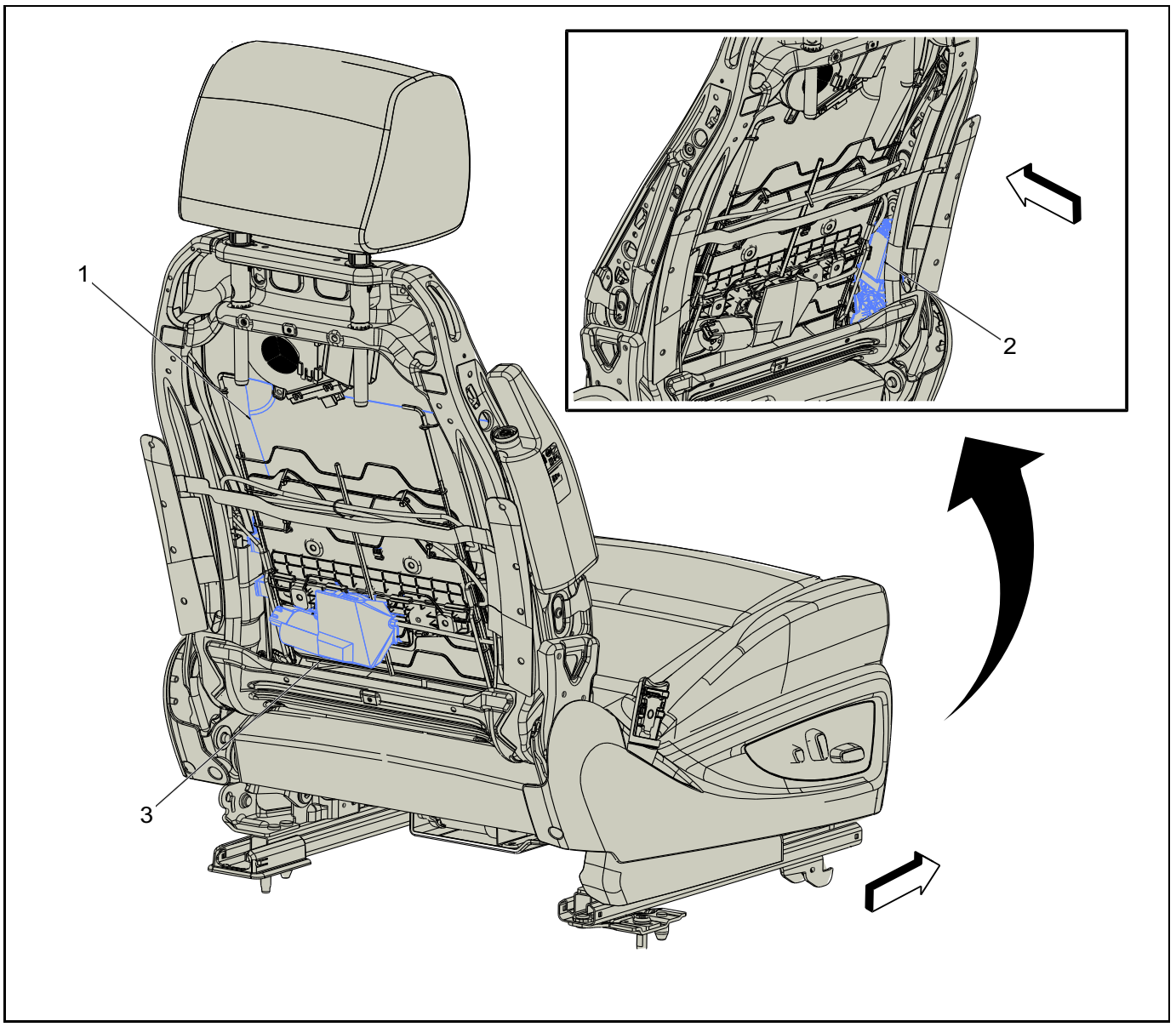
4975692

Items

(1) E14D Seat Heating Element - Passenger Cushion (KA1)

(2) S64P Seat Adjuster Switch - Passenger (A95/AG2)

Back of Passenger Seat Components (A95/KA1)



4975696

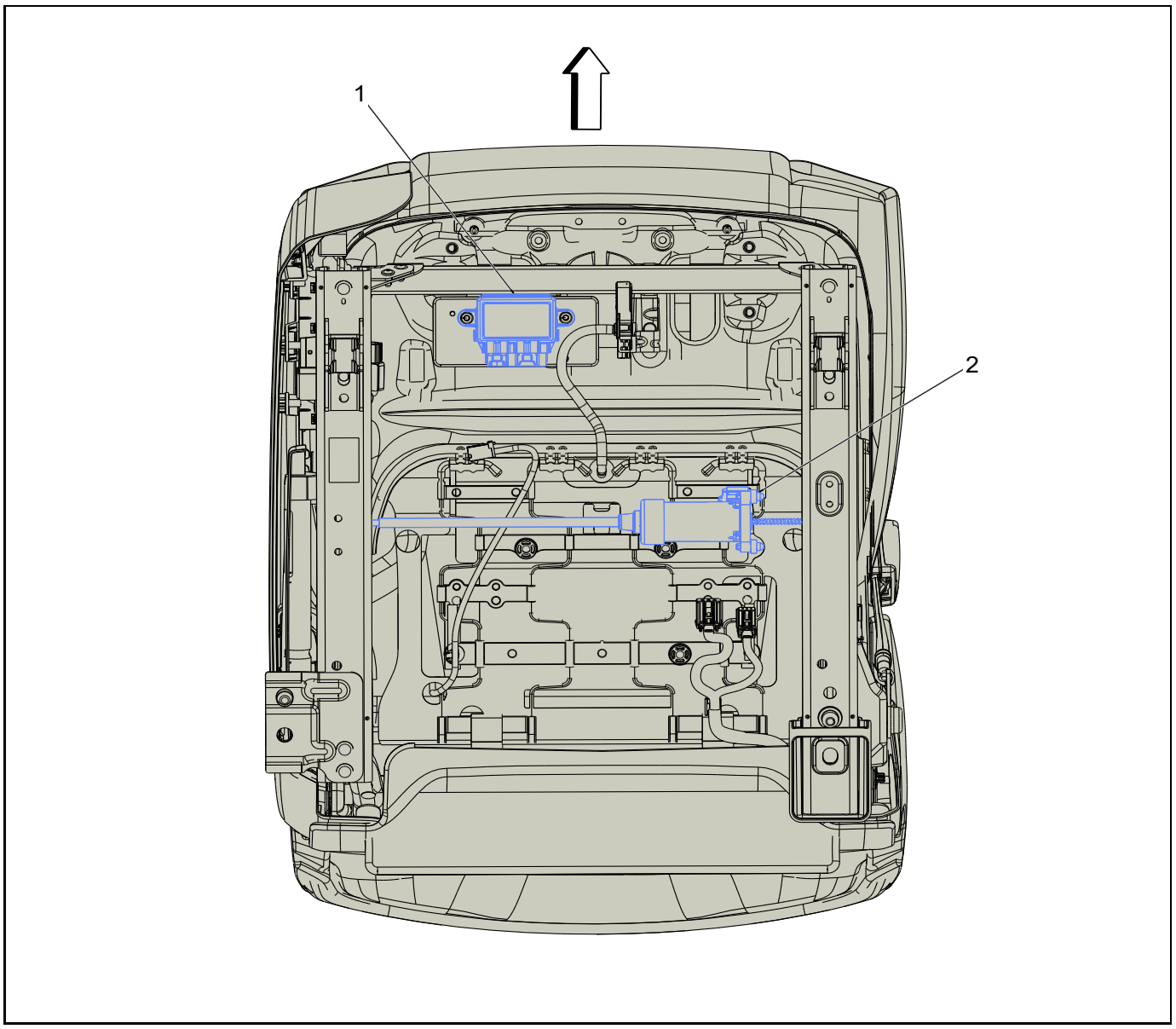
Items

(1) E14C Seat Heating Element - Passenger Back (KA1)

(2) M56P Seat Recline Motor - Passenger (A95/AG2)

(3) M52P Seat Lumbar Support Horizontal Motor - Passenger (A95)

Bottom of Passenger Seat Components (A95/KA1)



4975697

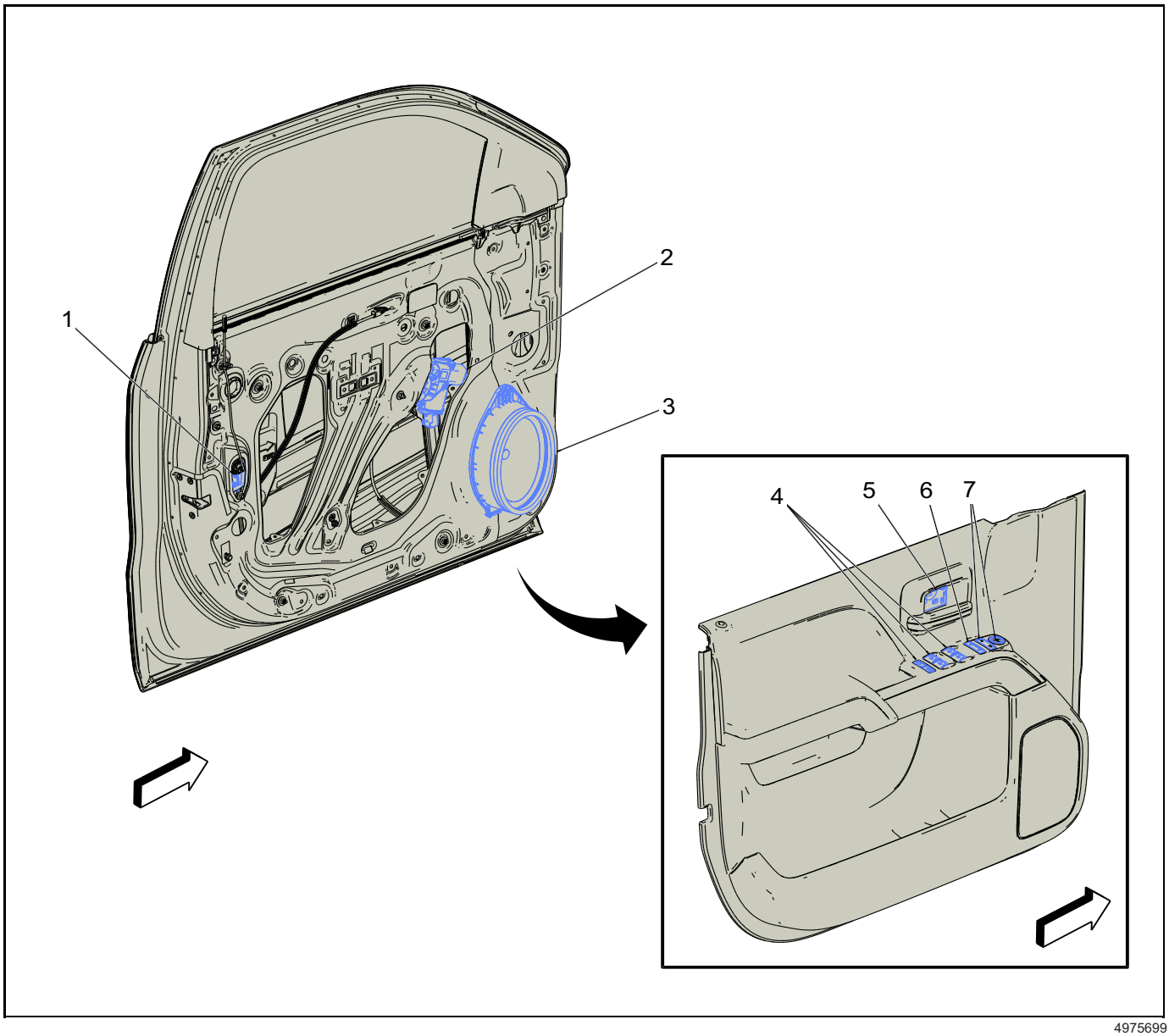
Items

(1) K29 Seat Heating Control Module (KA1)

(2) M51P Seat Horizontal Motor - Passenger (A95/AG2)

Door Component Views

Driver Door Components

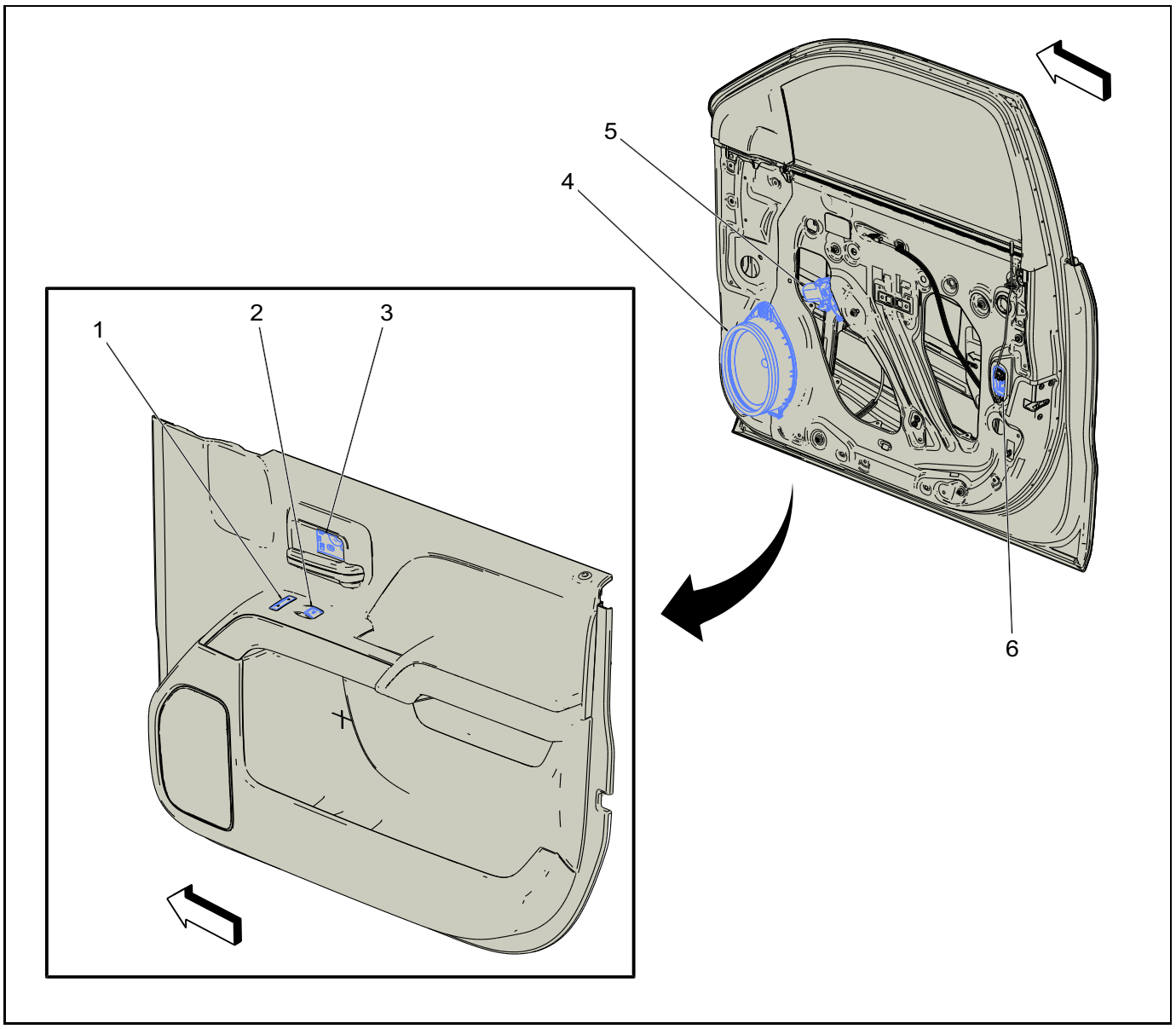


4975699

Items

(1) A23D Door Latch Assembly - Driver
(2) M74D Window Motor - Driver
(3) P19AG Speaker - Left Front Door
(4) S79D Window Switch - Driver
(5) E63D Flood Lamp - Driver Door Handle (A31)
(6) S13D Door Lock Switch - Driver
(7) S52 Outside Rearview Mirror Switch (DPN)

Passenger Door Components

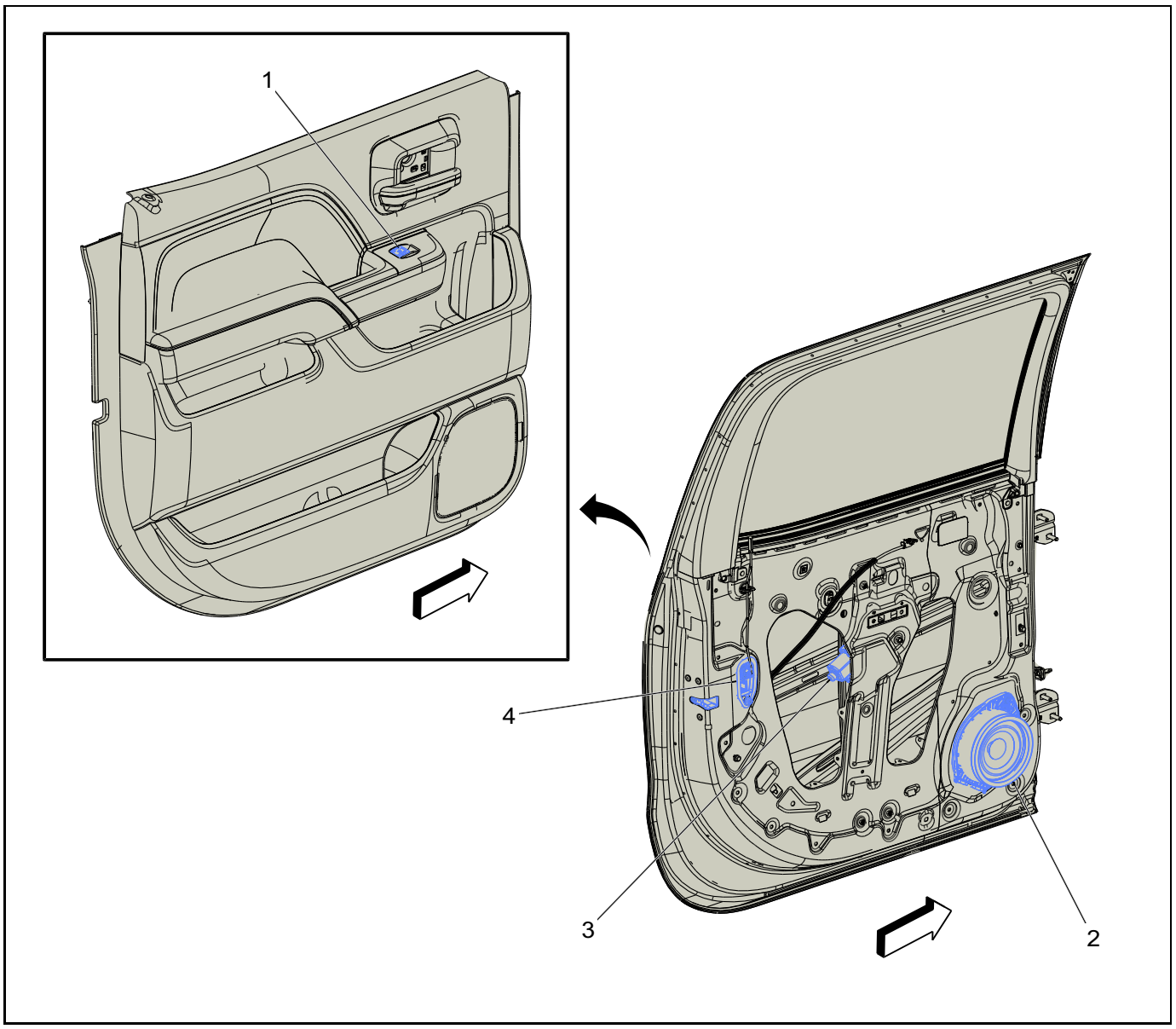


4975700

Items

(1) S13P Door Lock Switch - Passenger
(2) S79P Window Switch - Passenger
(3) E63P Flood Lamp - Passenger Door Handle (A31)
(4) P19AH Speaker - Right Front Door
(5) M74P Window Motor - Passenger
(6) A23P Door Latch Assembly - Passenger

Left Rear Door Components



4975701

Items

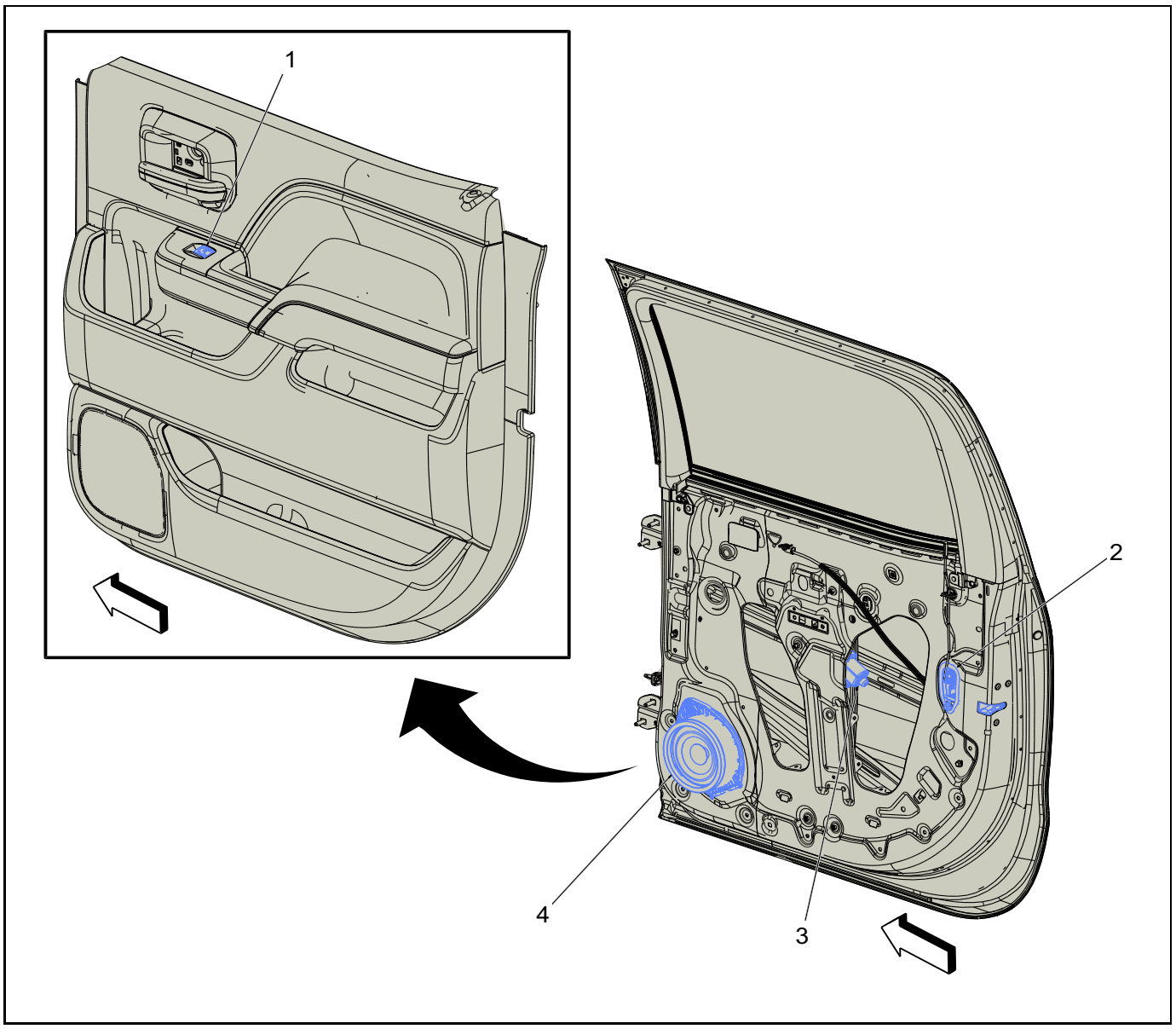
(1) S79LR Window Switch - Left Rear (Crew Cab)

(2) P19AL Speaker - Left Rear Door (Crew Cab)

(3) M74LR Window Motor - Left Rear (Crew Cab)

(4) A23LR Door Latch Assembly - Left Rear (Crew Cab)

Right Rear Door Components



4975702

Items

(1) S79RR Window Switch - Right Rear (Crew Cab)

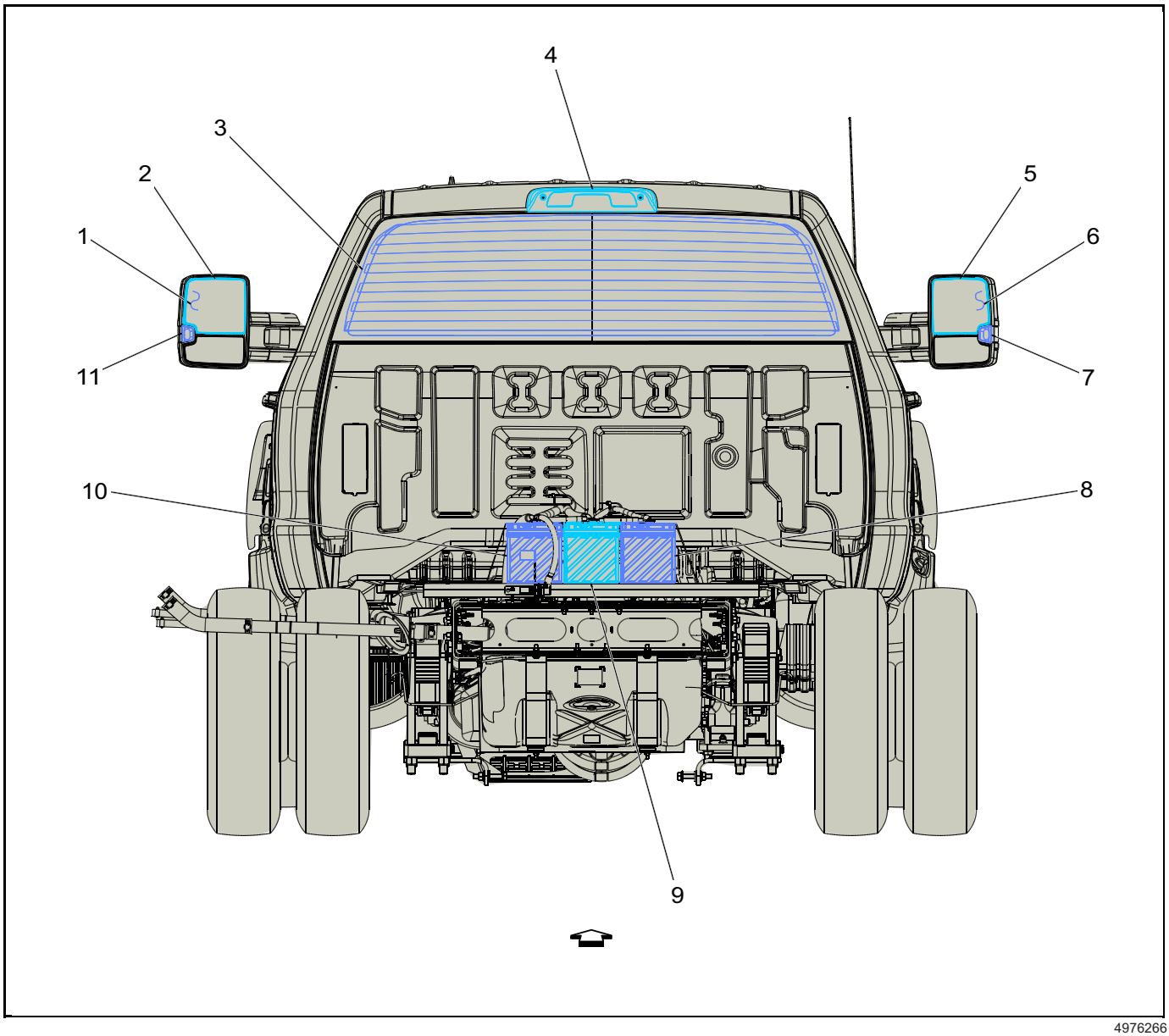
(2) A23RR Door Latch Assembly - Right Rear (Crew Cab)

(3) M74RR Window Motor - Right Rear (Crew Cab)

(4) P19AM Speaker - Right Rear Door (Crew Cab)

Luggage Compartment/Rear of Vehicle Component Views

Rear of Vehicle Components



4976266

Items

(1) E4Y Turn Signal Repeater Lamp - Left (DPN)

(2) E17D Outside Rearview Mirror Glass - Driver (DPN)

(3) E18 Rear Defogger Grid (C49)

(4) E6 Center High Mounted Stop Lamp

(5) E17P Outside Rearview Mirror Glass - Passenger (DPN)

(6) E4Z Turn Signal Repeater Lamp - Right (DPN)

(7) E70P Outside Rearview Mirror Cargo Lamp - Passenger (DPN)

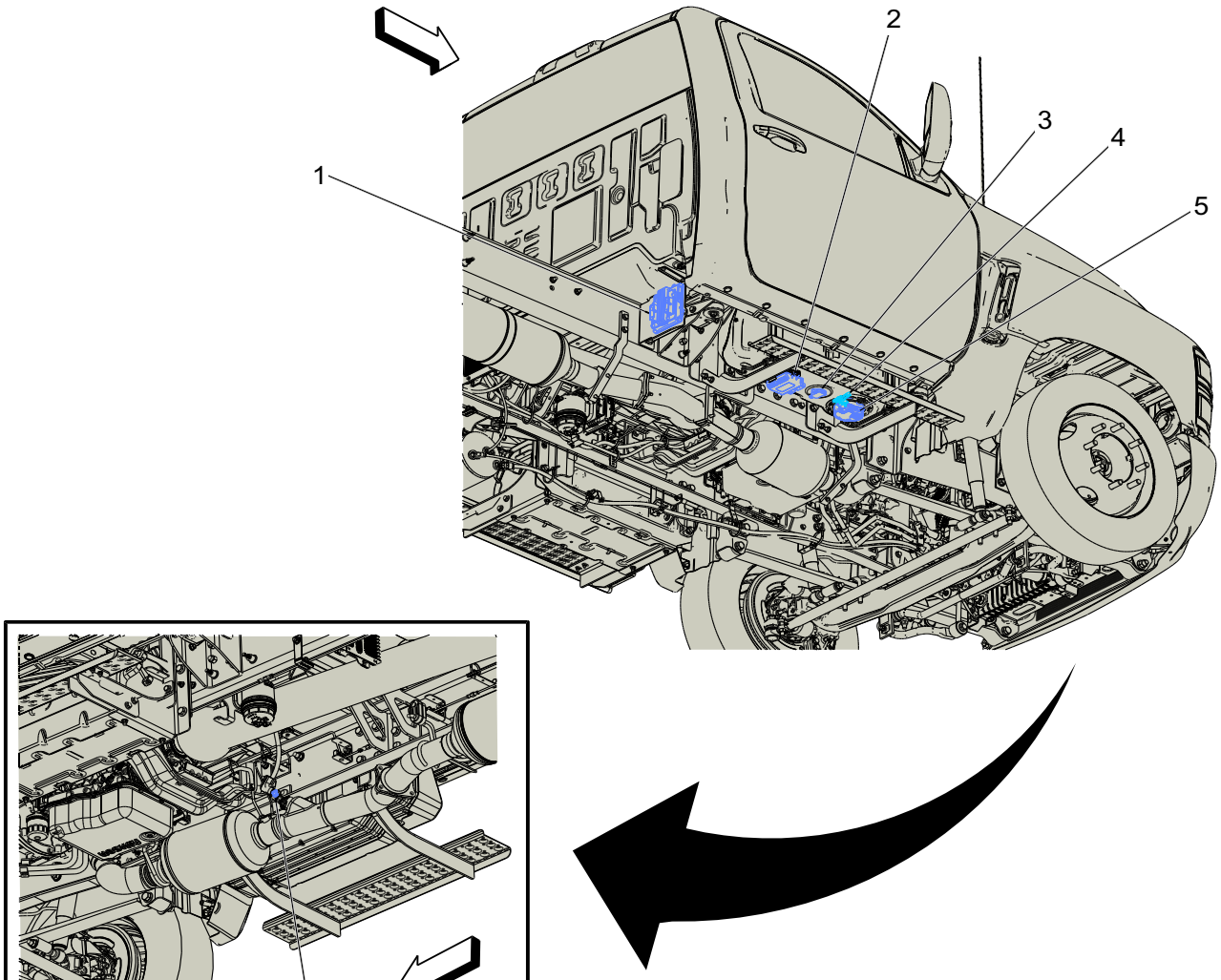
(8) C1BB Battery - Auxiliary 2 (7Y9)

(9) C1BA Battery - Auxiliary 1

(10) C1 Battery

(11) E70D Outside Rearview Mirror Cargo Lamp - Driver (DPN)

Wheels/Vehicle Underbody Component Views
Below Right Rear of Cab Components

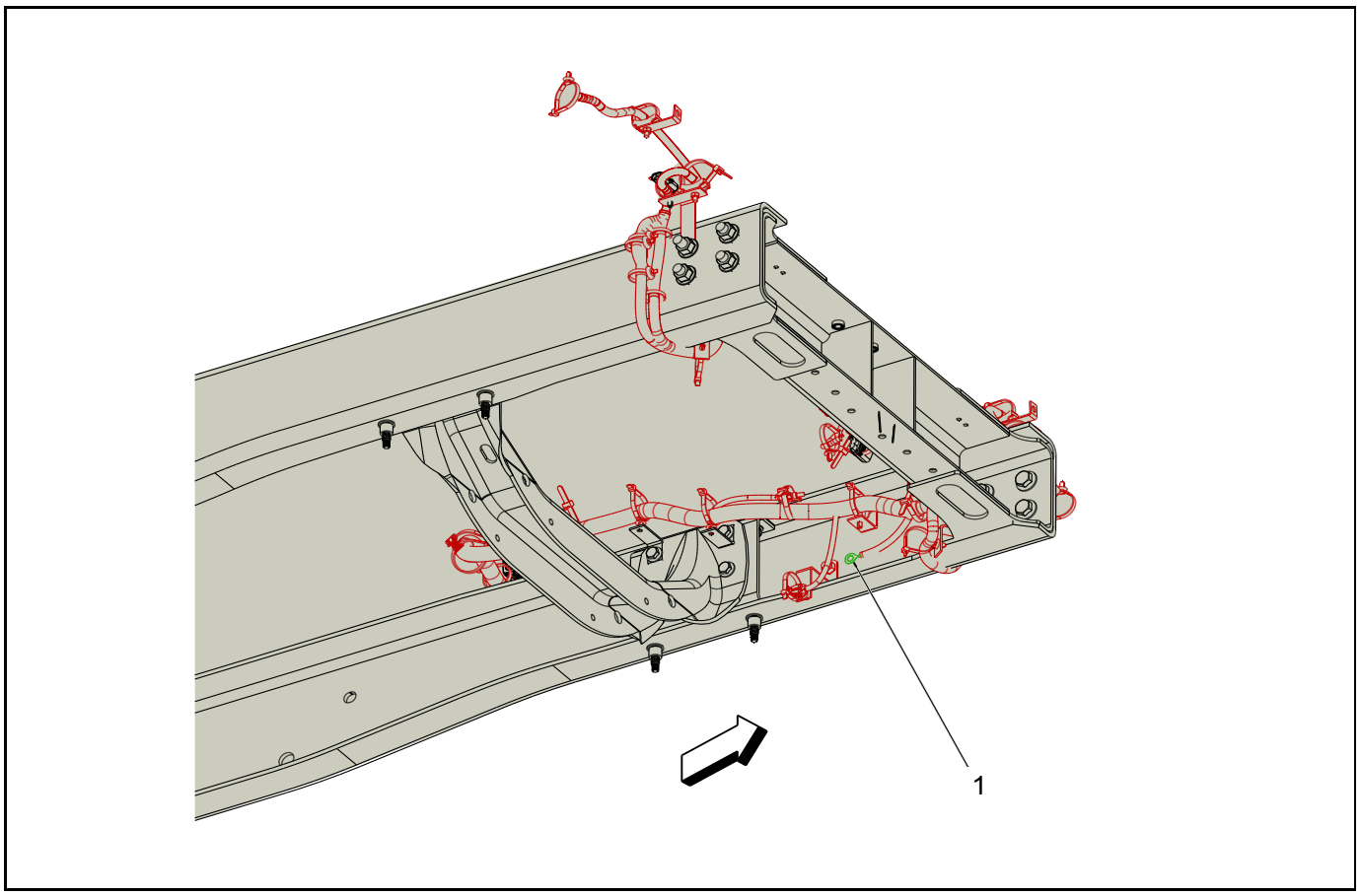


4975703

Items

(1) K44 Power Take-Off Control Module (PTO)
(2) K115 Reductant Control Module
(3) B295 Reductant Quality Sensor
(4) E52 Reductant Line Heater
(5) A38 Reductant Pump and Sensor Assembly
(6) Q61 Reductant Injector

Ground Views
G101

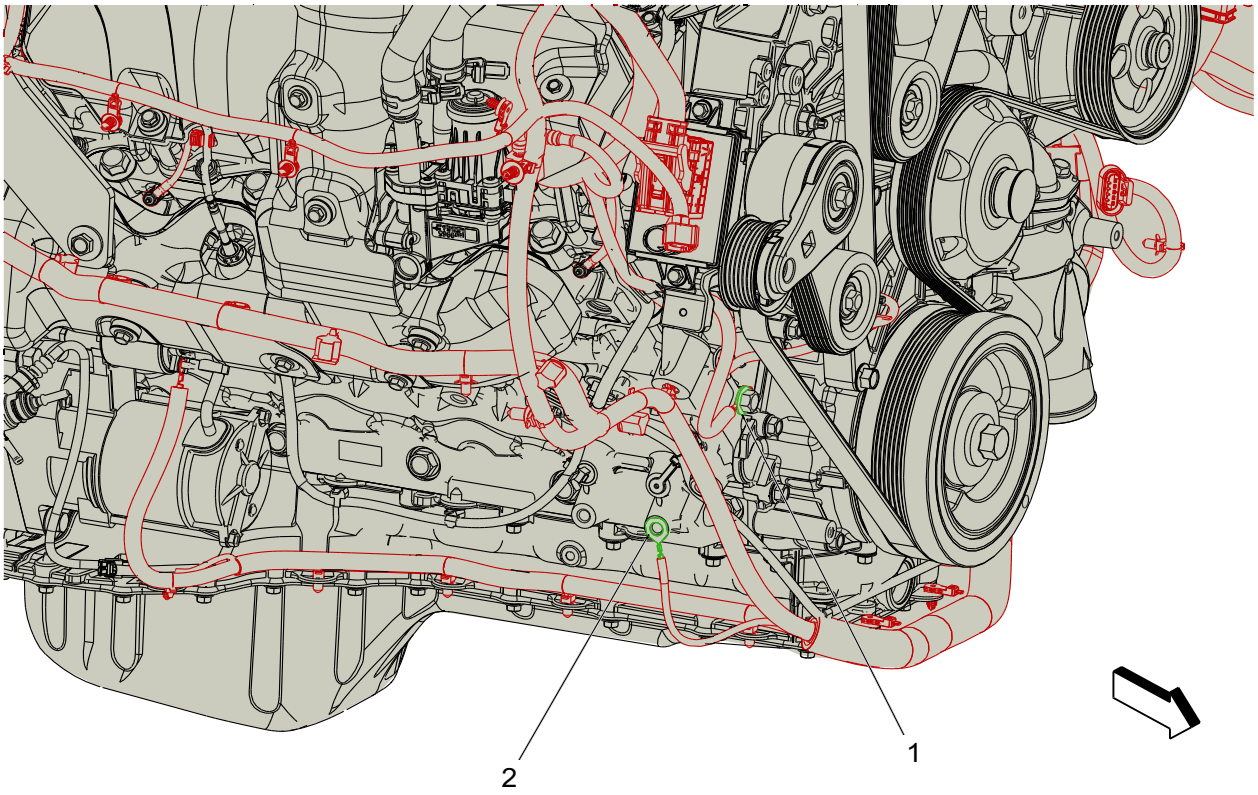


4992545

Items

(1) G101 Forward Lamp Harness

G110 and G112



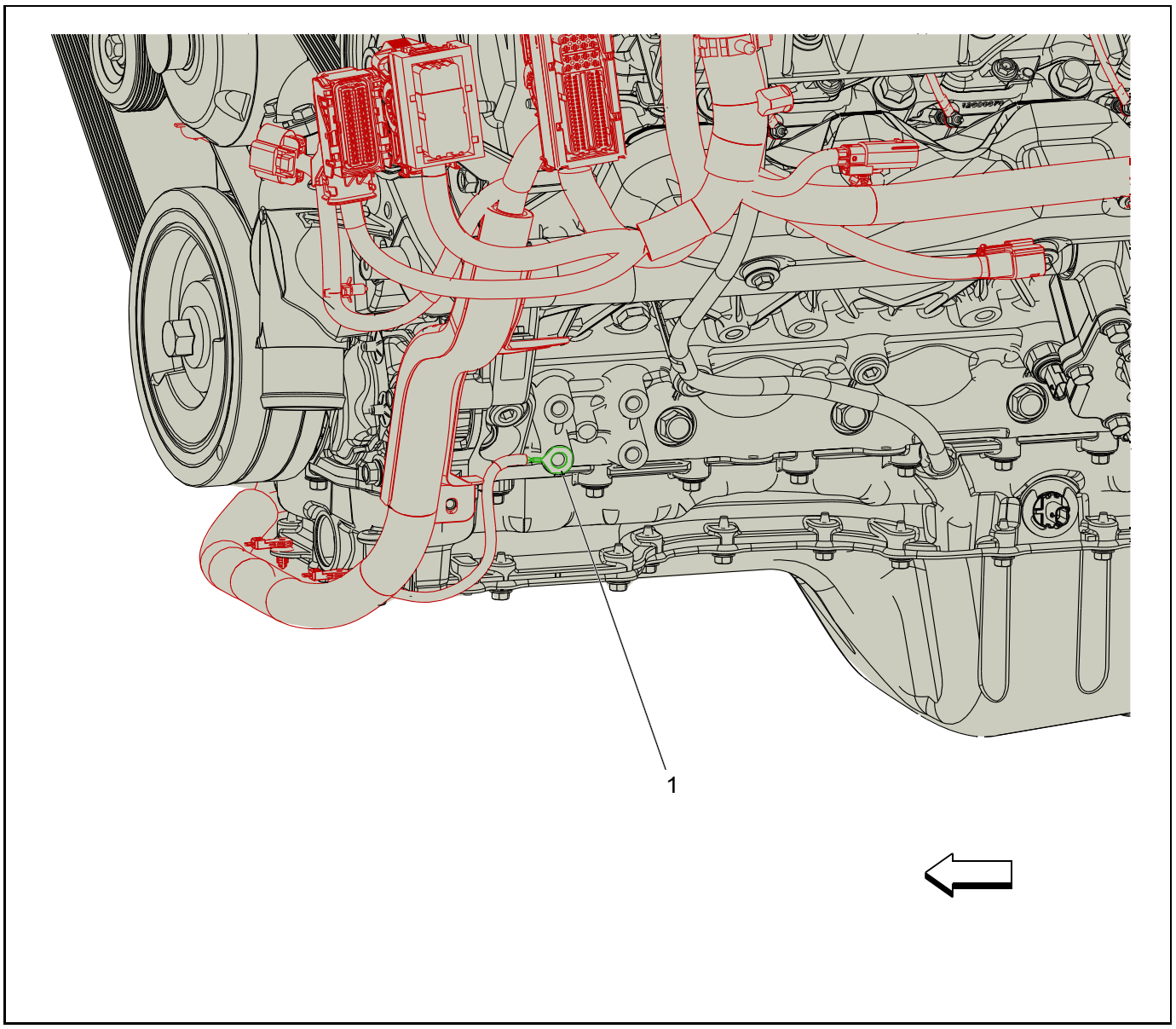
4975575

Items

(1) G112 Engine Harness

(2) G110 Engine Chassis Harness

G120

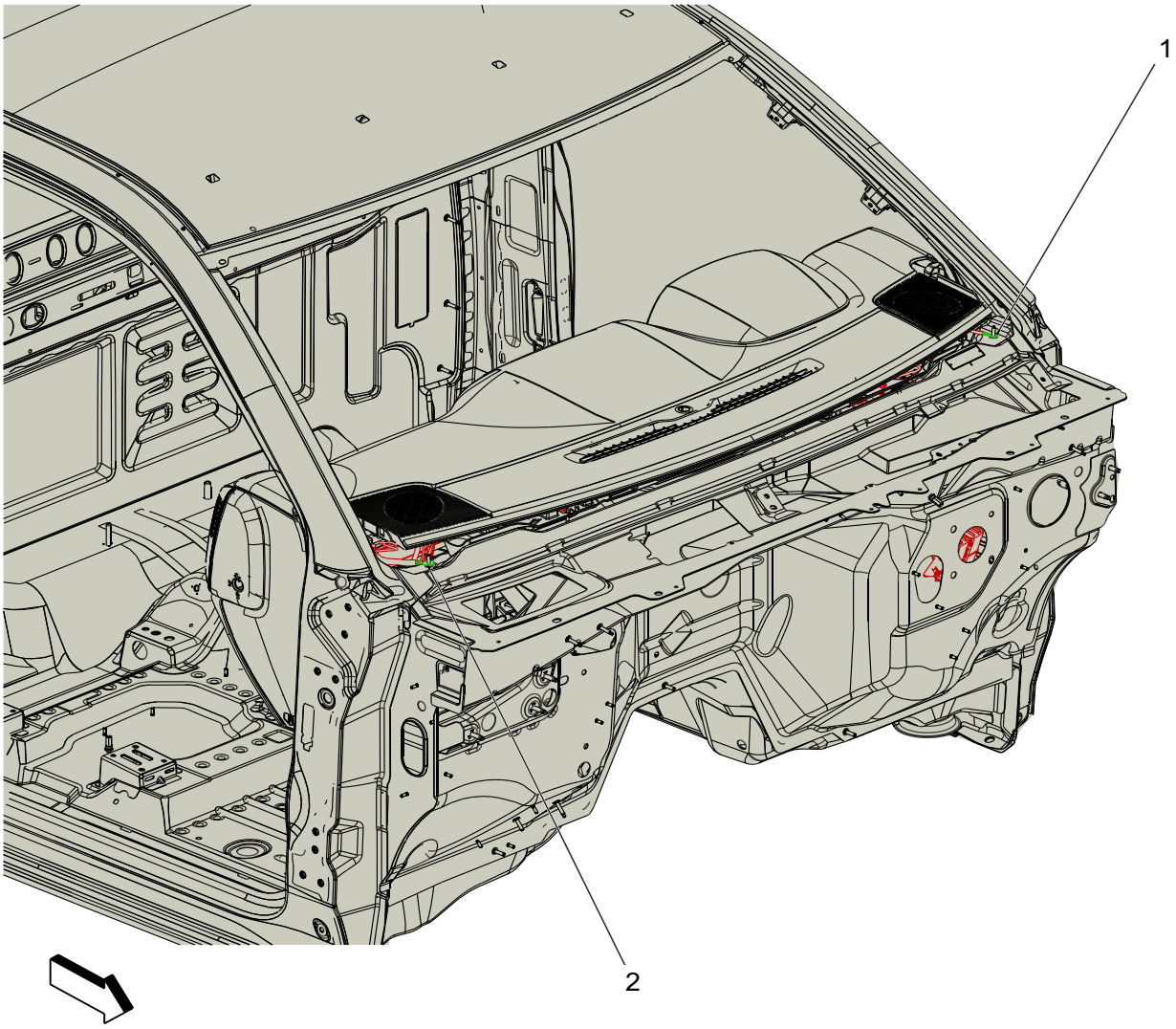


4975578

Items

(1) G120 Engine Chassis Harness

G210 and G218



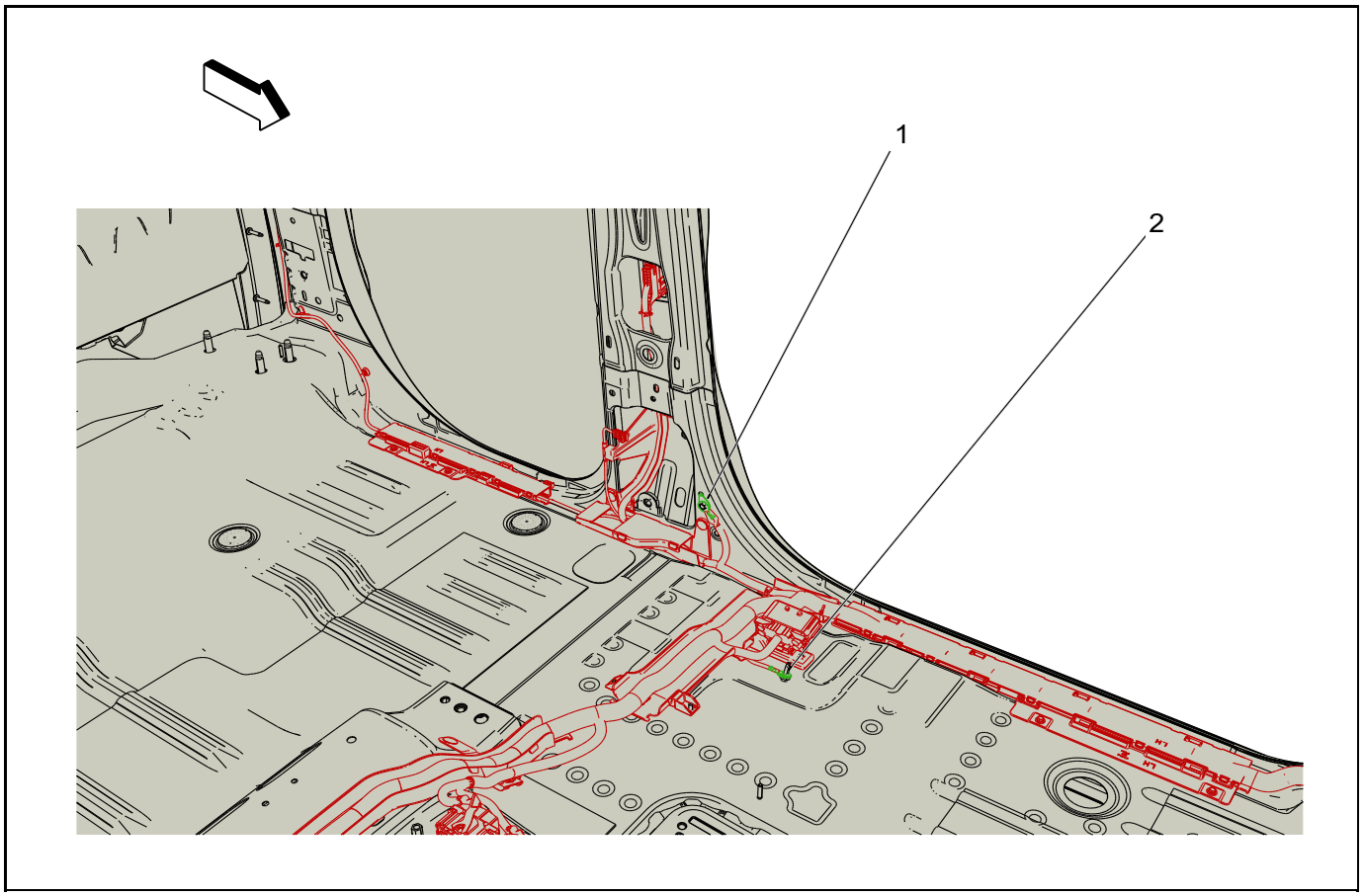
4975581

Items

(1) G218 Instrument Panel Harness

(2) G210 Instrument Panel Harness

G311 and G325



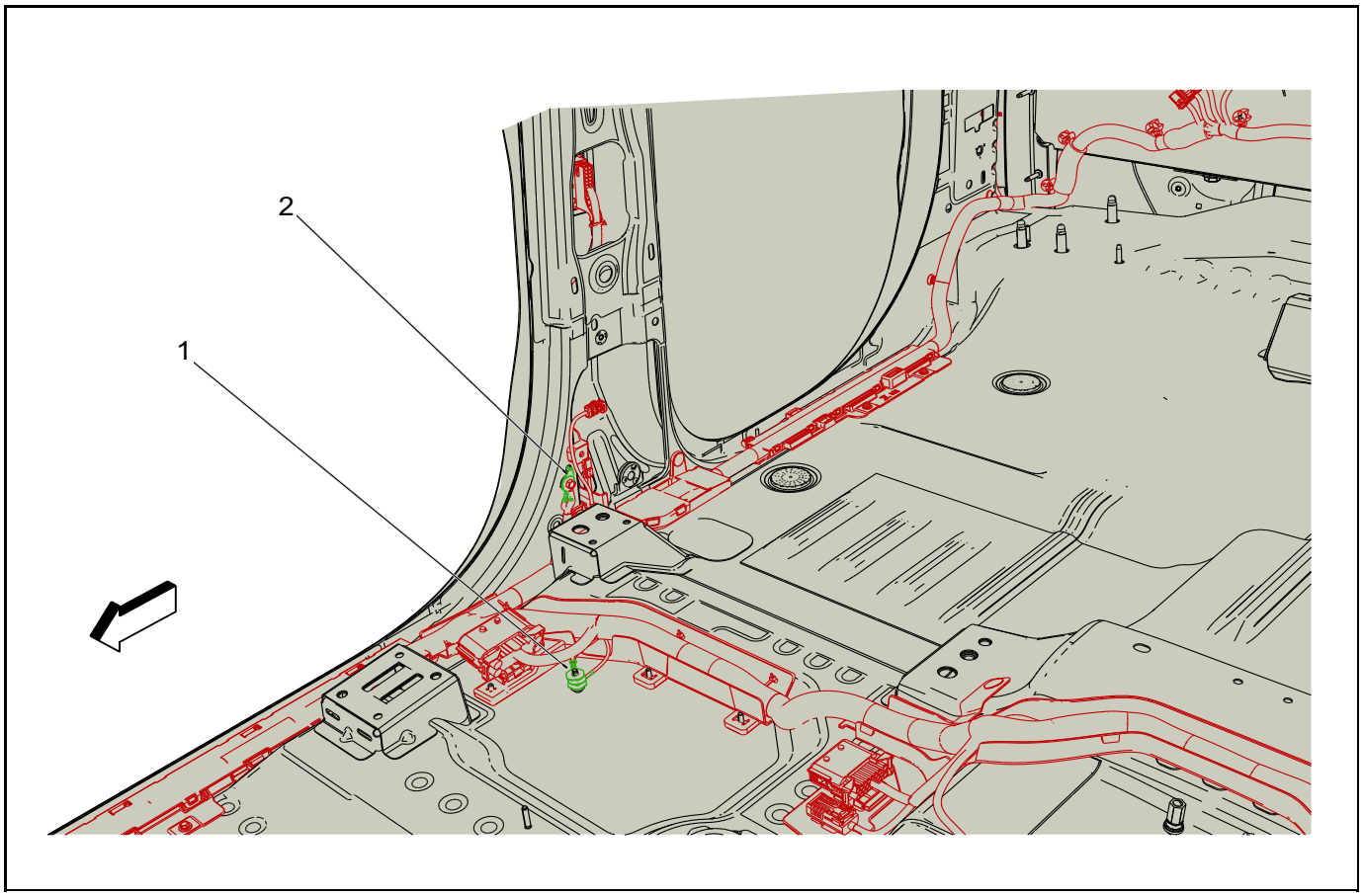
4975585

Items

(1) G311 Body Harness

(2) G325 Body Harness

G312 and G327



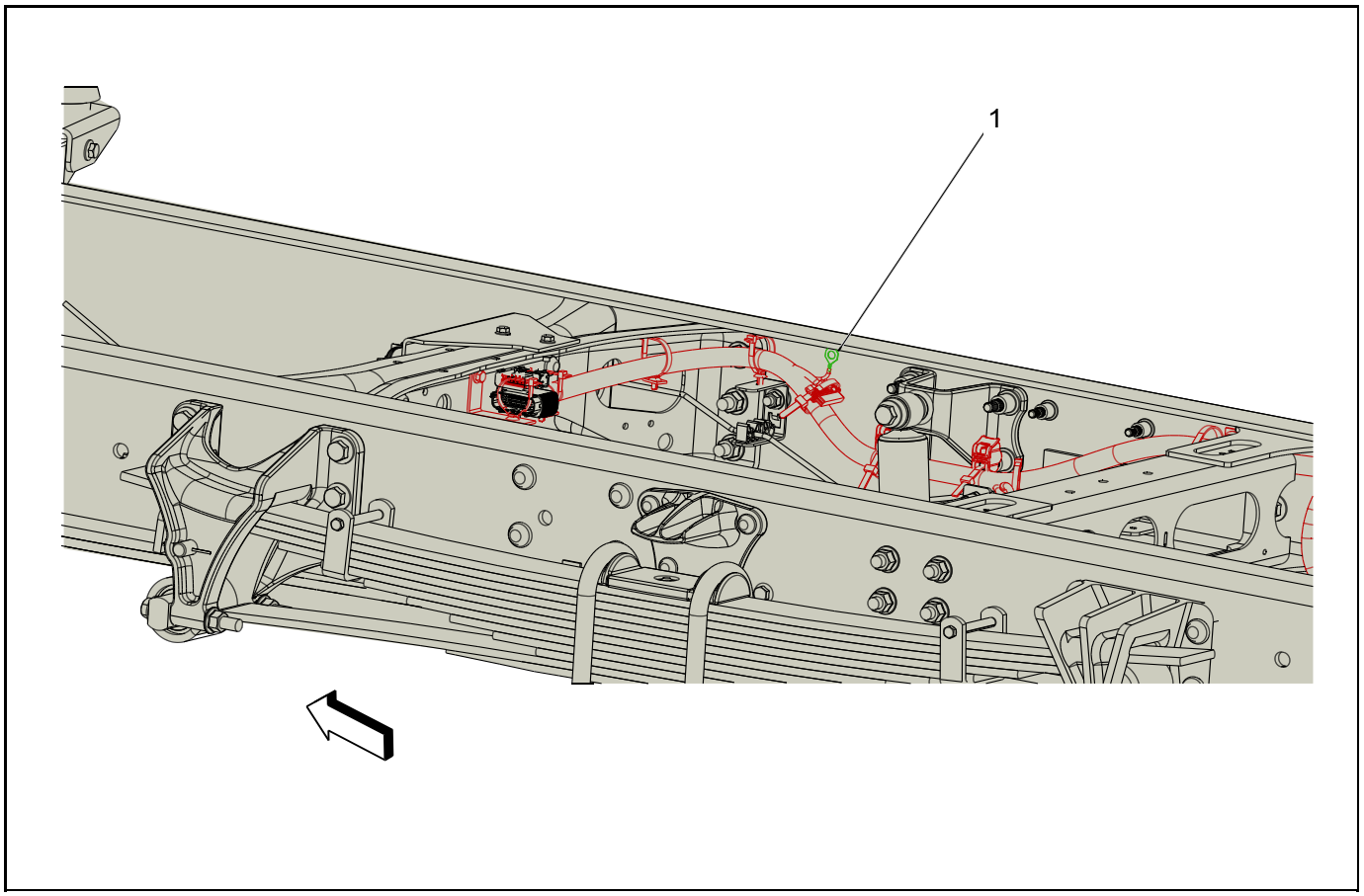
4975588

Items

(1) G327 Body Harness

(2) G312 Body Harness

G402



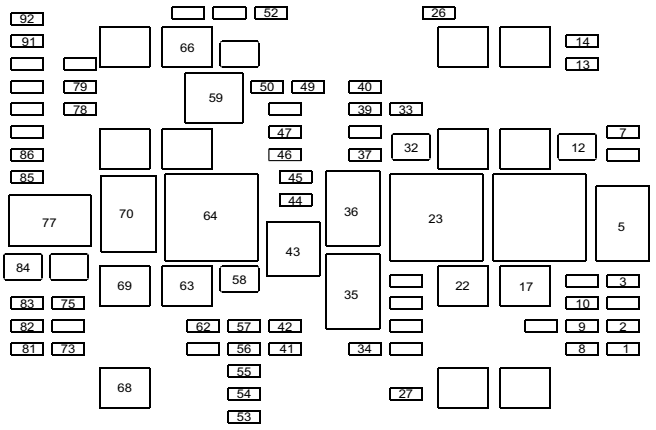
4975590

Items

(1) G402 Chassis Rear Right Harness

Electrical Center Identification Views

X50A Fuse Block - Underhood Label



FUSES

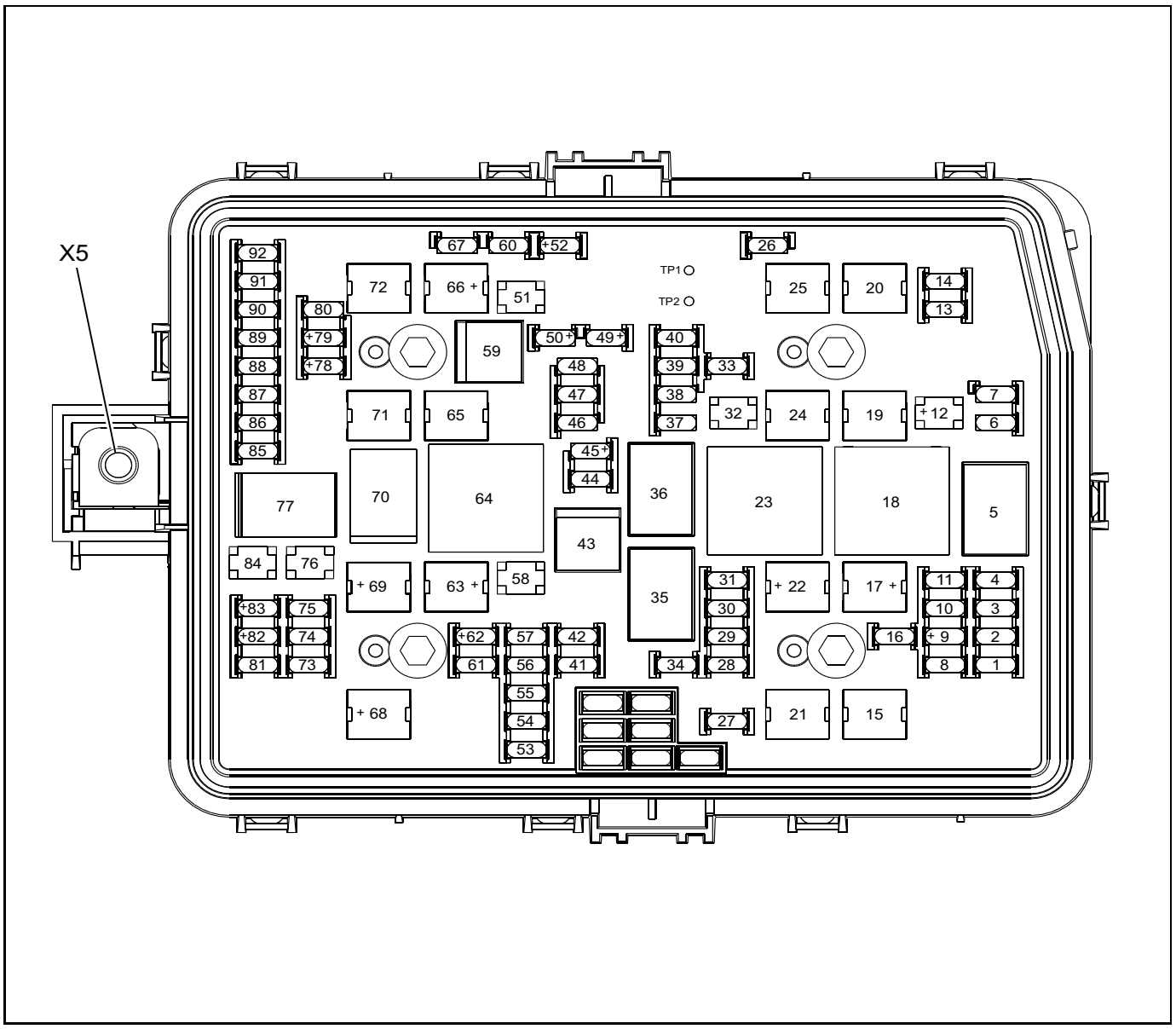
1 HI BEAM LT (10A)
2 HI BEAM RT (10A)
3 WASH PUMP (15A)
7 UPPFITERS 3&4 (5A)
8 FOG LAMP (15A)
9 RVC (5A)
10 UPPFITERS 1&2 (5A)
12 4WD TREC (30A)
13 LR_STP_TRN_LAMP (15A)
14 RR_STP_TRN_LAMP (15A)
17 IECL 1 (60A)
22 IECL 2 (60A)
26 RR AMBER (15A)
27 HORN (15A)
32 REAR DEFOG (30A)
33 HTD MIR (15A)
34 PRK LAMP LT (15A)
37 MSTRAIDS LAIR (5A)
39 AIR DRYER (20A)
40 MISC IGN (10A)
41 TRLR PRK LAMP (20A)
42 PRK LAMP RT (15A)
44 FUEL PUMP (20A)
45 LOW AIR PRESS (15A)
46 ECM IGN (15A)
47 TRANS IGN (15A)
49 TCM_BATT (15A)
50 A/C CLTCH (10A)
52 FRT WPR (25A)
53 STOP LAMP (15A)
54 TRLR REV LAMP (10A)
55 TRLR BCK/UP LAMP (10A)
56 AIR DUMP (10A)
57 LR AMBER (15A)
58 TRLR_BRK (30A)
62 ICCM (10A)
63 ACC PWR (20A)
66 AUX UEC (60A)
68 ABS PUMP (60A)
69 NOT USED
73 LFT_TRLR STOP_TURN (15A)
75 NOT USED
78 ECM_BATT (15A)
79 CAB_HTR_AUX BATT (10A)
81 RGT_TRLR STOP_TRN (15A)
82 FTZM (30A)
83 ABS VALVE (25A)
84 TRLR_BATT (30A)
85 ENG (15A)
86 ECM (30A)
91 ECM THROT CONT (15A)
92 COOL FAN CLUTCH (10A)

RELAYS

5 WASH PUMP
23 DEFOG REAR
35 PRK LAMP
36 RUN/CRNK
43 LOW AIR PRESS
59 A/C CONTROL
64 LR AMBER
70 NOT USED
77 ECM

4894090

X50A Fuse Block - Underhood Top View



4894093

Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
1	HI BEAM LT	F1UA	10A	• E4E Headlamp - Left High Beam
2	HI BEAM RT	F2UA	10A	• E4F Headlamp - Right High Beam
3	WASH PUMP	F3UA	15A	• G24 Windshield Washer Pump
7	UPPFITERS 3 and 4	F7UA	5A	• F6DR
8	FOG LAMP	F8UA	15A	• E29LF Fog Lamp - Left Front (T3U) • E29RF Fog Lamp - Right Front (T3U)
9	RVC	F9UA	5A	• K9 Body Control Module
10	UPPFITERS 1 and 2	F10UA	5A	• F5DL
12	4WD TREC	F12UA	30A	• K69 Transfer Case Control Module (NQF)

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
13	LR_STP_TRN_LA-MP	F13UA	15A	• E5S Tail/Stop and Turn Signal Lamp - Left • X405 Chassis Harness to Body Builder Connection Harness (5DX) • X495 Body Builder Connection Harness to Chassis Rear Right Harness (5DY)
14	RR_STP_TRN_L-AMP	F14UA	15A	• E5T Tail/Stop and Turn Signal Lamp - Right • X405 Chassis Harness to Body Builder Connection Harness (5DX) • X495 Body Builder Connection Harness to Chassis Rear Right Harness (5DY)
17	IECL 1	F17UA	60A	• X51L Fuse Block - Instrument Panel Left
22	IECL 2	F22UA	60A	• X51L Fuse Block - Instrument Panel Left
26	RR AMBER	F26UA	15A	• X405 Chassis Harness to Body Builder Connection Harness (5DX) • X495 Body Builder Connection Harness to Chassis Rear Right Harness (5DY)
27	HORN	F27UA	15A	• P12 Horn
32	REAR DEFOG	F32UA	30A	• E18 Rear Defogger Grid (C49)
33	HTD MIR	F33UA	15A	• E17D Outside Rearview Mirror Glass - Driver (DPN) • E17P Outside Rearview Mirror Glass - Passenger (DPN)
34	PRK LAMP LT	F34UA	15A	• E2LM Side Marker Lamp - Left Middle (DPN) • E3A Roof Clearance Lamp - Left Front Outer • E3C Roof Clearance Lamp - Front Middle • E3E Roof Clearance Lamp - Right Front Outer • E4S Park/Turn Signal Lamp - Left Upper • E4Q Park/Turn Signal Lamp - Left Lower • E5S Tail/Stop and Turn Signal Lamp - Left • X405 Chassis Harness to Body Builder Connection Harness (5DX) • X495 Body Builder Connection Harness to Chassis Rear Right Harness (5DY)
37	MSTRAIDS LAIR	F37UA	5A	• W31 Blunt Cut - Crank Inhibit Provisions
39	AIR DRYER	F39UA	20A	• TBD1 AIR DRYER (JPY)
40	MISC IGN	F40UA	10A	• S48A Multifunction Switch - Instrument Panel (G40/GP1/GP8) • X191 Engine Chassis Harness to Engine Chassis Harness (PTO)
41	TRLR PRK LAMP	F41UA	20A	• X88 Trailer Connector (UY7)
42	PRK LAMP RT	F42UA	15A	• E2RM Side Marker Lamp - Right Middle (DPN) • E4TPark/Turn Signal Lamp - Right Upper • E4R Park/Turn Signal Lamp - Right Lower • E5T Tail/Stop and Turn Signal Lamp - Right • X405 Chassis Harness to Body Builder Connection Harness (5DX) • X495 Body Builder Connection Harness to Chassis Rear Right Harness (5DY)
44	FUEL PUMP	F44UA	20A	• KR23B Fuel Pump Relay - Secondary (NSQ)
45	LOW AIR PRESS	F45UA	15A	• Not Used
46	ECM IGN	F46UA	15A	• K20 Engine Control Module • K38A Chassis Control Module - Auxiliary (JL1) • K111 Fuel Pump Control Module

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
47	TRANS IGN	F47UA	15A	• K34 Glow Plug Control Module • K71 Transmission Control Module
49	TCM_BATT	F49UA	15A	• K71 Transmission Control Module
50	A/C CLTCH	F50UA	10A	• KR29 A/C Compressor Clutch Relay
52	FRT WPR	F52UA	25A	• KR12B Windshield Wiper Relay • KR12C Windshield Wiper Speed Control Relay
53	STOP LAMP	F53UA	15A	• E6 Center High Mounted Stop Lamp • X405 Chassis Harness to Body Builder Connection Harness (5DX) • X495 Body Builder Connection Harness to Chassis Rear Right Harness (5DY)
54	TRLR REV LAMP	F54UA	10A	• E5A Backup Lamp - Left • E5B Backup Lamp - Right • P3 Backup Alarm (UZF) • X405 Chassis Harness to Body Builder Connection Harness (5DX) • X495 Body Builder Connection Harness to Chassis Rear Right Harness (5DY)
55	TRLR BCK/UP LAMP	F55UA	10A	• X88 Trailer Connector (UY7)
56	AIR DUMP	F56UA	10A	• AIR PRESSURE RLEASE RELAY
57	LR AMBER	F57UA	15A	• X405 Chassis Harness to Body Builder Connection Harness (5DX) • X495 Body Builder Connection Harness to Chassis Rear Right Harness (5DY)
58	TRLR_BRK	F58UA	30A	• K133 Trailer Brake Power Control Module (JL1) • X61A Junction Block - Instrument Panel • X405 Chassis Harness to Body Builder Connection Harness (5DX) • X495 Body Builder Connection Harness to Chassis Rear Right Harness (5DY)
62	ICCM	F62UA	10A	• K38A Chassis Control Module - Auxiliary (JL1)
63	ACCY PWR	F63UA	20A	• Not Used
66	AUX UEC	F66UA	60A	• X50B Fuse Block - Underhood Auxiliary
68	ABS PUMP	F68UA	60A	• K17 Electronic Brake Control Module
69	SPARE	F69UA	30A	• Not Used
73	LFT_TRLR_STO-P_TURN	F73UA	15A	• X88 Trailer Connector (UY7)
75	SPARE	F75UA	30A	• Not Used
78	ECM_BATT	F78UA	15A	• K20 Engine Control Module
79	CAB_HTR_AUX BATT	F79UA	10A	• K115 Reductant Control Module
81	RGT_TRLR_STO-P_TURN	F81UA	15A	• X88 Trailer Connector (UY7)
82	FTZM	F82UA	30A	• K111 Fuel Pump Control Module
83	ABS VALVE	F83UA	25A	• K17 Electronic Brake Control Module
84	TRLR_BATT	F84UA	30A	• X88 Trailer Connector (UY7)
85	ENG	F85UA	15A	• B75C Multifunction Intake Air Sensor
86	ECM	F86UA	30A	• K20 Engine Control Module

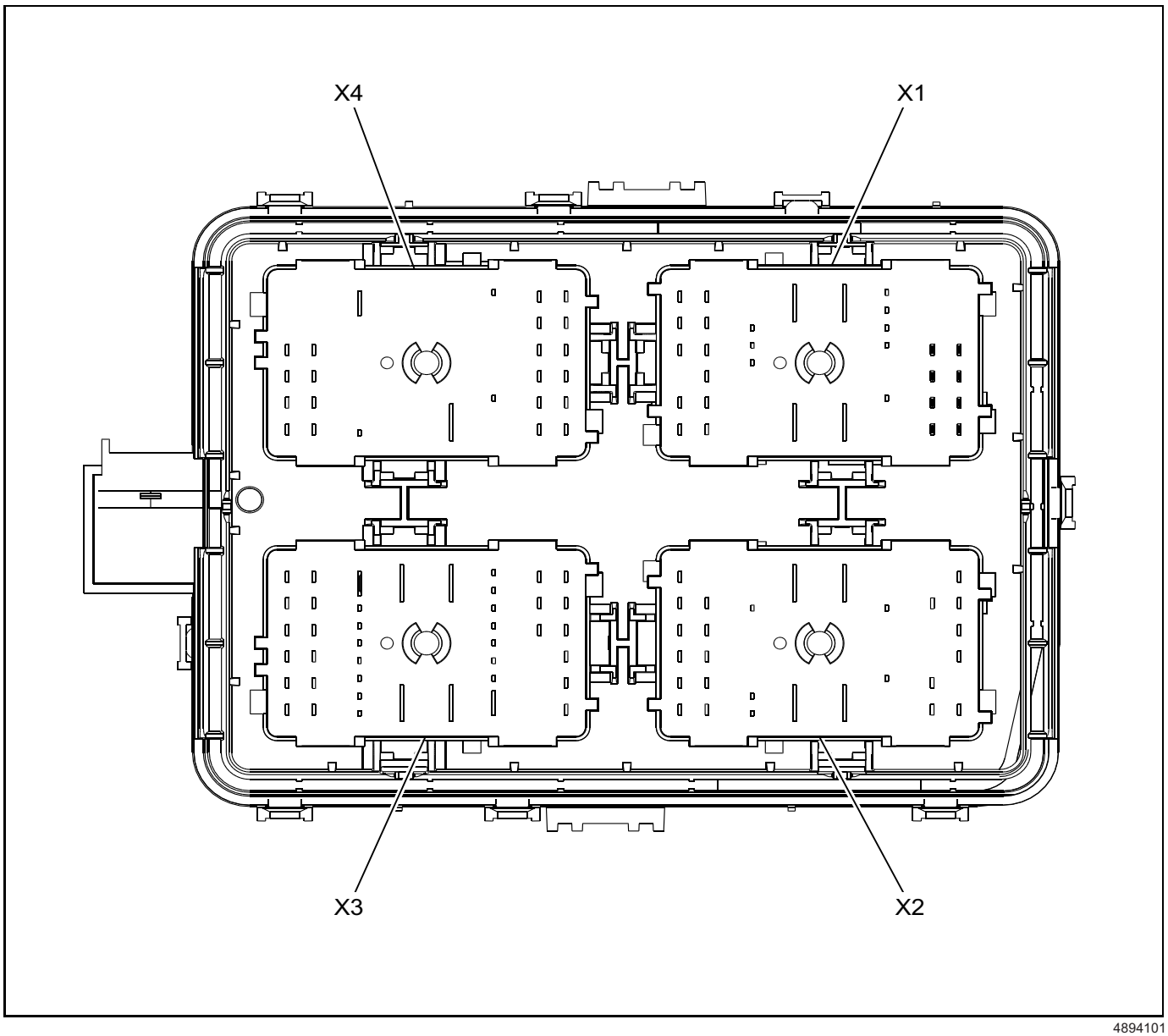
Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
91	ECM THROT CONT	F91UA	15A	• K20 Engine Control Module
92	COOL FAN CLUTCH	F92UA	10A	• KR20F Cooling Fan Relay
Relays				
5	WASH PUMP	KR11 Windshield Washer Pump Relay	—	• F3UA
23	DEFOG REAR	KR5 Rear Defogger Relay	—	• F32UA • F33UA
35	PRK LAMP	KR53 Park Lamps Relay	—	• F34UA • F41UA • F42UA
36	RUN/CRNK	KR73 Ignition Main Relay	—	• F7UA • F10UA • F37UA • F39UA • F40UA • F44UA • F46UA • F47UA • F56UA • KR99 Air Suspension Relay
43	LOW AIR PRESS	KR99 Air Suspension Relay	—	• F45UA
59	A/C CONTROL	KR29 A/C Compressor Clutch Relay	—	• Q2 A/C Compressor Clutch (C67)
64	LR AMBER	KR68L Turn Signal Lamps Relay - Left	—	• F57UA
70	SPARE	—	—	• Not Used
77	ECM	KR75 Engine Controls Ignition Relay	—	• F85UA • F86UA • F91UA • F92UA • KR29 A/C Compressor Clutch Relay
Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block.				
—	—	KR12B Windshield Wiper Relay	—	• KR12C Windshield Wiper Speed Control Relay
—	—	KR12C Windshield Wiper Speed Control Relay	—	• M75 Windshield Wiper Motor
—	—	KR3 Horn Relay	—	• F27UA
—	—	KR40 Backup Lamp Relay	—	• F54UA • F55UA
—	—	KR46 Front Fog Lamp Relay	—	• F8UA
—	—	KR48 Headlamp High Beam Relay	—	• F1UA • F2UA
—	—	KR59 Stop Lamp Relay	—	• F53UA

Usage Table (cont'd)

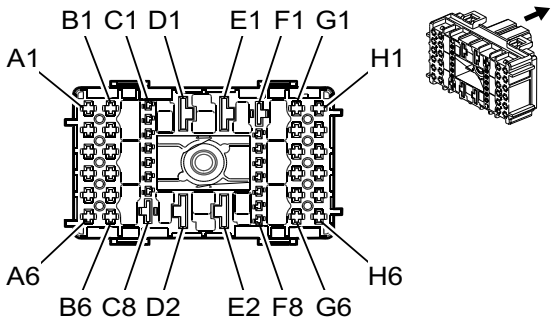
No.	Device Label Name	Device Assigned Name	Rating	Description
—	—	KR63L Trailer Stop/Turn Signal Lamp Relay - Left	—	• F73UA
—	—	KR63R Trailer Stop/Turn Signal Lamp Relay - Right	—	• F81UA
—	—	KR68R Turn Signal Lamps Relay - Right	—	• F26UA
—	—	AIR PRESSURE RELEASE RELAY	—	• TBD3 AIR SYSTEM CONTROL SOLENOID VALVE ASSEMBLY
—	—	KR182L Stop/Turn Signal Lamp Relay - Left	—	• F13UA
—	—	KR182R Stop/Turn Signal Lamp Relay - Right	—	• F14UA
Test Points				
TP1	CKT 95	TP1	—	• KR12C Windshield Wiper Speed Control Relay
TP2	CKT 92	TP2	—	• KR12C Windshield Wiper Speed Control Relay

X50A Fuse Block - Underhood Bottom View



4894101

X50A Fuse Block - Underhood X1



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-38125-560	Not Required	Not Required	Not Required	Not Required
II	19332366	J-35616-35 (VT)	J-38125-12A	Not Required	Not Required	Not Required	Not Required

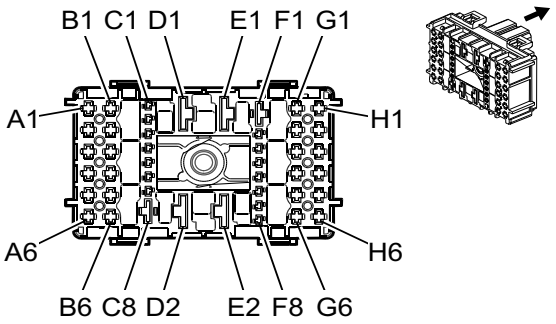
X50A Fuse Block - Underhood X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	0.75	D-BU/WH	1314	Left Front Turn Signal Lamp Control	II	—
A2	0.5	VT/WH	239	Run/Crank Ignition 1 Voltage	II	—
A3	0.35	BN/GY	2268	Windshield Washer Relay Control	II	—
A4	0.5	BK	550	Ground	II	—
A5	0.75	BK/WH	451	Signal Ground	II	—
A6	0.75	BN/L-GN	9950	—	II	—
B1	—	—	—	Not Occupied	—	—
B2	2	RD/GY	1342	Battery Positive Voltage	II	—
B3 - B4	—	—	—	Not Occupied	—	—
B5	0.75	YE/D-BU	18	Left Rear Stop/Turn Lamp Control	II	—
B6	0.75	BN/L-GN	19	Right Rear Stop/Turn Lamp Control	II	—
C1	0.75	YE	712	Left Headlamp Low Beam Control	I	—
C2	—	—	—	Not Occupied	—	—
C3	0.75	YE	312	Right Headlamp Low Beam Control	I	—
C4	—	—	—	Not Occupied	—	—
C5	0.75	L-GN/VT	1315	Right Front Turn Signal Lamp Control	I	—
C6	—	—	—	Not Occupied	—	—
C7	0.75	YE/D-BU	9960	—	I	—
C8 - F1	—	—	—	Not Occupied	—	—

X50A Fuse Block - Underhood X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
F2	0.35	BN/VT	193	Rear Defog Relay Control	I	—
F3	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	I	—
F4	0.5	D-BU/WH	1314	Left Front Turn Signal Lamp Control	I	—
F5	—	—	—	Not Occupied	—	—
F6	0.35	WH/VT	860	Front Windshield Wiper Switch High Signal	I	—
F7	0.75	L-GN/VT	619	Right Rear Turn Signal Lamp Control	I	—
F8	0.5	L-GN/VT	1315	Right Front Turn Signal Lamp Control	I	—
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	1	BK	550	Ground	II	—
G6	0.35	GY	91	Windshield Wiper Motor Relay Coil Control	II	—
H1	0.5	VT/GY	539	Run/Crank Ignition 1 Voltage	II	—
H2	2.5	RD/L-GN	242	Battery Positive Voltage	II	—
H3	1.5	VT/GY	139	Run/Crank Ignition 1 Voltage	II	—
H4	0.5	VT/WH	239	Run/Crank Ignition 1 Voltage	II	—
H5	1	WH	92	Windshield Wiper Motor High Speed Control	II	—
H6	1	YE/BN	95	Windshield Wiper Motor Low Speed Control	II	—

X50A Fuse Block - Underhood X2



4994132

Connector Part Information

Harness Type: Body
OEM Connector: 33384594
Service Connector: Service by Component Assembly - See Part Catalog
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-38125-560	Not Required	Not Required	Not Required	Not Required
II	19332366	J-35616-35 (VT)	J-38125-12A	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

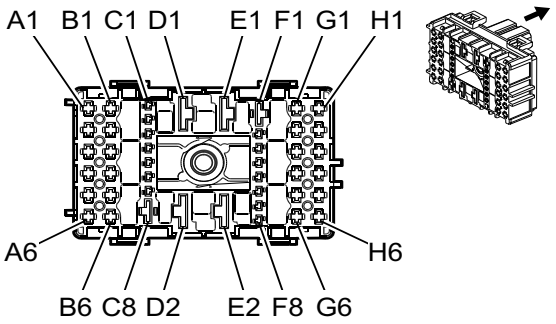
X50A Fuse Block - Underhood X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1 - A2	—	—	—	Not Occupied	—	—
A3	0.5	WH	711	Left Headlamp High Beam Control	II	—
A4	0.5	WH	311	Right Headlamp High Beam Control	II	—
A5	0.5	BK	550	Ground	II	—
A6	0.75	GY/VT	228	Windshield Washer Pump Control	II	—
B1 - B2	—	—	—	Not Occupied	—	—
B3	0.5	BN/VT	2234	Front Fog Lamp Control	II	—
B4	0.5	RD/YE	2340	Battery Positive Voltage	II	—
B5	0.5	VT/L-GN	39	Run/Crank Ignition 1 Voltage	II	—
B6	0.75	L-GN/VT	1315	Right Front Turn Signal Lamp Control	II	—
C1	0.35	D-BU/WH	5186	Left Trailer Turn Signal Lamp Control	I	—
C2	0.35	YE/GY	5187	Right Trailer Turn Signal Lamp Control	I	—
C3	0.5	BN	1317	Fog Lamp Relay Control	I	—
C4	0.35	BN/VT	1969	Headlamp High Beam Relay Control	I	—
C5	0.75	D-BU/WH	1314	Left Front Turn Signal Lamp Control	I	—
C6 - D1	—	—	—	Not Occupied	—	—
D2	10	RD/VT	842	Battery Positive Voltage	III	—

X50A Fuse Block - Underhood X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
E1	—	—	—	Not Occupied	—	—
E2	10	RD/D-BU	42	Battery Positive Voltage	III	—
F1	—	—	—	Not Occupied	—	—
F2	0.5	VT/WH	5065	Stop Lamp Relay Coil Control	I	—
F3	0.35	D-BU/BN	38	Backup Lamp Relay Control	I	—
F4	0.35	BN/WH	28	Horn Relay Control	I	—
F5	—	—	—	Not Occupied	—	—
F6	0.75	YE	312	Right Headlamp Low Beam Control	I	—
F7	—	—	—	Not Occupied	—	—
F8	0.75	YE	712	Left Headlamp Low Beam Control	I	—
G1	0.75	BN/GY	29	Horn Control	II	—
G2	—	—	—	Not Occupied	—	—
G3	2	RD/L-GN	968	—	II	—
G4	0.5	YE	5530	Hood Open Switch Signal	II	—
G5	0.5	YE	5530	Hood Open Switch Signal	II	—
G6 - H1	—	—	—	Not Occupied	—	—
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	D-BU	45	Park Lamp Relay Control	II	—

X50A Fuse Block - Underhood X3



4992608

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 33384584
Service Connector: Service by Component Assembly - See Part Catalog
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	19332365	J-35616-14 (GN)	J-38125-560	Not Required	Not Required	Not Required	Not Required
II	19332366	J-35616-35 (VT)	J-38125-12A	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

X50A Fuse Block - Underhood X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	0.5	VT/L-GN	439	Run/Crank Ignition 1 Voltage	II	—
A2	0.5 0.75	VT/BK L-GN	2139 123	Run/Crank Ignition 1 Voltage Folding Top Relay Up Control	II II	L5D -L5D
A3	0.5	VT/WH	239	Run/Crank Ignition 1 Voltage	II	—
A4	—	—	—	Not Occupied	—	—
A5	0.75	RD	110	Sunroof Switch Close Signal	II	—
A6	0.75	BN/L-GN	59	A/C Compressor Clutch Control	II	—
B1	—	—	—	Not Occupied	—	—
B2	1	VT/GY	539	Run/Crank Ignition 1 Voltage	II	—
B3 - B4	—	—	—	Not Occupied	—	—
B5	2.5	BK	550	Ground	II	—
B6	0.75	BK/WH	451	Signal Ground	II	—
C1	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	I	—
C2 - C3	—	—	—	Not Occupied	—	—
C4	0.5	WH/GY	459	A/C Compressor Clutch Relay Control	I	—
C5 - D1	—	—	—	Not Occupied	—	—
D2	10	RD/WH	342	Battery Positive Voltage	III	—

X50A Fuse Block - Underhood X3 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
E1 - F2	—	—	—	Not Occupied	—	—
F3	0.5	RD/BN	440	Battery Positive Voltage	I	—
F4	0.5	YE	5991	Powertrain Relay Coil Control	I	—
F5	0.75	RD/WH	3440	Battery Positive Voltage	I	—
F6	—	—	—	Not Occupied	—	—
F7	0.5	GY/YE	5297	Camshaft Position Exhaust Sensor Control 1	I	—
F8	—	—	—	Not Occupied	—	—
G1	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	II	—
G2 - G6	—	—	—	Not Occupied	—	—
H1	2.5	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	II	—
H2 - H5	—	—	—	Not Occupied	—	—
H6	0.75	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	II	—

X50A Fuse Block - Underhood X4

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Connector Part Information

Harness Type: Chassis
OEM Connector: 4100427C1
Service Connector: Service by Component Assembly - See Part Catalog
Description: Wire Entry Fuse Block

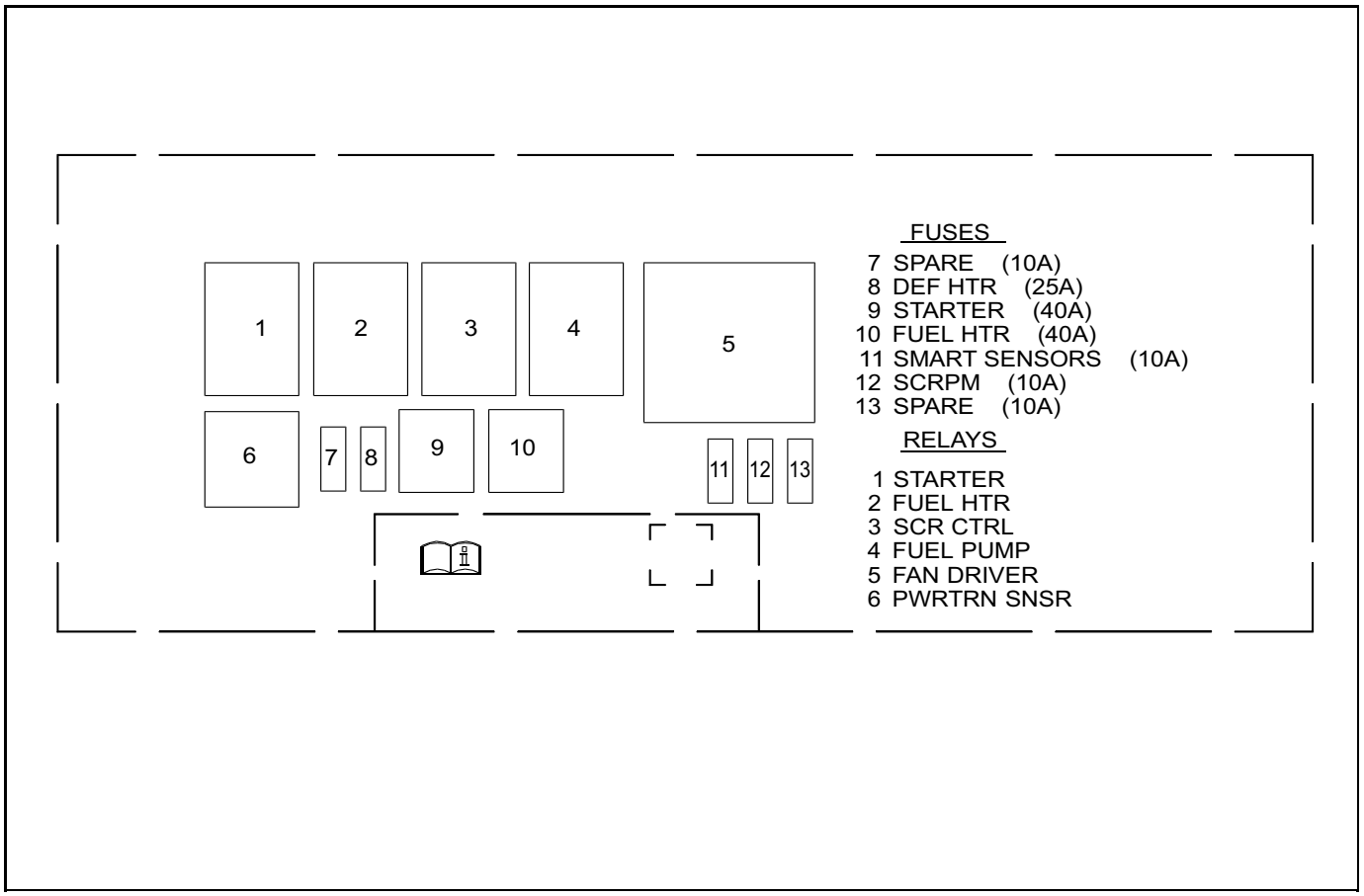
Terminal Part Information

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

X50A Fuse Block - Underhood X4

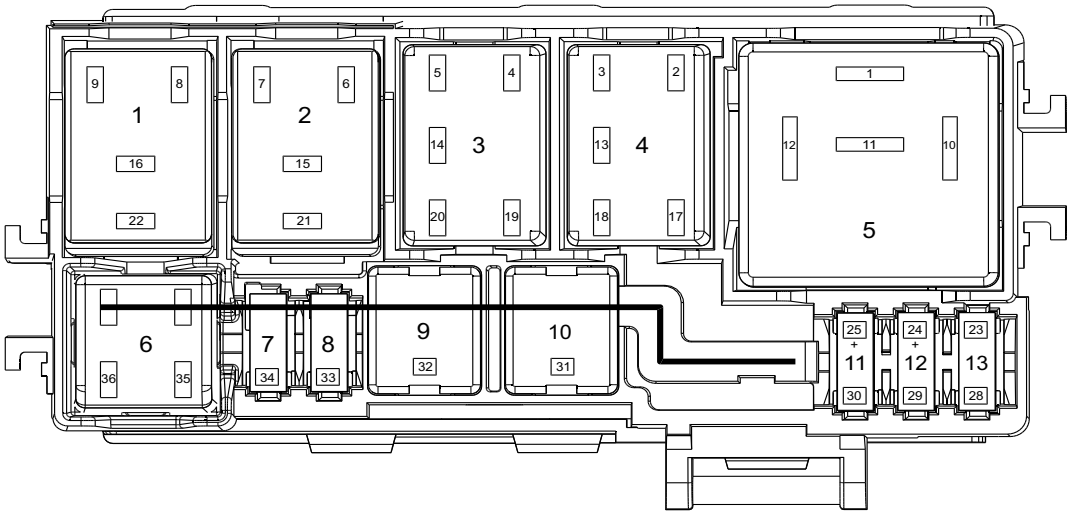
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	0.75	VT/GY	1054	Stop Lamp Control	I	—
A2	2	VT/GY	709	Left Park Lamp Control	I	—
A3	5	GY/BN	2109	Trailer Park Lamp Control	I	—
A4	2	GY/BN	309	Right Park Lamp Control	I	—
A6	0.5	PK	1739	Run/Crank Ignition 1 Voltage	I	—
B1	2	GN/WH	24	Backup Lamp Control	I	—
B2	2	WH/GN	1624	Trailer Backup Lamp Control	I	—
B4	2	YE/BN	618	Left Rear Turn Signal Lamp Control	I	—
B5	1.5	VT/GN	439	Run/Crank Ignition 1 Voltage	I	—
C1	0.75	GY	4461	Soft Top Bootwell Sensor Signal Right	I	—
C2	0.75	GY	4462	Soft Top Bootwell Sensor Signal Left	I	—
C7	1	RD	2040	Battery Positive Voltage	I	—
E1	10	RD/YE	1042	Battery Positive Voltage	I	—
F6	0.5	GN/GY	465	Fuel Pump Primary Relay Control	I	—
G3	1.5	YE/BU	318	Left Rear Trailer Stop/Turn Lamp Control	I	—
G6	2	RD/GN	1142	Battery Positive Voltage	I	—
H3	2	GN/BN	319	Right Rear Trailer Stop/Turn Lamp Control	I	—
H4	1.5	RD/VT	1242	Battery Positive Voltage	I	—
H5	2	RD/VT	1940	Battery Positive Voltage	I	—
H6	2	RD/YE	1242	Battery Positive Voltage	I	—

X50B Fuse Block - Underhood Auxiliary Label



4917818

X50B Fuse Block - Underhood Auxiliary Top View



4894087

Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
7	SPARE	F7UB	—	• Not Used
8	DEF HTR	F8UB	25A	• KR121A Reductant Control Module Relay 1
9	STARTER	F9UB	40A	• KR27 Starter Relay
10	FUEL HTR	F10UB	40A	• KR22 Fuel Heater Relay
11	SMART SENSORS	F11UB	10A	• B136 Exhaust Particulate Sensor • B195A Nitrogen Oxides Sensor 1 • B195B Nitrogen Oxides Sensor 2 • K111 Fuel Pump Driver Control Module • M103 Turbocharger Vane Position Actuator
12	SCRPM	F12UB	10A	• K115 Reductant Control Module
13	SPARE	F13UB	—	• Not Used
Relays				
1	STARTER	KR27 Starter Relay	—	• M64 Starter Motor
2	FUEL HTR	KR22 Fuel Heater Relay	—	• E11A Fuel Heater/Water in Fuel Sensor
3	SCR CTRL	KR121A Reductant Control Module Relay 1	—	• K115 Reductant Control Module
4	FUEL PUMP	KR23B Fuel Pump Relay - Secondary	—	• G12B Fuel Pump - Secondary (NSQ)

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
5	FAN DRIVER	KR20F Cooling Fan Relay	—	• Q85 Cooling Fan Clutch
6	PWRTRN SNSR	KR121B Reductant Control Module Relay 2	—	• F11UB • F12UB

X50B Fuse Block - Underhood Auxiliary Wire Entry

—

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 33322942
Service Connector: Service by Component Assembly - 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	13579915	J-35616-40 (BU)	J-38125-556	Not Required	Not Required	Not Required	Not Required
II	19332366	J-35616-35 (VT)	J-38125-12A	Not Required	Not Required	Not Required	Not Required
III	19370816	J-35616-42 (RD)	J-38125-556	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

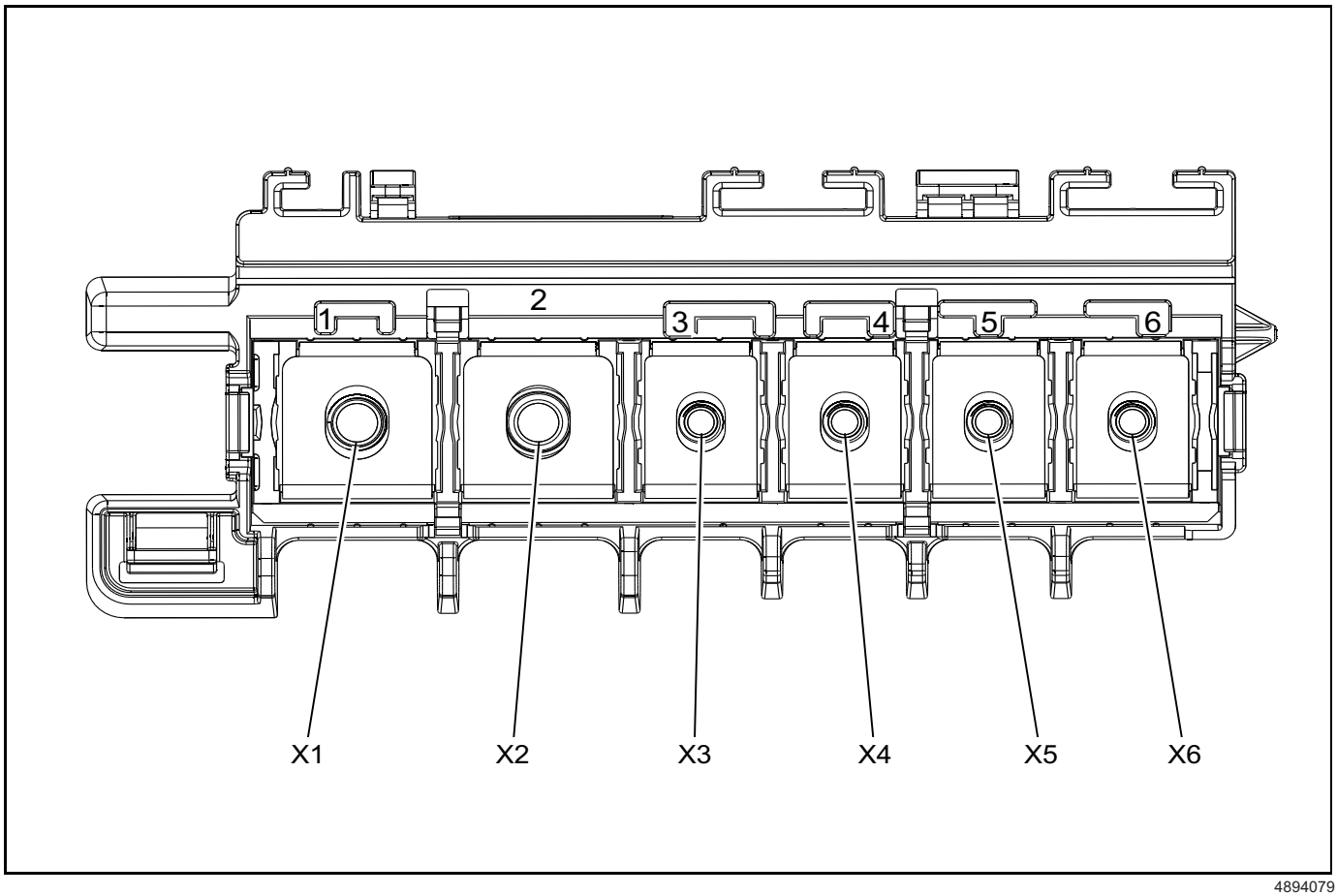
X50B Fuse Block - Underhood Auxiliary Wire Entry

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/YE	5297	Camshaft Position Exhaust Sensor Control 1	III	—
2	1	BK	550	Ground	II	—
3	1.5	VT/GY	539	Run/Crank Ignition 1 Voltage	II	—
4	0.5	L-GN/D-BU	3889	DEF Power Module Relay Control	II	—
5	2.5	D-BU/BN	3922	DEF Heater Supply 2	II	—
6	0.5	D-BU/L-GN	7071	Heater Fuel Control	II	—
7	0.5	VT/L-GN	355	Fuel Filter Heater Voltage	II	—
8	1	BK	550	Ground	II	—
9	0.5	YE/BK	625	Starter Enable Relay Control	II	—
10	1	BK	550	Ground	III	—
11	0.5	WH	2368	Cooling Fan Control Signal	III	—
12	0.5	WH/BK	2366	Cooling Fan Control Relay Speed Signal	III	—
15	2.5	VT/L-GN	355	Fuel Filter Heater Voltage	II	—
16	3	YE/VT	6	Starter Solenoid Crank Ignition Voltage	II	—
17	1	VT/GY	539	Run/Crank Ignition 1 Voltage	II	—
18	0.5	YE/D-BU	1465	Secondary Fuel Pump Relay Control	II	—
19	0.5	D-BU	3921	DEF Heater Supply 1	II	—
	2.5	D-BU	3921	DEF Heater Supply 1	II	—
20	0.5	D-BU	3921	DEF Heater Supply 1	II	—
21	2.5	VT/L-GN	355	Fuel Filter Heater Voltage	II	—
22	2.5	RD/D-BU	1240	Battery Positive Voltage	II	—
24	0.5	VT/D-BU	974	—	II	—
25	2.5	VT/D-BU	974	—	II	—
26	10	RD/WH	342	Battery Positive Voltage	IV	—

X50B Fuse Block - Underhood Auxiliary Wire Entry (cont'd)

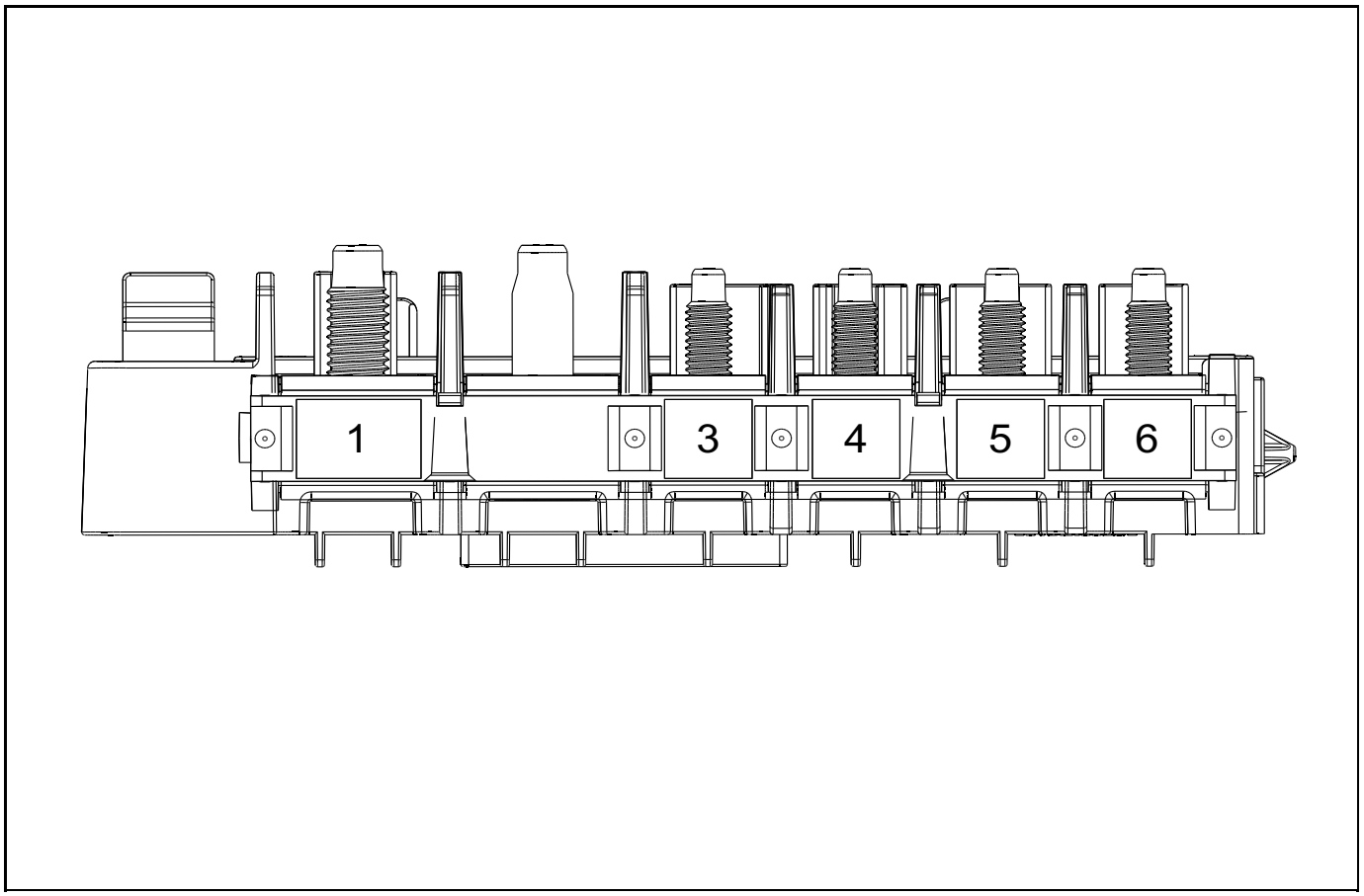
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
29	0.5	VT/L-GN	4320	Selective Catalytic Reduction Power Module Wake-Up Signal	II	—
30	2.5	VT/D-BU	3674	NOx Sensor 1 Control	II	—
31	2.5	VT/L-GN	355	Fuel Filter Heater Voltage	II	—
32	2.5	RD/D-BU	1240	Battery Positive Voltage	I	—
33	2.5	D-BU	3921	DEF Heater Supply 1	I	—
35	0.5	VT/D-BU	974	—	II	—
	2.5	VT/D-BU	974	—	II	—
36	0.5	L-GN/D-BU	3889	DEF Power Module Relay Control	II	—

X50D Fuse Block - Battery Top View



4894079

X50D Fuse Block - Battery Side View

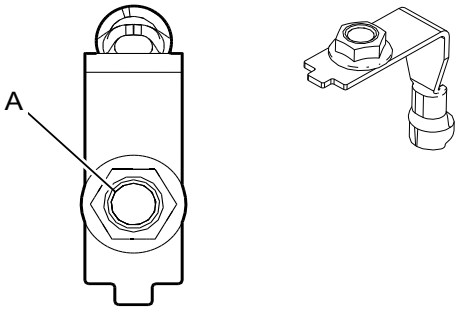


4894085

Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
1	—	F1BA	250A	• G13 Generator • X50A Fuse Block Underhood
2	—	—	—	• C1 Battery
3	—	F3BA	125A	• K34 Glow Plug Control Module
4	—	F4BA	100A	• E40 Electrical Auxiliary Heater (C32)
5	—	F5BA	60A	• X51R Fuse Block - Instrument Panel Right
6	—	F6BA	60A	• X51R Fuse Block - Instrument Panel Right

X50D Fuse Block - Battery X4 (C32)



4425476

Connector Part Information

Harness Type: Body
OEM Connector: 33265775
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

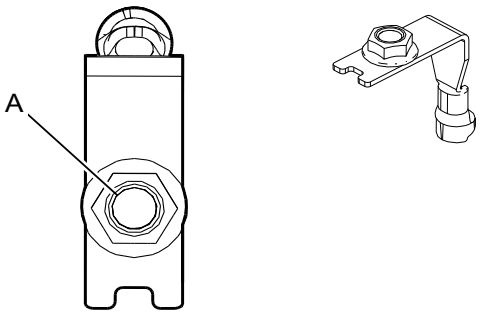
Terminal Part Information

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 X4 (C32)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	10	RD/GY	642	Battery Positive Voltage	I	—

X50D Fuse Block - Battery X5



4426162

Connector Part Information

Harness Type: Body
OEM Connector: 33265821
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 X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	6	RD/GY	142	Battery Positive Voltage	I	—

X50D Fuse Block - Battery X6

—

Connector Part Information

Harness Type: Body
OEM Connector: 35077346
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

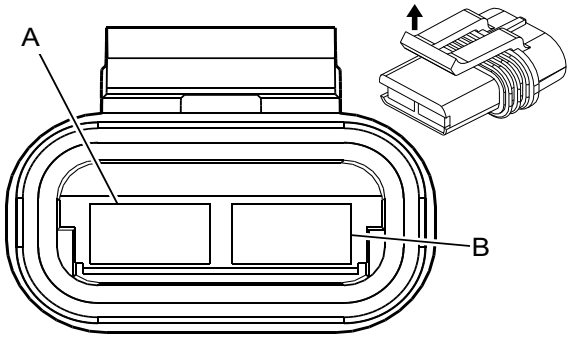
Terminal Part Information

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

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	6	RD/L-GN	242	Battery Positive Voltage	I	—

X55BA Fuse Holder 1 - Brake Booster



523591

Connector Part Information

Harness Type: Brake Booster
OEM Connector: 1667639C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 630 Metri-Pack Series, Sealed (BK)

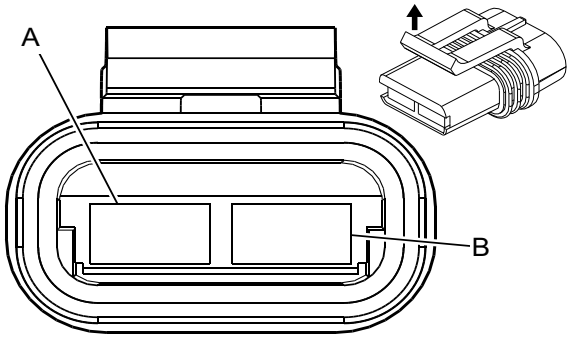
Terminal Part Information

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	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

X55BA Fuse Holder 1 - Brake Booster

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY	90	Right Mirror Motor Left Control	I	—
B	2	GY	90	Right Mirror Motor Left Control	II	—

X55BB Fuse Holder 2 - Brake Booster



523591

Connector Part Information

Harness Type: Brake Booster
OEM Connector: 1667639C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 630 Metri-Pack Series, Sealed (BK)

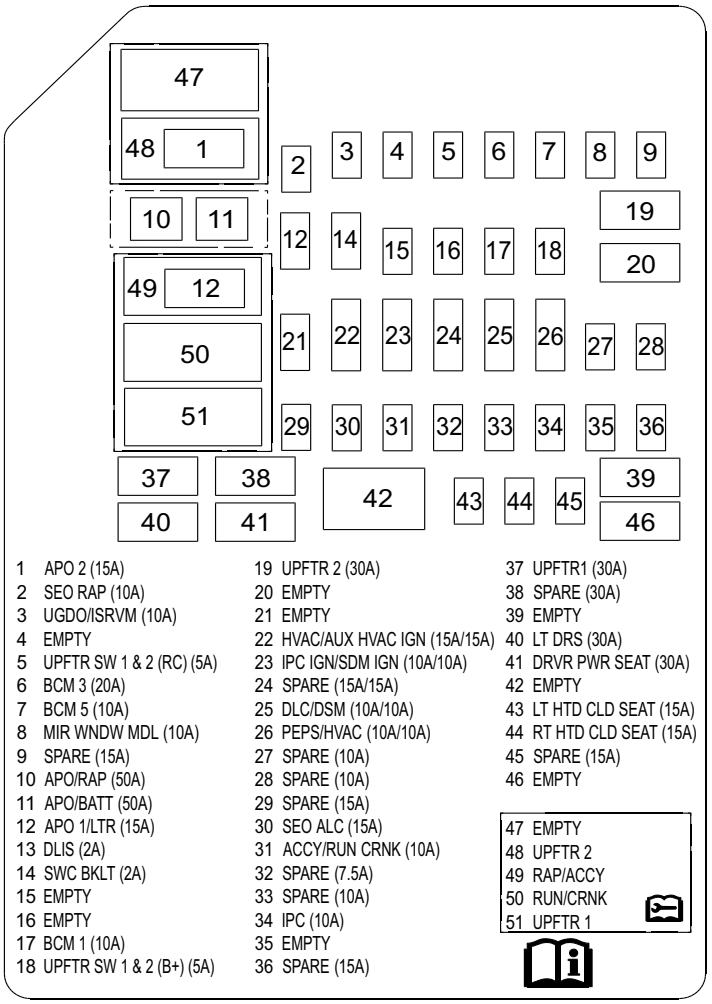
Terminal Part Information

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

X55BB Fuse Holder 2 - Brake Booster

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY	90	Right Mirror Motor Left Control	I	—
B	2	GY	90	Right Mirror Motor Left Control	I	—

X51L Fuse Block - Instrument Panel Left Label

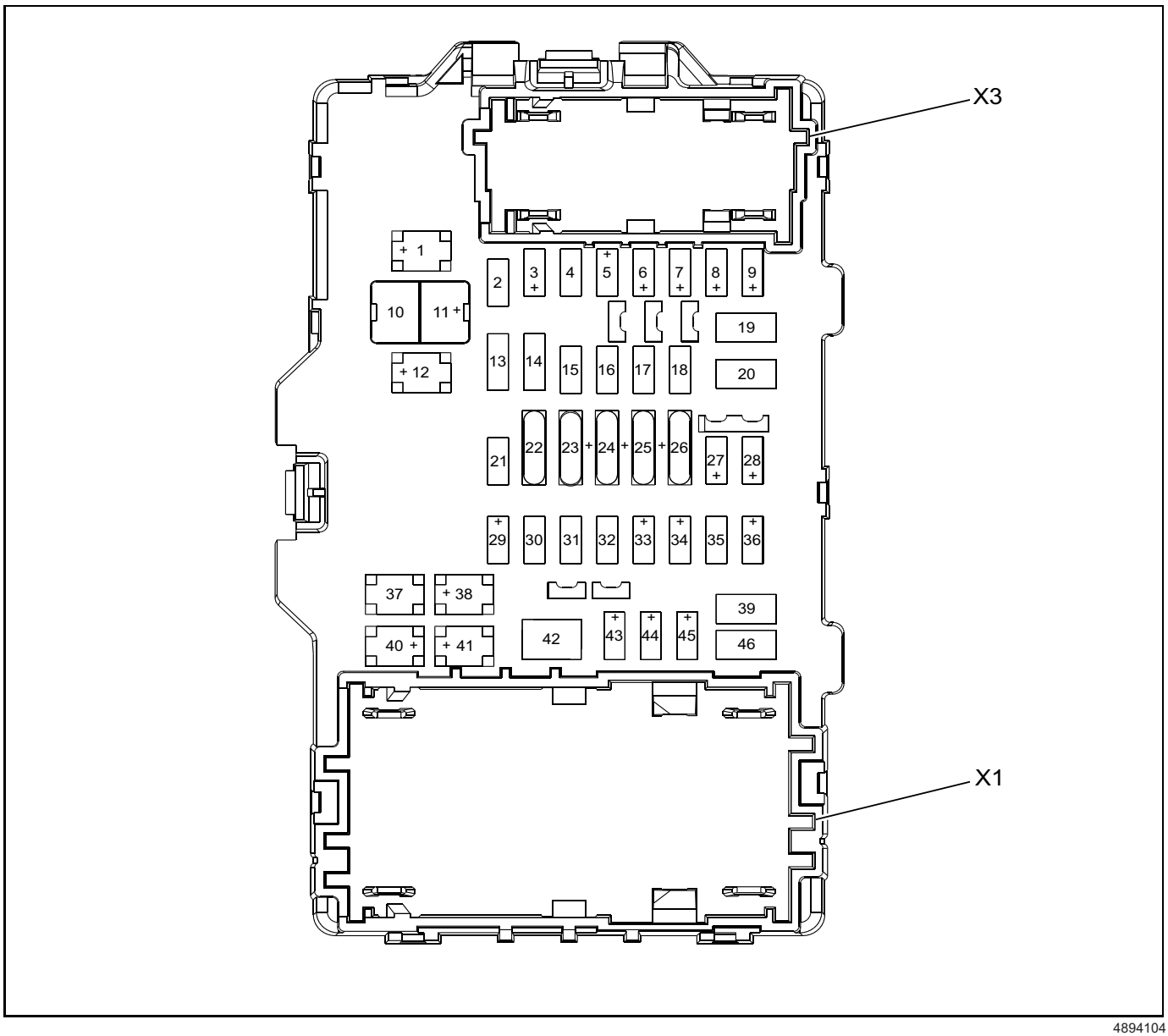


1 APO 2 (15A)
2 SEO RAP (10A)
3 UGDO/ISRVM (10A)
4 EMPTY
5 UPFTR SW 1 & 2 (RC) (5A)
6 BCM 3 (20A)
7 BCM 5 (10A)
8 MIR WNDW MDL (10A)
9 SPARE (15A)
10 APO/RAP (50A)
11 APO/BATT (50A)
12 APO 1/LTR (15A)
13 DLIS (2A)
14 SWC BKLT (2A)
15 EMPTY
16 EMPTY
17 BCM 1 (10A)
18 UPFTR SW 1 & 2 (B+) (5A)
19 UPFTR 2 (30A)
20 EMPTY
21 EMPTY
22 HVAC/AUX HVAC IGN (15A/15A)
23 IPC IGN/SDM IGN (10A/10A)
24 SPARE (15A/15A)
25 DLC/DSM (10A/10A)
26 PEPS/HVAC (10A/10A)
27 SPARE (10A)
28 SPARE (10A)
29 SPARE (15A)
30 SEO ALC (15A)
31 ACCY/RUN CRNK (10A)
32 SPARE (7.5A)
33 SPARE (10A)
34 IPC (10A)
35 EMPTY
36 SPARE (15A)
37 UPFTR1 (30A)
38 SPARE (30A)
39 EMPTY
40 LT DRS (30A)
41 DRVR PWR SEAT (30A)
42 EMPTY
43 LT HTD CLD SEAT (15A)
44 RT HTD CLD SEAT (15A)
45 SPARE (15A)
46 EMPTY

47 EMPTY
48 UPFTR 2
49 RAP/ACCY
50 RUN/CRNK
51 UPFTR 1

4894103

X51L Fuse Block - Instrument Panel Left Top View



4894104

Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
1	APO 2	F1DL	15A	• X80G Accessory Power Receptacle - Instrument Panel (-D07) • X80K Accessory Power Receptacle - Instrument Panel 2 (D07)
2	SEO RAP	F2DL	10A	• X61A Junction Block-Instrument Panel • T22 Modile Device Wireless Charger Module (K4C)
3	UGDO/ISRVM	F3DL	10A	• S63 Roof Beacon Switch (TRW)
4	EMPTY	F4DL	—	• Not Used
5	UPFTR SW 1 and 2 (RC)	F5DL	5A	• KR161A Configurable Provision Relay 1 (9L7) • KR161B Configurable Provision Relay 2 (9L7)

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
6	BCM 3	F6DL	20A	• K9 Body Control Module • E4H Headlamp - Right Low Beam • E4S Park/Turn Signal Lamp - Left Upper • E4Q Park/Turn Signal Lamp - Left Lower • E4Y Turn Signal Reapeater Lamp - Left (DPN) • KR68L Turn Signal Lamps Relay - Left (5DX/5DY) • X117 Right Snow Plow Headlight Harness to Right Snow Plow Light Harness (UNL)
7	BCM 5	F7DL	10A	• K9 Body Control Module • KR40 Backup Lamp Relay • KR113 Child Security Lock Disable Relay • KR114 Door Dead Lock Relay • S48A Multifunction Switch - Instrument Panel • S77 Transfer Case Shift Control Switch (NQF) • S79D Window Switch - Driver (Crew Cab)
8	MIR WNDW MDL	F8DL	10A	• S52 Outside Rearview Mirror Switch (DPN) • S79D Window Switch - Driver (A31)
9	SPARE	F9DL	15A	• Not Used
10	APO/RAP	F10DL	50A	• F1DL • F12DL
11	APO/BATT	F11DL	50A	• F1DL • F12DL
12	APO 1/LTR	F12DL	15A	• X80J Accessory Power Receptacle - Instrument Panel 1 (D07)
13	DLIS	F13DL	2A	• S39 Ignition Switch
14	SWC BKLT	F14DL	2A	• S70L Steering Wheel Controls Switch - Left (-UK3)
15	EMPTY	F15DL	—	• Not Used
16	EMPTY	F16DL	—	• Not Used

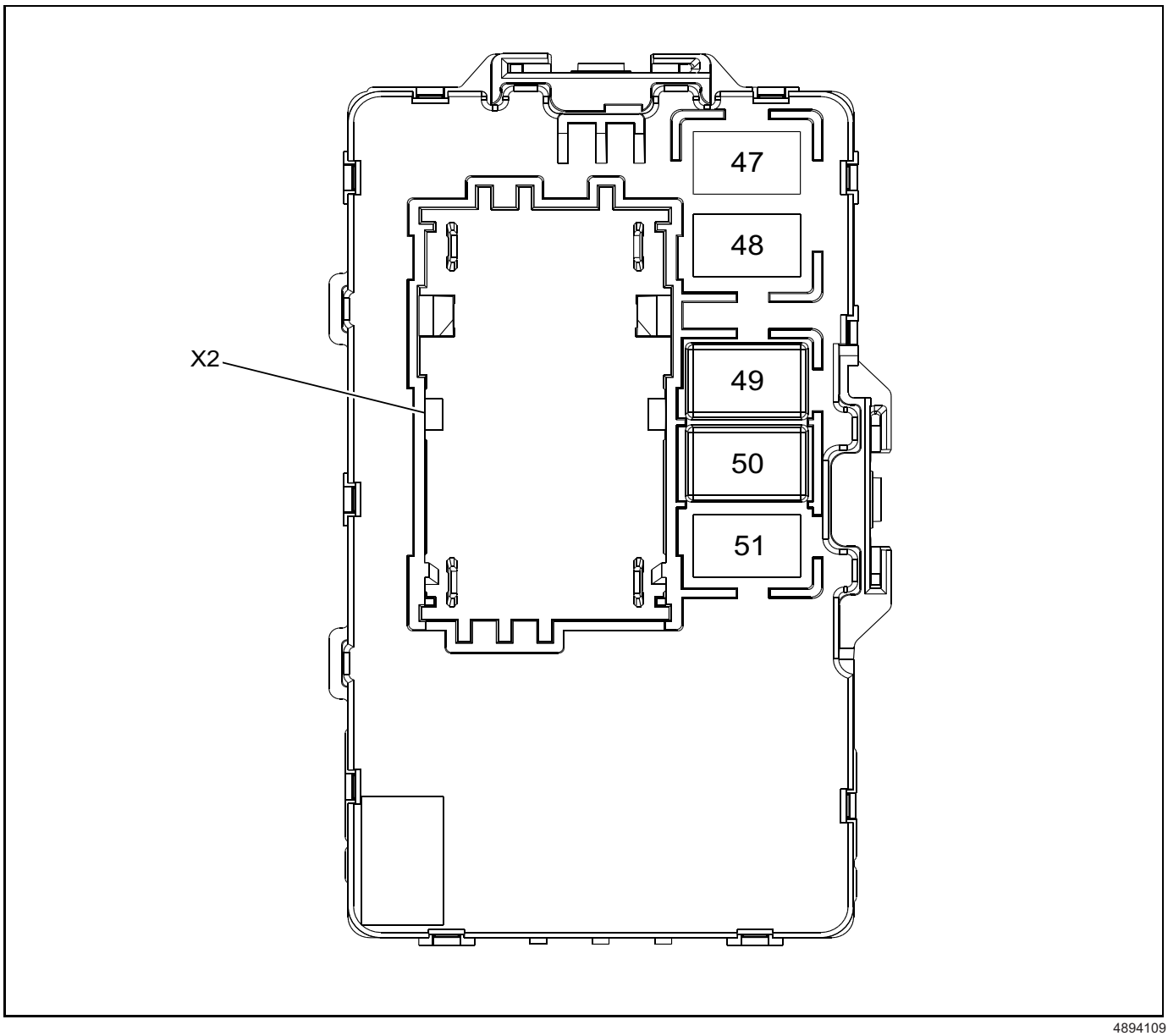
Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
17	BCM 1	F17DL	10A	• K9 Body Control Module • E1L Accent Lamp - Overhead Console • E63D Flood Lamp - Driver Door Handle (A31) • E63 Flood Lamp - Passenger Door Handle (A31) • K17 Electronic Brake Control Module • K20 Engine Control Module • K34 Glow Plug Control Module • K36 Inflatable Restraint Sensing and Diagnostic Module • K38A Chassis Control Module - Auxiliary (JL1) • K44 Power Take-Off Control Module (PTO) • K56 Serial Data Gateway Module • K69 Transfer Case Control Module (NQF) • K71 Transmission Control Module • K73 Telematics Communication Interface Control Module (UE1) • K74 Human Machine Interface Control Module (IO5/IO6) • K77 Remote Control Door Lock Receiver • K89 Immobilizer Control Module • KR11 Windshield Washer Pump Relay • KR12B Windshield Wiper Relay • KR59 Stop Lamp Relay • KR73 Ignition Main Relay (X50A Fuse Block Underhood) • KR73 Ignition Main Relay (X51L Fuse Block Instrument Panel - Left) • KR112 Cargo Lamp Relay • S48A Multifunction Switch - Instrument Panel • S70L Steering Wheel Controls Switch - Left • TBD7 BRAKE BOOSTER DIODE
18	UPFTR SW 1 and 2 (B+)	F18DL	5A	• KR161A Configurable Provision Relay 1 (9L7) • KR161B Configurable Provision Relay 2 (9L7)
19	UPFTR 2	F19DL	30A	• X61A Junction Block-Instrument Panel (9L7)
20	EMPTY	F20DL	—	• Not Used
21	EMPTY	F21DL	—	• Not Used
22	HVAC/AUX HVAC IGN	F22DL	15A/15A	• K33 HVAC Control Module • E40 Electrical Auxiliary Heater (C32)
23	IPC IGN/SDM IGN	F23DL	10A/10A	• P14 Passenger Air Bag Disable Indicator (C99) • P16 Instrument Cluster
24	SPARE	F24DL	15A/15A	• Not Used
25	DLC/DSM	F25DL	10A/10A	• X84 Data Link Connector
26	PEPS/HVAC	F26DL	10A/10A	• K33 HVAC Control Module • K56 Serial Data Gateway Module
27	SPARE	F27DL	10A	• Not Used
28	SPARE	F28DL	10A	• Not Used
29	SPARE	F29DL	15A	• Not Used
30	SEO ALC	F30DL	15A	• W12 Blunt Cut - Emergency Vehicle Provision (ANM) • X61A Junction Block-Instrument Panel (-ANM)

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
31	ACCY/RUN CRNK	F31DL	10A	• A10 Inside Rearview Mirror (DD8) • K69 Transfer Case Control Module (NQF) • B87 Rearview Camera (UVC) • S48A Multifunction Switch - Instrument Panel (PTO)
32	SPARE	F32DL	7.5A	• Not Used
33	SPARE	F33DL	10A	• Not Used
34	IPC	F34DL	10A	• A26 HVAC Controls • P16 Instrument Cluster • P17 Info Display Module (IO3/IO5/IO6) • S32D Seat Heating Switch - Driver (KA1) • S32P Seat Heating Switch - Passenger (KA1)
35	EMPTY	F35DL	—	• Not Used
36	SPARE	F36DL	15A	• Not Used
37	UPFTR 1	F37DL	30A	• X61A Junction Block-Instrument Panel (9L7)
38	SPARE	F38DL	30A	• Not Used
39	EMPTY	F39DL	—	• Not Used
40	LT DRS	F40DL	30A	• M74D Window Motor-Driver (A31) • S79LR Window Switch-Left Rear (Crew Cab)
41	DRVR PWR SEAT	F41DL	30A	• S64D Seat Adjuster Switch-Driver (A95/AZF)
42	EMPTY	F42DL	—	• Not Used
43	LT HTD CLD SEAT	F43DL	15A	• K29 Seat Heating Control Module (KA1)
44	RH HTD CLD SEAT	F44DL	15A	• K29 Seat Heating Control Module (KA1)
45	SPARE	F45DL	15A	• Not Used
46	EMPTY	F46DL	—	• Not Used

X51L Fuse Block - Instrument Panel Left Bottom View



4894109

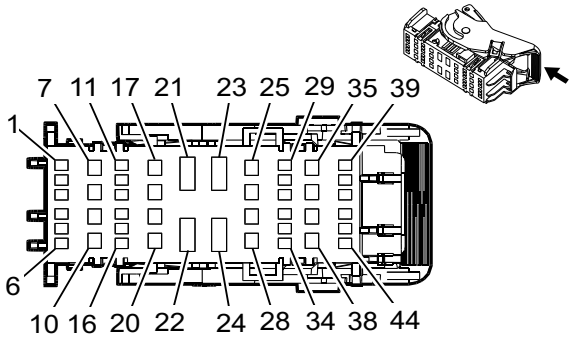
Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Relays				
47	EMPTY	—	—	• Not Used
48	UPFTR 2	KR161B Configurable Provision Relay 2	—	• F19DL
49	RAP/ACCY	KR76A Retained Accessory Power Relay 1	—	• F2DL • F10DL
50	RUN/CRNK	KR73 Ignition Main Relay	—	• F22DL • F23DL • F30DL • F31DL • F32DL • F33DL

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
51	UPFTR 1	KR161A Configurable Provision Relay 1	—	• F37DL

X51L Fuse Block - Instrument Panel Left X1



3240123

Connector Part Information

Harness Type: Body
OEM Connector: 13967687
Service Connector: 19329455
Description: 44-Way F 1.5, 2.8, 800 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	19301752	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301761	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	19367554	J-35616-44 (YE)	J-38125-558	Not Available	Not Available	Not Available	Not Available

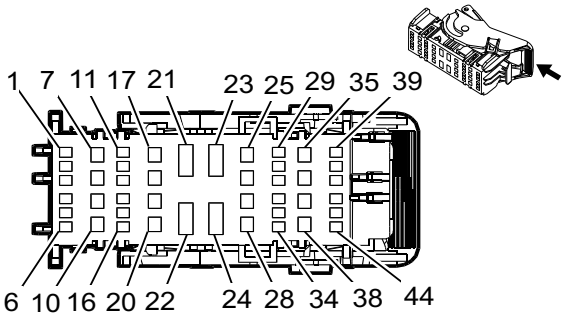
X51L Fuse Block - Instrument Panel Left X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 11	—	—	—	Not Occupied	—	—
12	0.5	YE/WH	962	—	III	—
13 - 15	—	—	—	Not Occupied	—	—
16	0.5	RD/VT	1940	Battery Positive Voltage	III	—
17	0.75	RD/L-GN	6140	Battery Positive Voltage	II	—
18	0.75	RD/L-GN	5140	Battery Positive Voltage	II	—
19 - 20	—	—	—	Not Occupied	—	—
21	6	RD/VT	842	Battery Positive Voltage	IV	—
22	—	—	—	Not Occupied	—	—
23	6	RD/D-BU	42	Battery Positive Voltage	IV	—
24 - 26	—	—	—	Not Occupied	—	—
27	2.5	RD/YE	5040	Battery Positive Voltage	I	—
28 - 29	—	—	—	Not Occupied	—	—
30	0.5	VT/WH	1939	Run/Crank Ignition 1 Voltage	III	—
31	—	—	—	Not Occupied	—	—
32	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	III	—

X51L Fuse Block - Instrument Panel Left X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
33 - 34	—	—	—	Not Occupied	—	—
35	2.5	D-BU	965	—	I	—
36	2.5	RD/D-BU	1842	Battery Positive Voltage	I	—
37	2.5	RD/D-BU	1842	Battery Positive Voltage	I	—
38	—	—	—	Not Occupied	—	—
39	0.5	RD/WH	961	—	III	—
40 - 41	—	—	—	Not Occupied	—	—
42	0.35	L-GN/VT	5199	Run/Crank Relay Coil Control	III	—
43	0.35	GY/VT	755	RAP Relay Coil Control	III	—
44	0.35	VT/YE	43	Accessory Ignition Voltage	III	—

X51L Fuse Block - Instrument Panel Left X2



3240119

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13967688
Service Connector: 19329456
Description: 44-Way F 1.5, 2.8, 800 Metri-Pack 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	19300649	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301752	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

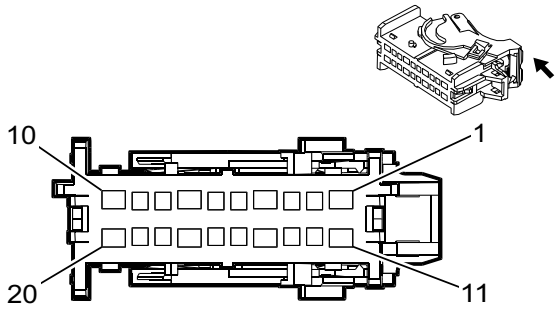
X51L Fuse Block - Instrument Panel Left X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	YE	6817	LED Backlight Dimming Control	IV	—
4	0.35	BN	6136	Control	IV	—
5	0.35	RD/D-BU	540	Battery Positive Voltage	IV	—
6	—	—	—	Not Occupied	—	—
7	0.75	RD/BN	2940	Battery Positive Voltage	III	—
8	1	RD/GY	2140	Battery Positive Voltage	III	—
9	—	—	—	Not Occupied	—	—
10	1.5	RD/BN	4240	Battery Positive Voltage	II	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.5	VT/L-GN	39	Run/Crank Ignition 1 Voltage	IV	—
14	—	—	—	Not Occupied	—	—
15	0.5	VT/GY	539	Run/Crank Ignition 1 Voltage	IV	—
16	—	—	—	Not Occupied	—	—
17	2.5	GY/BK	966	—	II	—
18	0.75	RD/WH	2740	Battery Positive Voltage	III	—

X51L Fuse Block - Instrument Panel Left X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
19	—	—	—	Not Occupied	—	—
20	1.5	RD/WH	1040	Battery Positive Voltage	II	—
21 - 24	—	—	—	Not Occupied	—	—
25	0.35	RD/VT	3340	Battery Positive Voltage	III	—
	0.5	RD/VT	3340	Battery Positive Voltage	III	—
26	0.35	RD/D-BU	3240	Battery Positive Voltage	I	—
27	—	—	—	Not Occupied	—	—
28	0.5	VT/BK	1639	Run/Crank Ignition 1 Voltage	I	—
29 - 34	—	—	—	Not Occupied	—	—
35	0.5	RD/GY	2840	Battery Positive Voltage	I	—
36 - 37	—	—	—	Not Occupied	—	—
38	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	III	—
39 - 43	—	—	—	Not Occupied	—	—
44	0.75	BK	1850	Ground	IV	—

X51L Fuse Block - Instrument Panel Left X3



3240104

Connector Part Information

Harness Type: Headliner
OEM Connector: 15547106
Service Connector: 13597270
Description: 20-Way F 1.5, 2.8 OCS Series (BK)

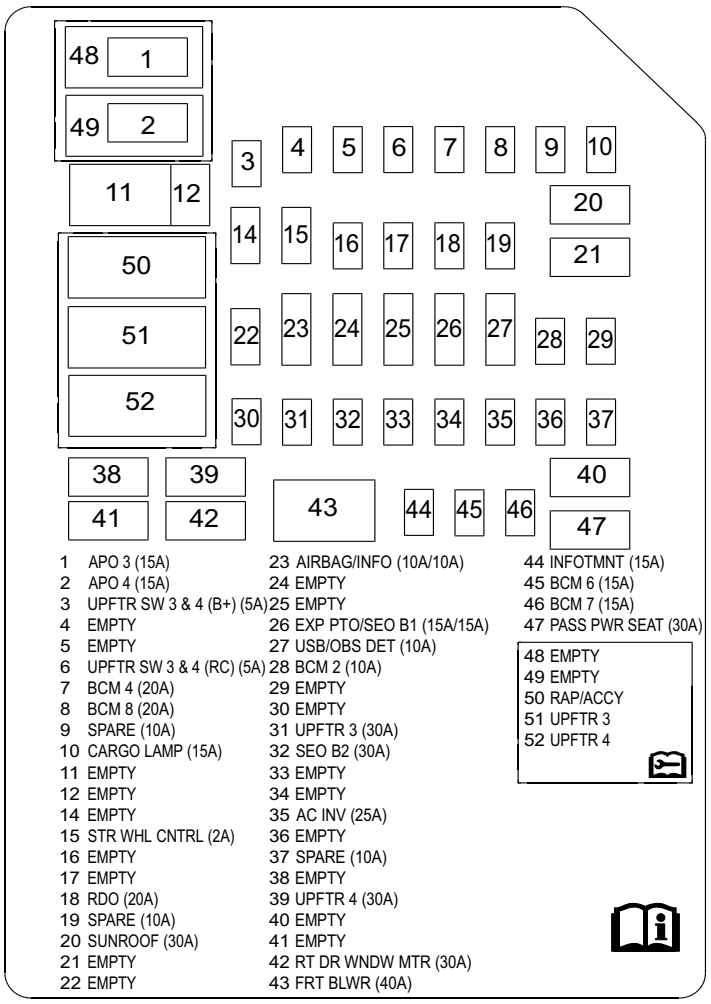
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301767	J-35616-14 (GN)	J-38125-557	Not Available	Not Available	Not Available	Not Available

X51L Fuse Block - Instrument Panel Left X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 10	—	—	—	Not Occupied	—	—
11	0.35	VT/YE	43	Accessory Ignition Voltage	I	—
12	0.5	RD/YE	240	Battery Positive Voltage	II	—
13	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	II	—
14	0.35	VT/BK	1139	Run/Crank Ignition 1 Voltage	I	—
15 - 20	—	—	—	Not Occupied	—	—

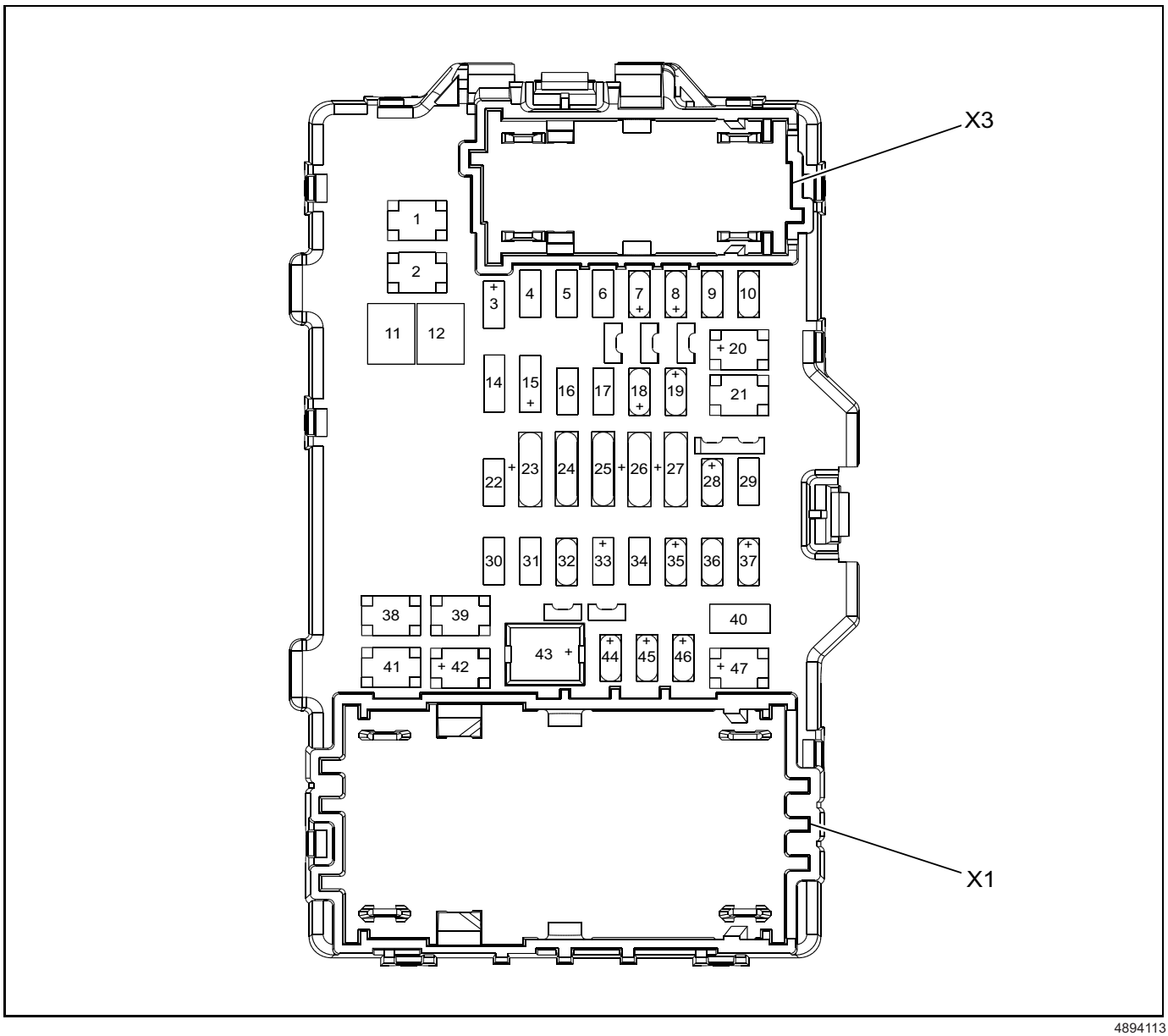
X51R Fuse Block - Instrument Panel Right Label



1 APO 3 (15A)
2 APO 4 (15A)
3 UPFTR SW 3 & 4 (B+) (5A)
4 EMPTY
5 EMPTY
6 UPFTR SW 3 & 4 (RC) (5A)
7 BCM 4 (20A)
8 BCM 8 (20A)
9 SPARE (10A)
10 CARGO LAMP (15A)
11 EMPTY
12 EMPTY
14 EMPTY
15 STR WHL CNTRL (2A)
16 EMPTY
17 EMPTY
18 RDO (20A)
19 SPARE (10A)
20 SUNROOF (30A)
21 EMPTY
22 EMPTY
23 AIRBAG/INFO (10A/10A)
24 EMPTY
25 EMPTY
26 EXP PTO/SEO B1 (15A/15A)
27 USB/OBS DET (10A)
28 BCM 2 (10A)
29 EMPTY
30 EMPTY
31 UPFTR 3 (30A)
32 SEO B2 (30A)
33 EMPTY
34 EMPTY
35 AC INV (25A)
36 EMPTY
37 SPARE (10A)
38 EMPTY
39 UPFTR 4 (30A)
40 EMPTY
41 EMPTY
42 RT DR WNDW MTR (30A)
43 FRT BLWR (40A)
44 INFOTMNT (15A)
45 BCM 6 (15A)
46 BCM 7 (15A)
47 PASS PWR SEAT (30A)
48 EMPTY
49 EMPTY
50 RAP/ACCY
51 UPFTR 3
52 UPFTR 4

4894111

X51R Fuse Block - Instrument Panel Right Top View



4894113

Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
1	APO 3	F1DR	15A	• X80D Accessory Power Receptacle - Center Console Compartment (D07) • X80E Accessory Power Receptacle - Center Seat (-D07)
2	APO 4	F2DR	15A	• X80D Accessory Power Receptacle - Center Console Compartment (-D07) • X80L Accessory Power Receptacle - Center Console Rear (D07)
3	UPFTR SW 3 and 4 (B+)	F3DR	5A	• KR161C Configurable Provision Relay 3 (9L7) • KR161D Configurable Provision Relay 4 (9L7)
4	EMPTY	F4DR	—	• Not Used
5	EMPTY	F5DR	—	• Not Used

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
6	UPFTR SW 3 and 4 (RC)	F6DR	5A	• KR161C Configurable Provision Relay 3 (9L7) • KR161D Configurable Provision Relay 4 (9L7)
7	BCM 4	F7DR	20A	• K9 Body Control Module • E4G Headlamp - Left Low Beam • E4T Park/Turn Signal Lamp - Right Upper • E4R Park/Turn Signal Lamp - Right Lower • E4Z Turn Signal Repeater Lamp - Right (DPN) • KR68R Turn Signal Lamps Relay - Right (5DX/5DY) • X107 Left Snow Plow Headlight Harness to Left Snow Plow Light Harness (UNL)
8	BCM 8	F8DR	20A	• K9 Body Control Module • A23D Door Latch Assembly - Driver • A23LR Door Latch Assembly - Left Rear (Crew Cab) • A23P Door Latch Assembly - Passenger • A23RR Door Latch Assembly - Right Rear (Crew Cab)
9	SPARE	F9DR	10A	• Not Used
10	CARGO LAMP	F10DR	15A	• E6 Center High Mounted Stop Lamp • E33 Cargo Lamp • E70D Outside Rearview Mirror Cargo Lamp - Driver (DPN) • E70P Outside Rearview Mirror Cargo Lamp - Passenger (DPN)
11	EMPTY	F11DR	—	• Not Used
12	EMPTY	F12DR	—	• Not Used
14	EMPTY	F14DR	—	• Not Used
15	STR WHL CNTRL	F15DR	2A	• S70L Steering Wheel Controls - Left • S70R Steering Wheel Controls Switch - Right (UK3)
16	EMPTY	F16DR	—	• Not Used
17	EMPTY	F17DR	—	• Not Used
18	RDO	F18DR	20A	• A11 Radio (IO3/IO5/IO6) • A33 Media Disc Player (TG5) • K74 Human Machine Interface Control (IO5/IO6) • X83 Auxiliary Audio Input (D07) • X92 USB Receptacle (D07)
19	SPARE	F19DR	10A	• Not Used
20	SUNROOF	F20DR	30A	• KR58 Roof Beacon Relay (TRW)
21	EMPTY	F21DR	—	• Not Used
22	EMPTY	F22DR	—	• Not Used
23	AIRBAG/INFO	F23DR	10A/10A	• K36 Inflatable Restraint Sensing and Diagnostic Module • K73 Telematics Communication Interface Control Module (UE1)
24	EMPTY	F24DR	—	• Not Used
25	EMPTY	F25DR	—	• Not Used
26	EXP PTO/SEO B1	F26DR	15A/15A	• K44 Power Take - Off Control Module (PTO) • X191 Engine Chassis Harness to Engine Chassis Harness (PTO)
27	USB/OBS DET	F27DR	10A	• X83 Auxiliary Audio Input (-D07)

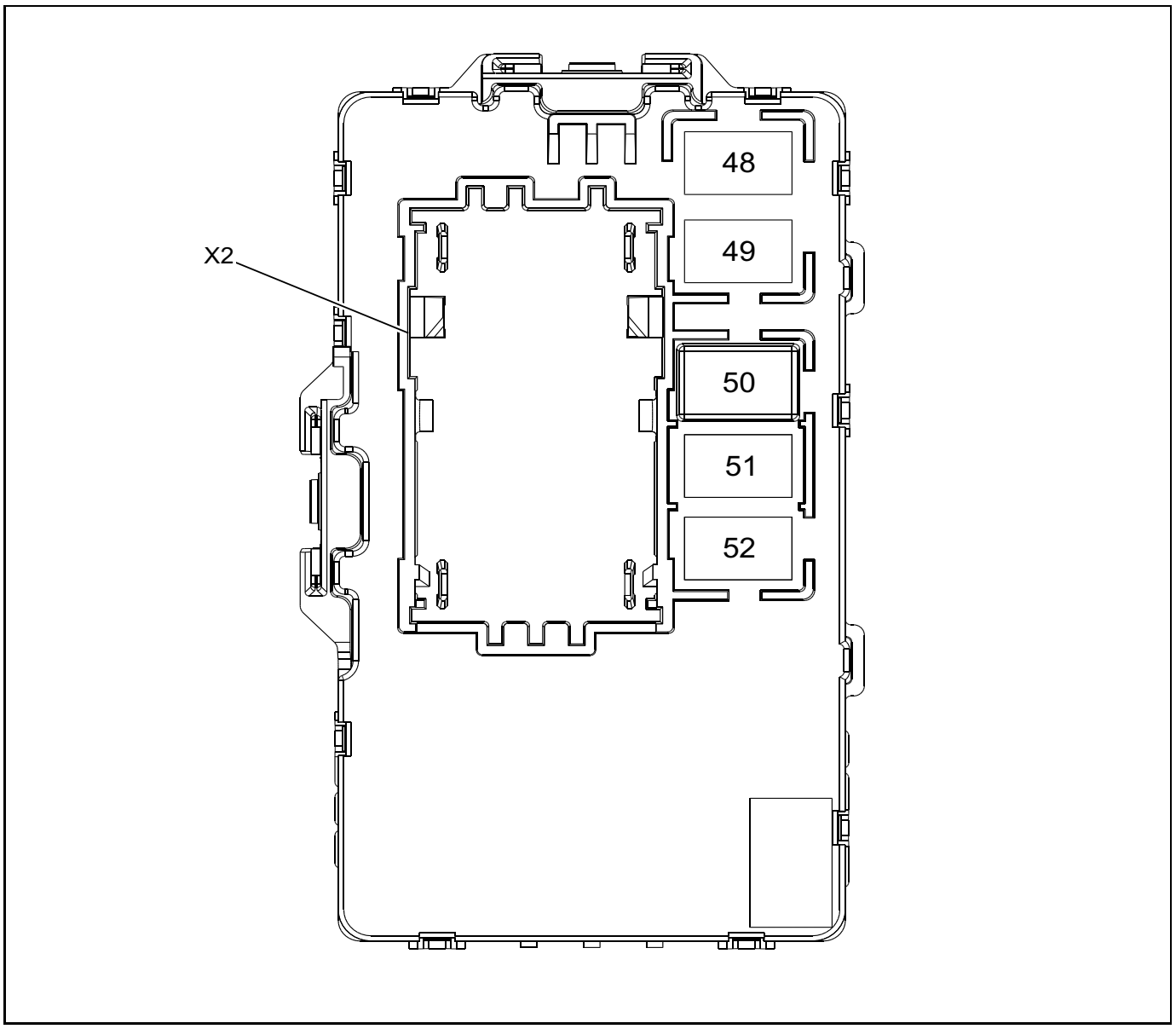
Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
28	BCM 2	F28DR	10A	• K9 Body Control Module • B10B Ambient Light/Sunload Sensor • K17 Electronic Brake Control Module • K36 Inflatable Restraint Sensing and Diagnostic Module • K44 Power Take-Off Control Module (PTO) • K56 Serial Data Gateway Module • K71 Transmission Control Module • K73 Telematics Communication Interface Control Module (UE1) • K74 Human Machine Interface Control Module (IO5/IO6) • K77 Remote Control Door Lock Receiver • K89 Immobilizer Control Module • KR12B Windshield Wiper Relay • S70L Steering Wheel Controls Switch - Left • S77 Transfer Case Shift Control Switch (NQF) • X61A Junction Block - Instrument Panel • X81 Accessory Power Receptacle - 110V AC (KI4)
29	EMPTY	F29DR	—	• Not Used
30	EMPTY	F30DR	—	• Not Used
31	UPFTR 3	F31DR	30A	• X61A Junction Block - Instrument Panel (9L7)
32	SEO B2	F32DR	30A	• X61A Junction Block - Instrument Panel
33	EMPTY	F33DR	—	• Not Used
34	EMPTY	F34DR	—	• Not Used
35	AC INV	F35DR	25A	• T1 Accessory DC/AC Power Inverter Module (KI4)
36	EMPTY	F36DR	—	• Not Used
37	SPARE	F37DR	10A	• Not Used
38	EMPTY	F38DR	—	• Not Used
39	UPFTR 4	F39DR	30A	• X61A Junction Block-Instrument Panel (9L7/JPZ) • AIR PRESSURE RELEASE RELAY (JPZ)
40	EMPTY	F40DR	—	• Not Used
41	EMPTY	F41DR	—	• Not Used
42	RT DR WNDW MTR	F42DR	30A	• S79P Window Switch - Passenger (A31) • S79RR window Switch - Right Rear (Crew Cab)
43	FRT BLWR	F43DR	40A	• M8 Blower Motor
44	INFOTMNT	F44DR	15A	• A11 Radio (IOB)

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
45	BCM 6	F45DR	15A	• K9 Body Control Module • E31L Sunshade Mirror Lamp - Left (DH6) • E31R Sunshade Mirror Lamp - Right (DH6) • E37B Dome/Reading Lamps - 2nd Row (Crew Cab-AZ3) • E37EL Dome/Reading Lamps - Front Overhead Console Left • E37ER Dome/Reading Lamps - Front Overhead Console Right • F14DL (-UK3) • KR76A Retained Accessory Power Relay 1 • KR76B Retained Accessory Power Relay 2 • S5 Center Console Compartment Lamp Switch (D07) • S12 Dome Lamp Switch • S13D Door Lock Switch - Driver • S13P Door Lock Switch - Passenger • S30 Headlamp Switch • S48A Multifunction Switch - Instrument Panel • S52 Outside Rearview Mirror Switch (DPN) • S63 Roof Beacon Switch (TRW) • S76 Trailer Brake Control Switch (JL1) • S77 Transfer Case Shift Control Switch (NQF)
46	BCM 7	F46DR	15A	• K9 Body Control Module • E37B Dome/Reading Lamps - 2nd Row (Crew Cab-AZ3) • E37EL Dome/Reading Lamps - Front Overhead Console Left • E37ER Dome/Reading Lamps - Front Overhead Console Right • M7 Transmission Shift Lock Control Solenoid Actuator
47	PASS PWR SEAT	F47DR	30A	• S64P Seat Adjuster Switch - Passenger (A95/AZF)

X51R Fuse Block - Instrument Panel Right Bottom View



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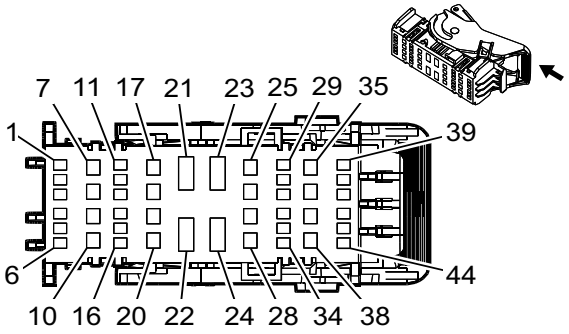
Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Relays				
48	EMPTY	—	—	• Not Used
49	EMPTY	—	—	• Not Used
50	RAP/ACCY	KR76B Retained Accessory Power Relay 2	—	• F1DR • F2DR
51	UPFTR 3	KR161C Configurable Provision Relay 3	—	• F31DR
52	UPFTR 4	KR161D Configurable Provision Relay 4	—	• F39DR

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block.				
—	—	KR112 Cargo Lamp Relay	—	• F10DR
—	—	KR113 Child Security Lock Disable Relay	—	• A23LR Door Latch Assembly-Left Rear (Crew Cab) • A23RR Door Latch Assembly-Right Rear (Crew Cab)
—	—	KR114 Door Dead Lock Relay	—	• A23D Door Latch Assembly - Driver • A23 LR Door Latch Assembly - Left Rear (Crew Cab) • A23P Door Latch Assembly - Passenger • A23RR Door Latch Assembly - Right Rear (Crew Cab)

X51R Fuse Block - Instrument Panel Right X1



3240121

Connector Part Information

Harness Type: Body
OEM Connector: 13967689
Service Connector: 19329457
Description: 44-Way F 1.5, 2.8, 800 Metri-Pack 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	19301752	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301761	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	19366953	J-35616-44 (YE)	J-38125-558	Not Available	Not Available	Not Available	Not Available
V	19367554	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
VI	19370817	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

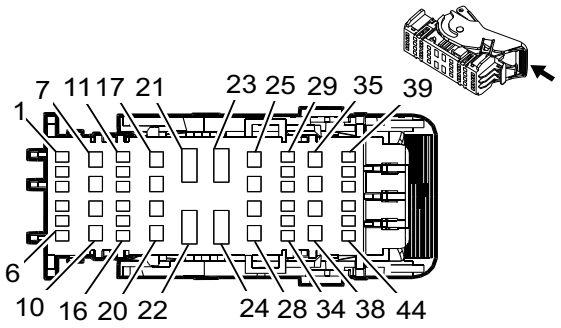
X51R Fuse Block - Instrument Panel Right X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75 1.5	GY GY	295 295	Door Lock Actuator Lock Control Door Lock Actuator Lock Control	III VI	CREW CAB 43 STANDARD CAB 03
2	1.5	WH/D-BU	3266	Child Security Lock Motor Lock Control	VI	—
3	0.35	VT/YE	3267	Child Security Lock Relay Control	III	—
4	1.5	GY/L-GN	3271	Door Lock Control 2	VI	—
5	—	—	—	Not Occupied	—	—
6	0.35	GY/VT	755	RAP Relay Coil Control	III	—
7 - 11	—	—	—	Not Occupied	—	—
12	0.75	RD/D-BU	4540	Battery Positive Voltage	III	—
13	0.75	RD/VT	2640	Battery Positive Voltage	III	—
14	—	—	—	Not Occupied	—	—
15	0.5	VT/GY	709	Left Park Lamp Control	III	—

X51R Fuse Block - Instrument Panel Right X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
16	0.5	RD/L-GN	4440	Battery Positive Voltage	III	—
17	—	—	—	Not Occupied	—	—
18	1.5	VT/YE	143	Accessory Ignition Voltage	I	—
19	2.5	RD/WH	1340	Battery Positive Voltage	I	—
20	2.5	RD/WH	1340	Battery Positive Voltage	I	—
21	6	RD/L-GN	242	Battery Positive Voltage	IV	—
22	4	RD/VT	542	Battery Positive Voltage	V	—
23	—	—	—	Not Occupied	—	—
24	6	RD/GY	142	Battery Positive Voltage	IV	—
25 - 26	—	—	—	Not Occupied	—	—
27	0.75	RD/VT	340	Battery Positive Voltage	II	—
28	—	—	—	Not Occupied	—	—
29	1.5	D-BU/WH	195	Door Lock Control	VI	—
30	1.5	BN	5910	Door Double Lock Actuator Lock Control	VI	—
31 - 32	—	—	—	Not Occupied	—	—
33	0.75	RD/WH	3440	Battery Positive Voltage	III	—
34	0.75	RD/L-GN	5140	Battery Positive Voltage	III	—
35 - 37	—	—	—	Not Occupied	—	—
38	2.5	RD/YE	1440	Battery Positive Voltage	I	—
39	—	—	—	Not Occupied	—	—
40	0.75	GY	5911	Door Lock Actuator Lock Control 2	III	—
41	0.35	D-BU/BN	7547	Security Lock Relay Control	III	—
42 - 44	—	—	—	Not Occupied	—	—

X51R Fuse Block - Instrument Panel Right X2



3240120

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13967690
Service Connector: 19329458
Description: 44-Way F 1.5, 2.8, 800 Metri-Pack 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	19370817	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	19370817	J-35616-44 (YE)	J-38125-560	12110127	Delphi 19	F	G
III	19370817	J-35616-4A (PU)	J-38125-560	Not Available	Not Available	Not Available	Not Available

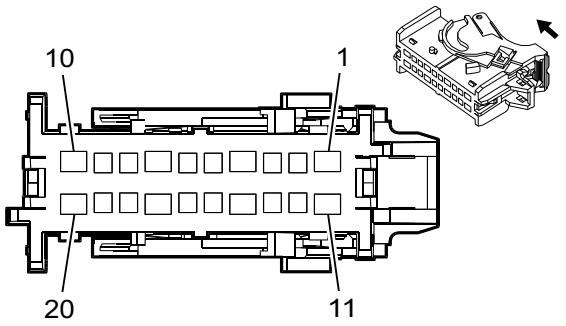
X51R Fuse Block - Instrument Panel Right X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.5	BN/WH	1429	Standing Lamp Relay Control	I	—
5	0.5	BK	1050	Ground	I	—
6	—	—	—	Not Occupied	—	—
7	0.75	RD/VT	4040	Battery Positive Voltage	III	—
8	0.75	RD/D-BU	2540	Battery Positive Voltage	III	—
9	0.5	VT/WH	239	Run/Crank Ignition 1 Voltage	III	—
10	1.5	VT/YE	243	Accessory Ignition Voltage	III	—
11	0.75	WH/VT	1430	Exterior Courtesy Lamp Control	I	—
12 - 13	—	—	—	Not Occupied	—	—
14	0.5	L-GN/GY	963	—	I	—
15	0.5	WH/D-BU	964	—	I	—
16	0.35	RD/YE	3040	Battery Positive Voltage	I	—
17	0.75 1	RD/VT RD/VT	340 340	Battery Positive Voltage Battery Positive Voltage	III III	IOB TG5
18 - 21	—	—	—	Not Occupied	—	—

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

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
22	2.5	BK	1050	Ground	II	—
23 - 27	—	—	—	Not Occupied	—	—
28	2.5	RD/L-GN	968	—	III	—
29	0.75	RD/BN	2240	Battery Positive Voltage	I	—
30 - 33	—	—	—	Not Occupied	—	—
34	0.35	RD/D-BU	3240	Battery Positive Voltage	I	—
35	2.5	RD/GY	4140	Battery Positive Voltage	III	—
36	—	—	—	Not Occupied	—	—
37	1.5	RD/YE	2340	Battery Positive Voltage	III	—
38	2.5	YE/BN	967	—	III	—
39 - 41	—	—	—	Not Occupied	—	—
42	0.75	RD/VT	340	Battery Positive Voltage	I	—
43 - 44	—	—	—	Not Occupied	—	—

X51R Fuse Block - Instrument Panel Right X3



3243003

Connector Part Information

Harness Type: Right A-Pillar
OEM Connector: 15547107
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 1.5, 2.8 OCS Series (GY)

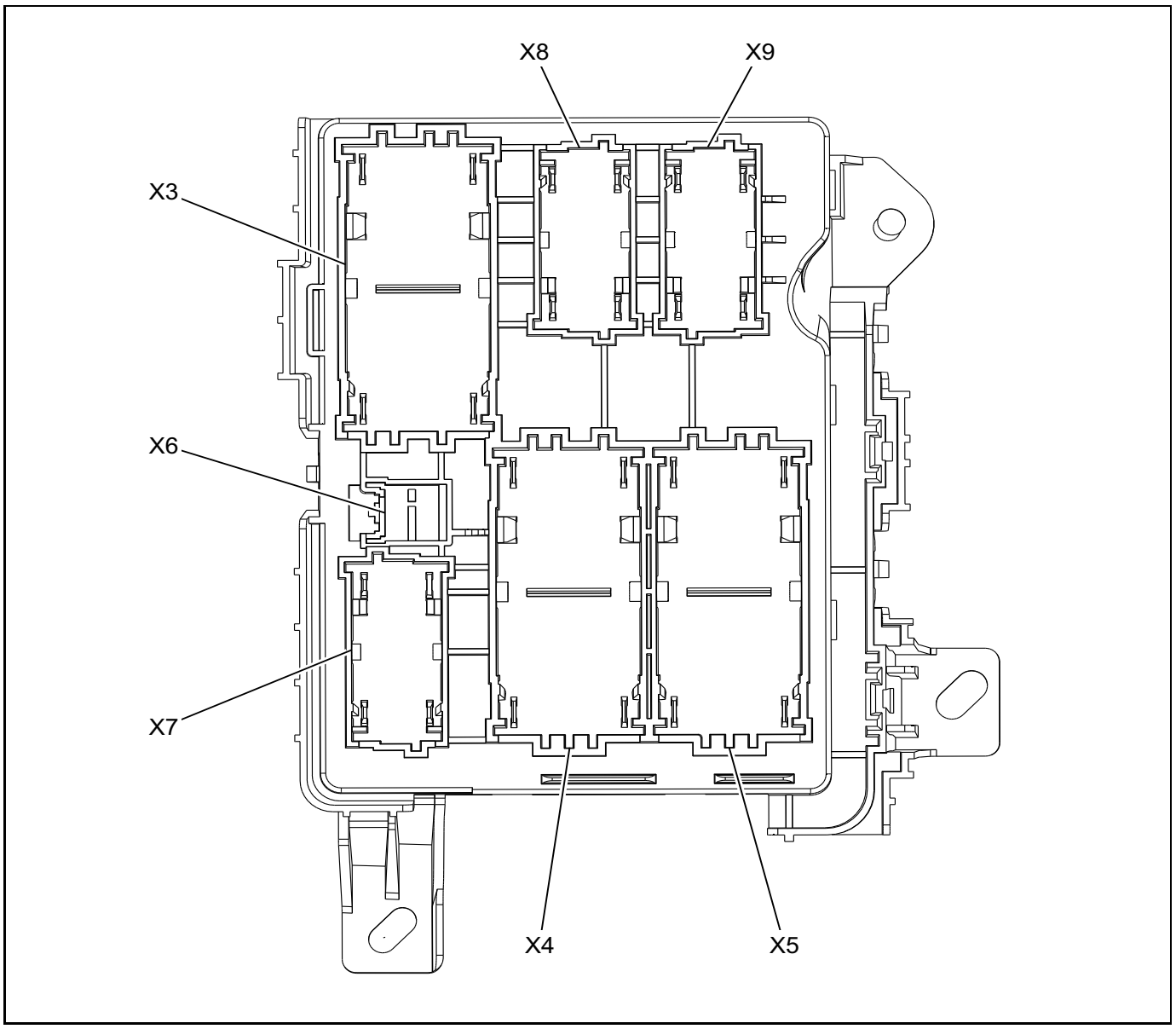
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (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

X51R Fuse Block - Instrument Panel Right X3

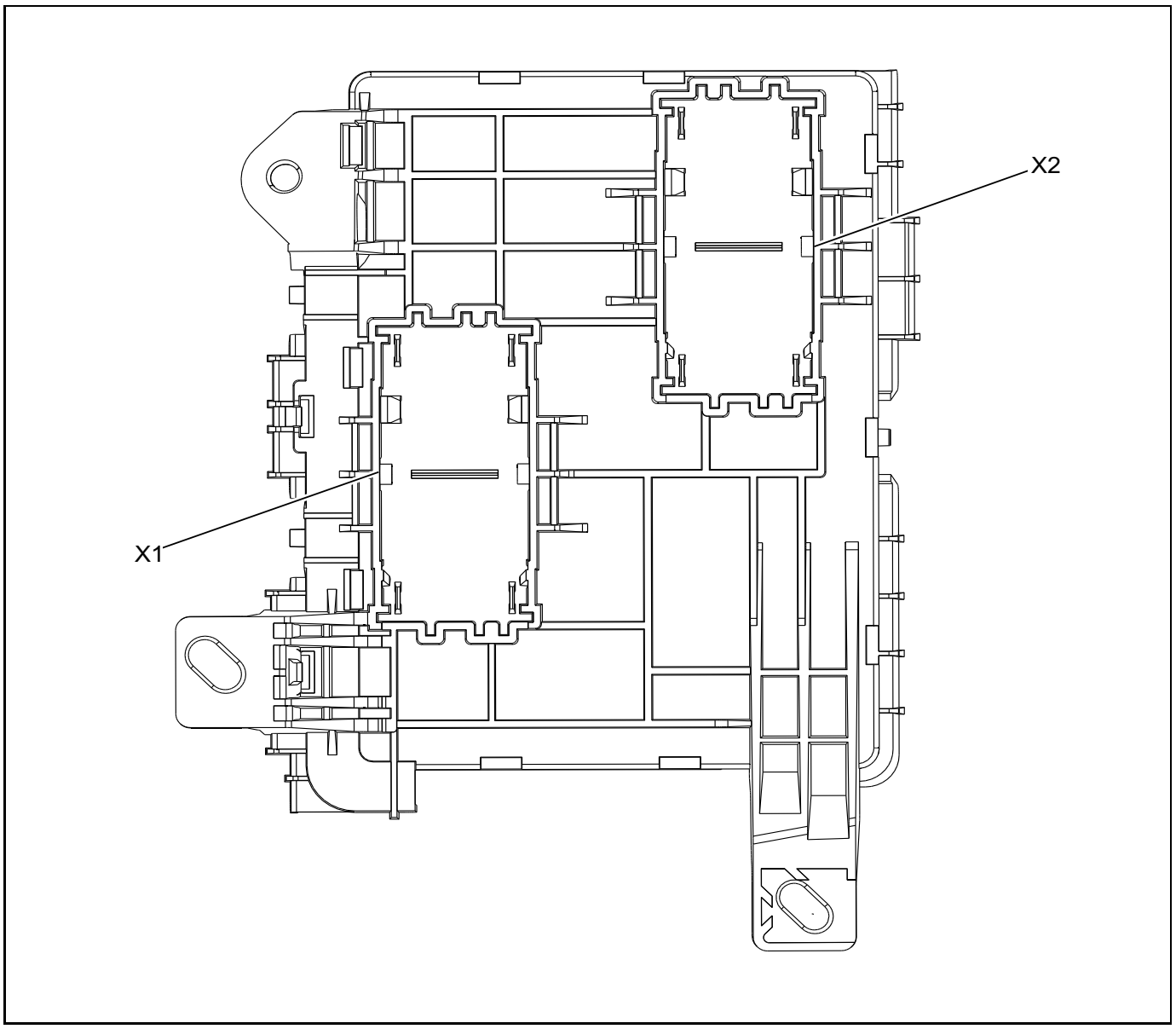
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	RD/L-GN	3140	Battery Positive Voltage	II	—
2 - 7	—	—	—	Not Occupied	—	—
8	0.5	VT/GY	709	Left Park Lamp Control	I	—
9	—	—	—	Not Occupied	—	—
10	0.5 2.5	BK BK	1050 1050	Ground Ground	II II	U01 -U01
11 - 20	—	—	—	Not Occupied	—	—

X61A Junction Block - Instrument Panel Top View



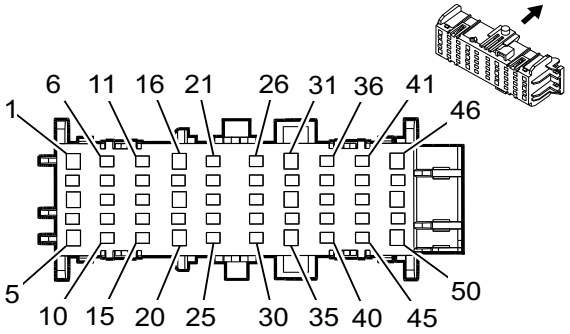
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X61A Junction Block - Instrument Panel Bottom View



4894116

X61A Junction Block - Instrument Panel X1



3240131

Connector Part Information

Harness Type: Body
OEM Connector: 33114819
Service Connector: 19301798
Description: 50-Way F 1.5, 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	19370817	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	19370817	J-35616-4A (PU)	J-38125-560	Not Available	Not Available	Not Available	Not Available

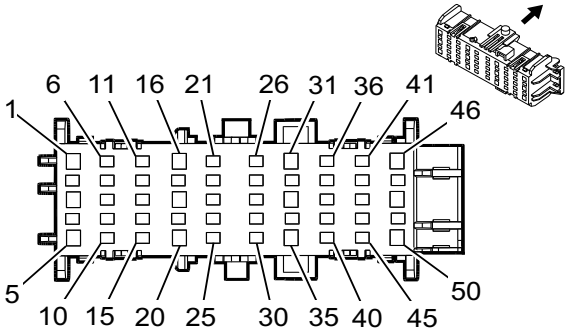
X61A Junction Block - Instrument Panel X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 12	—	—	—	Not Occupied	—	—
13	2	RD/L-GN	968	—	I	—
14 - 15	—	—	—	Not Occupied	—	—
16	2.5	D-BU	965	—	II	—
17	0.75	WH/VT	1430	Exterior Courtesy Lamp Control	I	—
18	—	—	—	Not Occupied	—	—
19	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
20	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—
21	0.5	RD/WH	961	—	I	—
22	0.35	VT	185	Low Washer Fluid Indicator Control	I	—
23	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	I	—
24	0.5	BN	7634	Integrated Trailer Brake Controller Redundant Manual Apply Signal	I	—
25	0.35	GY	5697	Child Lockout Indicator Control	I	—
26	0.5	D-BU/RD	7632	Integrated Trailer Brake Controller Switch 5V Reference	I	—
27	0.5	BK/BN	7631	Integrated Trailer Brake Controller Switch Low Reference	I	—
28	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	I	—

X61A Junction Block - Instrument Panel X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
29	0.5	YE	7635	Integrated Trailer Brake Controller Manual Apply Signal	I	—
30	0.5	VT/WH	239	Run/Crank Ignition 1 Voltage	I	—
31 - 32	—	—	—	Not Occupied	—	—
33	0.35	VT/BN	300	Run Ignition 3 Voltage	II	—
34	0.5	YE/WH	962	—	I	—
35	0.5	VT/L-GN	39	Run/Crank Ignition 1 Voltage	II	—
36	0.5	VT/WH	239	Run/Crank Ignition 1 Voltage	I	—
37 - 38	—	—	—	Not Occupied	—	—
39	1	D-BU/VT	1134	Park Brake Switch Signal	I	—
40	—	—	—	Not Occupied	—	—
41	0.5	L-GN/BK	7633	Integrated Trailer Brake Controller User Gain Signal	I	—
42 - 43	—	—	—	Not Occupied	—	—
44	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	I	—
45	—	—	—	Not Occupied	—	—
46	0.5	VT/WH	1939	Run/Crank Ignition 1 Voltage	II	—
47	0.5	WH	6816	Indicator Dimming Control	I	—
48	—	—	—	Not Occupied	—	—
49	0.35	YE/WH	816	Brake Transmission Shift Interlock Solenoid Control	I	—
50	2.5	BK	2550	Ground	II	—

X61A Junction Block - Instrument Panel X2



3240130

Connector Part Information

Harness Type: Body
OEM Connector: 33115109
Service Connector: 19329464
Description: 50-Way F 1.5, 2.8 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	19370817	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	19370817	J-35616-35 (VT)	J-38125-560	1326030-8	Lear 17	B	F
III	19370817	J-35616-4A (PU)	J-38125-560	Not Available	Not Available	Not Available	Not Available

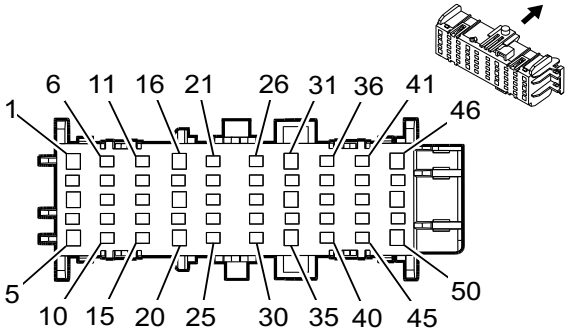
X61A Junction Block - Instrument Panel X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	2	RD/GY	1342	Battery Positive Voltage	III	—
4	0.35	D-BU	2307	Passenger Air Bag On Indicator Control	I	—
5	—	—	—	Not Occupied	—	—
6	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
7	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
8 - 17	—	—	—	Not Occupied	—	—
18	4	BK	550	Ground	II	—
19	0.35	VT/WH	5234	Passenger Seat Belt Indicator Control	I	—
20 - 22	—	—	—	Not Occupied	—	—
23	0.5 0.75	WH/BN WH/BN	6815 6815	Inadvertent Power Control Inadvertent Power Control	I I	DH6 -DH6
24	0.35	L-GN	2308	Passenger Air Bag Off Indicator Control	I	—
25	—	—	—	Not Occupied	—	—
26	0.35	D-BU/GY	7473	Incremental Encoder Impulse Signal	I	—
27	0.35	VT	7476	Incremental Encoder Sensor Low Reference	I	—
28	—	—	—	Not Occupied	—	—

X61A Junction Block - Instrument Panel X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
29	0.75	GY	157	Interior Lamp Control	I	—
30	0.35	GY	156	Courtesy Lamp Switch Signal	I	—
31	1	YE/VT	1553	Transfer Case Motor Counter Clockwise Control	III	—
32	0.35	YE	7474	Incremental Encoder Direction Signal	I	—
33	0.75	VT/GY	1054	Stop Lamp Control	III	—
34	—	—	—	Not Occupied	—	—
35	2.5	RD/L-GN	242	Battery Positive Voltage	III	—
36	0.35	WH/L-GN	7475	Incremental Encoder Sensor 8V Reference	I	—
37	—	—	—	Not Occupied	—	—
38	0.35	VT/YE	5985	Accessory Wakeup Serial Data	I	—
39 - 43	—	—	—	Not Occupied	—	—
44	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	I	—
45	—	—	—	Not Occupied	—	—
46	1	YE/GY	1552	Transfer Case Motor Clockwise Control	III	—
47	0.5	L-GN/GY	817	Vehicle Speed Signal	I	—
48	2.5	D-BU	47	Trailer Auxiliary Control	III	—
49	—	—	—	Not Occupied	—	—
50	0.35	VT/YE	43	Accessory Ignition Voltage	III	—

X61A Junction Block - Instrument Panel X3



3240132

Connector Part Information

Harness Type: Headliner
OEM Connector: 33115112
Service Connector: 19329467
Description: 50-Way F 1.5, 2.8 OCS 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	19370817	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	19370817	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
III	19370817	J-35616-35 (VT)	J-38125-560	Not Available	Not Available	Not Available	Not Available

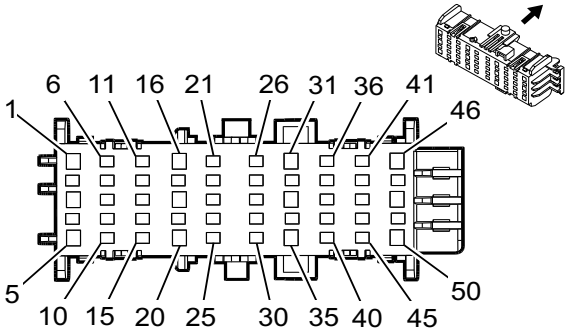
X61A Junction Block - Instrument Panel X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	RD/L-GN	3140	Battery Positive Voltage	III	—
4	0.35	D-BU	2307	Passenger Air Bag On Indicator Control	II	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.75	WH/VT	1430	Exterior Courtesy Lamp Control	I	—
8	0.35	YE/WH	1690	Automatic Day/Night Mirror Signal	I	—
9	0.35	BK/YE	1691	Automatic Day/Night Mirror Low Reference	I	—
10 - 12	—	—	—	Not Occupied	—	—
13	0.35	L-GN/RD	24	Backup Lamp Control	I	—
14 - 16	—	—	—	Not Occupied	—	—
17	0.35	L-GN/BK	2515	Keypad Control	I	—
18	—	—	—	Not Occupied	—	—
19	0.35	VT/WH	5234	Passenger Seat Belt Indicator Control	II	—
20	—	—	—	Not Occupied	—	—
21	0.35	L-GN/D-BU	2514	Keypad Signal	I	—
22	0.35	YE/BN	2516	Keypad Green LED Control	I	—
23	—	—	—	Not Occupied	—	—

X61A Junction Block - Instrument Panel X3 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
24	0.35	L-GN/RD	2308	Passenger Air Bag Off Indicator Control	II	—
25	0.5	WH/BN	6815	Inadvertent Power Control	II	DH6
	0.5	WH/BN	6815	Inadvertent Power Control	I	-DH6
26	0.35	WH	6192	Power Sliding Window Switch Close Signal	II	—
27	0.5	YE	6817	LED Backlight Dimming Control	I	AZ3
	0.5	YE	6817	LED Backlight Dimming Control	II	-AZ3
28	0.35	GY/D-BU	156	Courtesy Lamp Switch Signal	II	—
29	0.5	GY	157	Interior Lamp Control	II	AZ3
	0.5	GY	157	Interior Lamp Control	I	-AZ3
30 - 31	—	—	—	Not Occupied	—	—
32	0.35	YE/VT	6191	Power Sliding Window Switch Open Signal	II	—
33 - 34	—	—	—	Not Occupied	—	—
35	0.5	VT/GY	1054	Stop Lamp Control	III	—
36	0.35	BN/WH	2517	Keypad Red LED Control	I	—
37 - 40	—	—	—	Not Occupied	—	—
41	0.35	GY/L-GN	328	Interior Lamp Defeat Switch Signal	II	—
42	0.35	VT/L-GN	7558	LED Ambient Lighting Control 2	II	—
	0.35	VT/L-GN	7558	LED Ambient Lighting Control 2	I	—
43 - 44	—	—	—	Not Occupied	—	—
45	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	I	—
46	2.5	BK	1050	Ground	III	—
47	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
48	—	—	—	Not Occupied	—	—
49	0.35	WH	3152	Lane Departure Warning Indicator Control	I	—
50	—	—	—	Not Occupied	—	—

X61A Junction Block - Instrument Panel X4



3240129

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33115111
Service Connector: 19329466
Description: 50-Way F 1.5, 2.8 OCS 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	19370817	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	19370817	J-35616-4A (PU)	J-38125-560	Not Available	Not Available	Not Available	Not Available

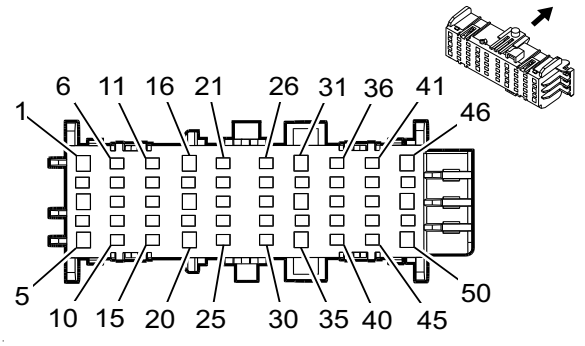
X61A Junction Block - Instrument Panel X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	YE/BN	967	—	II	—
2	0.35	YE/VT	2516	Keypad Green LED Control	I	—
3	0.35	BK/L-GN	552	Sensor Low Reference	II	—
4	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
5	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
6	0.5	YE	6817	LED Backlight Dimming Control	I	—
7	0.35	L-GN/WH	2514	Keypad Signal	I	—
8	0.35	GY/RD	598	5V Reference	I	—
9	0.35	WH/L-GN	526	Stop Lamp Switch Signal	I	—
10	0.35	D-BU/YE	1693	Four Wheel Drive Switch Signal	I	—
11	—	—	—	Not Occupied	—	—
12	2	RD/L-GN	968	—	I	—
13	—	—	—	Not Occupied	—	—
14	0.35	BN	1560	Neutral Indicator Control	I	—
15	0.35	GY/RD	6029	Four Wheel Drive Mode Switch 5V Reference	I	—
16	2.5	BK	1050	Ground	II	—
17	—	—	—	Not Occupied	—	—
18	2.5	GY/BK	966	—	II	—
19	0.35	L-GN/BK	2515	Keypad Control	I	—

X61A Junction Block - Instrument Panel X4 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	2.5	RD/L-GN	968	—	II	—
21	0.5	VT/L-GN	7558	LED Ambient Lighting Control 2	I	—
22	0.35	BN/WH	2517	Keypad Red LED Control	I	—
23	0.35	BN/BK	1566	4 HI Indicator Control	I	—
24	0.35	VT/WH	1565	4 LO Indicator Control	I	—
25	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	I	—
26	—	—	—	Not Occupied	—	—
27	0.35	GY/L-GN	328	Interior Lamp Defeat Switch Signal	I	—
28 - 30	—	—	—	Not Occupied	—	—
31	1.5	RD/YE	2340	Battery Positive Voltage	II	—
32	0.5	BK/WH	1851	Signal Ground	I	—
33	0.35 0.5	BK/WH BK/WH	1851 1851	Signal Ground Signal Ground	II II	— —
34	—	—	—	Not Occupied	—	—
35	2.5	BK/WH	1851	Signal Ground	II	—
36 - 37	—	—	—	Not Occupied	—	—
38	0.5	BK/WH	1851	Signal Ground	I	—
39	0.35	BK/WH	1851	Signal Ground	I	—
40	0.35	L-GN/BK	1563	2 HI Indicator Control	I	—
41 - 43	—	—	—	Not Occupied	—	—
44	0.75	BK	2550	Ground	I	—
45	0.35	BK	2550	Ground	I	—
46	0.75	BK	2550	Ground	II	—
47	0.35	BK	2550	Ground	I	—
48	0.75	BK	2550	Ground	II	—
49	—	—	—	Not Occupied	—	—
50	0.75	BK	2550	Ground	II	—

X61A Junction Block - Instrument Panel X5



3240128

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33115110
Service Connector: 19329465
Description: 50-Way F 1.5, 2.8 OCS 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	19300649	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301761	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

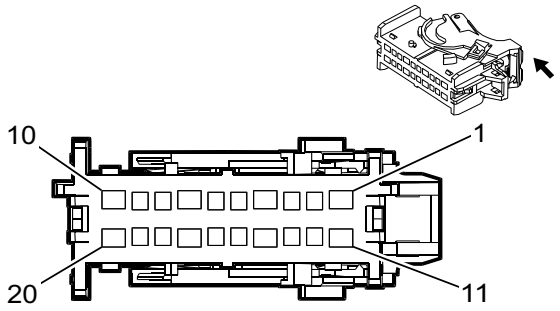
X61A Junction Block - Instrument Panel X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
4	0.75	WH/VT	1430	Exterior Courtesy Lamp Control	III	—
5	—	—	—	Not Occupied	—	—
6	0.35	GY	5697	Child Lockout Indicator Control	III	—
7	0.5	BN	7634	Integrated Trailer Brake Controller Redundant Manual Apply Signal	III	—
8	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	III	—
9	0.35	VT	185	Low Washer Fluid Indicator Control	III	—
10	0.5	RD/WH	961	—	III	—
11	0.5	VT/WH	239	Run/Crank Ignition 1 Voltage	III	—
12	0.5	YE	7635	Integrated Trailer Brake Controller Manual Apply Signal	III	—
13	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	III	—
14	0.5	BK/BN	7631	Integrated Trailer Brake Controller Switch Low Reference	III	—
15	0.5	D-BU/RD	7632	Integrated Trailer Brake Controller Switch 5V Reference	III	—
16	0.5	VT/L-GN	39	Run/Crank Ignition 1 Voltage	I	—

X61A Junction Block - Instrument Panel X5 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
17	0.5	YE/WH	962	—	III	—
18	0.35	VT/BN	300	Run Ignition 3 Voltage	I	KI4+D07
	0.35	VT/BN	300	Run Ignition 3 Voltage	II	KI4+D09
19	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	III	—
20 - 21	—	—	—	Not Occupied	—	—
22	0.5	D-BU/VT	1134	Park Brake Switch Signal	III	—
23 - 24	—	—	—	Not Occupied	—	—
25	0.5	VT/WH	239	Run/Crank Ignition 1 Voltage	III	—
26	—	—	—	Not Occupied	—	—
27	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	III	—
28 - 29	—	—	—	Not Occupied	—	—
30	0.5	L-GN/BK	7633	Integrated Trailer Brake Controller User Gain Signal	III	—
31	0.35	BK	2550	Ground	I	—
32	0.35	YE/WH	816	Brake Transmission Shift Interlock Solenoid Control	III	—
33	—	—	—	Not Occupied	—	—
34	0.5	WH	6816	Indicator Dimming Control	III	—
35 - 36	—	—	—	Not Occupied	—	—
37	0.35	WH	6816	Indicator Dimming Control	III	—
38	0.35	WH	6816	Indicator Dimming Control	III	—
39 - 50	—	—	—	Not Occupied	—	—

X61A Junction Block - Instrument Panel X8



3240104

Connector Part Information

Harness Type: Brake Clutch
OEM Connector: 15547106
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 1.5, 2.8 OCS Series (BK)

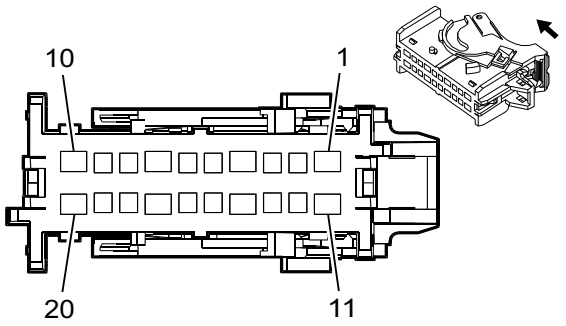
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (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

X61A Junction Block - Instrument Panel X8

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 7	—	—	—	Not Occupied	—	—
8	0.5	WH/L-GN	526	Stop Lamp Switch Signal	I	—
9	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
10	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
11	—	—	—	Not Occupied	—	—
12	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
13	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
14	0.5	WH/RD	6207	Memory Sensor High Reference	II	—
15	0.5	D-BU	5952	Adjustable Pedal Position Sensor Brake Signal	I	—
16	1.5	YE	5129	Adjustable Pedal Actuator Rearward Control	I	—
17	0.5	BK/GY	6206	Memory Sensor Low Reference	II	—
18	1.5	L-GN/VT	5130	Adjustable Pedal Actuator Forward Control	I	—
19	0.5	BK/L-GN	552	Sensor Low Reference	I	—
20	0.5	GY/RD	598	5V Reference	II	—

X61A Junction Block - Instrument Panel X9



3243003

Connector Part Information

Harness Type: Brake Clutch
OEM Connector: 15547107
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 1.5, 2.8 OCS Series (GY)

Terminal Part Information

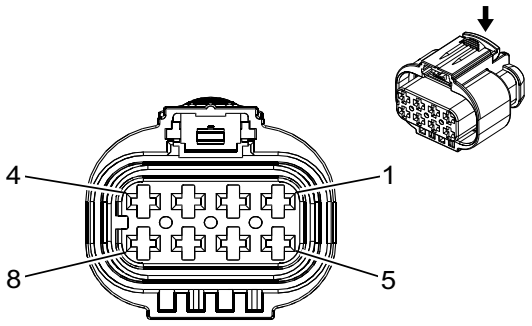
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X61A Junction Block - Instrument Panel X9

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	YE/BN	1569	Transfer Case Lock Solenoid Control	II	—
2	0.35	D-BU/YE	1693	Four Wheel Drive Switch Signal	I	—
3	0.35	GY/RD	6029	Four Wheel Drive Mode Switch 5V Reference	I	—
4	0.35	BN/BK	1566	4 HI Indicator Control	II	—
5	0.35	VT/WH	1565	4 LO Indicator Control	I	—
6	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	I	—
7	0.35	VT/YE	5985	Accessory Wakeup Serial Data	II	—
8	0.35	L-GN/BK	1563	2 HI Indicator Control	I	—
9	0.35	GY/L-GN	1561	AWD Indicator Control	I	—
10	0.5	GY/BK	1570	Front Axle Actuator Control	II	—
11	3	RD/GY	1342	Battery Positive Voltage	II	—
12	0.35	BN	1560	Neutral Indicator Control	I	—
13	0.35	VT	7476	Incremental Encoder Sensor Low Reference	I	—
14	3	BK	550	Ground	II	—
15	0.35	D-BU/GY	7473	Incremental Encoder Impulse Signal	I	—
16	0.35	YE	7474	Incremental Encoder Direction Signal	I	—
17	4	YE/VT	1553	Transfer Case Motor Counter Clockwise Control	II	—
18	0.35	WH/L-GN	7475	Incremental Encoder Sensor 8V Reference	I	—
19	0.5	YE/WH	1695	Four Wheel Drive Wheel Lock Indicator Control	I	—
20	4	YE/GY	1552	Transfer Case Motor Clockwise Control	II	—

Component Connector End Views

A6C Fuel Pump and Level Sensor Assembly - Primary (N2L)



3749582

Connector Part Information

Harness Type: Chassis Rear Right
OEM Connector: 4088330C1
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 2.8 Series, Sealed (GY)

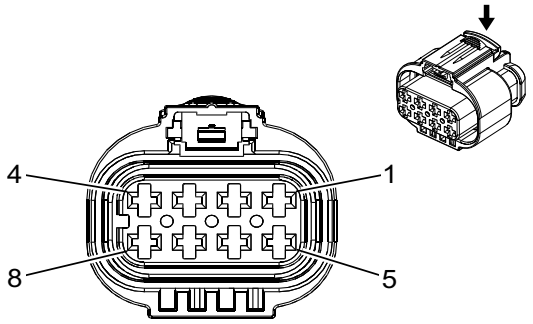
Terminal Part Information

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

A6C Fuel Pump and Level Sensor Assembly - Primary (N2L)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GY	120	Fuel Pump Control	I	—
2	1.5	YE/GY	4137	Fuel Pump Supply Voltage Phase 2	I	—
3	1.5	WH/BN	4138	Fuel Pump Supply Voltage Phase 3	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	BU/VT	1589	Primary Fuel Level Sensor Signal	I	—
6	0.5	BK/GN	6281	Fuel Level Sensor Low Reference	I	—
7 - 8	—	—	—	Not Occupied	—	—

A6C Fuel Pump and Level Sensor Assembly - Primary (NSQ/NVK)



3749582

Connector Part Information

Harness Type: Chassis
OEM Connector: 4088330C1
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 2.8 Series, Sealed (GY)

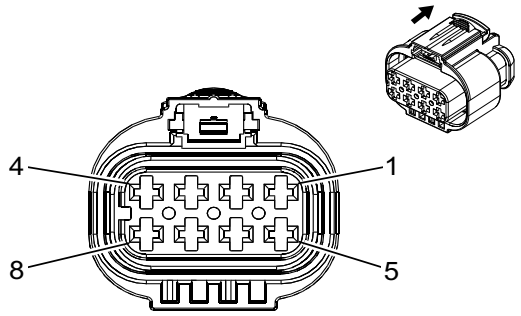
Terminal Part Information

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

A6C Fuel Pump and Level Sensor Assembly - Primary (NSQ/NVK)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GY	120	Fuel Pump Control	I	—
2	1.5	YE/GY	4137	Fuel Pump Supply Voltage Phase 2	I	—
3	1.5	WH/BN	4138	Fuel Pump Supply Voltage Phase 3	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	BU/VT	1589	Primary Fuel Level Sensor Signal	I	—
6	0.5	BK/GN	6281	Fuel Level Sensor Low Reference	I	—
7 - 8	—	—	—	Not Occupied	—	—

A6D Fuel Pump and Level Sensor Assembly - Secondary (NSQ)



3749583

Connector Part Information

Harness Type: Chassis Rear Right
OEM Connector: 4088872C1
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 2.8 Series, Sealed (L-BU)

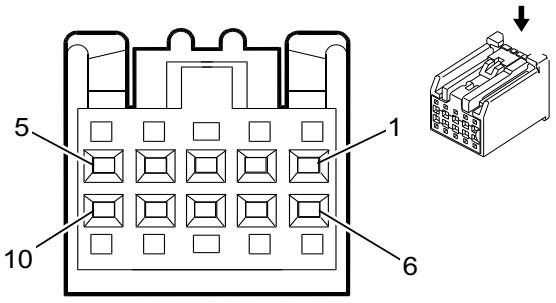
Terminal Part Information

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

A6D Fuel Pump and Level Sensor Assembly - Secondary (NSQ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	1.5	GY	120	Fuel Pump Control	I	—
4	1.5	BK	2150	Ground	I	—
5	0.5	BU/WH	1937	Secondary Fuel Level Sensor Signal	I	—
6	0.5	BK/GN	6281	Fuel Level Sensor Low Reference	I	—
7 - 8	—	—	—	Not Occupied	—	—

A10 Inside Rearview Mirror (DD8/UE1)



2180211

Connector Part Information

Harness Type: Headliner
OEM Connector: 13815336
Service Connector: 13577390
Description: 10-Way F 0.64 Kaizen Series (BK)

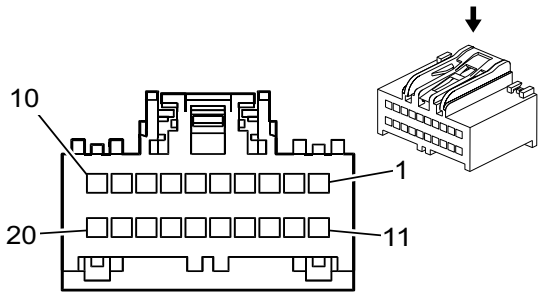
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575742	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

A10 Inside Rearview Mirror (DD8/UE1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	L-GN/RD	24	Backup Lamp Control	II	—
2	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	II	—
3	0.35	L-GN/D-BU	2514	Keypad Signal	II	—
4	0.35	L-GN/BK	2515	Keypad Control	II	—
5	0.5	BK	1050	Ground	I	—
6	0.35	YE/BN	2516	Keypad Green LED Control	II	—
7	0.35	BN/WH	2517	Keypad Red LED Control	II	—
8	0.35	BK/YE	1691	Automatic Day/Night Mirror Low Reference	II	—
9	0.35	YE/WH	1690	Automatic Day/Night Mirror Signal	II	—
10	—	—	—	Not Occupied	—	—

A11 Radio X1 (IO3/IO5/IO6)



1715228

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13859758
Service Connector: 15126710
Description: 20-Way F USCAR 64 Series (GY)

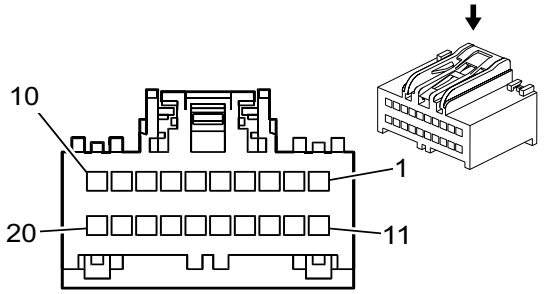
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575742	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

A11 Radio X1 (IO3/IO5/IO6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	WH/D-BU	6973	Camera Signal 2	II	—
5	0.35	GY/YE	6972	Camera Signal 2 +	II	—
6	0.5	Bare	5842	Auxiliary Audio Screen 2	I	—
7	0.35	D-BU	2060	Auxiliary Detection Signal	II	—
8	0.35	VT	5843	Auxiliary Audio Common Signal	II	—
9	0.35	GY	5839	Left Auxiliary Audio Signal 2	II	—
10	0.35	L-GN	5841	Right Auxiliary Audio Signal 2	II	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.5	L-GN/D-BU	7532	Local Interconnect Network Serial Data Bus 10	I	—
14	0.5	GY/L-GN	1102	Low Speed GMLAN Serial Data #2	I	—
15 - 18	—	—	—	Not Occupied	—	—
19	0.35	BK/YE	659	Cellular Telephone Voice Low Reference	II	—
20	0.35	YE	658	Cellular Telephone Voice Signal	II	—

A11 Radio X1 (IOB)



1715228

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13859758
Service Connector: 15126710
Description: 20-Way F USCAR 64 Series (GY)

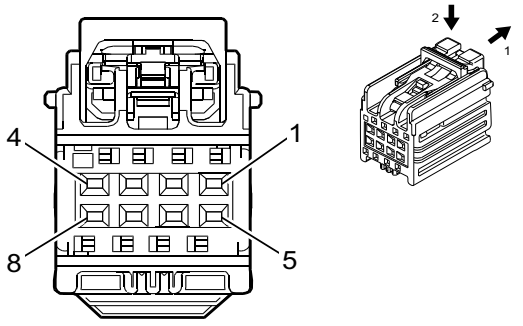
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575742	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

A11 Radio X1 (IOB)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	2550	Ground	I	—
2	0.35	GY/BN	9003	—	II	—
3	0.35	BN	9004	—	II	—
4	0.5	GY/L-GN	1102	Low Speed GMLAN Serial Data #2	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	BK/GY	5152	Voice Recognition Audio Low Reference	II	—
7	0.35	GY/YE	5149	Voice Recognition Audio Signal	II	—
8	0.35	BN/L-GN	3983	Display Radio Bank Switch Signal 2	II	—
9	0.35	BK/YE	659	Cellular Telephone Voice Low Reference	II	—
10	0.35	YE	658	Cellular Telephone Voice Signal	II	—
11	0.75	RD/VT	340	Battery Positive Voltage	I	—
12 - 13	—	—	—	Not Occupied	—	—
14	0.35	WH/D-BU	6973	Camera Signal 2	II	—
15	0.35	GY/YE	6972	Camera Signal 2 +	II	—
16	0.5	Bare	5842	Auxiliary Audio Screen 2	I	—
17	0.35	D-BU	2060	Auxiliary Detection Signal	II	—
18	0.35	VT	5843	Auxiliary Audio Common Signal	II	—
19	0.35	GY	5839	Left Auxiliary Audio Signal 2	II	—
20	0.35	L-GN	5841	Right Auxiliary Audio Signal 2	II	—

A11 Radio X2 (IO3/IO5/IO6)



4280711

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33183559
Service Connector: 19355209
Description: 8-Way F YESC Kaizen Series (GY)

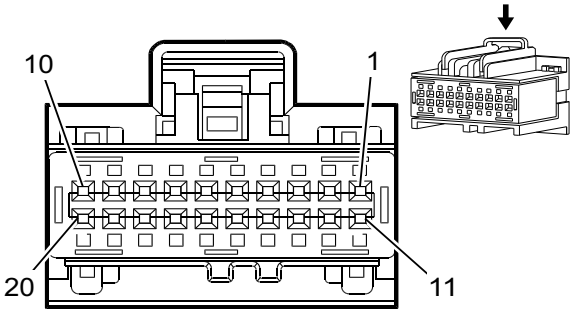
Terminal Part Information

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

A11 Radio X2 (IO3/IO5/IO6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/L-GN	3997	MOST Serial Data (-)	I	—
2	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
3	0.5	WH/L-GN	3997	MOST Serial Data (-)	I	—
4	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.35	WH/VT	3999	MOST Control	I	—
8	—	—	—	Not Occupied	—	—

A11 Radio X2 (IOB)



1664552

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13950640
Service Connector: 15126709
Description: 20-Way F USCAR 64 Series (BN)

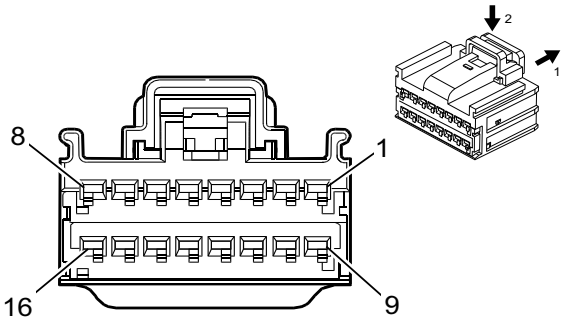
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575742	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

A11 Radio X2 (IOB)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.35	GY	314	Radio On Signal	II	—
4	0.35	VT/GY	1381	LCD Dimming Signal	II	—
5	0.35	GY/D-BU	3989	Display Radio Bank Switch Dim Signal	II	—
6	0.35	BN/L-GN	4502	Video Display Request Signal	II	—
7	0.35	BN/L-GN	3364	Navigation Display Reset Signal	II	—
8	0.35	D-BU	4315	Radio Volume Up Signal	II	—
9	0.35	GY/BN	4314	Radio Volume Down Signal	II	—
10	0.75	BK	2550	Ground	I	—
11	0.5	WH	46	Right Rear Speaker Control (+)	I	—
12	0.5	D-BU/BK	115	Right Rear Speaker Signal (-)	I	—
13	0.5	L-GN	199	Left Rear Speaker Control (+)	I	—
14	0.5	L-GN/BK	116	Left Rear Speaker Signal (-)	I	—
15	0.75	YE/BK	117	Right Front Speaker Signal (-) 1	I	—
16	0.75	YE	200	Right Front Speaker Control (+) 1	I	—
17	0.75	BN/D-BU	118	Left Front Speaker Signal (-) 1	I	—
18	0.75	D-BU	201	Left Front Speaker Control (+) 1	I	—
19	—	—	—	Not Occupied	—	—
20	0.75	RD/VT	340	Battery Positive Voltage	I	—

A11 Radio X3 (IO3/IO5/IO6)



4332214

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15512506
Service Connector: 13591061
Description: 16-Way F 1.5 OCS Series (BK)

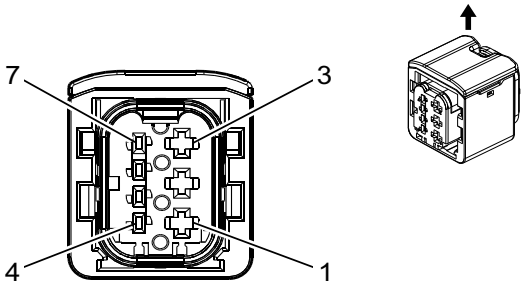
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

A11 Radio X3 (IO3/IO5/IO6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	D-BU	201	Left Front Speaker Control (+) 1	I	—
2	0.75	YE	200	Right Front Speaker Control (+) 1	I	—
3	0.5	L-GN	199	Left Rear Speaker Control (+)	I	—
4	0.5	WH	46	Right Rear Speaker Control (+)	I	—
5 - 7	—	—	—	Not Occupied	—	—
8	0.75	RD/VT	340	Battery Positive Voltage	I	—
9	0.75	BN/D-BU	118	Left Front Speaker Signal (-) 1	I	—
10	0.75	YE/BK	117	Right Front Speaker Signal (-) 1	I	—
11	0.5	L-GN/BK	116	Left Rear Speaker Signal (-)	I	—
12	0.5	D-BU/BK	115	Right Rear Speaker Signal (-)	I	—
13 - 15	—	—	—	Not Occupied	—	—
16	0.75	BK	2550	Ground	I	—

A16 Transfer Case Motor (NQF)



4975548

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13831149
Service Connector: 19370827
Description: 7-Way F 1.5, 2.8 MCP Series, Sealed (BK)

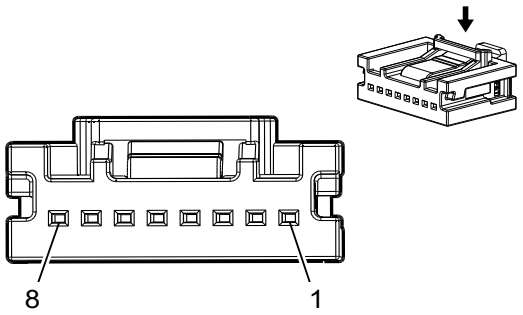
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (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

A16 Transfer Case Motor (NQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	YE/VT	1553	Transfer Case Motor Counter Clockwise Control	II	—
2	—	—	—	Not Occupied	—	—
3	1	OG	1552	Transfer Case Motor Clockwise Control	II	—
4	0.5	VT	7476	Incremental Encoder Sensor Low Reference	I	—
5	—	—	—	Not Occupied	—	—
6	0.5	D-BU/GY	7473	Incremental Encoder Impulse Signal	I	—
7	0.5	WH/L-GN	7475	Incremental Encoder Sensor 8V Reference	I	—

A22 Radio Controls (IOB)



4017639

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15532151
Service Connector: 19355393
Description: 8-Way F 0.64 Series (BK)

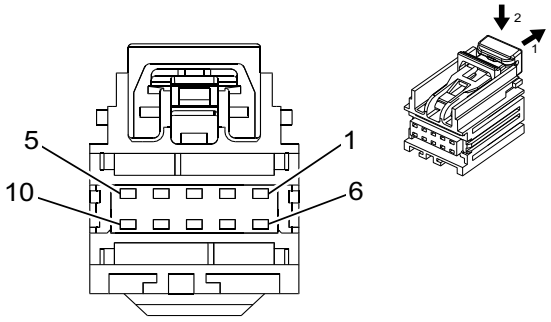
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	EL-35616-58 (BK)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A22 Radio Controls (IOB)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY/BN	3761	Infotainment Regulated Control	I	—
2	0.35	L-GN/BK	2515	Keypad Control	I	—
3	0.35	BN/L-GN	3983	Display Radio Bank Switch Signal 2	I	—
4	0.35	GY	314	Radio On Signal	I	—
5	0.35	GY/D-BU	3989	Display Radio Bank Switch Dim Signal	I	—
6	0.35	D-BU	4315	Radio Volume Up Signal	I	—
7	0.35	GY/BN	4314	Radio Volume Down Signal	I	—
8	0.35	BK/BN	2518	Keypad Low Reference	I	—

A23D Door Latch Assembly - Driver



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)

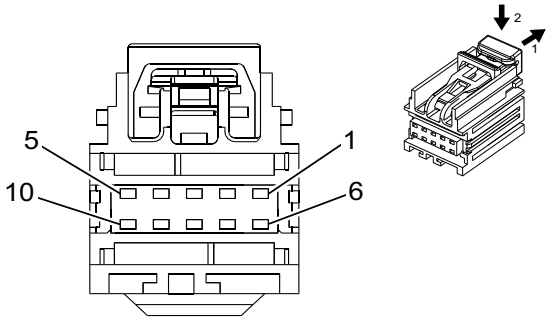
Terminal Part Information

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

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	745	Left Front Door Ajar Switch Signal	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	BK	1150	Ground	I	—
4	0.35	WH/VT	3270	Driver Door Lock Motor Status Signal	I	—
5	0.35	D-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	—
8	0.75	BN/BK	294	Door Lock Actuator Unlock Control	I	—
9 - 10	—	—	—	Not Occupied	—	—

A23LR Door Latch Assembly - Left Rear (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)

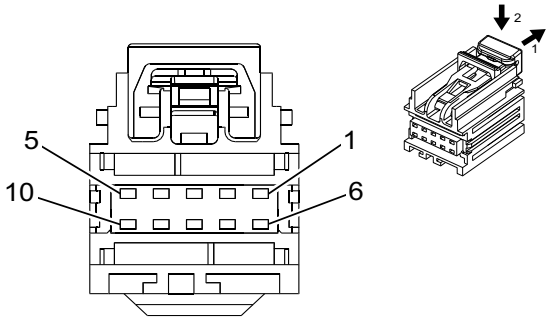
Terminal Part Information

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 (Crew Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY/WH	747	Left Rear Door Ajar Switch Signal	I	—
2	0.35	BN/WH	3269	Child Security Lock Motor Status Signal Left Rear	I	—
3	0.5	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	0.75	WH/D-BU	3266	Child Security Lock Motor Lock Control	I	—
10	—	—	—	Not Occupied	—	—

A23P Door Latch Assembly - Passenger



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)

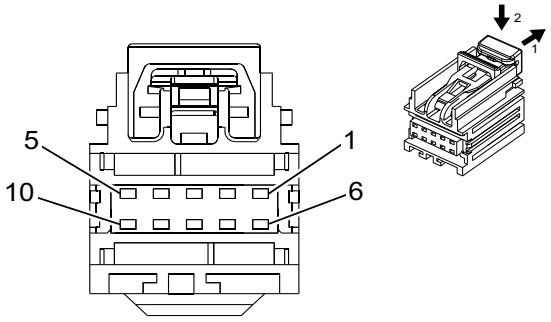
Terminal Part Information

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

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	BK	1250	Ground	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	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 (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)

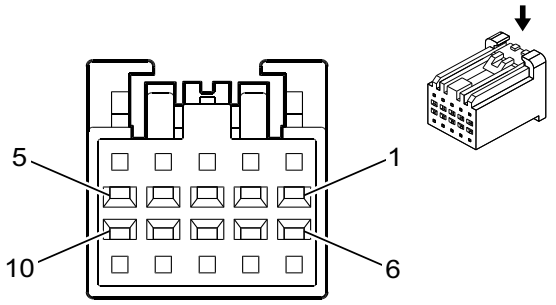
Terminal Part Information

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 (Crew Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	BK	1250	Ground	I	—
4	0.35	GY/BK	3268	Child Security Lock Motor Status Signal Right Rear	I	—
5	0.35	GY/WH	748	Right Rear Door Ajar Switch Signal	I	—
6	—	—	—	Not Occupied	—	—
7	0.75	WH/D-BU	3266	Child Security Lock Motor Lock Control	I	—
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	—	—

A26 HVAC Controls



2840038

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13876499
Service Connector: 13581139
Description: 10-Way F 0.64 Kaizen Series (GY)

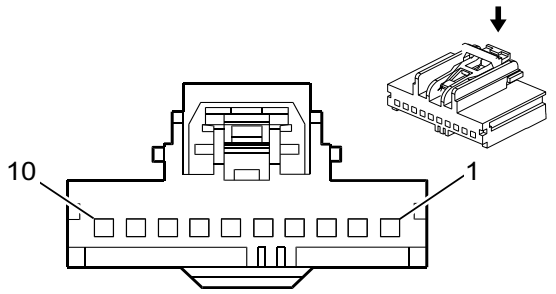
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575742	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	13575867	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/GY	2840	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	L-GN	5060	Low Speed GMLAN Serial Data	II	—
4 - 8	—	—	—	Not Occupied	—	—
9	0.35	L-GN/YE	7531	Local Interconnect Network Serial Data Bus 9	II	—
10	0.35	BK	2550	Ground	II	—

A33 Media Disc Player (TG5)



1711011

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15490628
Service Connector: 89047355
Description: 10-Way F 0.64 Kaizen Series (BK)

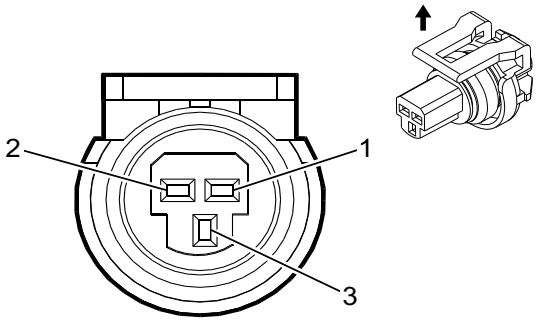
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575742	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

A33 Media Disc Player (TG5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/VT	3999	MOST Control	II	—
2	—	—	—	Not Occupied	—	—
3	0.5	WH/L-GN	3997	MOST Serial Data (-)	I	—
4	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
5	0.5	WH/L-GN	3997	MOST Serial Data (-)	I	—
6	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
7	—	—	—	Not Occupied	—	—
8	0.75	BK	2550	Ground	I	—
9	—	—	—	Not Occupied	—	—
10	0.75	RD/VT	340	Battery Positive Voltage	I	—

B1 A/C Refrigerant Pressure Sensor (C67)



2909191

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13846842
Service Connector: 19368669
Description: 3-Way F 150 GT Series, Sealed (BK)

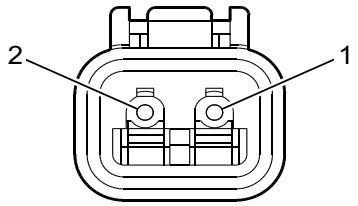
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B1 A/C Refrigerant Pressure Sensor (C67)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/BN	5514	A/C Refrigerant Pressure Sensor Low Reference	I	—
2	0.5	BN/RD	2700	A/C Pressure Sensor 5V Reference	I	—
3	0.5	L-GN	380	A/C Refrigerant Pressure Sensor Signal	I	—

B5LF Wheel Speed Sensor - Left Front



4976379

Connector Part Information

Harness Type: Chassis
OEM Connector: 3866308C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F DT Series, Sealed (BK)

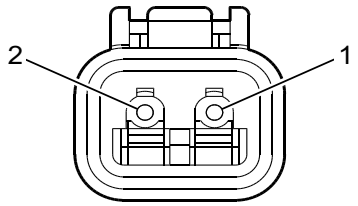
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	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	0.75	GY/WH	7064	Wheel Speed Sensor Control Left Front	I	—
2	0.75	GY	830	Wheel Speed Sensor Signal Left Front	I	—

B5LR Wheel Speed Sensor - Left Rear



4976379

Connector Part Information

Harness Type: Chassis Rear Left
OEM Connector: 3866308C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F DT Series, Sealed (BK)

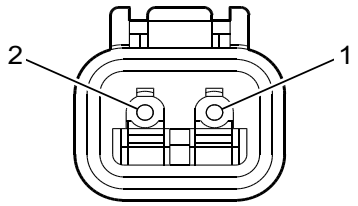
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	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	1	GY/BK	7127	Wheel Speed Sensor Control Left Rear	I	—
2	1	BU	884	Wheel Speed Sensor Signal Left Rear	I	—

B5RF Wheel Speed Sensor - Right Front



4976379

Connector Part Information

Harness Type: Chassis
OEM Connector: 3866308C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F DT Series, Sealed (BK)

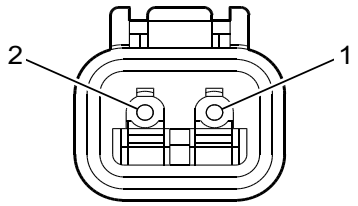
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	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	0.75	GY/BN	7065	Wheel Speed Sensor Control Right Front	I	—
2	0.75	YE	872	Wheel Speed Sensor Signal Right Front	I	—

B5RR Wheel Speed Sensor - Right Rear



4976379

Connector Part Information

Harness Type: Chassis Rear Right
OEM Connector: 3866308C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F DT Series, Sealed (BK)

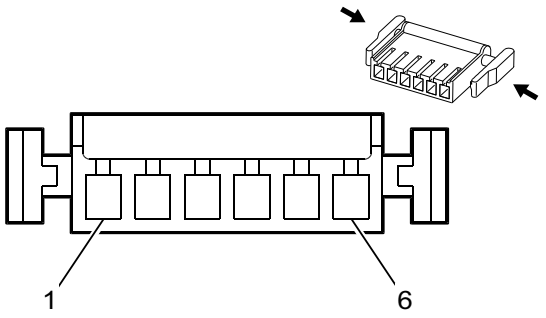
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	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	0.75	WH/BU	7128	Wheel Speed Sensor Control Right Rear	I	—
2	1	VT	882	Wheel Speed Sensor Signal Right Rear	I	—

B10B Ambient Light/Sunload Sensor



2173602

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13726957
Service Connector: 13576539
Description: 6-Way F 0.64 Micro-Quadlock Series (BK)

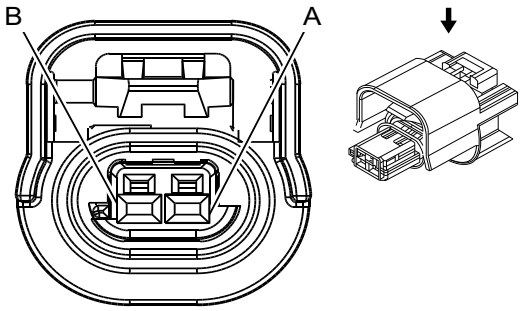
Terminal Part Information

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	728	Security Indicator Control	I	—
2 - 4	—	—	—	Not Occupied	—	—
5	0.35	WH/D-BU	278	Ambient Light Sensor Signal	I	—
6	0.35	BK/YE	1791	Air Temperature Door Control Low Reference	I	—

B14A Transmission Output Shaft Speed Sensor



2171193

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13520101
Service Connector: 13504951
Description: 2-Way F 150 GT Series, Sealed (BK)

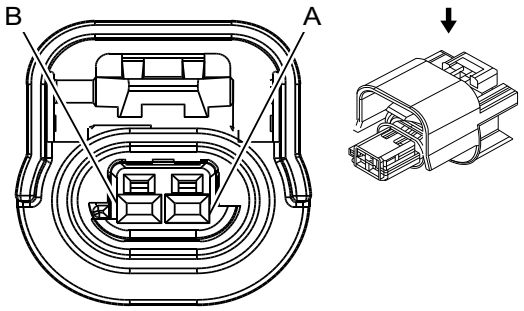
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B14A Transmission Output Shaft Speed Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	YE	160	Antenna Motor Down Control	I	—
B	0.75	L-GN	140	Battery Positive Voltage	I	—

B14B Transmission Turbine Speed Sensor



2171193

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13520101
Service Connector: 13504951
Description: 2-Way F 150 GT Series, Sealed (BK)

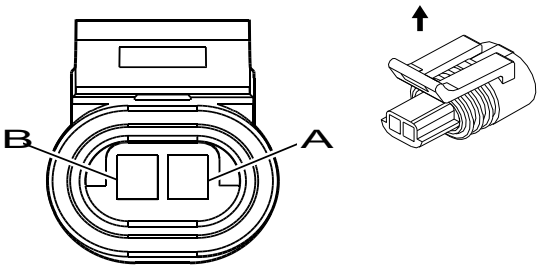
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B14B Transmission Turbine Speed Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	OG	180	Remote Compact Disc/Cassette Player Control	I	—
B	0.75	D-BU	120	Fuel Pump Control	I	—

B20 Brake Fluid Level Switch



655692

Connector Part Information

Harness Type: Brake Booster
OEM Connector: 2036583C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150.2 Metri-Pack Series, Sealed (BK)

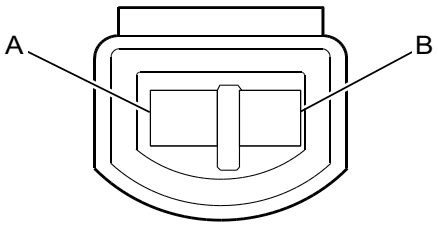
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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
A	0.75	GY	9	Park Lamp Control	I	—
B	0.75	GY	90	Right Mirror Motor Left Control	I	—

B21C Brake Pressure Differential Switch



5169092

Connector Part Information

Harness Type: Brake Booster
OEM Connector: 3518873C91
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Sealed (NA)

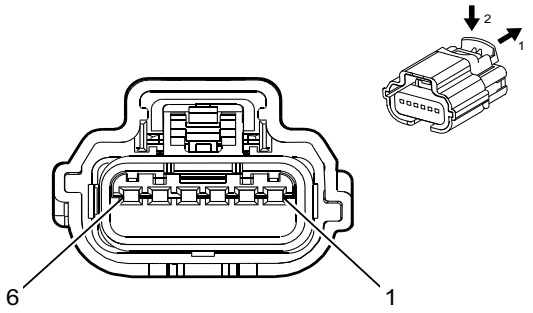
Terminal Part Information

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

B21C Brake Pressure Differential Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	16	GN	90	Right Mirror Motor Left Control	I	—
B	16	GN	90	Right Mirror Motor Left Control	I	—

B22 Brake Pedal Position Sensor (NQF)



4773396

Connector Part Information

Harness Type: Brake Clutch
OEM Connector: 35199160
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 64 Series, Sealed (NA)

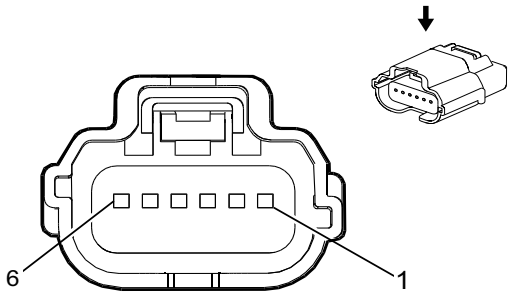
Terminal Part Information

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 (NQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/GN	552	Sensor Low Reference	I	—
2	0.5	GY/RD	598	5V Reference	I	—
3	0.5	WH/GN	526	Stop Lamp Switch Signal	I	—
4	0.5	BU/YE	5361	Brake Apply Sensor Signal	I	—
5	0.5	BK/BN	5360	Brake Apply Sensor Low Reference	I	—
6	0.5	WH	5359	Brake Apply Sensor Control	I	—

B22 Brake Pedal Position Sensor (-NQF)



3270302

Connector Part Information

Harness Type: Brake Clutch
OEM Connector: 13893502
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 64 Series, Sealed (NA)

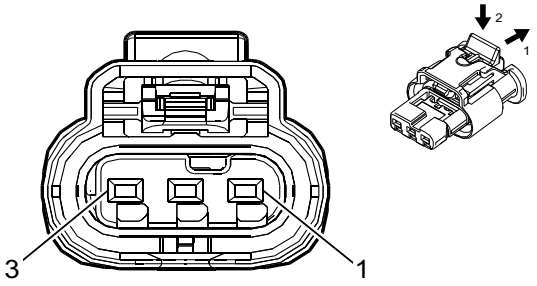
Terminal Part Information

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 (-NQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/L-GN	552	Sensor Low Reference	I	—
2	0.5	GY/RD	598	5V Reference	I	—
3	0.5	WH/L-GN	526	Stop Lamp Switch Signal	I	—
4	0.5	D-BU/YE	5361	Brake Apply Sensor Signal	I	—
5	0.5	BK/BN	5360	Brake Apply Sensor Low Reference	I	—
6	0.5	WH	5359	Brake Apply Sensor Control	I	—

B23 Camshaft Position Sensor



4256077

Connector Part Information

Harness Type: Engine
OEM Connector: 13594670
Service Connector: 19352065
Description: 3-Way F 1.2 MCP Series, Sealed (BN)

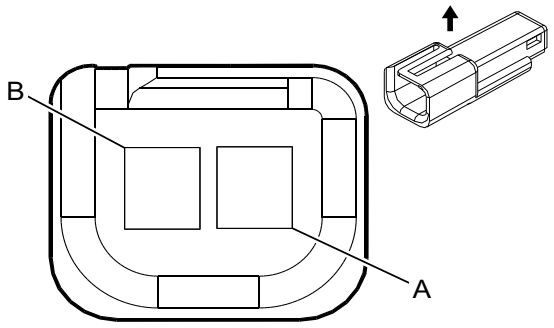
Terminal Part Information

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

B23 Camshaft Position Sensor

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	—

B24 Mobile Telephone Microphone (IO5/IO6/IOB/UE1)



35441

Connector Part Information

Harness Type: Headliner
OEM Connector: 12047663
Service Connector: 13584278
Description: 2-Way M 150 Metri-Pack Series (BK)

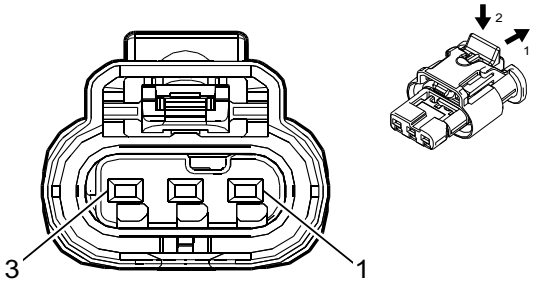
Terminal Part Information

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

B24 Mobile Telephone Microphone (IO5/IO6/IOB/UE1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	BK/BN	654	Cellular Telephone Microphone Low Reference	I	—
B	0.35	D-BU	655	Cellular Telephone Microphone Signal	I	—

B26 Crankshaft Position Sensor



4256077

Connector Part Information

Harness Type: Engine Left
OEM Connector: 13594670
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCP Series, Sealed (BN)

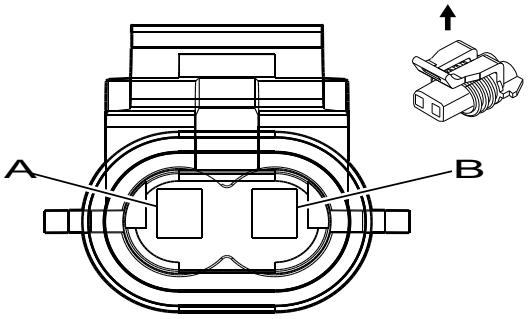
Terminal Part Information

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

B26 Crankshaft Position Sensor

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	—

B33 Engine Coolant Level Switch



655783

Connector Part Information

Harness Type: Body
OEM Connector: 15324243
Service Connector: 19368034
Description: 2-Way F 150 Metri-Pack Series, Sealed (GY)

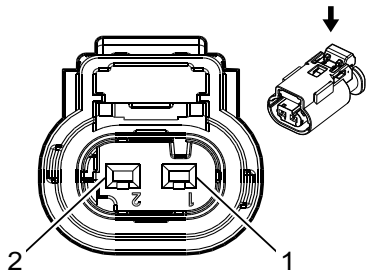
Terminal Part Information

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

B33 Engine Coolant Level Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	D-BU/YE	68	Low Coolant Level Indicator Control	I	—
B	0.75	BK/WH	1851	Signal Ground	I	—

B34 Engine Coolant Temperature Sensor



2717066

Connector Part Information

Harness Type: Engine Left
OEM Connector: 13503566
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

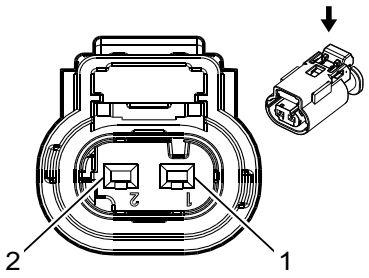
Terminal Part Information

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

B34 Engine Coolant Temperature Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	I	—
2	0.5	BU	410	Engine Coolant Temperature Sensor Signal	I	—

B35 Engine Oil Level Switch



2717066

Connector Part Information

Harness Type: Engine Left
OEM Connector: 13503566
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

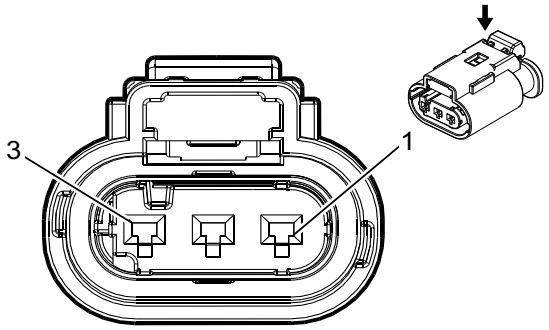
Terminal Part Information

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

B35 Engine Oil Level Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/WH	251	Signal Ground	I	—
2	0.5	BN/GN	1174	Oil Level Switch Signal	I	—

B37B Engine Oil Pressure Sensor



3240107

Connector Part Information

Harness Type: Engine Left
OEM Connector: 13503573
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

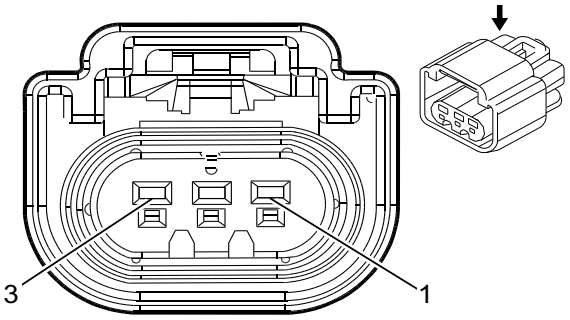
Terminal Part Information

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

B37B Engine Oil Pressure Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BN	331	Oil Pressure Sensor Signal	I	—
2	0.5	BK/VT	2755	Oil Pressure Sensor Low Reference	I	—
3	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	I	—

B47 Fuel Pressure Sensor



1860942

Connector Part Information

Harness Type: Chassis
OEM Connector: 4088276C1
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 150 GT Series, Sealed (BK)

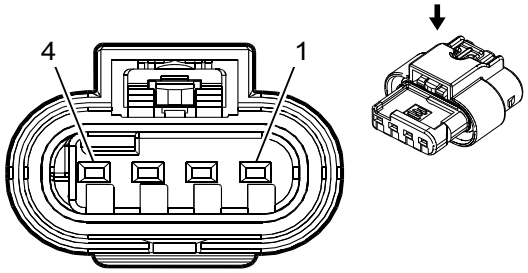
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	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	BU	7446	Fuel Line Pressure Sensor Signal	I	—
2	0.5	BK/YE	7447	Fuel Line Pressure Sensor Low Reference	I	—
3	0.5	BN/RD	7445	Fuel Line Pressure Sensor 5V Reference	I	—

B47B Fuel Rail Pressure Sensor



2596543

Connector Part Information

Harness Type: Engine Left
OEM Connector: 13576418
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.2 MCP Series, Sealed (BK)

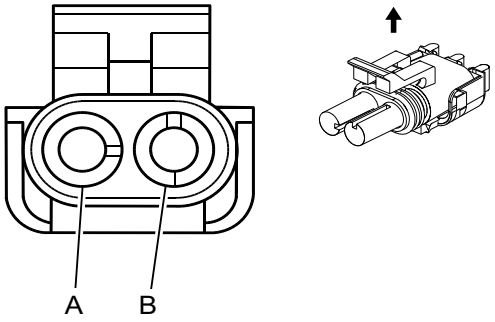
Terminal Part Information

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

B47B Fuel Rail Pressure Sensor

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	—

B55 Engine Hood Switch (BTV/UTJ)



781760

Connector Part Information

Harness Type: Left Headlight Jumper
OEM Connector: 587568C91
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Weather Pack Series (BK)

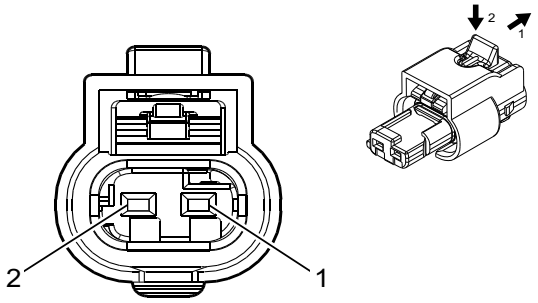
Terminal Part Information

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

B55 Engine Hood Switch (BTV/UTJ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	YE	5530	Hood Open Switch Signal	I	—
B	1.5	BN/GN	109	Hood Ajar Switch Signal	I	—

B59 Front Impact Sensor



4975834

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 4087999C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON-CB Series, Sealed (BK)

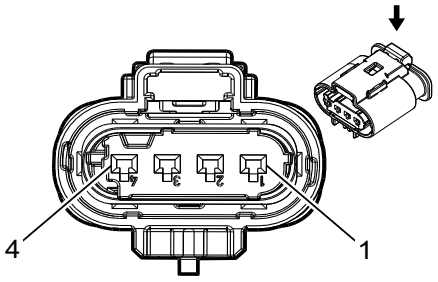
Terminal Part Information

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

B59 Front Impact Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	OG/GY	6618	Middle Front Discriminating Sensor Signal	I	—
2	1.5	BK/OG	6619	Middle Front Discriminating Sensor Low Reference	I	—

B65 Intake Manifold Pressure and Air Temperature Sensor



2717079

Connector Part Information

Harness Type: Engine
OEM Connector: 13503575
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

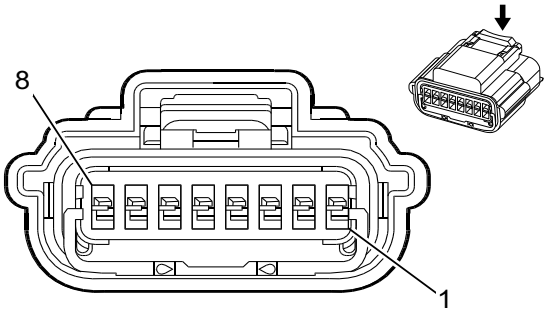
Terminal Part Information

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	BN	9348	Induction Air Temperature Sensor 3 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	—

B75C Multifunction Intake Air Sensor



2581486

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13774439
Service Connector: 13583440
Description: 8-Way F 0.64 Series, Sealed (BK)

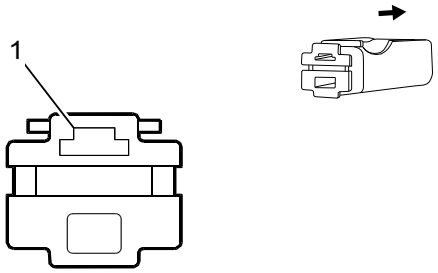
Terminal Part Information

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

B75C Multifunction Intake Air Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/D-BU	6289	Induction Air Temperature Sensor Signal	I	—
2	0.5	WH/RD	3201	Throttle Inlet Absolute Pressure Sensor 5V Reference	I	—
3	0.5	BK/VT	2760	Intake Air Temperature Sensor Low Reference	I	—
4	0.5	BN/L-GN	5266	Ambient Air Pressure Sensor Signal	I	—
5	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	I	—
6	0.5	L-GN/WH	492	Mass Air Flow Sensor Signal	I	—
7	0.75	BK/WH	451	Signal Ground	I	—
8	0.5	BN/GY	4008	Humidity Sensor Signal	I	—

B80 Park Brake Switch



1413086

Connector Part Information

Harness Type: Body
OEM Connector: 13511619
Service Connector: 19367647
Description: 1-Way F 250 Series (BK)

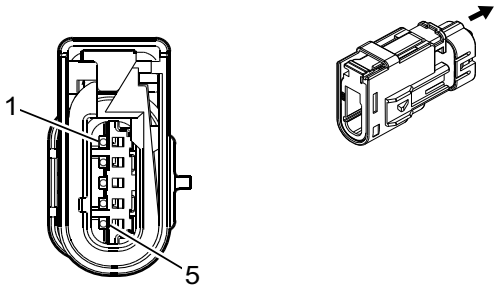
Terminal Part Information

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

B80 Park Brake Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	D-BU/VT	1134	Park Brake Switch Signal	I	—

B87 Rearview Camera (UVC)



4808321

Connector Part Information

Harness Type: Rearview Camera Jumper
OEM Connector: 13519365
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed (GY)

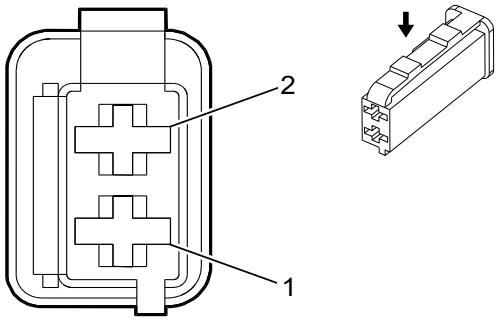
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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	0.75	GY/YE	6972	Camera Signal 2 +	I	—
2	0.75	WH/BU	6973	Camera Signal 2	I	—
3	0.5	WH	6974	Camera Low Reference	I	—
4	0.75	BK	2550	Ground	I	—
5	0.75	VT/GN	1739	Run/Crank Ignition 1 Voltage	I	—

B88D Seat Belt Switch - Driver



2339593

Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 1563189-1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.6 Timer Series (BK)

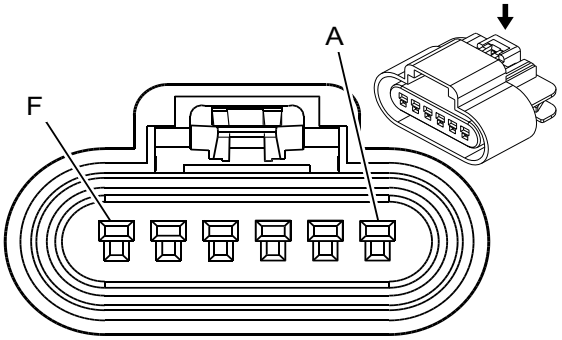
Terminal Part Information

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

B88D Seat Belt Switch - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/OG	1363	Driver Seat Belt Switch Low Reference	I	—
2	0.35	OG/BN	238	Driver Seat Belt Switch Signal	I	—

B107 Accelerator Pedal Position Sensor (NQF)



632357

Connector Part Information

Harness Type: Brake Clutch
OEM Connector: 15397578
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 150 GT Series, Sealed (BK)

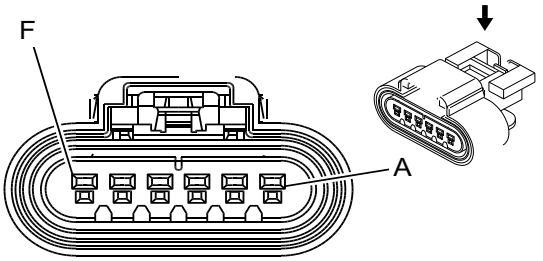
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B107 Accelerator Pedal Position Sensor (NQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	BK/VT	1272	Accelerator Pedal Position Low Reference 2	I	—
B	0.35	GN/WH	1162	Accelerator Pedal Position Signal 2	I	—
C	0.35	BN/RD	1274	Accelerator Pedal Position 5V Reference 2	I	—
D	0.35	WH/RD	1164	Accelerator Pedal Position 5V Reference 1	I	—
E	0.35	YE/WH	1161	Accelerator Pedal Position Signal 1	I	—
F	0.35	BK/BU	1271	Accelerator Pedal Position Low Reference 1	I	—

B107 Accelerator Pedal Position Sensor (-NQF)



886053

Connector Part Information

Harness Type: Brake Clutch
OEM Connector: 15326830
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 150 GT Series, Sealed (BK)

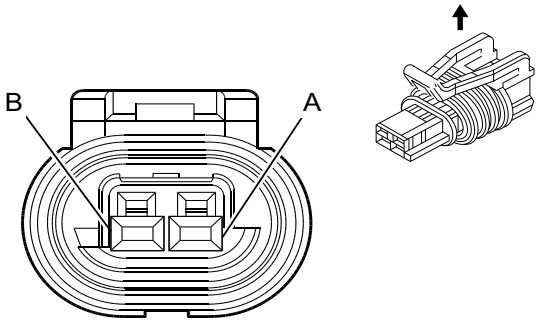
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B107 Accelerator Pedal Position Sensor (-NQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	BK/VT	1272	Accelerator Pedal Position Low Reference 2	I	—
B	0.35	L-GN/WH	1162	Accelerator Pedal Position Signal 2	I	—
C	0.35	BN/RD	1274	Accelerator Pedal Position 5V Reference 2	I	—
D	0.35	WH/RD	1164	Accelerator Pedal Position 5V Reference 1	I	—
E	0.35	YE/WH	1161	Accelerator Pedal Position Signal 1	I	—
F	0.35	BK/D-BU	1271	Accelerator Pedal Position Low Reference 1	I	—

B118B Windshield Washer Fluid Level Switch



1538760

Connector Part Information

Harness Type: Body
OEM Connector: 15449028
Service Connector: 88987993
Description: 2-Way F 150 GT Series, Sealed (BK)

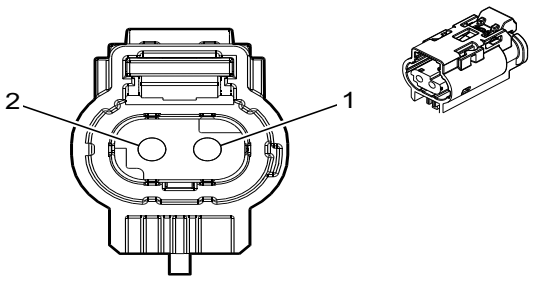
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B118B Windshield Washer Fluid Level Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	VT	185	Low Washer Fluid Indicator Control	I	—
B	0.75	BK	1050	Ground	I	—

B130A Exhaust Gas Recirculation Temperature Sensor 1



4451423

Connector Part Information

Harness Type: Engine
OEM Connector: 13583201
Service Connector: 19354079
Description: 2-Way F 1.2 Multilock Series, Sealed

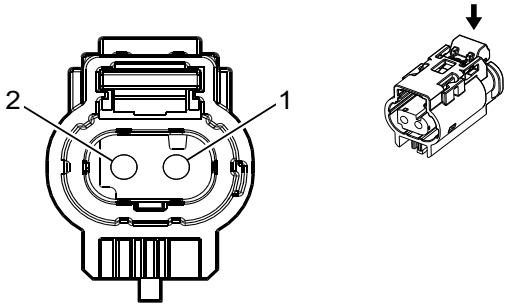
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B130A Exhaust Gas Recirculation Temperature Sensor 1

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



3747581

Connector Part Information

Harness Type: Engine
OEM Connector: 13583199
Service Connector: 19332628
Description: 2-Way F 1.2 Multilock Series, Sealed (GY)

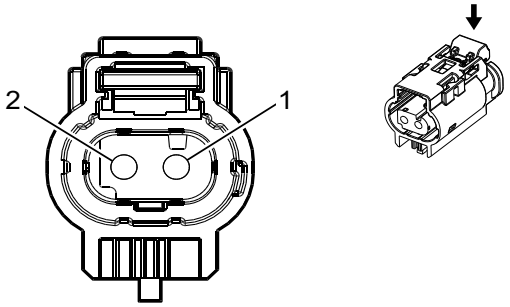
Terminal Part Information

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

B130B Exhaust Gas Recirculation Temperature Sensor 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/BN	3237	Exhaust Gas Recirculation Temperature Sensor Signal	I	—
2	0.5	BK/BU	6274	Exhaust Gas Recirculation Temperature Sensor Low Reference	I	—

B131A Exhaust Temperature Sensor 1



3747581

Connector Part Information

Harness Type: Engine
OEM Connector: 13583195
Service Connector: 19332719
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

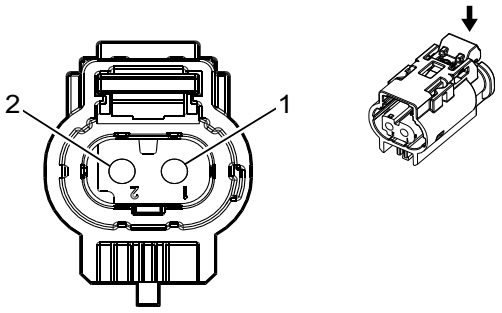
Terminal Part Information

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

B131A Exhaust Temperature Sensor 1

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	—

B131B Exhaust Temperature Sensor 2



3747580

Connector Part Information

Harness Type: Engine
OEM Connector: 13583197
Service Connector: 19332627
Description: 2-Way F 1.2 Multilock Series, Sealed

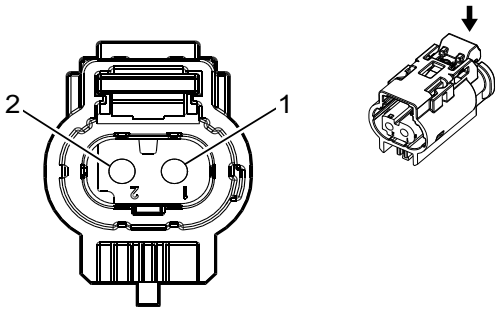
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B131B Exhaust Temperature Sensor 2

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	—

B131C Exhaust Temperature Sensor 3



3747580

Connector Part Information

Harness Type: Chassis
OEM Connector: 4088566C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed

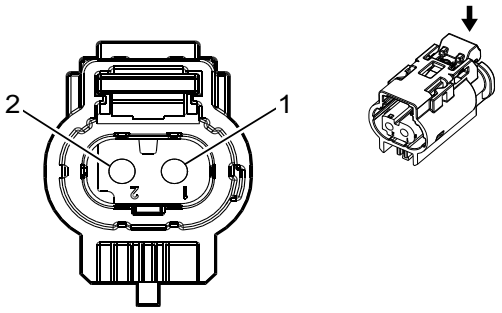
Terminal Part Information

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

B131C Exhaust Temperature Sensor 3

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	—

B131D Exhaust Temperature Sensor 4



3747580

Connector Part Information

Harness Type: Chassis
OEM Connector: 4088566C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed

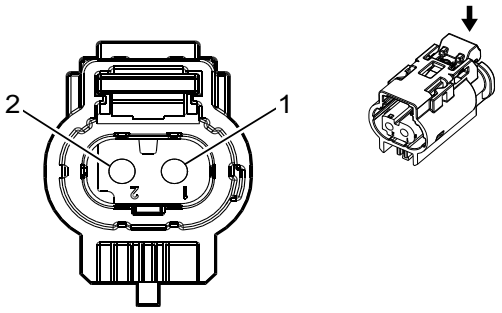
Terminal Part Information

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

B131D Exhaust Temperature Sensor 4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/BN	3658	Exhaust Gas Temperature Sensor 4 Signal	I	—
2	0.5	BK/GY	3659	Exhaust Gas Temperature Sensor 4 Low Reference	I	—

B131E Exhaust Temperature Sensor 5



3747580

Connector Part Information

Harness Type: Chassis
OEM Connector: 4088566C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed

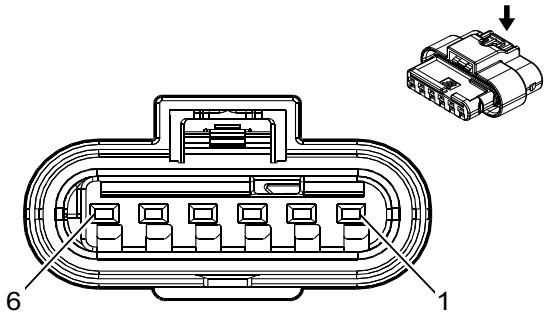
Terminal Part Information

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

B131E Exhaust Temperature Sensor 5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU/GY	3660	Exhaust Gas Temperature Sensor 5 Signal	I	—
2	0.5	BK/VT	3661	Exhaust Gas Temperature Sensor 5 Low Reference	I	—

B136 Exhaust Particulate Matter Sensor



3747582

Connector Part Information

Harness Type: Chassis
OEM Connector: 4088465C1
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 1.2 MCON-CB Series, Sealed (BK)

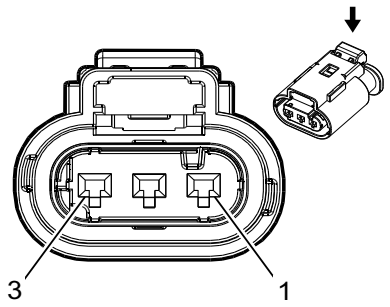
Terminal Part Information

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

B136 Exhaust Particulate Matter Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	BK	2150	Ground	I	—
2	0.5	WH	4499	High Speed GMLAN Serial Data (-) 7	I	—
3	0.5	WH	4499	High Speed GMLAN Serial Data (-) 7	I	—
4	0.5	BU/BN	4498	High Speed GMLAN Serial Data (+) 7	I	—
5	0.5	BU/BN	4498	High Speed GMLAN Serial Data (+) 7	I	—
6	1.5	VT/BU	3674	NOx Sensor 1 Control	I	—

B154 Diesel Particulate Filter Exhaust Differential Pressure Sensor



2717069

Connector Part Information

Harness Type: Chassis
OEM Connector: 4088567C1
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

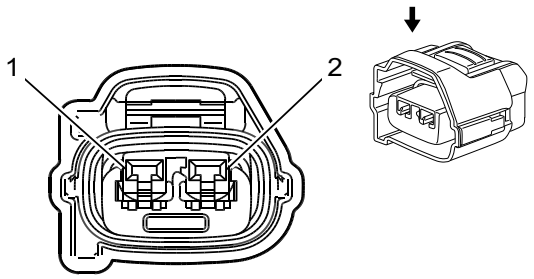
Terminal Part Information

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

B154 Diesel Particulate Filter Exhaust Differential Pressure Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU	6053	Exhaust Pressure Sensor Signal 1	I	—
2	0.5	BK/YE	6055	Exhaust Pressure Sensor Low Reference 1	I	—
3	0.5	WH/RD	6054	Exhaust Pressure Sensor 5V Reference 1	I	—

B193A Charge Air Cooler Inlet Temperature Sensor



2388842

Connector Part Information

Harness Type: Engine
OEM Connector: 7283-7020-10
Service Connector: 19368660
Description: 2-Way F 090 Series, Sealed (D-GY)

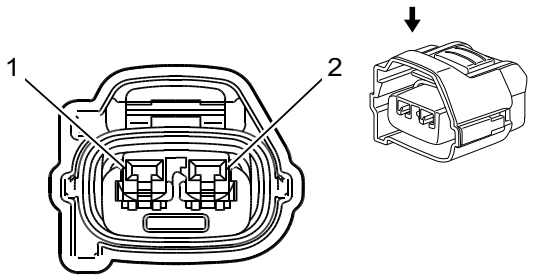
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-18 (BK)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B193A Charge Air Cooler Inlet Temperature Sensor

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



2388842

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 15401053
Service Connector: 19368660
Description: 2-Way F 090 Series, Sealed (D-GY)

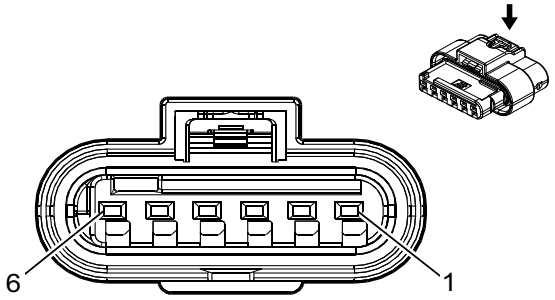
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-18 (BK)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B193B Charge Air Cooler Outlet Temperature Sensor

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/D-BU	3680	Charge Air Cooler Outlet Temperature Sensor Low Reference	I	—

B195A Nitrogen Oxides Sensor 1



3747584

Connector Part Information

Harness Type: Body
OEM Connector: 13975341
Service Connector: 19329354
Description: 6-Way F 1.2 MCON-CB Series, Sealed (BN)

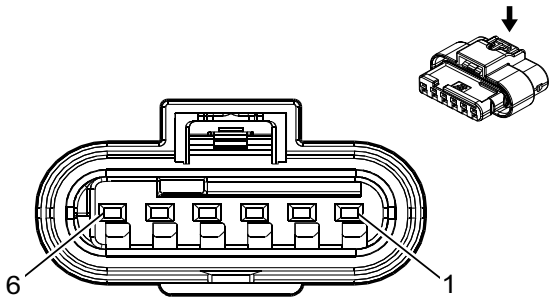
Terminal Part Information

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

B195A Nitrogen Oxides Sensor 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/D-BU	3674	NOx Sensor 1 Control	I	—
2	0.5	D-BU/BN	4498	High Speed GMLAN Serial Data (+) 7	I	—
3	0.5	D-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	451	Signal Ground	I	—

B195B Nitrogen Oxides Sensor 2



4045008

Connector Part Information

Harness Type: Chassis
OEM Connector: 4088640C1
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 1.2 MCON-CB Series, Sealed (BN)

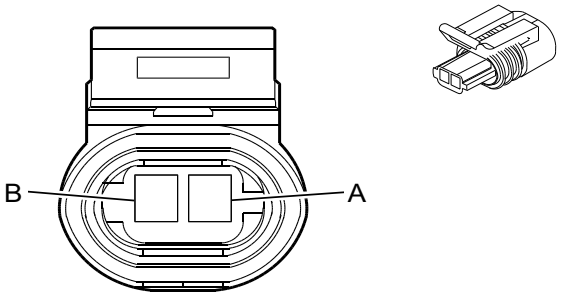
Terminal Part Information

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

B195B Nitrogen Oxides Sensor 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	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	1.5	BK	2150	Ground	I	—

B343 Power Brake Booster Fluid Flow Switch



646180

Connector Part Information

Harness Type: Brake Booster
OEM Connector: 2036584C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150.2 Metri-Pack Series, Sealed (GY)

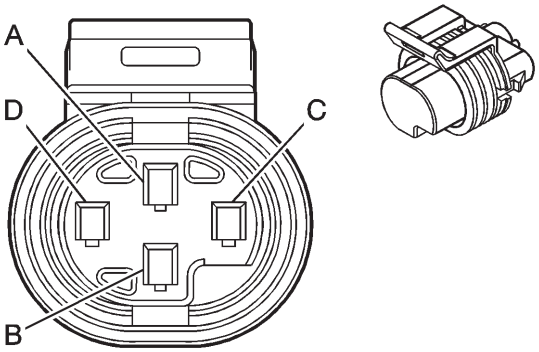
Terminal Part Information

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
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

B343 Power Brake Booster Fluid Flow Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1	GY	90	Right Mirror Motor Left Control	I	—
B	1	GY	90	Right Mirror Motor Left Control	II	—

B353 Air Suspension Low Pressure Warning Switch (G40/GP1/GP8)



1664567

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 1661777C1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 150 Metri-Pack Series, Sealed (BN)

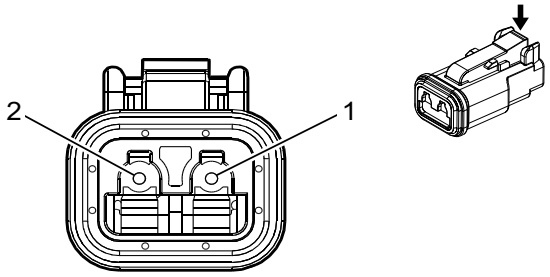
Terminal Part Information

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

B353 Air Suspension Low Pressure Warning Switch (G40/GP1/GP8)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
C	1	GY	603	A/C Low Pressure Switch Signal	I	—
D	1	BK	603	A/C Low Pressure Switch Signal	I	—

B356 Brake Pipe Pressure Switch



5168743

Connector Part Information

Harness Type: Brake Booster
OEM Connector: 3602747C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.5 DT Series, Sealed (BK)

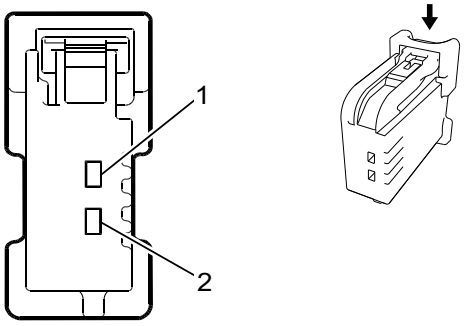
Terminal Part Information

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

B356 Brake Pipe Pressure Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	GY	90	Right Mirror Motor Left Control	I	—
2	2	GY	90	Right Mirror Motor Left Control	I	—

E1L Accent Lamp - Overhead Console



2173586

Connector Part Information

Harness Type: Overhead Console
OEM Connector: 13595207
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.5 Series (BK)

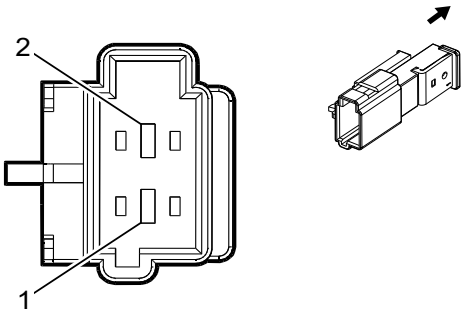
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1L Accent Lamp - Overhead Console

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/L-GN	7558	LED Ambient Lighting Control 2	I	—
2	0.35	BK	1050	Ground	I	—

E3A Roof Clearance Lamp - Left Front Outer



2339581

Connector Part Information

Harness Type: Right A-Pillar
OEM Connector: 13662506
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.6 Timer Series (BK)

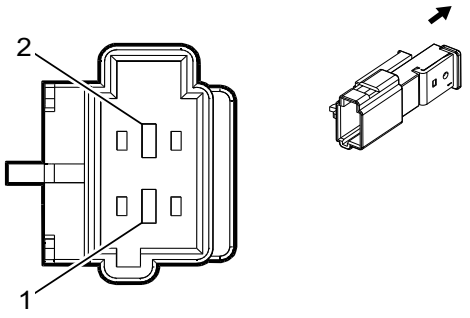
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-34 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E3A Roof Clearance Lamp - Left Front Outer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/GY	709	Left Park Lamp Control	I	—
2	0.5	BK	1050	Ground	I	—

E3C Roof Clearance Lamp - Front Middle



2339581

Connector Part Information

Harness Type: Right A-Pillar
OEM Connector: 13662506
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.6 Timer Series (BK)

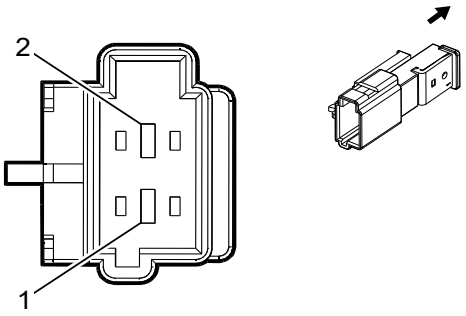
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-34 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E3C Roof Clearance Lamp - Front Middle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/GY	709	Left Park Lamp Control	I	—
2	0.5	BK	1050	Ground	I	—

E3E Roof Clearance Lamp - Right Front Outer



2339581

Connector Part Information

Harness Type: Right A-Pillar
OEM Connector: 13662506
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.6 Timer Series (BK)

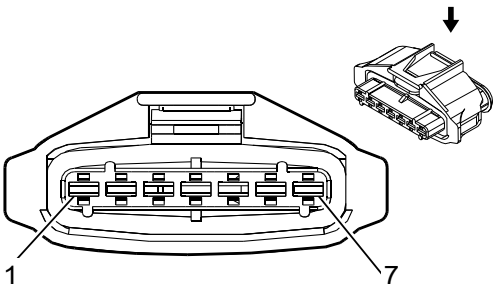
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-34 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E3E Roof Clearance Lamp - Right Front Outer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/GY	709	Left Park Lamp Control	I	—
2	0.5	BK	1050	Ground	I	—

E11A Fuel Heater/Water in Fuel Sensor



2537256

Connector Part Information

Harness Type: Chassis
OEM Connector: 4088469C1
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F 2.8 Junior Power Timer Series, Sealed (BK)

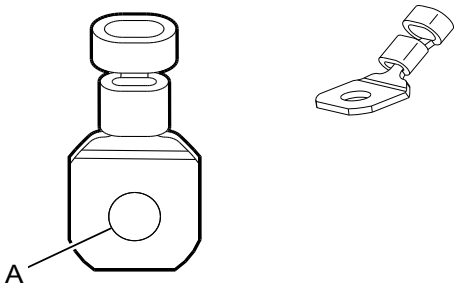
Terminal Part Information

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

E11A Fuel Heater/Water in Fuel Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/VT	412	Fuel Filter Temperature Sensor Low Reference	I	—
2	0.5	BN/VT	455	Fuel Filter Temperature Signal	I	—
3	0.5	BK/BU	6861	Water In Fuel Sensor Signal	I	—
4	0.5	BK/BU	6863	Water In Fuel Sensor Low Reference	I	—
5	—	—	—	Not Occupied	—	—
6	1.5	VT/GN	355	Fuel Filter Heater Voltage	I	—
7	1.5	BK	2150	Ground	I	—

E12A Glow Plug 1



3471503

Connector Part Information

Harness Type: Engine
OEM Connector: 7009-1338-02
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

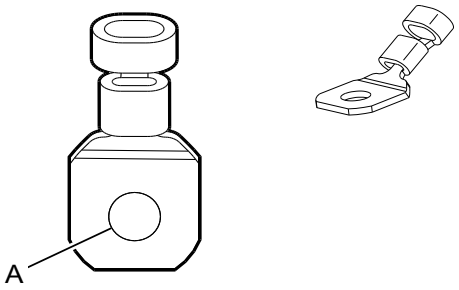
Terminal Part Information

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

E12A Glow Plug 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY/BU	1581	Glow Plug Control 1	I	—

E12B Glow Plug 2



3471503

Connector Part Information

Harness Type: Engine
OEM Connector: 7009-1338-02
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

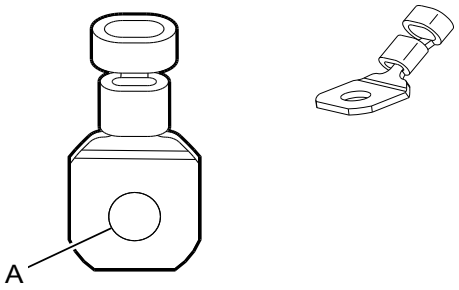
Terminal Part Information

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

E12B Glow Plug 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY/BN	1582	Glow Plug Control 2	I	—

E12C Glow Plug 3



3471503

Connector Part Information

Harness Type: Engine
OEM Connector: 7009-1338-02
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

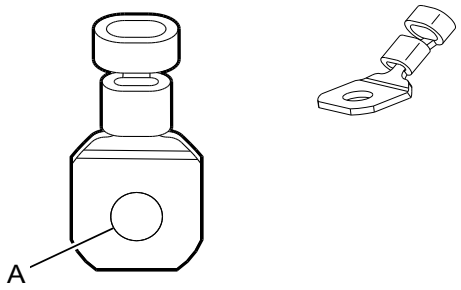
Terminal Part Information

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

E12C Glow Plug 3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY/GN	1583	Glow Plug Control 3	I	—

E12D Glow Plug 4



3471503

Connector Part Information

Harness Type: Engine
OEM Connector: 7009-1338-02
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

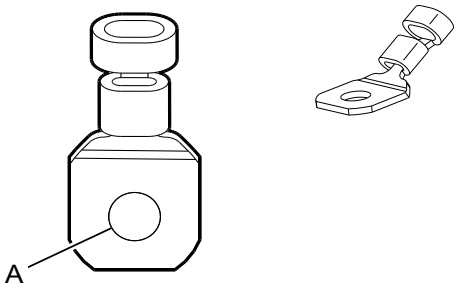
Terminal Part Information

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

E12D Glow Plug 4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY/YE	1584	Glow Plug Control 4	I	—

E12E Glow Plug 5



3471503

Connector Part Information

Harness Type: Engine
OEM Connector: 7009-1338-02
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

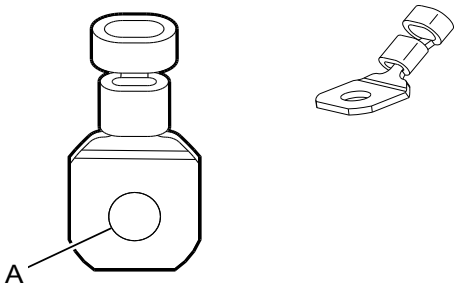
Terminal Part Information

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

E12E Glow Plug 5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY/WH	1585	Glow Plug Control 5	I	—

E12F Glow Plug 6



3471503

Connector Part Information

Harness Type: Engine
OEM Connector: 7009-1338-02
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

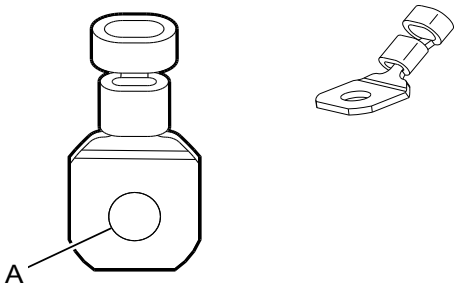
Terminal Part Information

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

E12F Glow Plug 6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY/VT	1586	Glow Plug Control 6	I	—

E12G Glow Plug 7



3471503

Connector Part Information

Harness Type: Engine
OEM Connector: 7009-1338-02
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

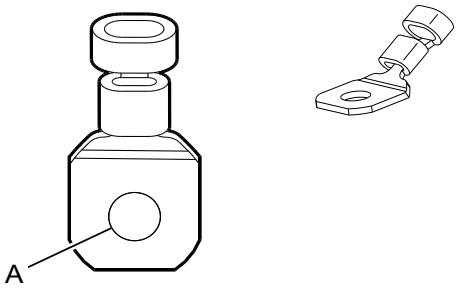
Terminal Part Information

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

E12G Glow Plug 7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	WH/BU	1588	Glow Plug Control 8	I	—

E12H Glow Plug 8



3471503

Connector Part Information

Harness Type: Engine
OEM Connector: 7009-1338-02
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

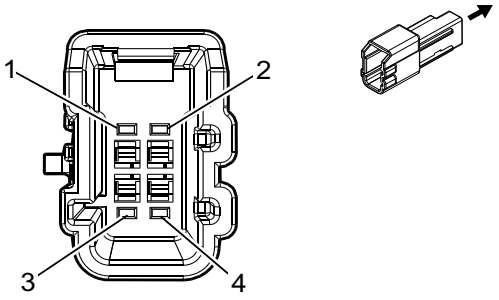
Terminal Part Information

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

E12H Glow Plug 8

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	WH/BK	1587	Glow Plug Control 7	I	—

E14A Seat Heating Element - Driver Back (KA1)



4293695

Connector Part Information

Harness Type: Driver Seat Back
OEM Connector: 6098-7781
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (GY)

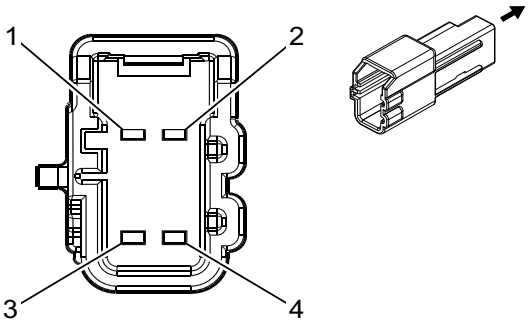
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-17 (LT GN)	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	L-BU	2425	Driver Heated Back 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	—

E14B Seat Heating Element - Driver Cushion (KA1)



4210503

Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 6098-7779
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (BK)

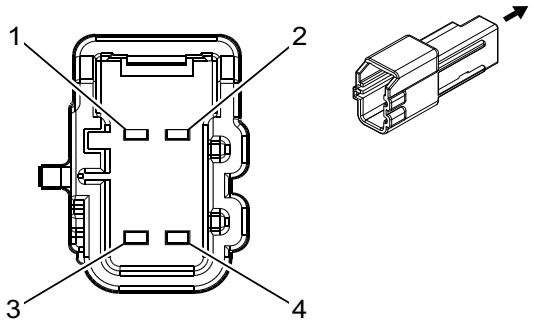
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-17 (LT GN)	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	BN/VT	2077	Driver Heated Seat Element Control	I	—
2	0.5	YE/GY	2079	Driver Heated Seat NTC Signal	I	—
3	0.5	BN/YE	2080	Driver Heated Seat NTC Low Reference	I	—
4	0.75	BN/BK	2078	Driver Heated Seat Element Low Reference	I	—

E14D Seat Heating Element - Passenger Cushion (KA1)



4210503

Connector Part Information

Harness Type: Passenger Seat Cushion
OEM Connector: 6098-7779
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series (BK)

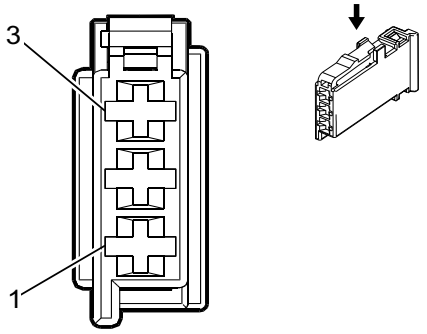
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-17 (LT GN)	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/L-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	—

E28 Center Console Compartment Lamp (D07)



2039656

Connector Part Information

Harness Type: Floor Console
OEM Connector: 10865339
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.6 Micro-Timer Series (BK)

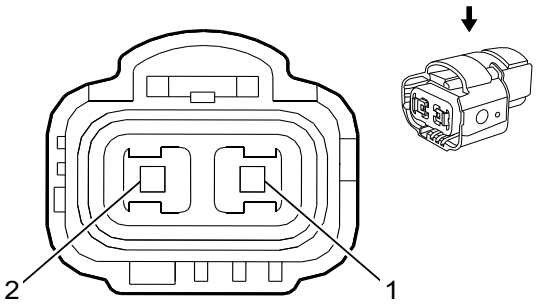
Terminal Part Information

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

E28 Center Console Compartment Lamp (D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/BN	6815	Inadvertent Power Control	I	—
2	0.75	BK	1050	Ground	I	—
3	—	—	—	Not Occupied	—	—

E29LF Fog Lamp - Left Front (T3U)



2891749

Connector Part Information

Harness Type: Left Fog Lamp Jumper
OEM Connector: 6131286C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.5 Series, Sealed (BK)

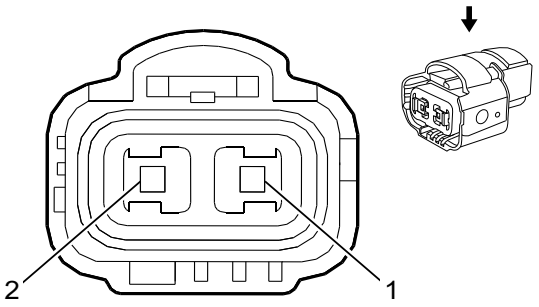
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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	1.5	BN/VT	2234	Front Fog Lamp Control	I	—
2	1.5	BK	150	Ground	I	—

E29RF Fog Lamp - Right Front (T3U)



2891749

Connector Part Information

Harness Type: Right Fog Lamp Jumper
OEM Connector: 6131286C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.5 Series, Sealed (BK)

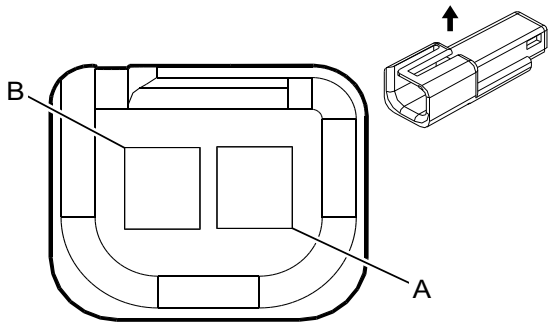
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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	1.5	BN/VT	2234	Front Fog Lamp Control	I	—
2	1.5	BK	150	Ground	I	—

E31L Sunshade Mirror Lamp - Left (DH6)



35441

Connector Part Information

Harness Type: Headliner
OEM Connector: 12047663
Service Connector: 13584278
Description: 2-Way M 150 Metri-Pack Series (BK)

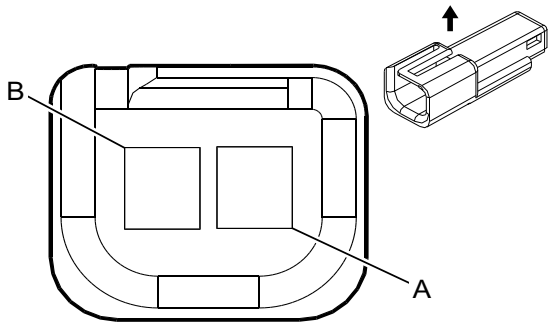
Terminal Part Information

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

E31L Sunshade Mirror Lamp - Left (DH6)

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	—

E31R Sunshade Mirror Lamp - Right (DH6)



35441

Connector Part Information

Harness Type: Headliner
OEM Connector: 12047663
Service Connector: 13584278
Description: 2-Way M 150 Metri-Pack Series (BK)

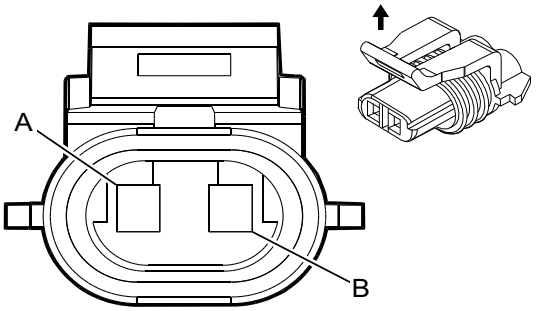
Terminal Part Information

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

E31R Sunshade Mirror Lamp - Right (DH6)

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	—

E33 Cargo Lamp



537107

Connector Part Information

Harness Type: Chassis Rear Right
OEM Connector: 1661778C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 Metri-Pack Series, Sealed (GY)

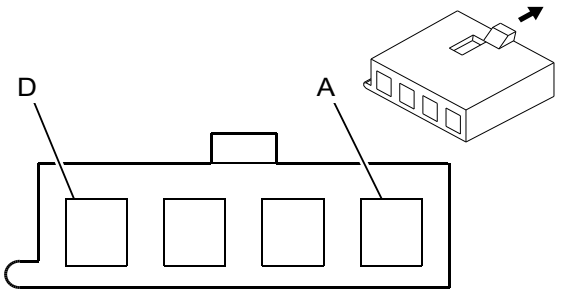
Terminal Part Information

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

E33 Cargo Lamp

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	WH/VT	1430	Exterior Courtesy Lamp Control	I	—
B	1	BK	1430	Exterior Courtesy Lamp Control	I	—

E37B Dome/Reading Lamps - 2nd Row (Crew Cab-AZ3)



287981

Connector Part Information

Harness Type: Headliner
OEM Connector: 12092162
Service Connector: 15306021
Description: 4-Way F 150 Metri-Pack Series (BK)

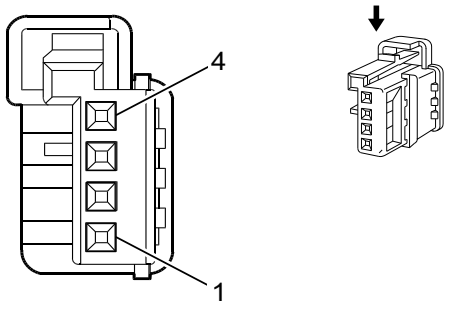
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E37B Dome/Reading Lamps - 2nd Row (Crew Cab-AZ3)

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	—
C	0.5	GY	157	Interior Lamp Control	I	—
D	0.5	YE	6817	LED Backlight Dimming Control	I	—

E37EL Dome/Reading Lamps - Front Overhead Console Left



2904464

Connector Part Information

Harness Type: Overhead Console
OEM Connector: 10812166
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64 Micro-Quadlock Series (GY)

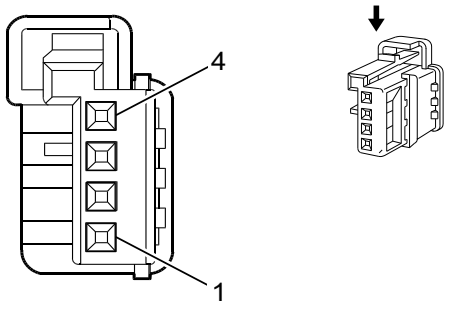
Terminal Part Information

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

E37EL Dome/Reading Lamps - Front Overhead Console Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control	I	—
2	0.5	WH/BN	6815	Inadvertent Power Control	I	—
3	0.5	GY	157	Interior Lamp Control	I	—
4	0.5	BK	1050	Ground	I	—

E37ER Dome/Reading Lamps - Front Overhead Console Right



2904464

Connector Part Information

Harness Type: Overhead Console
OEM Connector: 10812166
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64 Micro-Quadlock Series (GY)

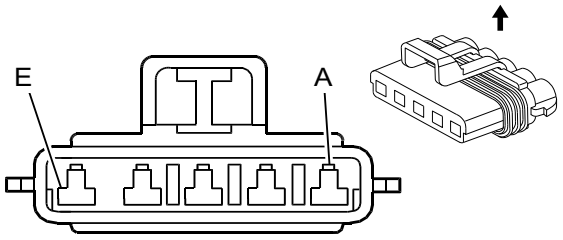
Terminal Part Information

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

E37ER Dome/Reading Lamps - Front Overhead Console Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control	I	—
2	0.5	WH/BN	6815	Inadvertent Power Control	I	—
3	0.5	GY	157	Interior Lamp Control	I	—
4	0.5	BK	1050	Ground	I	—

E42L Tail Lamp Assembly - Left



243503

Connector Part Information

Harness Type: Chassis Rear Left
OEM Connector: 1661375C2
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 280 Metri-Pack Series, Sealed

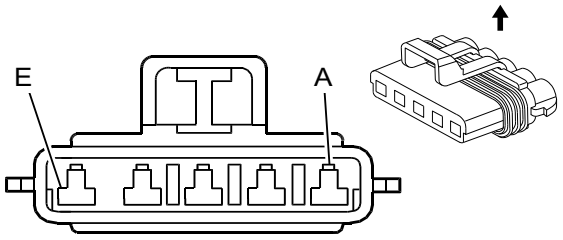
Terminal Part Information

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

E42L Tail Lamp Assembly - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GN/WH	24	Backup Lamp Control	I	—
B	2	YE/BU	18	Left Rear Stop/Turn Lamp Control	I	—
C	—	—	—	Not Occupied	—	—
D	2	VT/GY	709	Left Park Lamp Control	I	—
E	3	BK	10	Headlamp Switch Signal	I	—

E42R Tail Lamp Assembly - Right



243503

Connector Part Information

Harness Type: Chassis Rear Right
OEM Connector: 1661375C2
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 280 Metri-Pack Series, Sealed

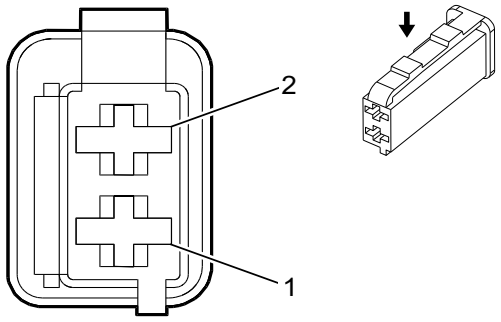
Terminal Part Information

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

E42R Tail Lamp Assembly - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GN/WH	24	Backup Lamp Control	I	—
B	2	GY/BN	309	Right Park Lamp Control	I	UGE
C	2	BN/GN	19	Right Rear Stop/Turn Lamp Control	I	—
D	2	GY/BN	309	Right Park Lamp Control	I	TR1
E	3	BK	10	Headlamp Switch Signal	I	—

E63D Flood Lamp - Driver Door Handle (A31)



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)

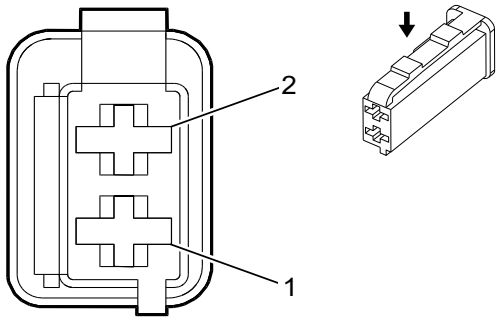
Terminal Part Information

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 (A31)

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 (A31)



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)

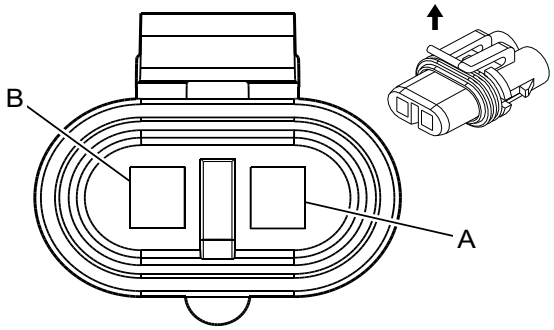
Terminal Part Information

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 (A31)

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	1250	Ground	I	—

E91 Air Dryer Valve Heater (JPY)



646148

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 1673790C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 280 Metri-Pack Series, Sealed (BK)

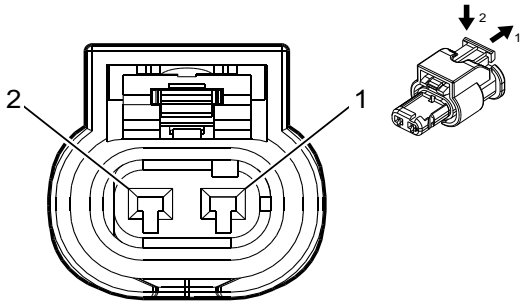
Terminal Part Information

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

E91 Air Dryer Valve Heater (JPY)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1	VT/GY	139	Run/Crank Ignition 1 Voltage	I	—
B	1	BK	139	Run/Crank Ignition 1 Voltage	I	—

F101 Passenger Instrument Panel Air Bag



2698576

Connector Part Information

Harness Type: Passenger Instrument Panel Air Bag
OEM Connector: 13863037
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCP Series, Sealed (YE)

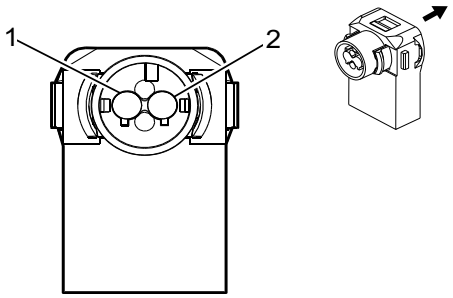
Terminal Part Information

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	.35	YE/OG	3025	Passenger IP Module Stage 1 High Control	I	—
2	.35	OG/WH	3024	Passenger IP Module Stage 1 Low Control	I	—

F112D Seat Belt Retractor Pretensioner - Driver (Crew 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)

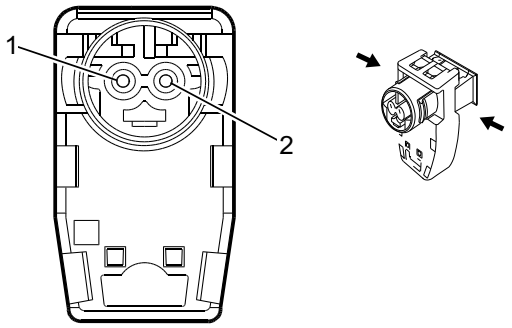
Terminal Part Information

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 (Crew Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD	3477	Driver Seat Belt Retractor Pretensioner High Control	I	—
2	0.5	GY	3478	Driver Seat Belt Retractor Pretensioner Low Control	I	—

F112D Seat Belt Retractor Pretensioner - Driver (Standard Cab)



2368877

Connector Part Information

Harness Type: Body
OEM Connector: 33512202
Service Connector: 19355492
Description: 2-Way F 0.64 Series, Sealed (BK with YE Cover)

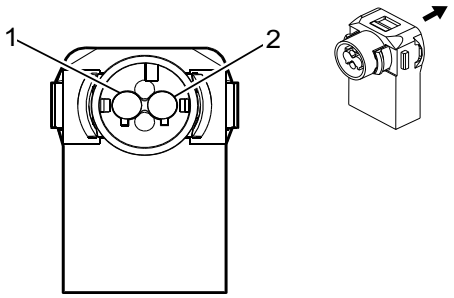
Terminal Part Information

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 (Standard Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD	3477	Driver Seat Belt Retractor Pretensioner High Control	I	—
2	0.5	GY	3478	Driver Seat Belt Retractor Pretensioner Low Control	I	—

F112P Seat Belt Retractor Pretensioner - Passenger (Crew 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)

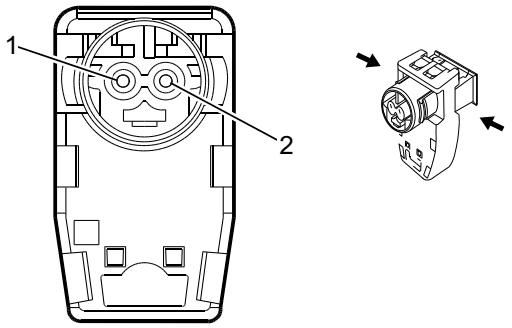
Terminal Part Information

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

F112P Seat Belt Retractor Pretensioner - Passenger (Crew Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN	3475	Passenger Seat Belt Retractor Pretensioner High Control	I	—
2	0.5	WH	3476	Passenger Seat Belt Retractor Pretensioner Low Control	I	—

F112P Seat Belt Retractor Pretensioner - Passenger (Standard Cab)



2368877

Connector Part Information

Harness Type: Body
OEM Connector: 33512202
Service Connector: 19355492
Description: 2-Way F 0.64 Series, Sealed (BK with YE Cover)

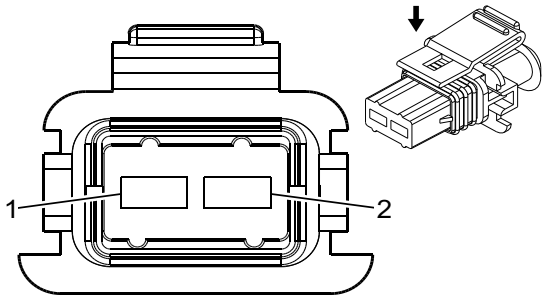
Terminal Part Information

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 (Standard Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN	3475	Passenger Seat Belt Retractor Pretensioner High Control	I	—
2	0.5	WH	3476	Passenger Seat Belt Retractor Pretensioner Low Control	I	—

G13 Generator



1522871

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 12186308
Service Connector: 13585849
Description: 2-Way F Junior Power Timer Series, Sealed (BK)

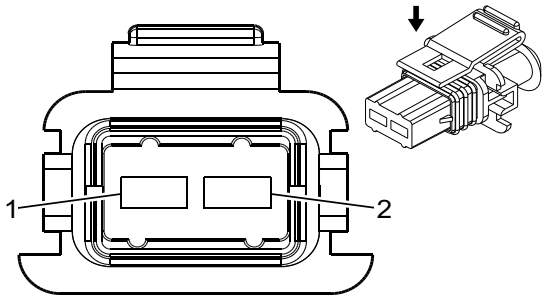
Terminal Part Information

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

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN	25	Charge Indicator Control	I	—
2	0.5	GY	23	Generator Field Duty Cycle Signal	I	—

G13E Generator - Auxiliary (KHB)



1522871

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 12186308
Service Connector: 13585849
Description: 2-Way F Junior Power Timer Series, Sealed (BK)

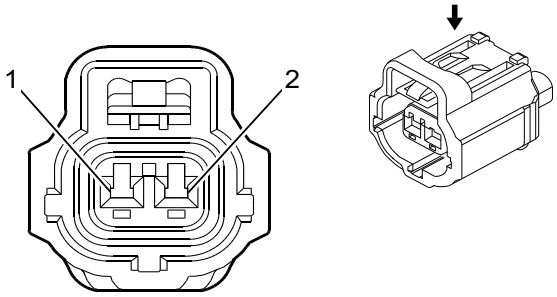
Terminal Part Information

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 (KHB)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN	25	Charge Indicator Control	I	—
2	—	—	—	Not Occupied	—	—

G24 Windshield Washer Pump



4975439

Connector Part Information

Harness Type: Body
OEM Connector: 15368658
Service Connector: 19370826
Description: 2-Way F SSC Series, Sealed (BK)

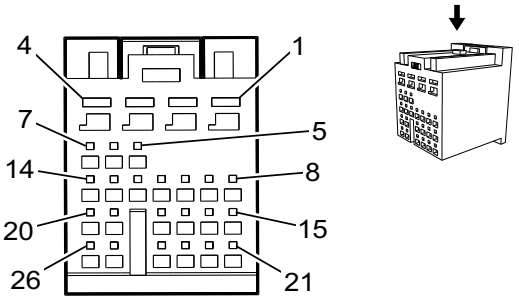
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-33 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required

G24 Windshield Washer Pump

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY/VT	228	Windshield Washer Pump Control	I	—
2	0.75	BK	1050	Ground	I	—

K9 Body Control Module X1



2282907

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13943345
Service Connector: 13582966
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	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
II	13587507	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	C	A
III	13587507	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A

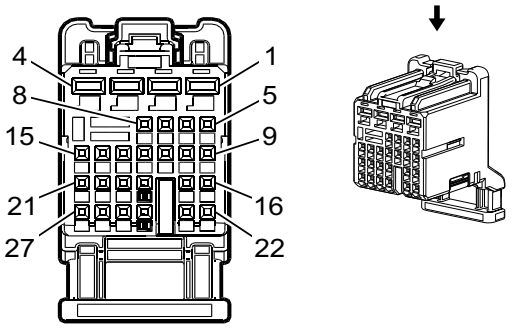
K9 Body Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	1850	Ground	III	—
2	0.75	RD/D-BU	2540	Battery Positive Voltage	III	—
3	1	RD/GY	2140	Battery Positive Voltage	II	—
4	0.75	RD/BN	2240	Battery Positive Voltage	III	—
5	0.5	WH	6816	Indicator Dimming Control	I	—
6	—	—	—	Not Occupied	—	—
7	0.35	BK/YE	5005	Instrument Panel Lamp Dimmer Switch Low Reference	I	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.5	D-BU/VT	1134	Park Brake Switch Signal	I	—
11	0.35	L-GN/BN	306	Headlamp Switch Headlamps Off Signal Control	I	—
12	—	—	—	Not Occupied	—	—
13	0.35	D-BU/RD	1688	5V Reference	I	—
14	0.35	GY/L-GN	328	Interior Lamp Defeat Switch Signal	I	—
15	0.35	D-BU/GY	192	Front Fog Lamp Switch Signal	I	—
16	0.35	WH/VT	103	Headlamp Switch On Signal	I	—
17 - 18	—	—	—	Not Occupied	—	—
19	0.35	BK/L-GN	552	Sensor Low Reference	I	—

K9 Body Control Module X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	—	—	—	Not Occupied	—	—
21	0.35	GY	728	Security Indicator Control	I	—
22	0.35	L-GN/GY	13	Headlamp Switch Park Lamp Signal	I	—
23	0.5	VT/L-GN	7558	LED Ambient Lighting Control 2	I	—
24	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
25	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
26	0.35	D-BU/WH	3275	Remote Function Actuator Receive Signal	I	—

K9 Body Control Module X2



2180237

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13943361
Service Connector: 13576637
Description: 27-Way F 0.64, 2.8 Series (L-BU)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
II	13587507	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A

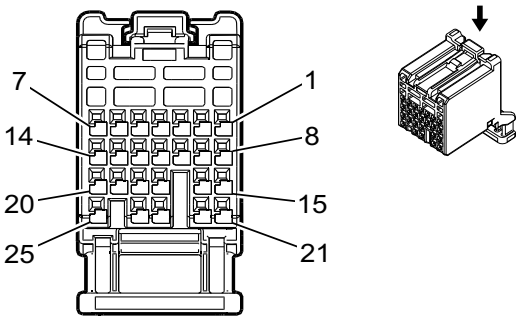
K9 Body Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/WH	2740	Battery Positive Voltage	II	—
2	0.75	BK	1850	Ground	II	—
3	0.75	RD/BN	2940	Battery Positive Voltage	II	—
4	0.75	RD/VT	4040	Battery Positive Voltage	II	—
5	—	—	—	Not Occupied	—	—
6	0.35	GY	5697	Child Lockout Indicator Control	I	—
7	0.35	WH/L-GN	526	Stop Lamp Switch Signal	I	—
8	0.5	YE	6817	LED Backlight Dimming Control	I	—
9	0.35	YE/GY	44	Instrument Panel Lamp Dimmer Switch Signal	I	—
10	0.35	WH/D-BU	278	Ambient Light Sensor Signal	I	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.35	GY/RD	598	5V Reference	I	—
14	0.35	D-BU/VT	1788	Traction Control Switch Signal 1	I	—
15	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	I	—
16	0.35	GY	3273	Remote Function Actuator Low Reference	I	—
17	—	—	—	Not Occupied	—	—
18	0.5	GY	158	Cargo Lamp Switch Signal	I	—
19	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	I	—
20	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	I	—

K9 Body Control Module X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
21	0.5	L-GN/GY	6135	Local Interconnect Network Serial Data Bus 4	I	—
22 - 24	—	—	—	Not Occupied	—	—
25	0.35	GY/WH	3272	Remote Function Actuator Control	I	—
26	0.35	L-GN/WH	111	Hazard Switch Signal	I	—
27	0.35	YE/L-GN	3274	Remote Function Actuator Transmit Signal	I	—

K9 Body Control Module X3



3468989

Connector Part Information

Harness Type: Steering Column
OEM Connector: 13582968
Service Connector: Service by Harness - See Part Catalog
Description: 25-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	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

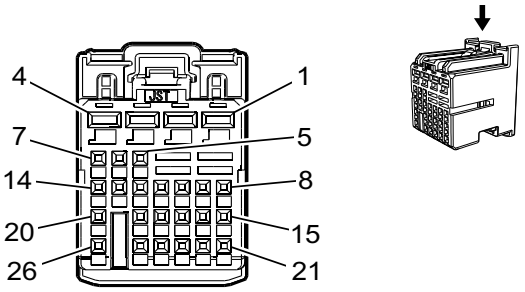
K9 Body Control Module X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN/GY	3277	Vehicle Anti-Theft System Immobilizer Low Reference	I	—
2	0.5	GN/VT	7533	Local Interconnect Network Serial Data Bus 11	I	—
3	0.35	GY/BK	3276	Vehicle Anti-Theft System Immobilizer Control	I	—
4	0.35	WH/RD	1444	12V Reference	I	—
5	0.5	VT/YE	4	Accessory Ignition Voltage	I	—
6	0.5	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	0.35	BK/GY	6009	Windshield Wiper Switch Low Reference	I	—
11	0.35	WH	524	Headlamp Dimmer Switch High Beam Signal	I	—
12	0.35	WH/GN	663	Hazard Switch Left Turn Signal	I	—
13	0.35	YE/BU	1714	Windshield Wiper Switch Low Signal	I	—
14	0.35	BU/GY	553	Shift Select Switch Performance Signal	I	—
15	0.5	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	0.35	YE/BN	307	Headlamp Switch Flash To Pass Signal	I	—
18	0.35	GN/WH	3287	Horn Switch Signal	I	—
19	0.5	OG	7527	Local Interconnect Network Serial Data Bus 5	I	—

K9 Body Control Module X3 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	0.35	GY	1715	Windshield Wiper Switch High Signal	I	—
21	0.35	VT/YE	5526	Tap Up/Tap Down Switch Signal	I	—
22	0.5	WH/BK	1073	Ignition Key Resistor Signal	I	—
23	—	—	—	Not Occupied	—	—
24	0.35	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



3240145

Connector Part Information

Harness Type: Body
OEM Connector: 13962485
Service Connector: 13587579
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	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
II	13582298	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
III	13587507	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A

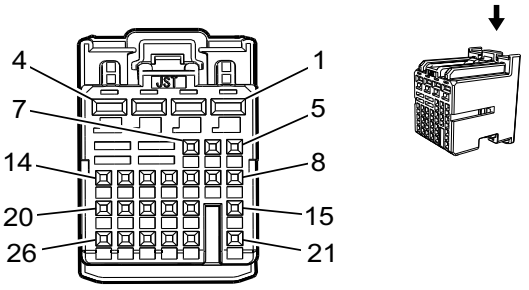
K9 Body Control Module X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE	712	Left Headlamp Low Beam Control	III	—
2	0.75	YE	312	Right Headlamp Low Beam Control	III	—
3	0.75	L-GN/VT	1315	Right Front Turn Signal Lamp Control	III	—
4 - 10	—	—	—	Not Occupied	—	—
11	0.5	VT/WH	5065	Stop Lamp Relay Coil Control	I	—
12	0.35	GY/VT	755	RAP Relay Coil Control	I	—
13	—	—	—	Not Occupied	—	—
14	0.35	BN/GY	2268	Windshield Washer Relay Control	I	—
15	0.35	L-GN/VT	5199	Run/Crank Relay Coil Control	I	—
16	0.35	GY	91	Windshield Wiper Motor Relay Coil Control	I	—
17	0.5	BN/L-GN	196	Windshield Wiper Motor Park Switch Signal	I	—
18 - 19	—	—	—	Not Occupied	—	—
20	0.5	RD/YE	2340	Battery Positive Voltage	I	—
21	0.5	YE	5530	Hood Open Switch Signal	I	—
22	0.35	VT/YE	5985	Accessory Wakeup Serial Data	I	—
23	0.5	WH/D-BU	5986	Serial Data Communication Enable	I	—

K9 Body Control Module X4 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
24	0.5	BN/L-GN	109	Hood Ajar Switch Signal	I	—
25	0.5	L-GN/YE	2081	Exhaust Brake Switch Control	I	—
26	0.75	BK/WH	451	Signal Ground	II	—

K9 Body Control Module X5



3240146

Connector Part Information

Harness Type: Body
OEM Connector: 13962299
Service Connector: 13587577
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	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
II	13582298	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
III	13587507	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A

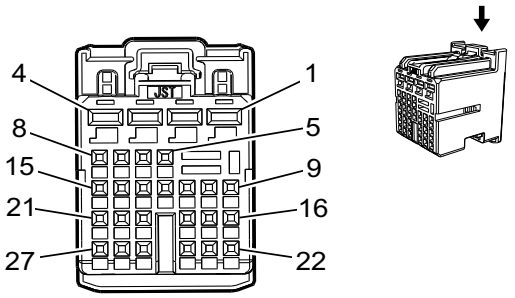
K9 Body Control Module X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.75	D-BU/WH	1314	Left Front Turn Signal Lamp Control	III	—
3	0.75	RD/L-GN	5140	Battery Positive Voltage	III	—
4	0.75	RD/WH	3440	Battery Positive Voltage	III	—
5 - 7	—	—	—	Not Occupied	—	—
8	0.35	D-BU/WH	5186	Left Trailer Turn Signal Lamp Control	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	BN	1317	Fog Lamp Relay Control	I	—
11	—	—	—	Not Occupied	—	—
12	0.35	WH/D-BU	6311	Cruise/ETC/TCC Brake Signal	I	—
13	—	—	—	Not Occupied	—	—
14	0.35	VT/BN	300	Run Ignition 3 Voltage	I	—
15	0.35	L-GN/WH	3438	Exhaust Brake Switch Signal	I	—
16	0.35	VT/YE	3267	Child Security Lock Relay Control	I	—
17	0.35	YE/GY	5187	Right Trailer Turn Signal Lamp Control	I	—
18	0.35	BN/VT	1969	Headlamp High Beam Relay Control	I	—
19	0.35	BN/WH	28	Horn Relay Control	I	—

K9 Body Control Module X5 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	0.75	BN/L-GN	9950	—	II	—
21	0.75	YE/D-BU	9960	—	II	—
22	0.35	D-BU	45	Park Lamp Relay Control	I	—
23	—	—	—	Not Occupied	—	—
24	0.35	WH/VT	860	Front Windshield Wiper Switch High Signal	I	—
25	—	—	—	Not Occupied	—	—
26	0.35	D-BU/BN	38	Backup Lamp Relay Control	I	—

K9 Body Control Module X6



3240147

Connector Part Information

Harness Type: Body
OEM Connector: 13962300
Service Connector: 13587576
Description: 27-Way F 0.64, 2.8 Series (L-PU)

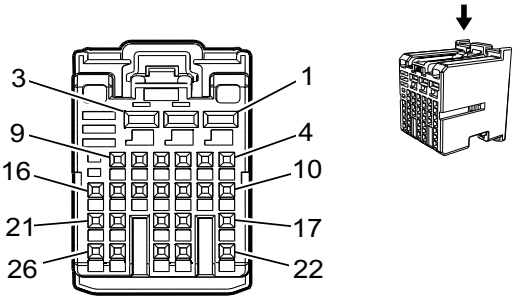
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575789	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	C	A
II	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
III	13587507	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A

K9 Body Control Module X6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	D-BU/WH	195	Door Lock Control	I	—
2	1.5	GY/L-GN	3271	Door Lock Control 2	I	—
3	1.5	BK	1850	Ground	I	—
4	1.5 0.75	BN/YE BN/YE	294 294	Door Lock Actuator Unlock Control Door Lock Actuator Unlock Control	I III	CREW CAB 43 STANDARD CAB 03
5	—	—	—	Not Occupied	—	—
6	0.35	D-BU/VT	1124	Door Lock Key Switch Unlock Signal	II	—
7 - 8	—	—	—	Not Occupied	—	—
9	0.5	L-GN/D-BU	6133	Local Interconnect Network Serial Data Bus 2	II	—
10	0.5	L-GN/YE	6134	Local Interconnect Network Serial Data Bus 3	II	—
11 - 20	—	—	—	Not Occupied	—	—
21	0.35	WH/VT	3270	Driver Door Lock Motor Status Signal	II	—
22 - 23	—	—	—	Not Occupied	—	—
24	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
25	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
26	0.5	BN/WH	1429	Standing Lamp Relay Control	II	—
27	0.35	GY	747	Left Rear Door Ajar Switch Signal	II	—

K9 Body Control Module X7



3240144

Connector Part Information

Harness Type: Body
OEM Connector: 13962301
Service Connector: 13587578
Description: 26-Way F 0.64, 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	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
II	13587507	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A

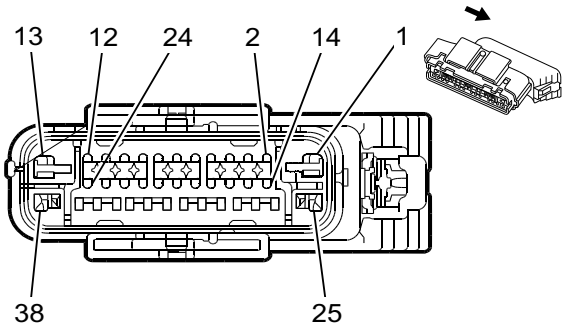
K9 Body Control Module X7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY	157	Interior Lamp Control	II	—
2	—	—	—	Not Occupied	—	—
3	0.75	WH/BN	6815	Inadvertent Power Control	II	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.35	YE/WH	816	Brake Transmission Shift Interlock Solenoid Control	I	—
7 - 8	—	—	—	Not Occupied	—	—
9	0.5	YE	6817	LED Backlight Dimming Control	I	—
10	0.35	D-BU/BN	7547	Security Lock Relay Control	I	—
11	0.35	GY	748	Right Rear Door Ajar Switch Signal	I	—
12	0.35	BN/WH	3269	Child Security Lock Motor Status Signal Left Rear	I	—
13	—	—	—	Not Occupied	—	—
14	0.35	GY	746	Right Front Door Ajar Switch Signal	I	—
15	0.35	YE/BN	3265	Child Security Lock Switch Signal	I	—
16	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	I	—
17	—	—	—	Not Occupied	—	—
18	0.35	GY/BK	3268	Child Security Lock Motor Status Signal Right Rear	I	—
19	0.35	GY	156	Courtesy Lamp Switch Signal	I	—

K9 Body Control Module X7 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	—	—	—	Not Occupied	—	—
21	0.35	YE/VT	244	Passenger Door Lock Switch Lock Control	I	—
22	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
23	0.5	L-GN	5060	Low Speed GMLAN Serial Data	I	—
24	0.35	BN/VT	245	Passenger Door Lock Switch Unlock Control	I	—
25	0.35 0.35	L-GN GY	4512 745	Wireless Charging System Charge Indicator Control Left Front Door Ajar Switch Signal	I I	CREW CAB 43 STANDARD CAB 03
26	—	—	—	Not Occupied	—	—

K17 Electronic Brake Control Module



1986146

Connector Part Information

Harness Type: Chassis
OEM Connector: 4089378C1
Service Connector: Service by Harness - See Part Catalog
Description: 38-Way F 0.64, 2.8, 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	Not Required	No Tool Required	No Tool Required	Not Available	Not Available	Not Available	Not Available

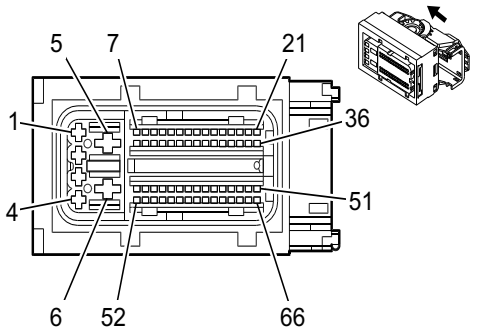
K17 Electronic Brake Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	5	RD/YE	1042	Battery Positive Voltage	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.75	GY	90	Right Mirror Motor Left Control	I	—
5	—	—	—	Not Occupied	—	—
6	0.75	GY/BN	7065	Wheel Speed Sensor Control Right Front	I	—
7 - 12	—	—	—	Not Occupied	—	—
13	3	BK	2150	Ground	I	—
14	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
15 - 17	—	—	—	Not Occupied	—	—
18	0.75	YE	872	Wheel Speed Sensor Signal Right Front	I	—
19	0.75	VT	882	Wheel Speed Sensor Signal Right Rear	I	—
20	0.75	GY/BK	7127	Wheel Speed Sensor Control Left Rear	I	—
21	0.75	GY	830	Wheel Speed Sensor Signal Left Front	I	—
22 - 24	—	—	—	Not Occupied	—	—
25	2	RD/VT	1940	Battery Positive Voltage	I	—
26	0.5	BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
27	—	—	—	Not Occupied	—	—
28	0.75	GY	90	Right Mirror Motor Left Control	I	—
29	0.75	GY	90	Right Mirror Motor Left Control	I	—
30	—	—	—	Not Occupied	—	—
31	0.75	WH/BU	7128	Wheel Speed Sensor Control Right Rear	I	—

K17 Electronic Brake Control Module (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
32	—	—	—	Not Occupied	—	—
33	0.75	BU	884	Wheel Speed Sensor Signal Left Rear	I	—
34	0.75	GY/WH	7064	Wheel Speed Sensor Control Left Front	I	—
35	0.75	WH/BU	5986	Serial Data Communication Enable	I	—
36 - 37	—	—	—	Not Occupied	—	—
38	1.5	BK	2150	Ground	I	—

K20 Engine Control Module X1



2498868

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 35059716
Service Connector: 19370822
Description: 66-Way F 0.64 MTS-B, 2.8 ATS, 6.3 Ducon 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	13575360	J-35616-4A (PU)	J-38125-36	4-964286-1	Lear 16	E	1
II	13575862	J-35616-64B (LT BU)	J-38125-12A	1719532-5	Lear 7	J	J
III	13584448	J-35616-64B (LT BU)	J-38125-12A	1719532-5	Lear 7	J	J
IV	13584528	J-35616-42 (RD)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
V	19369848	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

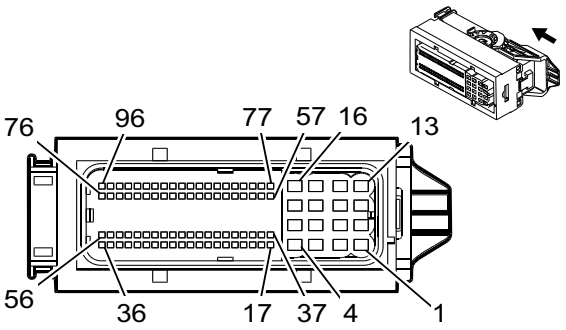
K20 Engine Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	I	—
2	0.5	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	RD/BN	440	Battery Positive Voltage	I	—
5	2.5	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	IV	—
6	4	BK/WH	451	Signal Ground	V	—
7	0.5	VT/YE	5985	Accessory Wakeup Serial Data	III	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.5	L-GN/WH	492	Mass Air Flow Sensor Signal	III	—
11	0.5	D-BU/GY	636	Outside Ambient Air Temperature Sensor Signal	III	—
12	—	—	—	Not Occupied	—	—
13	0.5	WH/RD	1164	Accelerator Pedal Position 5V Reference 1	III	—
14	0.5	BN/RD	1274	Accelerator Pedal Position 5V Reference 2	III	—
15	0.5	L-GN/WH	1162	Accelerator Pedal Position Signal 2	III	—

K20 Engine Control Module X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
16	0.5	BK/VT	1272	Accelerator Pedal Position Low Reference 2	III	—
17 - 20	—	—	—	Not Occupied	—	—
21	0.5	YE	2928	Fuel Metering Valve High Control	III	—
22	0.5	VT/L-GN	439	Run/Crank Ignition 1 Voltage	III	—
23	—	—	—	Not Occupied	—	—
24	0.5	WH/D-BU	6311	Cruise/ETC/TCC Brake Signal	III	—
25	0.5	BN/GY	4008	Humidity Sensor Signal	III	—
26	0.5	BK/D-BU	61	Outside Ambient Temperature Sensor Low Reference	III	—
27	0.5	BK/D-BU	1271	Accelerator Pedal Position Low Reference 1	III	—
28	0.5	YE/WH	1161	Accelerator Pedal Position Signal 1	III	—
29 - 32	—	—	—	Not Occupied	—	—
33	0.5	BN/WH	419	Check Engine Indicator Control	III	—
34	0.5	L-GN/BN	507	Wait To Start Indicator Control	III	—
35	0.5	WH/GY	459	A/C Compressor Clutch Relay Control	III	—
36	0.5	BN/BK	2929	Fuel Metering Valve Low Control	III	—
37 - 38	—	—	—	Not Occupied	—	—
39	0.5	WH	4499	High Speed GMLAN Serial Data (-) 7	III	—
40	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
41 - 42	—	—	—	Not Occupied	—	—
43	0.5	BK/BN	5360	Brake Apply Sensor Low Reference	III	—
44	0.5	WH	5359	Brake Apply Sensor Control	III	—
45	0.5	WH/D-BU	6289	Induction Air Temperature Sensor Signal	III	—
46	0.5	BN/RD	2700	A/C Pressure Sensor 5V Reference	III	—
47	0.5	L-GN	380	A/C Refrigerant Pressure Sensor Signal	III	—
48	0.5	BK/BN	5514	A/C Refrigerant Pressure Sensor Low Reference	III	—
49	—	—	—	Not Occupied	—	—
50	0.5	WH/BK	2366	Cooling Fan Control Relay Speed Signal	III	—
51	0.5	YE	5991	Powertrain Relay Coil Control	III	—
52 - 53	—	—	—	Not Occupied	—	—
54	0.5	D-BU/BN	4498	High Speed GMLAN Serial Data (+) 7	III	—
55	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
56 - 58	—	—	—	Not Occupied	—	—
59	0.5	D-BU/YE	5361	Brake Apply Sensor Signal	III	—
60	0.5	BK/VT	2760	Intake Air Temperature Sensor Low Reference	III	—
61 - 63	—	—	—	Not Occupied	—	—
64	0.5	YE/D-BU	1465	Secondary Fuel Pump Relay Control	III	—
65	0.5	YE/BK	625	Starter Enable Relay Control	III	—
66	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	III	—

K20 Engine Control Module X2



4115094

Connector Part Information

Harness Type: Engine
OEM Connector: 12685985
Service Connector: 19370825
Description: 96-Way F 0.64 MTS-B, 2.8 ATS 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	13584448	J-35616-64B (LT BU)	J-38125-12A	1719532-5	Lear 7	J	J
II	13584448	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
III	13584530	J-35616-4A (PU)	J-38125-36	4-964286-1	Lear 16	E	1

K20 Engine Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT/GN	4806	Direct Fuel Injector (DFI) High Voltage Control Cylinder 6	III	—
2	0.75	YE/GY	4807	Direct Fuel Injector (DFI) High Voltage Control Cylinder 7	III	—
3	0.75	GY/BU	4804	Direct Fuel Injector (DFI) High Voltage Control Cylinder 4	III	—
4	0.75	BN	4801	Direct Fuel Injector (DFI) High Voltage Control Cylinder 1	III	—
5	0.75	VT/GY	4906	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6	III	—
6	0.75	WH/YE	4907	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 7	III	—
7	0.75	BU/WH	4904	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4	III	—
8	0.75	BN/WH	4901	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1	III	—
9	0.75	GN/GY	4903	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3	III	—
10	0.75	GY/WH	4908	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 8	III	—

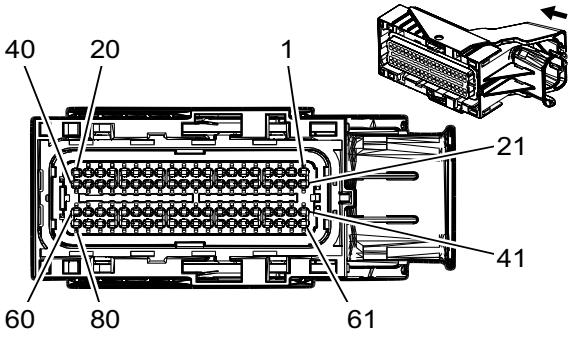
K20 Engine Control Module X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
11	0.75	GN/WH	4905	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5	III	—
12	0.75	BU/GY	4902	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2	III	—
13	0.75	GN	4803	Direct Fuel Injector (DFI) High Voltage Control Cylinder 3	III	—
14	0.75	GY	4808	Direct Fuel Injector (DFI) High Voltage Control Cylinder 8	III	—
15	0.75	WH/GN	4805	Direct Fuel Injector (DFI) High Voltage Control Cylinder 5	III	—
16	0.75	BU	4802	Direct Fuel Injector (DFI) High Voltage Control Cylinder 2	III	—
17	0.5	BK/VT	2755	Oil Pressure Sensor Low Reference	II	—
18	0.5	YE/BN	331	Oil Pressure Sensor Signal	II	—
19	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	II	—
20	0.5	BU/RD	2702	Exhaust Gas Recirculation 5V Reference 2	II	—
21	0.5	BN/WH	5763	Exhaust Gas Recirculation Valve Sensor Signal	II	—
22	0.5	BK/BN	2753	Exhaust Gas Recirculation Sensor Low Reference	II	—
23	—	—	—	Not Occupied	—	—
24	0.5	BN/YE	2161	Fuel Rail Pressure Sensor 2 Signal	II	—
25	—	—	—	Not Occupied	—	—
26	0.5	BN	9348	Induction Air Temperature Sensor 3 Signal	II	—
27 - 29	—	—	—	Not Occupied	—	—
30	0.5	BU	410	Engine Coolant Temperature Sensor Signal	II	—
31	0.5	BN	25	Charge Indicator Control	II	—
32 - 36	—	—	—	Not Occupied	—	—
37	0.5	BK/GN	5301	Camshaft Position Intake Sensor Low Reference 1	II	—
38	0.5	YE/VT	5275	Camshaft Position Intake Sensor 1	II	—
39	0.5	GY/BU	5300	Camshaft Position Intake Sensor Control 1	II	—
40	0.5	VT/RD	3652	EGR Cooler Bypass Position Sensor 5V Reference	II	—
41	0.5	GN/GY	3654	EGR Cooler Bypass Position Sensor Signal	II	—
42	0.5	BK/BU	3653	EGR Cooler Bypass Position Sensor Low Reference	II	—
43	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	II	—
44	0.5	BU/WH	3630	Throttle Position Sensor (SENT1) Signal	II	—
45	0.5	BN/RD	2701	Throttle Position Sensor 5V Reference	II	—
46 - 49	—	—	—	Not Occupied	—	—
50	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	II	—
51	0.5	GY	23	Generator Field Duty Cycle Signal	II	—
52 - 56	—	—	—	Not Occupied	—	—
57	0.5	BK/GN	2919	Fuel Rail Pressure Sensor Low Reference	II	—
58	0.5	BU/WH	2918	Fuel Rail Pressure Sensor Signal	II	—
59	0.5	BN/RD	2917	Fuel Rail Pressure Sensor 5V Reference	II	—
60	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	II	—
61	0.5	GN/WH	432	Manifold Absolute Pressure Sensor Signal	II	—

K20 Engine Control Module X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
62	0.5	BK/GN	469	Manifold Absolute Pressure Sensor Low Reference	II	—
63 - 68	—	—	—	Not Occupied	—	—
69	0.5	BN/BU	2926	Hydrocarbon Injector High Control	II	—
70	—	—	—	Not Occupied	—	—
71	0.5	VT/BU	6091	Crankshaft Position Sensor Replicated Signal	II	—
72	0.5	VT/BN	2927	Hydrocarbon Injector Low Control	II	—
73	—	—	—	Not Occupied	—	—
74	0.5	YE	581	Throttle Actuator Control Open	II	—
75	0.5	BN/WH	582	Throttle Actuator Control Close	II	—
76	0.75	BK/YE	2834	Fuel Rail Pressure Solenoid Low Reference	I	—
77 - 79	—	—	—	Not Occupied	—	—
80	0.5	BN/RD	7445	Fuel Line Pressure Sensor 5V Reference	II	—
81	0.5	BU/WH	7446	Fuel Line Pressure Sensor Signal	II	—
82	0.5	BK/YE	7447	Fuel Line Pressure Sensor Low Reference	II	—
83	—	—	—	Not Occupied	—	—
84	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	II	—
85	0.5	GN	6271	Crankshaft 60X Sensor Signal	II	—
86	0.5	VT/BU	6270	Crankshaft 60X Sensor 5V Reference	II	—
87	0.5	BN/GN	1174	Oil Level Switch Signal	II	—
88 - 90	—	—	—	Not Occupied	—	—
91	0.5	BU/GN	7071	Heater Fuel Control	II	—
92	0.5	BN/VT	3656	EGR Cooler Bypass Motor Close Control	II	—
93	0.5	YE/GN	3655	EGR Cooler Bypass Motor Open Control	II	—
94	0.5	VT/BK	5746	Exhaust Gas Recirculation Valve Motor Low Signal	II	—
95	0.5	WH/VT	5764	Exhaust Gas Recirculation Valve Motor High Signal	II	—
96	0.75	BU/WH	2530	Fuel Rail Pressure Solenoid Control	I	—

K20 Engine Control Module X3



2474736

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13782479
Service Connector: 13577545
Description: 80-Way F MX123 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	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

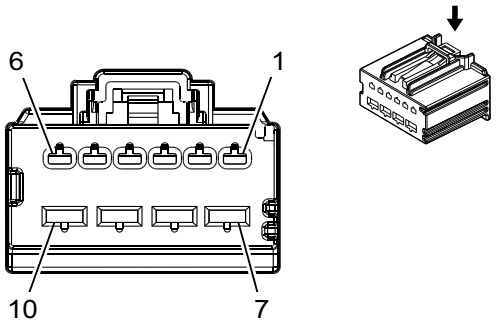
K20 Engine Control Module X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN	3099	DEF Dosing Valve High Control	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	L-GN/D-BU	3889	DEF Power Module Relay Control	I	—
4 - 11	—	—	—	Not Occupied	—	—
12	0.5	YE/BK	3682	Charge Air Cooler Inlet Temperature Sensor Low Reference	I	—
13	0.5	YE/D-BU	3680	Charge Air Cooler Outlet Temperature Sensor Low Reference	I	—
14	0.5	BK/YE	6275	Exhaust Gas Recirculation Temperature Sensor 2 Low Reference	I	—
15	0.5	BK/D-BU	6274	Exhaust Gas Recirculation Temperature Sensor Low Reference	I	—
16	0.5	BK/VT	3661	Exhaust Gas Temperature Sensor 5 Low Reference	I	—
17	0.5	BK/GY	3659	Exhaust Gas Temperature Sensor 4 Low Reference	I	—
18	0.5	BK/L-GN	3657	Exhaust Gas Temperature Sensor 3 Low Reference	I	—
19	0.5	BK/D-BU	6783	Exhaust Gas Temperature Sensor 2 Low Reference	I	—
20	0.5	BK/BN	6782	Exhaust Gas Temperature Sensor 1 Low Reference	I	—
21	0.75	BN/WH	3100	DEF Dosing Valve Low Control	I	—

K20 Engine Control Module X3 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
22 - 24	—	—	—	Not Occupied	—	—
25	0.5	WH/L-GN	6142	Power Take Off Engine Shutdown Signal	I	—
26 - 27	—	—	—	Not Occupied	—	—
28	0.5	WH/RD	3201	Throttle Inlet Absolute Pressure Sensor 5V Reference	I	—
29	0.5	BN/L-GN	5266	Ambient Air Pressure Sensor Signal	I	—
30 - 31	—	—	—	Not Occupied	—	—
32	0.5	L-GN	3683	Charge Air Cooler Inlet Temperature Sensor Signal	I	—
33	0.5	BN	3681	Charge Air Cooler Outlet Temperature Sensor Signal	I	—
34	0.5	YE/L-GN	3236	Exhaust Gas Recirculation Temperature Sensor 2 Signal	I	—
35	0.5	WH/BN	3237	Exhaust Gas Recirculation Temperature Sensor Signal	I	—
36	0.5	D-BU/GY	3660	Exhaust Gas Temperature Sensor 5 Signal	I	—
37	0.5	VT/BN	3658	Exhaust Gas Temperature Sensor 4 Signal	I	—
38	0.5	GY/L-GN	5378	Exhaust Gas Temperature Sensor 3	I	—
39	0.5	D-BU/L-GN	5377	Exhaust Gas Temperature Sensor 2	I	—
40	0.5	D-BU/WH	5277	Exhaust Gas Temperature Sensor 1	I	—
41 - 64	—	—	—	Not Occupied	—	—
65	0.5	BK/BN	6141	Cooling Fan Speed Low Reference	I	—
66	0.5	D-BU/VT	2364	Cooling Fan Speed Signal	I	—
67	0.5	GY/RD	2365	Cooling Fan Speed 5V Reference	I	—
68	0.5	GY/BK	3096	Output Speed (Digital) Sensor 5V Reference	I	—
69	0.5	L-GN	3098	Output Speed (Digital) Signal	I	—
70	0.5	WH/BK	3097	Output Speed (Digital) Sensor Low Reference	I	—
71 - 75	—	—	—	Not Occupied	—	—
76	0.5	BK/YE	6055	Exhaust Pressure Sensor Low Reference 1	I	—
77	0.5	D-BU	6053	Exhaust Pressure Sensor Signal 1	I	—
78	0.5	WH/RD	6054	Exhaust Pressure Sensor 5V Reference 1	I	—
79 - 80	—	—	—	Not Occupied	—	—

K29 Seat Heating Control Module X1 (KA1)



3791446

Connector Part Information

Harness Type: Passenger Seat Cushion
OEM Connector: 31372-1000
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 Series (BK)

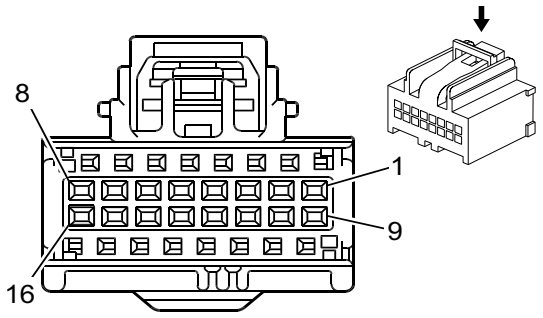
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (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

K29 Seat Heating Control Module 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/L-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/L-GN	6140	Battery Positive Voltage	II	—
8	0.75	BK	1250	Ground	II	—
9	—	—	—	Not Occupied	—	—
10	0.75	RD/L-GN	5140	Battery Positive Voltage	II	—

K29 Seat Heating Control Module X2 (KA1)



1653409

Connector Part Information

Harness Type: Passenger Seat Cushion
OEM Connector: 15136073
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 0.64 Kaizen Series (BK)

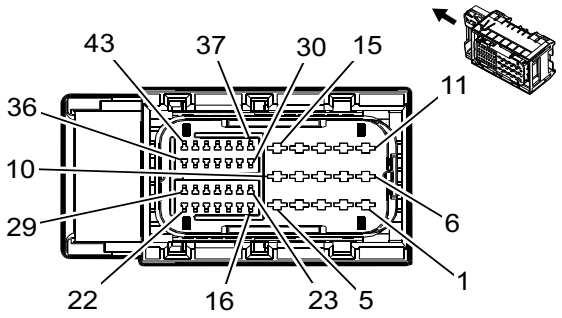
Terminal Part Information

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

K29 Seat Heating Control Module 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	L-BU	2425	Driver Heated Back NTC Signal	I	—
4	0.5	WH/L-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	0.35	L-GN/L-BU	6133	Local Interconnect Network Serial Data Bus 2	I	—
9 - 11	—	—	—	Not Occupied	—	—
12	0.5	BK/L-GN	2482	Passenger Heated Back NTC Low Reference	I	—
13 - 16	—	—	—	Not Occupied	—	—

K34 Glow Plug Control Module X2



3553744

Connector Part Information

Harness Type: Engine
OEM Connector: 10023701
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	13576372	J-35616-4A (PU)	J-38125-556	Not Available	Not Available	Not Available	Not Available
II	13580008	J-35616-16 (LT GN)	J-38125-21	Not Available	Not Available	Not Available	Not Available

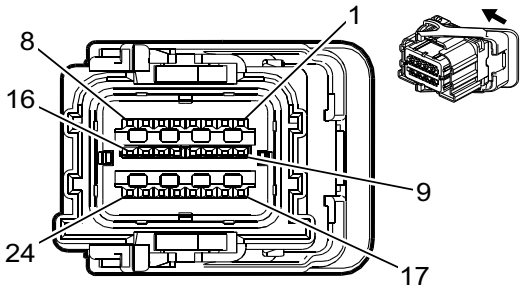
K34 Glow Plug Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	2	GY/YE	1584	Glow Plug Control 4	I	—
3	2	GY/GN	1583	Glow Plug Control 3	I	—
4	2	GY/BN	1582	Glow Plug Control 2	I	—
5	2	GY/BU	1581	Glow Plug Control 1	I	—
6 - 9	—	—	—	Not Occupied	—	—
10	2	BK	550	Ground	I	—
11	—	—	—	Not Occupied	—	—
12	2	GY/WH	1585	Glow Plug Control 5	I	—
13	2	GY/VT	1586	Glow Plug Control 6	I	—
14	2	WH/BK	1587	Glow Plug Control 7	I	—
15	2	WH/BU	1588	Glow Plug Control 8	I	—
16	0.5	BK	—	—	II	—
17	0.5	BK	—	—	II	—
18	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
19	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
20 - 22	—	—	—	Not Occupied	—	—
23	0.5	BK	—	—	II	—
24	0.5	BK	—	—	II	—

K34 Glow Plug Control Module X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
25	0.5	BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
26	0.5	BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
27 - 29	—	—	—	Not Occupied	—	—
30	0.5	BK	—	—	II	—
31	0.5	BK	—	—	II	—
32	—	—	—	Not Occupied	—	—
33	0.5	VT/BK	2139	Run/Crank Ignition 1 Voltage	II	—
34 - 36	—	—	—	Not Occupied	—	—
37	0.5	BK	—	—	II	—
38	0.5	BK	—	—	II	—
39	—	—	—	Not Occupied	—	—
40	0.5	VT/YE	443	Accessory Ignition Voltage	II	—
41 - 43	—	—	—	Not Occupied	—	—

K36 Inflatable Restraint Sensing and Diagnostic Module X1



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	19328872	J-35616-64B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19368490	J-35616-64B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

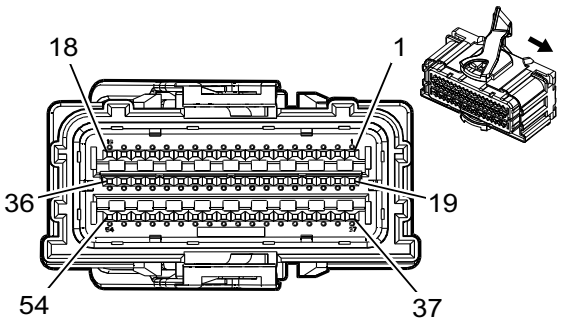
K36 Inflatable Restraint Sensing and Diagnostic Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
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/L-GN	4440	Battery Positive Voltage	II	—
10	0.35	VT/WH	5234	Passenger Seat Belt Indicator Control	I	—
11	0.35	D-BU	2307	Passenger Air Bag On Indicator Control	I	—
12	0.35	L-GN	2308	Passenger Air Bag Off Indicator Control	I	—
13	0.35	VT/OG	371	Passenger IP Module Disable Switch Signal	I	—
14	0.35	D-BU/OG	7328	Passenger IP Module Disable Switch Low Reference	I	—
15	0.5	L-GN	5060	Low Speed GMLAN Serial Data	II	—
16	—	—	—	Not Occupied	—	—
17	0.5	WH/D-BU	5986	Serial Data Communication Enable	II	—
18	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	II	—
19	0.75	BK/WH	2751	Signal Ground	II	—

K36 Inflatable Restraint Sensing and Diagnostic Module X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—
21 - 24	—	—	—	Not Occupied	—	—

K36 Inflatable Restraint Sensing and Diagnostic Module X2



2817420

Connector Part Information

Harness Type: Body
OEM Connector: 13944372
Service Connector: 19303770
Description: 54-Way F 0.64 Series, Sealed (YE)

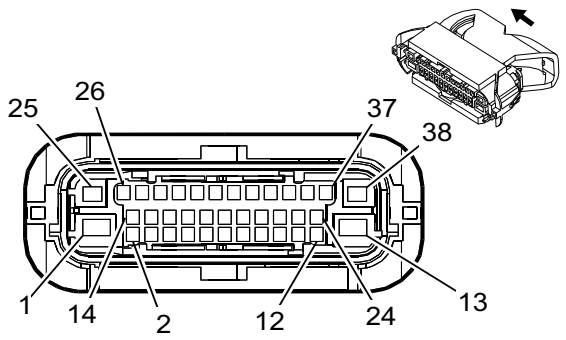
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19328872	J-35616-64B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19368490	J-35616-64B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

K36 Inflatable Restraint Sensing and Diagnostic Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 22	—	—	—	Not Occupied	—	—
23	0.5	OG/GY	6618	Middle Front Discriminating Sensor Signal	II	—
24	0.5	BK/OG	6619	Middle Front Discriminating Sensor Low Reference	II	—
25 - 36	—	—	—	Not Occupied	—	—
37	0.5	RD	3477	Driver Seat Belt Retractor Pretensioner High Control	II	—
38	0.5	GY	3478	Driver Seat Belt Retractor Pretensioner Low Control	II	—
39	0.5	WH	3476	Passenger Seat Belt Retractor Pretensioner Low Control	II	—
40	0.5	L-GN	3475	Passenger Seat Belt Retractor Pretensioner High Control	II	—
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 - 54	—	—	—	Not Occupied	—	—

K38A Chassis Control Module - Auxiliary (JL1)



3240111

Connector Part Information

Harness Type: Chassis
OEM Connector: 4086720C1
Service Connector: Service by Harness - See Part Catalog
Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 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	No Tool Required	No Tool Required	Not Available	Not Available	Not Available	Not Available

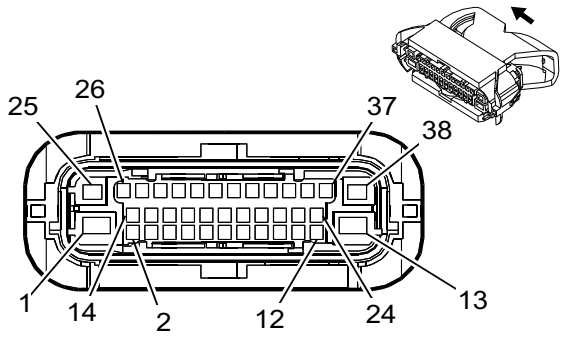
K38A Chassis Control Module - Auxiliary (JL1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	RD	2040	Battery Positive Voltage	I	—
2 - 12	—	—	—	Not Occupied	—	—
13	1	BK	1750	Ground	I	—
14	0.5	VT/YE	5985	Accessory Wakeup Serial Data	I	—
15	—	—	—	Not Occupied	—	—
16	0.5	BU/RD	7632	Integrated Trailer Brake Controller Switch 5V Reference	I	—
17	—	—	—	Not Occupied	—	—
18	0.5	BN	7634	Integrated Trailer Brake Controller Redundant Manual Apply Signal	I	—
19	0.5	BK/BN	7631	Integrated Trailer Brake Controller Switch Low Reference	I	—
20	0.5	YE	7635	Integrated Trailer Brake Controller Manual Apply Signal	I	—
21	0.5	GN/BK	7633	Integrated Trailer Brake Controller User Gain Signal	I	—
22	0.5	YE/BK	2224	Trailer Brake Enable Signal	I	—
23	0.5	WH/BK	2223	Trailer Brake Control Signal	I	—
24	—	—	—	Not Occupied	—	—
25	1.5	VT/GN	439	Run/Crank Ignition 1 Voltage	I	—
26	0.5	BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
27	0.5	BU	2500	High Speed GMLAN Serial Data (+) 1	I	—

K38A Chassis Control Module - Auxiliary (JL1) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
28	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
29	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
30	0.5	GN/VT	4114	Local Interconnect Network Serial Data Bus 14	I	—
31 - 38	—	—	—	Not Occupied	—	—

K44 Power Take-Off Control Module X1 (PTO)



3240111

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13924619
Service Connector: 19119894
Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 MCP Series, Sealed (BK)

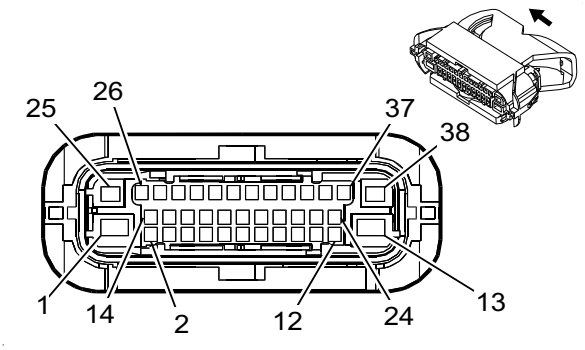
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19119772	J-35616-35 (VT)	J-38125-557	1241388-1	Lear 17	E	C
II	19301757	J-35616-40 (BU)	J-38125-556	1241408-1	Lear 28	C	A
III	19301775	J-35616-40 (BU)	J-38125-556	Not Available	Not Available	Not Available	Not Available
IV	19301776	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

K44 Power Take-Off Control Module X1 (PTO)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/D-BU	4540	Battery Positive Voltage	III	—
2 - 12	—	—	—	Not Occupied	—	—
13	1.5	BK/WH	451	Signal Ground	II	—
14	0.5	WH/D-BU	5986	Serial Data Communication Enable	IV	—
15	0.5	L-GN/WH	488	Power Take Off Control Switch	IV	—
16 - 17	—	—	—	Not Occupied	—	—
18	0.5	BN/L-GN	4311	Power Take Off Enable In Cab Switch Normally Closed Signal	IV	—
19 - 24	—	—	—	Not Occupied	—	—
25	0.75	BN/WH	6085	Power Take Off Remote Engine Start Switch Signal	I	—
26	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	IV	—
27	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	IV	—
28	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	IV	—
29	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	IV	—
30 - 38	—	—	—	Not Occupied	—	—

K44 Power Take-Off Control Module X2 (PTO)



3638282

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13655518
Service Connector: 19303771
Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 MCP Series, Sealed (BK with BN Inner Connector)

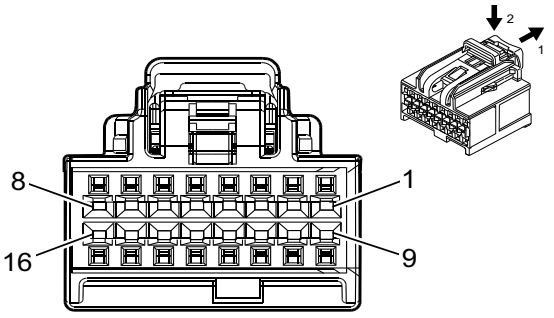
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19301776	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

K44 Power Take-Off Control Module X2 (PTO)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 7	—	—	—	Not Occupied	—	—
8	0.75	YE	2522	Power Take Off Status Signal	I	—
9 - 10	—	—	—	Not Occupied	—	—
11	0.5	VT/D-BU	2562	Power Take Off Relay Coil Control	I	—
12 - 27	—	—	—	Not Occupied	—	—
28	0.5	WH/L-GN	6142	Power Take Off Engine Shutdown Signal	I	—
29 - 34	—	—	—	Not Occupied	—	—
35	0.5	D-BU/GY	6089	Power Take Off Remote Switch Set Signal 1	I	—
36	0.75	D-BU/BN	4408	Power Take Off Enable Signal	I	—
37	0.75	BN	6381	Power Take Off Relay Engage Signal	I	—
38	—	—	—	Not Occupied	—	—

K56 Serial Data Gateway Module X1



4873243

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35016343
Service Connector: 13519738
Description: 16-Way F 0.64 OCS Series (BK)

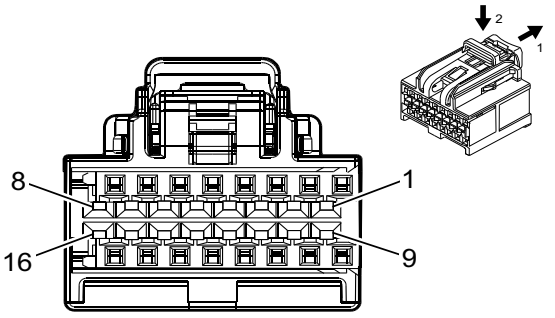
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	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	—	—	—	Not Occupied	—	—
3	0.35	D-BU/L-GN	1304	High Speed GMLAN Serial Data (+)9	I	—
4	0.35	WH/L-GN	1305	High Speed GMLAN Serial Data (-)9	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	BK/WH	1851	Signal Ground	I	—
7	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
8	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
9	—	—	—	Not Occupied	—	—
10	0.35	WH/D-BU	5986	Serial Data Communication Enable	I	—
11	0.35	D-BU/L-GN	1304	High Speed GMLAN Serial Data (+)9	I	—
12	0.35	WH/L-GN	1305	High Speed GMLAN Serial Data (-)9	I	—
13	0.35	D-BU/L-GN	1304	High Speed GMLAN Serial Data (+)9	I	—
14	0.35	WH/L-GN	1305	High Speed GMLAN Serial Data (-)9	I	—
15	0.5	L-GN	5060	Low Speed GMLAN Serial Data	I	—
16	—	—	—	Not Occupied	—	—

K56 Serial Data Gateway Module X2



4873254

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35016344
Service Connector: 13519739
Description: 16-Way F 0.64 OCS Series (GY)

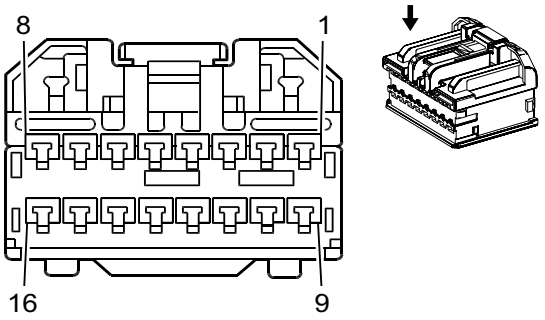
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

K56 Serial Data Gateway Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
2	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
3 - 6	—	—	—	Not Occupied	—	—
7	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
8	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	GY/L-GN	1102	Low Speed GMLAN Serial Data #2	I	—
11 - 16	—	—	—	Not Occupied	—	—

K69 Transfer Case Control Module X1 (NQF)



1866235

Connector Part Information

Harness Type: Brake Clutch
OEM Connector: 13547237
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 1.5 Series (GY)

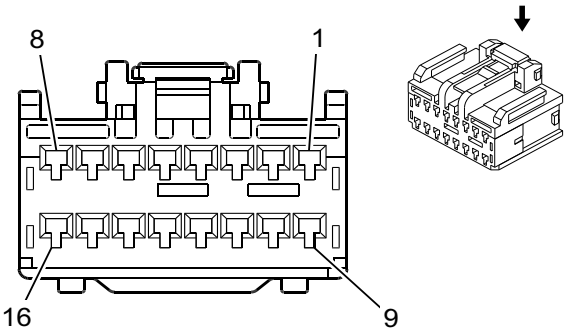
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K69 Transfer Case Control Module X1 (NQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BK	7478	Rotary Position Sensor Low Reference	II	—
2	0.5	WH/L-GN	7479	Rotary Position Sensor Signal	II	—
3	0.35	YE	7474	Incremental Encoder Direction Signal	II	—
4	0.5	GY/BK	1570	Front Axle Actuator Control	II	—
5	0.35	D-BU/GY	7473	Incremental Encoder Impulse Signal	II	—
6	0.35	GY/RD	6029	Four Wheel Drive Mode Switch 5V Reference	II	—
7	0.35	D-BU/YE	1693	Four Wheel Drive Switch Signal	II	—
8	—	—	—	Not Occupied	—	—
9	0.5	WH/RD	7477	Rotary Position Sensor 5V Reference	II	—
10	0.35	WH/L-GN	7475	Incremental Encoder Sensor 8V Reference	II	—
11	0.35	VT	7476	Incremental Encoder Sensor Low Reference	II	—
12	0.5	YE/WH	1695	Four Wheel Drive Wheel Lock Indicator Control	II	—
13	1	YE/BN	1569	Transfer Case Lock Solenoid Control	I	—
14 - 16	—	—	—	Not Occupied	—	—

K69 Transfer Case Control Module X2 (NQF)



1653404

Connector Part Information

Harness Type: Brake Clutch
OEM Connector: 15489823
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 1.5 Series (BK)

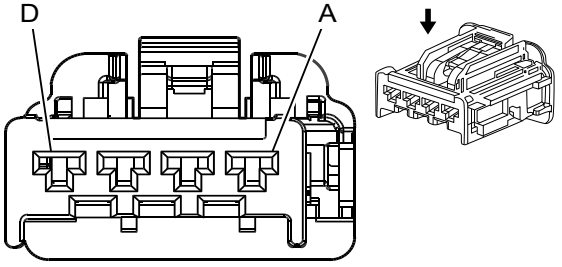
Terminal Part Information

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

K69 Transfer Case Control Module X2 (NQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.35	VT/WH	1565	4 LO Indicator Control	I	—
4	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	VT/YE	5985	Accessory Wakeup Serial Data	I	—
7	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
8	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
9 - 10	—	—	—	Not Occupied	—	—
11	0.35	GY/L-GN	1561	AWD Indicator Control	I	—
12	0.35	BN	1560	Neutral Indicator Control	I	—
13	0.35	L-GN/BK	1563	2 HI Indicator Control	I	—
14	0.35	BN/BK	1566	4 HI Indicator Control	I	—
15	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
16	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—

K69 Transfer Case Control Module X3 (NQF)



1866237

Connector Part Information

Harness Type: Brake Clutch
OEM Connector: 15466671
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 280 GT Series (L-GY)

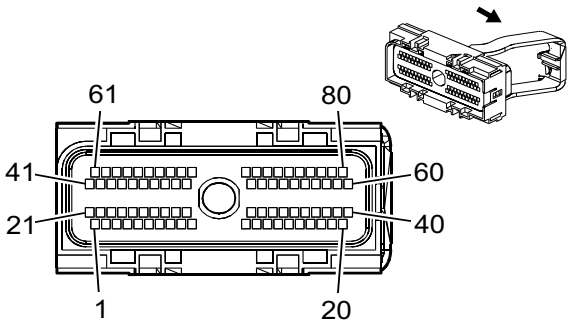
Terminal Part Information

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

K69 Transfer Case Control Module X3 (NQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	4	YE/VT	1553	Transfer Case Motor Counter Clockwise Control	I	—
B	4	YE/GY	1552	Transfer Case Motor Clockwise Control	I	—
C	3	RD/GY	1342	Battery Positive Voltage	I	—
D	3	BK	550	Ground	I	—

K71 Transmission Control Module



1864287

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 15499493
Service Connector: 88988938
Description: 80-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	13578813	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	19300432	J-35616-14 (GN)	J-38125-557	Not Available	Not Available	Not Available	Not Available
III	19300432	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

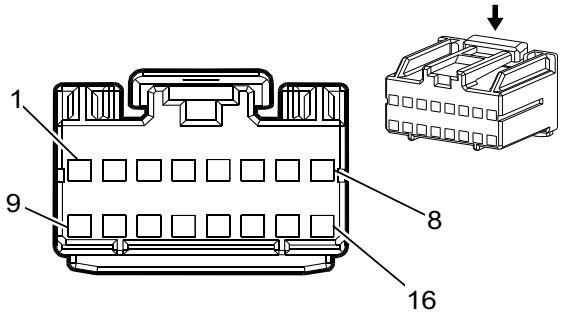
K71 Transmission Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 5	—	—	—	Not Occupied	—	—
6	0.75	YE	2500	High Speed GMLAN Serial Data (+) 1	III	—
7 - 8	—	—	—	Not Occupied	—	—
9	1.5	BK	109	Hood Ajar Switch Signal	II	—
10	0.75	RD	110	Sunroof Switch Close Signal	III	—
11	0.75	OG	111	Hazard Switch Signal	I	—
12 - 13	—	—	—	Not Occupied	—	—
14	0.75	GY	114	Low Oil Pressure Switch Signal	I	—
15 - 16	—	—	—	Not Occupied	—	—
17	0.75	D-BU	117	Right Front Speaker Signal (-) 1	I	—
18 - 19	—	—	—	Not Occupied	—	—
20	0.75	D-BU	120	Fuel Pump Control	I	—
21 - 22	—	—	—	Not Occupied	—	—
23	0.75	L-GN	123	Folding Top Relay Up Control	I	—
24 - 26	—	—	—	Not Occupied	—	—
27	0.75	L-GN	2501	High Speed GMLAN Serial Data (-) 1	III	—
28 - 30	—	—	—	Not Occupied	—	—

K71 Transmission Control Module (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
31	0.75	YE	131	Sunroof Limit Switch Range Signal	I	—
32	—	—	—	Not Occupied	—	—
33	0.75	YE	133	Sunroof Limit Switch Low Reference	I	—
34	0.75	WH	134	Charge Port Valve Command Signal	I	—
35	—	—	—	Not Occupied	—	—
36	0.75	OG	136	Driver Information Center Fuel LED Control	I	—
37	0.75	WH	137	Driver Information Center Switch Economy LED Control	I	—
38	0.75	OG	138	Rear Compartment Lid Pull Down Motor Control	I	—
39	—	—	—	Not Occupied	—	—
40	0.75	L-GN	140	Battery Positive Voltage	I	—
41 - 50	—	—	—	Not Occupied	—	—
51	0.75	WH	151	Signal Ground	I	—
52	0.75	L-GN	152	Driver Information Center Gauge LED Control	I	—
53	0.75	YE	153	Driver Information Center Oil LED Control	I	—
54	0.75	TN	154	Driver Information Center Date LED Control	I	—
55	0.75	WH	155	Driver Seat Belt Retractor Solenoid Control	I	—
56	—	—	—	Not Occupied	—	—
57	0.75	WH	157	Interior Lamp Control	I	—
58	0.75	L-GN	158	Cargo Lamp Switch Signal	I	—
59	—	—	—	Not Occupied	—	—
60	0.75	YE	160	Antenna Motor Down Control	I	—
61 - 62	—	—	—	Not Occupied	—	—
63	0.75	YE	163	Folding Top Motor Down Control	I	—
64 - 70	—	—	—	Not Occupied	—	—
71	0.75	YE	171	Power Window Master Switch Right Rear Down Signal	I	—
72	—	—	—	Not Occupied	—	—
73	0.75	D-BU	173	ABS Pump Motor Control	I	—
74	0.75	D-BU	174	Low Washer Fluid Indicator Control	I	—
75 - 76	—	—	—	Not Occupied	—	—
77	0.75	L-GN	177	Left Folding Top Motor Down Control	I	—
78	0.75	WH	178	Right Folding Top Motor Down Control	I	—
79	0.75	RD	179	Oil Pump Command Signal	I	—
80	0.75	OG	180	Remote Compact Disc/Cassette Player Control	I	—

K73 Telematics Communication Interface Control Module X1 (UE1)



1471689

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15431362
Service Connector: 15306351
Description: 16-Way F 100A Micro-Pack Series (NA)

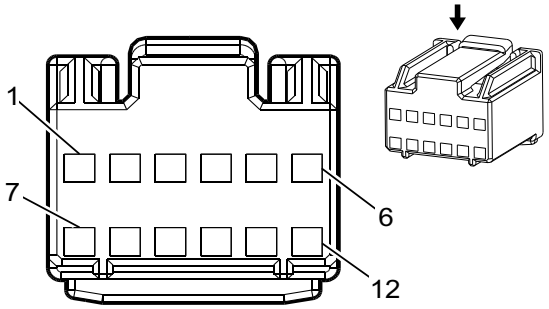
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575546	J-35616-16 (LT GN)	J-38125-559	15445905	Delphi 23	J	J
II	13575548	J-35616-16 (LT GN)	J-38125-559	15445905	Delphi 23	J	J

K73 Telematics Communication Interface Control Module X1 (UE1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/L-GN	1102	Low Speed GMLAN Serial Data #2	II	—
2	0.35	BN/WH	2517	Keypad Red LED Control	I	—
3	0.35	YE/VT	2516	Keypad Green LED Control	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.35	L-GN/BK	2515	Keypad Control	I	—
7	0.35	BK	2550	Ground	I	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.35	D-BU/L-GN	1304	High Speed GMLAN Serial Data (+)9	I	—
11	0.35	L-GN/WH	2514	Keypad Signal	I	—
12	0.35	WH/L-GN	1305	High Speed GMLAN Serial Data (-)9	I	—
13 - 14	—	—	—	Not Occupied	—	—
15	0.35	RD/D-BU	3240	Battery Positive Voltage	I	—
16	—	—	—	Not Occupied	—	—

K73 Telematics Communication Interface Control Module X2 (UE1)



1471691

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15431365
Service Connector: 88952886
Description: 12-Way F 100A Micro-Pack Series (NA)

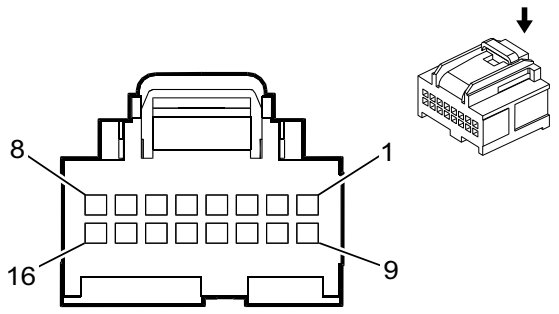
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575546	J-35616-16 (LT GN)	J-38125-559	15445905	Delphi 23	J	J
II	13575548	J-35616-16 (LT GN)	J-38125-559	15445905	Delphi 23	J	J

K73 Telematics Communication Interface Control Module X2 (UE1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	658	Cellular Telephone Voice Signal	I	—
2	0.35	BK/YE	659	Cellular Telephone Voice Low Reference	I	—
3	0.5	D-BU/L-GN	1304	High Speed GMLAN Serial Data (+)9	II	—
4	0.5	WH/L-GN	1305	High Speed GMLAN Serial Data (-)9	II	—
5	0.5	Bare	1792	Low Reference	II	—
6	0.35	GY/YE	5149	Voice Recognition Audio Signal	I	—
7	0.35	WH/D-BU	5986	Serial Data Communication Enable	I	—
8	0.35	Bare	1782	Low Reference	I	—
9	0.35	D-BU	655	Cellular Telephone Microphone Signal	I	—
10	0.35	BK/BN	654	Cellular Telephone Microphone Low Reference	I	—
11	—	—	—	Not Occupied	—	—
12	0.35	BK/GY	5152	Voice Recognition Audio Low Reference	I	—

K74 Human Machine Interface Control Module X1 (IO5/IO6)



3240102

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35013094
Service Connector: 13519737
Description: 16-Way F 0.64 OCS Series (BK)

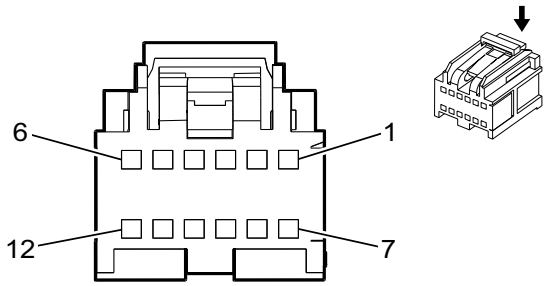
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

K74 Human Machine Interface Control Module X1 (IO5/IO6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35 0.35	GY/YE D-BU	5149 655	Voice Recognition Audio Signal Cellular Telephone Microphone Signal	I I	UE1 -UE1
2	0.35 0.35	BK/GY BK/BN	5152 654	Voice Recognition Audio Low Reference Cellular Telephone Microphone Low Reference	I I	UE1 -UE1
3 - 4	—	—	—	Not Occupied	—	—
5	0.35	WH/D-BU	5986	Serial Data Communication Enable	I	—
6	—	—	—	Not Occupied	—	—
7	0.75	RD/VT	340	Battery Positive Voltage	I	—
8	0.75	BK	2550	Ground	I	—
9	0.5	L-GN/WH	7527	Local Interconnect Network Serial Data Bus 5	I	—
10	—	—	—	Not Occupied	—	—
11	0.5 0.35	D-BU/L-GN D-BU/L-GN	1304 1304	High Speed GMLAN Serial Data (+)9 High Speed GMLAN Serial Data (+)9	I I	UE1 -UE1
12	0.5 0.35	WH/L-GN WH/L-GN	1305 1305	High Speed GMLAN Serial Data (-)9 High Speed GMLAN Serial Data (-)9	I I	UE1 -UE1
13	0.5	D-BU/L-GN	1304	High Speed GMLAN Serial Data (+)9	I	—
14	0.5	WH/L-GN	1305	High Speed GMLAN Serial Data (-)9	I	—
15 - 16	—	—	—	Not Occupied	—	—

K74 Human Machine Interface Control Module X2 (IO5/IO6)



3240099

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 35013145
Service Connector: 19370823
Description: 12-Way F 0.64 OCS Series (GY)

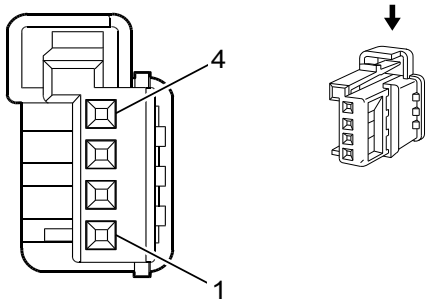
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

K74 Human Machine Interface Control Module X2 (IO5/IO6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/VT	3999	MOST Control	I	—
2	0.5	WH/L-GN	3997	MOST Serial Data (-)	I	—
3	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	GY/YE	6972	Camera Signal 2 +	I	—
6	0.35	WH/D-BU	6973	Camera Signal 2	I	—
7	—	—	—	Not Occupied	—	—
8	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
9	0.5	WH/L-GN	3997	MOST Serial Data (-)	I	—
10 - 12	—	—	—	Not Occupied	—	—

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)

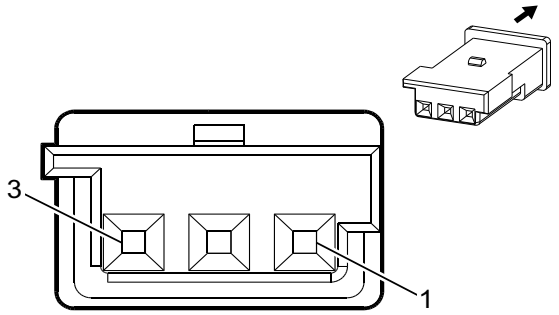
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	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/L-GN	3274	Remote Function Actuator Transmit Signal	I	—
3	0.35	D-BU/WH	3275	Remote Function Actuator Receive Signal	I	—
4	0.35	GY/WH	3272	Remote Function Actuator Control	I	—

K89 Immobilizer Control Module



2179789

Connector Part Information

Harness Type: Steering Column
OEM Connector: 19153569
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F Micro-Quadlock Series (PU)

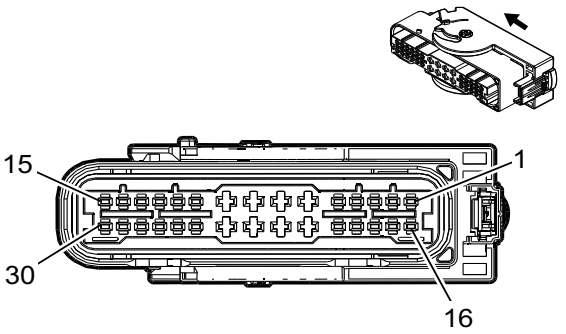
Terminal Part Information

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

K89 Immobilizer Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	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	0.35	GY/BK	3276	Vehicle Anti-Theft System Immobilizer Control	I	—

K111 Fuel Pump Driver Control Module



3240109

Connector Part Information

Harness Type: Chassis
OEM Connector: 4086737C1
Service Connector: Service by Harness - See Part Catalog
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	Not Required	No Tool Required	No Tool Required	Not Available	Not Available	Not Available	Not Available

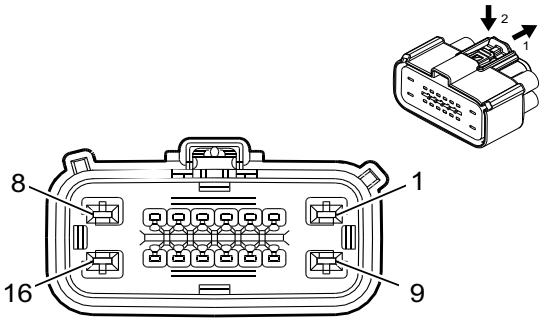
K111 Fuel Pump Driver Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.5	BN/VT	455	Fuel Filter Temperature Signal	I	—
5	0.5	BK/BU	6861	Water In Fuel Sensor Signal	I	—
6	—	—	—	Not Occupied	—	—
7	1.5	RD/VT	1242	Battery Positive Voltage	I	—
8	1.5	GY	120	Fuel Pump Control	I	—
9	1.5	YE/GY	4137	Fuel Pump Supply Voltage Phase 2	I	—
10 - 12	—	—	—	Not Occupied	—	—
13	0.5	BU/VT	1589	Primary Fuel Level Sensor Signal	I	—
	0.5	VT	1589	Primary Fuel Level Sensor Signal	I	—
14	0.5	BU	1937	Secondary Fuel Level Sensor Signal	I	—
15	0.5	WH	4499	High Speed GMLAN Serial Data (-) 7	I	—
16	1	VT/BU	3674	NOx Sensor 1 Control	I	—
17	1	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 - 21	—	—	—	Not Occupied	—	—
22	1.5	BK	2150	Ground	I	—
23	0.5	BK	7444	Fuel System Control Module Shield Ground	I	—
24	1.5	WH/BN	4138	Fuel Pump Supply Voltage Phase 3	I	—
25	0.5	BK/BU	6863	Water In Fuel Sensor Low Reference	I	—

K111 Fuel Pump Driver Control Module (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
26 - 27	—	—	—	Not Occupied	—	—
28	0.5	BK/GN	6281	Fuel Level Sensor Low Reference	I	—
29	0.5	BN/WH	6281	Fuel Level Sensor Low Reference	I	—
30	0.5	BU/BN	4498	High Speed GMLAN Serial Data (+) 7	I	—

K133 Trailer Brake Power Control Module (JL1)



4624589

Connector Part Information

Harness Type: Chassis
OEM Connector: 4086719C1
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 1.5, 2.8 Series, Sealed (GY)

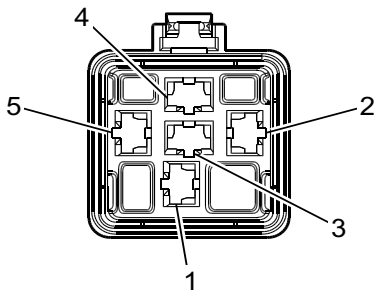
Terminal Part Information

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

K133 Trailer Brake Power Control Module (JL1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	RD/GN	1142	Battery Positive Voltage	I	—
	3	RD/GN	1142	Battery Positive Voltage	I	—
2	0.5	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	3	BU	47	Trailer Auxiliary Control	I	—
9	3	BK	1750	Ground	I	—
10 - 11	—	—	—	Not Occupied	—	—
12	0.5	GN/VT	4114	Local Interconnect Network Serial Data Bus 14	I	—
13 - 16	—	—	—	Not Occupied	—	—

KR14 Brake Booster Pump Motor Relay



5168820

Connector Part Information

Harness Type: Brake Booster
OEM Connector: 1661747C91
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way F 630 Metri-Pack Series, Sealed (BK)

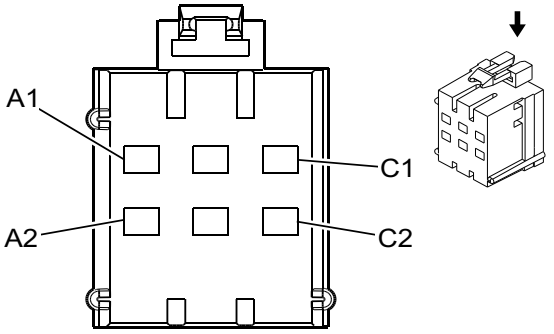
Terminal Part Information

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

KR14 Brake Booster Pump Motor Relay

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	5	RD	90	Right Mirror Motor Left Control	I	—
2	1	GY	90	Right Mirror Motor Left Control	I	—
3	—	—	—	Not Occupied	—	—
4	5	GY	90	Right Mirror Motor Left Control	I	—
5	1	GY	90	Right Mirror Motor Left Control	I	—

KR58 Roof Beacon Relay (TRW)



281201

Connector Part Information

Harness Type: Overhead Console
OEM Connector: 12110541
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 280 Metri-Pack Flexlock Series (BK)

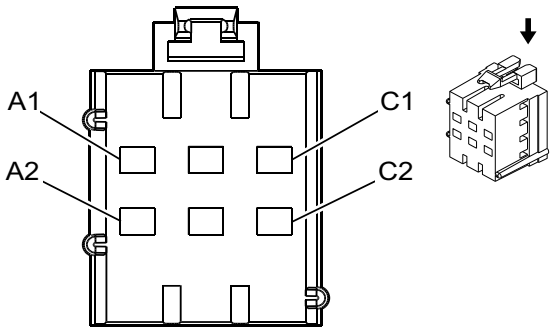
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

KR58 Roof Beacon Relay (TRW)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	0.35	BK	1050	Ground	I	—
A2	2.5	L-GN/D-BU	5989	Emergency Lamp Relay Contact Control	I	—
B1 - B2	—	—	—	Not Occupied	—	—
C1	2.5	RD/L-GN	3140	Battery Positive Voltage	I	—
C2	0.5	WH/BK	5990	Emergency Lamp Switch Signal	I	—

KR193 Rear Air Suspension Control Valve Relay (JPZ)



309518

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12129715
Service Connector: Pending
Description: 6-Way F 280 Metri-Pack Flexlock Series (GY)

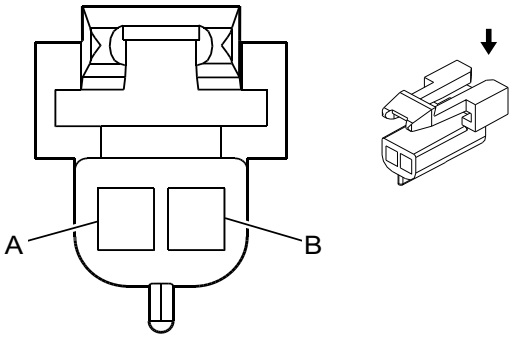
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

KR193 Rear Air Suspension Control Valve Relay (JPZ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	0.35	BK/GY	5958	Leveling Suspension Relay Coil Low Reference	I	—
A2	0.35	GN/GY	6095	Right Rear Air Spring Solenoid Control	I	—
	0.5	GN/GY	6095	Right Rear Air Spring Solenoid Control	I	—
B1	—	—	—	Not Occupied	—	—
B2	0.5	GN	6094	Left/Rear Air Spring Solenoid Control	I	—
C1	0.5	VT/WH	1139	Run/Crank Ignition 1 Voltage	I	—
C2	0.35	YE/GN	5957	Leveling Suspension Relay Coil Control	I	—

M7 Transmission Shift Lock Control Solenoid Actuator



280768

Connector Part Information

Harness Type: Steering Column
OEM Connector: 12052832
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 Metri-Pack Series (BK)

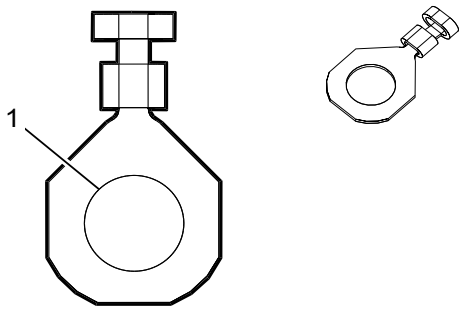
Terminal Part Information

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

M7 Transmission Shift Lock Control Solenoid Actuator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	YE/WH	816	Brake Transmission Shift Interlock Solenoid Control	I	—
B	0.5	BK/WH	1851	Signal Ground	I	—

M9 Brake Booster Pump Motor



5168828

Connector Part Information

Harness Type: Brake Booster
OEM Connector: 365682C2
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way Ring Terminal

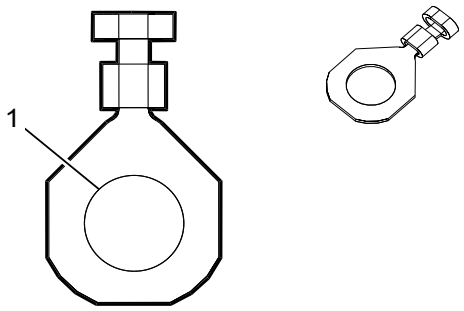
Terminal Part Information

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

M9 Brake Booster Pump Motor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	5	GY	90	Right Mirror Motor Left Control	I	—

M9 Brake Booster Pump Motor X2



5168828

Connector Part Information

Harness Type: Brake Booster
OEM Connector: 3867524C1
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way Ring Terminal

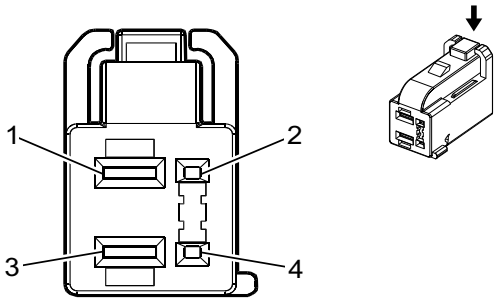
Terminal Part Information

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

M9 Brake Booster Pump Motor X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	3	WH	90	Right Mirror Motor Left Control	I	—

M50D Seat Front Vertical Motor - Driver (A95/AG1)



3683652

Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 3-023-66-52
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BN)

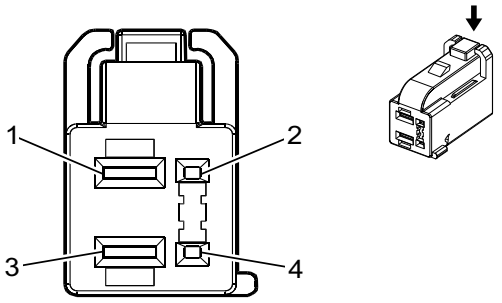
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M50D Seat Front Vertical Motor - Driver (A95/AG1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	L-GN/BN	286	Driver Power Seat Front Vertical Motor Up Control	I	—
2	0.35	WH/RD	3298	Memory Sensor High Reference 2	II	—
3	1.5	L-BU/VT	287	Driver Power Seat Front Vertical Motor Down Control	I	—
4	0.5	BN/WH	557	Memory Seat Front Vertical Motor Position Sensor Signal	II	—

M51D Seat Horizontal Motor - Driver (A95/AG1)



3683652

Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 3-023-66-52
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BN)

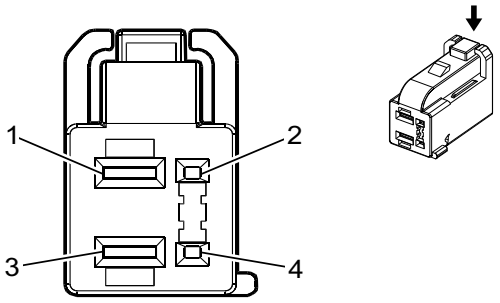
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M51D Seat Horizontal Motor - Driver (A95/AG1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	YE/L-BU	285	Driver Power Seat Horizontal Motor Forward Control	I	—
2	0.35	WH/RD	3298	Memory Sensor High Reference 2	II	—
3	1.5	GY/L-GN	284	Driver Power Seat Horizontal Motor Rearward Control	I	—
4	0.5	L-GN	569	Memory Seat Horizontal Motor Position Sensor Signal	II	—

M51P Seat Horizontal Motor - Passenger (A95)



3683652

Connector Part Information

Harness Type: Passenger Seat Cushion
OEM Connector: 3-023-66-52
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BN)

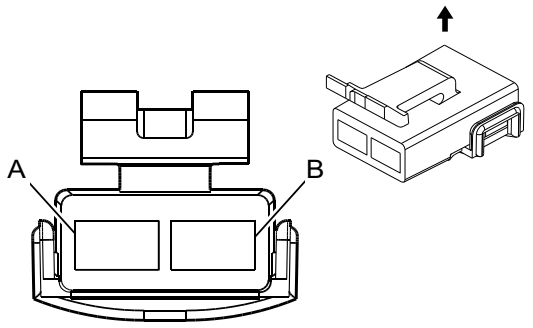
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M51P Seat Horizontal Motor - Passenger (A95)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	YE/L-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	—	—

M52D Seat Lumbar Support Horizontal Motor - Driver (A95/AG1)



130707

Connector Part Information

Harness Type: Driver Seat Back
OEM Connector: 12020556
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 480 Metri-Pack Series (BK)

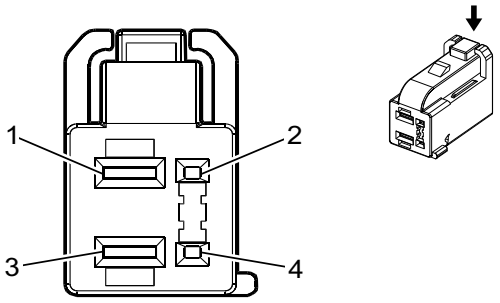
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-40 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M52D Seat Lumbar Support Horizontal Motor - Driver (A95/AG1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	L-BU	611	Driver Power Seat Lumbar Motor Forward Control	I	—
B	1.5	VT	610	Driver Power Seat Lumbar Motor Rearward Control	I	—

M55D Seat Rear Vertical Motor - Driver (A95/AG1)



3683652

Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 3-023-66-52
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BN)

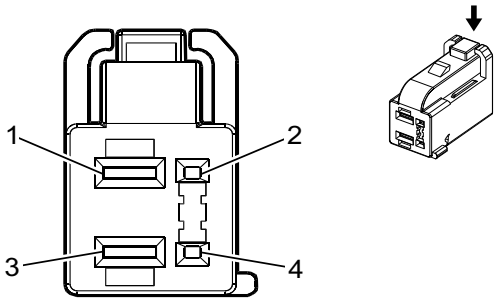
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M55D Seat Rear Vertical Motor - Driver (A95/AG1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GY/L-BU	283	Driver Power Seat Rear Vertical Motor Down Control	I	—
2	0.35	WH/RD	3298	Memory Sensor High Reference 2	II	—
3	1.5	YE	282	Driver Power Seat Rear Vertical Motor Up Control	I	—
4	0.5	YE/L-BU	568	Memory Seat Rear Vertical Motor Position Sensor Signal	II	—

M56D Seat Recline Motor - Driver ((A95/AG1)+KA1)



3683652

Connector Part Information

Harness Type: Driver Seat Back
OEM Connector: 3-023-66-52
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BN)

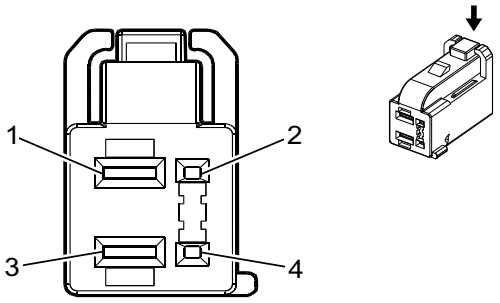
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M56D Seat Recline Motor - Driver ((A95/AG1)+KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	L-GN/YE	276	Driver Power Seat Recline Motor Forward Control	I	—
2	0.35	WH/RD	3298	Memory Sensor High Reference 2	II	—
3	1.5	L-BU/YE	277	Driver Power Seat Recline Motor Rearward Control	I	—
4	0.35	WH/BK	570	Driver Memory Seat Recline Motor Position Sensor Signal	II	—

M56D Seat Recline Motor - Driver ((A95/AG1)-KA1)



3683652

Connector Part Information

Harness Type: Driver Seat Back
OEM Connector: 13597381
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series (BN)

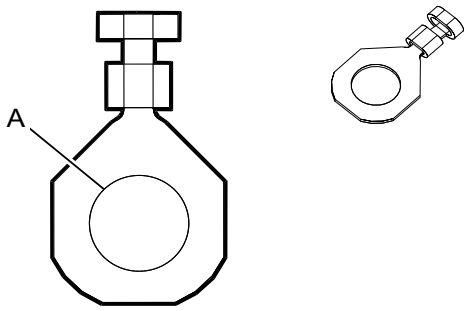
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M56D Seat Recline Motor - Driver ((A95/AG1)-KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	L-GN/YE	276	Driver Power Seat Recline Motor Forward Control	I	—
2	0.35	WH/RD	3298	Memory Sensor High Reference 2	II	—
3	1.5	L-BU/YE	277	Driver Power Seat Recline Motor Rearward Control	I	—
4	0.35	WH/BK	570	Driver Memory Seat Recline Motor Position Sensor Signal	II	—

M64 Starter Motor X1



3240148

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 12103519
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

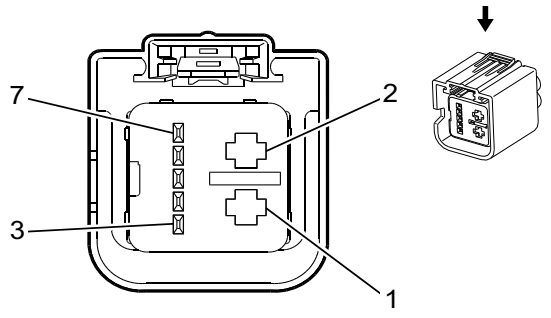
Terminal Part Information

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

M64 Starter Motor X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	3	YE/VT	6	Starter Solenoid Crank Ignition Voltage	I	—

M74D Window Motor - Driver (A31)



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 (BK)

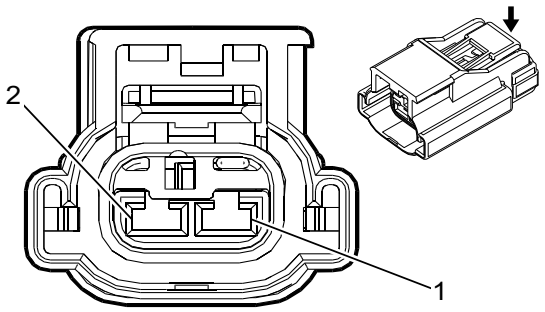
Terminal Part Information

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-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M74D Window Motor - Driver (A31)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BK	1150	Ground	I	—
2	2.5	RD/D-BU	1842	Battery Positive Voltage	I	—
3	0.35	L-GN/WH	1300	Power Window Master Switch Left Front Up Signal	II	—
4	0.5	L-GN/YE	6134	Local Interconnect Network Serial Data Bus 3	II	—
5	0.35	L-GN/VT	7628	Power Window Motor Left Front Express Control	II	—
6	0.35	GY	745	Left Front Door Ajar Switch Signal	II	—
7	0.35	GY	1136	Power Window Master Switch Left Front Down Signal	II	—

M74LR Window Motor - Left Rear (Crew Cab)



3372003

Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 13896059
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 APEX Series, Sealed (BK)

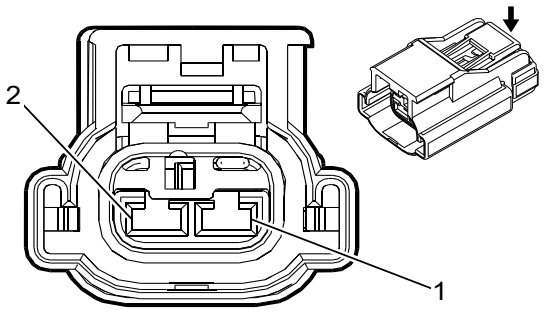
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M74LR Window Motor - Left Rear (Crew Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	D-BU/VT	668	Power Window Motor Left Rear Up Control	I	—
2	2.5	YE/D-BU	669	Power Window Motor Left Rear Down Control	I	—

M74P Window Motor - Passenger



3372003

Connector Part Information

Harness Type: Passenger Door
OEM Connector: 13896059
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 APEX Series, Sealed (BK)

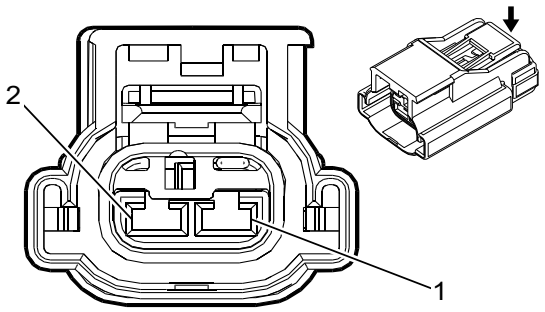
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M74P Window Motor - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	YE/D-BU	3388	Power Window Motor Passenger Down Control	I	—
2	2.5	L-GN/GY	3387	Power Window Motor Passenger Up Control	I	—

M74RR Window Motor - Right Rear (Crew Cab)



3372003

Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 13896059
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 APEX Series, Sealed (BK)

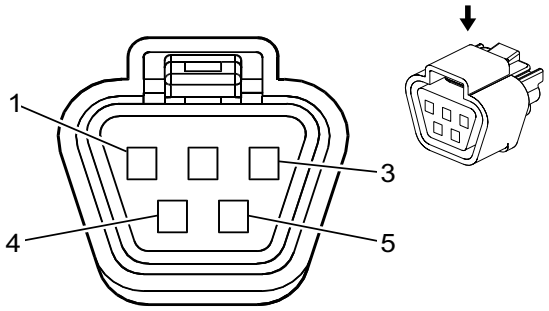
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M74RR Window Motor - Right Rear (Crew Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	D-BU/GY	670	Power Window Motor Right Rear Up Control	I	—
2	2.5	L-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)

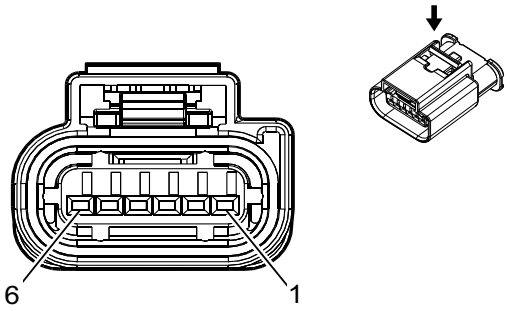
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-18 (BK)	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	1	YE/BN	95	Windshield Wiper Motor Low Speed Control	I	—
2	0.5	BK	1850	Ground	I	—
3	0.5	BN/L-GN	196	Windshield Wiper Motor Park Switch Signal	I	—
4	1	WH	92	Windshield Wiper Motor High Speed Control	I	—
5	1	BK	550	Ground	I	—

M103 Turbocharger Vane Position Actuator



3747579

Connector Part Information

Harness Type: Engine
OEM Connector: 13507080
Service Connector: 19354437
Description: 6-Way F 1.2 MCON Series, Sealed (BK)

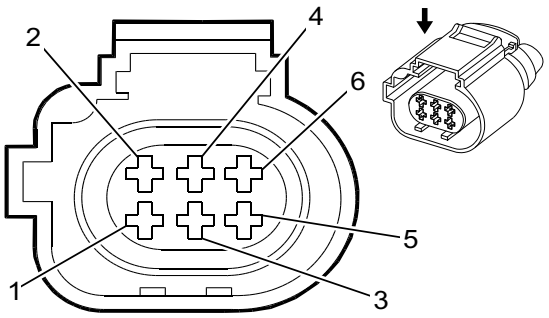
Terminal Part Information

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

M103 Turbocharger Vane Position Actuator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	4499	High Speed GMLAN Serial Data (-) 7	I	—
2	0.5	WH	4499	High Speed GMLAN Serial Data (-) 7	I	—
3	0.5	BU/BN	4498	High Speed GMLAN Serial Data (+) 7	I	—
4	0.5	BU/BN	4498	High Speed GMLAN Serial Data (+) 7	I	—
5	0.5	BK/WH	251	Signal Ground	I	—
6	0.5	VT/BU	3674	NOx Sensor 1 Control	I	—

M114 Exhaust Gas Recirculation Cooler Bypass Valve Actuator



2216905

Connector Part Information

Harness Type: Engine
OEM Connector: 284716-5
Service Connector: 19354082
Description: 6-Way F 1.6 Micro-Timer Series, Sealed (GY)

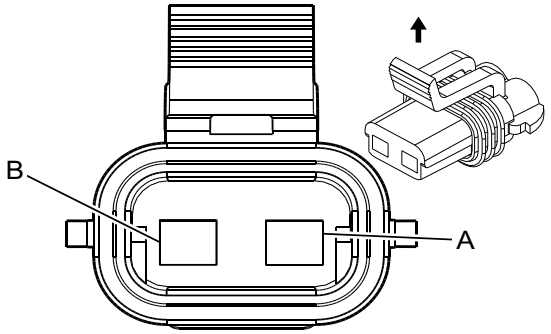
Terminal Part Information

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

M114 Exhaust Gas Recirculation Cooler Bypass Valve Actuator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/VT	3656	EGR Cooler Bypass Motor Close Control	I	—
2	0.5	GN/GY	3654	EGR Cooler Bypass Position Sensor Signal	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	BK/BU	3653	EGR Cooler Bypass Position Sensor Low Reference	I	—
5	0.5	YE/GN	3655	EGR Cooler Bypass Motor Open Control	I	—
6	0.5	VT/RD	3652	EGR Cooler Bypass Position Sensor 5V Reference	I	—

P3 Backup Alarm (UZF)



68721

Connector Part Information

Harness Type: Chassis Rear Right
OEM Connector: 1671610C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 280 Metri-Pack Series, Sealed (BK)

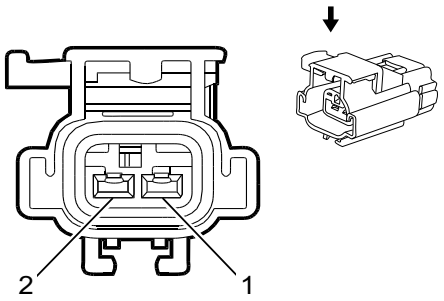
Terminal Part Information

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

P3 Backup Alarm (UZF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	WH/GN	1624	Trailer Backup Lamp Control	I	—
B	1	BK	1624	Trailer Backup Lamp Control	I	—

P12 Horn



2323609

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 3626435C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed (BK)

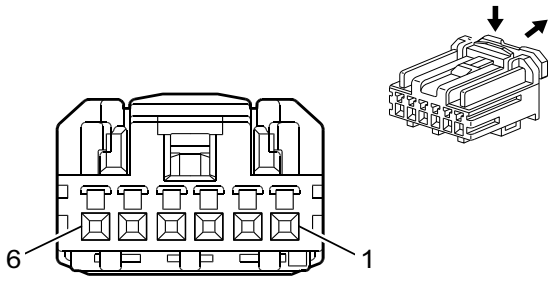
Terminal Part Information

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

P12 Horn

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	BN/GY	29	Horn Control	I	—
2	1	BK	85	Cruise Control Engaged Indicator	I	—

P14 Passenger Air Bag Disabled Indicator



4650256

Connector Part Information

Harness Type: Overhead Console
OEM Connector: 33358802
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 HCM Series (NA)

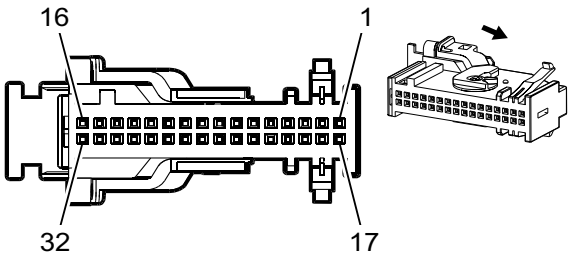
Terminal Part Information

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

P14 Passenger Air Bag Disabled Indicator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU	2307	Passenger Air Bag On Indicator Control	I	—
2	0.5	BK	1050	Ground	I	—
3	0.35	L-GN	2308	Passenger Air Bag Off Indicator Control	I	—
4	0.35	VT/WH	1139	Run/Crank Ignition 1 Voltage	I	—
5	0.35	VT/WH	5234	Passenger Seat Belt Indicator Control	I	—
6	—	—	—	Not Occupied	—	—

P16 Instrument Cluster



627214

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12198036
Service Connector: 88988405
Description: 32-Way F 0.64 Micro-Quadlock Series (BK)

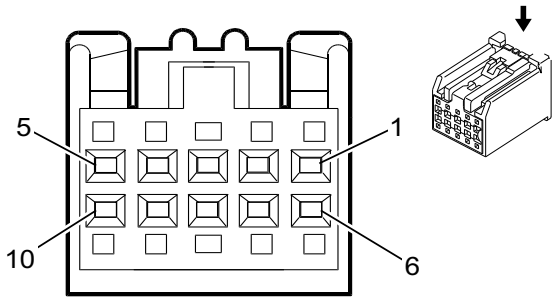
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579993	J-35616-64B (LT BU)	J-38125-12A	144969-1	Lear 25	E	2

P16 Instrument Cluster

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/L-GN	3997	MOST Serial Data (-)	I	—
2	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
3	0.5	GY/L-GN	1102	Low Speed GMLAN Serial Data #2	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	WH/VT	3999	MOST Control	I	—
6	—	—	—	Not Occupied	—	—
7	0.5	RD/GY	2840	Battery Positive Voltage	I	—
8	0.5	VT/BK	1639	Run/Crank Ignition 1 Voltage	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	D-BU/YE	68	Low Coolant Level Indicator Control	I	—
11 - 15	—	—	—	Not Occupied	—	—
16	0.35	BN/WH	419	Check Engine Indicator Control	I	—
17	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
18	0.5	WH/L-GN	3997	MOST Serial Data (-)	I	—
19	0.5	BK/WH	1851	Signal Ground	I	—
20	0.5	L-GN/BK	3894	Local Interconnect Network Serial Data Bus 12	I	—
21 - 23	—	—	—	Not Occupied	—	—
24	0.35	VT	185	Low Washer Fluid Indicator Control	I	—
25 - 31	—	—	—	Not Occupied	—	—
32	0.35	L-GN/BN	507	Wait To Start Indicator Control	I	—

P17 Info Display Module X1 (IO3/IO5/IO6)



2180211

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13815336
Service Connector: 13577390
Description: 10-Way F 0.64 Kaizen Series (BK)

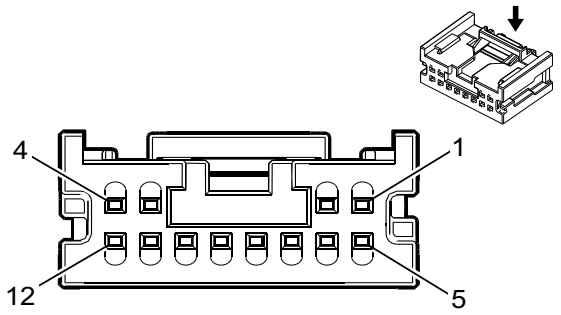
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575742	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

P17 Info Display Module X1 (IO3/IO5/IO6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/GY	2840	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	GY/L-GN	1102	Low Speed GMLAN Serial Data #2	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	L-GN/D-BU	7532	Local Interconnect Network Serial Data Bus 10	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.5	L-GN/WH	7527	Local Interconnect Network Serial Data Bus 5	I	—
9	—	—	—	Not Occupied	—	—
10	0.35	BK	2550	Ground	II	—

P17 Info Display Module X1 (IOB)



3824362

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33253016
Service Connector: 13588265
Description: 12-Way F Mini 50 Series (BK)

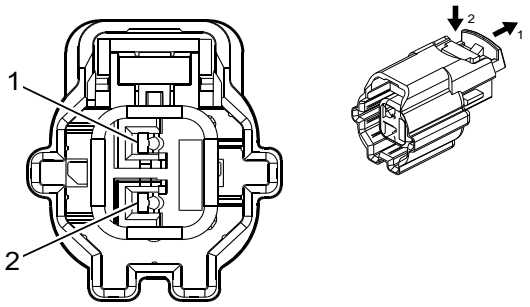
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19333221	EL-35616-58 (BK)	J-38125-553	Not Available	Not Available	Not Available	Not Available

P17 Info Display Module X1 (IOB)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BN	9004	—	I	—
2	0.35	BN/L-GN	3364	Navigation Display Reset Signal	I	—
3	0.35	GY/BN	3761	Infotainment Regulated Control	I	—
4	0.35	L-GN/BK	2515	Keypad Control	I	—
5	0.35	VT/GY	1381	LCD Dimming Signal	I	—
6	0.35	GY/D-BU	3989	Display Radio Bank Switch Dim Signal	I	—
7	0.35	BN/L-GN	4502	Video Display Request Signal	I	—
8	0.35	GY/BN	9003	—	I	—
9	0.35	BK	2550	Ground	I	—
10	0.35	BK	2550	Ground	I	—
11	0.35	BK/BN	2518	Keypad Low Reference	I	—
12	0.35	GY/D-BU	3989	Display Radio Bank Switch Dim Signal	I	—

P19AG Speaker - Left Front Door



4840334

Connector Part Information

Harness Type: Driver Door
OEM Connector: 33380179
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series (BK)

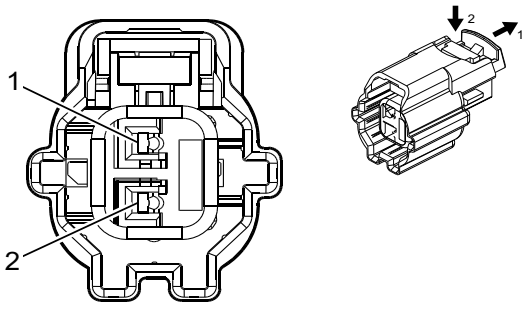
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	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	1	BN/D-BU	118	Left Front Speaker Signal (-) 1	I	—
2	1	D-BU	201	Left Front Speaker Control (+) 1	I	—

P19AH Speaker - Right Front Door



4840334

Connector Part Information

Harness Type: Passenger Door
OEM Connector: 33380179
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series (BK)

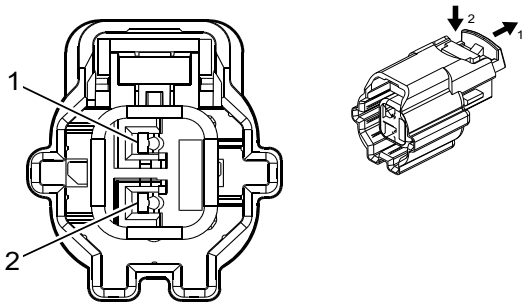
Terminal Part Information

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

P19AH Speaker - Right Front Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	YE/BK	117	Right Front Speaker Signal (-) 1	I	—
2	1	YE	200	Right Front Speaker Control (+) 1	I	—

P19AL Speaker - Left Rear Door (Crew Cab)



4840334

Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 33380179
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series (BK)

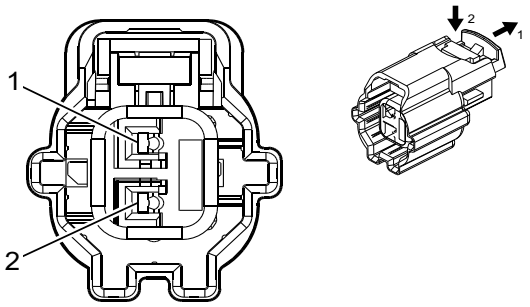
Terminal Part Information

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

P19AL Speaker - Left Rear Door (Crew Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	L-GN/BK	116	Left Rear Speaker Signal (-)	I	—
2	1	L-GN	199	Left Rear Speaker Control (+)	I	—

P19AM Speaker - Right Rear Door (Crew Cab)



4840334

Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 33380179
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series (BK)

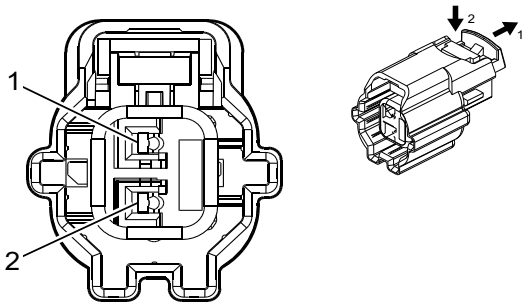
Terminal Part Information

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

P19AM Speaker - Right Rear Door (Crew Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	D-BU/BK	115	Right Rear Speaker Signal (-)	I	—
2	1	WH	46	Right Rear Speaker Control (+)	I	—

P19AN Speaker - Left Rear Trim Panel (Standard Cab)



4840334

Connector Part Information

Harness Type: Body
OEM Connector: 33380179
Service Connector: 19370459
Description: 2-Way F 150 MX Series (BK)

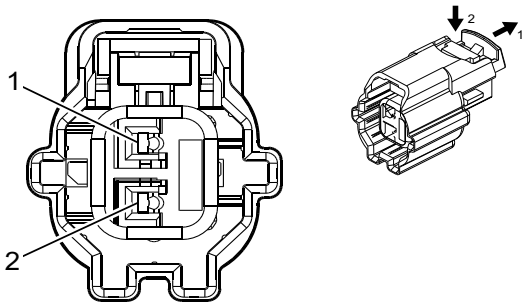
Terminal Part Information

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

P19AN Speaker - Left Rear Trim Panel (Standard Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/BK	116	Left Rear Speaker Signal (-)	I	—
2	0.5	L-GN	199	Left Rear Speaker Control (+)	I	—

P19AP Speaker - Right Rear Trim Panel (Standard Cab)



4840334

Connector Part Information

Harness Type: Body
OEM Connector: 33380179
Service Connector: 19370459
Description: 2-Way F 150 MX Series (BK)

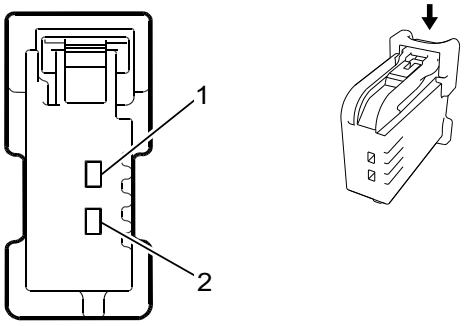
Terminal Part Information

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

P19AP Speaker - Right Rear Trim Panel (Standard Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU/BK	115	Right Rear Speaker Signal (-)	I	—
2	0.5	WH	46	Right Rear Speaker Control (+)	I	—

P19J Speaker - Left Instrument Panel (UQ3)



2173586

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13595207
Service Connector: 13584097
Description: 2-Way F 1.5 Series (BK)

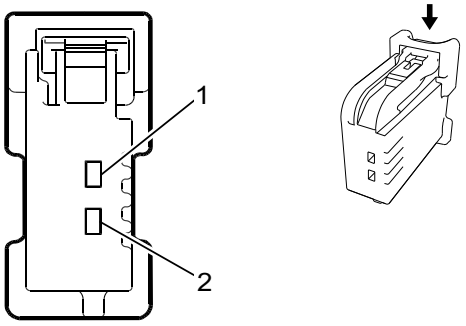
Terminal Part Information

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

P19J Speaker - Left Instrument Panel (UQ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/D-BU	118	Left Front Speaker Signal (-) 1	I	—
2	0.5	D-BU	201	Left Front Speaker Control (+) 1	I	—

P19W Speaker - Right Instrument Panel (UQ3)



2173586

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13595207
Service Connector: 13584097
Description: 2-Way F 1.5 Series (BK)

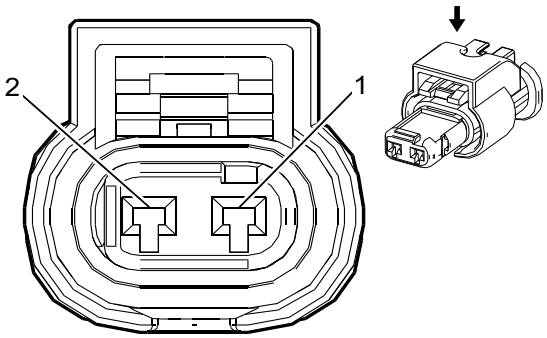
Terminal Part Information

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

P19W Speaker - Right Instrument Panel (UQ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BK	117	Right Front Speaker Signal (-) 1	I	—
2	0.5	YE	200	Right Front Speaker Control (+) 1	I	—

Q2 A/C Compressor Clutch (C67)



2474752

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13927761
Service Connector: 19329415
Description: 2-Way F 1.2 MCP Series, Sealed (BK)

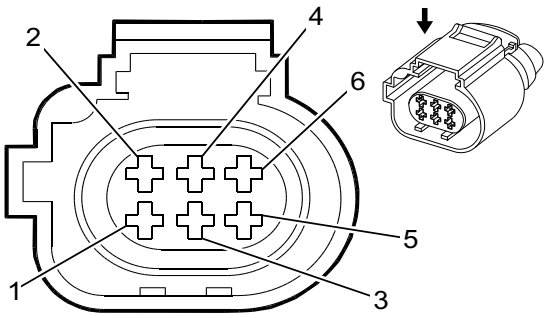
Terminal Part Information

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

Q2 A/C Compressor Clutch (C67)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	BK	550	Ground	I	—
2	0.75	BN/L-GN	59	A/C Compressor Clutch Control	I	—

Q14 Exhaust Gas Recirculation Valve



2216905

Connector Part Information

Harness Type: Engine
OEM Connector: 284716-5
Service Connector: 19354082
Description: 6-Way F 1.6 Micro-Timer Series, Sealed (GY)

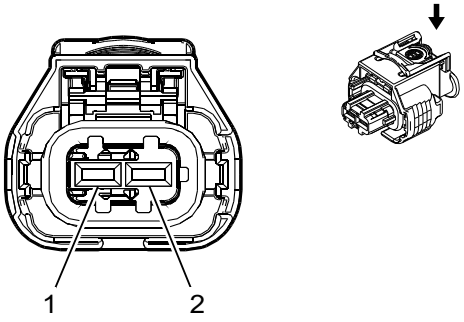
Terminal Part Information

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

Q14 Exhaust Gas Recirculation Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/VT	5764	Exhaust Gas Recirculation Valve Motor High Signal	I	—
2	0.5	BN/WH	5763	Exhaust Gas Recirculation Valve Sensor Signal	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	BK/BN	2753	Exhaust Gas Recirculation Sensor Low Reference	I	—
5	0.5	VT/BK	5746	Exhaust Gas Recirculation Valve Motor Low Signal	I	—
6	0.5	BU/RD	2702	Exhaust Gas Recirculation 5V Reference 2	I	—

Q17A Fuel Injector 1



2845578

Connector Part Information

Harness Type: Engine
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed (BK)

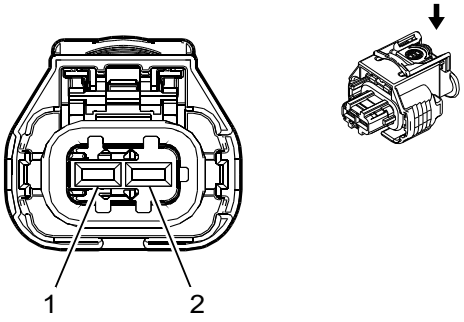
Terminal Part Information

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

Q17A Fuel Injector 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN	4801	Direct Fuel Injector (DFI) High Voltage Control Cylinder 1	I	—
2	0.75	BN/WH	4901	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1	I	—

Q17B Fuel Injector 2



2845578

Connector Part Information

Harness Type: Engine
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed (BK)

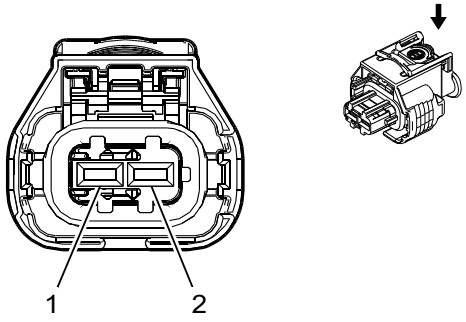
Terminal Part Information

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

Q17B Fuel Injector 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BU	4802	Direct Fuel Injector (DFI) High Voltage Control Cylinder 2	I	—
2	0.75	BU/GY	4902	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2	I	—

Q17C Fuel Injector 3



2845578

Connector Part Information

Harness Type: Engine
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed (BK)

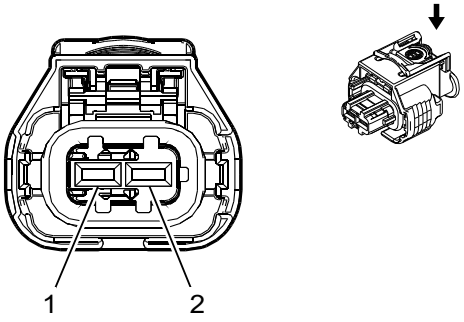
Terminal Part Information

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

Q17C Fuel Injector 3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GN	4803	Direct Fuel Injector (DFI) High Voltage Control Cylinder 3	I	—
2	0.75	GN/GY	4903	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3	I	—

Q17D Fuel Injector 4



2845578

Connector Part Information

Harness Type: Engine
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed (BK)

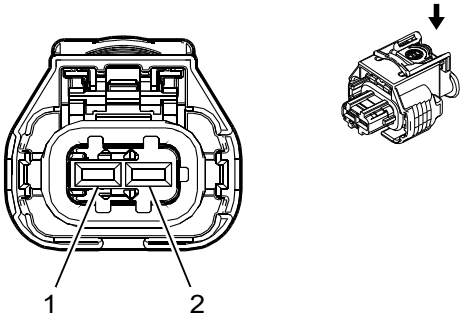
Terminal Part Information

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

Q17D Fuel Injector 4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY/BU	4804	Direct Fuel Injector (DFI) High Voltage Control Cylinder 4	I	—
2	0.75	BU/WH	4904	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4	I	—

Q17E Fuel Injector 5



2845578

Connector Part Information

Harness Type: Engine
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed (BK)

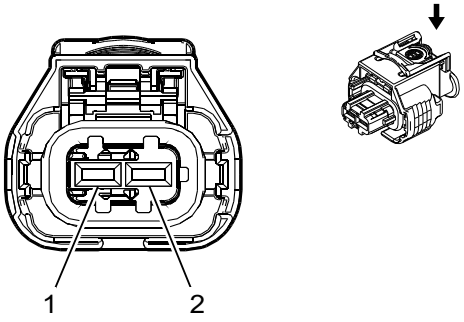
Terminal Part Information

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

Q17E Fuel Injector 5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH/GN	4805	Direct Fuel Injector (DFI) High Voltage Control Cylinder 5	I	—
2	0.75	GN/WH	4905	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5	I	—

Q17F Fuel Injector 6



2845578

Connector Part Information

Harness Type: Engine
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed (BK)

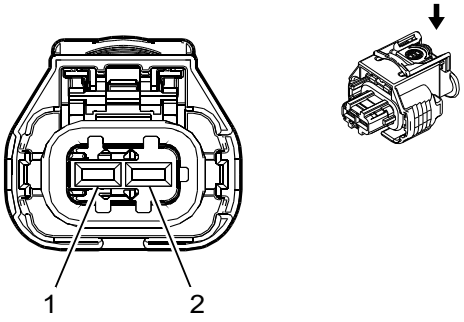
Terminal Part Information

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

Q17F Fuel Injector 6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT/GN	4806	Direct Fuel Injector (DFI) High Voltage Control Cylinder 6	I	—
2	0.75	VT/GY	4906	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6	I	—

Q17G Fuel Injector 7



2845578

Connector Part Information

Harness Type: Engine
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed (BK)

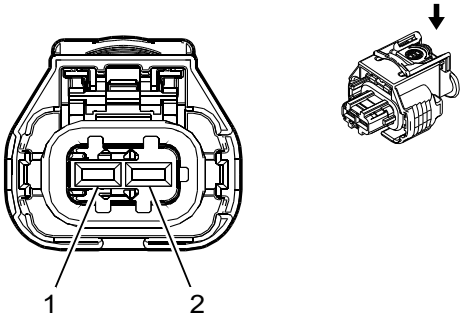
Terminal Part Information

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

Q17G Fuel Injector 7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE/GY	4807	Direct Fuel Injector (DFI) High Voltage Control Cylinder 7	I	—
2	0.75	WH/YE	4907	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 7	I	—

Q17H Fuel Injector 8



2845578

Connector Part Information

Harness Type: Engine
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed (BK)

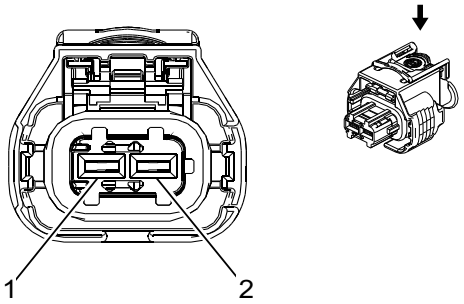
Terminal Part Information

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

Q17H Fuel Injector 8

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY	4808	Direct Fuel Injector (DFI) High Voltage Control Cylinder 8	I	—
2	0.75	GY/WH	4908	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 8	I	—

Q18A Fuel Pressure Regulator 1



2577394

Connector Part Information

Harness Type: Engine Left
OEM Connector: 13343443
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed (BK)

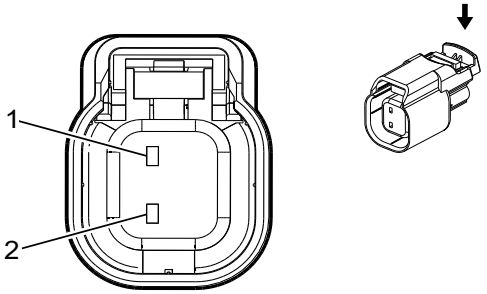
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q18A Fuel Pressure Regulator 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/BK	2929	Fuel Metering Valve Low Control	I	—
2	0.5	YE	2928	Fuel Metering Valve High Control	I	—

Q18B Fuel Pressure Regulator 2



2792100

Connector Part Information

Harness Type: Engine
OEM Connector: 13581410
Service Connector: 19352068
Description: 2-Way F 1.5 Series, Sealed (BK)

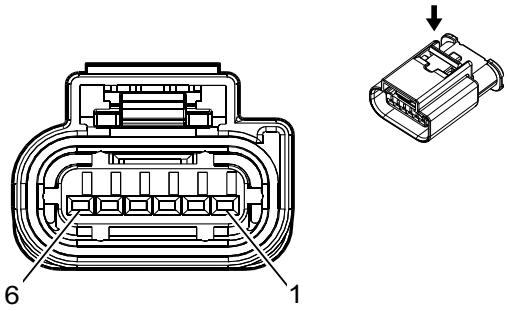
Terminal Part Information

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

Q18B Fuel Pressure Regulator 2

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	—

Q20 Intake Air Flow Valve



3747579

Connector Part Information

Harness Type: Engine
OEM Connector: 13507087
Service Connector: 19352911
Description: 6-Way F 1.2 MCON Series, Sealed (BK)

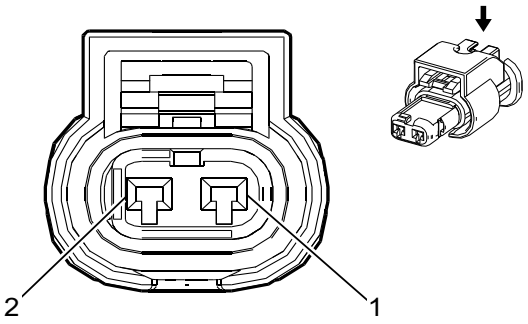
Terminal Part Information

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

Q20 Intake Air Flow Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	581	Throttle Actuator Control Open	I	—
2	0.5	BN/WH	582	Throttle Actuator Control Close	I	—
3	0.5	BU/WH	3630	Throttle Position Sensor (SENT1) Signal	I	—
4	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	I	—
5	0.5	BN/RD	2701	Throttle Position Sensor 5V Reference	I	—
6	—	—	—	Not Occupied	—	—

Q46 A/C Compressor Solenoid Valve (C67)



2851901

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13927762
Service Connector: 19299928
Description: 2-Way F 1.2 MCP Series, Sealed (BK)

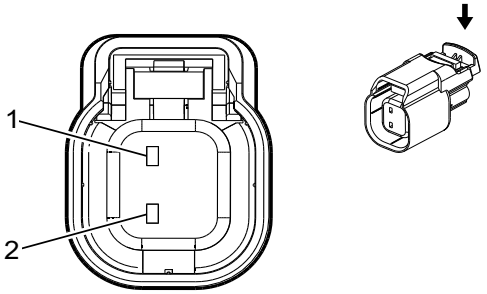
Terminal Part Information

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

Q46 A/C Compressor Solenoid Valve (C67)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	D-BU/YE	7574	Electric Variable Displacement Control	I	—
2	0.75	D-BU/BN	7573	Electric Variable Displacement Supply	I	—

Q61 Reductant Injector



2792100

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 35011347
Service Connector: 19352068
Description: 2-Way F 1.5 Series, Sealed (BK)

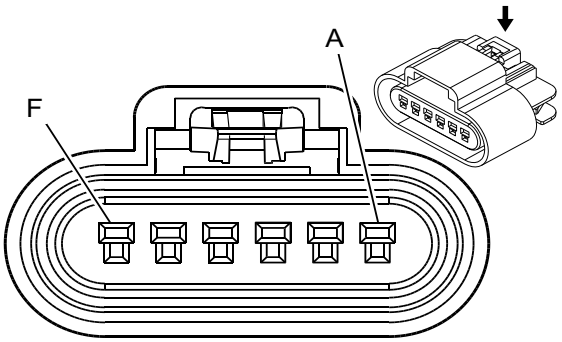
Terminal Part Information

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

Q61 Reductant Injector

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN	3099	DEF Dosing Valve High Control	I	—
2	0.75	BN/WH	3100	DEF Dosing Valve Low Control	I	—

Q85 Cooling Fan Clutch



632357

Connector Part Information

Harness Type: Engine Cooling Fan
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F (BK)

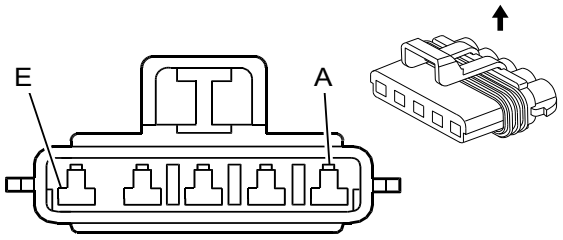
Terminal Part Information

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

Q85 Cooling Fan Clutch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	RD	2368	Cooling Fan Control Signal	I	—
B	—	—	—	—	I	—
C	—	OG	2365	Cooling Fan Speed 5V Reference	I	—
D	—	WH	2364	Cooling Fan Speed Signal	I	—
E	—	BK	6141	Cooling Fan Speed Low Reference	I	—
F	—	GN	550	Ground	I	—

Q101 Rear Air Suspension Control Valve (JPZ)



243503

Connector Part Information

Harness Type: Chassis
OEM Connector: 1661375C2
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 280 Metri-Pack Series, Sealed

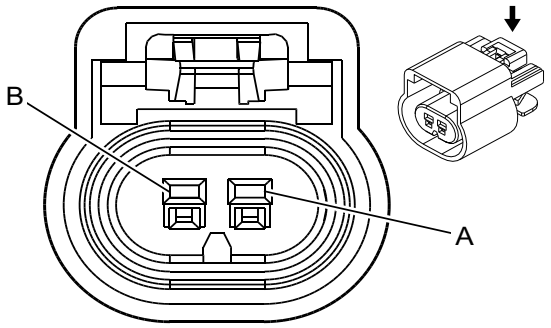
Terminal Part Information

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

Q101 Rear Air Suspension Control Valve (JPZ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	—	—	Not Occupied	—	—
B	0.75	GY	4462	Soft Top Bootwell Sensor Signal Left	I	—
C	0.75	GY	4461	Soft Top Bootwell Sensor Signal Right	I	—
D - E	—	—	—	Not Occupied	—	—

R6A Terminating Resistor - High Speed Bus



523630

Connector Part Information

Harness Type: Chassis
OEM Connector: 3683465C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 GT Series, Sealed (BK)

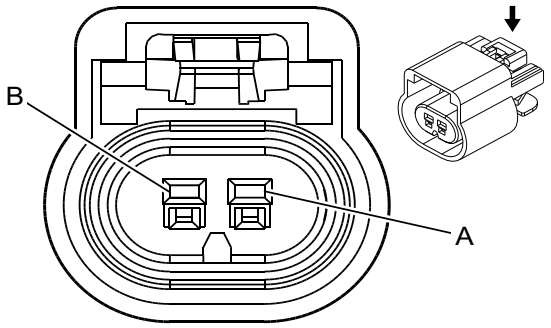
Terminal Part Information

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

R6F Terminating Resistor - High Speed Extension Bus 2



523630

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13510085
Service Connector: 13580114
Description: 2-Way F 150 GT Series, Sealed (BK)

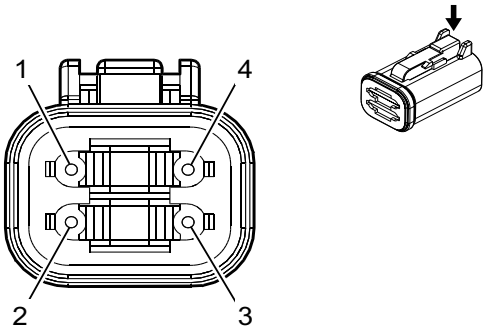
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

R6F Terminating Resistor - High Speed Extension Bus 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	D-BU/L-GN	1304	High Speed GMLAN Serial Data (+)9	I	—
B	0.5	WH/L-GN	1305	High Speed GMLAN Serial Data (-)9	I	—

R50 Brake Booster Diode



5168702

Connector Part Information

Harness Type: Brake Booster
OEM Connector: 3991593C1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.5 DT Series, Sealed (GY)

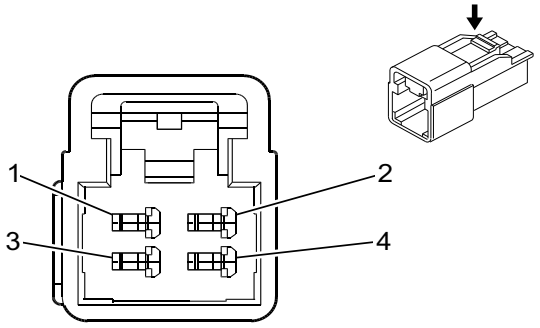
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-66 (YE)	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

R50 Brake Booster Diode

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.75	WH/BU	6311	Cruise/ETC/TCC Brake Signal	I	—
3	1	GY	90	Right Mirror Motor Left Control	I	—
4	1	GY	90	Right Mirror Motor Left Control	II	—

S3 Transmission Shift Lever



2099222

Connector Part Information

Harness Type: Steering Column
OEM Connector: HCMDWSB-04-K
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M HCM Series (BK)

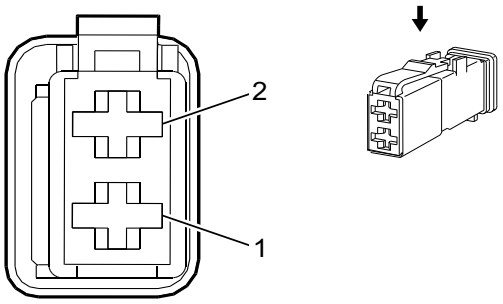
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-17 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S3 Transmission Shift Lever

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BU/GY	553	Shift Select Switch Performance Signal	I	—
2	0.35	BK/WH	1851	Signal Ground	I	—
3	0.35	VT/YE	5526	Tap Up/Tap Down Switch Signal	I	—
4	0.35	BK/WH	1851	Signal Ground	I	—

S5 Center Console Compartment Lamp Switch (D07)



1974969

Connector Part Information

Harness Type: Floor Console
OEM Connector: 10787635
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Timer Series (NA)

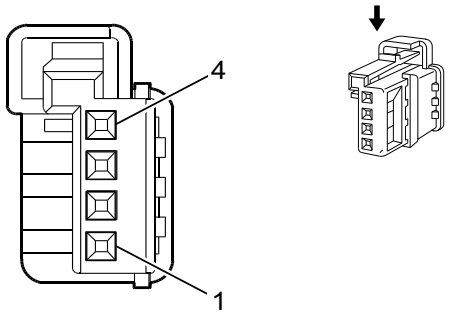
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S5 Center Console Compartment Lamp Switch (D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/BN	6815	Inadvertent Power Control	I	—
2	0.5	WH/BN	6815	Inadvertent Power Control	I	—

S12 Dome Lamp Switch



2667612

Connector Part Information

Harness Type: Overhead Console
OEM Connector: 13862319
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64 Micro-Quadlock Series (BN)

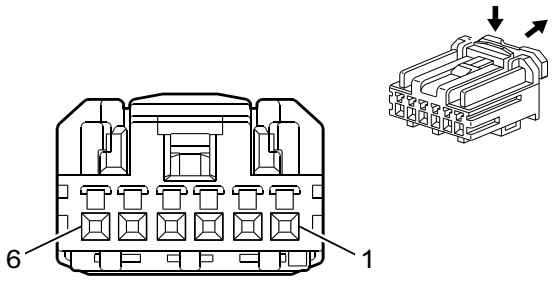
Terminal Part Information

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

S12 Dome Lamp Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1050	Ground	I	—
2	0.35	GY/L-GN	328	Interior Lamp Defeat Switch Signal	I	—
3	0.35	GY	156	Courtesy Lamp Switch Signal	I	—
4	0.35	YE	6817	LED Backlight Dimming Control	I	—

S13D Door Lock Switch - Driver (A31)



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)

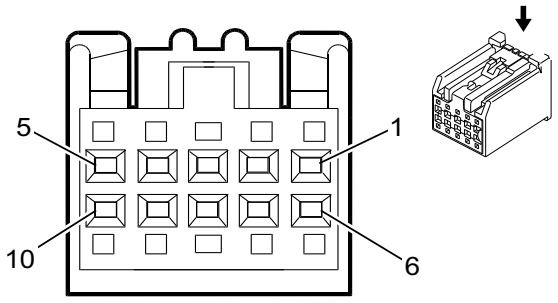
Terminal Part Information

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

S13D Door Lock Switch - Driver (A31)

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	BN/YE	780	Driver Door Lock Switch Lock Signal	I	—
4	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	I	—
5	0.35	BK	1150	Ground	I	—
6	—	—	—	Not Occupied	—	—

S13D Door Lock Switch - Driver (-A31)



2180211

Connector Part Information

Harness Type: Driver Door Trim
OEM Connector: 13815336
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 Kaizen Series (BK)

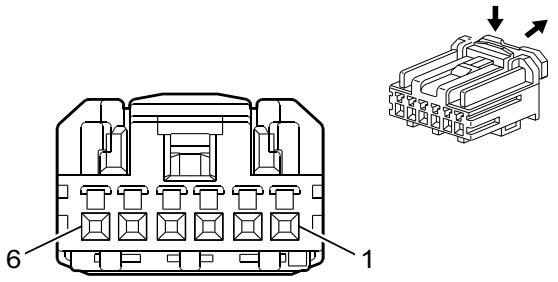
Terminal Part Information

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

S13D Door Lock Switch - Driver (-A31)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1150	Ground	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.35	YE	6817	LED Backlight Dimming Control	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	I	—
7	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	I	—
8 - 10	—	—	—	Not Occupied	—	—

S13P Door Lock Switch - Passenger (A31)



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)

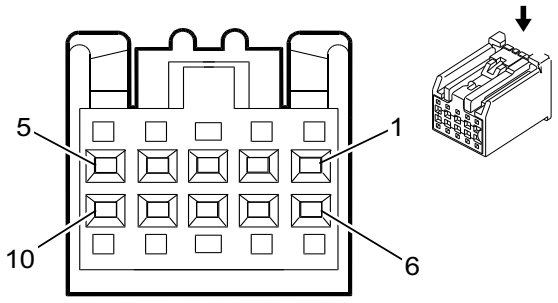
Terminal Part Information

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

S13P Door Lock Switch - Passenger (A31)

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	YE/VT	244	Passenger Door Lock Switch Lock Control	I	—
4	0.35	BN/VT	245	Passenger Door Lock Switch Unlock Control	I	—
5	0.35	BK	1250	Ground	I	—
6	—	—	—	Not Occupied	—	—

S13P Door Lock Switch - Passenger (-A31)



2180211

Connector Part Information

Harness Type: Passenger Door Trim
OEM Connector: 13815336
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 Kaizen Series (BK)

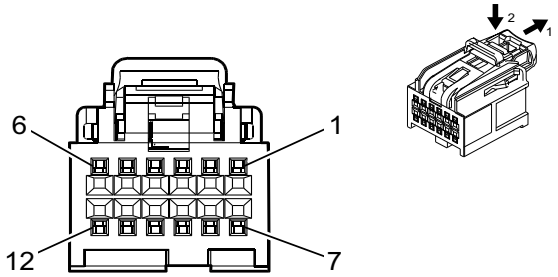
Terminal Part Information

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

S13P Door Lock Switch - Passenger (-A31)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1250	Ground	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.35	YE	6817	LED Backlight Dimming Control	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	YE/VT	244	Passenger Door Lock Switch Lock Control	I	—
7	0.35	BN/VT	245	Passenger Door Lock Switch Unlock Control	I	—
8 - 10	—	—	—	Not Occupied	—	—

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)

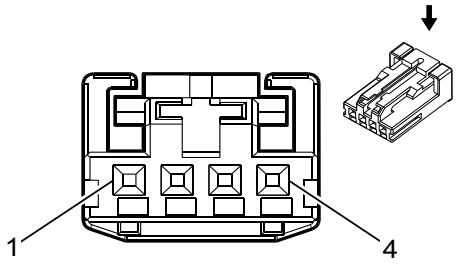
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	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	0.5	YE	6817	LED Backlight Dimming Control	I	—
3	0.35	L-GN/BN	306	Headlamp Switch Headlamps Off Signal Control	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	L-GN/GY	13	Headlamp Switch Park Lamp Signal	I	—
6	—	—	—	Not Occupied	—	—
7	0.35	BK/YE	5005	Instrument Panel Lamp Dimmer Switch Low Reference	I	—
8	0.5	BK	1850	Ground	I	—
9	—	—	—	Not Occupied	—	—
10	0.35	D-BU/GY	192	Front Fog Lamp Switch Signal	I	—
11	0.35	YE/GY	44	Instrument Panel Lamp Dimmer Switch Signal	I	—
12	0.35	D-BU/RD	1688	5V Reference	I	—

S32D Seat Heating Switch - Driver (KA1)



2717162

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13853727
Service Connector: 19367524
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

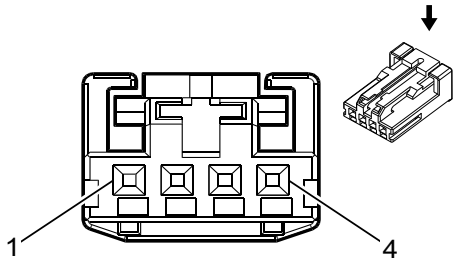
Terminal Part Information

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

S32D Seat Heating Switch - Driver (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1850	Ground	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	L-GN/WH	7527	Local Interconnect Network Serial Data Bus 5	I	—
4	0.35	RD/GY	2840	Battery Positive Voltage	I	—

S32P Seat Heating Switch - Passenger (KA1)



2717162

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13853727
Service Connector: 19367524
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

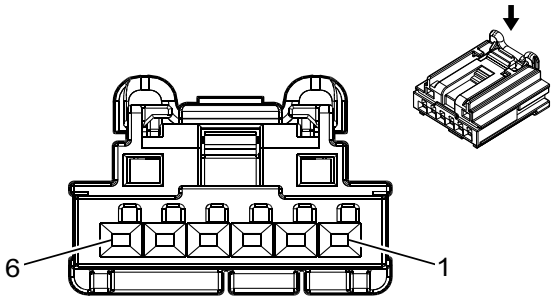
Terminal Part Information

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

S32P Seat Heating Switch - Passenger (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD/GY	2840	Battery Positive Voltage	I	—
2	0.5	L-GN/WH	7527	Local Interconnect Network Serial Data Bus 5	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	BK	1850	Ground	I	—

S39 Ignition Switch



3960313

Connector Part Information

Harness Type: Steering Column
OEM Connector: 13583825
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Generation Y Series (BK)

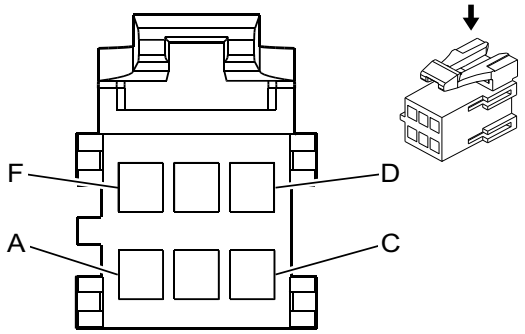
Terminal Part Information

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

S39 Ignition Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	VT/BK	3	Run/Crank Ignition 1 Voltage	I	—
3	0.5	VT/YE	4	Accessory Ignition Voltage	I	—
4	0.35	RD/BU	540	Battery Positive Voltage	I	—
5	0.5	WH/VT	1020	Off/Run/Crank Ignition Voltage	I	—
6	0.5	WH/BK	1073	Ignition Key Resistor Signal	I	—

S40 Passenger Air Bag Disable Switch (C99)



362753

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15305286
Service Connector: 15306014
Description: 6-Way F 150 Metri-Pack Series (YE)

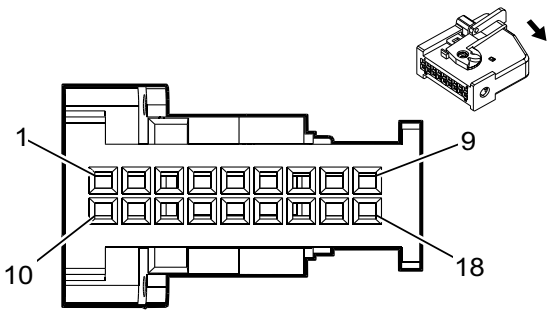
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S40 Passenger Air Bag Disable Switch (C99)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	D-BU/OG	7328	Passenger IP Module Disable Switch Low Reference	I	—
B - C	—	—	—	Not Occupied	—	—
D	0.35	VT/OG	371	Passenger IP Module Disable Switch Signal	I	—
E - F	—	—	—	Not Occupied	—	—

S48A Multifunction Switch - Instrument Panel X1



3240103

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 10820548
Service Connector: 13584100
Description: 18-Way F 0.64 Series (BK)

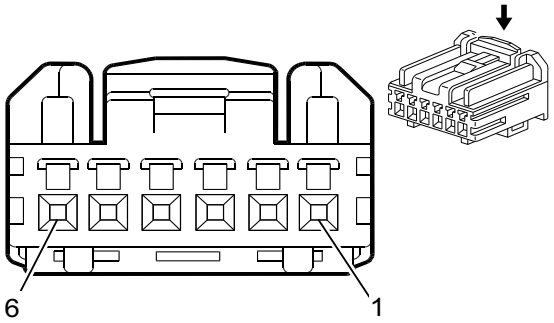
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575782	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
II	13575783	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

S48A Multifunction Switch - Instrument Panel X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control	II	—
2	0.35	WH	6816	Indicator Dimming Control	II	—
3	—	—	—	Not Occupied	—	—
4	0.5	VT/WH	239	Run/Crank Ignition 1 Voltage	I	—
5	0.5	BN/L-GN	603	A/C Low Pressure Switch Signal	I	—
6	—	—	—	Not Occupied	—	—
7	0.5	BN/WH	1429	Standing Lamp Relay Control	I	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.5	WH/D-BU	964	—	I	—
11	0.5	L-GN/GY	963	—	I	—
12	0.5	RD/WH	961	—	I	—
13	0.5	YE/WH	962	—	I	—
14	0.5	BK	1850	Ground	I	—
15 - 16	—	—	—	Not Occupied	—	—
17	0.35	D-BU/VT	1788	Traction Control Switch Signal 1	II	—
18	0.5	GY	158	Cargo Lamp Switch Signal	I	—

S48A Multifunction Switch - Instrument Panel X2



1664548

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15488869
Service Connector: 19115655
Description: 6-Way F 0.64 HCM Series (BK)

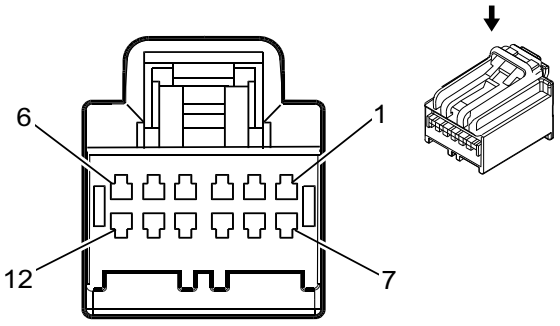
Terminal Part Information

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

S48A Multifunction Switch - Instrument Panel X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BN/L-GN	4311	Power Take Off Enable In Cab Switch Normally Closed Signal	I	—
2	0.35	L-GN/WH	488	Power Take Off Control Switch	I	—
3	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	I	—
4	0.5	L-GN/YE	2081	Exhaust Brake Switch Control	I	—
5	0.35	L-GN/WH	3438	Exhaust Brake Switch Signal	I	—
6	—	—	—	Not Occupied	—	—

S52 Outside Rearview Mirror Switch (DPN)



3556661

Connector Part Information

Harness Type: Driver Door Trim
OEM Connector: 13950638
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 64 Series, Sealed (GY)

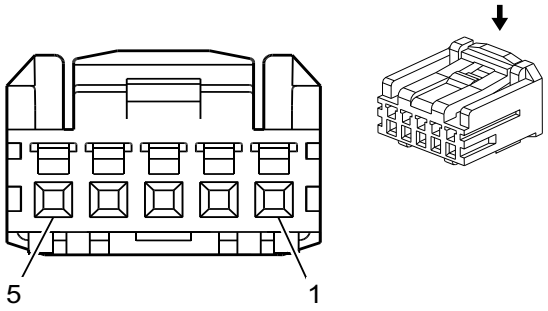
Terminal Part Information

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

S52 Outside Rearview Mirror Switch (DPN)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE/VT	3397	Passenger Mirror Motor Up (+) Down (-) Control	I	—
2	0.75	WH/L-GN	3412	Driver Mirror Motor Fold In Control	I	—
3	0.75	YE/BN	3391	Driver Mirror Motor Common Control	I	—
4	0.75	L-GN/BK	3396	Passenger Mirror Motor Right (+) Left (-) Control	I	—
5	0.75	BK	1150	Ground	I	—
6	0.35	YE	6817	LED Backlight Dimming Control	I	—
7	0.75	VT/D-BU	3390	Driver Mirror Motor Up (+) Down (-) Control	I	—
8	0.75	WH	3398	Passenger Mirror Motor Common Control	I	—
9	0.75	GY/WH	3411	Driver Mirror Motor Fold Out Control	I	—
10	0.75	BN/BK	3389	Driver Mirror Motor Right (+) Left (-) Control	I	—
11	—	—	—	Not Occupied	—	—
12	0.75	RD/VT	1940	Battery Positive Voltage	I	—

S63 Roof Beacon Switch (TRW)



1673494

Connector Part Information

Harness Type: Overhead Console
OEM Connector: 15491277
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way F HCM Series (BK)

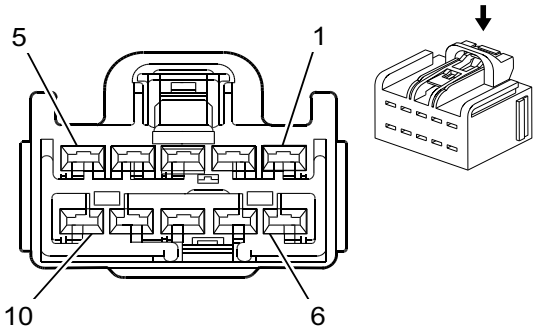
Terminal Part Information

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

S63 Roof Beacon Switch (TRW)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1050	Ground	I	—
2	0.5	YE	6817	LED Backlight Dimming Control	I	—
3	0.5	RD/YE	240	Battery Positive Voltage	I	—
4	0.5	WH/BK	5990	Emergency Lamp Switch Signal	I	—
5	—	—	—	Not Occupied	—	—

S64D Seat Adjuster Switch - Driver X1 (A95/AG1)



1856796

Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 7283-6457-40
Service Connector: Service by Harness - See Part Catalog
Description: 10-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-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

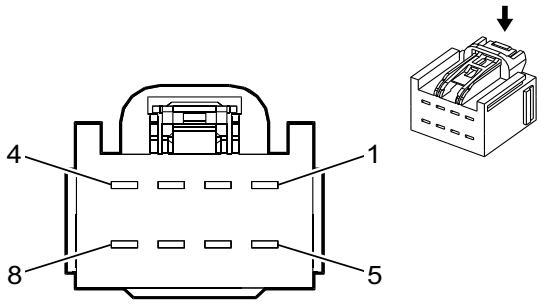
S64D Seat Adjuster Switch - Driver X1 (A95/AG1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5 1.5	L-GN/BN L-GN/BN	1518 286	Power Seat Front Vertical Up Switch Signal Driver Power Seat Front Vertical Motor Up Control	I I	CREW CAB 43 STANDARD CAB 03
2	2.5	BK	1150	Ground	I	—
3	0.5 1.5	YE/BN YE/L-BU	1522 285	Power Seat Horizontal Forward Switch Signal Driver Power Seat Horizontal Motor Forward Control	I I	CREW CAB 43 STANDARD CAB 03
4	0.5 1.5	GY/BK L-GN/YE	1269 276	Power Seat Recline Forward Switch Signal Driver Power Seat Recline Motor Forward Control	I I	CREW CAB 43 STANDARD CAB 03
5	0.5 1.5	L-BU/VT L-BU/VT	1520 287	Power Seat Front Vertical Down Switch Signal Driver Power Seat Front Vertical Motor Down Control	I I	CREW CAB 43 STANDARD CAB 03
6	0.35 2.5	BK RD/YE	1150 5040	Ground Battery Positive Voltage	I I	CREW CAB 43 STANDARD CAB 03
7	0.5 1.5	GY/L-GN GY/L-GN	1523 284	Power Seat Horizontal Rearward Switch Signal Driver Power Seat Horizontal Motor Rearward Control	I I	CREW CAB 43 STANDARD CAB 03
8	0.5 1.5	YE YE	1519 282	Power Seat Rear Vertical Up Switch Signal Driver Power Seat Rear Vertical Motor Up Control	I I	CREW CAB 43 STANDARD CAB 03

S64D Seat Adjuster Switch - Driver X1 (A95/AG1) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
9	0.5 1.5	L-GN/GY L-BU/YE	1270 277	Power Seat Recline Rearward Switch Signal Driver Power Seat Recline Motor Rearward Control	I I	CREW CAB 43 STANDARD CAB 03
10	0.5 1.5	YE/L-BU GY/L-BU	1521 283	Power Seat Rear Vertical Down Switch Signal Driver Power Seat Rear Vertical Motor Down Control	I I	CREW CAB 43 STANDARD CAB 03

S64D Seat Adjuster Switch - Driver X2 (A95/AG1)



2832199

Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 7283-3243-40
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 2.8 Series (L-GY)

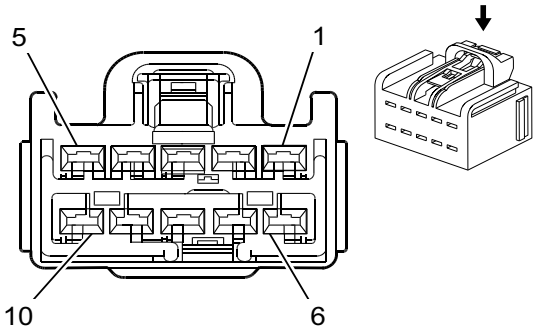
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S64D Seat Adjuster Switch - Driver X2 (A95/AG1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	1066	Driver Seat Lumbar Up Switch Signal	I	—
2	0.5 1.5	YE L-BU	1065 611	Driver Seat Lumbar Forward Switch Signal Driver Power Seat Lumbar Motor Forward Control	I I	CREW CAB 43 STANDARD CAB 03
3 - 4	—	—	—	Not Occupied	—	—
5	0.5	YE/BK	1067	Driver Seat Lumbar Down Switch Signal	I	—
6	0.5 1.5	L-BU/VT VT	1064 610	Driver Seat Lumbar Rearward Switch Signal Driver Power Seat Lumbar Motor Rearward Control	I I	CREW CAB 43 STANDARD CAB 03
7 - 8	—	—	—	Not Occupied	—	—

S64P Seat Adjuster Switch - Passenger X1 (A95)



1856796

Connector Part Information

Harness Type: Passenger Seat Cushion
OEM Connector: 7283-6457-40
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F YESC Kaizen Series (L-GY)

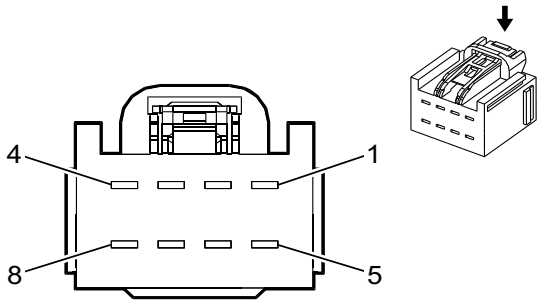
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S64P Seat Adjuster Switch - Passenger X1 (A95)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	1.5	L-GN	76	Passenger Power Seat Recline Motor Forward Control	I	—
3	1.5	YE/WH	296	Passenger Power Seat Horizontal Motor Forward Control	I	—
4	—	—	—	Not Occupied	—	—
5	2.5	BK	1250	Ground	I	—
6	—	—	—	Not Occupied	—	—
7	1.5	L-BU/BN	77	Passenger Power Seat Recline Motor Rearward Control	I	—
8	—	—	—	Not Occupied	—	—
9	1.5	YE/L-BU	290	Passenger Power Seat Horizontal Motor Rearward Control	I	—
10	2.5	RD/BN	1440	Battery Positive Voltage	I	—

S64P Seat Adjuster Switch - Passenger X2 (A95)



2832199

Connector Part Information

Harness Type: Passenger Seat Cushion
OEM Connector: 7283-3243-40
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 2.8 Series (L-GY)

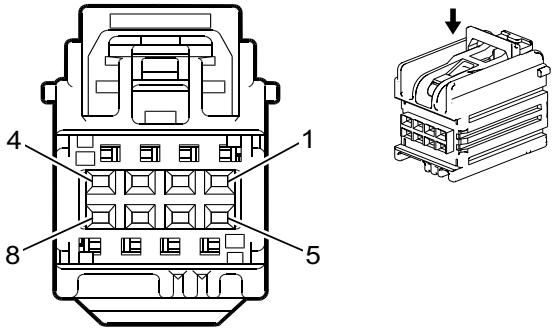
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S64P Seat Adjuster Switch - Passenger X2 (A95)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	1.5	VT	210	Passenger Power Seat Lumbar Motor Rearward Control	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	1.5	L-BU	211	Passenger Power Seat Lumbar Motor Forward Control	I	—
7 - 8	—	—	—	Not Occupied	—	—

S76 Trailer Brake Control Switch (J71)



1716517

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13518475
Service Connector: 13576542
Description: 8-Way F YESC Kaizen Series (BK)

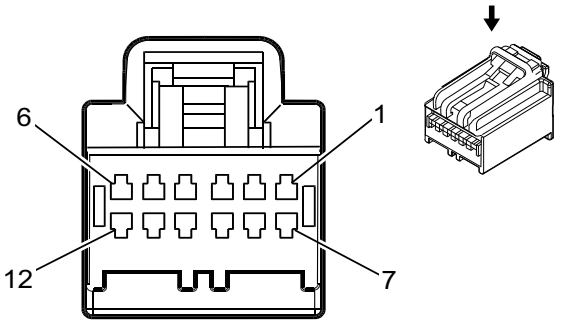
Terminal Part Information

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

S76 Trailer Brake Control Switch (J71)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	D-BU/RD	7632	Integrated Trailer Brake Controller Switch 5V Reference	I	—
4	0.5	YE	7635	Integrated Trailer Brake Controller Manual Apply Signal	I	—
5	0.5	BN	7634	Integrated Trailer Brake Controller Redundant Manual Apply Signal	I	—
6	0.5	L-GN/BK	7633	Integrated Trailer Brake Controller User Gain Signal	I	—
7	0.35	YE	6817	LED Backlight Dimming Control	I	—
8	0.5	BK/BN	7631	Integrated Trailer Brake Controller Switch Low Reference	I	—

S77 Transfer Case Shift Control Switch (NQF)



3556661

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13587624
Service Connector: 19151154
Description: 12-Way F 64 Series, Sealed (GY)

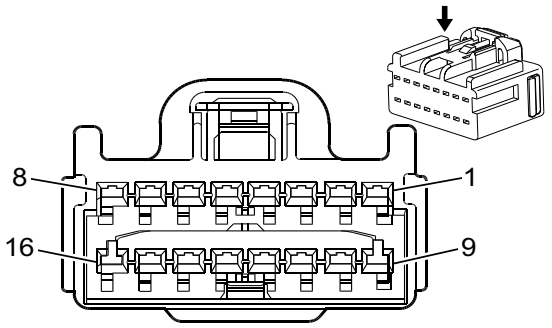
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575742	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

S77 Transfer Case Shift Control Switch (NQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.35	VT/BN	300	Run Ignition 3 Voltage	II	—
3	0.35	BN	1560	Neutral Indicator Control	II	—
4	0.35	WH	6816	Indicator Dimming Control	II	—
5	0.35	YE	6817	LED Backlight Dimming Control	II	—
6	0.5	BK	1050	Ground	I	—
7	—	—	—	Not Occupied	—	—
8	0.35	L-GN/BK	1563	2 HI Indicator Control	II	—
9	0.35	BN/BK	1566	4 HI Indicator Control	II	—
10	0.35	VT/WH	1565	4 LO Indicator Control	II	—
11	0.35	GY/RD	6029	Four Wheel Drive Mode Switch 5V Reference	II	—
12	0.35	D-BU/YE	1693	Four Wheel Drive Switch Signal	II	—

S78 Turn Signal/Multifunction Switch X1



1592558

Connector Part Information

Harness Type: Steering Column
OEM Connector: 7283-6453-60
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 1.5 Kaizen Series (GN)

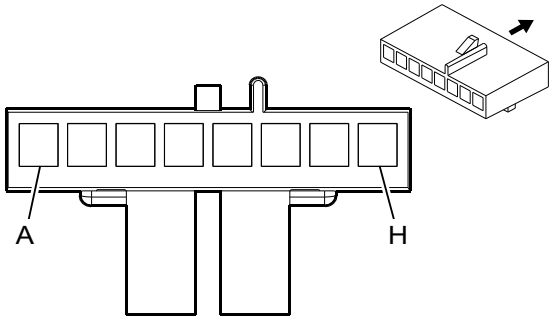
Terminal Part Information

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

S78 Turn Signal/Multifunction Switch X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	GY	1715	Windshield Wiper Switch High Signal	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	WH/BK	94	Windshield Washer Switch Signal	I	—
7	0.35	BK/GY	6009	Windshield Wiper Switch Low Reference	I	—
8	0.35	YE/BU	1714	Windshield Wiper Switch Low Signal	I	—
9	—	—	—	Not Occupied	—	—
10	0.35	YE/BN	307	Headlamp Switch Flash To Pass Signal	I	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.35	BK/WH	1851	Signal Ground	I	—
14	0.35	WH	524	Headlamp Dimmer Switch High Beam Signal	I	—
15 - 16	—	—	—	Not Occupied	—	—

S78 Turn Signal/Multifunction Switch X2



39746

Connector Part Information

Harness Type: Steering Column
OEM Connector: 15466859
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 150 Metri-Pack Series (L-GY)

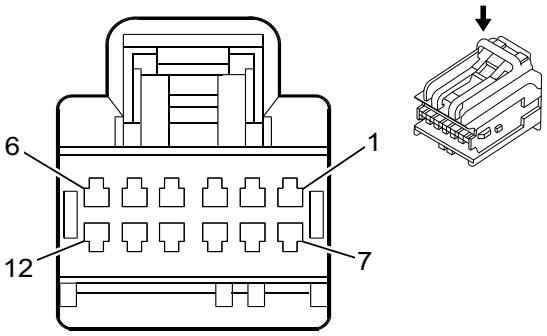
Terminal Part Information

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

S78 Turn Signal/Multifunction Switch X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A - B	—	—	—	Not Occupied	—	—
C	0.35	BK/WH	1851	Signal Ground	I	—
D	0.35	VT/BU	664	Hazard Switch Right Turn Signal	I	—
E	0.35	WH/GN	663	Hazard Switch Left Turn Signal	I	—
F	0.35	BK/WH	1851	Signal Ground	I	—
G	0.35	GN/WH	111	Hazard Switch Signal	I	—
H	—	—	—	Not Occupied	—	—

S79D Window Switch - Driver (A31)



1664569

Connector Part Information

Harness Type: Driver Door Trim
OEM Connector: 13950639
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 0.64 Series, Sealed (BK)

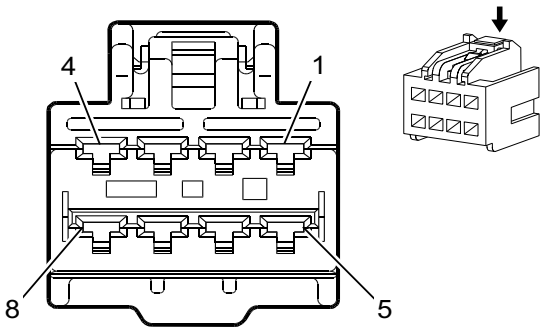
Terminal Part Information

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

S79D Window Switch - Driver (A31)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	1150	Ground	I	—
2	0.35	L-GN/VT	7628	Power Window Motor Left Front Express Control	I	—
3	0.35	GY	1136	Power Window Master Switch Left Front Down Signal	I	—
4	0.5	RD/VT	1940	Battery Positive Voltage	I	—
5	0.5	L-GN/YE	6134	Local Interconnect Network Serial Data Bus 3	I	—
6	0.35	L-GN/WH	1300	Power Window Master Switch Left Front Up Signal	I	—
7	0.35	WH/VT	3270	Driver Door Lock Motor Status Signal	I	—
8	0.35	D-BU/VT	1124	Door Lock Key Switch Unlock Signal	I	—
9	—	—	—	Not Occupied	—	—
10	0.35	YE/BN	3265	Child Security Lock Switch Signal	I	—
11	0.35	WH	6816	Indicator Dimming Control	I	—
12	0.35	GY	5697	Child Lockout Indicator Control	I	—

S79LR Window Switch - Left Rear (Crew Cab)



1653389

Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 15491286
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 2.8 Series (BK)

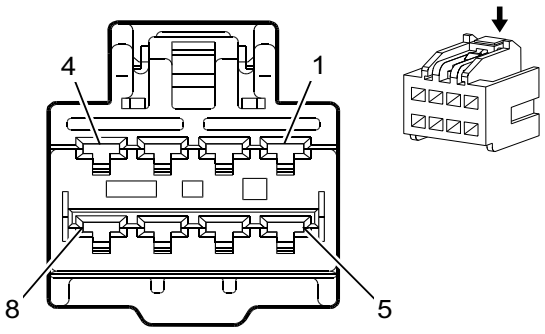
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S79LR Window Switch - Left Rear (Crew Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/GY	6135	Local Interconnect Network Serial Data Bus 4	I	—
2	0.35	GY/WH	747	Left Rear Door Ajar Switch Signal	I	—
3	0.5	BK	1150	Ground	I	—
4	—	—	—	Not Occupied	—	—
5	2.5	BK	1150	Ground	I	—
6	2.5	D-BU/VT	668	Power Window Motor Left Rear Up Control	I	—
7	2.5	YE/D-BU	669	Power Window Motor Left Rear Down Control	I	—
8	2.5	RD/D-BU	1842	Battery Positive Voltage	I	—

S79P Window Switch - Passenger (A31)



1653389

Connector Part Information

Harness Type: Passenger Door Trim
OEM Connector: 15491286
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 2.8 Series (BK)

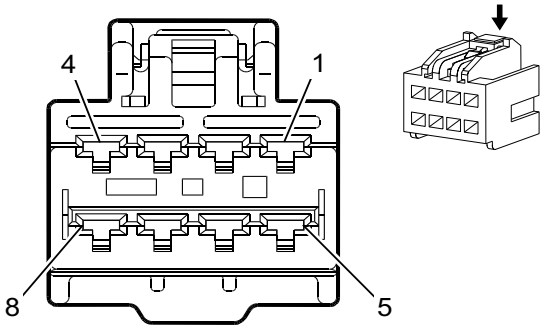
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S79P Window Switch - Passenger (A31)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BK	1250	Ground	I	—
2	2.5	L-GN/GY	3387	Power Window Motor Passenger Up Control	I	—
3	2.5	YE/D-BU	3388	Power Window Motor Passenger Down Control	I	—
4	2.5	RD/WH	1340	Battery Positive Voltage	I	—
5	0.5	L-GN/YE	6134	Local Interconnect Network Serial Data Bus 3	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.35	GY	746	Right Front Door Ajar Switch Signal	I	—

S79RR Window Switch - Right Rear (Crew Cab)



1653389

Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 15491286
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 2.8 Series (BK)

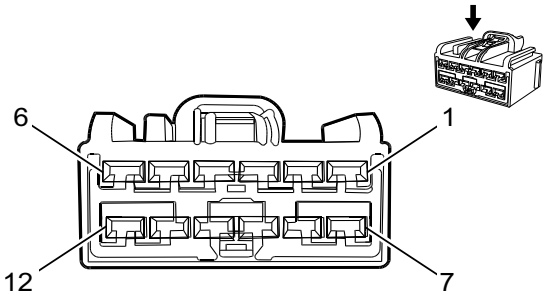
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S79RR Window Switch - Right Rear (Crew Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/GY	6135	Local Interconnect Network Serial Data Bus 4	I	—
2	0.35	GY/WH	748	Right Rear Door Ajar Switch Signal	I	—
3 - 4	—	—	—	Not Occupied	—	—
5	2.5	BK	1250	Ground	I	—
6	2.5	D-BU/GY	670	Power Window Motor Right Rear Up Control	I	—
7	2.5	L-GN/BK	671	Power Window Motor Right Rear Down Control	I	—
8	2.5	RD/WH	1340	Battery Positive Voltage	I	—

T1 Accessory DC/AC Power Inverter Module (KI4)



2231648

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 10846814
Service Connector: 13580444
Description: 12-Way F 2.8 Kaizen Series (L-GY)

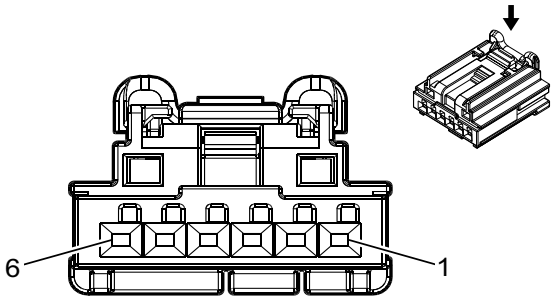
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575839	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19300649	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301752	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19368264	J-35616-35 (VT)	J-38125-11A	7116-4112-02	Yazaki 9	C	D

T1 Accessory DC/AC Power Inverter Module (KI4)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	1.5	BK	5683	120 V AC Phase A	III	—
3 - 5	—	—	—	Not Occupied	—	—
6	2.5	RD/GY	4140	Battery Positive Voltage	IV	—
7	1.5	RD	5684	120 V AC Phase B	III	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.5	Bare	514	Low Reference	I	—
11	2.5	BK	1050	Ground	III	—
12	0.35	D-BU/BN	6807	DC To AC Inverter Control	II	—

T22 Mobile Device Wireless Charger Module (K4C)



3960313

Connector Part Information

Harness Type: Wireless Charger
OEM Connector: 13920633
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Generation Y Series (BK)

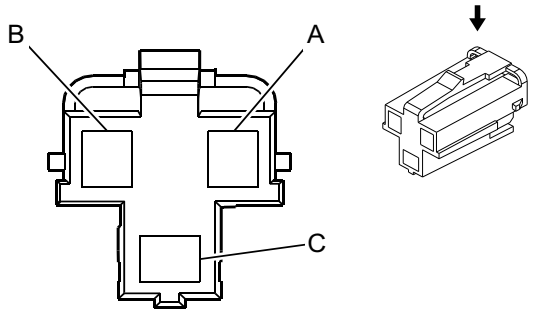
Terminal Part Information

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

T22 Mobile Device Wireless Charger Module (K4C)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/YE	43	Accessory Ignition Voltage	I	—
2	0.75	BK	1050	Ground	I	—
3	0.35	L-GN	4512	Wireless Charging System Charge Indicator Control	I	—
4 - 6	—	—	—	Not Occupied	—	—

X80D Accessory Power Receptacle - Center Console Compartment (AE7/AZ3)



362748

Connector Part Information

Harness Type: Center Seat
OEM Connector: 12176836
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 280 Metri-Pack Series (GY)

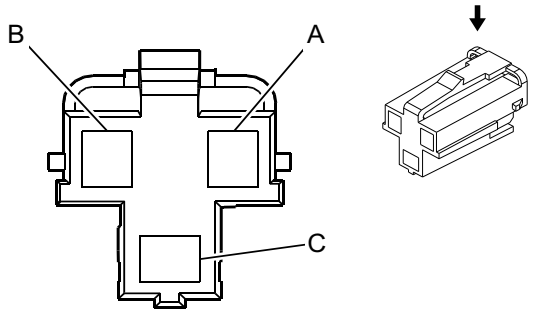
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80D Accessory Power Receptacle - Center Console Compartment (AE7/AZ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/YE	243	Accessory Ignition Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1250	Ground	I	—

X80D Accessory Power Receptacle - Center Console Compartment (D07)



362748

Connector Part Information

Harness Type: Floor Console
OEM Connector: 12176836
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 280 Metri-Pack Series (GY)

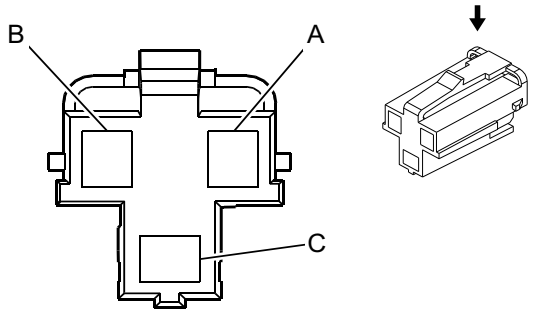
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80D Accessory Power Receptacle - Center Console Compartment (D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/YE	143	Accessory Ignition Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X80E Accessory Power Receptacle - Center Seat (AZ3)



362748

Connector Part Information

Harness Type: Center Seat
OEM Connector: 12176836
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 280 Metri-Pack Series (GY)

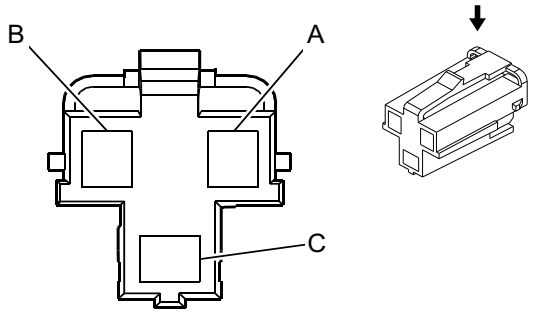
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80E Accessory Power Receptacle - Center Seat (AZ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/YE	143	Accessory Ignition Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1250	Ground	I	—

X80G Accessory Power Receptacle - Instrument Panel (-D07)



362748

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12176836
Service Connector: 19257374
Description: 3-Way F 280 Metri-Pack Series (GY)

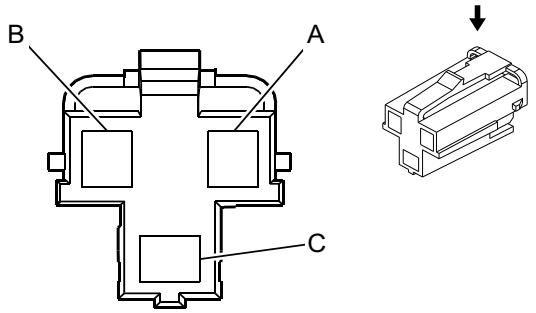
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80G Accessory Power Receptacle - Instrument Panel (-D07)

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	—

X80J Accessory Power Receptacle - Instrument Panel 1 (D07)



362748

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12176836
Service Connector: 19257374
Description: 3-Way F 280 Metri-Pack Series (GY)

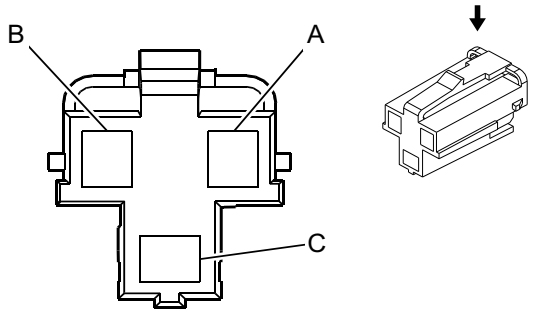
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80J Accessory Power Receptacle - Instrument Panel 1 (D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	RD/WH	1040	Battery Positive Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X80K Accessory Power Receptacle - Instrument Panel 2 (D07)



362748

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12176836
Service Connector: 19257374
Description: 3-Way F 280 Metri-Pack Series (GY)

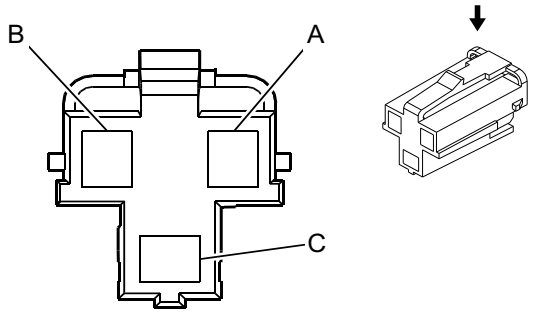
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80K Accessory Power Receptacle - Instrument Panel 2 (D07)

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 (D07)



362748

Connector Part Information

Harness Type: Floor Console
OEM Connector: 12176836
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 280 Metri-Pack Series (GY)

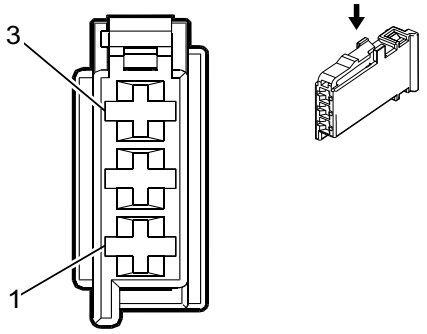
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80L Accessory Power Receptacle - Center Console Rear (D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/YE	243	Accessory Ignition Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X81 Accessory Power Receptacle - 110V AC X1 (KI4+D07)



2039656

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 10865339
Service Connector: 93186706
Description: 3-Way F 1.6 Micro-Timer Series (BK)

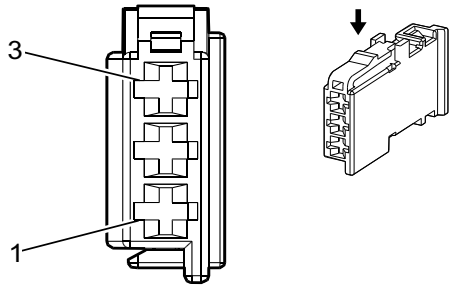
Terminal Part Information

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+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/BN	300	Run Ignition 3 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	1.5	BK	5683	120 V AC Phase A	I	—

X81 Accessory Power Receptacle - 110V AC X2 (KI4+D07)



2236412

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13648774
Service Connector: 19367740
Description: 3-Way F 1.6 Timer Series, Sealed (GY)

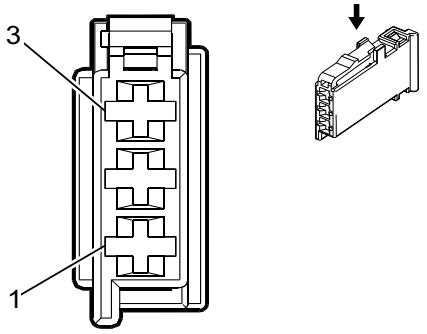
Terminal Part Information

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+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU/BN	6807	DC To AC Inverter Control	I	—
2	—	—	—	Not Occupied	—	—
3	1.5	RD	5684	120 V AC Phase B	I	—

X81 Accessory Power Receptacle - 110V AC X1 (KI4-D07)



2039656

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 10865339
Service Connector: 93186706
Description: 3-Way F 1.6 Micro-Timer Series (BK)

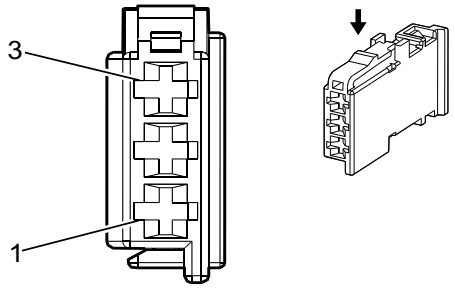
Terminal Part Information

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-D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/BN	300	Run Ignition 3 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	1.5	BK	5683	120 V AC Phase A	I	—

X81 Accessory Power Receptacle - 110V AC X2 (KI4-D07)



2236412

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13648774
Service Connector: 19367740
Description: 3-Way F 1.6 Timer Series, Sealed (GY)

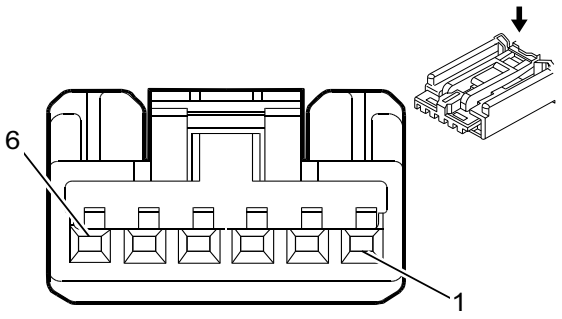
Terminal Part Information

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-D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU/BN	6807	DC To AC Inverter Control	I	—
2	—	—	—	Not Occupied	—	—
3	1.5	RD	5684	120 V AC Phase B	I	—

X83 Auxiliary Audio Input X1 (D07)



1862240

Connector Part Information

Harness Type: Floor Console
OEM Connector: 13595476
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Kaizen Series (BK)

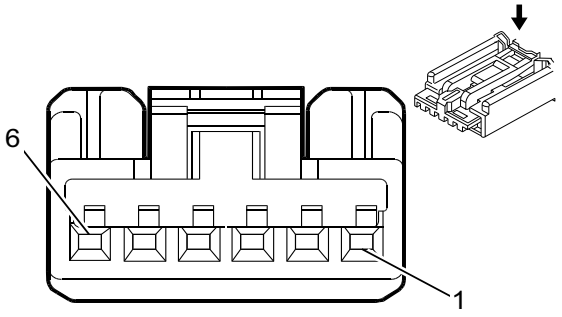
Terminal Part Information

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

X83 Auxiliary Audio Input X1 (D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	5839	Left Auxiliary Audio Signal 2	I	—
2	0.35	L-GN	5841	Right Auxiliary Audio Signal 2	I	—
3	0.35	VT	5843	Auxiliary Audio Common Signal	I	—
4	0.75	BK	2550	Ground	I	—
5	0.35	D-BU	2060	Auxiliary Detection Signal	I	—
6	0.75	RD/VT	340	Battery Positive Voltage	I	—

X83 Auxiliary Audio Input X1 (-D07)



1862240

Connector Part Information

Harness Type: Center Seat
OEM Connector: AIT2PB-06-1AK
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Kaizen Series (BK)

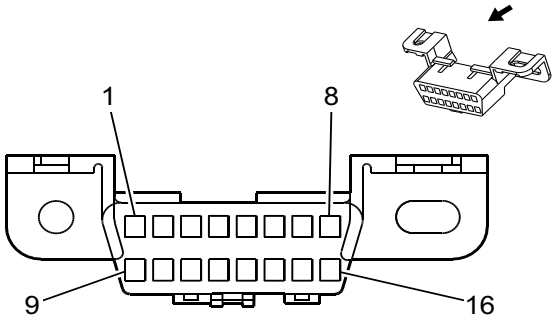
Terminal Part Information

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

X83 Auxiliary Audio Input X1 (-D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	5839	Left Auxiliary Audio Signal 2	I	—
2	0.35	L-GN	5841	Right Auxiliary Audio Signal 2	I	—
3	0.35	VT	5843	Auxiliary Audio Common Signal	I	—
4	0.35	BK	2550	Ground	I	—
5	0.35	L-BU	2060	Auxiliary Detection Signal	I	—
6	0.75	RD/VT	340	Battery Positive Voltage	I	—

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	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	0.5	L-GN	5060	Low Speed GMLAN Serial Data	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.5	BK	1050	Ground	I	—
5	0.5	BK/WH	1851	Signal Ground	I	—
6	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
7 - 11	—	—	—	Not Occupied	—	—
12	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
13	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
14	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
15	—	—	—	Not Occupied	—	—
16	0.35	RD/D-BU	3240	Battery Positive Voltage	I	—

X85 Steering Wheel Air Bag Coil X1

—

Connector Part Information

Harness Type: Steering Column
OEM Connector: AIT2PB-10-1-AK
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F

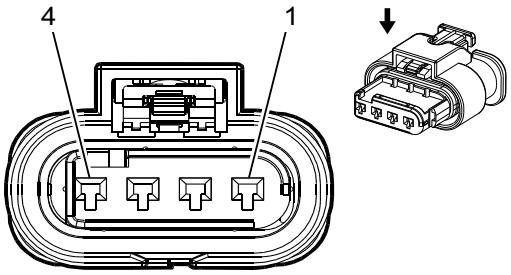
Terminal Part Information

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

X85 Steering Wheel Air Bag Coil X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD/YE	3040	Battery Positive Voltage	I	—
2	0.5	GN/BK	3894	Local Interconnect Network Serial Data Bus 12	I	—
4	0.35	GY/GN	5737	Adaptive Cruise Control Gap Up/Down Switch Signal	I	—
5	0.35	BN	6136	Control	I	—
6	0.35	WH/RD	1444	12V Reference	I	—
8	0.35	BN/GN	1884	Cruise Control Set/Coast/Resume/Accelerate Switch Signal	I	—
9	0.35	BK	1050	Ground	I	—
10	0.35	GN/WH	3287	Horn Switch Signal	I	—

X85 Steering Wheel Air Bag Coil X3



2684560

Connector Part Information

Harness Type: Body
OEM Connector: 13854531
Service Connector: 13586137
Description: 4-Way F 1.2 Series, Sealed (YE)

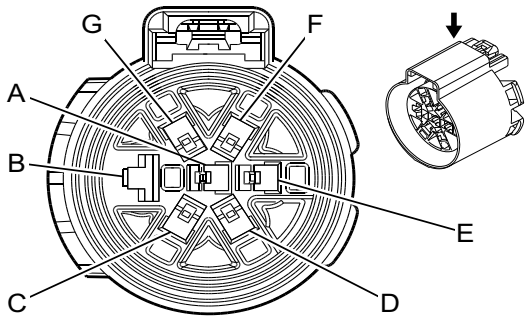
Terminal Part Information

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

X85 Steering Wheel Air Bag Coil X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	OG/VT	3021	Steering Wheel Module Stage 1 High Control	I	—
2	0.35	BN/OG	3020	Steering Wheel Module Stage 1 Low Control	I	—
3 - 4	—	—	—	Not Occupied	—	—

X88 Trailer Connector (UY7)



2056936

Connector Part Information

Harness Type: Chassis Rear Left
OEM Connector: 4088983C1
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F 280, 630 Metri-Pack Series, Sealed (BK)

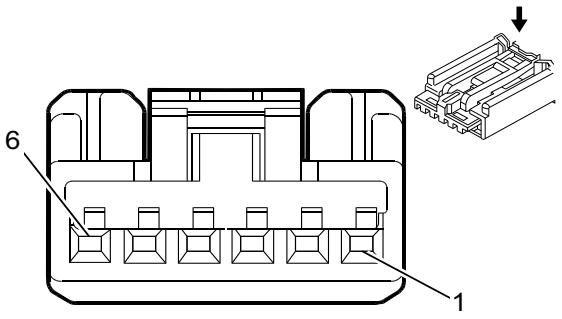
Terminal Part Information

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

X88 Trailer Connector (UY7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2.5	WH/GN	1624	Trailer Backup Lamp Control	I	—
B	5	BK	22	Trailer Ground	I	—
C	2.5	BU	47	Trailer Auxiliary Control	I	—
D	2.5	GN/BN	319	Right Rear Trailer Stop/Turn Lamp Control	I	—
E	2.5	RD/VT	1242	Battery Positive Voltage	I	—
F	2.5	GY/BN	2109	Trailer Park Lamp Control	I	—
G	2.5	YE/BU	318	Left Rear Trailer Stop/Turn Lamp Control	I	—

X92 USB Receptacle X1 (D07)



1862240

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13595476
Service Connector: 19367517
Description: 6-Way F 0.64 Kaizen Series (BK)

Terminal Part Information

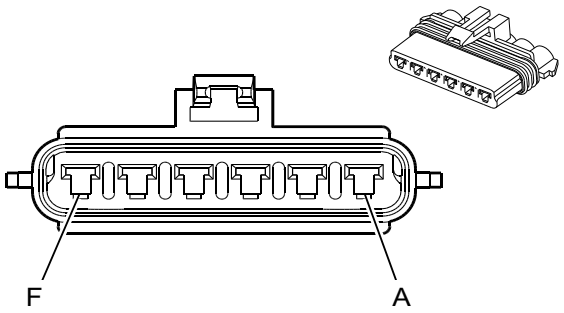
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X92 USB Receptacle X1 (D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	BK	2550	Ground	I	—
5	—	—	—	Not Occupied	—	—
6	0.75	RD/VT	340	Battery Positive Voltage	I	—

Splice Pack Connector End Views

JX100 Splice Pack



535933

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 3551896C1
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 280 Metri-Pack Series, Sealed (BK)

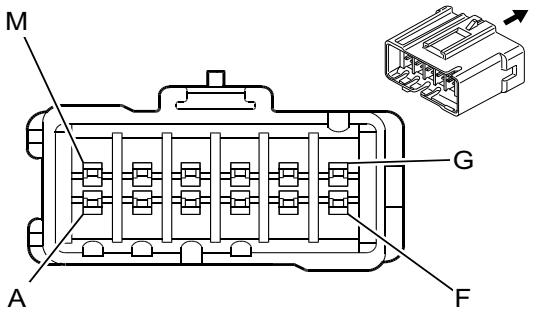
Terminal Part Information

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

JX100 Splice Pack

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	BK	10	Headlamp Switch Signal	I	—
B	1.5	BK	150	Ground	I	—
C	1	BK	139	Run/Crank Ignition 1 Voltage	I	—
D	1	BK	603	A/C Low Pressure Switch Signal	I	—
E - F	—	—	—	Not Occupied	—	—

JX200 Splice Pack



831366

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15305291
Service Connector: 13576417
Description: 12-Way F 280 Metri-Pack Series (BK)

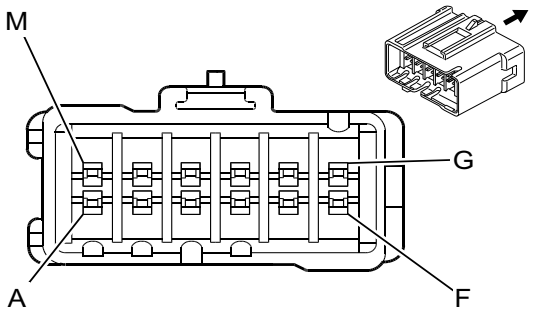
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575721	J-35616-4A (PU)	J-38125-553	12110844	Delphi 4	E	4
II	13575721	J-35616-4A (PU)	J-38125-553	12110844	Delphi 4	E	A

JX200 Splice Pack

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-GN	5060	Low Speed GMLAN Serial Data	II	—
B - D	—	—	—	Not Occupied	—	—
E	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
F - H	—	—	—	Not Occupied	—	—
J	0.5	L-GN	5060	Low Speed GMLAN Serial Data	II	—
K	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
L	—	—	—	Not Occupied	—	—
M	0.5	L-GN	5060	Low Speed GMLAN Serial Data	II	—

JX300 Splice Pack



831366

Connector Part Information

Harness Type: Body
OEM Connector: 15305291
Service Connector: 13576417
Description: 12-Way F 280 Metri-Pack Series (BK)

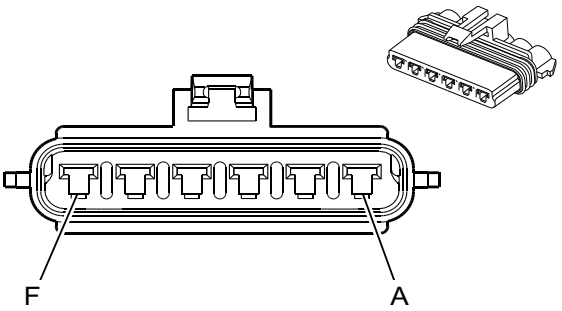
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575721	J-35616-4A (PU)	J-38125-553	12110844	Delphi 4	E	A

JX300 Splice Pack

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-GN	5060	Low Speed GMLAN Serial Data	I	—
B - H	—	—	—	Not Occupied	—	—
J	0.5	L-GN	5060	Low Speed GMLAN Serial Data	I	—
K - L	—	—	—	Not Occupied	—	—
M	0.5	L-GN	5060	Low Speed GMLAN Serial Data	I	—

JX301 Splice Pack



535933

Connector Part Information

Harness Type: Chassis
OEM Connector: 3551896C1
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 280 Metri-Pack Series, Sealed (BK)

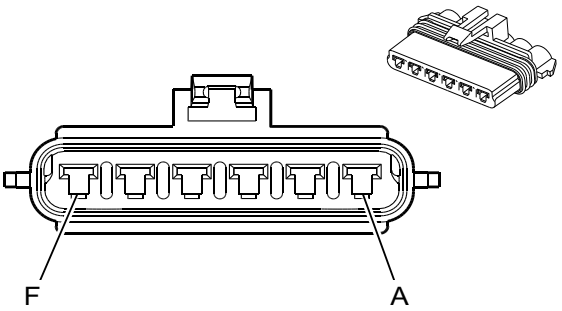
Terminal Part Information

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

JX301 Splice Pack

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	3	BK	11	Headlamp High Beam Control	I	—
B	1	BK	1750	Ground	I	—
C	1.5	BK	2150	Ground	I	—
D	1.5	BK	2150	Ground	I	—
E	3	BK	2150	Ground	I	—
F	1.5	BK	2150	Ground	I	—

JX302 Splice Pack



535933

Connector Part Information

Harness Type: Chassis
OEM Connector: 3551896C1
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 280 Metri-Pack Series, Sealed (BK)

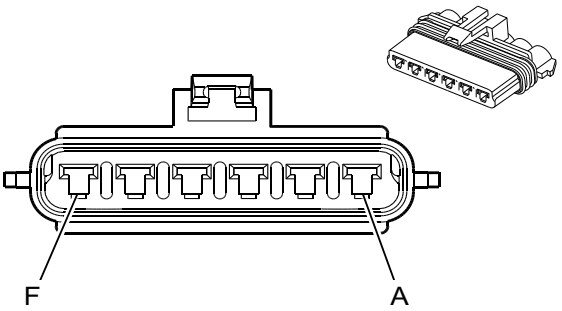
Terminal Part Information

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

JX302 Splice Pack

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	3	BK	11	Headlamp High Beam Control	I	—
B	3	BK	1750	Ground	I	—
C	1.5	BK	2150	Ground	I	—
D	3	BK	2150	Ground	I	—
E	3	WH	90	Right Mirror Motor Left Control	I	—
F	—	—	—	Not Occupied	—	—

JX402 Splice Pack



535933

Connector Part Information

Harness Type: Chassis Rear Right
OEM Connector: 3551896C1
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 280 Metri-Pack Series, Sealed (BK)

Terminal Part Information

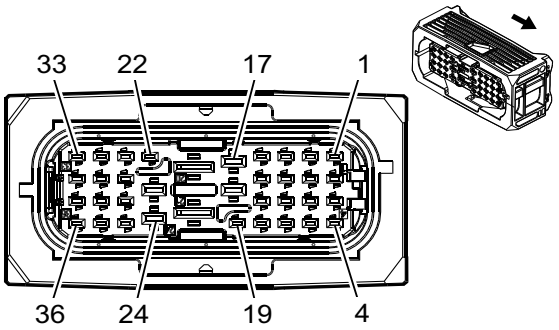
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

JX402 Splice Pack

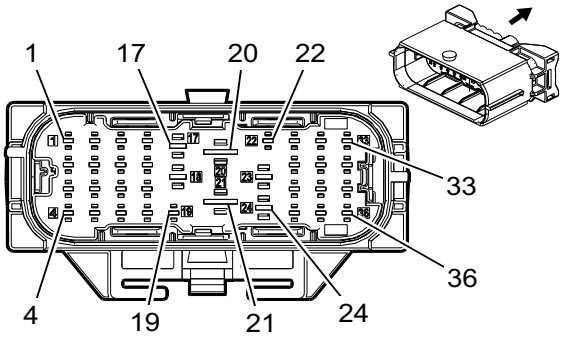
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	3	BK	10	Headlamp Switch Signal	I	—
B	3	BK	10	Headlamp Switch Signal	I	—
C	1	BK	1430	Exterior Courtesy Lamp Control	I	—
D	1	BK	1624	Trailer Backup Lamp Control	I	—
E	0.75	BK	2550	Ground	I	—
F	1.5	BK	10	Headlamp Switch Signal	I	—

Inline Harness Connector End Views

X101 Engine Chassis Harness to Engine Harness



4204560



3960400

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13929980
Service Connector: 19333092
Description: 36-Way F 1.5, 2.8 CTS, 6.3 MCP Series (BK)

Connector Part Information

Harness Type: Engine
OEM Connector: 13930004
Service Connector: 19330685
Description: 36-Way M 1.5, 2.8, 5.8 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	19301776	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
II	19329757	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
III	19333088	J-35616-35 (VT)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
IV	19368624	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	13575380	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	13581368	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VII	19331731	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X101 Engine Chassis Harness to Engine Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	D-BU/BN	4498	II	—	High Speed GMLAN Serial Data (+) 7	1	0.5	BU/BN	4498	VII	—
2	0.5	WH	4499	II	—	High Speed GMLAN Serial Data (-) 7	2	0.5	WH	4499	VII	—
3	0.5	D-BU	2500	I	—	High Speed GMLAN Serial Data (+) 1	3	0.5	BU	2500	VII	—
4	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	4	0.5	WH	2501	VII	—

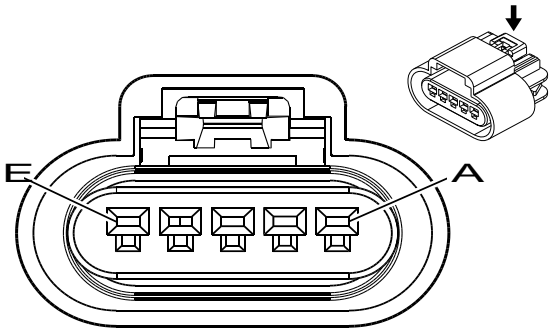
X101 Engine Chassis Harness to Engine Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
5	0.5	BK/BN	6782	II	—	Exhaust Gas Temperature Sensor 1 Low Reference	5	0.5	BK/BN	6782	VII	—
6	0.5	D-BU/WH	5277	II	—	Exhaust Gas Temperature Sensor 1	6	0.5	BU/WH	5277	VII	—
7	0.5	BK/D-BU	6783	II	—	Exhaust Gas Temperature Sensor 2 Low Reference	7	0.5	BK/BU	6783	VII	—
8	0.5	D-BU/L-GN	5377	II	—	Exhaust Gas Temperature Sensor 2	8	0.5	BU/GN	5377	VII	—
9	0.5	BK/D-BU	6274	II	—	Exhaust Gas Recirculation Temperature Sensor Low Reference	9	0.5	BK/BU	6274	VII	—
10	0.5	WH/BN	3237	II	—	Exhaust Gas Recirculation Temperature Sensor Signal	10	0.5	WH/BN	3237	VII	—
11	0.5	BK/YE	6275	II	—	Exhaust Gas Recirculation Temperature Sensor 2 Low Reference	11	0.5	BK/YE	6275	VII	—
12	0.5	YE/L-GN	3236	II	—	Exhaust Gas Recirculation Temperature Sensor 2 Signal	12	0.5	YE/GN	3236	VII	—
13	0.5	YE/BK	3682	II	—	Charge Air Cooler Inlet Temperature Sensor Low Reference	13	0.5	YE/BK	3682	VII	—
14	0.5	L-GN	3683	II	—	Charge Air Cooler Inlet Temperature Sensor Signal	14	0.5	GN	3683	VII	—
15	0.5	BN/BK	2929	II	—	Fuel Metering Valve Low Control	15	0.5	BN/BK	2929	VII	—
16	0.5	YE	2928	II	—	Fuel Metering Valve High Control	16	0.5	YE	2928	VII	—
17	0.5	VT/YE	5985	IV	—	Accessory Wakeup Serial Data	17	0.5	VT/YE	443	VI	—
18	0.5	VT/BK	2139	IV	—	Run/Crank Ignition 1 Voltage	18	0.5	VT/BK	2139	VI	—
19 - 21	—	—	—	—	—	Not Occupied	19 - 21	—	—	—	—	—

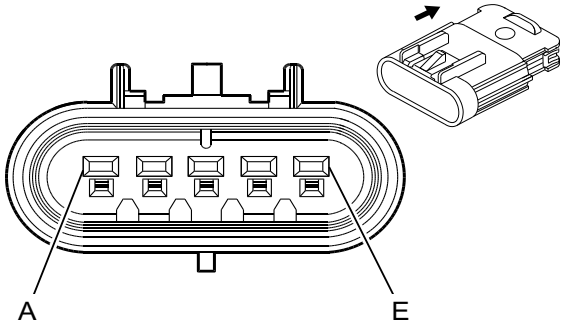
X101 Engine Chassis Harness to Engine Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
22	0.5	VT/D-BU	3674	I	—	NOx Sensor 1 Control	22	0.5	VT/BU	3674	V	—
23	0.5	GY	23	III	—	Generator Field Duty Cycle Signal	23	0.5	GY	23	VI	—
24	0.75	BN	25	III	—	Charge Indicator Control	24	0.5	BN	25	VI	—
25	0.5	BN/RD	7445	II	—	Fuel Line Pressure Sensor 5V Reference	25	0.5	BN/RD	7445	VII	—
26	0.5	BK/YE	7447	II	—	Fuel Line Pressure Sensor Low Reference	26	0.5	BK/YE	7447	VII	—
27	0.5	D-BU/WH	7446	II	—	Fuel Line Pressure Sensor Signal	27	0.5	BU/WH	7446	VII	—
28	—	—	—	—	—	Crankshaft Position Sensor Replicated Signal	28	0.5	VT/BU	6091	VII	—
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	0.5	D-BU/L-GN	7071	II	—	Heater Fuel Control	30	0.5	BU/GN	7071	VII	—
31	—	—	—	—	—	Hydrocarbon Injector Low Control	31	0.5	VT/BN	2927	VII	—
32	—	—	—	—	—	Hydrocarbon Injector High Control	32	0.5	BN/BU	2926	VII	—
33	0.5	D-BU/BN	4498	II	—	High Speed GMLAN Serial Data (+) 7	33	0.5	BU/BN	4498	VII	—
34	0.5	WH	4499	II	—	High Speed GMLAN Serial Data (-) 7	34	0.5	WH	4499	VII	—
35	0.5	D-BU	2500	I	—	High Speed GMLAN Serial Data (+) 1	35	0.5	BU	2500	VII	—
36	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	36	0.5	WH	2501	VII	—

X102 Engine Chassis Harness to Engine Cooling Fan Harness



647974



1334521

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13519051
Service Connector: 13585858
Description: 5-Way F 150 GT Series, Sealed (BK)

Connector Part Information

Harness Type: Engine Cooling Fan
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M (BK)

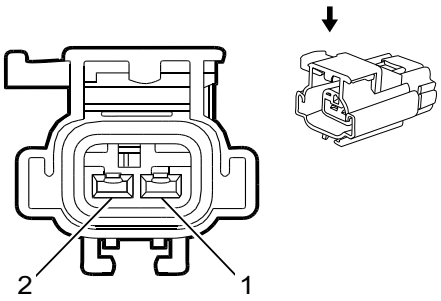
Terminal Part Information

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
II	Not Required	Not Available	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

X102 Engine Chassis Harness to Engine Cooling Fan Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	BK	550	I	—	Ground	A	—	GN	550	II	—
B	0.5	WH	2368	I	—	Cooling Fan Control Signal	B	—	RD	2368	II	—
C	0.5	BK/BN	6141	I	—	Cooling Fan Speed Low Reference	C	—	BK	6141	II	—
D	0.5	BU/VT	2364	I	—	Cooling Fan Speed Signal	D	—	WH	2364	II	—
E	0.5	GY/RD	2365	I	—	Cooling Fan Speed 5V Reference	E	—	OG	2365	II	—

X103 Forward Lamp Harness to Horn Jumper Harness



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2323609

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 3626435C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed (BK)

Connector Part Information

Harness Type: Horn Jumper
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M

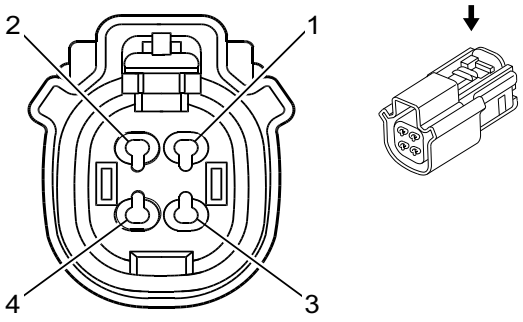
Terminal Part Information

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

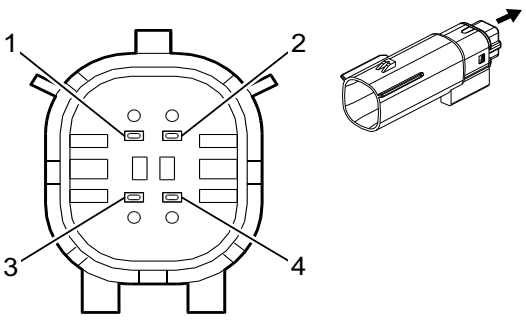
X103 Forward Lamp Harness to Horn Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BN/GY	29	I	—	Horn Control	1	1	BN/GY	29	II	—
2	1	BK	85	I	—	Cruise Control Engaged Indicator	2	1	BK	85	II	—

X105 Engine Chassis Harness to Engine Chassis Harness



1960031



2368875

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 33346391
Service Connector: 19366645
Description: 4-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 33344515
Service Connector: 19330396
Description: 4-Way M 150 MX Series, Sealed (BK)

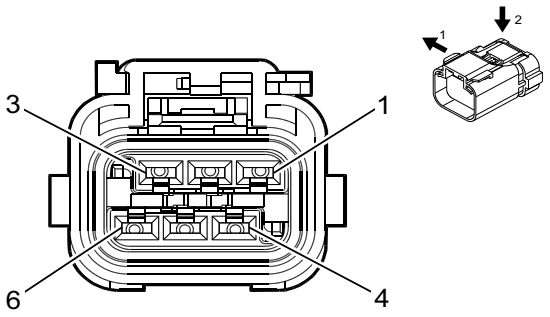
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (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

X105 Engine Chassis Harness to Engine Chassis Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	YE/BK	625	I	—	Starter Enable Relay Control	1	0.5	YE/BK	625	II	—
2	0.75	BN	25	I	—	Charge Indicator Control	2	0.75	BN	25	II	—
3	0.5	YE/BK	625	I	—	Starter Enable Relay Control	3	0.5	YE/BK	625	II	—
4	0.75	BN	25	I	—	Charge Indicator Control	4	0.75	BN	25	II	—

X107 Left Snow Plow Tee Harness to Left Snow Plow Headlight Harness (UNL)



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4997615

Connector Part Information

Harness Type: Left Snow Plow Tee
OEM Connector: 3612305C1
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 2.8 APEX Series, Sealed (BK)

Connector Part Information

Harness Type: Left Snow Plow Headlight
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way M

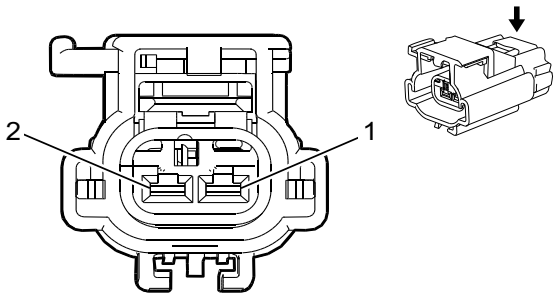
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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

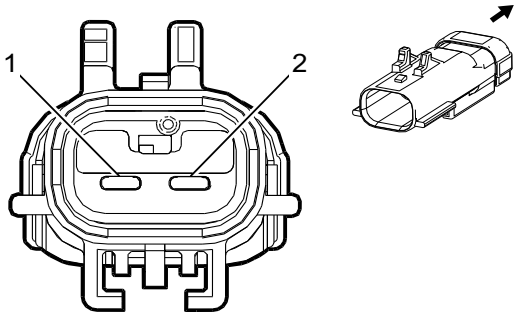
X107 Left Snow Plow Tee Harness to Left Snow Plow Headlight Harness (UNL)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	BK	250	I	—	Ground	1	—	—	—	II	—
2	1.5	YE	712	I	—	Left Headlamp Low Beam Control	2	—	—	—	II	—
3	1.5	WH	711	I	—	Left Headlamp High Beam Control	3	—	—	—	II	—
4	1.5	GY/BU	7538	I	—	Left Front DRL Control	4	—	—	—	II	—
5	1.5	VT/GY	709	I	—	Left Park Lamp Control	5	—	—	—	II	—
6	1.5	BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	6	—	—	—	II	—

X108 Forward Lamp Harness to Left Fog Lamp Jumper Harness (T3U)



2474690



2474698

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 6105358C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 APEX Series, Sealed (BK)

Connector Part Information

Harness Type: Left Fog Lamp Interconnect
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M

Terminal Part Information

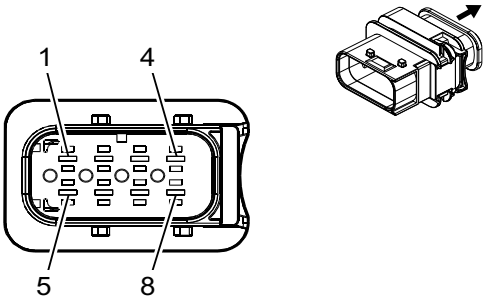
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	No Tool Required	No Tool Required	Not Required	Not Required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

X108 Forward Lamp Harness to Left Fog Lamp Jumper Harness (T3U)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	BN/VT	2234	I	—	Front Fog Lamp Control	1	1.5	BN/VT	2234	II	—
2	1.5	BK	150	I	—	Ground	2	1.5	BK	150	II	—

X109 Left Headlight Jumper Harness to Forward Lamp Harness

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4975769

Connector Part Information

Harness Type: Left Headlight Interconnect
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 4100563C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 2.8 Series, Sealed (BK)

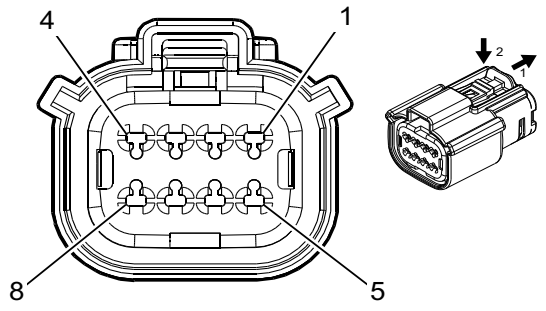
Terminal Part Information

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

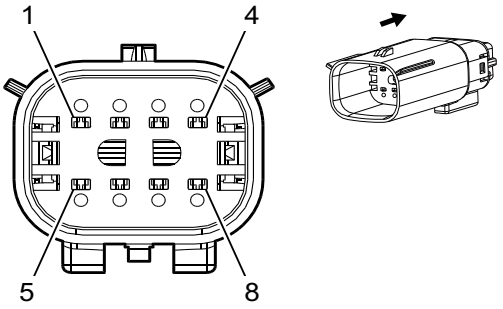
X109 Left Headlight Jumper Harness to Forward Lamp Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	YE	712	I	—	Left Headlamp Low Beam Control	1	1	YE	712	II	—
2	1	VT/GY	709	I	—	Left Park Lamp Control	2	1	VT/GY	709	II	—
3	1	BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	3	1	BU/WH	1314	II	—
4	1	BN/GN	109	I	—	Hood Ajar Switch Signal	4	1	BN/GN	109	II	—
5	1	WH	711	I	—	Left Headlamp High Beam Control	5	1	WH	711	II	—
6	1	GY/BU	7538	I	—	Left Front DRL Control	6	1	GY/BU	7538	II	—
7	1	YE	5530	I	—	Hood Open Switch Signal	7	1	YE	5530	II	—
8	1.5	BK	250	I	—	Ground	8	1.5	BK	250	II	—

X110 Left Snow Plow Tee Harness to Left Headlight Harness (UNL)



4846407



2667653

Connector Part Information

Harness Type: Left Snow Plow Tee
OEM Connector: 3709924C1
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Left Headlight
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

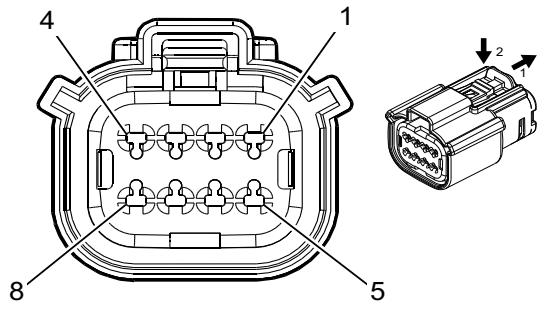
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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

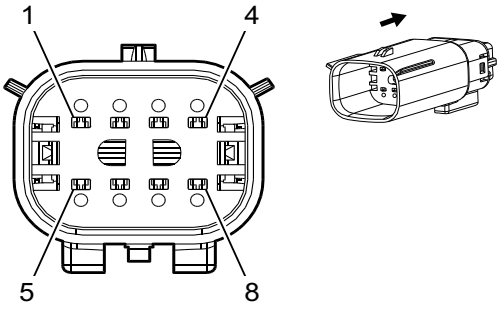
X110 Left Snow Plow Tee Harness to Left Headlight Harness (UNL)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	BK	250	I	—	Ground	1	1.5	BK	250	II	—
2	0.75	YE	712	I	—	Left Headlamp Low Beam Control	2	0.75	YE	712	II	—
3	0.75	WH	711	I	—	Left Headlamp High Beam Control	3	0.75	WH	711	II	—
4	0.75	GY/BU	7539	I	—	Right Front DRL Control	4	0.75	GY/BU	7539	II	—
5	0.75	VT/GY	709	I	—	Left Park Lamp Control	5	0.75	VT/GY	709	II	—
6	0.75	BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	6	0.75	BU/WH	1314	II	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—

X110 Left Headlight Jumper Harness to Left Headlight Harness (-UNL)



4846407



2667653

Connector Part Information

Harness Type: Left Headlight Jumper
OEM Connector: 3709924C1
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Left Headlight
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

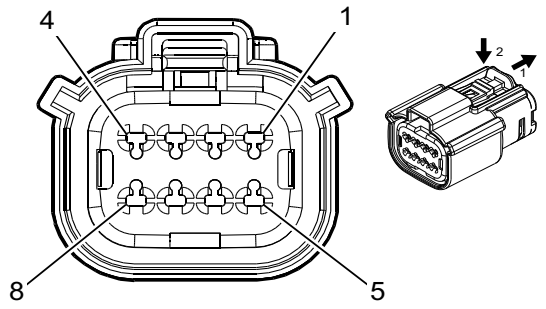
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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

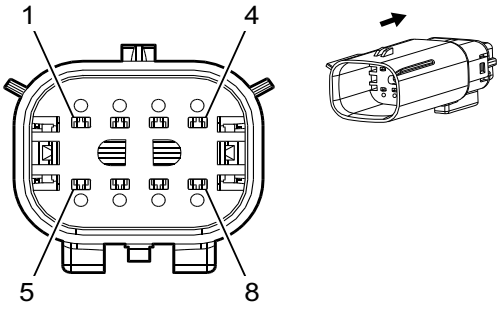
X110 Left Headlight Jumper Harness to Left Headlight Harness (-UNL)

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	712	I	—	Left Headlamp Low Beam Control	2	0.75	YE	712	II	—
3	0.75	WH	711	I	—	Left Headlamp High Beam Control	3	0.75	WH	711	II	—
4	0.75	GY/BU	7538	I	—	Left Front DRL Control	4	0.75	GY/BU	7538	II	—
5	0.75	VT/GY	709	I	—	Left Park Lamp Control	5	0.75	VT/GY	709	II	—
6	0.75	BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	6	0.75	BU/WH	1314	II	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—

X111 Left Headlight Jumper Harness to Left Snow Plow Tee Harness (UNL)



4846407



2667653

Connector Part Information

Harness Type: Left Headlight Jumper
OEM Connector: 3709924C1
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Left Snow Plow Tee
OEM Connector: 3709925C1
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M 150 MX Series, Sealed (BK)

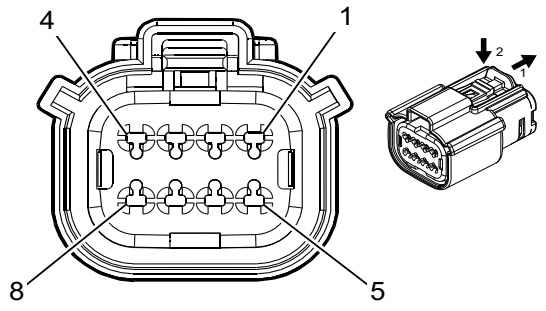
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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

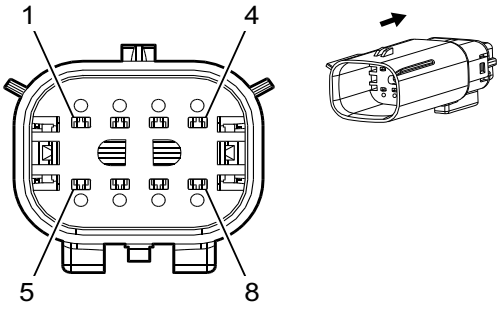
X111 Left Headlight Jumper Harness to Left Snow Plow Tee Harness (UNL)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	YE	712	I	—	Left Headlamp Low Beam Control	1	1.5	YE	712	II	—
2	1.5	VT/GY	709	I	—	Left Park Lamp Control	2	1.5	VT/GY	709	II	—
3	1.5	BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	3	1.5	BU/WH	1314	II	—
4	—	—	—	—	—	Not Occupied	4	—	—	—	—	—
5	1.5	WH	711	I	—	Left Headlamp High Beam Control	5	1.5	WH	711	II	—
6	1.5	GY/BU	7538	I	—	Left Front DRL Control	6	1.5	GY/BU	7538	II	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	1.5	BK	250	I	—	Ground	8	1.5	BK	250	II	—

X112 Engine Harness to Engine Jumper Harness



4846407



2667653

Connector Part Information

Harness Type: Engine
OEM Connector: 13520069
Service Connector: 19366859
Description: 8-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Engine Left
OEM Connector: 13520577
Service Connector: Service by Harness - See Part Catalog
Description: 8-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-35616-14 (GN)	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

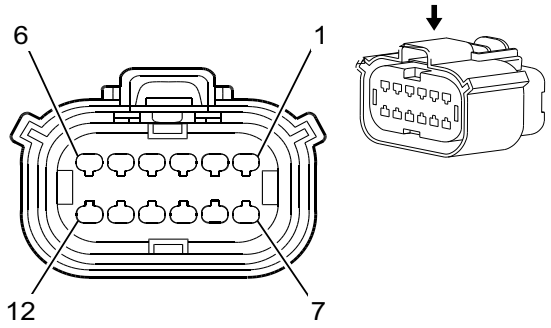
X112 Engine Harness to Engine Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT/BU	6270	I	—	Crankshaft 60X Sensor 5V Reference	1	0.5	VT/BU	6270	II	—
2	0.5	BK/VT	6272	I	—	Crankshaft 60X Sensor Low Reference	2	0.5	BK/VT	6272	II	—
3	0.5	GN	6271	I	—	Crankshaft 60X Sensor Signal	3	0.5	GN	6271	II	—
4	0.5	BN/RD	2917	I	—	Fuel Rail Pressure Sensor 5V Reference	4	0.5	BN/RD	2917	II	—
5	0.5	BK/GN	2919	I	—	Fuel Rail Pressure Sensor Low Reference	5	0.5	BK/GN	2919	II	—
6	0.5	BU/WH	2918	I	—	Fuel Rail Pressure Sensor Signal	6	0.5	BU/WH	2918	II	—

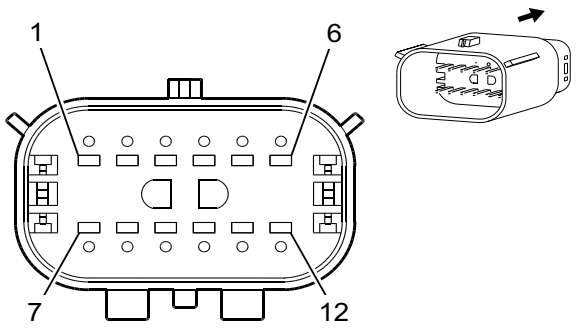
X112 Engine Harness to Engine Jumper Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.5	BN/YE	2161	I	—	Fuel Rail Pressure Sensor 2 Signal	7	0.5	BN/YE	2161	II	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X113 Engine Harness to Engine Jumper Harness



1825165



1825167

Connector Part Information

Harness Type: Engine
OEM Connector: 13503526
Service Connector: 13503528
Description: 12-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Engine Left
OEM Connector: 13520579
Service Connector: Service by Harness - See Part Catalog
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	13578813	J-35616-14 (GN)	J-38125-557	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

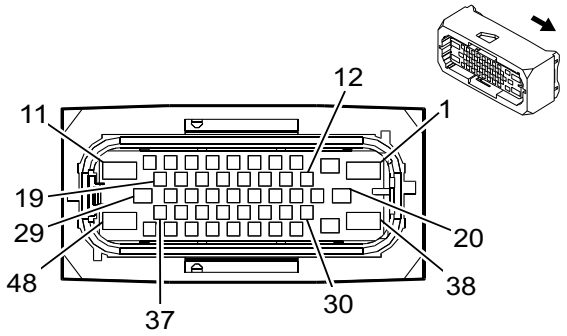
X113 Engine Harness to Engine Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	WH/RD	2705	I	—	Oil Pressure Sensor 5V Reference	1	0.5	WH/RD	2705	II	—
2	0.5	BK/VT	2755	I	—	Oil Pressure Sensor Low Reference	2	0.5	BK/VT	2755	II	—
3	0.5	YE/BN	331	I	—	Oil Pressure Sensor Signal	3	0.5	YE/BN	331	II	—
4	0.5	BU	410	I	—	Engine Coolant Temperature Sensor Signal	4	0.5	BU	410	II	—
5	0.5	BK/BN	2761	I	—	Coolant Temperature Sensor Low Reference	5	0.5	BK/BN	2761	II	—
6	0.5	BK/WH	251	I	—	Signal Ground	6	0.5	BK/WH	251	II	—
7	0.5	BN/GN	1174	I	—	Oil Level Switch Signal	7	0.5	BN/GN	1174	II	—
8 - 9	—	—	—	—	—	Not Occupied	8 - 9	—	—	—	—	—

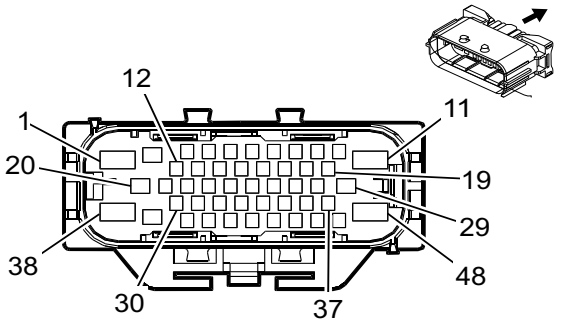
X113 Engine Harness to Engine Jumper Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
10	0.5	YE	2928	I	—	Fuel Metering Valve High Control	10	0.5	YE	2928	II	—
11	0.5	BN/BK	2929	I	—	Fuel Metering Valve Low Control	11	0.5	BN/BK	2929	II	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—

X115 Engine Harness to Body Harness



3240124



3240125

Connector Part Information

Harness Type: Engine Chassis

OEM Connector: 15509587

Service Connector: 19119963

Description: 48-Way F 1.5 MCP, 2.8 JPT, 6.3 MCP Series, Sealed (GY)

Connector Part Information

Harness Type: Body

OEM Connector: 15513437

Service Connector: 13586850

Description: 48-Way M 1.6, 2.8, 5.8 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	13580830	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
II	13580830	J-35616-4A (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
III	19301757	J-35616-40 (BU)	J-38125-556	1241408-1	Lear 28	B	G
IV	19301775	J-35616-40 (BU)	J-38125-556	1241408-1	Lear 28	C	A
V	19301776	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
VI	19329757	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
VII	13505807	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
VIII	13575233	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IX	13575350	J-35616-5 (PU)	J-38125-36	1-962915-3	Yazaki 15	E	1
X	13580827	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
XI	19329756	J-35616-32 (OR)	J-38125-36	Not Available	Not Available	Not Available	Not Available
XII	19352419	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

X115 Engine 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	—	—	—	—	—

X115 Engine Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
2	0.75	D-BU/BN	7573	II	—	Electric Variable Displacement Supply	2	0.5	D-BU/BN	7573	X	—
3	0.5	BN/WH	419	V	—	Check Engine Indicator Control	3	0.35	BN/WH	419	XII	—
4	0.5	WH/D-BU	6311	V	—	Cruise/ETC/TCC Brake Signal	4	0.5	WH/D-BU	6311	VII	—
5	0.5	WH	2501	V	—	High Speed GMLAN Serial Data (-) 1	5	0.5	WH	2501	VII	—
6	0.5	D-BU	2500	V	—	High Speed GMLAN Serial Data (+) 1	6	0.5	D-BU	2500	VII	—
7	0.5	WH	5359	V	—	Brake Apply Sensor Control	7	0.35	WH	5359	XII	—
8	0.5	BK/BN	5360	V	—	Brake Apply Sensor Low Reference	8	0.35	BK/BN	5360	XII	—
9	0.5	D-BU/YE	5361	V	—	Brake Apply Sensor Signal	9	0.35	D-BU/YE	5361	XII	—
10	0.5	YE/WH	1161	VI	—	Accelerator Pedal Position Signal 1	10	0.35	YE/WH	1161	VIII	—
11	3	BK	550	III	—	Ground	11	4	BK	550	XI	—
12 - 14	—	—	—	—	—	Not Occupied	12 - 14	—	—	—	—	—
15	0.75	YE	163	V	—	Folding Top Motor Down Control	15	0.75	YE	163	VII	—
16	0.5	VT/YE	5985	V	—	Accessory Wakeup Serial Data	16	0.35	VT/YE	5985	XII	—
17	0.5	WH/D-BU	5986	V	—	Serial Data Communication Enable	17	0.5	WH/D-BU	5986	VII	—
18	0.5	WH/RD	1164	VI	—	Accelerator Pedal Position 5V Reference 1	18	0.35	WH/RD	1164	VIII	—
19	0.5	BK/D-BU	1271	VI	—	Accelerator Pedal Position Low Reference 1	19	0.35	BK/D-BU	1271	VIII	—
20	0.75	D-BU/YE	7574	II	—	Electric Variable Displacement Control	20	0.5	D-BU/YE	7574	X	—
21	—	—	—	—	—	Not Occupied	21	—	—	—	—	—
22	0.5	D-BU/GY	7473	V	—	Incremental Encoder Impulse Signal	22	0.35	D-BU/GY	7473	XII	—

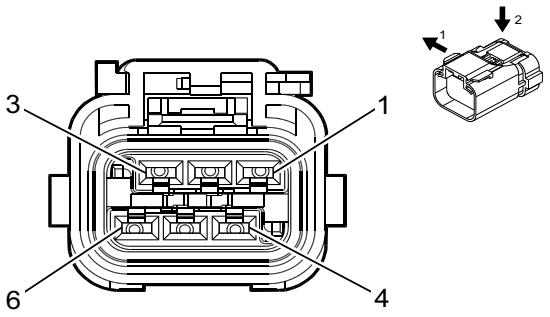
X115 Engine Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
23	0.5	VT	7476	V	—	Incremental Encoder Sensor Low Reference	23	0.35	VT	7476	XII	—
24	0.5	BK/WH	451	V	—	Signal Ground	24	0.5	BK/WH	451	VII	—
25	0.5	BN/RD	1274	VI	—	Accelerator Pedal Position 5V Reference 2	25	0.35	BN/RD	1274	VIII	—
26	0.5	L-GN/WH	1162	VI	—	Accelerator Pedal Position Signal 2	26	0.35	L-GN/WH	1162	VIII	—
27	0.5	BK/VT	1272	VI	—	Accelerator Pedal Position Low Reference 2	27	0.35	BK/VT	1272	VIII	—
28	—	—	—	—	—	Not Occupied	28	—	—	—	—	—
29	0.5	VT/D-BU	3674	I	—	NOx Sensor 1 Control	29	0.5	VT/D-BU	3674	X	—
30	0.5	WH/L-GN	7475	V	—	Incremental Encoder Sensor 8V Reference	30	0.35	WH/L-GN	7475	XII	—
31	—	—	—	—	—	Incremental Encoder Direction Signal	31	0.35	YE	7474	XII	—
32	0.5	D-BU/BN	4498	V	—	High Speed GMLAN Serial Data (+) 7	32	0.5	D-BU/BN	4498	VII	—
33	0.5	WH	4499	V	—	High Speed GMLAN Serial Data (-) 7	33	0.5	WH	4499	VII	—
34 - 36	—	—	—	—	—	Not Occupied	34 - 36	—	—	—	—	—
37	0.75	RD/D-BU	4540	V	—	Battery Positive Voltage	37	0.75	RD/D-BU	4540	VII	—
38	1	YE/VT	1553	IV	—	Transfer Case Motor Counter Clockwise Control	38	1	YE/VT	1553	XI	—
39	0.75	RD/VT	2640	II	—	Battery Positive Voltage	39	0.75	RD/VT	2640	IX	—
40	0.5	BN/L-GN	4311	V	—	Power Take Off Enable In Cab Switch Normally Closed Signal	40	0.35	BN/L-GN	4311	XII	—
41	0.5	L-GN/WH	488	V	—	Power Take Off Control Switch	41	0.35	L-GN/WH	488	XII	—
42	—	—	—	—	—	Not Occupied	42	—	—	—	—	—

X115 Engine Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
43	0.5	L-GN/ BN	507	V	—	Wait To Start Indicator Control	43	0.35	L-GN/ BN	507	XII	—
44	—	—	—	—	—	Not Occupied	44	—	—	—	—	—
45	0.5	D-BU/ GY	636	V	—	Outside Ambient Air Temperature Sensor Signal	45	0.35	D-BU/ GY	636	XII	—
46	0.5	BK/D-BU	61	V	—	Outside Ambient Temperature Sensor Low Reference	46	0.35	BK/D-BU	61	XII	—
47	—	—	—	—	—	Not Occupied	47	—	—	—	—	—
48	1	OG	1552	IV	—	Transfer Case Motor Clockwise Control	48	1	YE/ GY	1552	XI	—

X117 Right Snow Plow Tee Harness to Right Snow Plow Headlight Harness (UNL)



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4997615

Connector Part Information

Harness Type: Right Snow Plow Tee
OEM Connector: 3612305C1
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 2.8 APEX Series, Sealed (BK)

Connector Part Information

Harness Type: Right Snow Plow Headlight
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way M

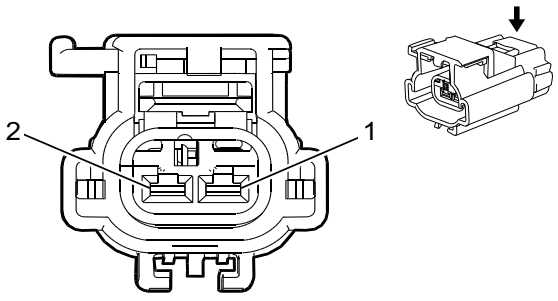
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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

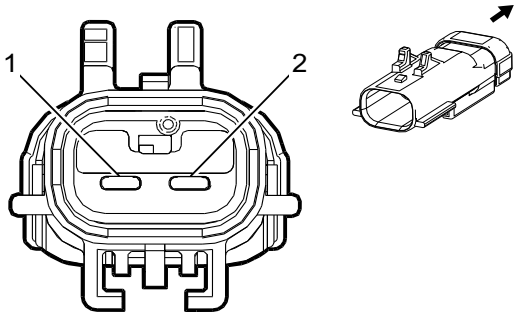
X117 Right Snow Plow Tee Harness to Right Snow Plow Headlight Harness (UNL)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	BK	250	I	—	Ground	1	1.5	BK	250	II	—
2	1.5	YE	712	I	—	Left Headlamp Low Beam Control	2	1.5	YE	712	II	—
3	1.5	WH	711	I	—	Left Headlamp High Beam Control	3	1.5	WH	711	II	—
4	1.5	GY/BU	7538	I	—	Left Front DRL Control	4	1.5	GY/BU	7538	II	—
5	1.5	VT/GY	709	I	—	Left Park Lamp Control	5	1.5	VT/GY	709	II	—
6	1.5	BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	6	1.5	BU/WH	1314	II	—

X118 Forward Lamp Harness to Right Fog Lamp Jumper Harness (T3U)



2474690



2474698

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 6105358C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 APEX Series, Sealed (BK)

Connector Part Information

Harness Type: Right Fog Lamp Interconnect
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M

Terminal Part Information

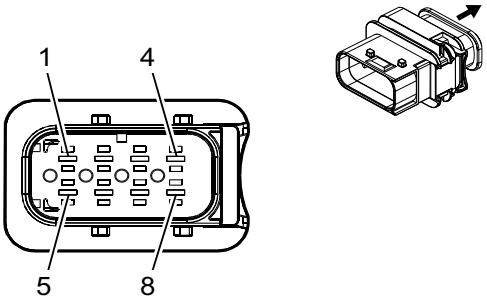
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	No Tool Required	No Tool Required	Not Required	Not Required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

X118 Forward Lamp Harness to Right Fog Lamp Jumper Harness (T3U)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	BN/VT	2234	I	—	Front Fog Lamp Control	1	1.5	BN/VT	2234	II	—
2	1.5	BK	150	I	—	Ground	2	1.5	BK	150	II	—

X119 Right Headlight Jumper Harness to Forward Lamp Harness

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4975769

Connector Part Information

Harness Type: Right Headlight Interconnect
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 4100563C1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 2.8 Series, Sealed (BK)

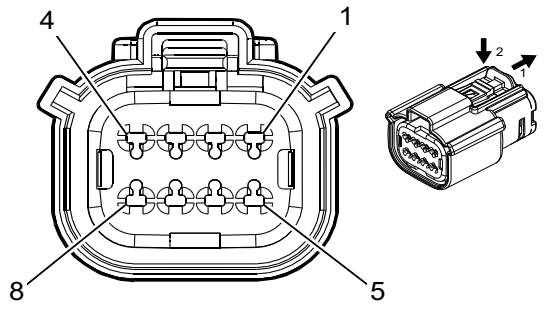
Terminal Part Information

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

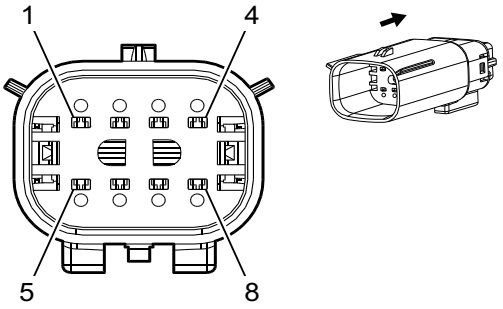
X119 Right Headlight Jumper Harness to Forward Lamp Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	YE	312	I	—	Right Headlamp Low Beam Control	1	1	YE	312	II	—
2	1	GY/BN	309	I	—	Right Park Lamp Control	2	1	GY/BN	309	II	—
3	1	GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	3	1	GN/VT	1315	II	—
5	1	WH	311	I	—	Right Headlamp High Beam Control	5	1	WH	311	II	—
6	1	BU/BN	7539	I	—	Right Front DRL Control	6	1	BU/BN	7539	II	—
8	1.5	BK	250	I	—	Ground	8	1.5	BK	250	II	—

X120 Right Snow Plow Tee Harness to Right Headlight Harness (UNL)



4846407



2667653

Connector Part Information

Harness Type: Right Snow Plow Tee
OEM Connector: 3709924C1
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Right Headlight
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

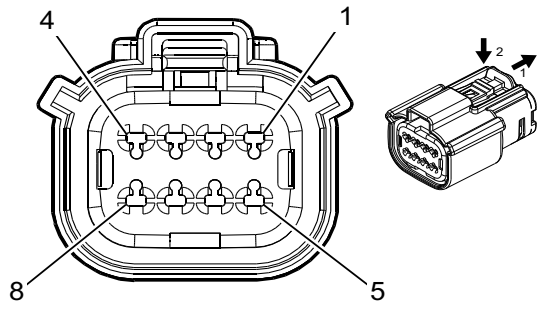
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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

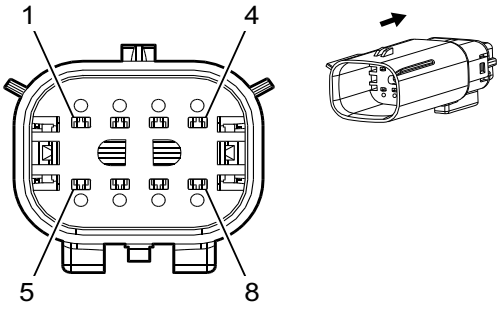
X120 Right Snow Plow Tee Harness to Right Headlight Harness (UNL)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	BK	250	I	—	Ground	1	1.5	BK	250	II	—
2	0.75	YE	712	I	—	Left Headlamp Low Beam Control	2	0.75	YE	712	II	—
3	0.75	WH	711	I	—	Left Headlamp High Beam Control	3	0.75	WH	711	II	—
4	0.75	GY/BU	7539	I	—	Right Front DRL Control	4	0.75	GY/BU	7539	II	—
5	0.75	VT/GY	709	I	—	Left Park Lamp Control	5	0.75	VT/GY	709	II	—
6	0.75	BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	6	0.75	BU/WH	1314	II	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—

X120 Right Headlight Jumper Harness to Right Headlight Harness (-UNL)



4846407



2667653

Connector Part Information

Harness Type: Right Headlight Jumper
OEM Connector: 3709924C1
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Right Headlight
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

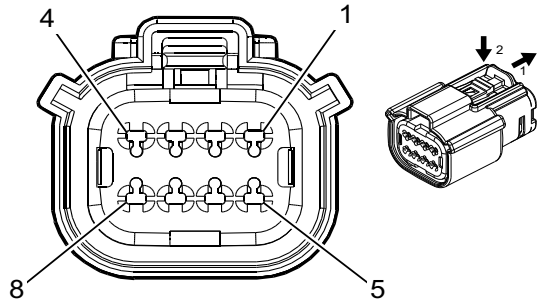
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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

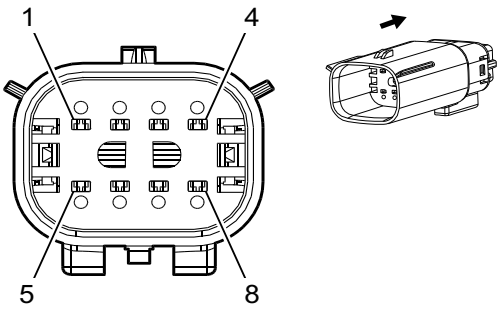
X120 Right Headlight Jumper Harness to Right Headlight Harness (-UNL)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	BK	250	I	—	Ground	1	1.5	BK	250	II	—
2	0.75	YE	712	I	—	Left Headlamp Low Beam Control	2	0.75	YE	712	II	—
3	0.75	WH	711	I	—	Left Headlamp High Beam Control	3	0.75	WH	711	II	—
4	0.75	GY/BU	7539	I	—	Right Front DRL Control	4	0.75	GY/BU	7539	II	—
5	0.75	VT/GY	709	I	—	Left Park Lamp Control	5	0.75	VT/GY	709	II	—
6	0.75	BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	6	0.75	BU/WH	1314	II	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—

X121 Right Headlight Jumper Harness to Right Snow Plow Tee Harness (UNL)



4846407



2667653

Connector Part Information

Harness Type: Right Headlight Jumper
OEM Connector: 3709924C1
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Right Snow Plow Tee
OEM Connector: 3709925C1
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M 150 MX Series, Sealed (BK)

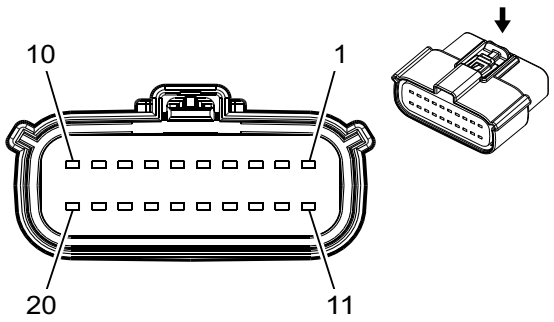
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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

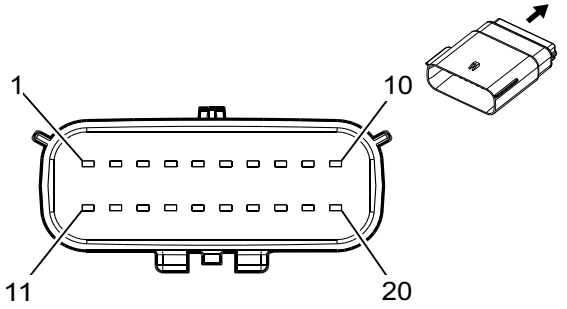
X121 Right Headlight Jumper Harness to Right Snow Plow Tee Harness (UNL)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	YE	712	I	—	Left Headlamp Low Beam Control	1	1.5	YE	712	II	—
2	1.5	VT/GY	709	I	—	Left Park Lamp Control	2	1.5	VT/GY	709	II	—
3	1.5	BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	3	1.5	BU/WH	1314	II	—
4	—	—	—	—	—	Not Occupied	4	—	—	—	—	—
5	1.5	WH	711	I	—	Left Headlamp High Beam Control	5	1.5	WH	711	II	—
6	1.5	GY/BU	7538	I	—	Left Front DRL Control	6	1.5	GY/BU	7538	II	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	2	BK	250	I	—	Ground	8	2	BK	250	II	—

X125 Engine Chassis Harness to Chassis Harness



2871898



2871861

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 13650143
Service Connector: 19300557
Description: 20-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Chassis
OEM Connector: 3990222C1
Service Connector: Service by Harness - See Part Catalog
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	19300432	J-35616-14 (GN)	J-38125-557	Not Available	Not Available	Not Available	Not Available
II	19300635	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
III	Not Required	No Tool Required	No Tool Required	Not Available	Not Available	Not Available	Not Available

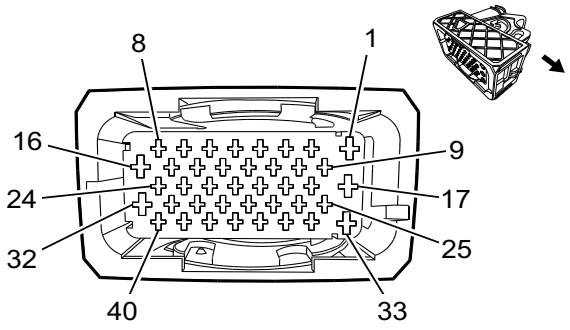
X125 Engine Chassis Harness to Chassis Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BK/VT	3661	II	—	Exhaust Gas Temperature Sensor 5 Low Reference	1	0.5	BK/VT	3661	III	—
2	0.5	D-BU/GY	3660	II	—	Exhaust Gas Temperature Sensor 5 Signal	2	0.5	BU/GY	3660	III	—
3	0.5	BK/GY	3659	II	—	Exhaust Gas Temperature Sensor 4 Low Reference	3	0.5	BK/GY	3659	III	—
4	0.5	VT/BN	3658	II	—	Exhaust Gas Temperature Sensor 4 Signal	4	0.5	VT/BN	3658	III	—
5 - 6	—	—	—	—	—	Not Occupied	5 - 6	—	—	—	—	—

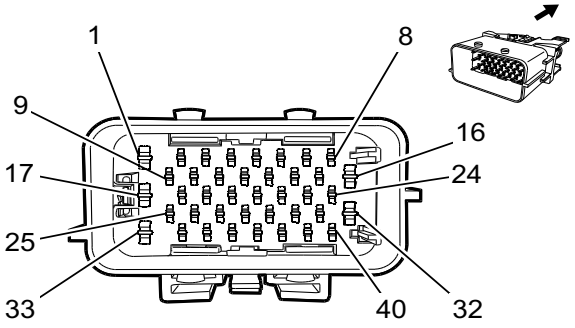
X125 Engine Chassis Harness to Chassis Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.5	BK/L-GN	3657	II	—	Exhaust Gas Temperature Sensor 3 Low Reference	7	0.5	BK/GN	3657	III	—
8	0.5	D-BU/WH	7446	II	—	Fuel Line Pressure Sensor Signal	8	0.5	BU	7446	III	—
9	0.5	BK/YE	7447	II	—	Fuel Line Pressure Sensor Low Reference	9	0.5	BK/YE	7447	III	—
10	1.5	VT/L-GN	355	I	—	Fuel Filter Heater Voltage	10	1.5	VT/GN	355	III	—
11	0.5	GY/L-GN	5378	II	—	Exhaust Gas Temperature Sensor 3	11	0.5	GY/GN	5378	III	—
12	1.5	VT/GY	539	I	—	Run/Crank Ignition 1 Voltage	12	1.5	GY	120	III	—
13 - 14	—	—	—	—	—	Not Occupied	13 - 14	—	—	—	—	—
15	0.5	WH/RD	6054	II	—	Exhaust Pressure Sensor 5V Reference 1	15	0.5	WH/RD	6054	III	—
16	0.5	BK/YE	6055	II	—	Exhaust Pressure Sensor Low Reference 1	16	0.5	BK/YE	6055	III	—
17	0.5	D-BU	6053	II	—	Exhaust Pressure Sensor Signal 1	17	0.5	BU	6053	III	—
18	0.5	BN/RD	7445	II	—	Fuel Line Pressure Sensor 5V Reference	18	0.5	BN/RD	7445	III	—
19	1.5	VT/D-BU	3674	I	—	NOx Sensor 1 Control	19	1.5	VT/BU	3674	III	—
20	—	—	—	—	—	Not Occupied	20	—	—	—	—	—

X138 Chassis Harness to Body Harness



2220548



2339640

Connector Part Information

Harness Type: Chassis
OEM Connector: 4086709C1
Service Connector: Service by Harness - See Part Catalog
Description: 40-Way F 1.5, 2.8 Series, Sealed (BK)

Connector Part Information

Harness Type: Body
OEM Connector: 13603208
Service Connector: 13576551
Description: 40-Way M 1.5 DSQ, 2.8 ATS 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	No Tool Required	No Tool Required	Not Available	Not Available	Not Available	Not Available
II	13505807	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
III	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IV	13580827	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	19352419	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

X138 Chassis Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GN/BK	7633	I	—	Integrated Trailer Brake Controller User Gain Signal	1	0.5	L-GN/BK	7633	IV	—
2	0.75	WH/BU	5986	I	—	Serial Data Communication Enable	2	0.5	WH/D-BU	5986	II	—
3	0.5	YE	7635	I	—	Integrated Trailer Brake Controller Manual Apply Signal	3	0.5	YE	7635	II	—
4	0.5	BU/RD	7632	I	—	Integrated Trailer Brake Controller Switch 5V Reference	4	0.5	D-BU/RD	7632	II	—

X138 Chassis Harness to Body Harness (cont'd)

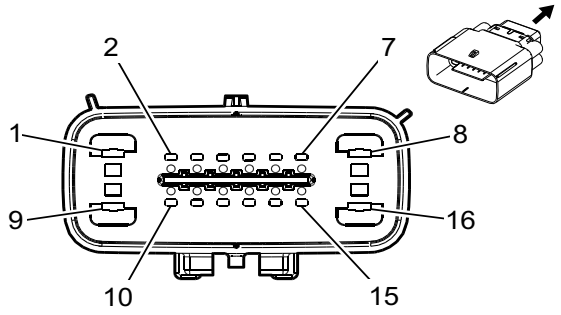
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
5	0.5	BN	7634	I	—	Integrated Trailer Brake Controller Redundant Manual Apply Signal	5	0.5	BN	7634	II	—
6	0.5	BK/BN	7631	I	—	Integrated Trailer Brake Controller Switch Low Reference	6	0.5	BK/BN	7631	II	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	0.75	VT/GY	1054	I	—	Stop Lamp Control	8	0.75	VT/GY	1054	II	—
9	0.5	BU/BN	4498	I	—	High Speed GMLAN Serial Data (+) 7	9	0.5	D-BU/BN	4498	II	—
10	0.5	WH	4499	I	—	High Speed GMLAN Serial Data (-) 7	10	0.5	WH	4499	II	—
11	1	YE/BU	18	I	—	Left Rear Stop/Turn Lamp Control	11	0.75	YE/D-BU	18	II	—
12	1	BN/GN	19	I	—	Right Rear Stop/Turn Lamp Control	12	0.75	BN/L-GN	19	II	—
13	—	—	—	—	—	Not Occupied	13	—	—	—	—	—
14	0.75	WH/BU	6311	I	—	Cruise/ETC/TCC Brake Signal	14	0.35	WH/D-BU	6311	V	—
15 - 17	—	—	—	—	—	Not Occupied	15 - 17	—	—	—	—	—
18	0.5	BU	2500	I	—	High Speed GMLAN Serial Data (+) 1	18	0.5	D-BU	2500	II	—
19	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	19	0.5	WH	2501	II	—
20	0.5	VT/YE	5985	I	—	Accessory Wakeup Serial Data	20	0.5	VT/YE	5985	II	—
21 - 22	—	—	—	—	—	Not Occupied	21 - 22	—	—	—	—	—
23	1.5	GY/BN	309	I	—	Right Park Lamp Control	23	0.5	GY/BN	309	II	—
24	1	GN/VT	619	I	—	Right Rear Turn Signal Lamp Control	24	0.75	L-GN/VT	619	II	—
25 - 28	—	—	—	—	—	Not Occupied	25 - 28	—	—	—	—	—
29	0.5	BK	2550	I	—	Ground	29	0.75	BK	2550	II	—
30	0.5	WH	6974	I	—	Camera Low Reference	30	0.5	BK	6974	II	—

X138 Chassis Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
31	—	—	—	—	—	Not Occupied	31	—	—	—	—	—
32	1.5	BU	47	I	—	Trailer Auxiliary Control	32	2.5	D-BU	47	III	—
33 - 35	—	—	—	—	—	Not Occupied	33 - 35	—	—	—	—	—
36	0.75	GN/VT	1430	I	—	Exterior Courtesy Lamp Control	36	0.75	WH/VT	1430	II	—
37	0.75	GY/YE	6972	I	—	Camera Signal 2 +	37	0.35	GY/YE	6972	V	—
38	0.75	WH/BU	6973	I	—	Camera Signal 2	38	0.35	WH/D-BU	6973	V	—
39	—	—	—	—	—	Not Occupied	39	—	—	—	—	—
40	—	—	—	—	—	Vehicle Speed Signal	40	0.5	L-GN/GY	817	II	—

X143 Reductant Control Module Jumper Harness to Engine Chassis Harness

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4209017

Connector Part Information

Harness Type: Reductant Control Module Jumper
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 33182033
Service Connector: 19354088
Description: 16-Way M 150 MX 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-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
III	19329833	J-35616-5 (PU)	J-38125-12A	1326030-6	Lear 17	E	2
IV	19329833	J-35616-5 (PU)	J-38125-12A	1326030-6	Lear 17	E	C
V	19332835	J-35616-5 (PU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

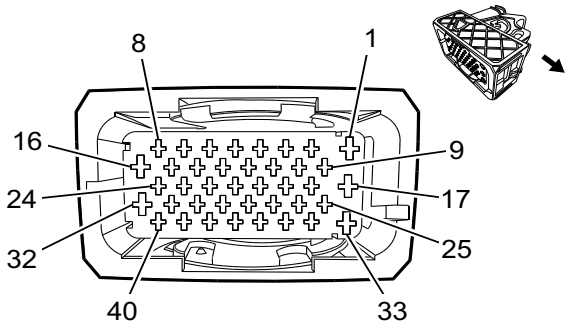
X143 Reductant Control Module Jumper Harness to Engine Chassis Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	RD/WH	3440	I	—	Battery Positive Voltage	1	0.75	RD/WH	3440	IV	—
4	0.5	WH	4499	I	—	High Speed GMLAN Serial Data (-) 7	4	0.5	WH	4499	II	—
5	0.5	D-BU/BN	4498	I	—	High Speed GMLAN Serial Data (+) 7	5	0.5	D-BU/BN	4498	II	—
8	2.5	BK	550	I	—	Ground	8	2.5	BK	550	V	—
9	0.5	VT/L-GN	4320	I	—	Selective Catalytic Reduction Power Module Wake-Up Signal	9	0.5	VT/L-GN	4320	III	—
14	0.5	WH	4499	I	—	High Speed GMLAN Serial Data (-) 7	14	0.5	WH	4499	II	—

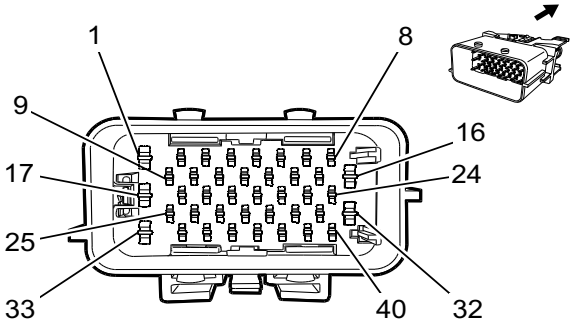
X143 Reductant Control Module Jumper Harness to Engine Chassis Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
15	0.5	D-BU/BN	4498	I	—	High Speed GMLAN Serial Data (+) 7	15	0.5	D-BU/BN	4498	II	—
16	2.5	D-BU/BN	3922	I	—	DEF Heater Supply 2	16	2.5	D-BU/BN	3922	V	—

X150 Forward Lamp Harness to Body Harness



2220548



2339640

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 4086709C1
Service Connector: Service by Harness - See Part Catalog
Description: 40-Way F 1.5, 2.8 Series, Sealed (BK)

Connector Part Information

Harness Type: Body
OEM Connector: 13603208
Service Connector: 13576551
Description: 40-Way M 1.5 DSQ, 2.8 ATS 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	No Tool Required	No Tool Required	Not Available	Not Available	Not Available	Not Available
II	13505807	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
III	13584536	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

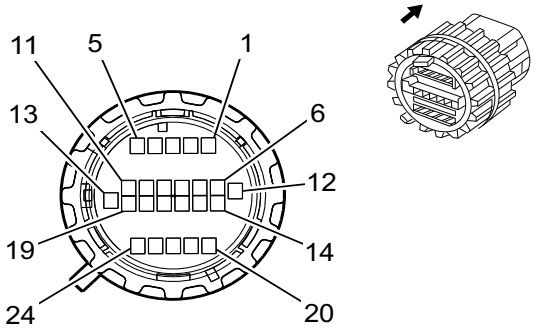
X150 Forward Lamp Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	1	BN/GY	29	I	—	Horn Control	2	0.75	BN/GY	29	II	—
3	1	GY/BU	7538	I	—	Left Front DRL Control	3	—	—	—	—	—
4	1	GY	603	I	—	A/C Low Pressure Switch Signal	4	0.5	BN/LGN	603	II	—
5 - 6	—	—	—	—	—	Not Occupied	5 - 6	—	—	—	—	—
7	1	BU/BN	7539	I	—	Right Front DRL Control	7	—	—	—	—	—
8	1	WH	311	I	—	Right Headlamp High Beam Control	8	0.5	WH	311	II	—
9	1	WH	711	I	—	Left Headlamp High Beam Control	9	0.5	WH	711	II	—

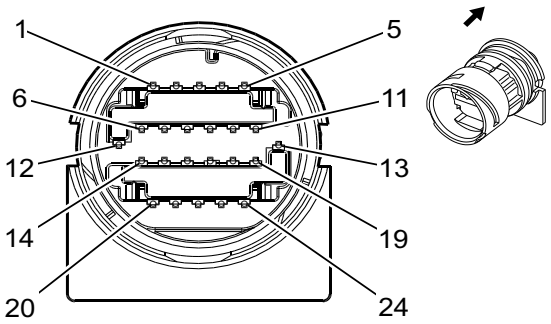
X150 Forward Lamp Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
10	1	BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	10	0.75	D-BU/WH	1314	II	—
11	1	VT/GY	709	I	—	Left Park Lamp Control	11	0.5	VT/GY	709	II	—
12	1	BN/VT	2234	I	—	Front Fog Lamp Control	12	0.5	BN/VT	2234	II	—
13 - 14	—	—	—	—	—	Not Occupied	13 - 14	—	—	—	—	—
15	1	GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	15	0.75	L-GN/VT	1315	II	—
16 - 17	—	—	—	—	—	Not Occupied	16 - 17	—	—	—	—	—
18	1	VT/GY	139	I	—	Run/Crank Ignition 1 Voltage	18	1.5	VT/GY	139	III	—
19	1	YE	5530	I	—	Hood Open Switch Signal	19	0.5	YE	5530	II	—
20	1	BN/GN	109	I	—	Hood Ajar Switch Signal	20	0.5	BN/L-GN	109	II	—
21	—	—	—	—	—	Not Occupied	21	—	—	—	—	—
22	1	YE	312	I	—	Right Headlamp Low Beam Control	22	0.75	YE	312	II	—
23	1	GY/BN	309	I	—	Right Park Lamp Control	23	0.5	GY/BN	309	II	—
24	—	—	—	—	—	Not Occupied	24	—	—	—	—	—
25	1	YE	712	I	—	Left Headlamp Low Beam Control	25	0.75	YE	712	II	—
26	—	—	—	—	—	Not Occupied	26	—	—	—	—	—
27	1.5	OG/GY	6618	I	—	Middle Front Discriminating Sensor Signal	27	0.5	OG/GY	6618	II	—
28	1.5	BK/OG	6619	I	—	Middle Front Discriminating Sensor Low Reference	28	0.5	BK/OG	6619	II	—
29 - 40	—	—	—	—	—	Not Occupied	29 - 40	—	—	—	—	—

X175 Engine Chassis Harness to Transmission Harness



1608549



1629123

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 15483856
Service Connector: 88988936
Description: 24-Way F (BK)

Connector Part Information

Harness Type: Transmission
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 24-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-38125-217	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

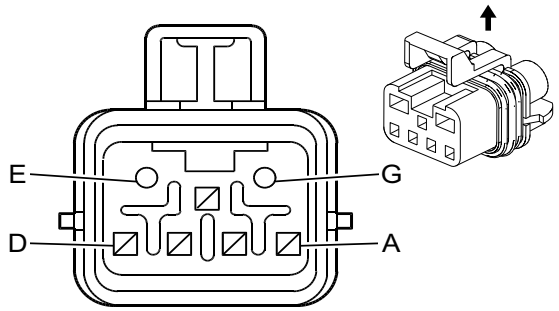
X175 Engine Chassis Harness to Transmission Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	L-GN	152	I	—	Driver Information Center Gauge LED Control	1	0.75	L-GN	152	II	—
2	0.75	YE	133	I	—	Sunroof Limit Switch Low Reference	2	0.75	YE	133	II	—
3	0.75	WH	151	I	—	Signal Ground	3	0.75	WH	151	II	—
4	0.75	D-BU	117	I	—	Right Front Speaker Signal (-) 1	4	0.75	D-BU	117	II	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	0.75	WH	157	I	—	Interior Lamp Control	6	0.75	WH	157	II	—
7	0.75	RD	179	I	—	Oil Pump Command Signal	7	0.75	RD	179	II	—
8	0.75	TN	154	I	—	Driver Information Center Date LED Control	8	0.75	TN	154	II	—

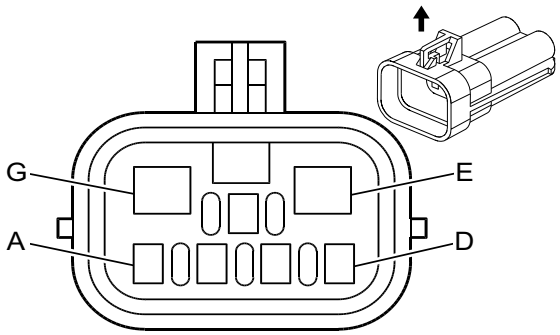
X175 Engine Chassis Harness to Transmission Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	0.75	L-GN	158	I	—	Cargo Lamp Switch Signal	9	0.75	L-GN	158	II	—
10	0.75	WH	178	I	—	Right Folding Top Motor Down Control	10	0.75	WH	178	II	—
11	0.75	L-GN	177	I	—	Left Folding Top Motor Down Control	11	0.75	L-GN	177	II	—
12	0.75	WH	137	I	—	Driver Information Center Switch Economy LED Control	12	0.75	WH	137	II	—
13	0.75	YE	131	I	—	Sunroof Limit Switch Range Signal	13	0.75	YE	131	II	—
14	0.75	OG	111	I	—	Hazard Switch Signal	14	0.75	OG	111	II	—
15	0.75	WH	155	I	—	Driver Seat Belt Retractor Solenoid Control	15	0.75	WH	155	II	—
16	0.75	YE	171	I	—	Power Window Master Switch Right Rear Down Signal	16	0.75	YE	171	II	—
17	0.75	OG	136	I	—	Driver Information Center Fuel LED Control	17	0.75	OG	136	II	—
18	0.75	OG	138	I	—	Rear Compartment Lid Pull Down Motor Control	18	0.75	OG	138	II	—
19	0.75	D-BU	174	I	—	Low Washer Fluid Indicator Control	19	0.75	D-BU	174	II	—
20	0.75	GY	114	I	—	Low Oil Pressure Switch Signal	20	0.75	GY	114	II	—
21	0.75	YE	153	I	—	Driver Information Center Oil LED Control	21	0.75	YE	153	II	—
22	0.75	D-BU	173	I	—	ABS Pump Motor Control	22	0.75	D-BU	173	II	—
23	0.75	WH	134	I	—	Charge Port Valve Command Signal	23	0.75	WH	134	II	—
24	—	—	—	—	—	Not Occupied	24	—	—	—	—	—

X180 Brake Booster Harness to Chassis Harness



816167



1372292

Connector Part Information

Harness Type: Hydromax Interconnect
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F

Connector Part Information

Harness Type: Chassis
OEM Connector: 3540569C1
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way M 150, 480 Metri-Pack Series, Sealed (BK)

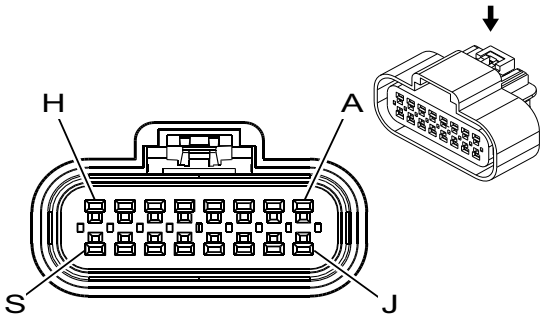
Terminal Part Information

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

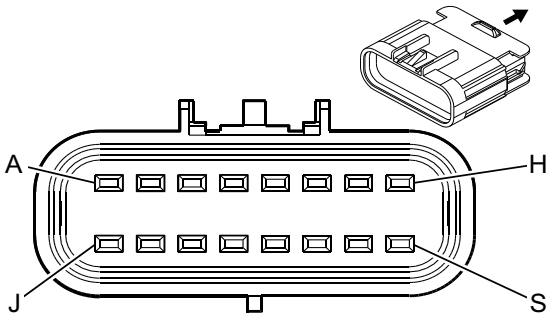
X180 Brake Booster Harness to Chassis Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
G	3	WH	90	I	—	Right Mirror Motor Left Control	G	3	WH	90	II	—
E	6	RD	90	I	—	Right Mirror Motor Left Control	E	6	RD	90	II	—
D	0.75	WH/BU	6311	I	—	Cruise/ETC/TCC Brake Signal	D	0.75	WH/BU	6311	II	—
C	0.75	GY	90	I	—	Right Mirror Motor Left Control	C	0.75	GY	90	II	—
B	0.75	GY	90	I	—	Right Mirror Motor Left Control	B	0.75	GY	90	II	—
A	0.75	GY	90	I	—	Right Mirror Motor Left Control	A	0.75	GY	90	II	—
F	—	—	—	—	—	Not Occupied	F	—	—	—	—	—

X191 Engine Chassis Harness to Engine Chassis Harness (PTO)



646383



632345

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 15326863
Service Connector: 19180282
Description: 16-Way F 150 GT Series, Sealed (BK)

Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 15326868
Service Connector: 15306364
Description: 16-Way M 150 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	13575412	J-35616-14 (GN)	J-38125-553	12191819	Delphi 8	2	1
II	13575412	J-35616-14 (GN)	J-38125-553	12191819	Delphi 8	E	1
III	13576364	J-35616-3 (GY)	J-38125-553	15326269	Delphi 19	E	4

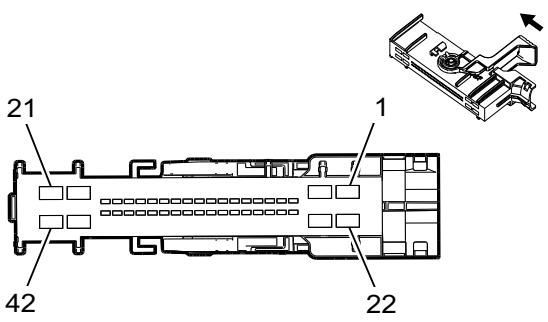
X191 Engine Chassis Harness to Engine Chassis Harness (PTO)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	BN/WH	6085	I	—	Power Take Off Remote Engine Start Switch Signal	A	0.5	BN/WH	6085	III	—
B	0.75	BN	6381	I	—	Power Take Off Relay Engage Signal	B	—	—	—	—	—
C	—	—	—	—	—	Not Occupied	C	—	—	—	—	—
D	0.75	BK	550	I	—	Ground	D	—	—	—	—	—
E - F	—	—	—	—	—	Not Occupied	E - F	—	—	—	—	—
G	0.75	YE	2522	I	—	Power Take Off Status Signal	G	—	—	—	—	—
H	0.5	VT/D-BU	2562	II	—	Power Take Off Relay Coil Control	H	—	—	—	—	—
J	0.5	WH/L-GN	6142	II	—	Power Take Off Engine Shutdown Signal	J	0.5	BN/WH	6085	III	—

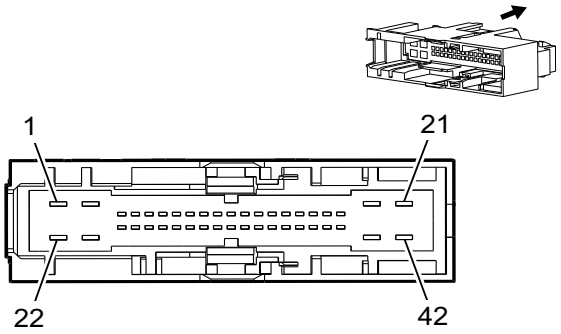
X191 Engine Chassis Harness to Engine Chassis Harness (PTO) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
K	0.75	RD/VT	2640	I	—	Battery Positive Voltage	K	—	—	—	—	—
L - M	—	—	—	—	—	Not Occupied	L - M	—	—	—	—	—
N	0.5	D-BU/GY	6089	II	—	Power Take Off Remote Switch Set Signal 1	N	—	—	—	—	—
P	—	—	—	—	—	Not Occupied	P	—	—	—	—	—
R	0.5	VT/WH	239	II	—	Run/Crank Ignition 1 Voltage	R	—	—	—	—	—
S	—	—	—	—	—	Not Occupied	S	—	—	—	—	—

X201 Steering Column Harness to Instrument Panel Harness



3955711



3240116

Connector Part Information

Harness Type: Steering Column
OEM Connector: 13597189
Service Connector: Service by Harness - See Part Catalog
Description: 42-Way F 1.2, 2.8 Series (GY)

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33155180
Service Connector: 13597187
Description: 42-Way M 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	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	13575823	J-35616-5 (PU)	J-38125-11A	7114-4110-02	Yazaki 9	E	C
IV	19301762	J-35616-65B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
V	19301763	J-35616-65B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

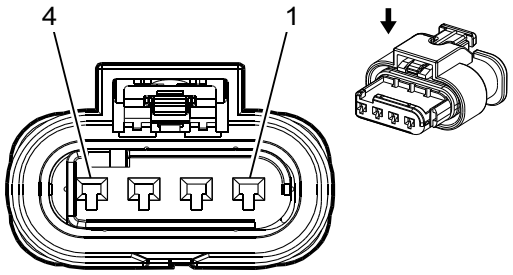
X201 Steering Column Harness to Instrument Panel Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 3	—	—	—	—	—	Not Occupied	1 - 3	—	—	—	—	—
4	0.35	RD/BU	540	I	—	Battery Positive Voltage	4	0.35	RD/D-BU	540	IV	—
5 - 15	—	—	—	—	—	Not Occupied	5 - 15	—	—	—	—	—
16	0.35	GN/WH	111	I	—	Hazard Switch Signal	16	0.35	L-GN/WH	111	IV	—
17	0.5	YE/WH	816	I	—	Brake Transmission Shift Interlock Solenoid Control	17	0.35	YE/WH	816	IV	—
18 - 19	—	—	—	—	—	Not Occupied	18 - 19	—	—	—	—	—
20	0.35	BK	1050	II	—	Ground	20	0.5	BK	1050	III	—

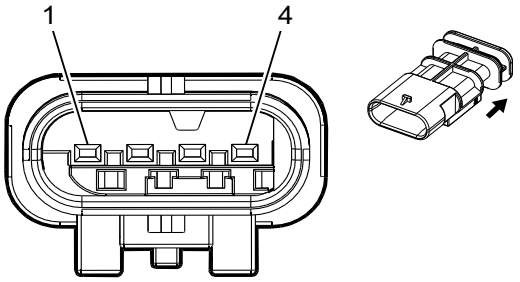
X201 Steering Column Harness to Instrument Panel Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
21 - 24	—	—	—	—	—	Not Occupied	21 - 24	—	—	—	—	—
25	0.35	RD/YE	3040	I	—	Battery Positive Voltage	25	0.35	RD/YE	3040	IV	—
26 - 29	—	—	—	—	—	Not Occupied	26 - 29	—	—	—	—	—
30	0.5	OG	7527	I	—	Local Interconnect Network Serial Data Bus 5	30	0.5	L-GN/WH	7527	V	—
31 - 32	—	—	—	—	—	Not Occupied	31 - 32	—	—	—	—	—
33	0.5	GN/BK	3894	I	—	Local Interconnect Network Serial Data Bus 12	33	0.5	L-GN/BK	3894	V	—
34 - 37	—	—	—	—	—	Not Occupied	34 - 37	—	—	—	—	—
38	0.35	BN	6136	I	—	Control	38	0.35	BN	6136	IV	—
39 - 41	—	—	—	—	—	Not Occupied	39 - 41	—	—	—	—	—
42	1	BK/WH	1851	II	—	Signal Ground	42	0.5	BK/WH	1851	III	—

X205 Instrument Panel Harness to Passenger Instrument Panel Air Bag Harness



2684560



2684563

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13854531
Service Connector: 13586137
Description: 4-Way F 1.2 Series, Sealed (YE)

Connector Part Information

Harness Type: Passenger Instrument Panel Air Bag
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M (YE)

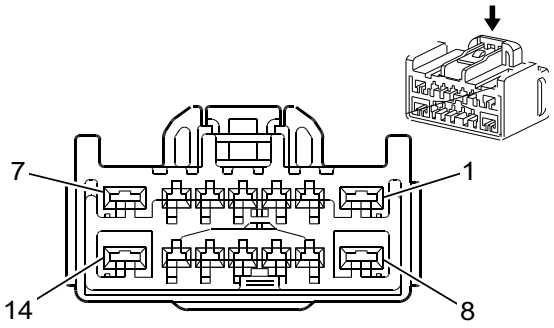
Terminal Part Information

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
II	Not Required	J-35616-17 (LT GN)	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

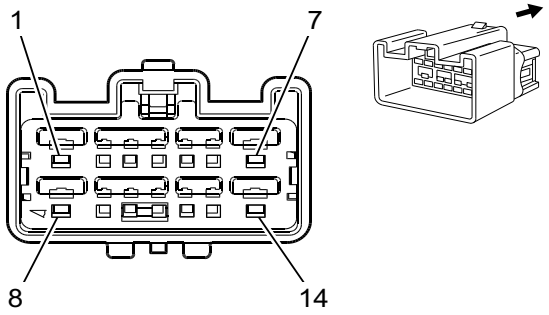
X205 Instrument Panel Harness to Passenger Instrument Panel Air Bag Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	YE/OG	3025	I	—	Passenger IP Module Stage 1 High Control	1	0.35	YE	3025	II	AK5
2	0.35	OG/WH	3024	I	—	Passenger IP Module Stage 1 Low Control	2	0.35	OG	3024	II	AK5
3	0.35	GY/OG	3027	I	—	Passenger IP Module Stage 2 High Control	3	—	—	—	III	—
4	0.35	OG/VT	3026	I	—	Passenger IP Module Stage 2 Low Control	4	—	—	—	III	—

X215 HVAC Harness to Instrument Panel Harness



823290



1283905

Connector Part Information

Harness Type: HVAC
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way F

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 10846900
Service Connector: 88956523
Description: 14-Way M 1.5, 2.8 Series (L-GY)

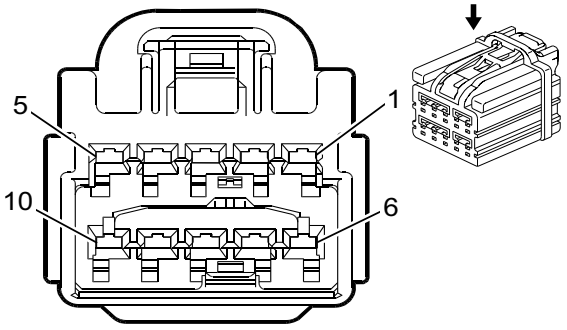
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	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

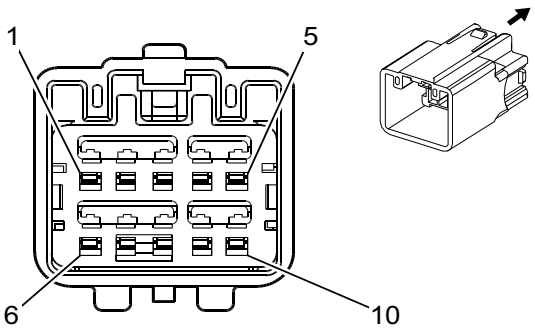
X215 HVAC Harness to Instrument Panel Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.35	L-GN	5060	I	—	Low Speed GMLAN Serial Data	2	0.35	L-GN	5060	II	—
3	0.35	L-GN/YE	7531	I	—	Local Interconnect Network Serial Data Bus 9	3	0.35	L-GN/YE	7531	II	—
4	0.5	RD/VT	3340	I	—	Battery Positive Voltage	4	0.5	RD/VT	3340	II	—
5	0.5	VT/GY	539	I	—	Run/Crank Ignition 1 Voltage	5	0.5	VT/GY	539	II	—
6 - 8	—	—	—	—	—	Not Occupied	6 - 8	—	—	—	—	—
9	0.35	BK/WH	1851	I	—	Signal Ground	9	0.35	BK/WH	1851	II	—
10	0.35	BK/YE	1791	I	—	Air Temperature Door Control Low Reference	10	0.35	BK/YE	1791	II	—
11 - 14	—	—	—	—	—	Not Occupied	11 - 14	—	—	—	—	—

X216 Body Harness to HVAC Harness



1733159



1732767

Connector Part Information

Harness Type: Body
OEM Connector: 10847018
Service Connector: 22708788
Description: 10-Way F YESC Kaizen Series (L-GY)

Connector Part Information

Harness Type: HVAC
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way M

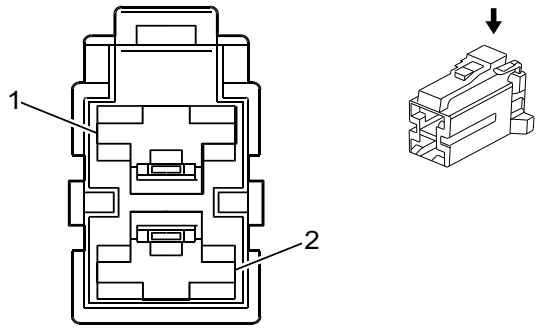
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575708	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	13578891	J-35616-2A (GY)	J-38125-11A	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

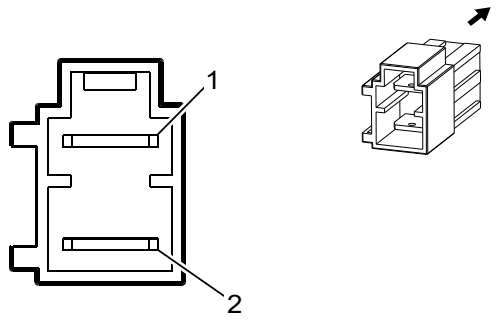
X216 Body Harness to HVAC Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 3	—	—	—	—	—	Not Occupied	1 - 3	—	—	—	—	—
4	0.35	BN/VT	193	II	—	Rear Defog Relay Control	4	0.35	BN/VT	193	III	—
5	0.5	D-BU/BN	7573	I	—	Electric Variable Displacement Supply	5	0.5	D-BU/BN	7573	III	—
6	0.5	D-BU/YE	7574	I	—	Electric Variable Displacement Control	6	0.5	D-BU/YE	7574	III	—
7 - 10	—	—	—	—	—	Not Occupied	7 - 10	—	—	—	—	—

X217 Body Harness to HVAC Harness



1283880



1989490

Connector Part Information

Harness Type: Body
OEM Connector: 10721337
Service Connector: 19368303
Description: 2-Way F 56 Series (BK)

Connector Part Information

Harness Type: HVAC
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M

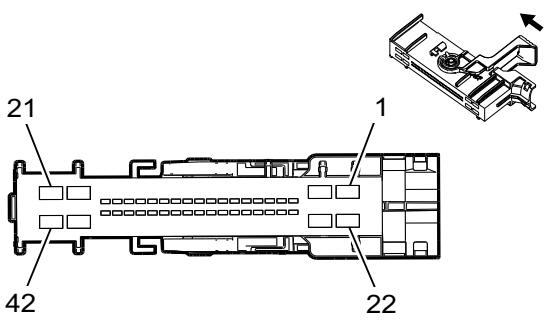
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-22 (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

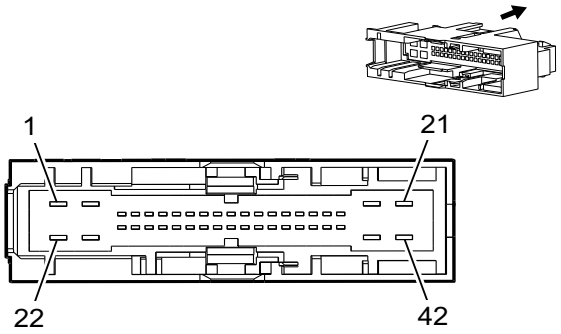
X217 Body Harness to HVAC Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	4	RD/VT	542	I	—	Battery Positive Voltage	1	4	RD/VT	542	II	—
2	10	RD/GY	642	I	—	Battery Positive Voltage	2	10	RD/GY	642	II	—

X225 Body Harness to Instrument Panel Harness



3955711



3240116

Connector Part Information

Harness Type: Body
OEM Connector: 33160247
Service Connector: 19301820
Description: 42-Way F 1.2, 2.8 Series (GY)

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33155179
Service Connector: 13586233
Description: 42-Way M 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	19300649	J-35616-16 (LT GN)	J-38125-21	Not Available	Not Available	Not Available	Not Available
II	19300649	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301752	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
V	13575821	J-35616-5 (PU)	J-38125-11A	7114-4110-02	Yazaki 9	E	C
VI	13575823	J-35616-5 (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
VII	19301762	J-35616-65B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
VIII	19301763	J-35616-65B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

X225 Body Harness to Instrument Panel Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	1.5	BK	1850	III	—	Ground	2	0.75	BK	1850	VI	—
3	—	—	—	—	—	Not Occupied	3	—	—	—	—	—
4	0.5	WH/BN	6815	I	—	Inadvertent Power Control	4	0.5	WH/BN	6815	VIII	—
5	0.35	GY/WH	3272	I	—	Remote Function Actuator Control	5	0.35	GY/WH	3272	VII	—

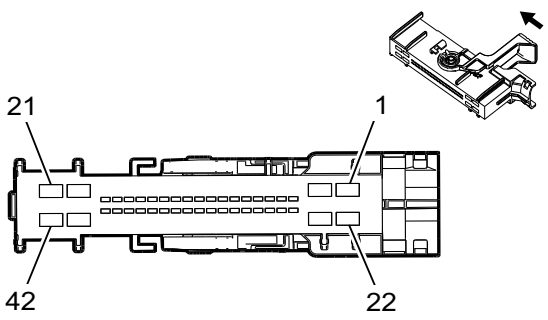
X225 Body Harness to Instrument Panel Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
6	0.35	D-BU/WH	3275	I	—	Remote Function Actuator Receive Signal	6	0.35	D-BU/WH	3275	VII	—
7	0.35	L-GN/BN	507	I	—	Wait To Start Indicator Control	7	0.35	L-GN/BN	507	VII	—
8	0.5	GY/VT	3998	I	—	MOST Serial Data (+)	8	0.5	GY/VT	3998	VIII	—
9 - 10	—	—	—	—	—	Not Occupied	9 - 10	—	—	—	—	—
11	0.5	WH/L-GN	3997	I	—	MOST Serial Data (-)	11	0.5	WH/L-GN	3997	VIII	—
12	0.5	BN/D-BU	118	I	—	Left Front Speaker Signal (-) 1	12	0.5	BN/D-BU	118	VIII	—
13	—	—	—	—	—	Not Occupied	13	—	—	—	—	—
14	0.5	L-GN	199	I	—	Left Rear Speaker Control (+)	14	0.5	L-GN	199	VIII	—
15	0.5	BN/L-GN	603	I	—	A/C Low Pressure Switch Signal	15	0.5	BN/L-GN	603	VIII	—
16 - 19	—	—	—	—	—	Not Occupied	16 - 19	—	—	—	—	—
20	0.5 0.75	BN/D-BU BN/D-BU	118 118	IV IV	UQ3 UQ3/UQ5	Left Front Speaker Signal (-) 1 Left Front Speaker Signal (-) 1	20	0.75	BN/D-BU	118	VI	—
21 - 22	—	—	—	—	—	Not Occupied	21 - 22	—	—	—	—	—
23	0.35	L-GN	4512	II	—	Wireless Charging System Charge Indicator Control	23	0.35	L-GN	4512	V	—
24	0.35	L-GN/WH	3438	I	—	Exhaust Brake Switch Signal	24	0.35	L-GN/WH	3438	VII	—
25	0.35	BN/WH	419	I	—	Check Engine Indicator Control	25	0.35	BN/WH	419	VII	—
26	0.35	YE/L-GN	3274	I	—	Remote Function Actuator Transmit Signal	26	0.35	YE/L-GN	3274	VII	—
27	0.35	GY	3273	I	—	Remote Function Actuator Low Reference	27	0.35	GY	3273	VII	—
28	0.5	BK	1850	I	—	Ground	28	0.5	BK	1850	VIII	—
29	0.5	WH/L-GN	3997	I	—	MOST Serial Data (-)	29	0.5	WH/L-GN	3997	VIII	—

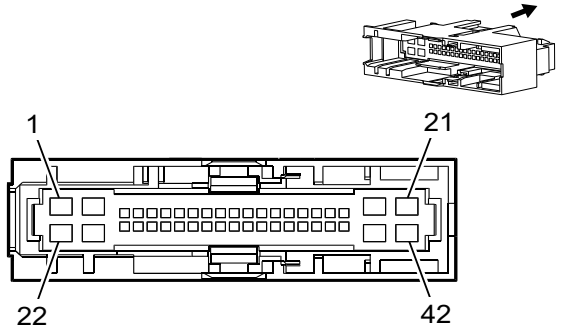
X225 Body Harness to Instrument Panel Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
30	0.35	L-GN/ WH	488	I	—	Power Take Off Control Switch	30	0.35	L-GN/ WH	488	VII	—
31	0.35	BN/L-GN	4311	I	—	Power Take Off Enable In Cab Switch Normally Closed Signal	31	0.35	BN/L-GN	4311	VII	—
32	0.5	GY/ VT	3998	I	—	MOST Serial Data (+)	32	0.5	GY/ VT	3998	VIII	—
33	0.5	D-BU	201	I	—	Left Front Speaker Control (+) 1	33	0.5	D-BU	201	VIII	—
34	—	—	—	—	—	Not Occupied	34	—	—	—	—	—
35	0.5	L-GN/ BK	116	I	—	Left Rear Speaker Signal (-)	35	0.5	L-GN/ BK	116	VIII	—
36	0.5	L-GN/ YE	2081	I	—	Exhaust Brake Switch Control	36	0.5	L-GN/ YE	2081	VIII	—
37	0.35	VT/ YE	43	I	—	Accessory Ignition Voltage	37	0.35	VT/ YE	43	VII	—
38 - 39	—	—	—	—	—	Not Occupied	38 - 39	—	—	—	—	—
40	0.5	L-GN/ GY	6135	I	—	Local Interconnect Network Serial Data Bus 4	40	0.5	L-GN/ GY	6135	VIII	—
41	0.5 0.75	D-BU D-BU	201 201	IV IV	UQ3 UQ3/UQ5	Left Front Speaker Control (+) 1 Left Front Speaker Control (+) 1	41	0.75	D-BU	201	VI	—
42	—	—	—	—	—	Not Occupied	42	—	—	—	—	—

X275 Instrument Panel Harness to Body Harness



2871892



3240118

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33160245
Service Connector: 19332682
Description: 42-Way F 1.2, 2.8 Series (YE)

Connector Part Information

Harness Type: Body
OEM Connector: 33155177
Service Connector: 13597184
Description: 42-Way M 0.64, 2.8 Series (YE)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13582232	J-35616-16 (LT GN)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
II	19300649	J-35616-16 (LT GN)	J-38125-21	Not Available	Not Available	Not Available	Not Available
III	19300649	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301752	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
V	19301761	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
VI	19370818	J-35616-16 (LT GN)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
VII	13575823	J-35616-5 (PU)	J-38125-11A	7114-4110-02	Yazaki 9	E	C
VIII	13575823	J-35616-5 (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IX	13575824	J-35616-5 (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
X	19301762	J-35616-65B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
XI	19301763	J-35616-65B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
XII	19329836	J-35616-65B (LT BU)	J-38125-12A	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	—	—	—	—	—

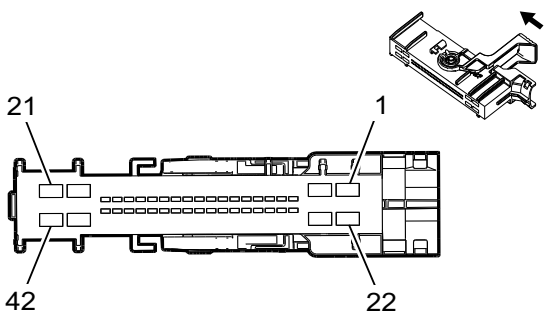
X275 Instrument Panel Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
2	1.5	VT/ YE	143	IV	—	Accessory Ignition Voltage	2	1.5	VT/ YE	143	IX	—
3	0.35	D-BU	2060	II	—	Auxiliary Detection Signal	3	0.5	D-BU	2060	XI	—
4	0.5	Bare	5842	II	—	Auxiliary Audio Screen 2	4	0.5	Bare	5842	XI	—
5	0.35	VT	5843	II	—	Auxiliary Audio Common Signal	5	0.5	VT	5843	XI	—
6	0.35	GY	5839	II	—	Left Auxiliary Audio Signal 2	6	0.5	GY	5839	XI	—
7	0.35	L-GN	5841	II	—	Right Auxiliary Audio Signal 2	7	0.5	L-GN	5841	XI	—
8	0.35	GY/ YE	6972	II	—	Camera Signal 2 +	8	0.35	GY/ YE	6972	X	—
9	0.35	WH/ D-BU	6973	II	—	Camera Signal 2	9	0.35	WH/ D-BU	6973	X	—
10 - 11	—	—	—	—	—	Not Occupied	10 - 11	—	—	—	—	—
12	0.5	YE/ BK	117	II	—	Right Front Speaker Signal (-) 1	12	0.5	YE/ BK	117	XI	—
13	0.5	BN/ WH	1429	II	—	Standing Lamp Relay Control	13	0.5	BN/ WH	1429	XI	—
14	0.5	WH	46	II	—	Right Rear Speaker Control (+)	14	0.5	WH	46	XI	—
15	0.35	YE/ OG	3025	I	—	Passenger IP Module Stage 1 High Control	15	0.35	YE/ OG	3025	XII	—
16	0.35	OG/ WH	3024	I	—	Passenger IP Module Stage 1 Low Control	16	0.35	OG/ WH	3024	XII	—
17	0.35	GY/ OG	3027	I	—	Passenger IP Module Stage 2 High Control	17	0.35	GY/ OG	3027	XII	—
18	0.35	OG/ VT	3026	I	—	Passenger IP Module Stage 2 Low Control	18	0.35	OG/ VT	3026	XII	—
19	0.75	BK/ WH	1851	II	—	Signal Ground	19	0.75	BK/ WH	1851	XI	—
20	0.75	YE/ BK	117	V	—	Right Front Speaker Signal (-) 1 Right Front Speaker Signal (-) 1	20	0.5 0.75	YE/ BK YE/ BK	117 117	VIII VIII	IOB UQ3/UQ5
21	1.5	VT/ YE	243	IV	—	Accessory Ignition Voltage	21	1.5	VT/ YE	243	IX	—

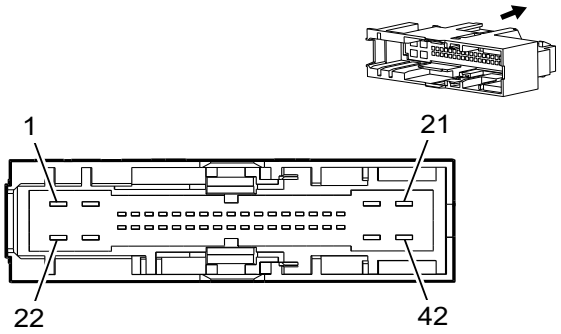
X275 Instrument Panel Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
22	—	—	—	—	—	Not Occupied	22	—	—	—	—	—
23	0.35 0.5 0.35	WH/D-BU WH/D-BU WH/D-BU	5986 5986 5986	V V III	IO5/IO6 UE1 -UE1	Serial Data Communication Enable Serial Data Communication Enable Serial Data Communication Enable	23	0.5	WH/D-BU	5986	VII	—
24	—	—	—	—	—	Not Occupied	24	—	—	—	—	—
25	0.5	L-GN	5060	II	—	Low Speed GMLAN Serial Data	25	0.5	L-GN	5060	XI	—
26 - 28	—	—	—	—	—	Not Occupied	26 - 28	—	—	—	—	—
29	0.35	Bare	6974	II	—	Camera Low Reference	29	0.35	Bare	6974	X	—
30	—	—	—	—	—	Not Occupied	30	—	—	—	—	—
31	0.5	D-BU/YE	68	II	—	Low Coolant Level Indicator Control	31	0.5	D-BU/YE	68	XI	—
32	—	—	—	—	—	Not Occupied	32	—	—	—	—	—
33	0.5	YE	200	II	—	Right Front Speaker Control (+) 1	33	0.5	YE	200	XI	—
34	—	—	—	—	—	Not Occupied	34	—	—	—	—	—
35	0.5	D-BU/BK	115	II	—	Right Rear Speaker Signal (-)	35	0.5	D-BU/BK	115	XI	—
36	0.35	D-BU/OG	7328	II	—	Passenger IP Module Disable Switch Low Reference	36	0.35	D-BU/OG	7328	X	—
37	0.35	VT/OG	371	II	—	Passenger IP Module Disable Switch Signal	37	0.35	VT/OG	371	X	—
38	1	BK	1050	VI	—	Ground	38	0.75	BK	1050	XI	—
39	0.75	BK	1050	II	—	Ground	39	0.75	BK	1050	XI	—
40	—	—	—	—	—	Not Occupied	40	—	—	—	—	—
41	0.75	YE	200	V	—	Right Front Speaker Control (+) 1 Right Front Speaker Control (+) 1	41	0.5 0.75	YE YE	200 200	VIII VIII	UQ3 IO5/IO6
42	—	—	—	—	—	Not Occupied	42	—	—	—	—	—

X300 Instrument Panel Harness to Floor Console Harness (D07)



3955711



3240116

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33160247
Service Connector: 19301820
Description: 42-Way F 1.2, 2.8 Series (GY)

Connector Part Information

Harness Type: Floor Console
OEM Connector: 33155180
Service Connector: Service by Harness - See Part Catalog
Description: 42-Way M 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	19300649	J-35616-16 (LT GN)	J-38125-21	Not Available	Not Available	Not Available	Not Available
II	19301752	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
V	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

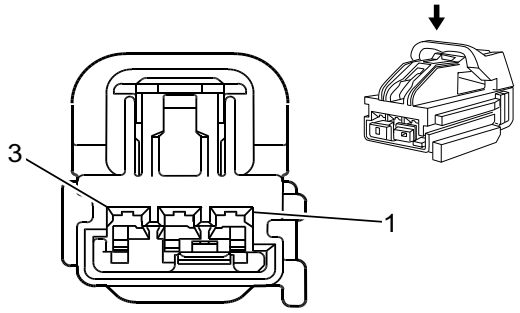
X300 Instrument Panel Harness to Floor Console Harness (D07)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	VT/YE	243	II	—	Accessory Ignition Voltage	1	1.5	VT/YE	243	IV	—
2	1.5	VT/YE	143	II	—	Accessory Ignition Voltage	2	1.5	VT/YE	143	IV	—
3	—	—	—	—	—	Not Occupied	3	—	—	—	—	—
4	0.35	D-BU	2060	I	—	Auxiliary Detection Signal	4	0.35	D-BU	2060	V	—
5	0.75	BK	2550	I	—	Ground	5	0.75	BK	2550	V	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.35	VT/YE	43	I	—	Accessory Ignition Voltage	7	0.35	VT/YE	43	V	—

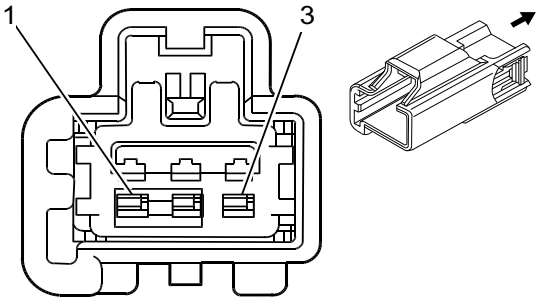
X300 Instrument Panel Harness to Floor Console Harness (D07) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
8 - 12	—	—	—	—	—	Not Occupied	8 - 12	—	—	—	—	—
13	0.5	Bare	5842	I	—	Auxiliary Audio Screen 2	13	0.5	Bare	5842	V	—
14	0.35	VT	5843	I	—	Auxiliary Audio Common Signal	14	0.35	VT	5843	V	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	—	—	—	—	—	Left Rear Seat Audio Headphone Signal	16	0.35	L-GN/ WH	3355	V	—
17	—	—	—	—	—	Rear Seat Audio Headphone Low Reference	17	0.5	Bare	3354	V	—
18 - 22	—	—	—	—	—	Not Occupied	18 - 22	—	—	—	—	—
23	2.5	BK	1050	II	—	Ground	23	2.5	BK	1050	IV	—
24	—	—	—	—	—	Battery Positive Voltage	24	0.75	RD/ VT	340	V	—
25 - 27	—	—	—	—	—	Not Occupied	25 - 27	—	—	—	—	—
28	0.5	WH/ BN	6815	I	—	Inadvertent Power Control	28	0.5	WH/ BN	6815	V	—
29	0.35	L-GN	4512	I	—	Wireless Charging System Charge Indicator Control	29	0.35	L-GN	4512	V	—
30 - 33	—	—	—	—	—	Not Occupied	30 - 33	—	—	—	—	—
34	0.35	L-GN	5841	I	—	Right Auxiliary Audio Signal 2	34	0.35	L-GN	5841	V	—
35	0.35	GY	5839	I	—	Left Auxiliary Audio Signal 2	35	0.35	GY	5839	V	—
36	—	—	—	—	—	Not Occupied	36	—	—	—	—	—
37	—	—	—	—	—	Right Rear Seat Audio Headphone Signal	37	0.35	BN/ GY	3357	V	—
38	—	—	—	—	—	Rear Seat Audio Headphone Common Signal	38	0.35	D-BU/ VT	3356	V	—
39 - 41	—	—	—	—	—	Not Occupied	39 - 41	—	—	—	—	—
42	0.75	RD/ VT	340	III	—	Battery Positive Voltage	42	0.75	RD/ VT	340	IV	—

X302 Wireless Charger Harness to Floor Console Harness (K4C)



1787799



1787800

Connector Part Information

Harness Type: Wireless Charger
OEM Connector: 10847008
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.5 Kaizen Series (L-GY)

Connector Part Information

Harness Type: Floor Console
OEM Connector: 10846803
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way M 1.5 YESC Kaizen Series (L-GY)

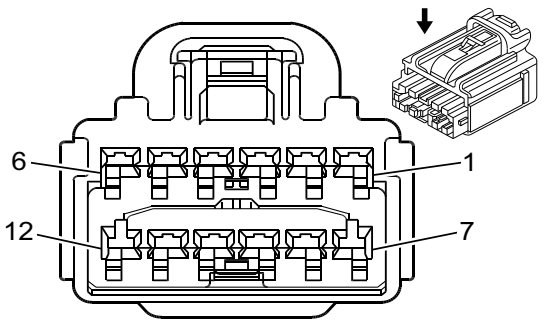
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (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

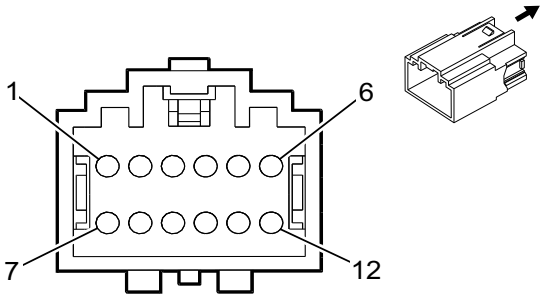
X302 Wireless Charger Harness to Floor Console Harness (K4C)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	VT/YE	43	I	—	Accessory Ignition Voltage	1	0.35	VT/YE	43	II	—
2	0.75	BK	1050	I	—	Ground	2	0.75	BK	1050	II	—
3	0.35	L-GN	4512	I	—	Wireless Charging System Charge Indicator Control	3	0.35	L-GN	4512	II	—

X305 Instrument Panel Harness to Headliner Harness



1856789



3240100

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13507762
Service Connector: 89046712
Description: 12-Way F YESC Kaizen Series (L-GY)

Connector Part Information

Harness Type: Headliner
OEM Connector: 13507705
Service Connector: 88988266
Description: 12-Way M 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	13575850	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	13575818	J-35616-3 (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

X305 Instrument Panel Harness to Headliner Harness

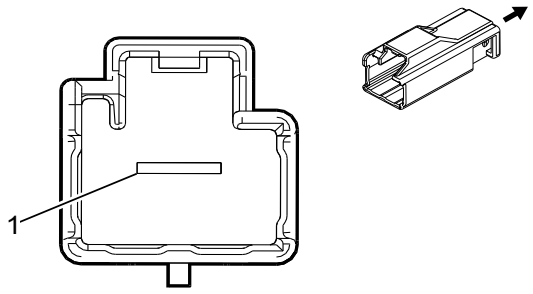
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1						Ground	1	0.5 0.75	BK/WH BK	2550 1050	II II	— —
2	—	—	—	—	—	Exterior Courtesy Lamp Control	2	0.75	WH/VT	1430	II	—
3	0.35	BK/BN	654	I	—	Interior Lamp Defeat Switch Signal Cellular Telephone Microphone Low Reference	3	0.35 0.35	GY/L-GN BK/BN	328 654	II II	— (IO5/IO6/IOB)-UE1
4	0.35	D-BU	655	I	—	Cellular Telephone Microphone Signal	4	0.35	D-BU	655	II	—
5	—	—	—	—	—	Battery Positive Voltage	5	0.5	RD/L-GN	1540	II	—
6 - 8	—	—	—	—	—	Not Occupied	6 - 8	—	—	—	—	—
9	—	—	—	—	—	LED Ambient Lighting Control 2	9	0.35	VT/L-GN	7558	II	—

X305 Instrument Panel Harness to Headliner Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
10						Entertainment Remote Enable Signal	10	0.35 0.5	L-GN/YE YE	7066 6817	II II	— —
11 - 12	—	—	—	—	—	Not Occupied	11 - 12	—	—	—	—	—

X307 Rear Window Defogger - Positive Harness to Body Harness (C49)

—



3240098

Connector Part Information

Harness Type: Rear Window Defog - Positive
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F

Connector Part Information

Harness Type: Body
OEM Connector: 13953570
Service Connector: 19333227
Description: 1-Way M 6.3 Series (BK)

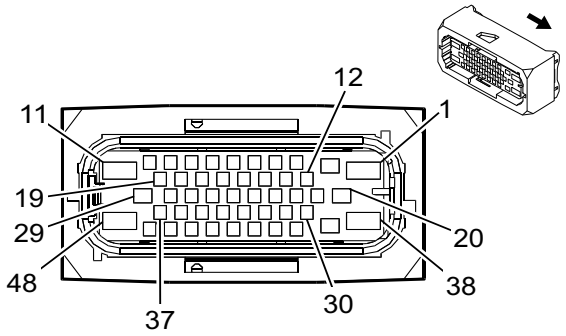
Terminal Part Information

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
II	Not Required	J-35616-43 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required

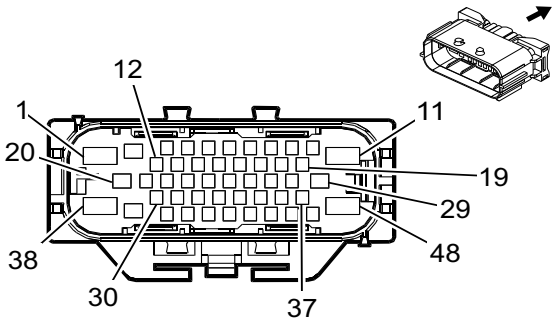
X307 Rear Window Defogger - Positive Harness to Body Harness (C49)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	BN/VT	293	I	—	Rear Defog Element Control	1	2.5	BN/VT	293	II	—

X310 Driver Seat Cushion Harness to Body Harness (-(A95/AG1))



3620765



3240126

Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 15509611

Service Connector: Service by Harness - See Part Catalog

Description: 48-Way F 1.5 MCP, 2.8 JPT, 6.3 MCP Series, Sealed (YE)

Connector Part Information

Harness Type: Body

OEM Connector: 15513436

Service Connector: 19301796

Description: 48-Way M 1.6, 2.8, 5.8 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-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	13505807	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
III	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IV	19329756	J-35616-32 (OR)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	19352419	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

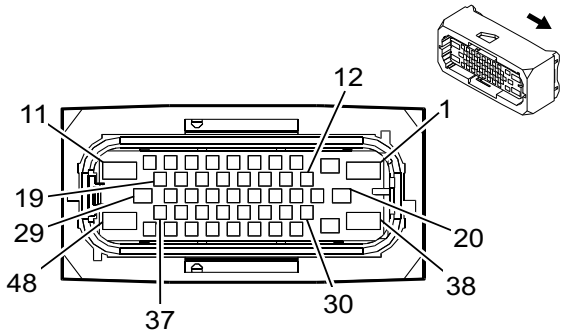
X310 Driver Seat Cushion Harness to Body Harness (-(A95/AG1))

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	—	—	—	—	—	Battery Positive Voltage	2	2.5	RD/YE	5040	III	—
3 - 5	—	—	—	—	—	Not Occupied	3 - 5	—	—	—	—	—
6	0.35	OG/BN	238	I	—	Driver Seat Belt Switch Signal	6	0.35	OG/BN	238	V	—
7	0.35	BK/OG	1363	I	—	Driver Seat Belt Switch Low Reference	7	0.35	BK/OG	1363	V	—
8 - 10	—	—	—	—	—	Not Occupied	8 - 10	—	—	—	—	—
11	—	—	—	—	—	Ground	11	4	BK	1150	IV	—

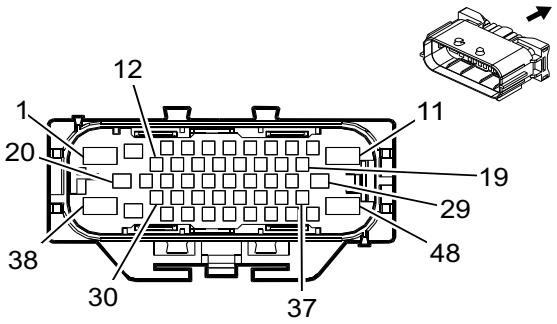
X310 Driver Seat Cushion Harness to Body Harness (-(A95/AG1)) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
12 - 21	—	—	—	—	—	Not Occupied	12 - 21	—	—	—	—	—
22	—	—	—	—	—	Driver Heated Seat Element Low Reference	22	0.75	BN/ BK	2078	II	—
23 - 27	—	—	—	—	—	Not Occupied	23 - 27	—	—	—	—	—
28	—	—	—	—	—	Driver Heated Seat NTC Low Reference	28	0.5	BK/ YE	2080	II	—
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	—	—	—	—	—	Driver Heated Back NTC Signal	30	0.5	D-BU	2425	II	—
31	—	—	—	—	—	Not Occupied	31	—	—	—	—	—
32	—	—	—	—	—	Driver Heated Seat NTC Signal	32	0.5	YE/ GY	2079	II	—
33 - 35	—	—	—	—	—	Not Occupied	33 - 35	—	—	—	—	—
36	—	—	—	—	—	Driver Heated Back Element Control	36	0.75	BN	2432	II	—
37	—	—	—	—	—	Driver Heated Seat Element Control	37	0.75	BN/ VT	2077	II	—
38 - 48	—	—	—	—	—	Not Occupied	38 - 48	—	—	—	—	—

X310 Driver Seat Cushion Harness to Body Harness ((A95/AG1)+KA1)



3620765



3240126

Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 15509588

Service Connector: Service by Harness - See Part Catalog

Description: 48-Way F 1.5 MCP, 2.8 JPT, 6.3 MCP Series, Sealed (YE)

Connector Part Information

Harness Type: Body

OEM Connector: 15513436

Service Connector: 19301796

Description: 48-Way M 1.6, 2.8, 5.8 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-35616-14 (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	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	13505807	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
V	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VI	19329756	J-35616-32 (OR)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VII	19352419	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

X310 Driver Seat Cushion Harness to Body Harness ((A95/AG1)+KA1)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2.5	RD/YE	5040	III	—	Battery Positive Voltage	2	2.5	RD/YE	5040	V	—
3	1.5	YE	5129	I	—	Adjustable Pedal Actuator Rearward Control	3	—	—	—	—	—
4	1.5	L-GN/VT	5130	I	—	Adjustable Pedal Actuator Forward Control	4	—	—	—	—	—

X310 Driver Seat Cushion Harness to Body Harness ((A95/AG1)+KA1) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
5	0.35	OG/ L-GN	5055	I	—	Driver Seat Position Switch Signal	5	—	—	—	—	—
6	0.35	OG/ BN	238	I	—	Driver Seat Belt Switch Signal	6	0.35	OG/ BN	238	VII	—
7	0.35	BK/ OG	1363	I	—	Driver Seat Belt Switch Low Reference	7	0.35	BK/ OG	1363	VII	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.35	L-GN/ GY	5286	I	—	Adjustable Pedal Switch Forward Signal	9	—	—	—	—	—
10	0.35	WH/ GY	5285	I	—	Adjustable Pedal Switch Rearward Signal	10	—	—	—	—	—
11	4	BK	1150	II	—	Ground	11	4	BK	1150	VI	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	0.5	WH/ RD	6207	I	—	Memory Sensor High Reference	13	—	—	—	—	—
14	0.35	L-BU	5952	I	—	Adjustable Pedal Position Sensor Brake Signal	14	—	—	—	—	—
15	0.5	BK/ GY	6206	I	—	Memory Sensor Low Reference	15	—	—	—	—	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.5	L-GN/ WH	7530	I	—	Local Interconnect Network Serial Data Bus 8	17	—	—	—	—	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.35	L-GN/ VT	5906	I	—	Driver Seat Vent Motor Control 1	19	—	—	—	—	—
20 - 21	—	—	—	—	—	Not Occupied	20 - 21	—	—	—	—	—
22	0.75	BN/ BK	2078	I	—	Driver Heated Seat Element Low Reference	22	0.75	BN/ BK	2078	IV	—
23	0.75	RD/ BN	1140	I	—	Battery Positive Voltage	23	—	—	—	—	—
24	0.5	L-GN/ OG	3069	I	—	Driver Side Impact Module Low Control	24	—	—	—	—	—

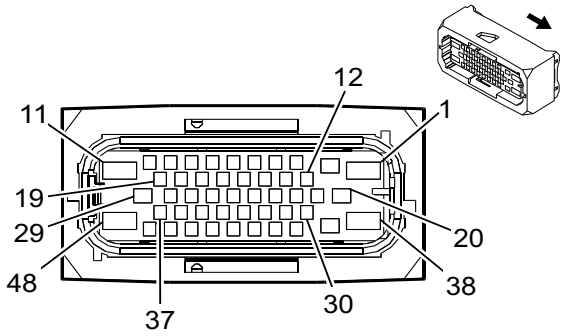
X310 Driver Seat Cushion Harness to Body Harness ((A95/AG1)+KA1) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
25	0.5	YE/OG	3482	I	—	Driver Seat Belt Anchor Pretensioner Low Control	25	—	—	—	—	—
26	0.5	L-GN	5060	I	—	Low Speed GMLAN Serial Data	26	—	—	—	—	—
27	—	—	—	—	—	Not Occupied	27	—	—	—	—	—
28	0.5	BN/YE	2080	I	—	Driver Heated Seat NTC Low Reference	28	0.5	BK/YE	2080	IV	—
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	0.5	L-BU	2425	I	—	Driver Heated Back NTC Signal	30	0.5	D-BU	2425	IV	—
31	—	—	—	—	—	Not Occupied	31	—	—	—	—	—
32	0.5	YE/GY	2079	I	—	Driver Heated Seat NTC Signal	32	0.5	YE/GY	2079	IV	—
33	0.5	OG/L-BU	3068	I	—	Driver Side Impact Module High Control	33	—	—	—	—	—
34	0.5	OG/YE	3481	I	—	Driver Seat Belt Anchor Pretensioner High Control	34	—	—	—	—	—
35	0.35	L-GN/L-BU	614	I	—	Memory Seat Switch Set Signal	35	—	—	—	—	—
36	0.75	BN	2432	I	—	Driver Heated Back Element Control	36	0.75	BN	2432	IV	—
37	0.75	BN/VT	2077	I	—	Driver Heated Seat Element Control	37	0.75	BN/VT	2077	IV	—
38 - 39	—	—	—	—	—	Not Occupied	38 - 39	—	—	—	—	—
40	0.35	BK/L-BU	5978	I	—	Memory Switch Low Reference	40	—	—	—	—	—
41	0.35	WH	615	I	—	Memory Seat Switch Signal 1	41	—	—	—	—	—
42	—	—	—	—	—	Not Occupied	42	—	—	—	—	—
43	0.5	VT	4106	I	—	Center Side Impact Module Low Control	43	—	—	—	—	—

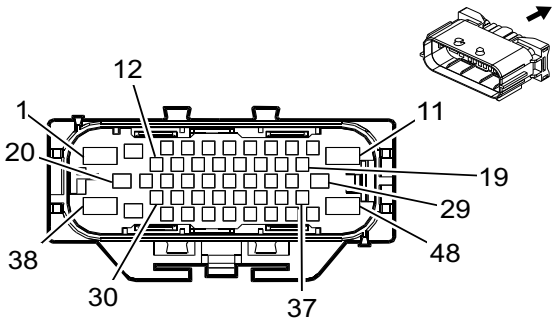
X310 Driver Seat Cushion Harness to Body Harness ((A95/AG1)+KA1) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
44	0.5	BN/WH	4107	I	—	Center Side Impact Module High Control	44	—	—	—	—	—
45	—	—	—	—	—	Not Occupied	45	—	—	—	—	—
46	0.35	GY	157	I	—	Interior Lamp Control	46	—	—	—	—	—
47 - 48	—	—	—	—	—	Not Occupied	47 - 48	—	—	—	—	—

X310 Driver Seat Cushion Harness to Body Harness ((A95/AG1)-KA1)



3620765



3240126

Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 15509590

Service Connector: Service by Harness - See Part Catalog

Description: 48-Way F 1.5 MCP, 2.8 JPT, 6.3 MCP Series, Sealed (YE)

Connector Part Information

Harness Type: Body

OEM Connector: 15513436

Service Connector: 19301796

Description: 48-Way M 1.6, 2.8, 5.8 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-35616-14 (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	Not Required	J-35616-4A (PU)	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	13505807	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
VI	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VII	19329756	J-35616-32 (OR)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VIII	19352419	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

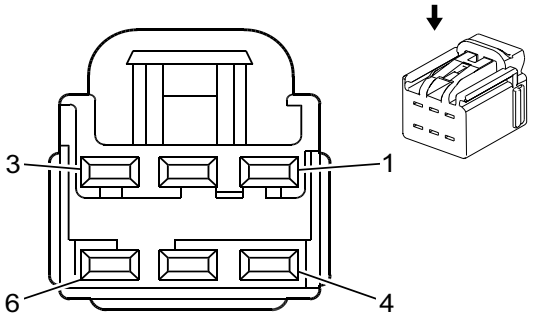
X310 Driver Seat Cushion Harness to Body Harness ((A95/AG1)-KA1)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2.5	RD/YE	5040	III	—	Battery Positive Voltage	2	2.5	RD/YE	5040	VI	—
3 - 5	—	—	—	—	—	Not Occupied	3 - 5	—	—	—	—	—
6	0.35	OG/BN	238	I	—	Driver Seat Belt Switch Signal	6	0.35	OG/BN	238	VIII	—

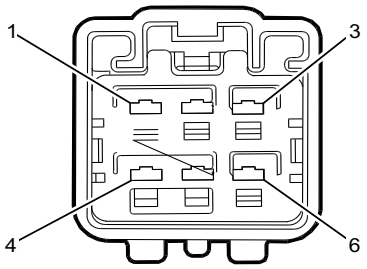
X310 Driver Seat Cushion Harness to Body Harness ((A95/AG1)-KA1) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.35	BK/OG	1363	I	—	Driver Seat Belt Switch Low Reference	7	0.35	BK/OG	1363	VIII	—
8 - 10	—	—	—	—	—	Not Occupied	8 - 10	—	—	—	—	—
11	4 2.5	BK BK	1150 1150	IV II	AG1/KA1 AG1-KA1	Ground Ground	11	4	BK	1150	VII	—
12 - 21	—	—	—	—	—	Not Occupied	12 - 21	—	—	—	—	—
22	—	—	—	—	—	Driver Heated Seat Element Low Reference	22	0.75	BN/BK	2078	V	—
23 - 27	—	—	—	—	—	Not Occupied	23 - 27	—	—	—	—	—
28	—	—	—	—	—	Driver Heated Seat NTC Low Reference	28	0.5	BK/YE	2080	V	—
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	—	—	—	—	—	Driver Heated Back NTC Signal	30	0.5	D-BU	2425	V	—
31	—	—	—	—	—	Not Occupied	31	—	—	—	—	—
32	—	—	—	—	—	Driver Heated Seat NTC Signal	32	0.5	YE/GY	2079	V	—
33 - 35	—	—	—	—	—	Not Occupied	33 - 35	—	—	—	—	—
36	—	—	—	—	—	Driver Heated Back Element Control	36	0.75	BN	2432	V	—
37	—	—	—	—	—	Driver Heated Seat Element Control	37	0.75	BN/VT	2077	V	—
38 - 48	—	—	—	—	—	Not Occupied	38 - 48	—	—	—	—	—

X311 Driver Seat Back Harness to Driver Seat Cushion Harness (A95/AG1)



1519696



1849802

Connector Part Information

Harness Type: Driver Seat Back
OEM Connector: 7283-6466-40
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F YESC Kaizen Series (L-GY)

Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 7282-6466-40
Service Connector: Service by Harness - See Part Catalog
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-35616-35 (VT)	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

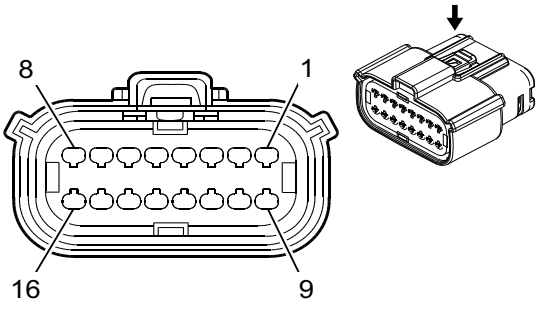
X311 Driver Seat Back Harness to Driver Seat Cushion Harness (A95/AG1)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35 0.75	WH/BK YE/L-BU	570 767	I I	— —	Driver Memory Seat Recline Motor Position Sensor Signal Driver Power Seat Lumbar Motor Down Control	1	1.5	YE/L-BU	767	II	—
2	0.35 0.75	WH/RD YE/BN	3298 768	I I	— —	Memory Sensor High Reference 2 Driver Power Seat Lumbar Motor Up Control	2	1.5	YE/BN	768	II	—
3	0.75 1.5	L-BU L-BU	611 611	I I	— —	Driver Power Seat Lumbar Motor Forward Control Driver Power Seat Lumbar Motor Forward Control	3	1.5	L-BU	611	II	—

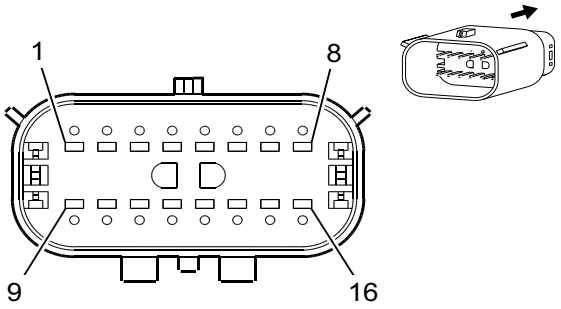
X311 Driver Seat Back Harness to Driver Seat Cushion Harness (A95/AG1) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
4	0.75 1.5	VT VT	610 610	I I	— —	Driver Power Seat Lumbar Motor Rearward Control Driver Power Seat Lumbar Motor Rearward Control	4	1.5	VT	610	II	—
5	1.5	L-GN/YE	276	I	—	Driver Power Seat Recline Motor Forward Control	5	1.5	L-GN/YE	276	II	—
6	1.5	L-BU/YE	277	I	—	Driver Power Seat Recline Motor Rearward Control	6	1.5	L-BU/YE	277	II	—

X312 Driver Seat Back Harness to Driver Seat Cushion Harness (KA1)



2548389



2548390

Connector Part Information

Harness Type: Driver Seat Back
OEM Connector: 33472-1886
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 150 MX Series, Sealed (YE)

Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 33482-1777
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way M 150 MX 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-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

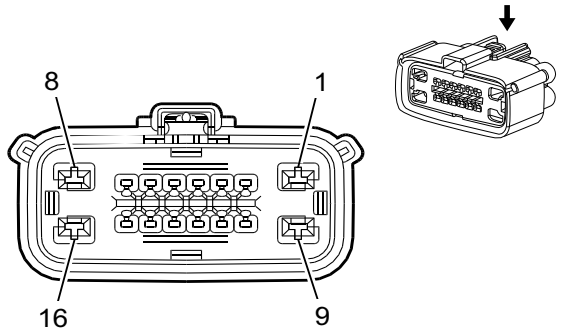
X312 Driver Seat Back Harness to Driver Seat Cushion Harness (KA1)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	OG/L-BU	3068	I	—	Driver Side Impact Module High Control	1	0.5	OG/L-BU	3068	III	—
2	0.5	L-GN/OG	3069	I	—	Driver Side Impact Module Low Control	2	0.5	L-GN/OG	3069	III	—
3	0.5	VT	4106	I	—	Center Side Impact Module Low Control	3	0.5	VT	4106	III	—
4	0.5	BN/WH	4107	I	—	Center Side Impact Module High Control	4	0.5	BN/WH	4107	III	—
5	0.75	BK	1150	II	—	Ground	5	0.75	BK	1150	III	—
6	0.75	BN	2432	II	—	Driver Heated Back Element Control	6	0.75	BN	2432	III	—

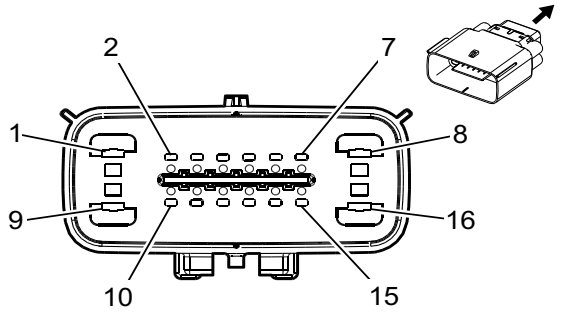
X312 Driver Seat Back Harness to Driver Seat Cushion Harness (KA1) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.35	L-GN/ VT	5906	II	—	Driver Seat Vent Motor Control 1	7	0.35	L-GN/ VT	5906	III	—
8	0.5	BK/ YE	2080	II	—	Driver Heated Seat NTC Low Reference	8	0.5	BN/ YE	2080	III	—
9	0.75	BN/ BK	2078	II	—	Driver Heated Seat Element Low Reference	9	0.75	BN/ BK	2078	III	—
10	0.5	L-BU	2425	II	—	Driver Heated Back NTC Signal	10	0.5	L-BU	2425	III	—
11	0.75	RD/L-GN	5140	II	—	Battery Positive Voltage	11	0.75	RD/L-GN	5140	III	—
12	0.35	WH/ BK	570	II	—	Driver Memory Seat Recline Motor Position Sensor Signal	12	0.5	WH/ BK	570	III	—
13	0.35	WH/ RD	3298	II	—	Memory Sensor High Reference 2	13	0.35	WH/ RD	3298	III	—
14 - 16	—	—	—	—	—	Not Occupied	14 - 16	—	—	—	—	—

X314 Center Seat Harness to Body Harness (-D07)



3684497



2373686

Connector Part Information

Harness Type: Center Seat
OEM Connector: 34985-1606
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 1.5, 2.8 Series, Sealed (BK)

Connector Part Information

Harness Type: Body
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	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	13584530	J-35616-5 (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19119395	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
V	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

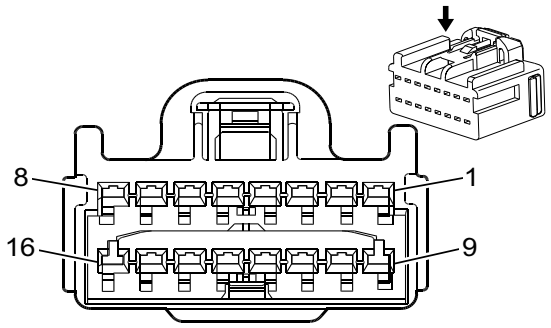
X314 Center Seat Harness to Body Harness (-D07)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	VT/YE	143	II	—	Accessory Ignition Voltage	1	1.5	VT/YE	143	III	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.35	BK	5842	I	—	Auxiliary Audio Screen 2	3	0.5	BK	5842	IV	—
4	0.35	GY	5839	I	—	Left Auxiliary Audio Signal 2	4	0.5	GY	5839	IV	—
5	0.35	L-BU	2060	I	—	Auxiliary Detection Signal	5	0.5	D-BU	2060	IV	—
6	0.35	BK	2550	I	—	Ground	6	0.75	BK	2550	V	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	1.5	BK	1250	II	—	Ground	8	1.5	BK	1250	III	—

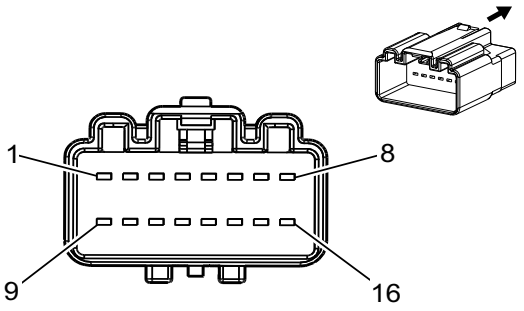
X314 Center Seat Harness to Body Harness (-D07) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	1.5	VT/YE	243	II	—	Accessory Ignition Voltage	9	1.5	VT/YE	243	III	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	0.35	L-GN	5841	I	—	Right Auxiliary Audio Signal 2	11	0.5	L-GN	5841	IV	—
12	0.35	VT	5843	I	—	Auxiliary Audio Common Signal	12	0.5	VT	5843	IV	—
13	—	—	—	—	—	Not Occupied	13	—	—	—	—	—
14	0.75	RD/VT	340	I	—	Battery Positive Voltage	14	0.75	RD/VT	340	V	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	1.5	BK	1250	II	—	Ground	16	1.5	BK	1250	III	—

X315 Body Harness to Brake Clutch Harness



1592558



1483278

Connector Part Information

Harness Type: Body
OEM Connector: 10847013
Service Connector: 89047090
Description: 16-Way F 1.5 Kaizen Series (GN)

Connector Part Information

Harness Type: Brake Clutch
OEM Connector: 13507433
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way M 1.5 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	13578813	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	13578891	J-35616-2A (GY)	J-38125-11A	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

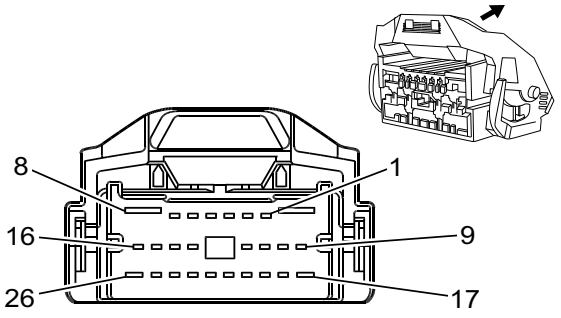
X315 Body Harness to Brake Clutch Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	BK/D-BU	1271	I	—	Accelerator Pedal Position Low Reference 1	1	0.35	BK/D-BU	1271	III	—
2	0.35	YE/WH	1161	I	—	Accelerator Pedal Position Signal 1	2	0.35	YE/WH	1161	III	—
3	0.35	WH/RD	1164	I	—	Accelerator Pedal Position 5V Reference 1	3	0.35	WH/RD	1164	III	—
4	0.35	BK/VT	1272	I	—	Accelerator Pedal Position Low Reference 2	4	0.35	BK/VT	1272	III	—
5	0.35	L-GN/WH	1162	I	—	Accelerator Pedal Position Signal 2	5	0.35	L-GN/WH	1162	III	—
6	0.35	BN/RD	1274	I	—	Accelerator Pedal Position 5V Reference 2	6	0.35	BN/RD	1274	III	—

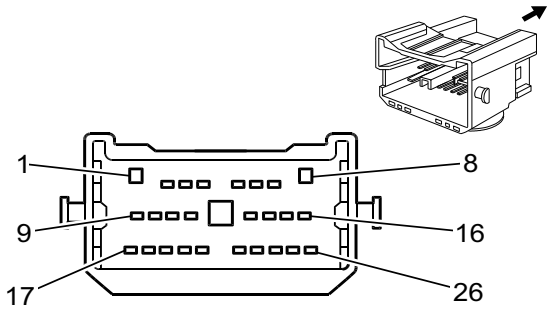
X315 Body Harness to Brake Clutch Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.35	WH	5359	II	—	Brake Apply Sensor Control	7	0.5	WH	5359	III	—
8	0.35	BK/BN	5360	II	—	Brake Apply Sensor Low Reference	8	0.5	BK/BN	5360	III	—
9	0.35	D-BU/YE	5361	II	—	Brake Apply Sensor Signal	9	0.5	D-BU/YE	5361	III	—
10	—	—	—	—	—	Rotary Position Sensor Low Reference	10	0.5	YE/BK	7478	III	—
11	—	—	—	—	—	Rotary Position Sensor 5V Reference	11	0.5	WH/RD	7477	III	—
12	—	—	—	—	—	Rotary Position Sensor Signal	12	0.5	WH/L-GN	7479	III	—
13 - 16	—	—	—	—	—	Not Occupied	13 - 16	—	—	—	—	—

X316 Headliner Harness to Overhead Console Harness



823264



823289

Connector Part Information

Harness Type: Headliner
OEM Connector: 15518265
Service Connector: 13587877
Description: 26-Way F 1.5, 2.8, 6.3 Series (BK)

Connector Part Information

Harness Type: Overhead Console
OEM Connector: 13536441
Service Connector: Service by Harness - See Part Catalog
Description: 26-Way M 1.5, 2.8, 6.3 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-38125-11A	Not Available	Not Available	Not Available	Not Available
II	13578891	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	13582322	J-35616-4A (PU)	J-38125-11A	7116-4110-02	Yazaki 9	E	C
IV	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
V	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

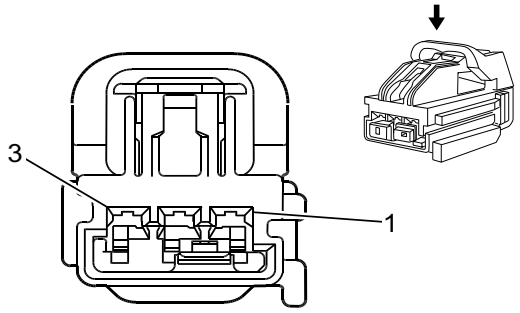
X316 Headliner Harness to Overhead Console Harness

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	VT/YE	43	II	—	Accessory Ignition Voltage	3	0.35	VT/YE	43	IV	—
4	0.5	BK	1050	I	—	Ground	4	0.5	BK	1050	IV	—
5	0.35	GY/L-GN	328	II	—	Interior Lamp Defeat Switch Signal	5	0.35	GY/L-GN	328	IV	—
6	0.35	GY/D-BU	156	II	—	Courtesy Lamp Switch Signal	6	0.35	GY	156	IV	—
7	0.5	WH/BN	6815	I	—	Inadvertent Power Control	7	0.5	WH/BN	6815	IV	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

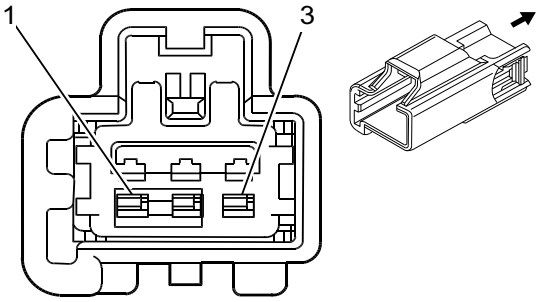
X316 Headliner Harness to Overhead Console Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	0.35	VT/L-GN	7558	II	—	LED Ambient Lighting Control 2	9	0.35	VT/L-GN	7558	IV	—
10	0.5	YE	6817	I	—	LED Backlight Dimming Control	10	0.5	YE	6817	IV	—
11	0.35	VT/BK	1139	II	—	Run/Crank Ignition 1 Voltage	11	0.35	VT/WH	1139	IV	—
12	0.35	VT/WH	5234	II	—	Passenger Seat Belt Indicator Control	12	0.35	VT/WH	5234	IV	—
13	0.35	D-BU	2307	II	—	Passenger Air Bag On Indicator Control	13	0.35	D-BU	2307	IV	—
14	0.35	L-GN/RD	2308	II	—	Passenger Air Bag Off Indicator Control	14	0.35	L-GN	2308	IV	—
15 - 16	—	—	—	—	—	Not Occupied	15 - 16	—	—	—	—	—
17	0.5	RD/YE	240	III	—	Battery Positive Voltage	17	0.5	RD/YE	240	V	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.35	YE/VT	6191	II	—	Power Sliding Window Switch Open Signal	19	0.35	YE/VT	6191	IV	—
20	0.35	WH	6192	II	—	Power Sliding Window Switch Close Signal	20	0.35	WH	6192	IV	—
21	0.5	GY	157	I	—	Interior Lamp Control	21	0.5	GY	157	IV	—
22	—	—	—	—	—	Not Occupied	22	—	—	—	—	—
23	0.35	VT/YE	43	II	—	Accessory Ignition Voltage	23	0.35	VT/YE	43	IV	—
24 - 26	—	—	—	—	—	Not Occupied	24 - 26	—	—	—	—	—

X317 Headliner Harness to Center High Mounted Stop Lamp Harness



1787799



1787800

Connector Part Information

Harness Type: Headliner
OEM Connector: 10847008
Service Connector: 19149536
Description: 3-Way F 1.5 Kaizen Series (L-GY)

Connector Part Information

Harness Type: Center High Mounted Stop Lamp
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way M

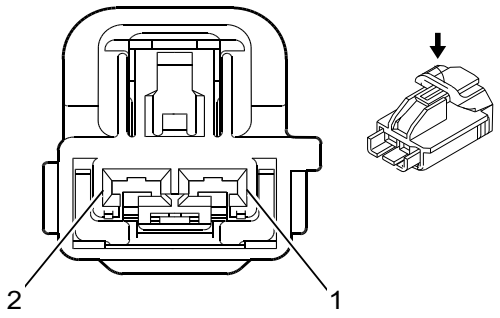
Terminal Part Information

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

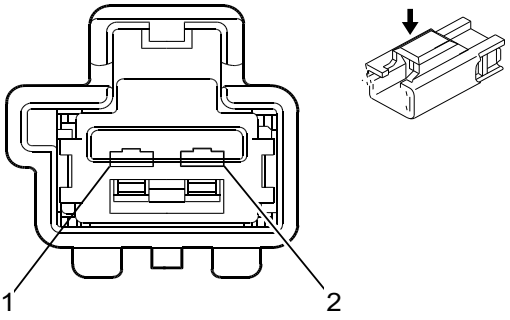
X317 Headliner Harness to Center High Mounted Stop Lamp Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	WH/VT	1430	I	—	Exterior Courtesy Lamp Control	1	0.75	WH/VT	1430	II	—
2	0.5	VT/GY	1054	I	—	Stop Lamp Control	2	0.5	VT/GY	1054	II	—
3	0.5	BK	1050	I	—	Ground	3	0.5	BK	1050	II	—

X319 Overhead Console Harness to Right A-Pillar Harness (TRW)



1803142



1803144

Connector Part Information

Harness Type: Overhead Console
OEM Connector: 10846819
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F YESC Kaizen Series (L-GY)

Connector Part Information

Harness Type: Right A-Pillar
OEM Connector: 10846812
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M YESC Kaizen Series (L-GY)

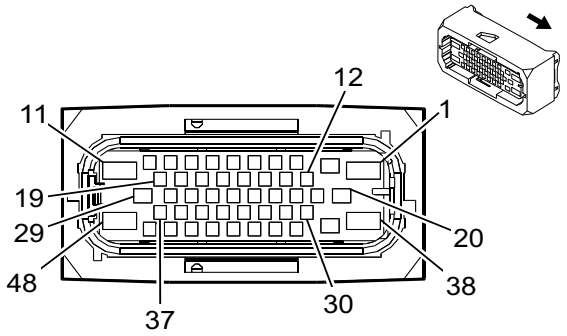
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	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

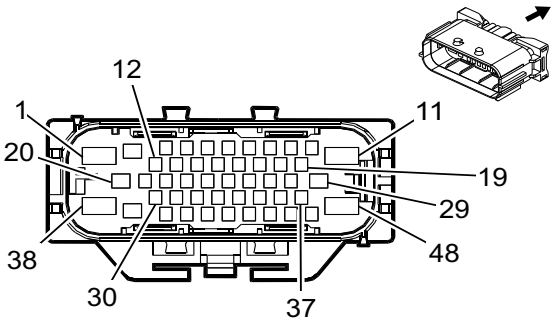
X319 Overhead Console Harness to Right A-Pillar Harness (TRW)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	RD/L-GN	3140	I	—	Battery Positive Voltage	1	2.5	RD/L-GN	3140	II	—
2	2.5	BK	1050	I	—	Ground	2	2.5	BK	1050	II	—

X320 Passenger Seat Cushion Harness to Body Harness (A95/KA1)



3620765



3240126

Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 15509588

Service Connector: Service by Harness - See Part Catalog

Description: 48-Way F 1.5 MCP, 2.8 JPT, 6.3 MCP Series, Sealed (YE)

Connector Part Information

Harness Type: Body

OEM Connector: 15513436

Service Connector: 19301796

Description: 48-Way M 1.6, 2.8, 5.8 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-35616-14 (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	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	13505807	J-35616-3 (GY)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
V	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VI	19329756	J-35616-32 (OR)	J-38125-36	Not Available	Not Available	Not Available	Not Available

X320 Passenger Seat Cushion Harness to Body Harness (A95/KA1)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2.5	RD/BN	1440	III	—	Battery Positive Voltage	2	2.5	RD/YE	1440	V	—
3 - 5	—	—	—	—	—	Not Occupied	3 - 5	—	—	—	—	—
6	0.35	OG/VT	1362	I	—	Passenger Seat Belt Switch Signal	6	—	—	—	—	—
7	0.35	BK/OG	1361	I	—	Passenger Seat Belt Switch Low Reference	7	—	—	—	—	—

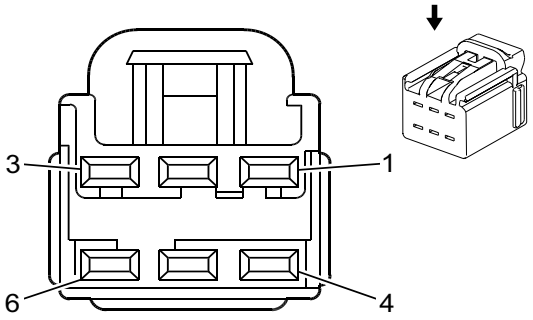
X320 Passenger Seat Cushion Harness to Body Harness (A95/KA1) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
8	0.75	BN/VT	2077	I	—	Driver Heated Seat Element Control	8	0.75	BN/VT	2077	IV	—
9	0.75	BN	2432	I	—	Driver Heated Back Element Control	9	0.75	BN	2432	IV	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	4	BK	1250	II	—	Ground Ground	11	1 4	BK BK	1250 1250	VI VI	AZ3 AG2
12 - 13	—	—	—	—	—	Not Occupied	12 - 13	—	—	—	—	—
14	0.35	L-BU/RD	5612	I	—	Passenger Seat Belt Tension Sensor 5V Reference	14	—	—	—	—	—
15	0.35	VT/OG	5611	I	—	Passenger Seat Belt Tension Sensor Signal	15	—	—	—	—	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.75	RD/L-GN	6140	I	—	Battery Positive Voltage	17	0.75	RD/L-GN	6140	IV	—
18 - 21	—	—	—	—	—	Not Occupied	18 - 21	—	—	—	—	—
22	0.75	BN/BK	2078	I	—	Driver Heated Seat Element Low Reference	22	0.75	BN/BK	2078	IV	—
23	—	—	—	—	—	Not Occupied	23	—	—	—	—	—
24	0.5	BN/OG	3067	I	—	Passenger Side Impact Module Low Control	24	—	—	—	—	—
25	0.5	GY/OG	3480	I	—	Passenger Seat Belt Anchor Pretensioner Low Control	25	—	—	—	—	—
26	0.35	L-GN	5060	I	—	Low Speed GMLAN Serial Data	26	—	—	—	—	—
27	0.35	L-GN/L-BU	6133	I	—	Local Interconnect Network Serial Data Bus 2	27	0.5	L-GN/D-BU	6133	IV	—
28	0.5	BK/YE	2080	I	—	Driver Heated Seat NTC Low Reference	28	0.5	BK/YE	2080	IV	—
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—

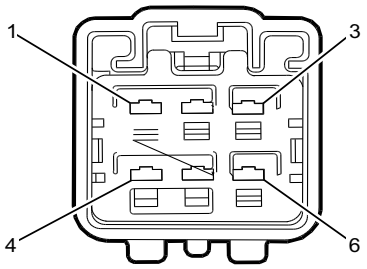
X320 Passenger Seat Cushion Harness to Body Harness (A95/KA1) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
30	0.5	L-BU	2425	I	—	Driver Heated Back NTC Signal	30	0.5	D-BU	2425	IV	—
31	—	—	—	—	—	Not Occupied	31	—	—	—	—	—
32	0.5	YE/GY	2079	I	—	Driver Heated Seat NTC Signal	32	0.5	YE/GY	2079	IV	—
33	0.5	OG/GY	3066	I	—	Passenger Side Impact Module High Control	33	—	—	—	—	—
34	0.5	OG/BN	3479	I	—	Passenger Seat Belt Anchor Pretensioner High Control	34	—	—	—	—	—
35	0.35	RD/L-GN	4440	I	—	Battery Positive Voltage	35	—	—	—	—	—
36	0.35	BK/WH	2751	I	—	Signal Ground	36	—	—	—	—	—
37 - 46	—	—	—	—	—	Not Occupied	37 - 46	—	—	—	—	—
47	0.75	RD/L-GN	5140	I	—	Battery Positive Voltage	47	0.75	RD/L-GN	5140	IV	—
48	—	—	—	—	—	Not Occupied	48	—	—	—	—	—

X321 Passenger Seat Back Harness to Passenger Seat Cushion Harness (A95)



1519696



1849802

Connector Part Information

Harness Type: Passenger Seat Back
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F

Connector Part Information

Harness Type: Passenger Seat Cushion
OEM Connector: 7282-6466-40
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way M YESC Kaizen Series (L-GY)

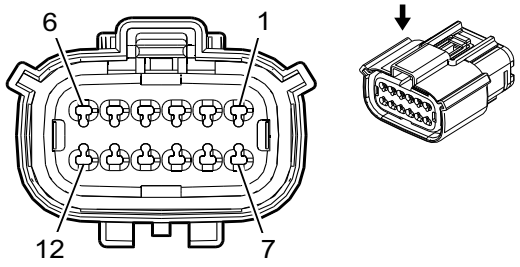
Terminal Part Information

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

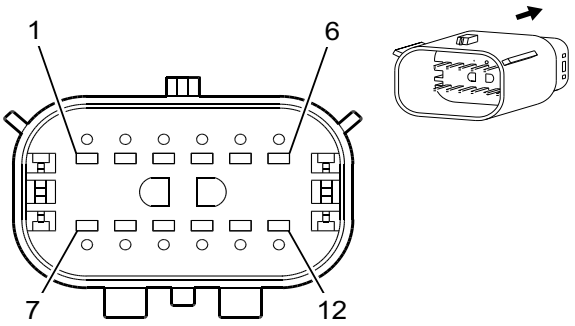
X321 Passenger Seat Back Harness to Passenger Seat Cushion Harness (A95)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 2	—	—	—	—	—	Not Occupied	1 - 2	—	—	—	—	—
3	1.5	L-BU	211	I	—	Passenger Power Seat Lumbar Motor Forward Control	3	1.5	L-BU	211	II	—
4	1.5	VT	210	I	—	Passenger Power Seat Lumbar Motor Rearward Control	4	1.5	VT	210	II	—
5	1.5	L-GN	76	I	—	Passenger Power Seat Recline Motor Forward Control	5	1.5	L-GN	76	II	—
6	1.5	L-BU/BN	77	I	—	Passenger Power Seat Recline Motor Rearward Control	6	1.5	L-BU/BN	77	II	—

X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (KA1)



2424960



1825167

Connector Part Information

Harness Type: Passenger Seat Back
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F

Connector Part Information

Harness Type: Passenger Seat Cushion
OEM Connector: 33482-1336
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way M 150 MX 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-35616-2A (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

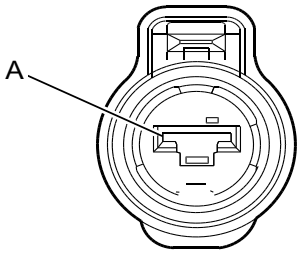
X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (KA1)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	OG/GY	3066	I	—	Passenger Side Impact Module High Control	1	0.5	OG/GY	3066	II	—
2	0.5	BN/OG	3067	I	—	Passenger Side Impact Module Low Control	2	0.5	BN/OG	3067	II	—
3	0.75	BK	1250	I	—	Ground	3	0.75	BK	1250	II	—
4	0.75	WH/BN	2481	I	—	Passenger Heated Back Element Control	4	0.75	WH/BN	2481	II	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	0.5	BK/L-GN	2482	I	—	Passenger Heated Back NTC Low Reference	6	0.5	BK/L-GN	2482	II	—
7	0.75	GY/BK	2480	I	—	Passenger Heated Seat Element Low Reference	7	0.75	GY/BK	2480	II	—

X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (KA1) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
8	0.5	WH/ L-BU	2436	I	—	Passenger Heated Back NTC Signal	8	0.5	WH/ L-BU	2436	II	—
9 - 12	—	—	—	—	—	Not Occu-pied	9 - 12	—	—	—	—	—

X330 Chassis Harness to Battery Feed Harness (7Y7/7Y8)



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4976432

Connector Part Information

Harness Type: Chassis
OEM Connector: 3537133C1
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 312 Series (GY)

Connector Part Information

Harness Type: Battery Feed
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way M

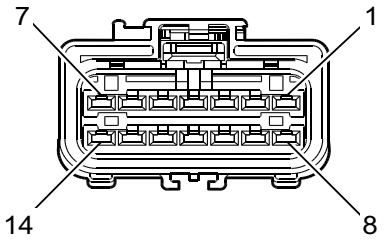
Terminal Part Information

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

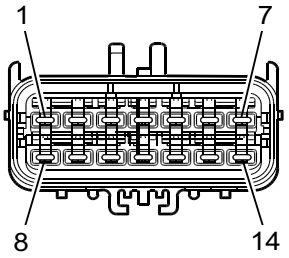
X330 Chassis Harness to Battery Feed Harness (7Y7/7Y8)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	6	RD	90	I	—	Right Mirror Motor Left Control	A	6	RD	90	II	—

X401 Chassis Rear Left Harness to Chassis Harness



4977613



4976624

Connector Part Information

Harness Type: Chassis Rear Left
OEM Connector: 3573078C1
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way F 2.8 APEX Series, Sealed (BK)

Connector Part Information

Harness Type: Chassis
OEM Connector: 3618231C1
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way M 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	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	No Tool Required	No Tool Required	Not Available	Not Available	Not Available	Not Available

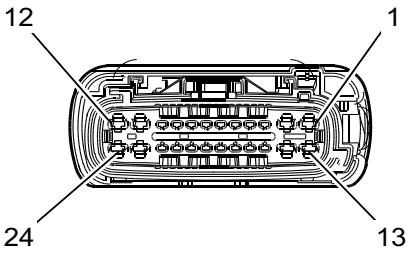
X401 Chassis Rear Left Harness to Chassis Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2	GN/WH	24	I	—	Backup Lamp Control	1	2	GN/WH	24	II	—
2	2	YE/BU	18	I	—	Left Rear Stop/Turn Lamp Control	2	1	YE/BU	18	II	—
3	2	VT/GY	709	I	—	Left Park Lamp Control	3	2	VT/GY	709	II	—
4	1	GY/BK	7127	I	—	Wheel Speed Sensor Control Left Rear	4	0.75	GY/BK	7127	II	—
5	1	BU	884	I	—	Wheel Speed Sensor Signal Left Rear	5	0.75	BU	884	II	—
6	2.5	RD/VT	1242	I	—	Battery Positive Voltage	6	2	RD/YE	1242	II	—
7	2.5	WH/GN	1624	I	—	Trailer Backup Lamp Control	7	2	WH/GN	1624	II	—
8	2.5	BU	47	I	—	Trailer Auxiliary Control Trailer Auxiliary Control	8	1.5 3	BU BU	47 47	II II	— —

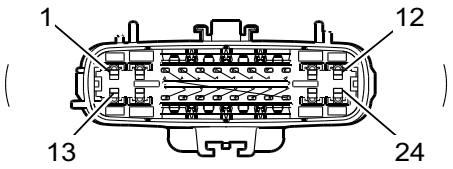
X401 Chassis Rear Left Harness to Chassis Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	2.5	GN/ BN	319	I	—	Right Rear Trailer Stop/ Turn Lamp Control	9	2	GN/ BN	319	II	—
10	2.5	GY/ BN	2109	I	—	Trailer Park Lamp Control	10	5	GY/ BN	2109	II	—
11	2.5	YE/ BU	318	I	—	Left Rear Trailer Stop/ Turn Lamp Control	11	1.5	YE/ BU	318	II	—
12 - 14	—	—	—	—	—	Not Occu-pied	12 - 14	—	—	—	—	—

X402 Chassis Rear Right Harness to Chassis Harness



4977737



4977715

Connector Part Information

Harness Type: Chassis Rear Right
OEM Connector: 3857801C1
Service Connector: Service by Harness - See Part Catalog
Description: 24-Way F 1.5, 2.8 APEX Series, Sealed (BK)

Connector Part Information

Harness Type: Chassis
OEM Connector: 3920649C1
Service Connector: Service by Harness - See Part Catalog
Description: 24-Way M 1.5, 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	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	No Tool Required	No Tool Required	Not Available	Not Available	Not Available	Not Available

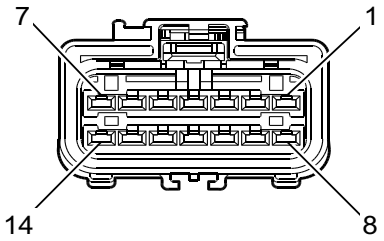
X402 Chassis Rear Right Harness to Chassis Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2	BN/GN	19	I	—	Right Rear Stop/Turn Lamp Control	2	1	BN/GN	19	II	—
3	—	—	—	—	—	Not Occupied	3	—	—	—	—	—
4	0.75	WH/GN	1624	I	—	Trailer Backup Lamp Control	4	1.5	GN/WH	24	II	—
5	0.75	WH/BU	7128	I	—	Wheel Speed Sensor Control Right Rear	5	0.75	WH/BU	7128	II	—
6	1	VT	882	I	—	Wheel Speed Sensor Signal Right Rear	6	0.75	VT	882	II	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	0.5 0.5	BU/VT BU/WH	1589 1937	I I	— —	Primary Fuel Level Sensor Signal	8	0.5 0.5	VT BU	1589 1937	II II	— —

X402 Chassis Rear Right Harness to Chassis Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
						Secondary Fuel Level Sensor Signal						
9	0.5	BK/GN	6281	I	—	Fuel Level Sensor Low Reference Fuel Level Sensor Low Reference	9	0.5 0.5	BN/WH BK/GN	6281 6281	II II	— —
10	0.75	WH/VT	1430	I	—	Exterior Courtesy Lamp Control	10	0.75	GN/VT	1430	II	—
11	1.5	GY	120	I	—	Fuel Pump Control	11	1.5	GY	120	II	—
12	1.5	YE/GY	4137	I	—	Fuel Pump Supply Voltage Phase 2	12	1.5	YE/GY	4137	II	—
13	1.5	WH/BN	4138	I	—	Fuel Pump Supply Voltage Phase 3	13	1.5	WH/BN	4138	II	—
14	2	GN/WH	24	I	—	Backup Lamp Control	14	2	GN/WH	24	II	—
15	0.75	GY/YE	6972	I	—	Camera Signal 2 +	15	0.75	GY/YE	6972	II	—
16	0.5	BK	6974	I	—	Camera Low Reference	16	0.75	WH	6974	II	—
17	0.75	WH/BU	6973	I	—	Camera Signal 2	17	0.75	WH/BU	6973	II	—
18	0.75	VT/GN	1739	I	—	Run/Crank Ignition 1 Voltage	18	0.5	PK	1739	II	—
19	0.5	BK	7444	I	—	Fuel System Control Module Shield Ground	19	0.5	BK	7444	II	—
20	—	—	—	—	—	Ground	20	0.5	BK	2550	II	—
21 - 22	—	—	—	—	—	Not Occupied	21 - 22	—	—	—	—	—
23	2	GY/BN	309	I	—	Right Park Lamp Control	23	2	GY/BN	309	II	—
24	1.5	BK	2150	I	—	Ground	24	2	BK	2150	II	—

X405 Chassis Harness to Body Builder Connection Harness (5DX)



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4977613

Connector Part Information

Harness Type: Chassis
OEM Connector: 3573078C1
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way F 2.8 APEX Series, Sealed (BK)

Connector Part Information

Harness Type: Body Builder Connection
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	No Tool Required	No Tool Required	Not Available	Not Available	Not Available	Not Available
II	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

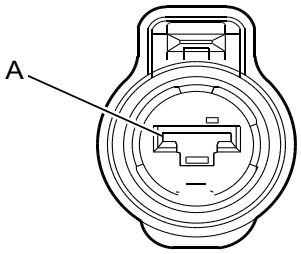
X405 Chassis Harness to Body Builder Connection Harness (5DX)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2	GN/WH	24	I	—	Backup Lamp Control	2	2	GN/WH	24	II	—
3	2	YE/BN	618	I	—	Left Rear Turn Signal Lamp Control	3	2	YE/BN	618	II	—
4	1	GN/VT	619	I	—	Right Rear Turn Signal Lamp Control	4	1	GN/VT	619	II	—
5	0.75	VT/GY	1054	I	—	Stop Lamp Control	5	0.75	VT/GY	1054	II	—
6 - 7	—	—	—	—	—	Not Occupied	6 - 7	—	—	—	—	—
8	2	VT/GY	709	I	—	Left Park Lamp Control	8	2	VT/GY	709	II	—
9	2	GY/BN	309	I	—	Right Park Lamp Control	9	2	GY/BN	309	II	—
10 - 11	—	—	—	—	—	Not Occupied	10 - 11	—	—	—	—	—

X405 Chassis Harness to Body Builder Connection Harness (5DX) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
12	1	YE/BU	18	I	—	Left Rear Stop/Turn Lamp Control	12	1	YE/BU	18	II	—
	2	YE/BU	18	I	—	Left Rear Stop/Turn Lamp Control		2	YE/BU	18	II	—
13	1	BN/GN	19	I	—	Right Rear Stop/Turn Lamp Control	13	1	BN/GN	19	II	—
14	2	RD/GN	1142	I	—	Battery Positive Voltage	14	2	RD/GN	1142	II	—
	3	RD/GN	1142	I	—	Battery Positive Voltage		3	RD/GN	1142	II	—

X430 Chassis Harness to Battery Feed Harness (7Y9)



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4976432

Connector Part Information

Harness Type: Chassis
OEM Connector: 3537133C1
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 312 Series (GY)

Connector Part Information

Harness Type: Battery Feed
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way M

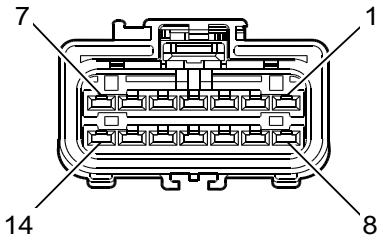
Terminal Part Information

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

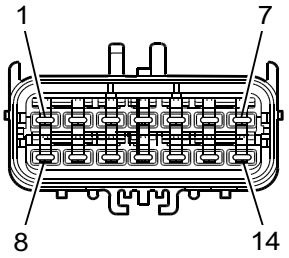
X430 Chassis Harness to Battery Feed Harness (7Y9)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	6	RD	90	I	—	Right Mirror Motor Left Control	A	6	RD	90	II	—

X455 Chassis Harness to Chassis Rear Right Harness (5DY)



4977613



4976624

Connector Part Information

Harness Type: Chassis
OEM Connector: 3573078C1
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way F 2.8 APEX Series, Sealed (BK)

Connector Part Information

Harness Type: Chassis Rear Right
OEM Connector: 3618231C1
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way M 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	No Tool Required	No Tool Required	Not Available	Not Available	Not Available	Not Available
II	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

X455 Chassis Harness to Chassis Rear Right Harness (5DY)

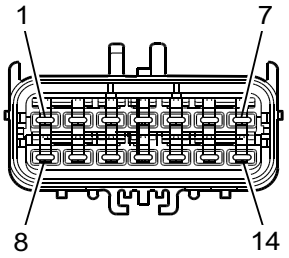
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2	GN/WH	24	I	—	Backup Lamp Control	2	2	GN/WH	24	II	—
3	2	YE/BN	618	I	—	Left Rear Turn Signal Lamp Control	3	2	YE/BN	618	II	—
4	1	GN/VT	619	I	—	Right Rear Turn Signal Lamp Control	4	2	GN/VT	619	II	—
5	0.75 1	VT/GY VT/GY	1054 1054	I I	— —	Stop Lamp Control Stop Lamp Control	5	2	VT/GY	1054	II	—
6 - 7	—	—	—	—	—	Not Occupied	6 - 7	—	—	—	—	—
8	2	VT/GY	709	I	—	Left Park Lamp Control	8	2	VT/GY	709	II	—
9	2	GY/BN	309	I	—	Right Park Lamp Control	9	2	GY/BN	309	II	—
10 - 11	—	—	—	—	—	Not Occupied	10 - 11	—	—	—	—	—

X455 Chassis Harness to Chassis Rear Right Harness (5DY) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
12	1	YE/ BU	18	I	—	Left Rear Stop/Turn Lamp Control	12	2	YE/ BU	18	II	—
13	1	BN/ GN	19	I	—	Right Rear Stop/Turn Lamp Control	13	2	BN/ GN	19	II	—
14	2	RD/ GN	1142	I	—	Battery Positive Voltage	14	2	RD/ YE	1142	II	—

X495 Body Builder Connection Harness to Chassis Rear Right Harness (5DY)

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4976624

Connector Part Information

Harness Type: Body Builder Connection
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way F

Connector Part Information

Harness Type: Chassis Rear Right
OEM Connector: 3618231C1
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way M 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	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

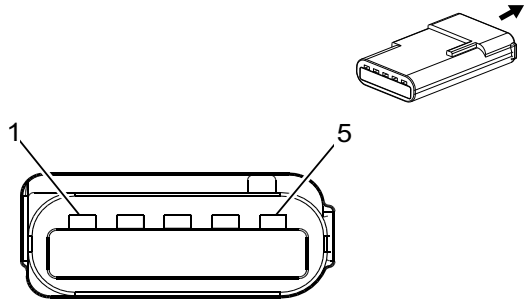
X495 Body Builder Connection Harness to Chassis Rear Right Harness (5DY)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	BK	10	I	—	Headlamp Switch Signal	1	1.5	BK	10	II	—
2	2	GN/WH	24	I	—	Backup Lamp Control	2	2	GN/WH	24	II	—
3	2	YE/BN	618	I	—	Left Rear Turn Signal Lamp Control	3	2	YE/BN	618	II	—
4	2	GN/VT	619	I	—	Right Rear Turn Signal Lamp Control	4	2	GN/VT	619	II	—
5	2	VT/GY	1054	I	—	Stop Lamp Control	5	2	VT/GY	1054	II	—
6	2	VT/GY	709	I	—	Left Park Lamp Control	6	2	VT/GY	709	II	—
8	2	VT/GY	709	I	—	Left Park Lamp Control	8	2	VT/GY	709	II	—
9	2	GY/BN	309	I	—	Right Park Lamp Control	9	2	GY/BN	309	II	—
12	2	YE/BU	18	I	—	Left Rear Stop/Turn Lamp Control	12	2	YE/BU	18	II	—

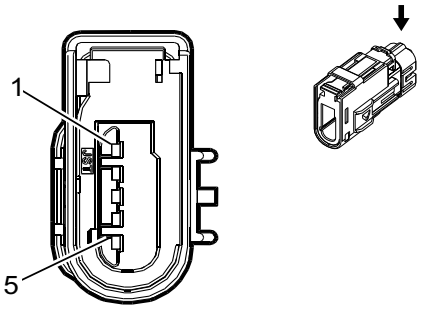
X495 Body Builder Connection Harness to Chassis Rear Right Harness (5DY) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
13	2	BN/ GN	19	I	—	Right Rear Stop/Turn Lamp Control	13	2	BN/ GN	19	II	—
14	2	RD/ YE	1142	I	—	Battery Positive Voltage	14	2	RD/ YE	1142	II	—

X499 Rearview Camera Jumper Harness to Chassis Rear Right Harness (UVC)



4242737



3277922

Connector Part Information

Harness Type: Rearview Camera Jumper
OEM Connector: 13582041
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way F 1.2 Series, Sealed (GY)

Connector Part Information

Harness Type: Chassis Rear Right
OEM Connector: 4102336C1
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed (BK)

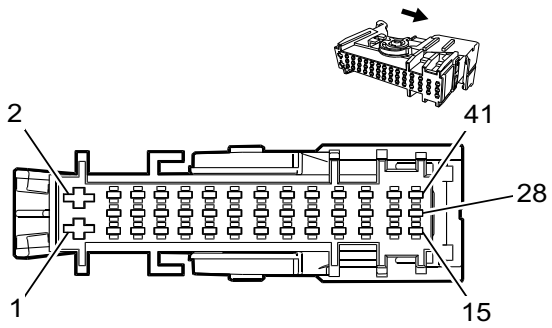
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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

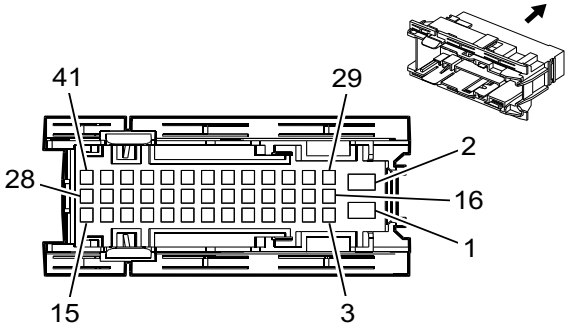
X499 Rearview Camera Jumper Harness to Chassis Rear Right Harness (UVC)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	GY/YE	6972	I	—	Camera Signal 2 +	1	0.75	GY/YE	6972	II	—
2	0.75	WH/BU	6973	I	—	Camera Signal 2	2	0.75	WH/BU	6973	II	—
3	0.5	WH	6974	I	—	Camera Low Reference	3	0.5	BK	6974	II	—
4	0.75	BK	2550	I	—	Ground	4	0.75	BK	2550	II	—
5	0.75	VT/GN	1739	I	—	Run/Crank Ignition 1 Voltage	5	0.75	VT/GN	1739	II	—

X500 Driver Door Harness to Body Harness



2173986



2474679

Connector Part Information

Harness Type: Driver Door
OEM Connector: 13600509
Service Connector: Service by Harness - See Part Catalog
Description: 41-Way F 4.8 Timer, 1.5 DSQ Series

Connector Part Information

Harness Type: Body
OEM Connector: 13946876
Service Connector: 13587760
Description: 41-Way M 1.5, 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	Not Required	J-35616-14 (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	13575593	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	2
IV	13575775	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
V	13582220	J-35616-32 (OR)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	19368263	J-35616-3 (GY)	J-38125-12A	964265-2	Lear 28	E	2
VII	19368263	J-35616-3 (GY)	J-38125-12A	964265-2	Lear 28	E	C
VIII	19370815	J-35616-32 (OR)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X500 Driver Door Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	RD/D-BU	1842	II	—	Battery Positive Voltage	1	2.5	RD/D-BU	1842	V	—
2	3	BK	1150	II	—	Ground	2	4	BK	1150	VIII	—
3	0.5	GY/WH	5996	I	—	Driver Outside Rear View Mirror Puddle Lamp Control	3	—	—	—	—	—
4	0.5	WH	3398	I	—	Passenger Mirror Motor Common Control	4	0.5	WH	3398	VI	—

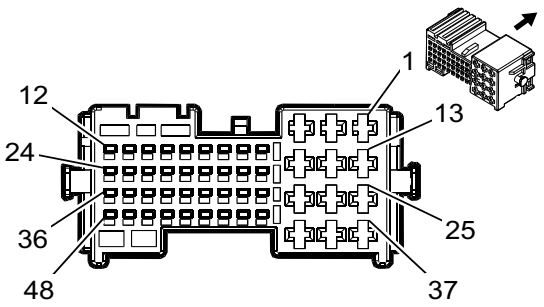
X500 Driver Door Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
5	0.35	YE/ BK	1690	I	—	Automatic Day/Night Mirror Signal	5	—	—	—	—	—
6	0.35	BK/ YE	1691	I	—	Automatic Day/Night Mirror Low Reference	6	—	—	—	—	—
7	0.35	D-BU/L-GN	614	I	—	Memory Seat Switch Set Signal	7	0.5	WH/ L-GN	3412	VI	—
8	0.35	WH	615	I	—	Memory Seat Switch Signal 1	8	0.5	GY/ WH	3411	VI	—
9	0.5	WH/ VT	1430	I	—	Exterior Courtesy Lamp Control	9	0.5	WH/ VT	1430	VI	—
10	1	D-BU	201	I	—	Left Front Speaker Control (+) 1	10	0.75	D-BU	201	VII	—
11	0.5	VT/ GY	709	I	—	Left Park Lamp Control	11	0.5	VT/ GY	709	VI	—
12	0.35	GY	745	I	—	Left Front Door Ajar Switch Signal	12	0.35	GY	745	IV	—
13	0.35	WH/ VT	3270	I	—	Driver Door Lock Motor Status Signal	13	0.35	WH/ VT	3270	IV	—
14	0.5	OG/ L-GN	2132	I	—	Left Front Side Impact Sensing Module Signal	14	—	—	—	—	—
15	0.5	BK/ OG	6628	I	—	Left Front Side Impact Sensing Module Low Reference	15	—	—	—	—	—
16	0.35	WH	6816	I	—	Indicator Dimming Control	16	0.5	WH	6816	VI	—
17	0.35	BN/ WH	781	I	—	Driver Door Lock Switch Unlock Signal	17	0.35	BN/ WH	781	IV	—
18	0.35	BN/ YE	780	I	—	Driver Door Lock Switch Lock Signal	18	0.35	BN/ YE	780	IV	—
19	0.75	BN/ BK	294	I	—	Door Lock Actuator Unlock Control	19	0.75	BN/ YE	294	VII	—
20	0.75	GY	5911	I	—	Door Lock Actuator Lock Control 2	20	0.75	GY	5911	VII	—
21	0.35	BK/D-BU	5978	I	—	Memory Switch Low Reference	21	—	—	—	—	—
22	—	—	—	—	—	Not Occupied	22	—	—	—	—	—

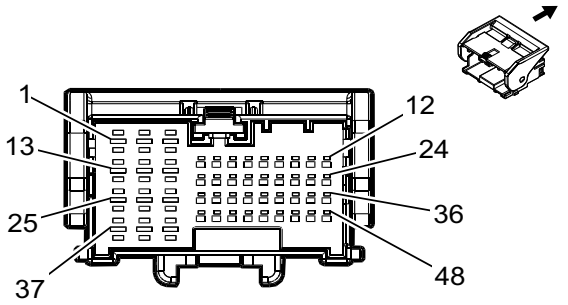
X500 Driver Door Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
23	1	BN/ D-BU	118	I	—	Left Front Speaker Signal (-) 1	23	0.75	BN/ D-BU	118	VII	—
24 - 25	—	—	—	—	—	Not Occupied	24 - 25	—	—	—	—	—
26	0.35	D-BU/ VT	1124	I	—	Door Lock Key Switch Unlock Signal	26	0.35	D-BU/ VT	1124	IV	—
27 - 28	—	—	—	—	—	Not Occupied	27 - 28	—	—	—	—	—
29	0.35	YE	6817	I	—	LED Backlight Dimming Control	29	0.35	YE	6817	IV	—
30	0.35	WH/ YE	7557	I	—	LED Ambient Lighting Control 1	30	0.35	WH/ YE	7557	IV	—
31	0.5	BN/ OG	2267	I	—	Mirror Heating Element Control	31	0.5	BN/ YE	2267	VI	—
32	0.35	GY	5697	I	—	Child Lockout Indicator Control	32	0.35	GY	5697	IV	—
33	0.5	L-GN/ YE	6134	I	—	Local Interconnect Network Serial Data Bus 3	33	0.5	L-GN/ YE	6134	III	—
34	0.5	L-GN/ WH	7530	I	—	Local Interconnect Network Serial Data Bus 8	34	—	—	—	—	—
35	0.35	BN/ RD	3265	I	—	Child Security Lock Switch Signal	35	0.35	YE/ BN	3265	IV	—
36	0.5	L-GN/ BK	3396	I	—	Passenger Mirror Motor Right (+) Left (-) Control	36	0.5	L-GN/ BK	3396	VI	—
37	—	—	—	—	—	Not Occupied	37	—	—	—	—	—
38	0.5	YE/ VT	3397	I	—	Passenger Mirror Motor Up (+) Down (-) Control	38	0.5	YE/ VT	3397	VI	—
39	—	—	—	—	—	Door Double Lock Actuator Lock Control	39	0.75	BN	5910	VII	—
40	0.5	RD/ VT	1940	I	—	Battery Positive Voltage	40	0.5	RD/ VT	1940	VI	—
41	0.5	D-BU/ WH	1314	I	—	Left Front Turn Signal Lamp Control	41	0.75	D-BU/ WH	1314	VII	—

X505 Driver Door Harness to Driver Door Trim Harness (A31)



3277913



3277901

Connector Part Information

Harness Type: Driver Door
OEM Connector: 13889713
Service Connector: Service by Harness - See Part Catalog
Description: 48-Way F 1.2 MCON, 2.8 MCP Series (BK)

Connector Part Information

Harness Type: Driver Door Trim
OEM Connector: 15512031
Service Connector: Service by Harness - See Part Catalog
Description: 48-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-35616-4A (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

X505 Driver Door Harness to Driver Door Trim Harness (A31)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	YE	6817	II	—	LED Backlight Dimming Control	1	0.35	YE	6817	IV	—
2	0.35	WH/YE	7557	II	—	LED Ambient Lighting Control 1	2	0.35	WH/YE	7557	IV	—
3	0.35	WH	6816	II	—	Indicator Dimming Control	3	0.35	WH	6816	IV	—
4	—	—	—	—	—	Not Occupied	4	—	—	—	—	—
5	0.5	BN/BK	3389	I	—	Driver Mirror Motor Right (+) Left (-) Control	5	0.75	BN/BK	3389	III	—
6	0.5	VT/D-BU	3390	I	—	Driver Mirror Motor Up (+) Down (-) Control	6	0.75	VT/D-BU	3390	III	—

X505 Driver Door Harness to Driver Door Trim Harness (A31) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.5	YE/ BN	3391	I	—	Driver Mirror Motor Common Control	7	0.75	YE/ BN	3391	III	—
8	0.5	GY/ WH	3411	I	—	Driver Mirror Motor Fold Out Control	8	0.75	GY/ WH	3411	III	—
9	0.5	WH/ L-GN	3412	I	—	Driver Mirror Motor Fold In Control	9	0.75	WH/ L-GN	3412	III	—
10	0.35	GY/ BN	3394	I	—	Driver Mirror Position Sensor Up (+) Down (-) Signal	10	0.35	GY/ BN	3394	III	—
11	0.5	BN/ BK	3389	I	—	Driver Mirror Motor Right (+) Left (-) Control	11	0.75	BN/ BK	3389	III	—
12	0.35	VT/ RD	3392	I	—	Driver Mirror Position Sensor 5V Reference	12	0.35	VT/ RD	3392	III	—
13	0.35	WH/ YE	3395	II	—	Driver Mirror Position Sensor Left (-) Right (+) Signal	13	0.35	WH/ YE	3395	IV	—
14	0.35	BK/ BN	3393	II	—	Driver Mirror Position Sensor Low Reference	14	0.35	BK/ BN	3393	IV	—
15 - 16	—	—	—	—	—	Not Occupied	15 - 16	—	—	—	—	—
17	0.5	BK	1150	I	—	Ground	17	0.35	BK	1150	III	—
18 - 21	—	—	—	—	—	Not Occupied	18 - 21	—	—	—	—	—
22	0.5	RD/ VT	1940	I	—	Battery Positive Voltage	22	0.5	RD/ VT	1940	III	—
23	0.75	BK	1150	I	—	Ground	23	0.75	BK	1150	III	—
24	—	—	—	—	—	Not Occupied	24	—	—	—	—	—
25	0.5	GY/ WH	3411	II	—	Driver Mirror Motor Fold Out Control	25	0.75	GY/ WH	3411	IV	—
26	0.5	WH/ L-GN	3412	II	—	Driver Mirror Motor Fold In Control	26	0.75	WH/ L-GN	3412	IV	—
27 - 28	—	—	—	—	—	Not Occupied	27 - 28	—	—	—	—	—
29	0.35	GY	1136	I	—	Power Window Master Switch Left Front Down Signal	29	0.35	GY	1136	III	—

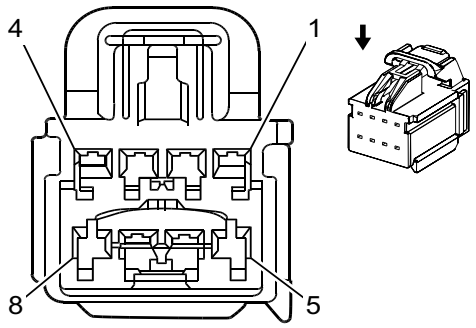
X505 Driver Door Harness to Driver Door Trim Harness (A31) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
30	0.35	L-GN/WH	1300	I	—	Power Window Master Switch Left Front Up Signal	30	0.35	L-GN/WH	1300	III	—
31	0.35	L-GN/VT	7628	I	—	Power Window Motor Left Front Express Control	31	0.35	L-GN/VT	7628	III	—
32	0.35	BK/D-BU	5978	I	—	Memory Switch Low Reference	32	0.35	BK/D-BU	5978	III	—
33	0.35	D-BU/L-GN	614	I	—	Memory Seat Switch Set Signal	33	0.35	D-BU/L-GN	614	III	—
34	0.35	WH	615	I	—	Memory Seat Switch Signal 1	34	0.35	WH	615	III	—
35	—	—	—	—	—	Not Occupied	35	—	—	—	—	—
36	0.5	L-GN/YE	6134	I	—	Local Interconnect Network Serial Data Bus 3	36	0.5	L-GN/YE	6134	III	—
37	0.5	L-GN/WH	7530	II	—	Local Interconnect Network Serial Data Bus 8	37	0.5	L-GN/WH	7530	IV	—
38 - 39	—	—	—	—	—	Not Occupied	38 - 39	—	—	—	—	—
40	0.35	BN/RD	3265	I	—	Child Security Lock Switch Signal	40	0.35	YE/BN	3265	III	—
41	0.35	WH/VT	3270	I	—	Driver Door Lock Motor Status Signal	41	0.35	WH/VT	3270	III	—
42	0.5	L-GN/BK	3396	I	—	Passenger Mirror Motor Right (+) Left (-) Control	42	0.75	L-GN/BK	3396	III	—
43	0.5	YE/VT	3397	I	—	Passenger Mirror Motor Up (+) Down (-) Control	43	0.75	YE/VT	3397	III	—
44	0.5	WH	3398	I	—	Passenger Mirror Motor Common Control	44	0.75	WH	3398	III	—
45	0.35	GY	5697	I	—	Child Lockout Indicator Control	45	0.35	GY	5697	III	—
46	0.35	D-BU/VT	1124	I	—	Door Lock Key Switch Unlock Signal	46	0.35	D-BU/VT	1124	III	—

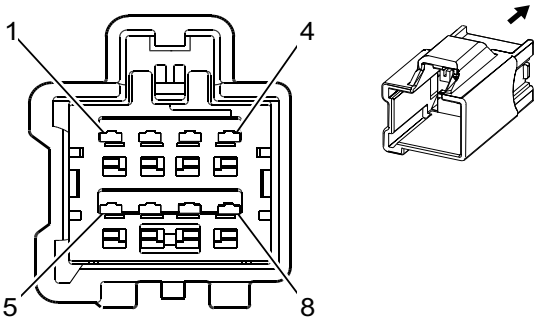
X505 Driver Door Harness to Driver Door Trim Harness (A31) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
47	0.35	BN/ WH	781	I	—	Driver Door Lock Switch Unlock Signal	47	0.35	BN/ WH	781	III	—
48	0.35	BN/ YE	780	I	—	Driver Door Lock Switch Lock Signal	48	0.35	BN/ YE	780	III	—

X506 Driver Door Trim Harness to Driver Door Harness (-A31)



1849808



1849807

Connector Part Information

Harness Type: Driver Door Trim
OEM Connector: 10846802
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 1.5 YESC Kaizen Series (L-GY)

Connector Part Information

Harness Type: Driver Door
OEM Connector: 10847035
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M 1.5 YESC Kaizen Series (L-GY)

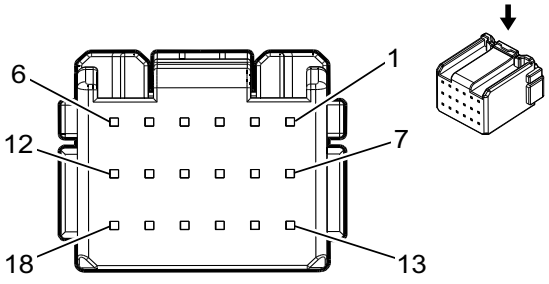
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (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

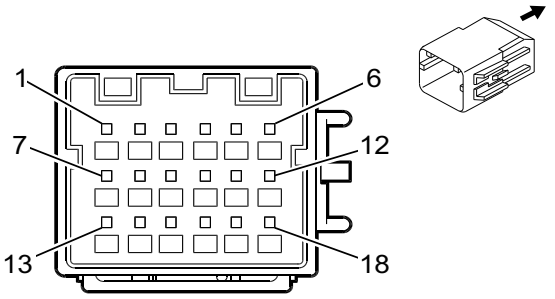
X506 Driver Door Trim Harness to Driver Door Harness (-A31)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 3	—	—	—	—	—	Not Occupied	1 - 3	—	—	—	—	—
4	0.35	BN/YE	780	I	—	Driver Door Lock Switch Lock Signal	4	0.35	BN/YE	780	II	—
5	0.35	BN/WH	781	I	—	Driver Door Lock Switch Unlock Signal	5	0.35	BN/WH	781	II	—
6	0.35	YE	6817	I	—	LED Backlight Dimming Control	6	0.35	YE	6817	II	—
7	0.35	BK	1150	I	—	Ground	7	0.5	BK	1150	II	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X510 Outside Rearview Mirror - Driver Harness to Driver Door Harness (DPN)



2667608



2907751

Connector Part Information

Harness Type: Outside Rearview Mirror - Driver
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 18-Way F

Connector Part Information

Harness Type: Driver Door
OEM Connector: 13888973
Service Connector: Service by Harness - See Part Catalog
Description: 18-Way M 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-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

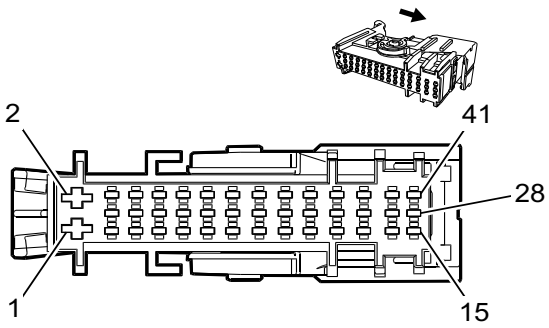
X510 Outside Rearview Mirror - Driver Harness to Driver Door Harness (DPN)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT/GY	709	I	DPN	Left Park Lamp Control	1	0.5	VT/GY	709	II	DPN
2	0.5	WH/VT	1430	I	DPN	Exterior Courtesy Lamp Control	2	0.5	WH/VT	1430	II	DPN
3	0.35	BK/BN	3393	I	—	Driver Mirror Position Sensor Low Reference	3	0.35	BK/BN	3393	II	—
4	0.5	GY/WH	3411	I	—	Driver Mirror Motor Fold Out Control	4	0.5	GY/WH	3411	II	—
5	0.5	BK	1150	I	—	Ground	5	0.5	BK	1150	II	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.35	WH/YE	3395	I	—	Driver Mirror Position Sensor Left (-) Right (+) Signal	7	0.35	WH/YE	3395	II	—
8	0.5	BN/OG	2267	I	—	Mirror Heating Element Control	8	0.5	BN/OG	2267	II	—

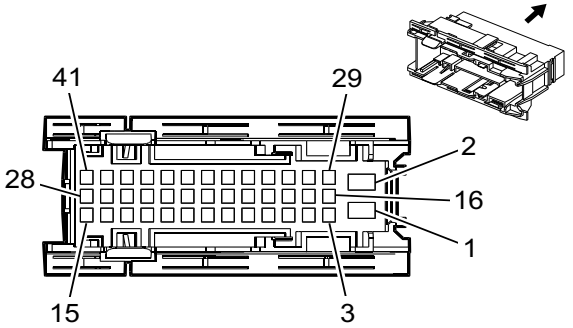
X510 Outside Rearview Mirror - Driver Harness to Driver Door Harness (DPN) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	0.5	VT/D-BU	3390	I	—	Driver Mirror Motor Up (+) Down (-) Control	9	0.5	VT/D-BU	3390	II	—
10	0.5	BN/BK	3389	I	—	Driver Mirror Motor Right (+) Left (-) Control	10	0.5	BN/BK	3389	II	—
11	0.5	BK	1150	I	—	Ground	11	0.5	BK	1150	II	—
12	0.5	YE/BN	3391	I	—	Driver Mirror Motor Common Control	12	0.5	YE/BN	3391	II	—
13	0.5	D-BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	13	0.5	D-BU/WH	1314	II	—
14	0.35	GY/BN	3394	I	—	Driver Mirror Position Sensor Up (+) Down (-) Signal	14	0.35	GY/BN	3394	II	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	0.35	BK/YE	1691	I	—	Automatic Day/Night Mirror Low Reference	16	0.35	BK/YE	1691	II	—
17	0.35	VT/RD	3392	I	—	Driver Mirror Position Sensor 5V Reference	17	0.35	VT/RD	3392	II	—
18	0.5	WH/L-GN	3412	I	—	Driver Mirror Motor Fold In Control	18	0.5	WH/L-GN	3412	II	—

X600 Passenger Door Harness to Body Harness



2173986



2474679

Connector Part Information

Harness Type: Passenger Door
OEM Connector: 13600509
Service Connector: Service by Harness - See Part Catalog
Description: 41-Way F 4.8 Timer, 1.5 DSQ Series

Connector Part Information

Harness Type: Body
OEM Connector: 13946876
Service Connector: 13587760
Description: 41-Way M 1.5, 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	Not Required	J-35616-14 (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	19370817	J-35616-3 (GY)	J-38125-560	964265-2	Lear 28	E	2
IV	19370817	J-35616-3 (GY)	J-38125-560	964265-2	Lear 28	E	C
V	19370817	J-35616-32 (OR)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	19370817	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X600 Passenger Door Harness to Body Harness

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	V	—
2	2.5	BK	1250	II	—	Ground	2	2.5	BK	1250	V	—
3	0.5	GY/L-GN	5996	I	—	Driver Outside Rear View Mirror Puddle Lamp Control	3	—	—	—	—	—
4	0.5	WH	3398	I	—	Passenger Mirror Motor Common Control	4	0.5	WH	3398	III	—
5 - 6	—	—	—	—	—	Not Occupied	5 - 6	—	—	—	—	—

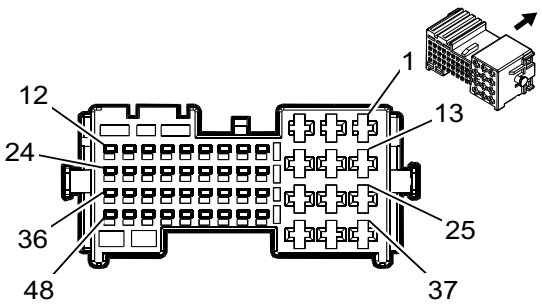
X600 Passenger Door Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.5	WH/ L-GN	3412	I	—	Driver Mirror Motor Fold In Control	7	0.5	WH/ L-GN	3412	III	—
8	0.5	GY/ WH	3411	I	—	Driver Mirror Motor Fold Out Control	8	0.5	GY/ WH	3411	III	—
9	0.5	WH/ VT	1430	I	—	Exterior Courtesy Lamp Control	9	0.5	WH/ VT	1430	III	—
10	1	YE/ BK	117	I	—	Right Front Speaker Signal (-) 1	10	0.75	YE/ BK	117	IV	—
11	0.5	GY/ BN	309	I	—	Right Park Lamp Control	11	0.5	GY/ BN	309	III	—
12	0.35	GY	746	I	—	Right Front Door Ajar Switch Signal	12	0.35	GY	746	VI	—
13	—	—	—	—	—	Not Occupied	13	—	—	—	—	—
14	0.5	OG/ L-GN	2134	I	—	Right Front Side Impact Sensing Module Signal	14	—	—	—	—	—
15	0.5	BK/ OG	6629	I	—	Right Front Side Impact Sensing Module Low Reference	15	—	—	—	—	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.35	BN/ VT	245	I	—	Passenger Door Lock Switch Unlock Control	17	0.35	BN/ VT	245	VI	—
18	0.35	YE/ BK	244	I	—	Passenger Door Lock Switch Lock Control	18	0.35	YE/ VT	244	VI	—
19	0.75	BN/ YE	294	I	—	Door Lock Actuator Unlock Control	19	0.75	BN/ YE	294	IV	—
20	0.75	GY	295	I	—	Door Lock Actuator Lock Control	20	0.75	GY	295	IV	—
21	0.5	BK/D-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	21	0.35	BK/D-BU	61	VI	—
22	—	—	—	—	—	Not Occupied	22	—	—	—	—	—
23	1	YE	200	I	—	Right Front Speaker Control (+) 1	23	0.75	YE	200	IV	—

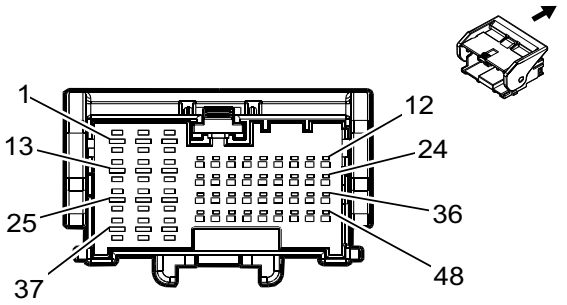
X600 Passenger Door Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
24	0.5	D-BU/GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	24	0.35	D-BU/GY	636	VI	—
25 - 28	—	—	—	—	—	Not Occupied	25 - 28	—	—	—	—	—
29	0.35	YE	6817	I	—	LED Backlight Dimming Control	29	0.5	YE	6817	III	—
30	0.35	WH/YE	7557	I	—	LED Ambient Lighting Control 1	30	0.35	WH/YE	7557	VI	—
31	0.5	BN/OG	2267	I	—	Mirror Heating Element Control	31	0.5	BN/YE	2267	III	—
32	—	—	—	—	—	Not Occupied	32	—	—	—	—	—
33	0.5	L-GN/YE	6134	I	—	Local Interconnect Network Serial Data Bus 3	33	0.5	L-GN/YE	6134	III	—
34 - 35	—	—	—	—	—	Not Occupied	34 - 35	—	—	—	—	—
36	0.5	L-GN/BK	3396	I	—	Passenger Mirror Motor Right (+) Left (-) Control	36	0.5	L-GN/BK	3396	III	—
37	—	—	—	—	—	Not Occupied	37	—	—	—	—	—
38	0.5	YE/VT	3397	I	—	Passenger Mirror Motor Up (+) Down (-) Control	38	0.5	YE/VT	3397	III	—
39	—	—	—	—	—	Door Double Lock Actuator Lock Control	39	0.75	BN	5910	IV	—
40	—	—	—	—	—	Not Occupied	40	—	—	—	—	—
41	0.5	L-GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	41	0.75	L-GN/VT	1315	IV	—

X605 Passenger Door Harness to Passenger Door Trim Harness (A31)



3277913



3277901

Connector Part Information

Harness Type: Passenger Door
OEM Connector: 13889713
Service Connector: Service by Harness - See Part Catalog
Description: 48-Way F 1.2 MCON, 2.8 MCP Series (BK)

Connector Part Information

Harness Type: Passenger Door Trim
OEM Connector: 15512031
Service Connector: Service by Harness - See Part Catalog
Description: 48-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-35616-4A (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 (A31)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	YE	6817	II	—	LED Backlight Dimming Control	1	0.35	YE	6817	IV	—
2	0.35	WH/YE	7557	II	—	LED Ambient Lighting Control 1	2	0.35	WH/YE	7557	IV	—
3 - 5	—	—	—	—	—	Not Occupied	3 - 5	—	—	—	—	—
6	0.5	YE/VT	3397	I	—	Passenger Mirror Motor Up (+) Down (-) Control	6	0.75	YE/VT	3397	III	—
7	0.5	WH	3398	I	—	Passenger Mirror Motor Common Control	7	0.75	WH	3398	III	—
8	0.5	YE/GY	3413	I	—	Passenger Mirror Motor Fold Out Control	8	0.75	YE/WH	3413	III	—

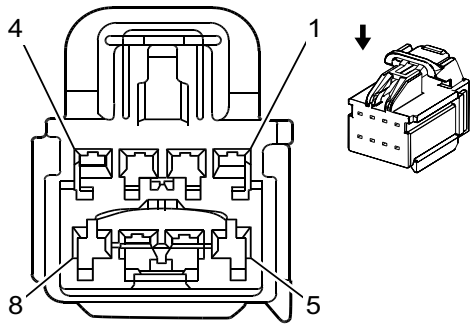
X605 Passenger Door Harness to Passenger Door Trim Harness (A31) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	0.5	D-BU/GY	3414	I	—	Passenger Mirror Motor Fold In Control	9	0.75	D-BU/GY	3414	III	—
10	0.35	D-BU/YE	3401	I	—	Passenger Mirror Position Sensor Up (+) Down (-) Signal	10	0.35	D-BU/YE	3401	III	—
11	0.5	L-GN/BK	3396	I	—	Passenger Mirror Motor Right (+) Left (-) Control	11	0.75	L-GN/BK	3396	III	—
12	0.35	YE/RD	3399	I	—	Passenger Mirror Position Sensor 5V Reference	12	0.35	YE/RD	3399	III	—
13	0.35	VT/WH	3403	II	—	Passenger Mirror Position Sensor Left (-) Right (+) Signal	13	0.35	VT/WH	3403	IV	—
14	0.35	BK/L-GN	3400	II	—	Passenger Mirror Position Sensor Low Reference	14	0.35	BK/L-GN	3400	IV	—
15	2.5	BK	1250	II	—	Ground	15	2.5	BK	1250	IV	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.5	BK	1250	I	—	Ground	17	0.35	BK	1250	III	—
18 - 24	—	—	—	—	—	Not Occupied	18 - 24	—	—	—	—	—
25	2.5	L-GN/GY	3387	II	—	Power Window Motor Passenger Up Control	25	2.5	L-GN/GY	3387	IV	—
26	2.5	YE/D-BU	3388	II	—	Power Window Motor Passenger Down Control	26	2.5	YE/D-BU	3388	IV	—
27	2.5	RD/WH	1340	II	—	Battery Positive Voltage	27	2.5	RD/WH	1340	IV	—
28 - 35	—	—	—	—	—	Not Occupied	28 - 35	—	—	—	—	—
36	0.5	L-GN/YE	6134	I	—	Local Interconnect Network Serial Data Bus 3	36	0.5	L-GN/YE	6134	III	—
37	0.5	L-GN/WH	7530	II	—	Local Interconnect Network Serial Data Bus 8	37	0.5	L-GN/WH	7530	IV	—
38 - 45	—	—	—	—	—	Not Occupied	38 - 45	—	—	—	—	—

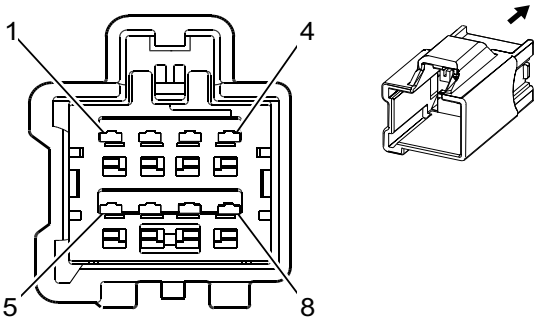
X605 Passenger Door Harness to Passenger Door Trim Harness (A31) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
46	0.35	GY	746	I	—	Right Front Door Ajar Switch Signal	46	0.35	GY	746	III	—
47	0.35	BN/VT	245	I	—	Passenger Door Lock Switch Unlock Control	47	0.35	BN/VT	245	III	—
48	0.35	YE/BK	244	I	—	Passenger Door Lock Switch Lock Control	48	0.35	YE/VT	244	III	—

X606 Passenger Door Trim Harness to Passenger Door Harness (-A31)



1849808



1849807

Connector Part Information

Harness Type: Passenger Door Trim
OEM Connector: 10846802
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 1.5 YESC Kaizen Series (L-GY)

Connector Part Information

Harness Type: Passenger Door
OEM Connector: 10847035
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M 1.5 YESC Kaizen Series (L-GY)

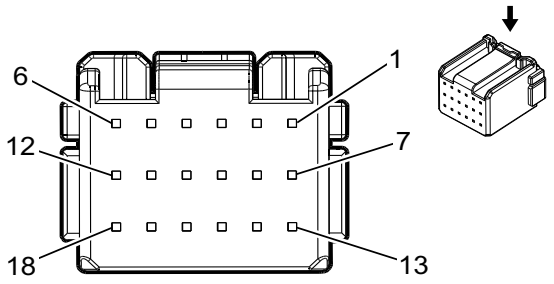
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (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

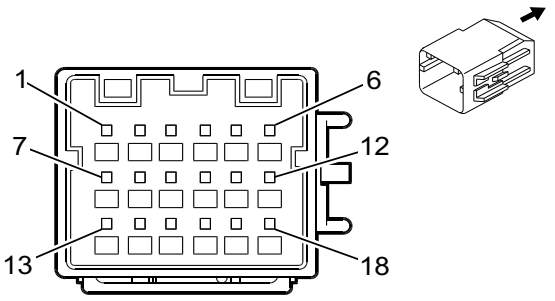
X606 Passenger Door Trim Harness to Passenger Door Harness (-A31)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 3	—	—	—	—	—	Not Occupied	1 - 3	—	—	—	—	—
4	0.35	YE/VT	244	I	—	Passenger Door Lock Switch Lock Control	4	0.35	YE/BK	244	II	—
5	0.35	BN/VT	245	I	—	Passenger Door Lock Switch Unlock Control	5	0.35	BN/VT	245	II	—
6	0.35	YE	6817	I	—	LED Backlight Dimming Control	6	0.35	YE	6817	II	—
7	0.35	BK	1250	I	—	Ground	7	0.5	BK	1250	II	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X610 Outside Rearview Mirror - Passenger Harness to Passenger Door Harness (DPN)



2667608



2907751

Connector Part Information

Harness Type: Outside Rearview Mirror - Passenger
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 18-Way F

Connector Part Information

Harness Type: Passenger Door
OEM Connector: 13888973
Service Connector: Service by Harness - See Part Catalog
Description: 18-Way M 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-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

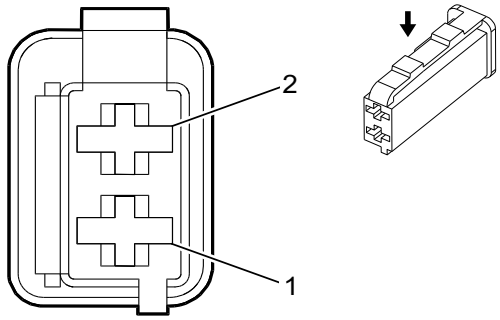
X610 Outside Rearview Mirror - Passenger Harness to Passenger Door Harness (DPN)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY/BN	309	I	DPN	Right Park Lamp Control	1	0.5	GY/BN	309	II	DPN
2	0.5	WH/VT	1430	I	—	Exterior Courtesy Lamp Control	2	0.5	WH/VT	1430	II	—
3	0.35	BK/L-GN	3400	I	—	Passenger Mirror Position Sensor Low Reference	3	0.35	BK/L-GN	3400	II	—
4	0.5	GY/WH	3411	I	—	Driver Mirror Motor Fold Out Control	4	0.5	GY/WH	3411	II	—
5	0.5	BK	1250	I	—	Ground	5	0.5	BK	1250	II	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.35	VT/WH	3403	I	—	Passenger Mirror Position Sensor Left (-) Right (+) Signal	7	0.35	VT/WH	3403	II	—
8	0.5	BN/OG	2267	I	—	Mirror Heating Element Control	8	0.5	BN/OG	2267	II	—

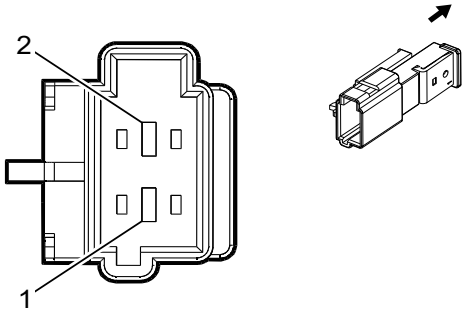
X610 Outside Rearview Mirror - Passenger Harness to Passenger Door Harness (DPN) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	0.5	YE/VT	3397	I	—	Passenger Mirror Motor Up (+) Down (-) Control	9	0.5	YE/VT	3397	II	—
10	0.5	L-GN/BK	3396	I	—	Passenger Mirror Motor Right (+) Left (-) Control	10	0.5	L-GN/BK	3396	II	—
11	0.5	BK	1250	I	—	Ground	11	0.5	BK	1250	II	—
12	0.5	WH	3398	I	—	Passenger Mirror Motor Common Control	12	0.5	WH	3398	II	—
13	0.5	L-GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	13	0.5	L-GN/VT	1315	II	—
14	0.35	D-BU/YE	3401	I	—	Passenger Mirror Position Sensor Up (+) Down (-) Signal	14	0.35	D-BU/YE	3401	II	—
15	0.5	D-BU/GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	15	0.5	D-BU/GY	636	II	—
16	0.5	BK/D-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	16	0.5	BK/D-BU	61	II	—
17	0.35	YE/RD	3399	I	—	Passenger Mirror Position Sensor 5V Reference	17	0.35	YE/RD	3399	II	—
18	0.5	WH/L-GN	3412	I	—	Driver Mirror Motor Fold In Control	18	0.5	WH/L-GN	3412	II	—

X611 Outside Rearview Mirror - Passenger Harness to Passenger Door Harness (DF2)



2339593



2339581

Connector Part Information

Harness Type: Outside Rearview Mirror - Passenger
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

Connector Part Information

Harness Type: Passenger Door
OEM Connector: 13662506
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.6 Timer Series (BK)

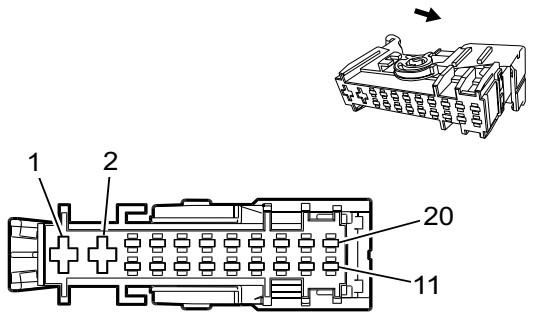
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-33 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-34 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required

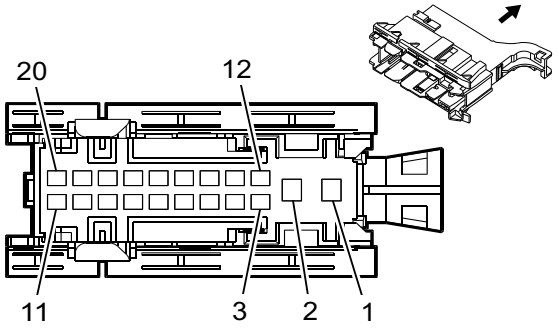
X611 Outside Rearview Mirror - Passenger Harness to Passenger Door Harness (DF2)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	D-BU/GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	1	0.5	D-BU/GY	636	II	—
2	0.5	BK/D-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	2	0.5	BK/D-BU	61	II	—

X700 Left Rear Door Harness to Body Harness (Crew Cab)



2180228



3621541

Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 13600493
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 1.5 DSQ, 4.8 Timer Series (GY)

Connector Part Information

Harness Type: Body
OEM Connector: 15539528
Service Connector: 19329469
Description: 20-Way M 1.5, 5.8 TTS Series (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-35616-14 (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	13575775	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	13582220	J-35616-32 (OR)	J-38125-560	Not Available	Not Available	Not Available	Not Available
V	19368263	J-35616-3 (GY)	J-38125-12A	964265-2	Lear 28	E	2
VI	19368263	J-35616-3 (GY)	J-38125-12A	964265-2	Lear 28	E	C
VII	19370815	J-35616-32 (OR)	J-38125-560	Not Available	Not Available	Not Available	Not Available

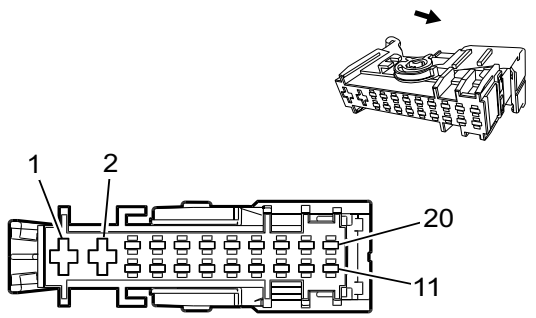
X700 Left Rear Door Harness to Body Harness (Crew Cab)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	RD/D-BU	1842	II	—	Battery Positive Voltage	1	2.5	RD/D-BU	1842	IV	—
2	3	BK	1150	II	—	Ground	2	4	BK	1150	VII	—
3 - 6	—	—	—	—	—	Not Occupied	3 - 6	—	—	—	—	—
7	1	L-GN	199	I	—	Left Rear Speaker Control (+)	7	0.5	L-GN	199	V	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.75	WH/D-BU	3266	I	—	Child Security Lock Motor Lock Control	9	0.75	WH/D-BU	3266	VI	—

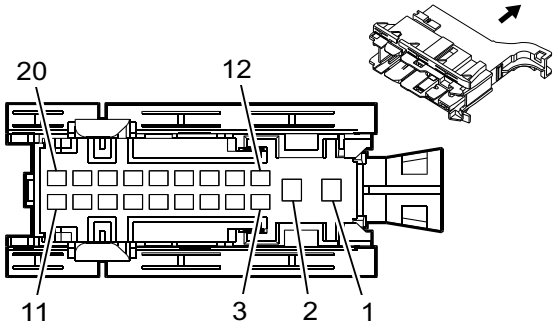
X700 Left Rear Door Harness to Body Harness (Crew Cab) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
10	0.75	BN/YE	294	I	—	Door Lock Actuator Unlock Control	10	0.75	BN/YE	294	VI	—
11	0.75	GY	295	I	—	Door Lock Actuator Lock Control	11	0.75	GY	295	VI	—
12	—	—	—	—	—	Left Rear Door Ajar Switch Signal	12	0.35	GY	747	III	—
13	—	—	—	—	—	Door Double Lock Actuator Lock Control	13	0.75	BN	5910	VI	—
14 - 15	—	—	—	—	—	Not Occupied	14 - 15	—	—	—	—	—
16	1	L-GN/BK	116	I	—	Left Rear Speaker Signal (-)	16	0.5	L-GN/BK	116	V	—
17	0.5	OG/D-BU	6620	I	—	Left Middle Side Impact Sensing Module Signal	17	—	—	—	—	—
18	0.5	BK/OG	6621	I	—	Left Middle Side Impact Sensing Module Low Reference	18	—	—	—	—	—
19	0.35	BN/WH	3269	I	—	Child Security Lock Motor Status Signal Left Rear	19	0.35	BN/WH	3269	III	—
20	0.5	L-GN/GY	6135	I	—	Local Interconnect Network Serial Data Bus 4	20	0.5	L-GN/GY	6135	V	—

X800 Right Rear Door Harness to Body Harness (Crew Cab)



2180228



3621541

Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 13600493
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 1.5 DSQ, 4.8 Timer Series (GY)

Connector Part Information

Harness Type: Body
OEM Connector: 15539528
Service Connector: 19329469
Description: 20-Way M 1.5, 5.8 TTS Series (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-35616-14 (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	13575775	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	13582220	J-35616-32 (OR)	J-38125-560	Not Available	Not Available	Not Available	Not Available
V	19368263	J-35616-3 (GY)	J-38125-12A	964265-2	Lear 28	E	2
VI	19368263	J-35616-3 (GY)	J-38125-12A	964265-2	Lear 28	E	C

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	IV	—
2	2.5	BK	1250	II	—	Ground	2	2.5	BK	1250	IV	—
3 - 6	—	—	—	—	—	Not Occupied	3 - 6	—	—	—	—	—
7	1	WH	46	I	—	Right Rear Speaker Control (+)	7	0.5	WH	46	V	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.75	WH/D-BU	3266	I	—	Child Security Lock Motor Lock Control	9	0.75	WH/D-BU	3266	VI	—

X800 Right Rear Door Harness to Body Harness (Crew Cab) (cont'd)

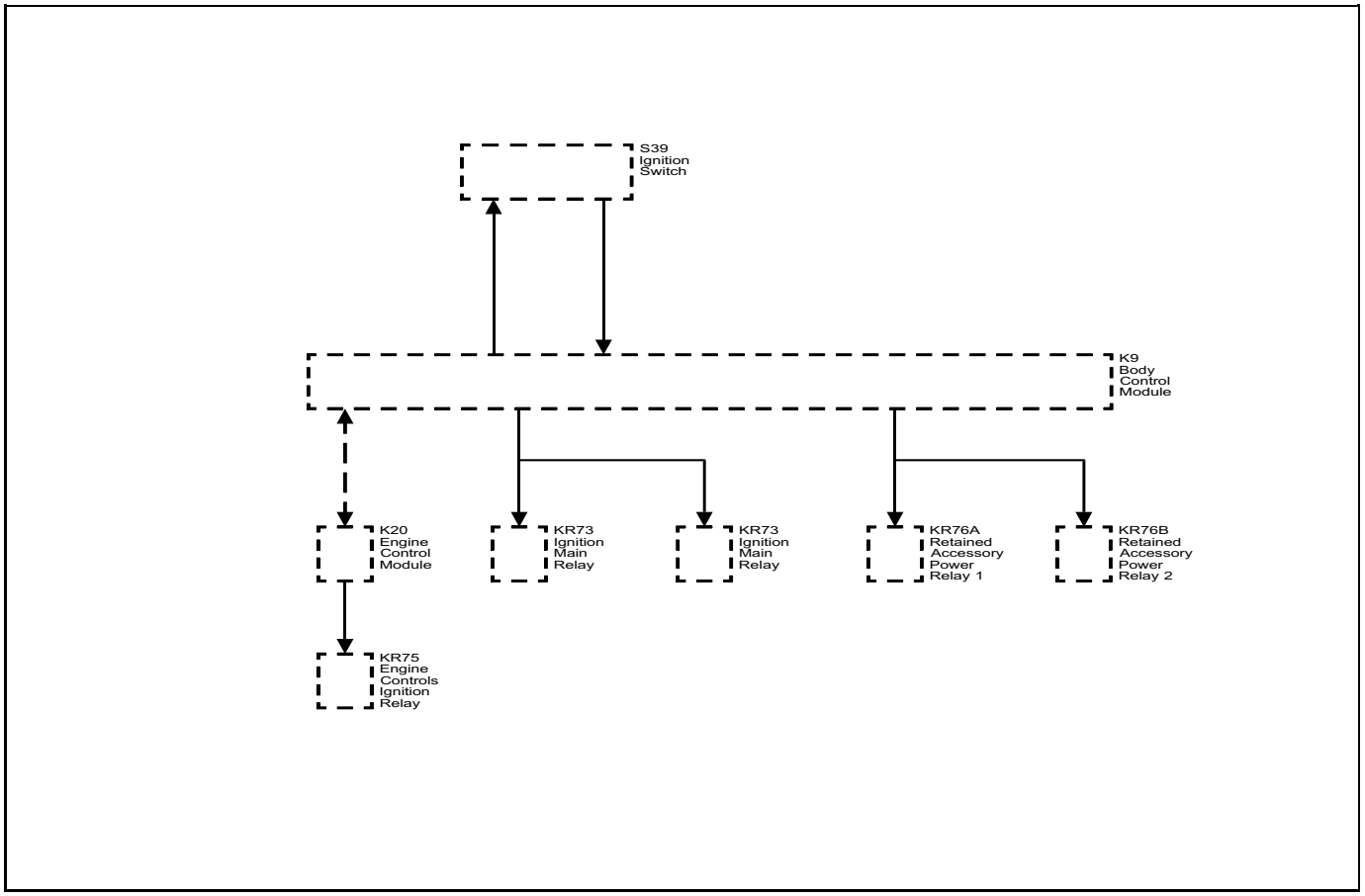
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
10	0.75	BN/YE	294	I	—	Door Lock Actuator Unlock Control	10	0.75	BN/YE	294	VI	—
11	0.75	GY	295	I	—	Door Lock Actuator Lock Control	11	0.75	GY	295	VI	—
12	—	—	—	—	—	Right Rear Door Ajar Switch Signal	12	0.35	GY	748	III	—
13 - 15	—	—	—	—	—	Not Occupied	13 - 15	—	—	—	—	—
16	1	D-BU/BK	115	I	—	Right Rear Speaker Signal (-)	16	0.5	D-BU/BK	115	V	—
17	0.5	OG/VT	6624	I	—	Right Middle Side Impact Sensing Module Signal	17	—	—	—	—	—
18	0.5	BK/OG	6625	I	—	Right Middle Side Impact Sensing Module Low Reference	18	—	—	—	—	—
19	0.35	GY/BK	3268	I	—	Child Security Lock Motor Status Signal Right Rear	19	0.35	GY/BK	3268	III	—
20	0.5	L-GN/GY	6135	I	—	Local Interconnect Network Serial Data Bus 4	20	0.5	L-GN/GY	6135	V	—

Description and Operation

Power Mode Description and Operation

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 7-568* 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:

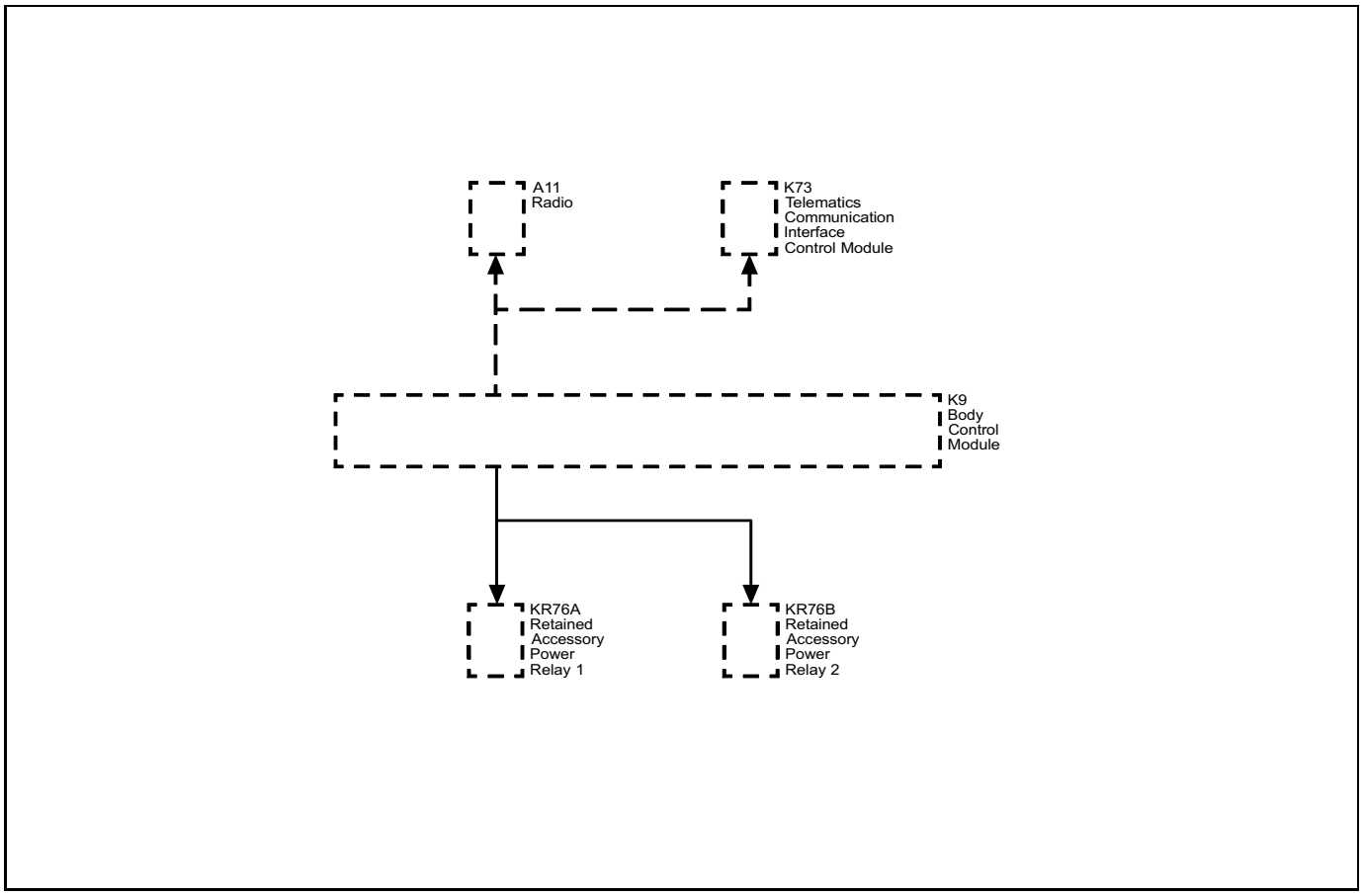
- The ignition switch is OFF, key out.
- Ignition OFF, transmitter is out of range
- No activity exists on the serial data line.
- No outputs are commanded.
- No delay timers are actively counting.
- No wake-up inputs are present.

If all these conditions are met, the BCM will enter a low power or sleep condition.

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.

Section 8

Safety and Security

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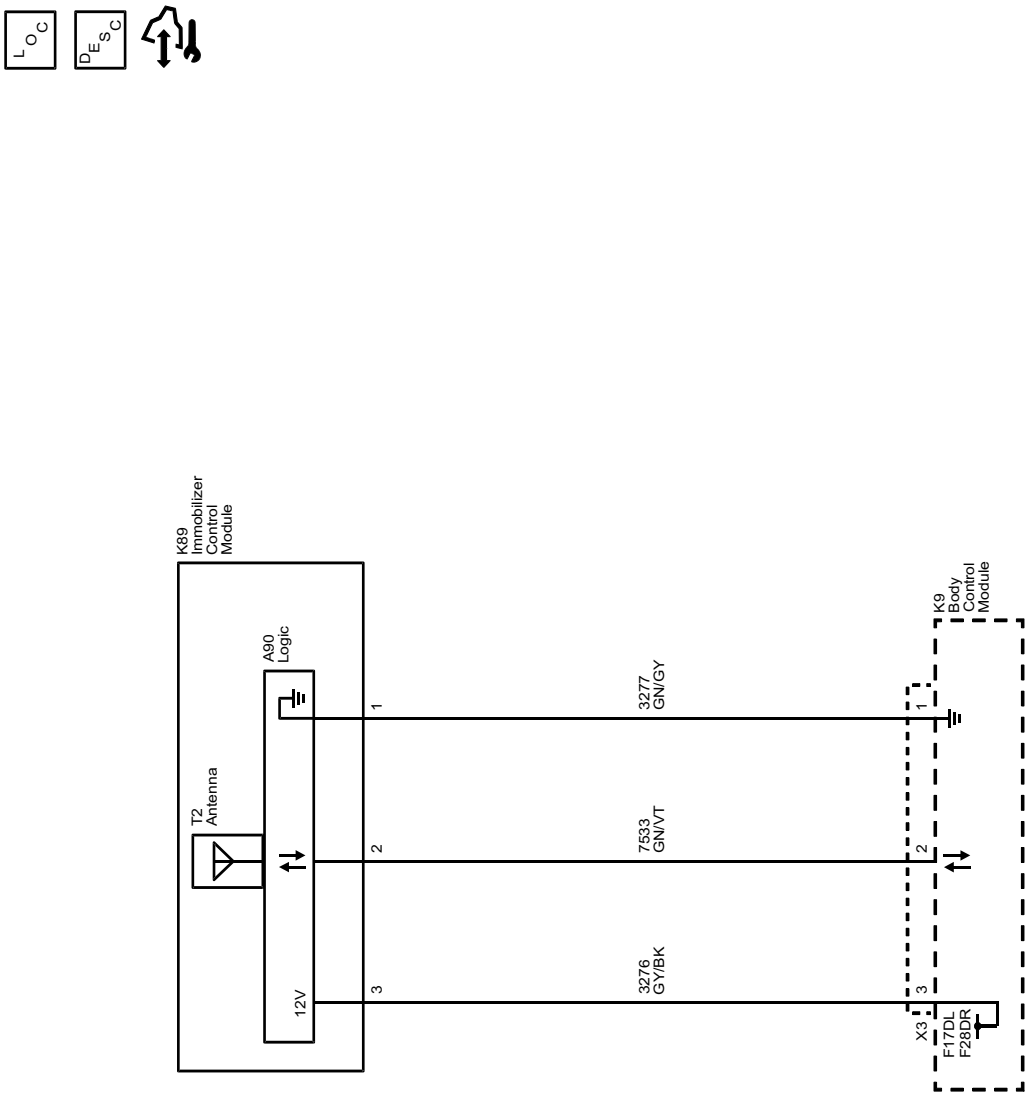
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BLANK

Immobilizer

Schematic and Routing Diagrams

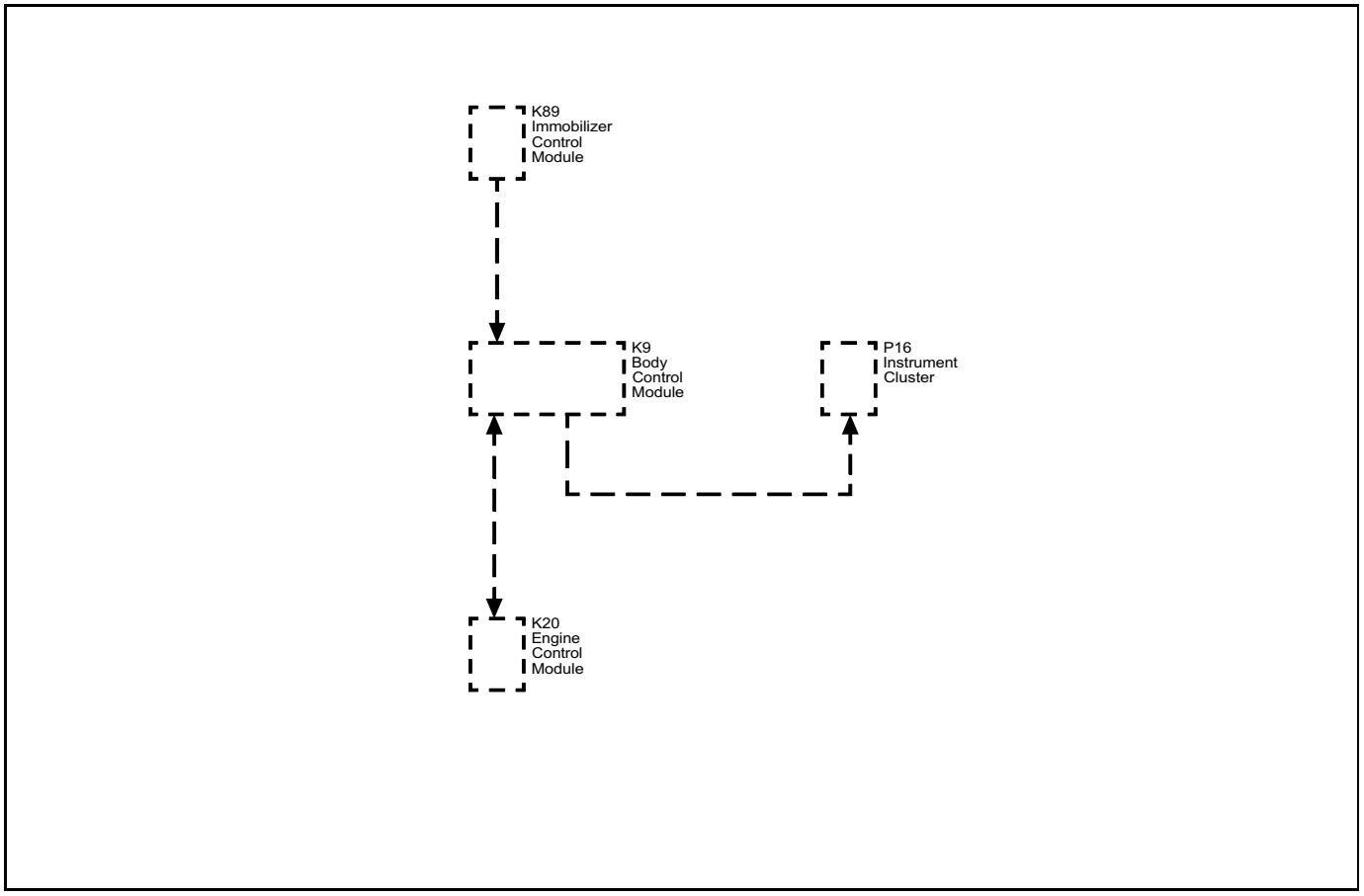
Immobilizer Schematics (Immobilizer)



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Description and Operation

Immobilizer Description and Operation



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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.

Remote Vehicle Speed Limiting Description and Operation

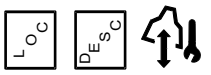
Certain vehicles equipped with OnStar® now have an additional feature that allows for remote limiting of the vehicle's speed. This OnStar® feature is called Stolen Vehicle Slow-Down and is now part of the OnStar® Stolen Vehicle Assistance service. This feature, when used in conjunction with local law enforcement and strict guidelines at the OnStar® Call Center, will slow the vehicle by interacting with the engine control system.

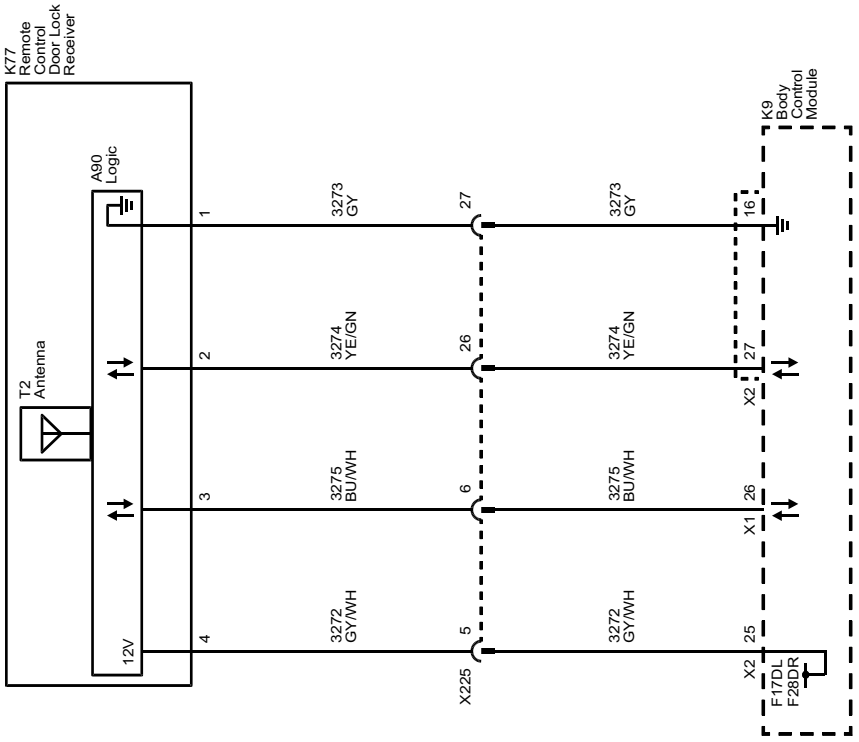
When the engine control system receives a valid request from the OnStar® telematics communications interface module, it will enter into a reduced engine power/vehicle speed limiting mode, which will decelerate the vehicle. Once the request is active the engine control module begins reducing engine torque to match requested vehicle speed and a REDUCED ENGINE POWER indication is displayed. No DTCs will be set during this process.

Remote Functions

Schematic and Routing Diagrams

Remote Function Schematics (Keyless Entry)





4915104

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
- Vehicle locator/Panic alarm
- 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.

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 app. It is possible that a customer may be unaware of account usage, result in an unwanted or phantom door lock/unlock. If normal system diagnosis does 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 an 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 DIC.
- 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 DIC.

- 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 DIC.
- Arm the content theft deterrent system.

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 an remote vehicle start is performed, the vehicle doors are locked, however they may then be unlocked/locked with the transmitter or vehicle key at any time. 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 seven 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 pressing the hazard lamp switch.

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.

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 an 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 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 an remote vehicle start event, a message is sent via serial data to the ECM. The ECM relies on the remote vehicle start message from 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

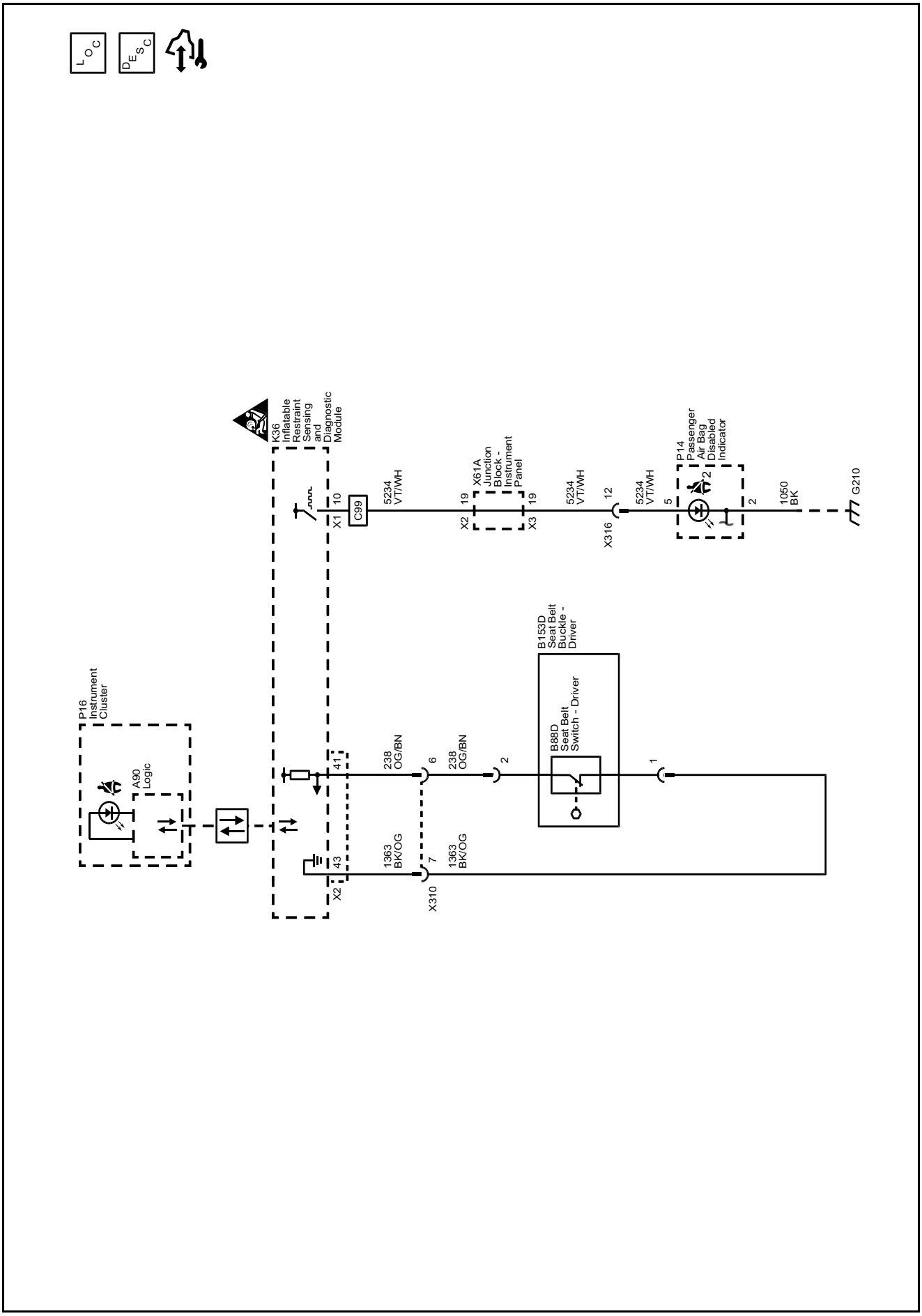
Keyless Entry Personalization

Vehicle lock/unlock functions and remote vehicle start remote vehicle start settings may be personalized. For functional descriptions and personalization instructions, refer to the vehicle owners manual.

Seat Belts

Schematic and Routing Diagrams

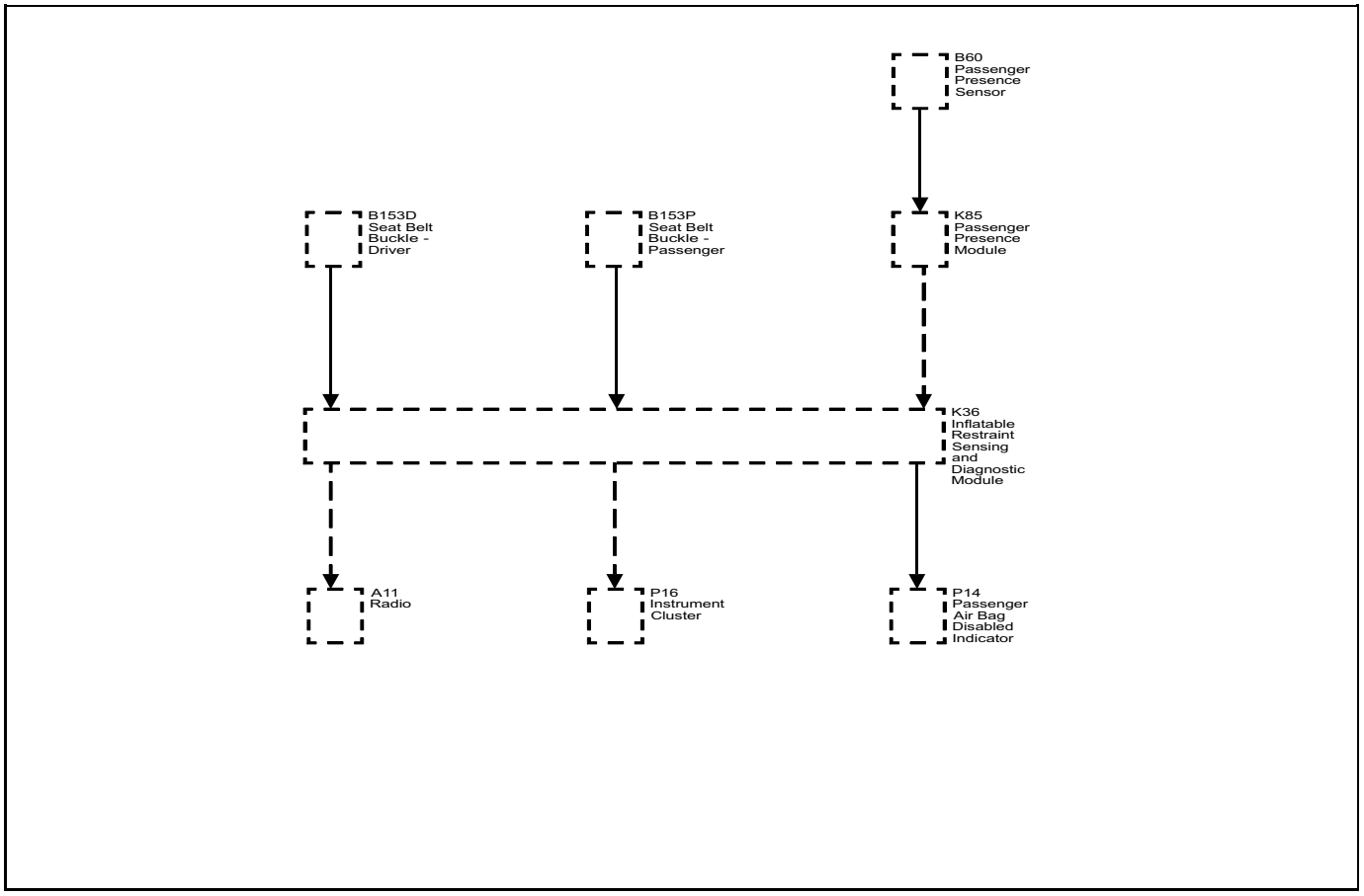
Seat Belt Schematics (Seat Belts)



Description and Operation

Seat Belt System Description and Operation

Seat Belt with P14 Block Diagram



3513718

Note: Not all items shown in block diagram are available in this publication

Restraint System

Note: If the vehicle has been in a collision, refer to *Repairs and Inspections Required After a Collision* in the Service Manual.

The vehicle has front and rear seat belts that are the primary means of occupant restraint. Seat belts help to keep the occupants inside the passenger compartment and to gradually reduce the impact forces during the following events:

- Frontal impact type crashes
- Rear impact type crashes
- Side impact type crashes
- Roll-over type crashes

All seat belt retractors have emergency locks. The retractors remain unlocked during normal operation and under normal driving conditions. The retractors remain unlocked during normal conditions in order to allow free movement of the upper body of each occupant.
A pendulum locks the seat belt webbing into position. The pendulum causes a locking bar to engage a cog on the spool of the retractor mechanism when the following conditions occur:

- A rapid extraction of the seat belt webbing from the retractor
- An abrupt change in vehicle speed
- An abrupt change in vehicle direction
- Operation of the vehicle on a steep upgrade
- Operation of the vehicle on a downgrade

The seat belts have an automatic locking (cinch) feature. The cinch feature is activated when the seat belt webbing is completely extended from the retractor. The cinch feature prevents the webbing from extending beyond the position from which it is allowed to retract. Use of the cinch feature is recommended for securing a child seat. The cinch feature may be cancelled by allowing the webbing to wind back completely into the retractor. After the cinch feature is cancelled, the webbing is unlocked. After the cinch feature is cancelled, the webbing will extend from the retractor.
This vehicle is also equipped with a supplemental inflatable restraint (SIR) system. Refer to *Supplemental Inflatable Restraint System Description and Operation on page 8-19*

Motorized Seat Belts

A motorized seat belt is a seat belt with a motor coupled to the shoulder belt retractor. The motorized seat belt provides the driver and passenger a sense of safety and, in the case of severe braking or a crash, more quickly couples the occupant to the vehicle, enhancing the safety to the occupant.

Motorized seat belts monitor vehicle information to determine when to perform each of the following retractions

- Full retraction for such situations but not limited to: panic braking and or skidding
- Dynamic support for lateral and longitudinal dynamics

Preconditions for motorized seat belt retractions

- Seat belt buckle is latched
- Vehicle speed greater than or equal to 25 kph (16 mph)
- All messages on serial data are received as valid

Triggers that may cause motorized seat belt retractions

- Emergency Braking
- Sudden Emergency / Panic Braking
- High Vehicle Deceleration Detection
- Ice Braking Detection
- Oversteer and Understeer

Motorized seat belt inputs

- Vehicle Power Mode
- Transmission Gear
- Wheel Speeds
- Vehicle Acceleration
- Accelerator Pedal Position
- Steering Wheel Angle and Gradient
- Yaw Rate and Lat/Long Acceleration
- Brake Pedal Position, Gradient, Pressure, Initial Travel
- Vehicle Stability

Motorized seat belt output signals

- Driver information center message – motorized seat belt Failed “Service Automatic Seatbelt Tightening”
- Driver information center message – motorized seat belt Unavailable “Automatic Seatbelt Tightening Unavailable”

Motorized seat belt retractions are inhibited when seat belt unbuckled

Driver and passenger motorized seat belts operate independently

Front Seat Belt System

The front seat belt system includes a driver and passenger seat belt pretensioner retractor. Both front seat belt pretensioners includes a seat belt switch in the seat buckle which controls a reminder lamp and a tone alarm.

Note: The front passenger seat is equipped with a passenger presence detection sensor, which detects an occupant. If the passenger presence detection sensor detects an empty front passenger seat, then the passenger fasten safety belt indicator will be disabled.

- When the driver seat belt is buckled and the ignition switch is turned ON, the following events will occur:
  - The tone alarm will not operate.
  - The reminder lamp will not operate.
- When the driver seat belt is not buckled and the ignition switch is in the ON position, the following events will occur:
  - The tone alarm will operate for 4–8 seconds and then go OFF.
  - The fasten safety belt indicator will turn ON for 20 seconds, until the driver seat belt is buckled.

Rear Seat Belt System

The Rear Seat Belt System includes the following components:

- The rear seat belt retractor is located at the wheelhouse panel and attached to the floor panel by the rear seat shoulder belt retractor bracket.
- The rear seat belt buckles and the center seat belt buckle are attached to each seat.

Child Seat Restraint System

Warning: A child in a rear-facing child restraint can be seriously injured if the front passenger air bag inflates, because the back of a rear-facing child restraint would be very close to the inflating air bag. NEVER use a rear-facing child restraint in this vehicle. If a forward-facing child restraint is suitable for your child, ALWAYS move the front passenger seat as far back as it will go and then install the child restraint. Be sure the child restraint position does not conflict with any additional requirements provided by the manufacturer. For more information, refer to the vehicle owner’s manual and the instructions that came with the child restraint.

A child in a rear-facing child restraint can be seriously injured if the right-front passengers air bag inflates. This is because the back of a rear-facing child restraint would be very close to the inflating air bag. NEVER use a rear-facing child restraint in this vehicle. If a forward-facing child restraint is suitable for your child, ALWAYS move the front passenger seat as far back as it will go and then install the child restraint. Be sure the child restraint position does not conflict with any additional requirements provided by the manufacturer. For more information, refer to the vehicle owners manual and the instruction that came with the child restraint.

The child seat may only be used in a forward facing seating location. The child seat should be installed and secured according to the manufacturer's directions. If the child seat has a top strap, the seat will need to be anchored. Passengers should not be allowed to sit at locations where the seat belts are being used to secure the child seat.

All vehicles are equipped with a dual-mode type retractor with emergency and automatic locking features. The automatic locking feature is for restraint of a child seat. The child seat can be secured by pulling the seat belt all the way out to lock it. Then tighten the seat belt around the child seat.

If a child seat is to be used in the second seat position, a special dealer-installed anchor must be used in order to anchor the child seat top strap. This only applies to the seats designed with the top strap provision and for the vehicles sold in Canada. In order to ensure the correct top strap angle, the child seat is only to be used at the seating position for which the top strap anchor is installed.

Fasten Safety Belt Indicators

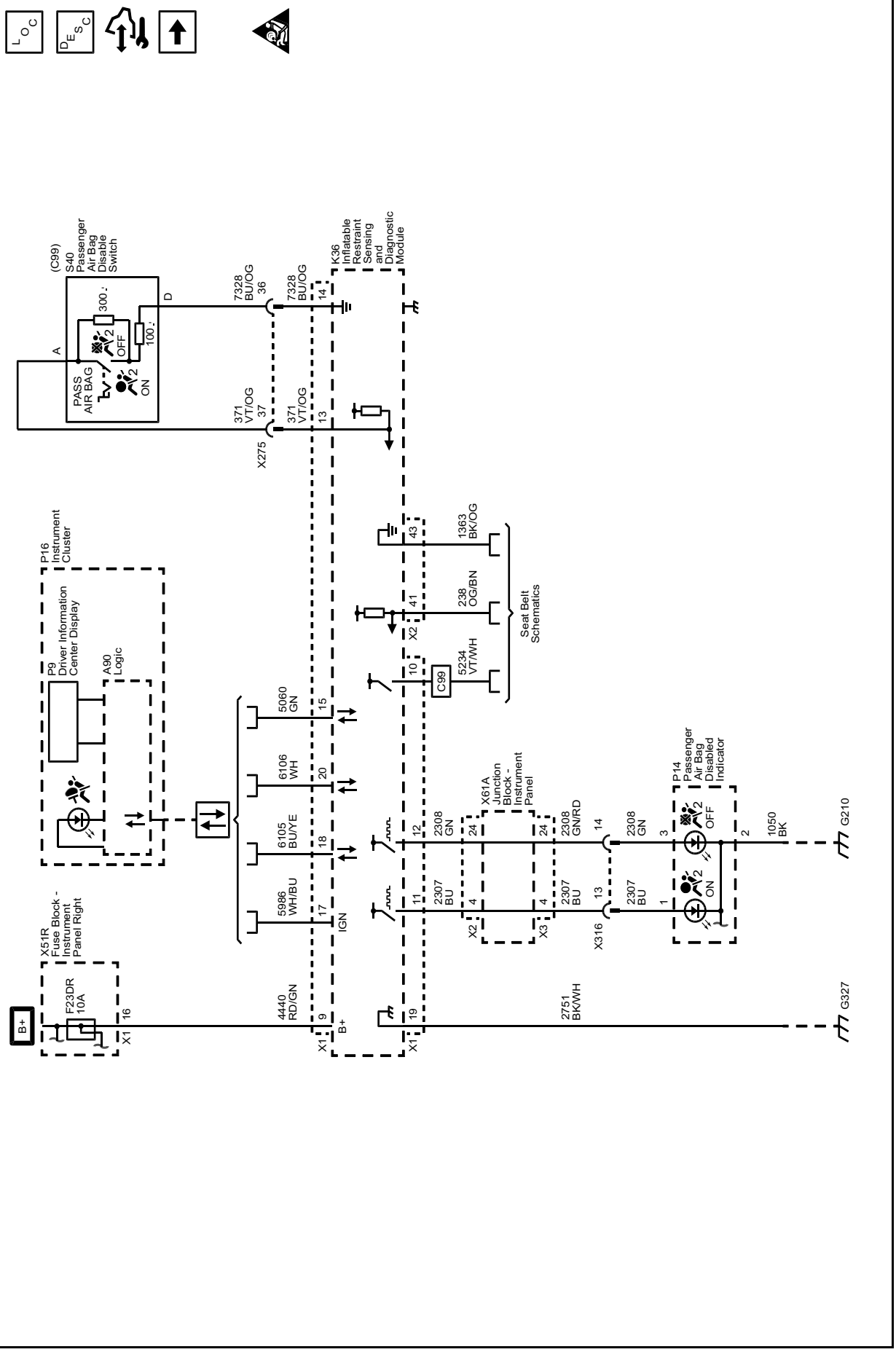
There is a fasten safety belt indicator for this vehicle. The driver fasten safety belt reminder is displayed in the instrument cluster. The fasten safety belt indicator may only be ON during RUN. The fasten safety belt indicator illuminates under the following conditions:

- During the bulb check
- The inflatable restraint sensing and diagnostic module (SDM) sends the status of the driver seat belt to the instrument cluster via serial data. If any of the seat belts are unfastened, the instrument cluster will send a message requesting a chime sound to be turned ON after a bulb check.

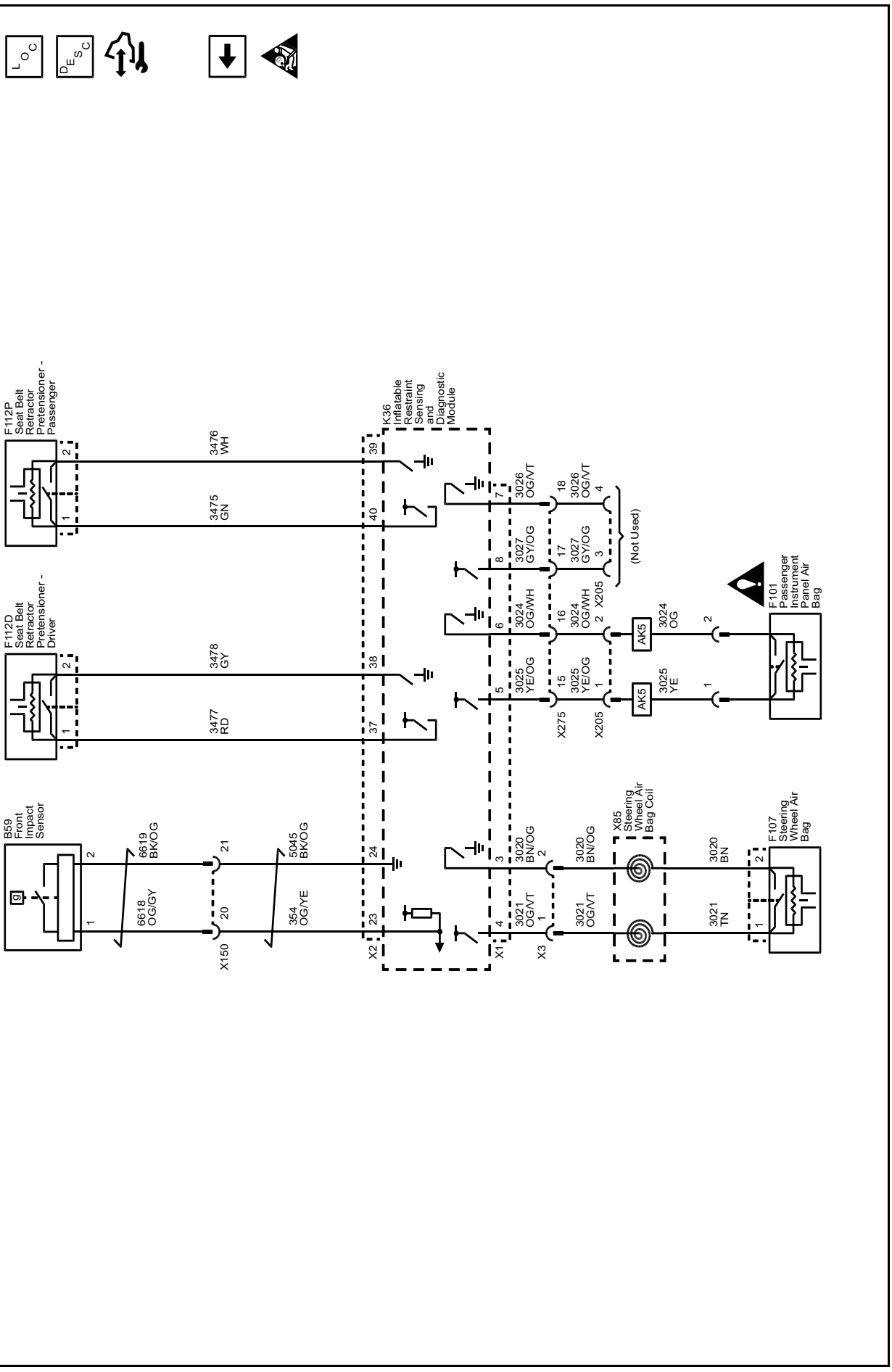
Supplemental Inflatable Restraints

Schematic and Routing Diagrams

SIR Schematics (Power, Ground, Serial Data, Disable Switch and Indicators)



SIR Schematics (Frontal Impact Sensing and Deployment)



Description and Operation

Supplemental Inflatable Restraint System Description and Operation

SIR System Overview

The supplemental inflatable restraint (SIR) system supplements the protection offered by the seat belts. The SIR system contains an inflatable restraint sensing and diagnostic module (SDM), air bags, seat belt pretensioners (retractor), and impact sensor. When the inflatable restraint sensing and diagnostic module detects a collision, the inflatable restraint sensing and diagnostic module will process the information provided by the sensors to further support air bag or pretensioner deployment. The inflatable restraint sensing and diagnostic module will deploy the air bags and pretensioners if it detects a collision of sufficient force. If the force of the impact is not sufficient to warrant air bag deployment, the inflatable restraint sensing and diagnostic module may still deploy the seat belt pretensioners. The inflatable restraint sensing and diagnostic module contains a sensing device that converts vehicle velocity changes to an electrical signal. The inflatable restraint sensing and diagnostic module compares these signals to values stored in memory. If the signals exceed a stored value, the inflatable restraint sensing and diagnostic module will determine the severity of the impact and either cause current to flow through the frontal deployment loops deploying the frontal air bags and pretensioners, or it will deploy the pretensioners only. The inflatable restraint sensing and diagnostic module continuously monitors the deployment loops for malfunctions and illuminates the AIR BAG indicator if a fault is detected. The inflatable restraint sensing and diagnostic module performs continuous diagnostic monitoring of the SIR system electrical components. Upon detection of a circuit malfunction, the inflatable restraint sensing and diagnostic module will set a DTC and inform the driver by illuminating the AIR BAG indicator. The steering column and knee bolsters are designed to absorb energy and compress during frontal collisions in order to limit leg movement and decrease the chance of injury to the driver and passenger.

AIR BAG Indicator (Driver)

The AIR BAG indicator, located in the instrument cluster, is used to notify the driver of SIR system malfunctions and to verify that the inflatable restraint sensing and diagnostic module (SDM) is communicating with the instrument cluster. When the ignition is turned ON, the inflatable restraint sensing and diagnostic module is supplied with ignition positive voltage. The instrument cluster will momentarily turn on the AIR BAG indicator. While the indicator is on, the inflatable restraint sensing and diagnostic module conducts tests on all SIR system components and circuits. If no malfunctions are detected the inflatable restraint sensing and diagnostic module will communicate with the instrument cluster through the serial data circuit and command the AIR BAG indicator OFF. The inflatable restraint sensing and diagnostic module provides continuous monitoring of the air bag circuits by conducting a sequence of checks. If a malfunction is detected the inflatable restraint sensing and diagnostic module will store a diagnostic trouble code (DTC) and command the instrument cluster to illuminate the AIR BAG indicator via serial data. The presence of a SIR system malfunction could result in non-deployment of the air bags or deployment in conditions less severe than intended. The AIR BAG indicator will remain ON until the malfunction has been repaired.

Inflatable Restraint Sensing and Diagnostic Module (SDM)

The inflatable restraint sensing and diagnostic module (SDM) is a microprocessor and the control center for the supplemental inflatable restraint (SIR) system. The inflatable restraint sensing and diagnostic module contains internal sensors along with external impact sensor(s) mounted at strategic locations on the vehicle. In the event of a collision, the inflatable restraint sensing and diagnostic module compares the signals from the internal and external impact sensor(s) to a value stored in memory. When the generated signals exceed the stored value, the inflatable restraint sensing and diagnostic module will cause current to flow through the appropriate deployment loops to deploy the air bags. The inflatable restraint sensing and diagnostic module records the SIR system status when a deployment occurs and illuminates the AIR BAG indicator located in the instrument cluster. The inflatable restraint sensing and diagnostic module performs continuous diagnostic monitoring of the SIR system electrical components and circuitry when the ignition is turned ON. If the inflatable restraint sensing and diagnostic module detects a malfunction, a DTC will be stored and the inflatable restraint sensing and diagnostic module will request the instrument cluster to illuminate the AIR BAG indicator, notifying the driver that a malfunction exists. In the event that ignition positive voltage is lost during a collision, the inflatable restraint sensing and diagnostic module maintains a 23-volt loop reserve for deployment of the air bags. It is important when disabling the SIR system for servicing or rescue operations to allow the 23-volt loop reserve to dissipate, which could take up to 1 minute.

Air Bags

This vehicle contains 2 air bags. The 2 air bags are located in the steering wheel (single inflator) and instrument panel (passenger side) (single inflator). To view the locations of the air bags refer to *Master Electrical Component List* in the Service Manual. Air bags contain a housing, inflatable air bag, on einitiating device, canister of gas generating material and, in some cases, stored compressed gas. The deployment loops supply current through the inflator modules to deploy the air bags. For moderate frontal collisions the air bags deploy at less than full deployment which consists of stage 1. The current passing through the air bag, ignites the material in the canister producing a rapid generation of gas and is some cases, the release of compressed gas. The gas produced from this reaction rapidly inflates the air bag. Once the air bag is inflated it quickly deflates through the air bag vent holes and/or the bag fabric. Each air bag is equipped with a shorting bar located in the connectors of the module.

The shorting bar shorts the air bag deployment loop circuitry to prevent unwanted deployment of the air bag when it is disconnected.

Seat Belt Pretensioners (Retractor)

The seat belt pretensioners (driver and passenger) consist of a housing, seat belt retractor (located in the B-pillar), seat belt webbing, an initiator, and a canister of gas generating materials. To view the locations of the seat belt pretentioners refer to *Master Electrical Component List* in the Service Manual. The initiator is part of the seat belt pretensioner deployment loop. When the vehicle is involved in a collision of sufficient force, the inflatable restraint sensing and diagnostic module causes current to flow through the seat belt deployment loops to the initiator. Current passing through the initiator ignites the material in the canister producing a rapid generation of gas. The gas produced from this reaction deploys the seat belt pretensioners which removes all of the slack in the seat belts. Depending on the severity of the collision, the seat belt pretensioners may deploy without the frontal air bags deploying, or they will deploy immediately before the frontal air bags deploy. Each seat belt pretensioner is equipped with a shorting bar that is located in the connector of the seat belt pretensioner. The shorting bar shorts the seat belt pretensioner circuitry to prevent unwanted deployment of the seat belt pretensioner when the connector is disconnected.

Impact Sensors

There is one impact sensor which is located in the front of the vehicle.To view the locations of the impact sensors refer to *Master Electrical Component List* in the Service Manual. The front of vehicle, the impact sensor contains a sensing device which monitors vehicle acceleration to detect collisions that are severe enough to warrant air bag deployment. The impact sensors are not part of the deployment loop, but instead provide input to the Inflatable Restraint Sensing and Diagnostic Module (SDM). The Inflatable Restraint Sensing and Diagnostic Module contains a microprocessor that performs calculations using the measured inputs from acceleration and pressure sensors. When the generated calculations exceed the stored value, the Inflatable Restraint Sensing and Diagnostic Module will cause current to flow through the deployment loops deploying the appropriate air bags.

Seat Belt Indicators

The seat belt indicators are controlled through the inflatable restraint sensing and diagnostic module (SDM). For further information on seat belt indicators refer to *Seat Belt System Description and Operation on page 8-13*.

Section 9

Transmission

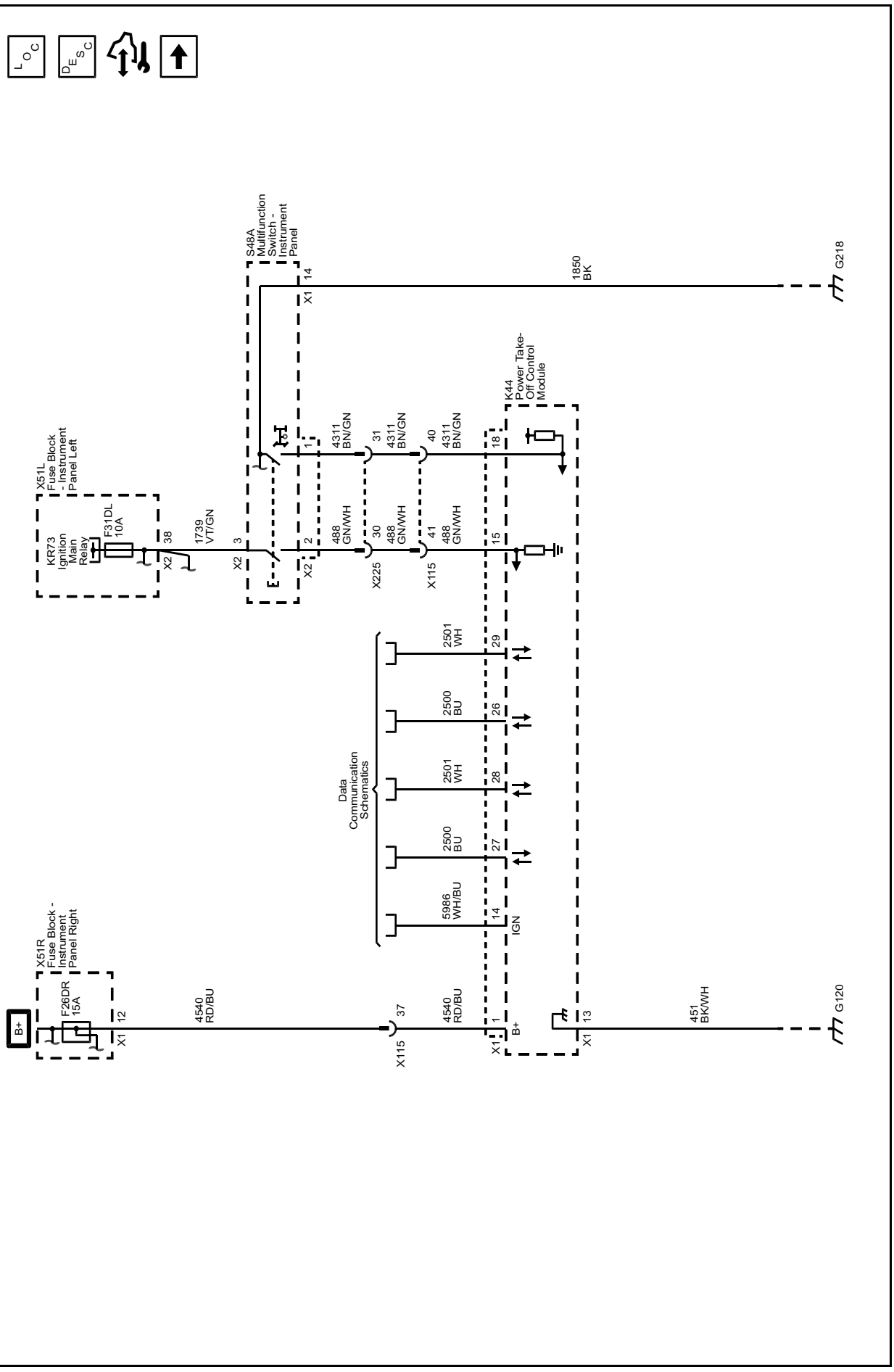
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Power Take-Off (PTO) Description and Operation 9-6
Shift Lock Control 9-12
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Automatic Transmission Shift Lock Control Description and Operation 9-14

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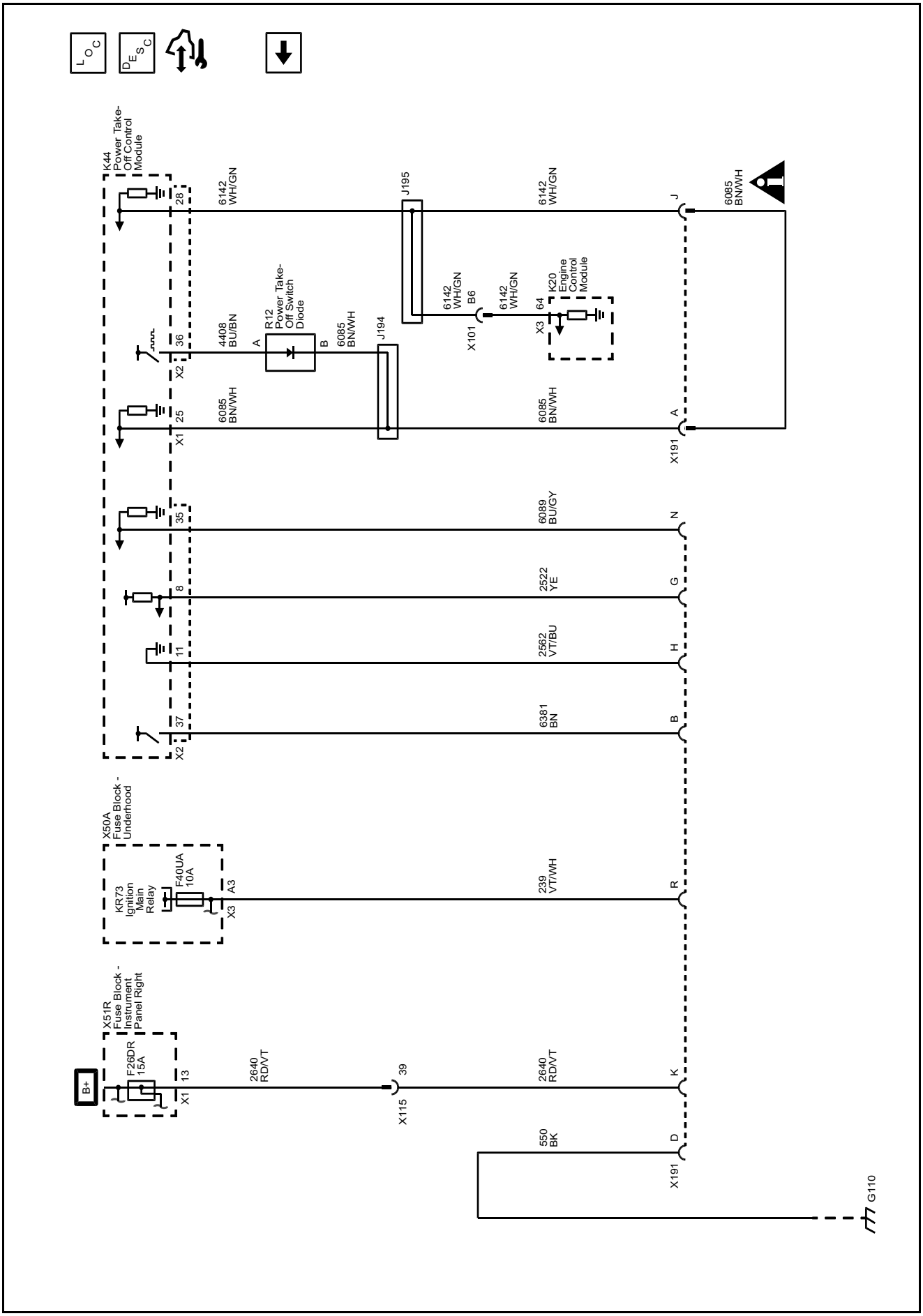
Power Take-Off

Schematic and Routing Diagrams

Power Take-Off (PTO) Schematics (Power, Ground, Serial Data and Enable (PTO))



Power Take-Off (PTO) Schematics (Provisional Connector (PTO))



Description and Operation

Power Take-Off (PTO) Description and Operation

The power take-off (PTO) is an upfitter integrated system that allows the user to create an auxiliary power source. The PTO system specifically controls engine speed to values higher than normal base idle, PTO load relay engagement, and remote starting and shutdown of the engine. When the operator requests PTO, the PTO switch will be turned ON and the engine RPM will go to a default standby speed.

The PTO system utilizes the following:

- The transmission driven PTO gear
- The in-cab PTO switch and cruise control SET – and RES + switches
- The PTO telltale indicator
- The power take off module (PTOM)
- The remote PTO upfitter connector

Note: For specific information on how to set up and operate the Power Take Off system refer to the vehicle Duramax Diesel supplement manual and the GM Upfitter website.

Factory Installed PTO Components

The in-cab PTO switch and cruise control SET – and RES + switches

The PTO switch is a part of the switch bank and is mounted in the right side of the center instrument panel. The PTO switch is a two position momentary switch with two states: ON/OFF. When the PTO switch is pressed and released to the ON position, the PTO relay will be energized by the PTOM. The cruise control SET – and RES + switches are used to control PTO desired speed. Note that the cruise control ON/OFF switch shall be set to OFF for PTO to operate.

PTO Telltale Indicator

The PTO telltale indicator is a part of the DIC message center. The PTOM shall command the state of the PTO telltale via instrument panel displays based on the following criteria:

- The telltale will illuminate, flashing at a 0.5 second interval rate when the PTO relay is energized. The indicator illuminates solid once the PTO load feedback signal confirms the load has been engaged or after 2 seconds if load feedback is not utilized by the PTO system.
- The telltale will flash at a 1 second interval rate when PTO memory speed is retained. Depressing the in-cab PTO switch to the OFF position turns the PTO system off. The PTO telltale will turn off once engine speed reaches base engine idle, at which time the PTO relay is de-energized.

Power Take-Off Module (PTOM)

- Processes PTO operator switch inputs and translates these inputs into an engine speed request to the ECM
- Controls the engagement of the PTO load relay
- Process requests to the BCM and ECM to start and shutdown the engine
- Requests the IPC to display on the DIC the actions the driver must take to enable PTO
- Requests the ECM to command an engine shutdown and engine shutdown horn warning for critical engine and transition conditions (stationary remote PTO only).

The PTOM constantly looks at the information from various sensors and other inputs, and controls the systems that affect vehicle performance. If any of the PTO engage conditions for the specific operating mode are no longer valid, the engine controller will exit out of PTO mode.

Remote PTO Upfitter Connector

The PTO upfitter connector provides access to all remote PTO functions. The connector is located on the right-hand outside frame rail, underneath the passenger side door. Electrical connections to the following components are provided by this connector. The upfitter connector pin circuits (other than battery, ignition and ground) are disabled as the vehicle is received from the factory. The PTO module must be reprogrammed by the upfitter or dealer to enable the following circuits:

- PTO remote engine arm
- PTO remote engine shutdown/start
- PTO remote set/variable speed potentiometer
- PTO lead feedback

Other Vehicle Modules

The PTO system also utilizes the following vehicle modules, which communicate over the serial data system:

- The body control module (BCM)
- The engine control module (ECM)
- The instrument panel cluster (IPC)
- The transmission control module (TCM)
- The electronic brake control module (EBCM)

Body Control Module (BCM)

The BCM maintains the PTO factory default mode, unless it is reprogrammed with a scan tool to change the PTO configuration mode. The BCM also controls the remote start/shutdown function.

Engine Control Module (ECM)

The ECM controls the engine speed and the engine starting based on messages from the PTOM through serial data. The ECM also provides PTO specific engine information to the PTOM through serial data messages.

Electronic Brake Control Module

The EBCM monitors the vehicle speed. The PTOM receives the status of the vehicle speed from the EBCM via serial data messages.

Instrument Panel Cluster (IPC)

The driver information center (DIC) of the IPC displays actions the driver must take in order to engage PTO. If the PTO will not engage, one or more of the following DIC messages may appear on the instrument panel cluster (IPC):

Stationary PTO	Mobile PTO
PTO: REDUCE VEHICLE SPEED	PTO: DISENGAGE CRUISE CONTROL
PTO: RELEASE BRAKE	PTO: REDUCE ENGINE SPEED
PTO: SET PARK BRAKE	PTO: RELEASE BRAKE
PTO: REDUCE ENGINE SPEED	PTO: PRESS and RELEASE BRAKE
PTO: SHIFT TO P OR N	PTO: REDUCE VEHICLE SPEED
PTO: DISENGAGE CRUISE CONTROL	—

Transmission Control Module (TCM)

The TCM adjusts shift patterns to minimize shifting during PTO operation. The TCM also provides transmission gear states and temperature conditions to the PTOM via serial data messages.

Electronic Brake Control Module (EBCM)

The EBCM disables the PTO if wheel speed pulses are larger than calibratable values. The EBCM also disengages the PTO during a traction control event.

PTO Enable Conditions

Stationary PTO

The following conditions must be met in order to engage stationary PTO:

- The engine must be running.
- The vehicle cannot be moving and the parking brake must be set.
- The shift lever must be in PARK (P) or NEUTRAL (N).
- The brake pedal must not be pressed.
- Cruise control must be OFF.

In-cab PTO operation: Press and release the in–cab PTO switch to the ON position. The PTO telltale indicator will flash fast until the PTO load becomes engaged. When the load becomes engaged, the telltale indicator will stop flashing and stay illuminated. The cruise control SET – and RES + switch positions can then be used to establish the desired PTO operating speed.

Remote PTO operation: Press and release the PTO remote arm switch, then within five seconds, press and release the PTO remote engine start/shutdown switch. The remote PTO indicator light will illuminate when the PTO load is engaged. The PTO remote SET or PTO remote variable speed switches can then be used to establish the desired PTO operating speed. These switches are accessed through the PTO upfitter connector, located under the passenger side door.

Mobile PTO

The following conditions must be met prior to engaging mobile PTO:

- The engine must be running.
- The vehicle speed must be less than the PTO top vehicle speed limit. The default setting is 94 km/h (58 mph). This limit can be adjusted.
- The shift lever must be in M1, M2 or M3.
- The brake must be pressed and then released. The brake must then remain released.
- Cruise control must be OFF.
- Engine speed must be less than the maximum allowed PTO engage speed of 1500 RPM.

Press and release the PTO in-cab switch to the ON position. The PTO telltale will flash fast until the PTO load becomes engaged. When the load becomes engaged, the telltale will stop flashing and stay illuminated. The SET – and RES + switches can then be used to establish the desired PTO operating speed.

PTO Disengage Conditions

Stationary PTO

The stationary PTO mode will disengage if any of the following conditions are detected by the vehicle modules:

- Vehicle movement
- The park brake is released
- The transmission is shifted from PARK (P) to DRIVE (D) or REVERSE (R).
- The PTO load becomes disengaged
- A press and release of the PTO in–cab switch to the OFF position.
- A press and release of the PTO remote engine start/shutdown switch (stationary remote PTO only).
- A press and release of the PTO E-STOP switch (stationary remote PTO only).

Mobile PTO

The mobile PTO mode will also disengage if the following conditions are detected by the vehicle modules:

- A press of the brake pedal
- Vehicle speed exceeds 94 km/h (58 mph)
- Engine speed exceeds the maximum allowed PTO operating speed of 2100 RPM
- The PTO load becomes disengaged
- A press and release of the PTO in–cab switch to the OFF position

The PTO control system will attempt to limit accelerator pedal and PTO switch input as the vehicle approaches the above operational limits. There are some vehicle conditions, such as down hill acceleration, which may cause vehicle speed or engine speed limits to be exceeded. Under those conditions, PTO is disengaged.

Modes of Operation

Preset PTO Mode

Preset PTO can only be used when the vehicle is not moving. The engine speed is initially set to a standby engine speed of 900 RPM. This provides an initial start-up engine speed to match the engagement of the PTO load. The PTO standby engine speed can be reprogrammed to higher speeds.

Choose one of two presets by pressing and releasing the cruise control SET – /RES + or PTO remote set switches:

- Speed 1: Pressing the cruise control SET — or PTO Remote Set 1 switch results in a preset speed of 1200 RPM.
- Speed 2: Pressing the cruise control RES + or PTO Remote Set 2 switch results in a preset speed of 1900 RPM

Pressing and releasing the PTO in-cab switch or PTO remote engine start/shutdown switch to the OFF position results in the return of the engine speed back to normal idle. The PTO load relay is also disengaged.

Maximum PTO Operating Speed: To protect the PTO from overspeed, the PTO system will disengage when the engine speed exceeds 3100 RPM.

The Stationary PTO Mode provides both in-cab and remote controls. The in-cab controls are enabled as the factory preset. The remote controls are disabled. This factory preset configuration can be reprogrammed to enable the remote controls, and disable the in-cab PTO controls.

Note: DO NOT enable/activate PTO during service (hoist) conditions at any time

Variable PTO Mode

In this mode, the vehicle can be programmed for stationary or mobile operation.

The variable PTO mode controls engine speed and PTO load engagement and is selected by either the PTO in-cab or remote switches. Engine speed selection is variable between base engine idle speed and a maximum of 3100 RPM.

In the mobile PTO mode, the vehicle will operate at a vehicle speed resulting from the current PTO engine speed request and current transmission gear range selected.

Vehicle speed stability is greatly improved by shifting into the transmission manual mode because upshifts are limited. This reduces the maximum vehicle speed while allowing high engine speed operation. Therefore, low vehicle speed operation, 16–40 km/h (10–25 mph) and high PTO engine speed 1500–2000 RPM can be achieved in the manual mode 1 and 2 transmission ranges.

In-cab PTO Switch Operation:

- ON: Press and release the PTO in-cab switch to the ON position to engage PTO. The PTOM will increase the engine speed to the factory preset engine speed. The initial standby speed can be adjusted by holding the accelerator to the desired engine speed, then pressing and releasing the ON switch. The current engine speed will become the new standby speed. This adjustment can only be done once at the initial engagement of the PTO, and the initial standby speed adjustment must be between the engine base idle speed and the maximum PTO engine speed.
- OFF: Press and release the PTO in-cab switch to the OFF position to disengage PTO. The engine speed will return to the base idle speed and the PTO load relay will be disengaged.

Cruise Control SET– and RES+ Switch Operation:

- SET —: Press and hold the accelerator to obtain the desired engine speed, then press and release the SET – switch. The current engine speed will be maintained. This action can be repeated as desired to a higher RPM value. The PTO set speed cannot exceed 3100 RPM.
  - – Tap Down: Press and release the SET – switch to reduce the engine speed by increments of 100 RPM.
  - – Coast: Press and hold the SET – switch to reduce the RPM by 150 RPM per second until the desired engine speed is reached or until the initial PTO standby speed is reached.
- RES +: When a PTO set speed has been achieved, press and release the brake pedal. Engine speed will return to normal idle speed. The PTO telltale will flash slowly indicating the previous PTO set speed has been retained in memory. Press and release the RES + to resume the previous PTO set speed. The PTO set speed cannot exceed 3100 RPM.
  - – Tap Up: Press and release the RES + to increase the engine speed by increments of 100 RPM.
  - – Accelerate: Press and hold the RES + to increase the RPM by 150 RPM per second until the desired engine speed is reached or until the maximum allowable PTO set speed is reached.

PTO State	Applied Switch	Short Apply	Long Apply
PTO STANDBY ENABLED	RES +	Tap Up (Engaged)	Accelerate (Engaged)
PTO STANDBY ENABLED	SET −	Engaged	Engaged
PTO ENGAGED (RPM already higher than standby)	SET –	Tap Down	Coast
PTO ENGAGED (RPM already lower than maximum speed)	RES +	Tap Up	Accelerate
STANDBY DISABLED with no memory speed	RES +	No Action	No Action
STANDBY DISABLED with a memory speed	RES +	Resume	Resume
STANDBY ENABLED with no memory speed	RES +	Tap Up (Engaged)	Resume
STANDBY ENABLED with a memory speed	RES +	Resume	Resume

Remote Engine Start Control

The PTO system allows the engine to be remotely started while operating in the stationary PTO mode. The wiring system provides for connections to a remote engine start arming switch and remote start/shutdownn switch. These connections are accessed through the upfitter connector.

The remote start function is initiated by a sequence of switch actions, in addition to several vehicle conditions. The following conditions must be met before attempting to remote start the engine. The vehicle ignition key can be in any position or removed from the ignition:

- The vehicle must be configured for stationary PTO operation.
- The parking brake must be set.
- The transmission must be in PARK (P).
- The hood must be closed.

Once the above conditions are met, to continue with the remote start, use the remote PTO controls to do the following:

1. Press and release the PTO remote arm switch.
2. Within five seconds of releasing the PTO remote arm switch, press and release the PTO remote engine start/shutdown switch until the engine starts.

The PTO system will then elevate engine RPM to standby speed and engage the PTO load. Use the PTO remote set or PTO remote variable speed switches (based on configuration) to elevate PTO speed to the desired engine operating speed.

Remote Engine Shutdown Control

The PTO system allows for remote engine shutdown while operating in the stationary PTO mode. This feature has the following functions:

- Engine shutdown using the operator remote switch: The vehicle wiring system provides remote engine shutdown switch connections, which can be accessed through the PTO upfitter connector.
- Timed auto-engine shutdown: The timed auto-engine shutdown feature provides the means to shut down the engine automatically after a predefined time. PTO must be operational for this function to be active.
- Engine shutdown based on critical engine conditions: The engine can be shutdown when PTO is operating if a critical engine condition is detected by the vehicle system (i.e., low oil, low oil pressure, hot engine, hot transmission, low fuel).
- Emergency engine shutdown: The vehicle wiring system supports remote Emergency engine shutdown via application of the E-STOP switch located at the external (upfitter's) panel accessible through the PTO upfitter connector. (e.g. when PTO relay is stuck closed in Stationary Remote mode, operator shall activate E—STOP switch to shutdown engine and allow engine to be restarted at the next ignition cycle without PTO system activation.

PTO Factory Default Settings

Power Take-Off (PTO) Description and Operation

Function	Value/Default Setting	Scan Tool/HMI Customization Menu
PTO Option	None Preset (Default) Variable Mobile	Scan Tool
PTO In-Cab Control	Enabled Disabled	Scan Tool
PTO Remote Control Status	Enabled Disabled (Default)	Scan Tool
PTO Ramp Rate	4 – 150 RPM/sec	Scan Tool
PTO Set 1 Speed	500 – 3100 RPM 1200 RPM (default)	HMI Customization Display/Scan Tool
PTO Set 2 Speed	500 – 3100 RPM 1900 RPM (default)	HMI Customization Display/Scan Tool
PTO Relay	Yes (default) No	Scan Tool
PTO Feedback	Yes (default) No	Scan Tool
Fuel Level for Engine Shutdown	0 – 25% fuel level 15% fuel level	Scan Tool
PTO to Set 1 Speed	Yes	Scan Tool

Power Take-Off (PTO) Description and Operation (cont'd)

Function	Value/Default Setting	Scan Tool/HMI Customization Menu
	No (default)	
PTO Remote Engine Start	Yes No (default)	Scan Tool
PTO Remote Set Switch	Yes No (default)	Scan Tool
PTO Remote Set Switch Type	Momentary (default) Latching	Scan Tool
PTO Remote Engine Shutdown	Yes No (default)	Scan Tool
Remote Set Switch Low = (less than 33% of Ignition voltage)	PTO Standby Set 1 (default) Set 2	Scan Tool
Remote Set Switch High + (33% to 66% of Ignition voltage)	PTO Standby Set 1 Set 2 (default)	Scan Tool
Remote Set Switch Open = (greater than 66% ignition voltage)	PTO Standby Set 1 (default) Set 2	Scan Tool
PTO Maximum Engage Speed	0 – 1500 RPM 1500 RPM (default)	Scan Tool
PTO Maximum Engine Speed	500 — 3100 RPM 2100 RPM (default)	Scan Tool
PTO Standby Speed	500 — 1500 RPM 900 RPM (default)	HMI Customization Display/Scan Tool
Engine Run Timer	0 — 1320 minutes	HMI Customization Display/Scan Tool
Chirp Before Start	Enabled (default) Disabled	Scan Tool
PTO Tap Step	4 – 500 RPM/Step 100 RPM/Step (default)	HMI Customization Display/Scan Tool
Brake Release Action	Standby Idle Speed (default)	Scan Tool
Remote PTO Variable Speed Switch	Yes No (default)	Scan Tool
PTO ON During Braking	Yes (default) No	Scan Tool
Maximum Vehicle Speed	30 kph (19 mph) to 94 kph (58 mph) 94 kph ((58 mph) (default)	Scan Tool
PTO Minimum Remote Variable Speed	0 – 50% 2% (default)	Scan Tool
PTO Maximum Remote Variable Speed	50 – 100% 95% (default)	Scan Tool
Engine Shutdown Enable	Yes No (default)	Scan Tool
PTO Accelerator Lockout	Enabled Disabled (default)	Scan Tool

Reprogramming the PTOM for Fast Idle/ PTO Using the Scan Tool

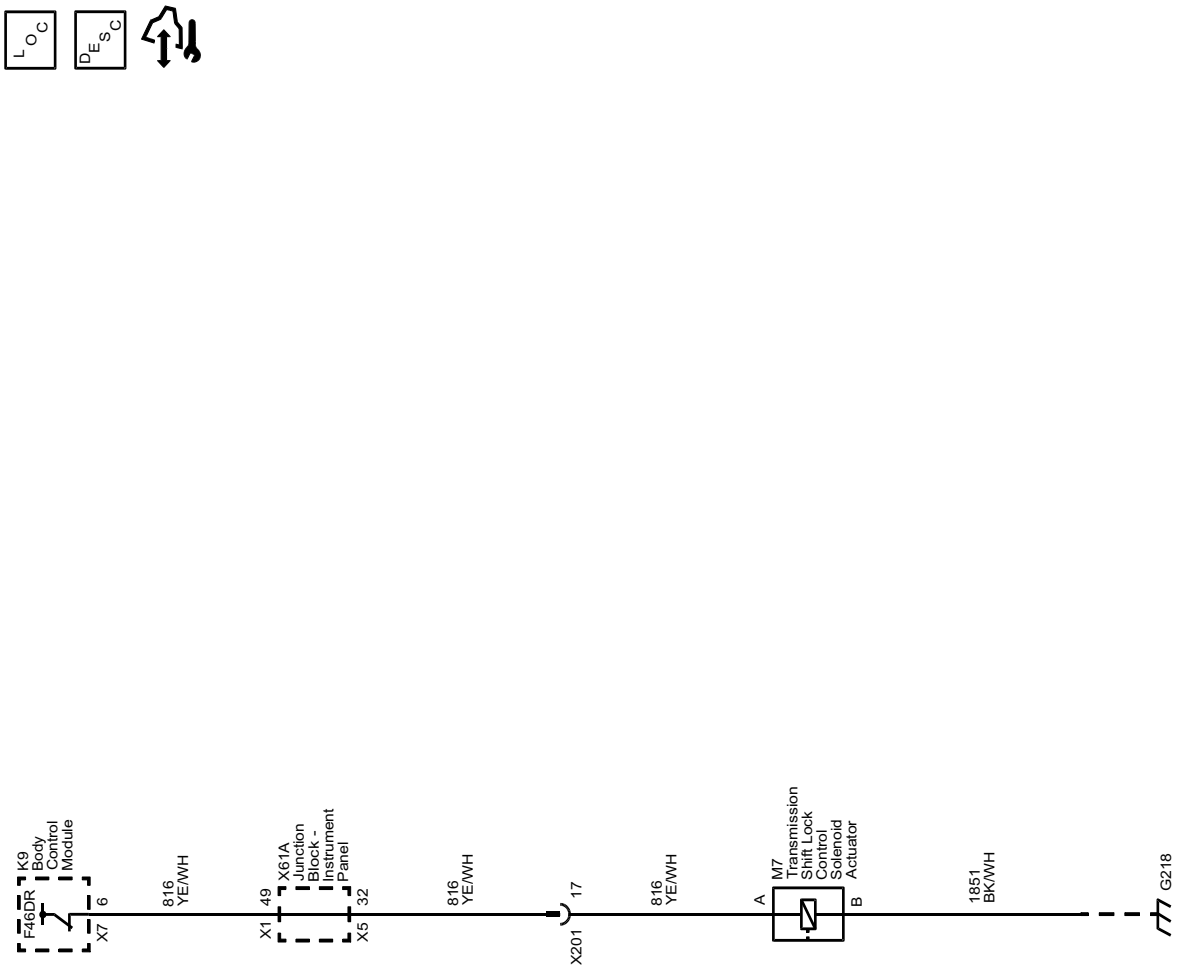
A scan tool must be used to enable certain PTO options and also to adjust the factory preset parameters to the desired settings.

For additional scan tool information, refer to *Control Module References* in the Service Manual.

Shift Lock Control

Schematic and Routing Diagrams

Shift Lock Control Schematics (Shift Lock Control)



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

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