



BODY BUILDER MANUAL

FOR

2017 CHEVROLET SILVERADO/GMC SIERRA

ELECTRICAL SECTION



Note to User:

As part of our mission to provide an up-to-date website that includes detailed Body Builder Manuals, Technical Bulletins, and Best Practice Manuals, we are now using sectional excerpts directly from the General Motors Service Information publications for our Electrical Body Builder Manuals.

You will note that the section numbers are non-sequential as we have provided only those that are believed to be the most pertinent to the Upfitter community and best suited to their needs.*

This new usage of the Service Information provides the opportunity for us to remain consistent with the changes that take place throughout the model year and to provide you updated information in a more timely fashion.

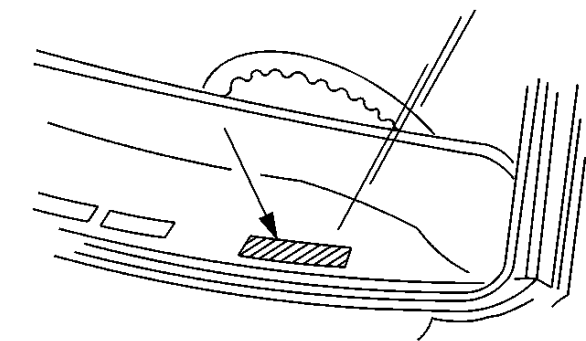
**** If you would like to have access to all of the electrical Service Information, please apply for a subscription from ACDelco at [http://acdelcotechconnect.com/html/tss tech esi.jsp](http://acdelcotechconnect.com/html/tss_tech esi.jsp)***

General Information

General Information

Introduction

Vehicle, Engine and Transmission ID and VIN Location, Derivative and Usage (GMC)



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
		3	Mexico
2	Manufacturer	G	General Motors
3	Make	D	GMC Incomplete
		T	GMC Truck
4	GVWR/Brake System/Body Style	N	6,001–7,000 lbs/Hydraulic/Standard Cab
		P	6,001–7,000 lbs/Hydraulic/Crew Cab
		R	6,001–7,000 lbs/Hydraulic/Extended Cab
		U	7,001–8,000 lbs/Hydraulic/Crew Cab
		V	7,001–8,000 lbs/Hydraulic/Extended Cab
		0	9,001–10,000 lbs/Hydraulic/Standard Cab
		1	9,001–10,000 lbs/Hydraulic/Crew Cab
		2	9,001–10,000 lbs/Hydraulic/Extended Cab
		3	10,001–14,000 lbs/Hydraulic/Standard Cab
		4	10,001–14,000 lbs/Hydraulic/Crew Cab

		5	10,001–14,000 lbs/Hydraulic/Extended Cab
5	Line Chassis	C	4x2
		1	
		K	4x4
		2	
6	Series	L	1500 GMC Sierra Fleet/Base
		M	1500 GMC Sierra SLE
		N	1500 GMC Sierra SLT
		P	1500 GMC Sierra Denali
		R	2500 GMC Sierra Fleet/Base
		S	2500 GMC Sierra SLE
		T	2500 GMC Sierra SLT
		U	2500 GMC Sierra Denali
		V	3500 GMC Sierra Fleet/Base
		W	3500 GMC Sierra SLE
		X	3500 GMC Sierra SLT
		Y	3500 GMC Sierra Denali
		9	GMC Sierra, (Non-US, Non-Canada)
7	Restraint System	C	Active Manual Belts, Airbag – Driver and Passenger – Front (1st row)
		E	Active Manual Belts, Airbags – Driver and Passenger – Front (1st row), Front Seat Side (1st row), Roof Side (all seating rows)
8	Engine Type	B	RPO LC8, Engine Flexible Fuel, (CNG/LGP), 8 Cyl, V8,6.0L, SFI
		C	RPO L83, Engine Gas, 8 Cylinder, 5.3L, SIDI VVT, AFM, E85 MAX, Aluminum
		G	RPO L96, Engine Flexible Fuel, (Gas/Ethanol), 8 Cylinder, 6.0L, SFI, Iron
		H	RPO LV3, Engine Gas, 6 Cylinder, 4.3L, SIDI, V6, VVT, OHV, E85 MAX, Aluminum
		J	RPO L86, Engine Gas, 8 Cylinder, 6.2L, SIDI VVT, AFM, E85 MAX, Aluminum
		P	RPO LV1, Engine Gas, 6 Cylinder, 4.3L, SIDI, V6, VVT, E85 MAX, Iron
9	Check Digit	—	Check Digit

10	Model Year	H	2017
11	Plant Location	F	Flint, Michigan, USA
		Z	Fort Wayne, Indiana, USA
		G	Silao, Mexico
12–17	Plant Sequence Number	—	Plant Sequence Number

4.3L (LV1 LV3) Engine ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 226538\) is invalid for this publication..](#)

5.3L (L83 L8B) or 6.2L (L86) Engine ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 225900\) is invalid for this publication..](#)

6.0L (L96) (LC8) Engine ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 225900\) is invalid for this publication..](#)

6.6L (L5P) Engine ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 203626\) is invalid for this publication..](#)

6L80 (MYC) or 6L90 (MYD) Transmission ID and VIN Derivative Location

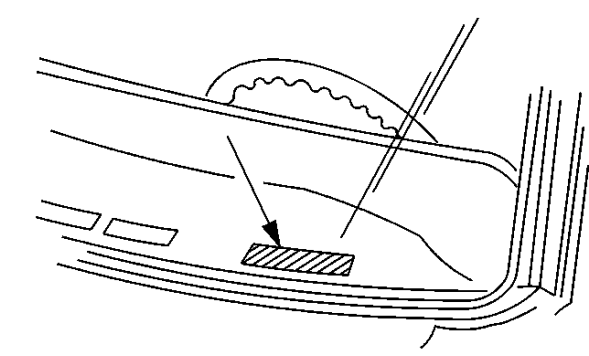
Refer to [CELL Link Error - Link target cell \(cell ID 135940\) is invalid for this publication..](#)

8L90 (M5U M5X) Transmission ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 260620\) is invalid for this publication..](#)

Allison (MW7) Transmission ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 7876\) is invalid for this publication..](#)



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
		3	Mexico
2	Manufacturer	G	General Motors
3	Make	B	Chevrolet Incomplete Truck
		C	Chevrolet Truck
4	GVWR/Brake System/Body Style	N	6,001–7,000 lbs/Hydraulic/Standard Cab
		P	6,001–7,000 lbs/Hydraulic/Crew Cab
		R	6,001–7,000 lbs/Hydraulic/Extended Cab
		U	7,001–8,000 lbs/Hydraulic/Crew Cab
		V	7,001–8,000 lbs/Hydraulic/Extended Cab
		0	9,001–10,000 lbs/Hydraulic/Standard Cab
		1	9,001–10,000 lbs/Hydraulic/Crew Cab
		2	9,001–10,000 lbs/Hydraulic/Extended Cab
		3	10,001–14,000 lbs/Hydraulic/Standard Cab
		4	10,001–14,000 lbs/Hydraulic/Crew Cab
		5	10,001–14,000 lbs/Hydraulic/Extended Cab
5	Line Chassis	C	4x2
		1	

		K	4x4
		2	
		N	1500 Chevrolet Silverado, Work Truck/LS/Fleet/Base
		P	1500 Chevrolet Silverado, Custom
		R	1500 Chevrolet Silverado, LT
		S	1500 Chevrolet Silverado, LTZ
		T	1500 Chevrolet Silverado, High Country
		U	2500 Chevrolet Silverado, Work Truck/Fleet/Base
		V	2500 Chevrolet Silverado, LT
		W	2500 Chevrolet Silverado, LTZ
		X	2500 Chevrolet Silverado, High Country
		Y	3500 Chevrolet Silverado, Work Truck/Fleet/Base
		Z	3500 Chevrolet Silverado, LT
		0	3500 Chevrolet Silverado, LTZ
		1	3500 Chevrolet Silverado, High Country
		9	Chevrolet Silverado, (Non-US, Non-Canada)
7	Restraint System	C	Active Manual Belts, Airbag – Driver and Passenger – Front (1st row)
		E	Active Manual Belts, Airbags – Driver and Passenger – Front (1st row), Front Seat Side (1st row), Roof Side (all seating rows)
8	Engine Type	B	RPO LC8, Engine Flexible Fuel, (CNG/LGP), 8 Cyl, V8,6.0L, SFI
		C	RPO L83, Engine Gas, 8 Cylinder, 5.3L, SIDI VVT, AFM, E85 MAX, Aluminum
		G	RPO L96, Engine Flexible Fuel, (Gas/Ethanol), 8 Cylinder, 6.0L, SFI, Iron
		H	RPO LV3, Engine Gas, 6 Cylinder, 4.3L, SIDI, V6, VVT, OHV, E85 MAX, Aluminum
		J	RPO L86, Engine Gas, 8 Cylinder, 6.2L, SIDI VVT, AFM, E85 MAX, Aluminum
		P	RPO LV1, Engine Gas, 6 Cylinder, 4.3L, SIDI, V6, VVT, E85 MAX, Iron
9	Check Digit	—	Check Digit
10	Model Year	H	2017
11	Plant Location	F	Flint, Michigan, USA

		Z	Fort Wayne, Indiana, USA
		G	Silao, Mexico
12–17	Plant Sequence Number	—	Plant Sequence Number

4.3L (LV1 LV3) Engine ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 226538\) is invalid for this publication..](#)

5.3L (L83 L8B) or 6.2L (L86) Engine ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 225900\) is invalid for this publication..](#)

6.0L (L96) (LC8) Engine ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 225900\) is invalid for this publication..](#)

6.6L (L5P) Engine ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 203626\) is invalid for this publication..](#)

6L80 (MYC) or 6L90 (MYD) Transmission ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 135940\) is invalid for this publication..](#)

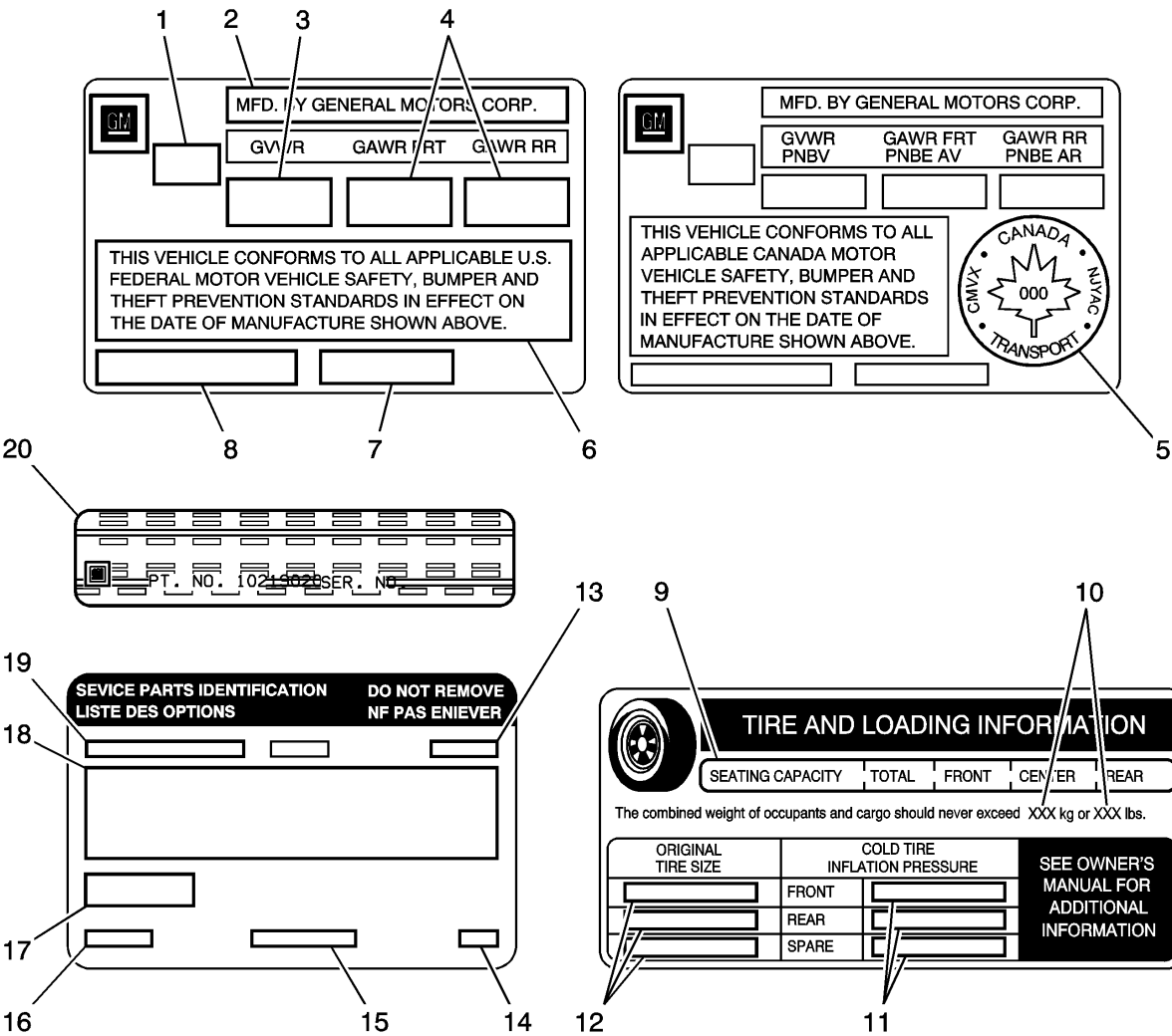
8L90 (M5U M5X) Transmission ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 260620\) is invalid for this publication..](#)

Allison (MW7) Transmission ID and VIN Derivative Location

Refer to [CELL Link Error - Link target cell \(cell ID 7876\) is invalid for this publication..](#)

Vehicle Certification, Tire Placard, Anti-Theft, and Service Parts ID Label



Vehicle Certification, Tire Placard, Anti-Theft, and Service Parts ID Label

Callouts	Description
Vehicle Certification Label The vehicle certification label is located on the driver door and displays the following assessments: <ul style="list-style-type: none">• Gross Vehicle Weight Rating (GVWR)• Gross Axle Weight Rating (GAWR), front and rear• The gross vehicle weight (GVW) is the weight of the vehicle and everything it carries. The gross vehicle weight must not exceed the GVWR. Include the following items when figuring the GVW:<ul style="list-style-type: none">– The base vehicle weight (factory weight)– The weight of all vehicle accessories– The weight of the driver and the passengers– The weight of the cargo	
1	Name of Manufacturer
2	Gross Vehicle Weight Rating
3	Gross Axle Weight Rating (Front, Rear)
4	Canadian Safety Mark (w/RPO Z49)

5	Certification Statement
6	Vehicle Class Type (Pass Car, etc.)
7	Vehicle Identification Number
8	Date of Manufacture (Mo/Yr)
Tire Placard The tire placard label is located on the driver side B pillar and displays the following assessments:	
9	Specified Occupant Seating Positions
10	Maximum Vehicle Capacity Weight
11	Tire Pressure, Front, Rear, and Spare (Cold)
12	Original Equipment Tire Size
Service Parts ID Label The vehicle service parts identification label is located in the instrument panel (I/P) compartment. The label is use to help identify the vehicle original parts and options.	
13	Vehicle Identification Number
14	Engineering Model Number (Vehicle Division, Line and Body Style)
15	Interior Trim Level and Decor
16	Exterior (Paint Color) WA Number
17	Paint Technology
18	Special Order Paint Colors and Numbers
19	Vehicle Option Content
Anti-Theft Label	
20	<p>The Federal law requires that General Motors label certain body parts on this vehicle with the VIN. The purpose of the law is to reduce the number of motor vehicle thefts by helping in the tracing and recovery of parts from stolen vehicles.</p> <p>Labels are permanently affixed to an interior surface of the part. The label on the replacement part contains the letter R, the manufacturer's logo, and the DOT symbol.</p> <p>The anti-theft label must be covered before any painting, and rustproofing procedures, and uncovered after the procedures. Failure to follow the precautionary steps may result in liability for violation of the Federal Vehicle Theft Prevention Standard and possible suspicion to the owner that the part was stolen.</p>

RPO Code List

RPO	Description
The production/process codes provide the description of the Regular Production Options (RPOs). The RPO list is printed on the Service Parts Identification Label.	
01U	PRIMARY COLOR-EXTERIOR, SPECIAL (02)
1LR	MODIFICATION-BRAKE SYSTEM, OPTIONAL LININGS
4AA	INTERIOR TRIM-JET BLACK
4B8	INTERIOR TRIM-COCOA / SHALE
4D7	INTERIOR TRIM-JET BLACK/DK ASH
4DP	INTERIOR TRIM-COCOA / DUNE
4ER	INTERIOR TRIM-JET BLACK / VECCHIO
4EX	INTERIOR TRIM-MINK
4EY	INTERIOR TRIM-COCOA / PILLION BROWN SAUVAGE
4EZ	INTERIOR TRIM-COCOA / DARK ATMOSPHERE
4FP	INTERIOR TRIM-PLATINUM JET BLACK
4FQ	INTERIOR TRIM-CHOOCCACHINO
4GB	INTERIOR TRIM-JET BLACK/ COBALT RED
4H9	INTERIOR TRIM-COCOA / MAPLE SUGAR
4HZ	INTERIOR TRIM-JET BLACK/MEDIUM ASH GRAY
5A7	WHEEL SPARE-NONE
5AZ	ACCESSORY-SAFETY KIT - UNIVERSAL
5JL	ACCESSORY-BRAKE UPGRADE PKG 1 - COMPLETE
5JR	ACCESSORY-MIRROR COVERS - ALTERNATE FINISH 1
5JY	ACCESSORY-TONNEAU - RR COMPT - SOFT FOLDING
5KW	ACCESSORY-EXTERIOR APPEARANCE PACKAGE 2
5KY	ACCESSORY-EXTERIOR APPEARANCE PACKAGE 4
5L6	EQUIPMENT-PACKAGE, SPECIAL FLEET

5VD	ACCESSORY-PROTECTOR - FRONT BUMPER
5VI	ACCESSORY-TIE DOWN RINGS - CARGO AREA
5W4	SALES PACKAGE-SPECIAL SERVICE, MUNICIPAL
5W7	ACCESSORY-AIR FILTER - PERFORMANCE
5WI	ACCESSORY-TIE DOWN RINGS - CARGO AREA, MOVEABLE
5Y3	ACCESSORY-TOW BALL - TRAILER HITCH
9C1	SALES PACKAGE-POLICE VEHICLE
9G3	SALES PACKAGE-"OFF ROAD"
9J4	BUMPER RR-(NONE)
9L3	TIRE SPARE-NONE
9L7	EQUIPMENT-ACSR Y WRG JUNC BLK
A31	WINDOW-POWER OPERATED, ALL DOORS (DO NOT USE ON NEW/MAJOR PROGRAMS)
A45	MEMORY-SEAT ADJUSTER, MIRROR, POWER, DRIVER, PERSONALIZATION
A48	WINDOW RR-FULL WIDTH, SLIDING, POWER
A4M	SALES PROCESSING OPT-#3
A52	SEAT-FRT BENCH
A60	LOCK CONTROL RR CMPT-LID, TAILGATE, KEY ACTIVATED
A68	SEAT RR-SPLIT, FOLDING
A91	LOCK CONTROL RR CMPT-TAILGATE, REM CONT ELEC OPEN/CLOSE
A95	SEAT-FRT BKT, HIGH BACK, DRIVER & PASS RECL
AAK	ACCESSORY-FLOOR LINER - CONTOURED - ALT DESIGN 1
ACO	IDENTIFICATION-ACCESSORY CATALOG OFFERING
AE7	SEAT-FRT SPLIT, DRIVER, PASS
AG1	ADJUSTER FRT ST-POWER, MULTI-DIRECTIONAL, DRIVER
AG2	ADJUSTER PASS ST-POWER, MULTI-DIRECTIONAL
AK5	RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER & PASS FRT

AKJ	WINDSHIELD STYLE-SHADE BAND
AKK	WINDSHIELD STYLE-ACOUSTIC PVB
AKO	WINDOW TYPE-PRIVACY
AKP	WINDOW TYPE-SOLAR ABSORBING
AKX	WINDSHIELD TYPE-SOLAR ABSORBING
AL0	SENSOR INDICATOR-INFLATABLE RESTRAINT, FRT PASS/CHILD PRESENCE DETECTOR
AM7	SEAT RR-FOLDING
AMF	LOCK CONTROL-ADDITIONAL, PROGRAMMABLE, REMOTE ENTRY, MULTIPLE UNITS
AN3	SEAT-FRT, INDIVIDUAL (NON BKT)
AP9	NET-CONVENIENCE
AQC	ORNAMENTATION-EXTR, BODY COLOR
AQQ	LOCK CONTROL, ENTRY-REMOTE ENTRY, EXTENDED RANGE (MY 09 AND FUTURE)
ARL	PLANT CODE-ARLINGTON, TX, USA
ARN	SEAT THIRD ROW-60/40 BENCH, MAN FOLD
AS8	SEAT THIRD ROW-60/40 BENCH, POWER FOLD
AT6	SEAT RR-BENCH, 60/40 MANUAL CONFIGURABLE
ATD	SEAT THIRD ROW-NONE
ATH	LOCK CONTROL, ENTRY-REMOTE ENTRY, EXTENDED RANGE, PASSIVE ENTRY, ALL DOORS
ATN	SEAT RR-BUCKET, POWER CONFIGURABLE
ATT	SEAT RR-BENCH, 60/40 POWER CONFIGURABLE
ATV	SEAT RR-BUCKET, MANUAL CONFIGURABLE
AU3	LOCK CONTROL-SIDE DR, ELEC
AX4	RESTRAINT CONVERSION-SEAT, MAN, EUROPEAN
AX7	RESTRAINT PROVISIONS-AUTOMATIC BELTS, PRE-CRASH, PRE-TIGHTENING
AXK	VEHICLE TYPE-TRUCK
AXP	VEHICLE TYPE-MULTI-PURPOSE PASSENGER VEHICLE

AXX	VEHICLE TYPE-VEHICLE TYPE - NOT REQUIRED DO NOT USE
AY0	RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER & PASS FRT, SEAT SIDE, ROOF SIDE
AYE	RESTRAINT-HEAD, RR SEAT, ANILINE LEATHER (WITH DVD) (DO NOT USE AFTER M.Y. 2016)
AYQ	RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER & PASS FRT, FRT SEAT SIDE, FRT INBOARD SEAT SIDE, ROOF SIDE
AZ3	SEAT-FRT SPLIT, DRIVER, PASS, FULL FEATURE CENTER
B1J	LINER-RR WHEELHOUSE
B1R	PORT OF ENTRY-UNISON, BELARUS
B30	COVERING FLOOR-CARPET
B32	COVERING FRT-FLOOR MATS, AUX
B33	COVERING REAR-FLOOR MATS, AUX
B3F	SEAT-FRT SPLIT, DELUXE, DRIVER, PASS, FULL FEATURE CENTER
B3V	TEST-EXTENDED WATER
B58	COVERING-FLOOR MAT, FRT & RR, CARPETED INSERT
B5N	COVERING-FLOOR MAT, FRT & RR, RUBBER
B85	MOLDING B/S-EXTERIOR, BRIGHT
B86	MOLDING B/S-BODY COLOR
BAG	PARTS PKG-EXPORT
BG9	COVERING FLOOR-RUBBER
BJA	PARTS PKG-TRUCK APPLICATION VAR.1
BPH	APPEARANCE PACKAGE-CHEVROLET "OFF ROAD"
BRS	STEPS, RUNNINGBOARD-SIDE, RETRACTABLE, POWER
BTM	SWITCH-ENGINE START, KEYLESS
BTV	REMOTE START-ENGINE
BVE	STEPS, RUNNINGBOARD-SIDE
BVQ	STEPS, RUNNINGBOARD-SIDE, TUBULAR, CHROME
BVV	STEPS, RUNNINGBOARD-SIDE, TUBULAR, BLACK

BWN	STEPS-CORNER ASSIST, BUMPER
C25	WIPER SYS RR WINDOW-INTERMITTENT
C42	HVAC SYSTEM-HEATER, OUTSIDE AIR, DELUXE
C49	DEFOGGER-RR WINDOW, ELECTRIC
C67	HVAC SYSTEM-AIR CONDITIONER FRT, ELECTRONIC CONTROLS
C99	SWITCH-INFL RST I/P MDL MAN SUPPRESSION
C9I	SWITCH-ROLL OVER SENSING
CE1	WIPER SYS WINDSHIELD-PULSE, MOISTURE SENSITIVE
CF5	ROOF-SUN, GLASS, SLIDING, ELEC
CG6	ORNAMENTATION-EXTR, NAMEPLATE, VAR 1
CGN	LINER-PUBX, SPRAY ON
CGO	COLLECTION GVW-COLLECTION GVW LESS THAN OR EQUAL TO 10,000 LBS
CJ2	HVAC SYSTEM-AIR CONDITIONER FRT, AUTO TEMP CONT, AUX TEMP CONT
CJ4	HVAC SYSTEM-AIR CONDITIONING, FRT & RR ELECTRONIC CONTROLS
CK4	COUNTRY-GREECE
CL5	COUNTRY-PERU
CL6	COUNTRY-BOLIVIA
CMD	PLANT CODE-FLINT, MI, USA (TRK)
CS0	COUNTRY-CZECH REPUBLIC
CS2	COUNTRY-NIGERIA
CS5	COUNTRY-ANGOLA
CT1	COUNTRY-BELGIUM
CT2	COUNTRY-AUSTRIA
CT3	COUNTRY-GERMANY
CT5	COUNTRY-NETHERLANDS
CT6	COUNTRY-ITALY
CT7	COUNTRY-DENMARK
CT8	COUNTRY-PORTUGAL

CT9	COUNTRY-SPAIN
CTD	EQUIPMENT-CARGO TIE DOWN (MOVABLE)
CU1	COUNTRY-NORWAY
CU2	COUNTRY-FINLAND
CU3	COUNTRY-FRANCE
CU4	COUNTRY-SWEDEN
CU5	COUNTRY-SWITZERLAND
CU7	COUNTRY-KUWAIT
CU8	COUNTRY-SAUDI ARABIA
CU9	COUNTRY-UNITED KINGDOM
CV3	COUNTRY-MEXICO
CV4	COUNTRY-ISRAEL
CV5	COUNTRY-JAPAN
CV6	COUNTRY-CHILE
CW1	COUNTRY-KOREA
CW2	COUNTRY-GULF AREAS (BAHRAIN, KUWAIT, OMAN, QATAR, SAUDI ARABIA, UAE)
CW5	COUNTRY-VENEZUELA
CWA	WASHER-CAMERA, REAR
CX0	COUNTRY-AZERBAIJAN
CX2	COUNTRY-COLOMBIA
CX3	COUNTRY-ECUADOR
CX9	COUNTRY-LEBANON
CY2	COUNTRY-JORDAN
CZ3	COUNTRY-RUSSIA
D07	CONSOLE-FRT COMPT, FLOOR, CUSTOM
D2D	COUNTRY-PHILIPPINES
D2O	COUNTRY-CURACAO
D2Y	COUNTRY-ANTIGUA
D3B	COUNTRY-BERMUDA
D3D	COUNTRY-REPUBLIC OF TRINIDAD AND TOBAGO
D3H	COUNTRY-BELARUS

D3I	COUNTRY-BARBADOS
D3J	COUNTRY-CAYMAN ISLANDS
D3K	COUNTRY-DOMINICAN REPUBLIC
D3L	COUNTRY-EL SALVADOR
D3M	COUNTRY-GUATEMALA
D3P	COUNTRY-HAITI
D3Q	COUNTRY-HONDURAS
D3U	COUNTRY-ST MAARTEN
D4G	COUNTRY-BAHAMAS
D4N	COUNTRY-COSTA RICA
D4X	COUNTRY-ARUBA
D5D	COUNTRY-NICARAGUA
D5K	COUNTRY-SURINAM
D75	HANDLE O/S DOOR-BODY COLOR
DCK	CONSOLE-FRT COMPT, FLOOR, CUSTOM, W/COOLER
DD8	MIRROR I/S R/V-LT SENSITIVE
DE2	MIRROR O/S-LH & RH, MANUAL CONTROL, FOLDING, COLOR
DF2	MIRROR O/S-LH & RH, WIDE LOAD, FOLDING, STAINLESS STEEL
DH6	MIRROR I/S FRT VAN-LH & RH, SUNSHADE, ILLUM
DL3	MIRROR O/S-LH & RH, REMOTE CONTROL, ELECTRIC, HEATED, POWER FOLDING, TURN SIG IND, LT SENSITIVE, COLOR
DL8	MIRROR O/S-LH & RH, REMOTE CONTROL, ELECTRIC, HEATED
DMQ	DECAL-ALASKAN
DNS	EQUIPMENT-SUPPLIER INSTALLED
DNU	EQUIPMENT-ADDITIONAL VIDEO SCREEN
DP6	MIRROR PROVISIONS-HOUSING, PAINTED
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

DPU	COUNTRY-BONAIRE
DPX	COUNTRY-TURKS AND CAICOS ISLANDS
DQS	MIRROR O/S-LH & RH, WIDE LOAD, VERT GLS,MAN EXT,PWR FLD,HTD,TURN SIG IND,R/CON,MEMORY,AUX CLEAR LP,AUX CARGO LP
DR4	MIRROR O/S-LH & RH, REMOTE CONTROL, ELECTRIC, HEATED, LT SENSITIVE, POWER FOLDING, COLOR
DRZ	MIRROR I/S R/V-LT SENSITIVE, FULL VIDEO DISPLAY
DT4	ASHTRAY-CIGARETTE LIGHTER
E20	HANDLE O/S DOOR-CHROME
E29	EQUIPMENT-MODIFICATION BASE EQUIPMENT
E5D	ACCESSORY-ASSIST HANDLES - INTERIOR
E63	BODY EQUIPMENT-FLEETSIDE PICK-UP BOX
E6N	END GATE-PUBX FRT UPR MOLDING DELETE
E7C	COUNTRY-LIBYA
EF5	COUNTRY-PANAMA
EF7	COUNTRY-UNITED STATES OF AMERICA (USA)
EXP	EXPORT-
F60	SPRING FRONT-HEAVY DUTY
FE9	CERTIFICATION-EMISSION, FEDERAL
FHO	VEHICLE FUEL-GASOLINE E10
FHS	VEHICLE FUEL-GASOLINE E85
FHV	VEHICLE FUEL-BIFUEL & MONOVALENT PLUS CNG
FHX	VEHICLE FUEL-DIESEL B20
FWI	PLANT CODE-FT WAYNE, IN, USA
G0P	SALES PACKAGE-SPECIAL OPS EDITION
G0S	SALES PACKAGE-CAMO EDITION
G1C	PRIMARY COLOR-EXTERIOR, OVERCAST MET(402Y)
G1E	PRIMARY COLOR-EXTERIOR, LIMITED ADDICTION RED TINT (405Y)

G1F	PRIMARY COLOR-EXTERIOR, BURNISHED BRANDY MET(406Y)
G1K	PRIMARY COLOR-EXTERIOR, SACR'E BLUE MET(409Y)
G1W	PRIMARY COLOR-EXTERIOR, ABALONE WHITE TRICOAT(140X)
G7C	PRIMARY COLOR-EXTERIOR, PULL ME OVER RED SOLID (130X)
G7T	PRIMARY COLOR-EXTERIOR, BAROQUE RED MET (142X)
G7U	PRIMARY COLOR-EXTERIOR, PLUM BERRY MET (143X)
G80	AXLE POSITRACTION-LIMITED SLIP
GAJ	APPEARANCE PACKAGE-HIGH COUNTRY
GAN	PRIMARY COLOR-EXTERIOR, SWITCHBLADE SILVER MET (G) 636R
GAR	PRIMARY COLOR-EXTERIOR, CARBON FLASH MET (G) 501Q
GAT	APPEARANCE PACKAGE-GMC "ALL TERRAIN"
GAZ	PRIMARY COLOR-EXTERIOR, SUMMIT WHITE (G) 8624
GBA	PRIMARY COLOR-EXTERIOR, BLACK (G) 8555
GCS	PRIMARY COLOR-EXTERIOR, VELVET RED MET (681R)
GGC	GRILLE-CUSTOM
GJB	PRIMARY COLOR-EXTERIOR, MINERAL MET (433B)
GMU	PRIMARY COLOR-EXTERIOR, PEPPERDUST MET-2 (441B)
GOZ	PRIMARY COLOR-EXTERIOR, DAYDREAM BEIGE MET (892T)
GPA	PRIMARY COLOR-EXTERIOR, GASOLINE MET-2 (457B)
GT4	AXLE REAR-3.73 RATIO
GT5	AXLE REAR-4.10 RATIO
GTY	AXLE-WIDE TRACK
GU4	AXLE REAR-3.08 RATIO
GU5	AXLE REAR-3.23 RATIO
GU6	AXLE REAR-3.42 RATIO

GWT	PRIMARY COLOR-EXTERIOR, CHAMPAGNE SILVER MET (102V)
GWX	PRIMARY COLOR-EXTERIOR, SUBTERRANEAN MET (105V)
GXG	PRIMARY COLOR-EXTERIOR, IRIIDIUM MET (121V)
GYK	PRIMARY COLOR-EXTERIOR, MYSTIC MOONLIGHT BLUE METALLIC (207V)
GYM	PRIMARY COLOR-EXTERIOR, SATIN STEEL GREY METALLIC (205V)
H0K	INTERIOR TRIM CONFIG-LEATHER, LEVEL 3, COCOA / DUNE
H0U	INTERIOR TRIM CONFIG-CLOTH, LEVEL 2, JET BLACK
H1Y	INTERIOR TRIM CONFIG-LEATHER, LEVEL 2, JET BLACK
H2G	INTERIOR TRIM CONFIG-VINYL, LEVEL 1, 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
H2T	INTERIOR TRIM CONFIG-CLOTH, LEVEL 2, COCOA / DUNE
H2U	INTERIOR TRIM CONFIG-LEATHER, LEVEL 3, JET BLACK
H2V	INTERIOR TRIM CONFIG-LEATHER, LEVEL 3, JET BLACK / DK ASH
H2W	INTERIOR TRIM CONFIG-LEATHER, LEVEL 3, JET BLACK / COBALT
H2X	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, JET BLACK
H2Y	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, COCOA / DUNE
H2Z	INTERIOR TRIM CONFIG-CLOTH, LEVEL 2, VAR1, JET BLACK
H3A	INTERIOR TRIM CONFIG-LEATHER VAR 1, LEVEL 3, COCOA / DUNE
H3B	INTERIOR TRIM CONFIG-LEATHER VAR 1, LEVEL 3, JET BLACK

H3C	INTERIOR TRIM CONFIG-LEATHER VAR 1, LEVEL 3, JET BLACK / DK ASH
H4S	INTERIOR TRIM CONFIG-LEATHER, LEVEL 3, MINK
H4W	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, COCOA / DARK ATMOSPHERE
H4X	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, COCOA / PILLION BROWN SAUVAGE
H4Y	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, COCOA / SHALE
HD7	HANDLE-O/S, DR, ILLUMINATED
HDQ	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, COCOA / MAPLE SUGAR
HEW	INTERIOR TRIM CONFIG-CLOTH, LEVEL 3, JET BLACK
HEY	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, JET BLACK / VECCHIO
HHZ	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, CHOCACCHINO
HJU	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, PLATINUM JET BLACK
HJV	INTERIOR TRIM CONFIG-CLOTH, LEVEL 3, COCOA / DUNE
HP5	ELECTRIFIED PROPULS-ELECTRIC, BAS, GEN 3
HQX	HEADLAMP COLOR-BEZEL, BODY COLOR
HQY	HEADLAMP COLOR-BEZEL, CHROME
HQZ	INTERIOR TRIM CONFIG-LEATHER, LEVEL 3, JET BLACK/MEDIUM ASH GRAY
I17	ENGINEERING YEAR-2017
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
J71	BRAKE PARKING-POWER OPERATED
J95	BRAKE-HYD POWER, SINGLE REAR WHEEL, 4 WHL DISC

J96	BRAKE-HYD POWER, DUAL REAR WHEEL, 4 WHL DISC
JB1	BRAKE-VAC POWER, 17" DISC/DISC, W/ESS, 7700 LBS
JD9	BRAKE-VAC POWER, 17" DISC/DISC, W/VSES, 7700 LBS
JF4	PEDALS-ADJUSTABLE, POWER
JHD	CONTROL-HILL DESCENT, GEAR HOLD
JK1	TIRE PRESS INDICATOR-LOW TIRE PRESSURE - NONE
JL1	CONTROL-INTEGRATED TRAILER BRAKE
K05	HEATER ENG-BLOCK
K34	CRUISE CONTROL-AUTOMATIC, ELECTRONIC
K40	ENGINE BRAKE-EXHAUST
K47	AIR CLEANER-HIGH CAPACITY
K4B	BATTERY-LN3, FLA, 12V, 70AH, 730 SAE CCA, AUX
K4C	CHARGER-INDUCTIVE PORTABLE WIRELESS DEVICE
K4D	BATTERY-LN3, FLA, 12V, 70AH, 730 SAE CCA, DUAL
K59	CRUISE CONTROL-AUTOMATIC, ADAPTIVE
K6H	ORNAMENTATION-R TAILGATE BOW TIE, DELETE
KA1	HEATER SEAT FRT-DRVR & PASS
KA6	HEATER SEAT-REAR
KB6	HEATER-SEAT, COOLING, FRT
KC4	COOLING SYSTEM-ENG OIL
KG4	GENERATOR-150 AMP
KHB	GENERATOR-150 AMP AND 220 AMP, DUAL
KI4	RECEPTACLE-ELECTRICAL, ACCESSORY 110 VOLT
KI5	RECEPTACLE-ELECTRICAL, ACCESSORY 230 VOLT
KNP	COOLING SYSTEM-TRANS, HD
KQV	HEATER-SEAT, VENTED, FRT
KRV	REFRIGERANT-LOW GWP

KSG	CRUISE CONTROL-AUTOMATIC, ADAPTIVE, WITH STOP/GO
KW5	GENERATOR-220 AMP
KW7	GENERATOR-170 AMP
KY4	GENERATOR-HYBRID MOTOR, BAS 3, 100 AMP
L5P	ENGINE-DIESEL, 8 CYL, 6.6L, DI, V8, TURBO, DURAMAX, GEN 5, VAR. 1
L83	ENGINE-GAS, 8 CYL, 5.3L, SIDI VVT, AFM, E85 MAX, ALUM, GM
L86	ENGINE-GAS, 8 CYL, 6.2L, SIDI VVT, AFM, E85 MAX, ALUM, GM
L8B	ENGINE-GAS, 8 CYL, 5.3L, V8, BAS 3, ALUM, GEN 5
L96	ENGINE-GAS, 8 CYL, 6.0L, SFI, E85 MAX, IRON, GM
LC8	ENGINE-LPG/CNG, 8 CYL, V8, 6.0L, SFI, GEN 1, GMNA
LV1	ENGINE-GAS, 6 CYL, 4.3L, SIDI, V6, VVT, E85 MAX, IRON
LV3	ENGINE-GAS, 6 CYL, 4.3L, GEN 5, SIDI, V6, VVT, OHV, E85 MAX, ALUM
M1F	POWER TAKE OFF-RR PTO
M2P	TRANSMISSION-MAN 5 SPD, 4.69 1ST, 2.56 2ND, 1.53 3RD, 1.00 4TH, 0.73 5TH, TR3655
M5U	TRANSMISSION-AUTO 8 SPD, 8L90
M5X	TRANSMISSION-AUTO 8 SPD, 8L90, BAS+
MAA	MARKETING AREA-AFRICA
MAF	MARKETING AREA-SOUTHEAST ASIA
MAH	MARKETING AREA-US, PUERTO RICO/USVI
MAM	MARKETING AREA-MIDDLE EAST
MAW	MARKETING AREA-KOREA
MAY	MARKETING AREA-ANDEAN (SOUTH AMERICA 2)
MBC	MARKETING AREA-CANADA
MBD	MARKETING AREA-CENTRAL AMERICA/CARIBBEAN
MBI	MARKETING AREA-ISRAEL
MBM	MARKETING AREA-EUROPE GROUP

MBR	MARKETING AREA-RUSSIA GROUP
MCX	MARKETING AREA-MEXICO
MQ7	TRANSMISSION-MAN 5 SPD, TREMEC, 109MM, 6.16 1ST, 3.11 2ND, 1.71 3RD, 1.00 4TH, 0.76 5TH (TR4050)
MSL	PLANT CODE-SILAO, MEXICO
MW7	TRANSMISSION-AUTO 6 SPD, ALLISON, LCT 1000, 3.10 1ST, .71 5TH, .62 6TH, O/D, CONV CLUTCH
MXW	TRANSMISSION-MAN 5 SPD, 4.227 1ST, 2.375 2ND, 1.470 3RD, 1.000 4TH, 0.808TH, TREMEC, GEN 1
MYC	TRANSMISSION-AUTO 6 SPD, HMD, 6L80
MYD	TRANSMISSION-AUTO 6 SPD, HMD, 6L90
N01	LOCK CONTROL-FUEL PLUG
N05	LOCK CONTROL-FUEL FILLER CAP
N08	LOCK CONTROL-FUEL FILLER DR, REM CONT
N12	EXHAUST SYSTEM-REAR EXIT
N2L	FUEL TANK-REAR TANK 40 GAL (151L)
N2M	FUEL TANK-FRONT TANK 23.5 GAL (89L)
N2N	FUEL TANK-DUAL TANK, FRONT TANK 23.5 GAL (89L) REAR TANK 40 GAL (151L)
N30	STEERING WHEEL-DELUXE
N33	STEERING COLUMN-TILT TYPE
N37	STEERING COLUMN-TILT, TELESCOPING
N38	STEERING COLUMN-TILT, TELESCOPING, POWER
N79	WHEEL SPARE-18 X 8.0, J, STEEL, DESIGN 2
NAA	ACCESSORY-ROCKER GUARD - TUBULAR
NE1	CERTIFICATION-EMISSION, GEOGRAPHICALLY RESTRICTED REGISTRATION FOR VEHICLES UP TO 14,000 LBS GVW (USE 2003 MDL YR
NE4	EMISSION SYSTEM-EEC 14
NE9	EMISSION SYSTEM-EEC 09
NHT	PERFORMANCE PACKAGE-ENHANCED TOWING
NK5	STEERING WHEEL-STANDARD

NKC	NOISE CONTROL-SYSTEM, ACTIVE NOISE CANCELLATION
NP0	TRANSFER CASE-ACTIVE, SINGLE SPEED,SWITCH ACTIVATED,ALUM
NP5	STEERING WHEEL-LEATHER WRAPPED
NQF	TRANSFER CASE-ELECTRIC SHIFT CONT, TWO SPEED, ALUM
NQG	TRANSFER CASE-MANUAL SHIFT CONT, TWO SPEED, ALUM
NQH	TRANSFER CASE-ACTIVE, TWO SPEED, SWITCH ACTIVATED, ALUM
NQL	EMISSION SYSTEM-KOREAN, LEV
NT7	EMISSION SYSTEM-FEDERAL, TIER 2
NTB	EMISSION SYSTEM-FEDERAL, TIER 3
NU2	EMISSION SYSTEM-CALIFORNIA, ULEV2
NU5	EMISSION SYSTEM-CALIFORNIA, BIN 4
NUB	EMISSION SYSTEM-CALIFORNIA, ULEV70
NUF	EMISSION SYSTEM-CALIFORNIA, ULEV125
NUK	EMISSION SYSTEM-CALIFORNIA, ULEV250
NUM	EMISSION SYSTEM-CALIFORNIA, LEV3 MDV 10-14K GVW
NUR	EMISSION SYSTEM-CALIFORNIA, LEV395
NV8	STEERING-POWER, MAGNETIC SPEED, VARIABLE ASSIST
NZ4	WHEEL SPARE-17 X 7.5, J, STEEL, DESIGN 2
NZD	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 6
NZG	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 7
NZH	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 8
NZJ	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 9
NZM	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 10
NZN	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 11
NZP	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 12
NZQ	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 15
NZR	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 16
NZT	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 18

NZZ	SALES PACKAGE-SKID PLATE, "OFF ROAD" SPORT
P03	COVER, WHEEL-VAR 3
P06	TRIM DISCS-WHEEL
P3H	ORNAMENTATION-EXTR, BOWTIE
PB4	LOCK CONTROL-WHEEL
PHF	WHEEL-18 X 8.0, J, ALUMINUM, DESIGN 30
PPA	EQUIPMENT-ASSIST, OPEN & CLOSE, TAILGATE
PTO	ENGINE CONTROL-POWER TAKE OFF (PTO) CONTROLS
PTW	WHEEL-18 X 8.0, J, ALUMINUM, DESIGN 2
PYN	WHEEL-17 X 7.5, J, STEEL, DESIGN 7
PYQ	WHEEL-17 X 7.5, J, ALUMINUM, DESIGN 7
PYR	WHEEL-18 X 8.0, J, ALUMINUM, DESIGN 24
PYS	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 14
PYT	WHEEL-18 X 8.0, J, STEEL, DESIGN 2
PYV	WHEEL-18 X 8.0, J, ALUMINUM, DESIGN 23
PYW	WHEEL-17 X 6.5, J, STEEL, DESIGN 2
PZX	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 2
Q5U	WHEEL-17 X 8.0, J, ALUMINUM, DESIGN 2
Q5W	WHEEL-17 X 8.0, J, ALUMINUM, DESIGN 1
Q7L	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 2
Q7M	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 3
Q7R	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 13
QAR	TIRE ALL-P265/60R17 SL 108V BW AL3
QBL	TIRE ALL-P265/70R17 SL 113H BW OOR
QF2	TIRE ALL-LT275/65R18 E 123/120Q BW MT, VAR 1
QFC	TIRE ALL-LT265/60R20 E 121/XXX S YYY AT
QGM	TIRE ALL-LT265/70R18 E 124/121R BW AT
QHQ	TIRE ALL-LT245/75R17 E 121/118R BW ALS
QHX	TIRE ALL-P285/50R20 SL 111H BW AL3
QQO	TIRE ALL-LT235/80R17 E 120/117Q BW ALS

QSS	TIRE ALL-P275/55R20 SL 111S BW AL2
QST	TIRE ALL-P285/45R22 SL 110H BW AL3
QWF	TIRE ALL-LT265/70R18 E 124/121 S BW ALS
QXN	TIRE ALL-P265/65R18 SL 112S BW OOR
QXO	TIRE ALL-P265/65R18 SL 112H BW AL3
QXT	TIRE ALL-LT265/70R17 E 121/118 Q BW AT
QXU	TIRE ALL-LT265/70R17 E 121/118 Q BW AT
QZT	TIRE ALL-LT235/80R17 E 120/117Q BW AT
R6J	CONTROL-SALES ITEM NO. 10
R6K	CONTROL-SALES ITEM NO. 11
R6V	CONTROL-SALES ITEM NO. 21
R88	ACCESSORY-ILLUMINATED EMBLEM - EXTERIOR - DESIGN 2
RAP	WHEEL-17 X 8.0, J, STEEL, DESIGN 1
RBR	WHEEL-22 X 9.0, J, STEEL, DESIGN 1
RBW	TIRE ALL-P265/65R18 SL 112T WOL AT
RBX	TIRE ALL-P265/65R18 SL 112T BW AT
RBZ	TIRE ALL-P255/70R17 SL 110S BW ALS
RC3	TIRE ALL-P265/70R17 SL 113S BW AT
RC4	TIRE SPARE-P265/70R17 SL 113S BW
RC5	TIRE ALL-LT265/70R17 C 112Q BW AT
RC7	TIRE ALL-P275/55R20 SL 111S BW AT
RCV	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 4
RCW	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 5
RD1	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 6
RD2	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 2
RD3	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 3
RD4	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 4
RD5	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 5
RD6	WHEEL-17 X 8.0, J, STEEL, DESIGN 2
RD7	WHEEL-17 X 8.0, J, STEEL, DESIGN 3
RDI	ACCESSORY-KEYLESS ENTRY

REG	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 7
RHH	TIRE ALL-P285/45R22 SL 110H BW AT
RHM	TIRE SPARE-LT265/70R17 C 112Q BW AT
RHO	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 19
RI8	TIRE ALL-265/65R18 SL 114S BW MT
RIA	ACCESSORY-FLOOR LINER - CONTOURED
RIB	ACCESSORY-FLOOR LINER - CONTOURED - 3RD ROW
RKX	TIRE ALL-P265/65R18 SL 112T BW ALS
RM7	WHEEL SPARE-17 X 8.0, J, STEEL, DESIGN 1
RN2	ACCESSORY-ILLUMINATED EMBLEM - EXTERIOR - DESIGN 1
RO1	ACCESSORY-GRILLES/GRILLE INSERT - ALTERNATE DESIGN 3
RO2	ACCESSORY-GRILLES/GRILLE INSERT - ALTERNATE DESIGN 4
RPT	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 14
RQ9	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 1
RQA	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 2
RS7	WHEEL-17 X 6.5, J, ALUMINUM, DESIGN 1
RT4	WHEEL-18 X 8.0, J, ALUMINUM, DESIGN 1
RT5	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 1
RTH	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 3
RTL	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 1
RUF	WHEEL SPARE-17 X 7.5, J, STEEL, DESIGN 1
RVA	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 1
RVG	ACCESSORY-ADAPTER - TRAILER HARNESS
RVQ	ACCESSORY-ASSIST STEPS - TUBULAR - OVAL - BLACK
RVS	ACCESSORY-ASSIST STEPS - TUBULAR - ROUND - BLACK
RVX	ACCESSORY-BALL MOUNT - TRAILER HITCH
RW2	ACCESSORY-BED RAILS - BLACK
RW3	ACCESSORY-BED RAILS - CHROME

RW6	ACCESSORY-BED STORAGE BOX - FIXED FULL WIDTH - METAL
RWI	ACCESSORY-BODY SIDE MOLDINGS - CHROME
RWK	ACCESSORY-BODY SIDE MOLDINGS - PAINTED
RWR	ACCESSORY-CAMERA - REAR VISION
RWS	ACCESSORY-FLOOR MATS - CARPET
RWU	ACCESSORY-CARGO AREA ORGANIZER - COLLAPSIBLE
RX1	ACCESSORY-WHEEL, WITH INSERTS - DESIGN 1
RXH	ACCESSORY-CENTER CAP - WHEEL - DESIGN 1
RXJ	ACCESSORY-CENTER CAP - WHEEL - DESIGN 2
RXN	ACCESSORY-WHEEL, WITH INSERTS - DESIGN 2
RXQ	ACCESSORY-CONVENIENCE NET - BED MOUNTED
RY7	ACCESSORY-DOOR HANDLES - ALTERNATE FINISH 1
RYT	ACCESSORY-FIRST AID KIT
RZ9	ACCESSORY-GRILLES/GRILLE INSERT - ALTERNATE DESIGN 1
RZB	ACCESSORY-GRILLES/GRILLE INSERT - ALTERNATE DESIGN 2
RZO	ACCESSORY-WHEEL - 20" - ALUMINUM - DESIGN 9
RZY	ACCESSORY-HARNESS - WIRING
S08	ACCESSORY-HIGHWAY SAFETY KIT
S0M	ACCESSORY-ILLUMINATED DOOR SILLS
S0P	ACCESSORY-INSERT - FLOOR CONSOLE
S0Y	ACCESSORY-LAMPS - CARGO AREA
S1V	ACCESSORY-HEADPHONES - RSE
S2B	WHEEL SPARE-17 X 7.0, J, ALUMINUM, DESIGN 1
S3X	ACCESSORY-LAMPS - FRONT ROOF MOUNTED - OFF-ROAD
S41	ACCESSORY-LINER - WHEEL HOUSE

S42	ACCESSORY-LOAD STOPS - UTILITY RACK
S44	ACCESSORY-LOCKING PIN - TRAILER HITCH
S47	ACCESSORY-LUG NUTS
S4O	ACCESSORY-MIRRORS - TRAILER EXTENSION - ALT FINISH
S4Z	ACCESSORY-MIRRORS - TRAILER EXTENSION
S55	ACCESSORY-FLOOR MATS - ALL WEATHER - ALT DESIGN
S5S	ACCESSORY-NUDGE BAR - TUBULAR
S6D	ACCESSORY-PORTABLE REFRIGERATOR
S6L	ACCESSORY-PROTECTOR - ROCKER PANEL
S6M	ACCESSORY-RADIO KIT - NAVIGATION
S6N	ACCESSORY-RECEIVER COVER - TRAILER HITCH
S6P	ACCESSORY-REMOTE START KIT
S6Q	ACCESSORY-ROADSIDE ASSISTANCE PACKAGE
S6V	ACCESSORY-ASSIST STEPS - RETRACTABLE
S6W	ACCESSORY-SEAT COVER - MUDDER (PROTECTIVE)
S9O	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 18
SAF	LOCK-SPARE TIRE, HOIST SHAFT
SAM	ACCESSORY-SKID PLATES
SAO	ACCESSORY-SMOKERS PACKAGE
SB1	ACCESSORY-SPLASH GUARDS - FLAT
SB7	ACCESSORY-DECAL PACKAGE - DESIGN 1
SB9	ACCESSORY-DECAL PACKAGE - DESIGN 2
SBY	ACCESSORY-SPORT BAR - BED MOUNTED - DESIGN 1
SCN	APPEARANCE PACKAGE-SPORT
SCU	ACCESSORY-SPORT BAR - BED MOUNTED - DESIGN 2
SCZ	ACCESSORY-TAILGATE HANDLE - ALTERNATE FINISH - CHROME
SD5	ACCESSORY-TIRE PRESSURE MONITOR
SDA	ACCESSORY-TOW HOOKS

SDE	ACCESSORY-TRAILER HITCH - REMOVABLE
SDI	ACCESSORY-TRIANGLE - REFLECTIVE
SE4	ACCESSORY-WHEEL - 18" - ALUMINUM - DESIGN 1
SES	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 1
SEU	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 2
SEV	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 3
SEW	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 4
SEY	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 5
SEZ	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 6
SF0	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 7
SF1	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 8
SF5	ACCESSORY-WHEEL FLARES - ALTERNATE DESIGN - MOLDED COLOR
SF6	ACCESSORY-WHEEL FLARES - ALTERNATE DESIGN - PAINTED
SF8	ACCESSORY-DECAL PACKAGE - DESIGN 3
SFC	ACCESSORY-DECAL PACKAGE - DESIGN 6
SFE	ACCESSORY-WHEEL LOCKS
SFJ	ACCESSORY-WINDOW SHADES - REFLECTIVE
SFV	ACCESSORY-WIRELESS NETWORK INTERFACE MODULE
SFZ	ACCESSORY-EMBLEM - EXTERIOR - DESIGN 1
SG1	ACCESSORY-EMBLEM - EXTERIOR - DESIGN 2
SGF	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 4
SGG	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 5
SGK	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 6
SGM	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 9
SH0	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 7
SIE	ACCESSORY-PUBX TIERED STORAGE

SIF	ACCESSORY-RSE - PORTABLE MEDIA CONNECTIVITY PACKAGE
SII	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 8
SIL	ACCESSORY-RSE - PORTABLE MEDIA CONNECTIVITY PKG - W/INTEGRATED POWER
SIY	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 9
SJ9	ACCESSORY-GRILLE / GRILLE INSERTS - ALTERNATE FINISH 1
SJA	ACCESSORY-GRILLE / GRILLE INSERTS - ALTERNATE FINISH 2
SKD	VEHICLE-SEMI-KNOCKED DOWN
SKP	WHEEL SPARE-17 X 6.5, J, STEEL, DESIGN 1
SL7	ACCESSORY-PUBX LADDER / UTILITY RACK STANCHIONS
SLT	EQUIPMENT-'LT' SALES PKG
SMI	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 17
SNO	ACCESSORY-HITCH COMPLETION PKG - GOOSENECK
SPY	ACCESSORY-LUG NUTS - ALT FINISH
SPZ	ACCESSORY-WHEEL LOCKS - ALT FINISH
SRW	CHASSIS-SINGLE REAR WHEEL, RIDE & HANDLING
ST7	SALES PACKAGE-WT BLACK OUT PACKAGE
ST9	SALES PACKAGE-C/K 10
STF	SALES PACKAGE-ALL TERRAIN X
STH	SALES PACKAGE-RALLY 2
STJ	SALES PACKAGE-CUSTOM SPORT 2
SU2	SALES PACKAGE-RALLY 2 Z71
SXL	EQUIPMENT-SLX SALES PACKAGE
SYT	ACCESSORY-SILL PLATES - ALTERNATE FINISH
T2H	ORNAMENTATION-EXTR, EXPORT UNIQUE REQUIREMENTS
T3U	LAMP FRT FOG-FRT FOG
T4F	HEADLAMPS-HIGH INTENSITY DISCHARGE
T4L	HEADLAMPS-LED

T4Z	SHIFTER INTERLOCK-SEAT BELT ASSURANCE SYSTEM
T79	LAMP-FOG, RR
T89	LAMP-TAIL & STOP, EXPORT
T94	CONTROL, HEADLAMPS-LH RULE OF THE ROAD
TB4	BODY EQUIPMENT-LIFT GATE (MANUAL)
TB5	BODY EQUIPMENT-LIFT GATE (POWER)
TB8	CONTROL, HEADLAMPS-RH RULE OF THE ROAD
TBD	ORNAMENTATION-EXTR, BOWTIE
TBD	PROVISIONS-SIDE TOP CAP DELETE
TBD	WHEEL-22" WHEEL (RPO: SMI)
TBD	WW-20 X 8.5, J, ALUMINUM (PYU)
TC2	BODY EQUIPMENT-LIFT GATE, POWER, HANDS FREE
TC7	GRILLE-RADIATOR, BODY COLOR SIDE, W/ CHROME TIPS
TCB	PLANT CODE-VALENCIA, VENEZUELA
TDM	MODE-TEEN DRIVER SETTINGS
TG5	PLAYER-COMPACT DISC AND MP3
TGG	LANGUAGE CONTROL-ENGLISH, ARABIC, FRENCH
TGK	COLOR COMBINATION-SOLID, SPECIAL PAINT
TL1	GRILLE-SPECIAL
TQ5	HEADLAMP HIGH BEAM-AUTO CONTROL
TR2	LAMP-TURN SIGNAL, ENLARGED
TRB	GRILLE-RADIATOR, BODY COLOR
TRW	PROVISIONS-LAMP, ROOF MOUNTED
TUF	ORNAMENTATION-EMBLEM, "TEXAS EDITION"
U01	LAMP-FIVE, ROOF MARKER, TRUCK
U19	SPEEDOMETER-INST, KILO & MILES, KILO ODOMETER
U2J	DIGITAL AUDIO SYSTEM-S-BAND - NONE
U2K	DIGITAL AUDIO SYSTEM-S-BAND

U2L	RECEPTION-HD
U42	ENTERTAINMENT PKG-RR SEAT, SINGLE DISP, REM CONTROL, RR CONSUMER PORT, 2-WIRELESS 2-CHANNEL HEADPHONES, OPTICAL DRIVE
U73	ANTENNA-FIXED, RADIO
U77	ANTENNA-RR WINDOW, RADIO
UB7	PERFORMANCE PACKAGE-HIGHER PAYLOAD
UD5	PARK ASSIST-FRONT AND REAR
UD7	PARK ASSIST-REAR
UDA	COMMUNICATION SYSTEM-VEHICLE, DEACTIVATED
UDC	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (ONE COLOR GRAPHIC)
UDD	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (MULTI COLOR STANDARD GRAPHIC)
UDV	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED, FULL CLUSTER (MULTI COLOR GRAPHIC)
UE0	COMMUNICATION SYSTEM-VEHICLE - NONE
UE1	COMMUNICATION SYSTEM-VEHICLE, ONSTAR
UE3	COMMUNICATION SYSTEM-VEHICLE, CHEVYSTAR
UEU	SENSOR INDICATOR-FORWARD COLLISION ALERT
UF2	LAMP-CARGO
UF3	SWITCH-HIGH IDLE
UFG	SENSOR INDICATOR-REAR CROSS TRAFFIC ALERT
UFL	LANE ACTIVE SAFETY-DEPARTURE WARNING
UG1	OPENER-GARAGE DOOR, UNIVERSAL
UGN	COLL IMMINENT BRK-ALL SPEED, VEH FWD MOVEMENT, BRAKE PREFILL, INTEGRATED BRAKE ASSIST
UHL	VEHICLE-U-HAUL
UHN	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 3
UHS	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (MULTI COLOR ENHANCED GRAPHIC)

UHX	LANE ACTIVE SAFETY-KEEP ASSIST
UHY	COLL IMMINENT BRK-LOW SPEED, VEH FWD MOVEMENT, BRAKE PREFILL, INTEGRATED BRAKE ASSIST
UI3	COMMUNICATION SYSTEM-VEHICLE, ERA GLONASS
UIC	ACCESSORY-ACCY COMBINATION PKG 1
UJ5	ACCESSORY-DVD ENTERTAINMENT SYSTEM - HEADREST - DUAL
UJM	TIRE PRESS INDICATOR-MANUAL LEARN
UK3	CONTROL-STEERING WHEEL, ACCESSORY
UKC	SIDE ACTIVE SAFETY-OBSTACLE DETECTION ENHANCED
UKG	PARK ASSIST-FRONT, REAR, LATERAL-FRONT (SEMI-AUTOMATIC STEERING & BRAKING ADVANCED PARKING AID)
UL2	FREQUENCIES-EUROPEAN
UL4	FREQUENCIES-SOUTH AMERICA
UL8	FREQUENCIES-SAUDI ARABIAN
ULK	ACCESSORY-TOW HOOKS - RED
ULT	APPEARANCE PACKAGE-CADILLAC ESCALADE, PLATINUM
UMN	SPEEDOMETER-INST, MILES & KILO, MILES ODOMETER
UPF	WIRELESS INTERFACE-SHORT RANGE, VOICE REC
UQ3	SPEAKER SYSTEM-ENHANCED AUDIO
UQ5	SPEAKER SYSTEM-4, DUAL FRT DR MTD, DUAL EXT D RGE QTR MNTD
UQA	SPEAKER SYSTEM-PREMIUM AUDIO BRANDED WITH AMPLIFIER
UQG	SPEAKER SYSTEM-ENHANCED AUDIO WITH AMPLIFIER
UQH	SPEAKER SYSTEM-PREMIUM AUDIO BRANDED WITH SURROUND AMPLIFIER, AUDIOPHILE
UQS	SPEAKER SYSTEM-PREMIUM AUDIO BRANDED WITH SURROUND AMPLIFIER
UTJ	THEFT DETERENT-ELECTRICAL, UNAUTHORIZED ENTRY

UTM	THEFT DETERENT SYS-UNAUTHORIZED ENTRY, W/O REMOTE KEYLESS ENTRY
UTR	ALARM, HORN-CONTENT THEFT DETERENT, SELF POWERED
UTT	THEFT DETERENT-BODY SECURITY CONTENT
UTU	SENSOR, VEHICLE-INCLINATION
UTV	SENSOR, VEHICLE-INTERIOR MOVEMENT
UV6	DISPLAY-HEAD UP
UVC	VISION-REAR VIEW, MONO, ANALOG
UVD	STEERING WHEEL HEAT-MANUAL
UVH	VISION-360 VIEW, MONO, ANALOG
UVZ	SENSOR-COLLISION AVOIDANCE & MITIGATION, VEHICLE REVERSE MOVEMENT
UY2	WIRING PROVISIONS-CAMPER & 5TH WHEEL TRAILER
V10	PROVISION OPTIONS-COLD WEATHER
V22	GRILLE-RADIATOR, CHROME
V3Q	BAR-PUBX BRIDGE
V46	BUMPER FRT-CHROME
V54	LUGGAGE CARRIER-ROOF, PAINTED
V76	HOOK-TOW
V78	VEHICLE STATEMENT-(NONE)
V8C	VEHICLE STATEMENT-MEXICO
V8I	VEHICLE STATEMENT-ISRAEL
VAT	ACCESSORY-GRILLE / GRILLE INSERTS - ALTERNATE FINISH - CHROME
VAV	ACCESSORY-FLOOR MATS - ALL WEATHER
VB5	BUMPER FRT-COLOR
VBJ	ACCESSORY-UNDERSEAT STORAGE
VBN	ACCESSORY-PUBX CARPET
VBR	ACCESSORY-PUBX RUBBER MAT
VBX	LANGUAGE LABEL-ARABIC
VC5	LABEL-SHIPPING, EXCEPT US, US POSSESSIONS, OR JAPAN (DO NOT USE MY18 AND BEYOND)

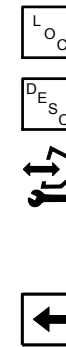
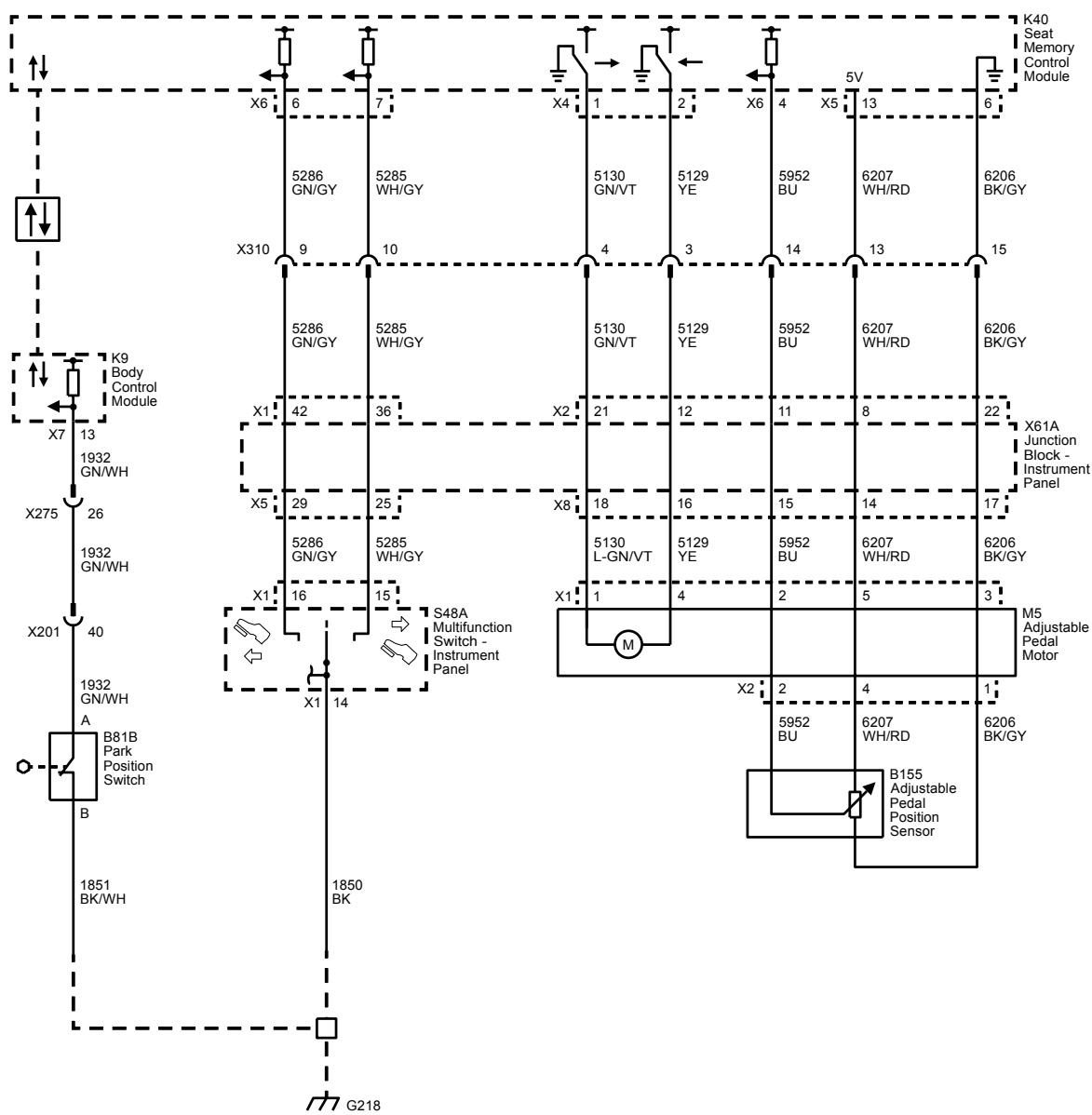
VFF	VIDEO FORMAT-REGION 1, NTSC
VFJ	VIDEO FORMAT-REGION 2, PAL
VFK	VIDEO FORMAT-REGION 3, NTSC
VFM	VIDEO FORMAT-REGION 4, NTSC
VGC	PROTECTOR-FILM, PAINT ETCH PREVENTIVE
VH6	BUMPER FRT-BLACK
VH9	ENVELOPE-OWNER INFO MAN
VHM	PROGNOSTIC SYSTEM-VEHICLE HEALTH MANAGEMENT
VJG	BUMPER RR-BLACK
VJH	BUMPER RR-CHROME
VK3	LICENSE PLATE FRONT-FRT MOUNTING PKG
VKU	ACCESSORY-MIRROR CAPS - CHROME
VKW	ACCESSORY-ORGANIZER - FRONT CONSOLE
VKY	ACCESSORY-DOOR HANDLES - ALTERNATE FINISH - CHROME
VL4	LICENSE PLATE FRONT-FRT MOUNTING PKG, EEC
VL5	LICENSE PLATE-RR MOUNTING PKG, EXPORT
VLG	ACCESSORY-CLOSEOUT - REAR FASCIA
VLI	ACCESSORY-MAT - TRUNK / CARGO AREA
VLQ	HOOK-TOW, CHROME
VNX	GRILLE-NONE
VPB	ACCESSORY-TONNEAU - RR COMPT - VINYL W/ INTEGRAL CROSSBOW SUPPORTS
VPH	VEHICLE PREPARATION-OVERSEAS DELIVERY
VPV	HANDLING CHARGE-ARLINGTON ASM TO KERR INDUSTRIES, ARLINGTON, TX AND RETURN TO ARLINGTON ASM
VPZ	GRILLE-RADIATOR, SPECIAL, CHROME
VQK	ACCESSORY-SPLASH GUARDS - CUSTOM MOLDED
VQL	ACCESSORY-FUEL DOOR - DESIGN 1
VQQ	ACCESSORY-CROSS RAILS - ROOF RACK - INTEGRATED - BLACK

VQT	ACCESSORY-TONNEAU - RR COMPT - HARD FOLDING
VQY	ACCESSORY-TOW HOOKS - CHROME
VQZ	ACCESSORY-EXHAUST TIP - DESIGN 1
VRS	ACCESSORY-CARGO SECURITY SHADE
VRV	ACCESSORY-SPLASH GUARDS - CUSTOM MOLDED - PAINTED
VT5	BUMPER RR-COLOR KEYED
VT7	OWNERS MANUAL-ENGLISH LANGUAGE
VTB	ACCESSORY-PROTECTOR - REAR BUMPER
VTG	ACCESSORY-INTERIOR TRIM KIT
VUK	ACCESSORY-TAILGATE LINER - PUBX
VV4	COMMUNICATION EQUIP-MOBILE INTERNET CONNECTIVITY
VVJ	CALIBRATION-SPEEDOMETER (180 KPH/112 MPH)
VW9	ACCESSORY-CENTER CAP - WHEEL - DESIGN 3
VWT	ACCESSORY-GRILLE SCREEN - INSECT PROTECTION
VXE	CAP-BOX RAIL DELETE
VXH	ACCESSORY-ASSIST STEPS - TUBULAR - CHROME - OVAL
VXJ	ACCESSORY-ASSIST STEPS - TUBULAR - CHROME - ROUND
VXT	VEHICLE TYPE-INCOMPLETE
VYU	PROVISIONS-SNOW PLOW PREP
VYW	ACCESSORY-FLOOR MATS - PREMIUM CARPET - DESIGN 1
VZ3	LABEL-MERCURY DISPOSAL NOTIFICATION
VZX	ACCESSORY-PUBX BEDLINER
W2D	ACCESSORY-CARGO NET
W88	ACCESSORY-SPLASH GUARDS - OVERSIZED
WBC	ACCESSORY-EXHAUST UPGRADE - DUAL MODE
WEA	APPEARANCE PACKAGE-Z71 PLUS

WH9	ACCESSORY-CARGO AREA DIVIDER - VERTICAL
WJI	SALES PACKAGE-MARY KAY
WJP	SALES PACKAGE-MIDNIGHT EDITION
WMH	VIN MODEL YEAR-2017
WPK	SALES PACKAGE-SPORT PACK
WV9	MERCHANDISED PKG-VALUE LEADER
X88	MARKET BRAND-CHEVROLET
XAA	ACCESSORY-TIRE ALL-P275/55R20 SL 111S BW AL2 VAR 1
XAC	ACCESSORY-TIRE ALL-P275/55R20 SL 111S BW AT VAR 1
XAH	ACCESSORY-TIRE ALL-P285/45R22 SL 110H BW AT -VAR 1
XAV	ACCESSORY-TIRE ALL - P285/45R22 SL 110H BW AL3 -VAR 1
XL7	FREQUENCIES RATING-315 MHZ, LONG DISTANCE
XL8	FREQUENCIES RATING-433 MHZ
Y65	SALES PACKAGE-ESS 1
Y66	SALES PACKAGE-ESS 2
Y86	SALES PACKAGE-ESS 1B
Y91	MERCHANDISED PKG-LUXURY EDITION
YE9	PACKAGE, CONVENIENCE-COMFORT & DECOR LEVEL #3
YF5	CERTIFICATION-EMISSION, CALIFORNIA
YM8	IDENTIFICATION-LIMITED PERSONALIZATION OPTION (LPO)
Z49	COUNTRY-CANADA
Z56	CHASSIS PACKAGE-POLICE CONVERSION
Z5X	MIRROR PROVISIONS-ARABIC LANGUAGE
Z60	CHASSIS PACKAGE-HIGH PERFORMANCE
Z6A	PROVISIONS-SPECIAL EQUIPMENT , 5TH WHEEL/ GOOSENECK TRAILER HITCH PREP PACKAGE
Z71	CHASSIS PACKAGE-"OFF ROAD"
Z75	MARKET BRAND-CADILLAC

Z82	TRAILER PROVISIONS-SPECIAL EQUIPMENT, H.D.
Z85	CHASSIS PACKAGE-INCREASED CAPACITY
Z88	MARKET BRAND-GMC
Z95	CHASSIS PACKAGE-MAGNERIDE
ZAK	TIRE SPARE-P265/60R17 SL 108V BW AL3
ZBL	TIRE SPARE-P265/70R17 SL 113 H BW OOR
ZBZ	TIRE SPARE-P255/70R17 SL 110H BW ALS
ZHQ	TIRE SPARE-LT245/75R17 E 121/118 R BW ALS
ZQO	TIRE SPARE-LT235/80R17 E 120/117 Q BW ALS
ZW7	CHASSIS PACKAGE-PREMIUM SMOOTH RIDE
ZW9	BODY EQUIPMENT-BASE BODY OR CHASSIS
ZWF	TIRE SPARE-LT265/70R18 E 124/121 S BW ALS
ZXT	TIRE SPARE-LT265/70R17/E BW TL
ZXU	TIRE SPARE-LT265/70R17 E 121/118 S BW AT
ZY1	COLOR COMBINATION-SOLID
ZYD	SALES PACKAGE-HIGH DESERT
ZZT	TIRE SPARE-LT235/80R17 E 120/117 Q BW AT

Adjustable Pedals (A45)



Description and Operation

Adjustable Pedals Description and Operation (Without A45)

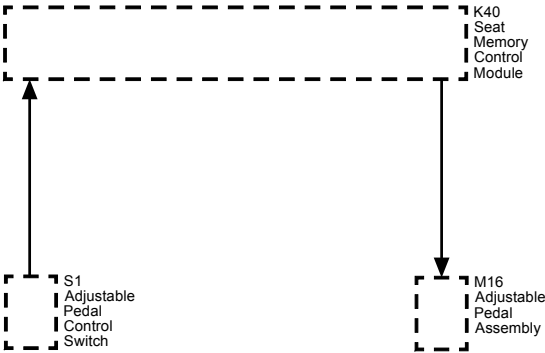
The adjustable pedals system is controlled by the adjustable pedals switch and the adjustable pedals relay and operation can occur only while the transmission selector lever is in the park position. The adjustable pedals assembly is moved forward or rearward by a motor which is fixed to the brake pedal actuator with a drive cable to the accelerator pedal actuator. In an inactive state both of the outputs to the motor are closed to ground. The adjustable pedals switch controls the adjustable pedals relay by applying battery voltage to one of the coils. The adjustable pedals motor is bidirectional and the direction of the pedal assembly travel is determined by which of the relay output circuits is switched to battery positive voltage while the other remains grounded. The adjustable pedals system uses the same motor and sensor assembly even when it is not equipped with the memory seats. The adjustable pedals position sensor is not used and does not have any circuits connected. The adjustable pedals position manually controlled by activating the switch in the forward or rearward direction until the desired position is reached.

Adjustable Pedals Description and Operation (With A45)

Adjustable Pedals System Components

The adjustable pedals system consists of the following components:

- The multifunction switch – instrument panel
- The seat memory control module
- The adjustable pedal motor
- The adjustable pedal position sensor



Adjustable Pedals System Operation

The adjustable pedals are not operable when the cruise control is engaged.

The adjustable pedal system is controlled by the seat memory control module. The adjustable pedals are moved forward or backward by a motor which is fastened to the brake pedal assembly with drive cables to the brake and accelerator pedal actuators.

The adjustable pedal motor is controlled by the seat memory control module through two motor control circuits. In an inactive state both control circuits are closed to ground within the module. The seat memory control module drives the adjustable pedal motor in the forward or rearward direction by closing the appropriate control circuit to battery voltage. The adjustable pedal motor is bidirectional and the direction of the pedal assembly travel is determined by which of the motor control circuits is switched to battery voltage while the other remains grounded.

The adjustable pedal forward and rearward switches are inputs to the module. Battery voltage is supplied to the switch from the seat memory control module. When the switch is operated to the forward or rearward direction the forward or rearward switch signal circuit is closed to the battery voltage circuit. Battery voltage on a switch signal circuit indicates to the seat memory control module that the switch is active.

The seat memory control module monitors the locations of the adjustable pedals using the adjustable pedal position sensor. The position sensor is supplied with a 5 V reference and ground circuit from the seat memory control module. The position sensor signal circuit is referenced from ground within the module. The position sensor signal circuit voltage levels are used by the seat memory control module to determine the positions of the adjustable pedals when storing or recalling memory position settings.

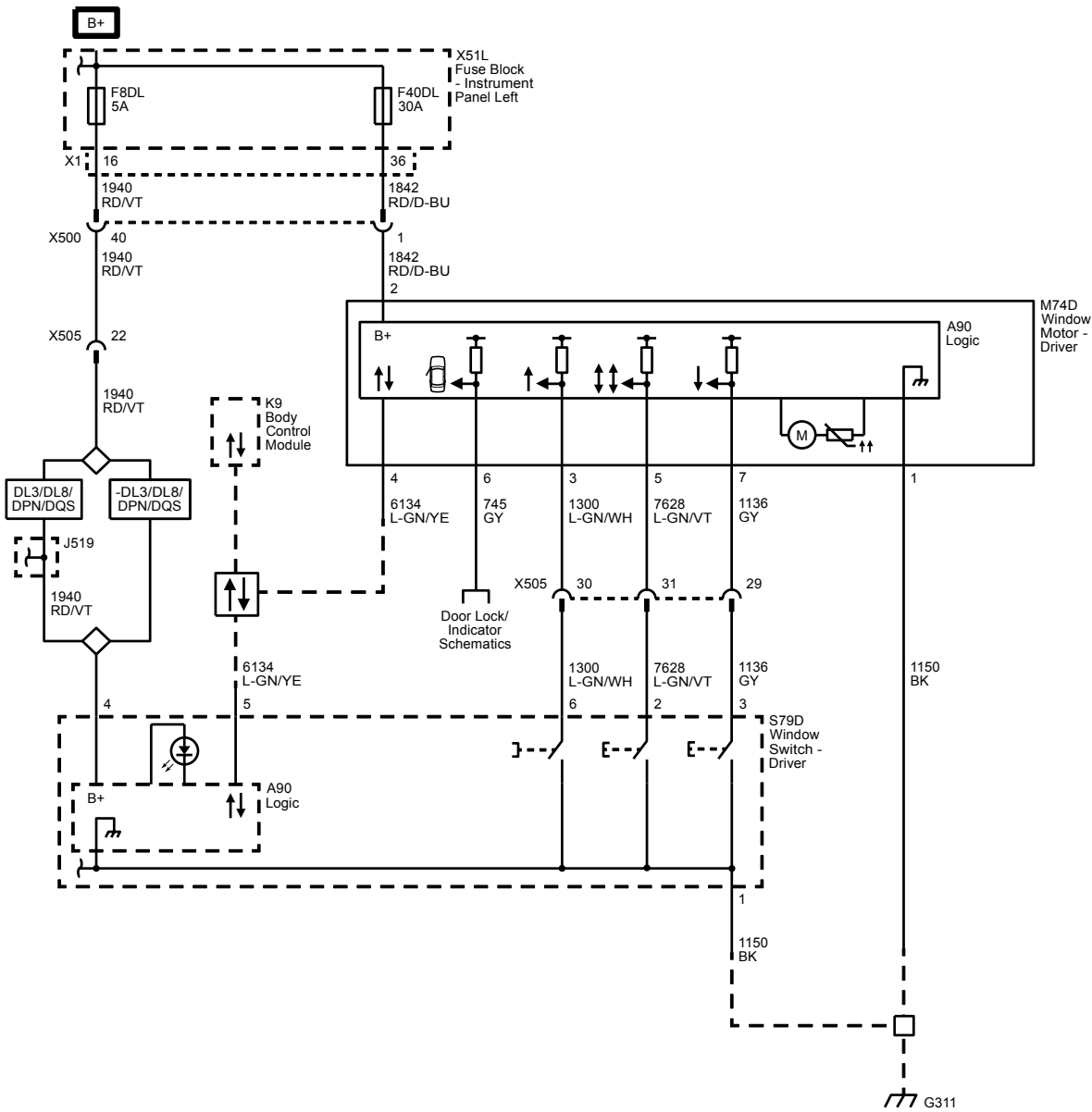
Body Systems

Fixed and Moveable Windows

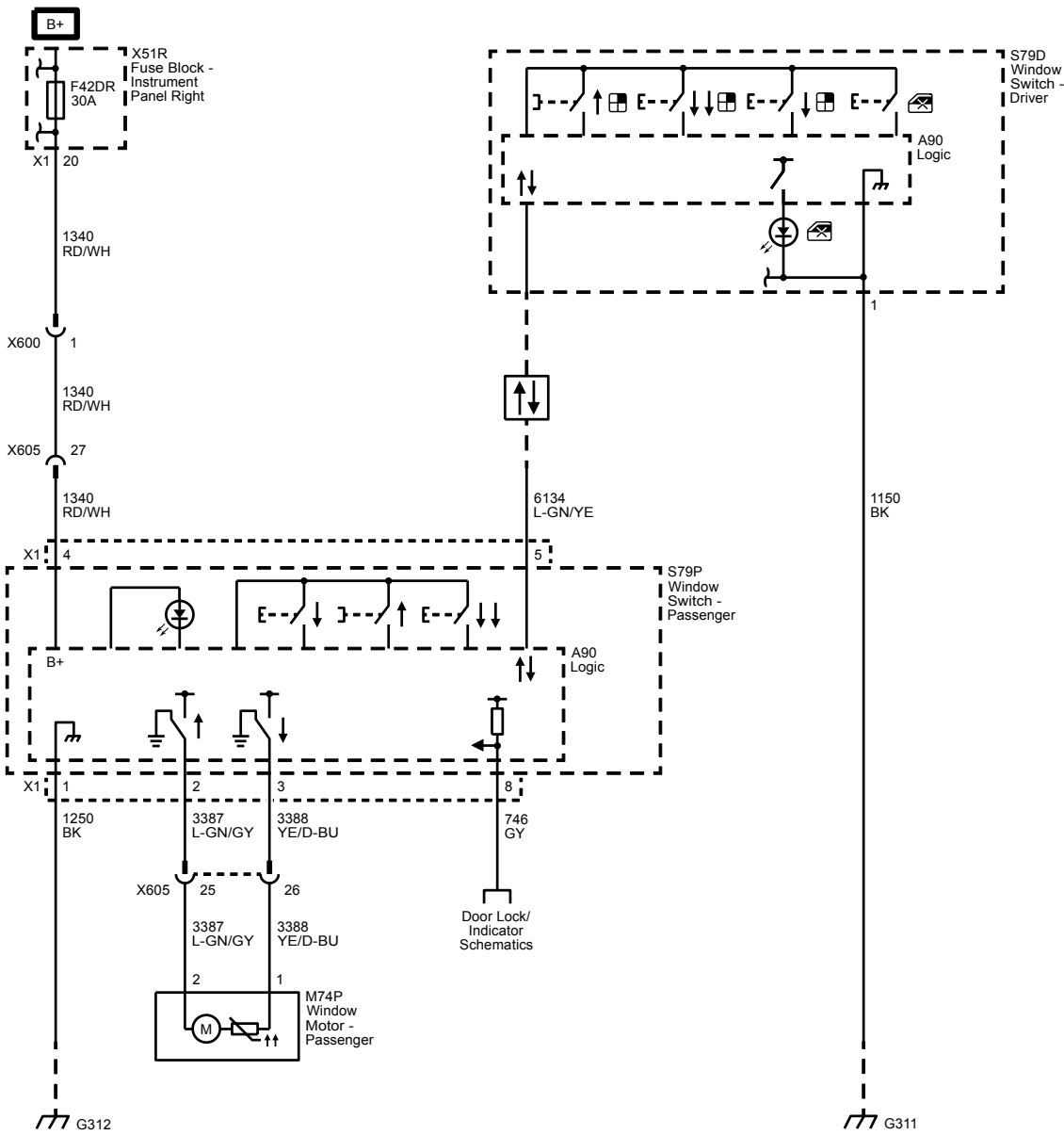
Schematic and Routing Diagrams

Moveable Window Schematics

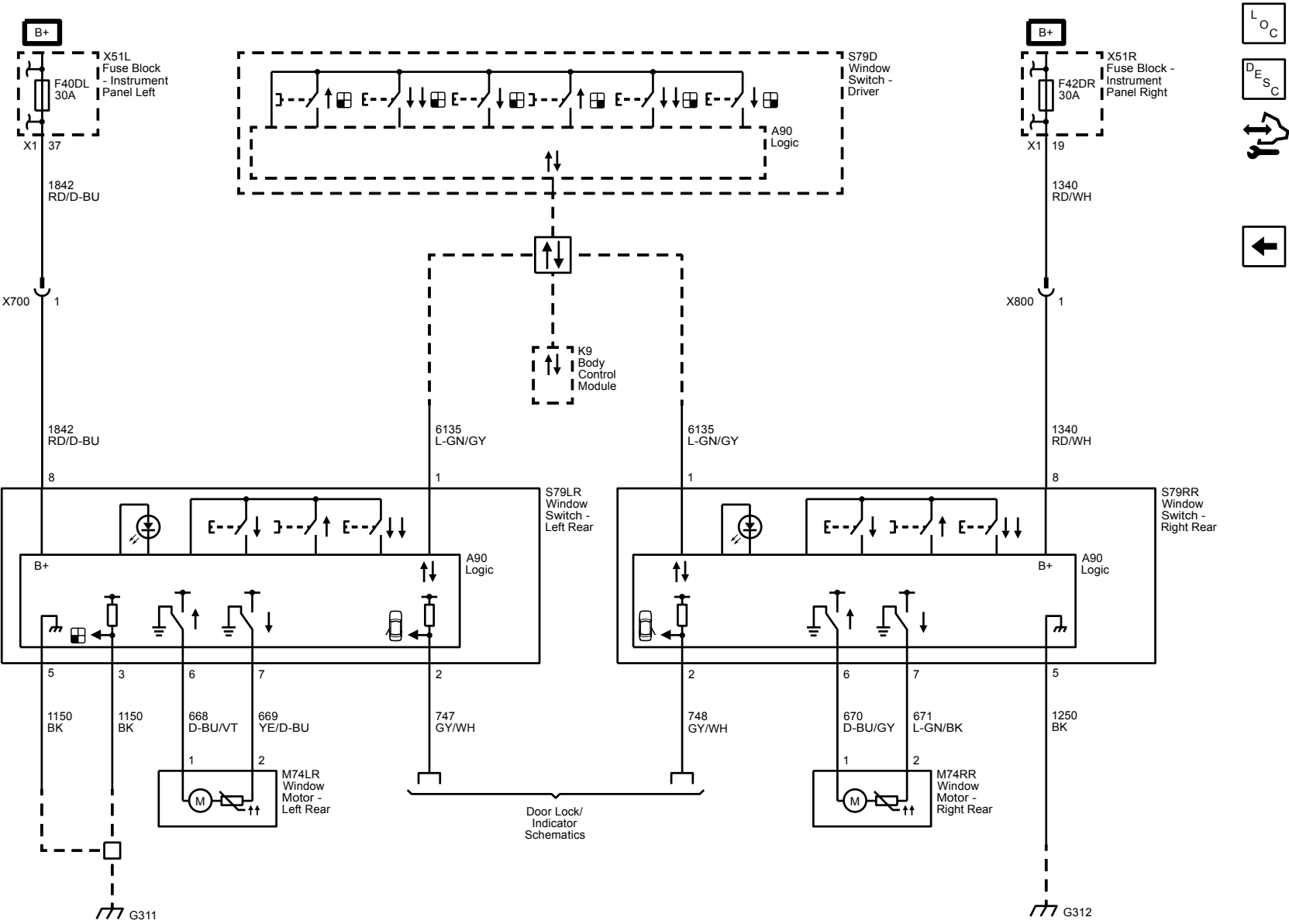
Driver Door (A31)



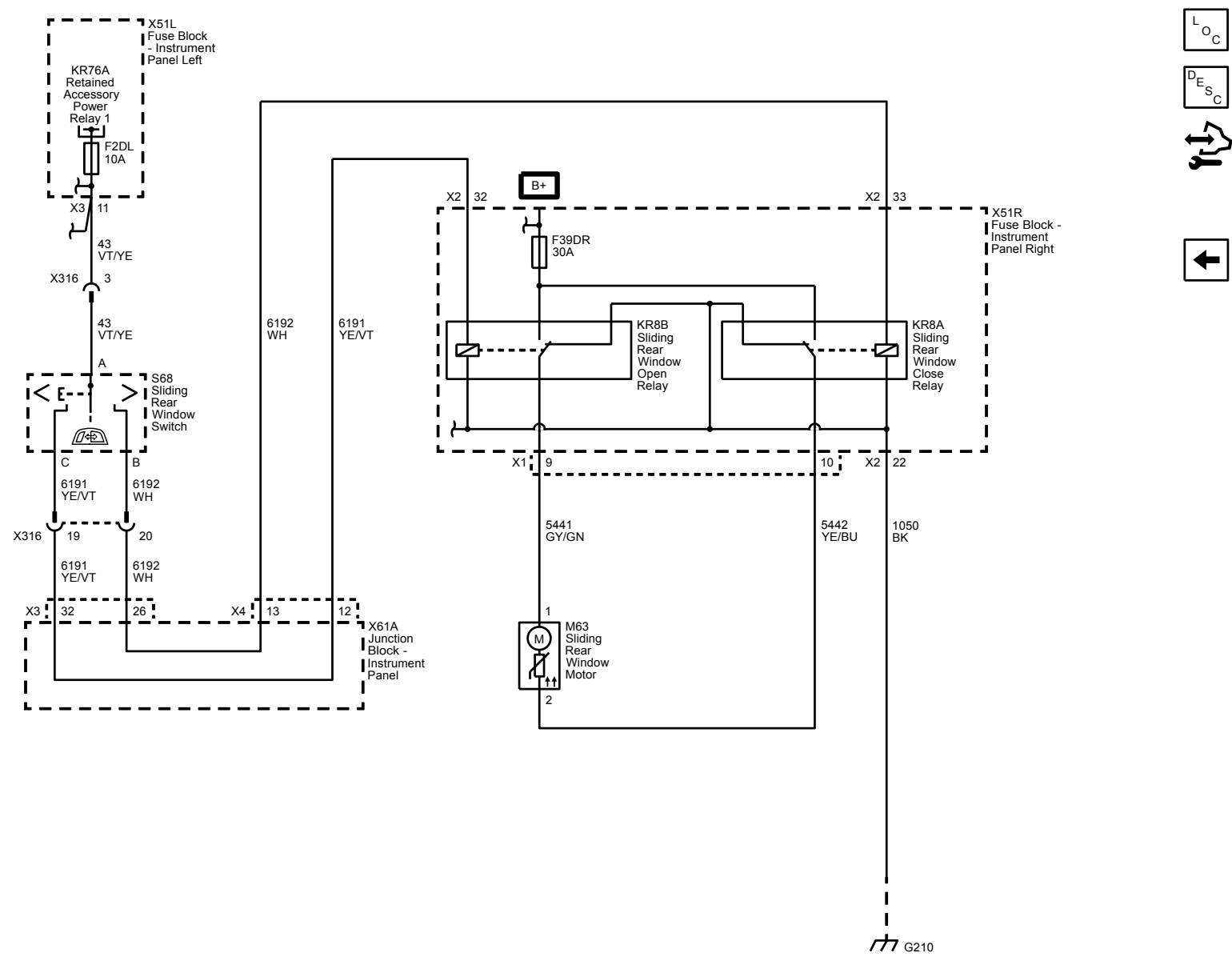
Passenger Door (A31)



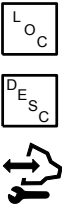
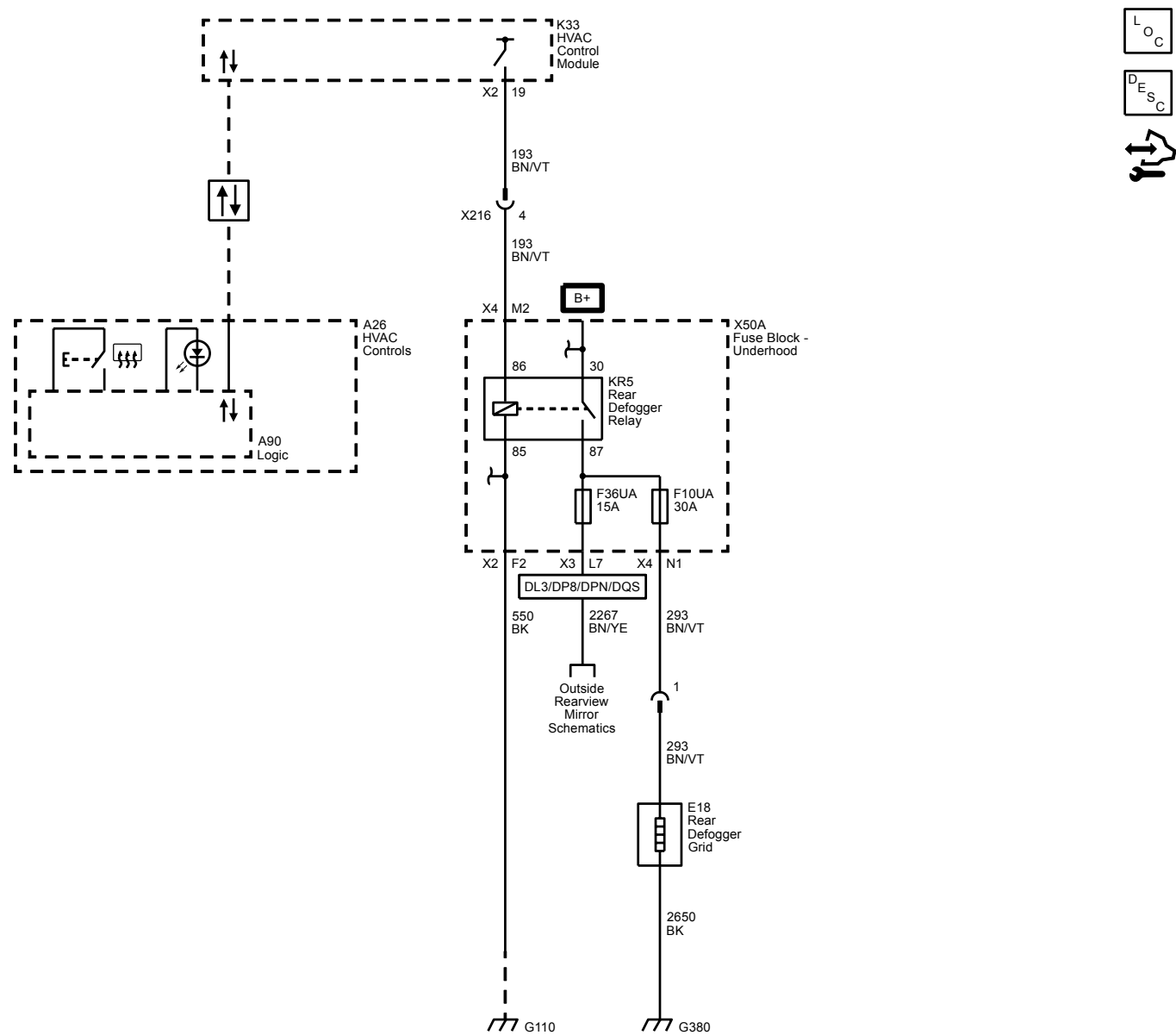
Rear Doors (Extended or Crew Cab)



Rear Sliding Window (A48)



Defogger



Description and Operation

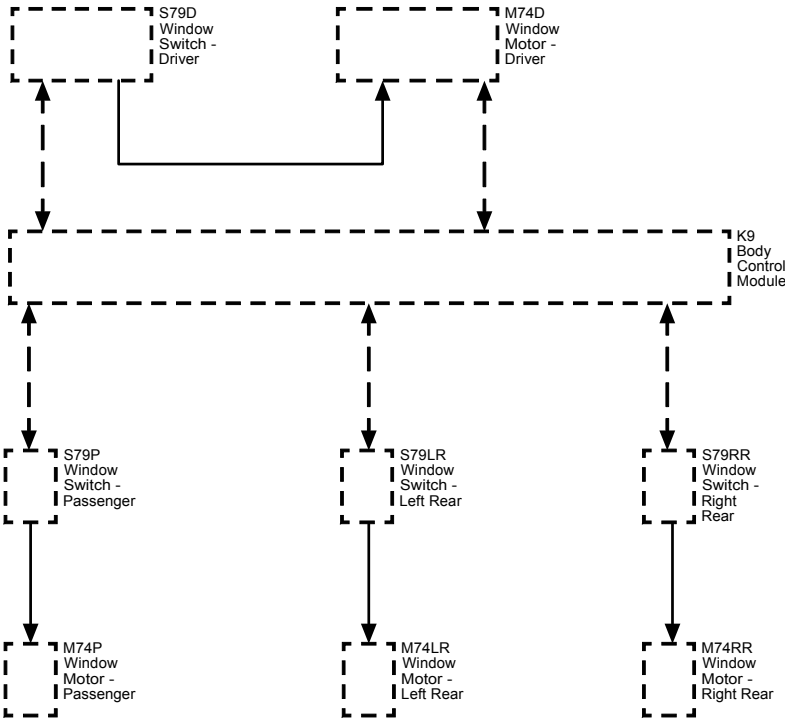
Power Windows Description and Operation

Power Windows System Components

The power window system consists of the following components:

- Driver window switch
- Passenger window switch
- Left rear window switch (Extended Cab and Crew Cab)
- Right rear window switch (Extended Cab and Crew Cab)
- Window motors in each of the doors
- Sliding rear window switch
- Sliding rear window relays
- Sliding rear window motor
- 30A Fuse
- Body control module (BCM)

14 Power Windows AXG-AER-AEQ Block Diagram



Driver Express Up and Express Down Power Window

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

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

Passenger, Left Rear and Right Rear Express Down Power Windows

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.

Rear Window and Rear Door Lockout Operation (Extended Cab and Crew Cab)

The driver power 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 motors, the rear window motors will then ignore all voltage drops in the window motor control circuits caused by using the rear window switches. The rear windows will still function normally from the switches on the driver window switch.

Power Sliding Rear Window

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

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

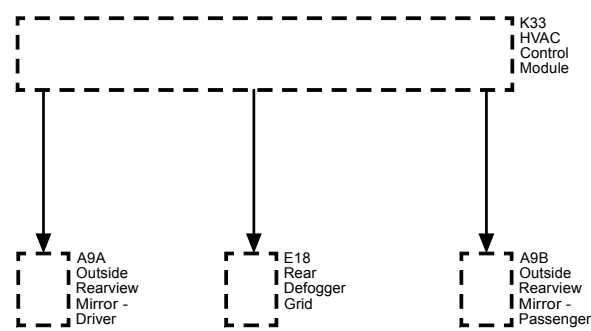
Rear Window Defogger Description and Operation

Rear Window Defogger System Components

The rear window defogger system consists of the following components:

- HVAC control module
- Rear defogger relay
- Rear defogger grid
- 40A fuse

Rear Window Defogger Block Diagram



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 equipped. A switch for the customer to control the system is provided within the HVAC control module, also included in the HVAC control module 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 on the HVAC control module causes the HVAC control module to 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 window switch is pressed and the engine is running, the rear defog control system will remain active for 10 minutes. After the initial cycle has lapsed, pressing the switch again will continue rear window defogger operation, but the cycle will only last 5 minutes.

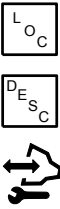
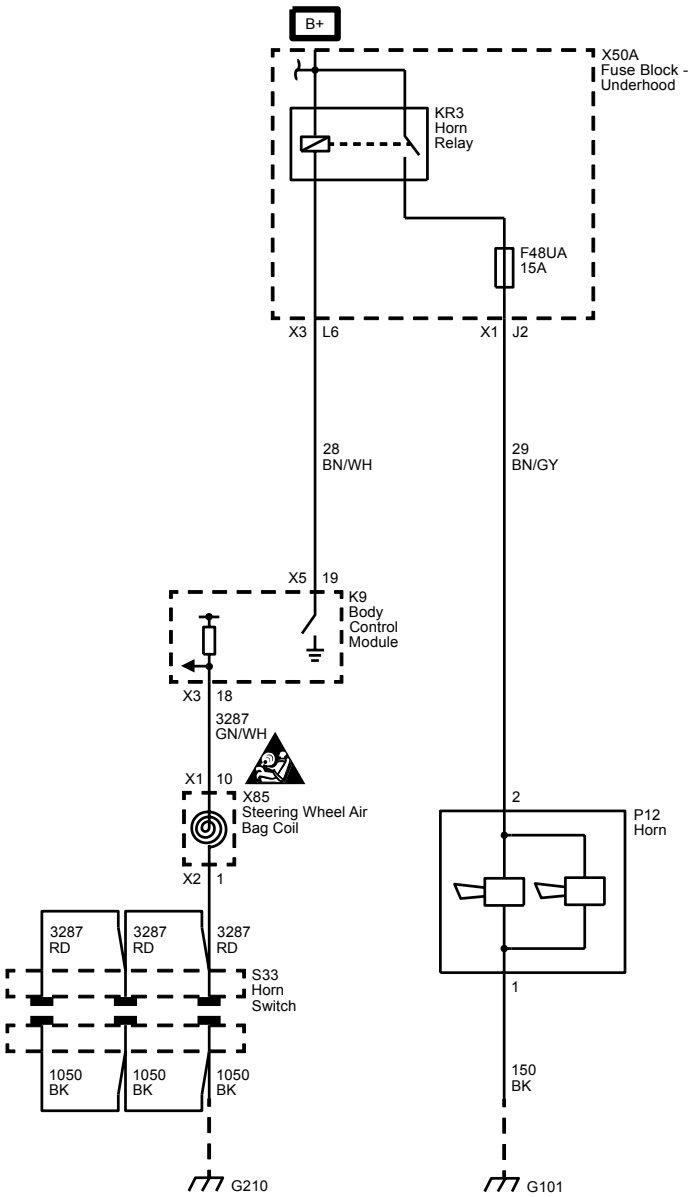
Body Systems

Horns and Pedestrian Alerts

Schematic and Routing Diagrams

Horn Schematics

Horn



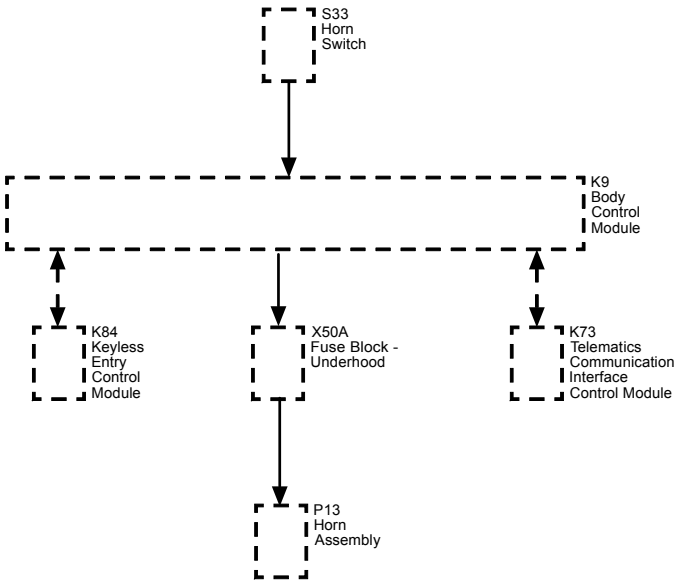
Description and Operation

Horns System Description and Operation

System Description

The horn system consists of the following components:

- HORN fuse
- Horn relay
- Horn switch
- Horn assembly
- Body control module (BCM)



System Operation

The vehicle horn system is activated under the following conditions:

- When the horn switch is depressed
- The BCM commands the horns ON under any of the following conditions:
 - When the content theft deterrent system detects a vehicle intrusion—For further information refer to [Theft Systems Description and Operation](#).
 - When the panic button is depressed on the remote control door lock transmitter—For further information refer to [Keyless Entry System Description and Operation](#).
 - 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](#).
 - When the OnStar® system is used to sound the horns if equipped—For further information, refer to [OnStar Description and Operation](#).

Circuit Operation

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

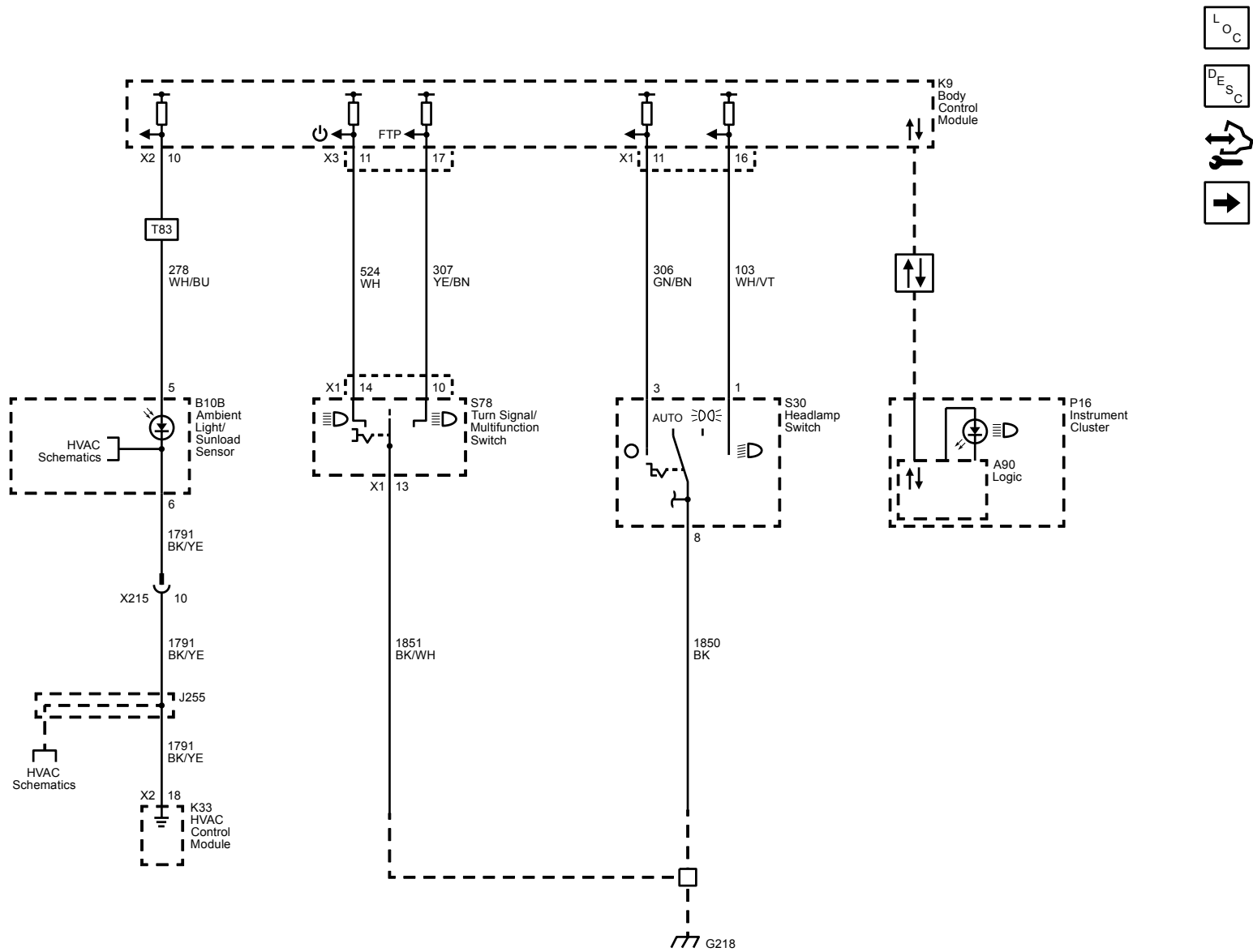
Body Systems

Lighting

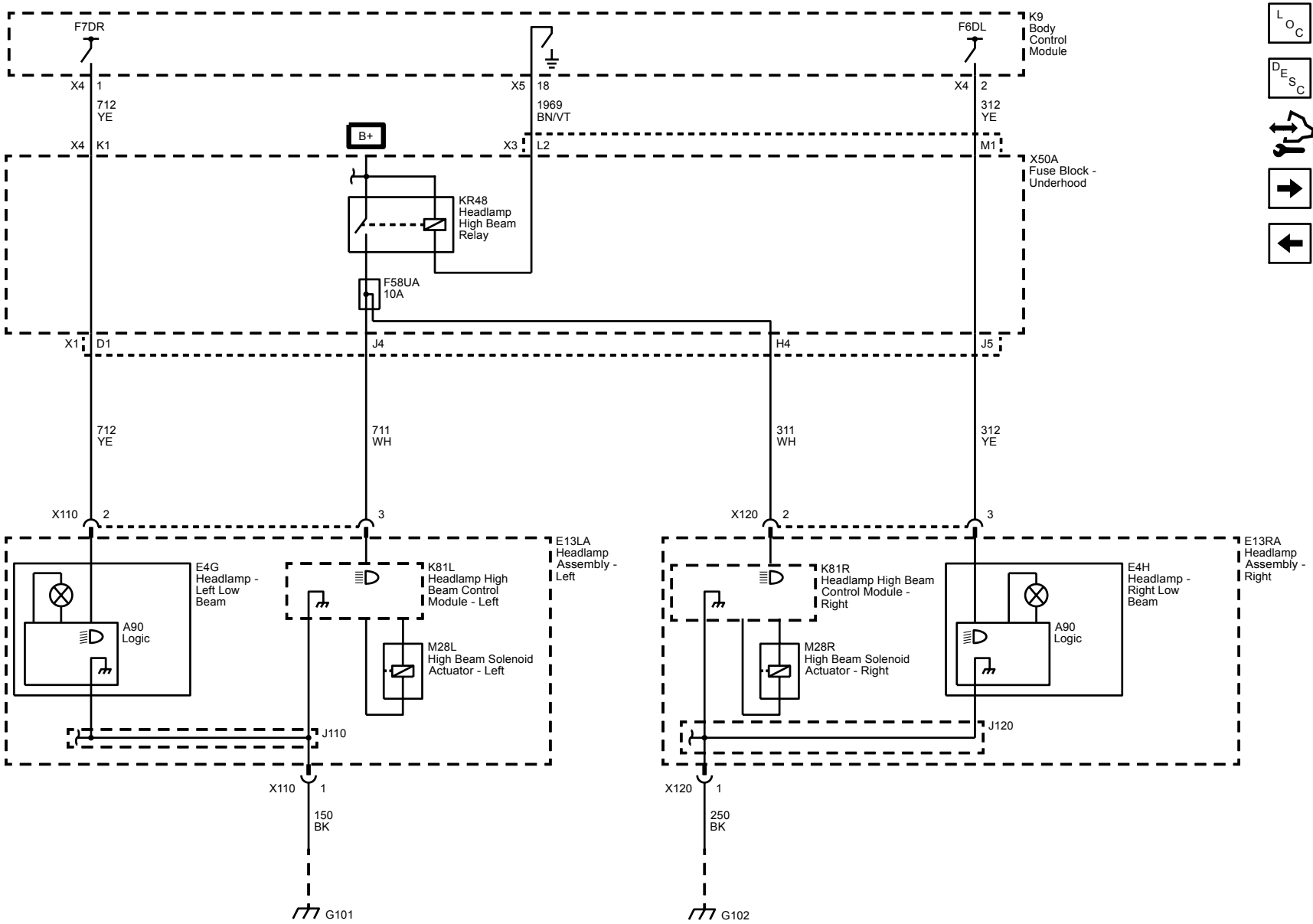
Schematic and Routing Diagrams

Headlights/Daytime Running Lights (DRL) Schematics

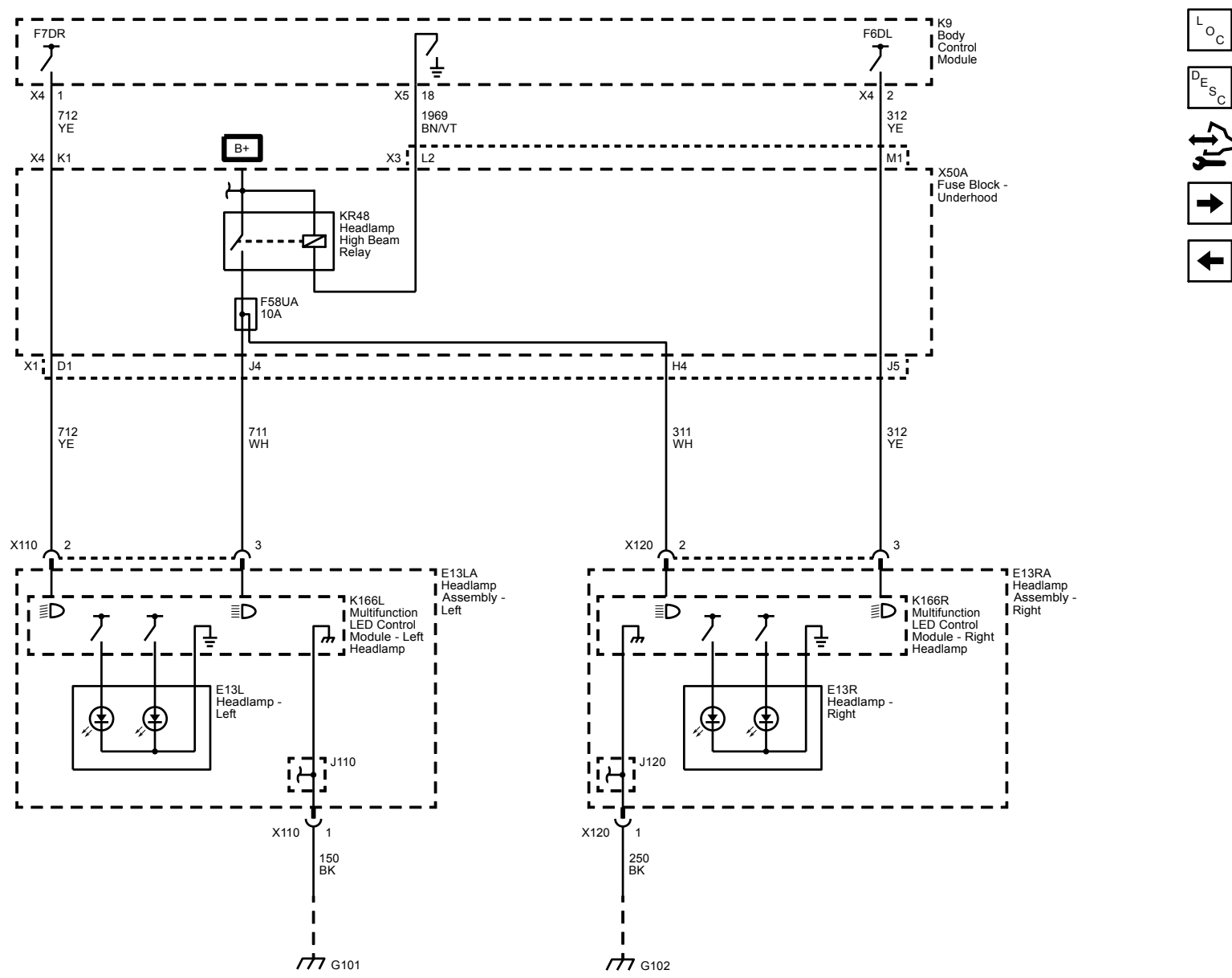
Controls



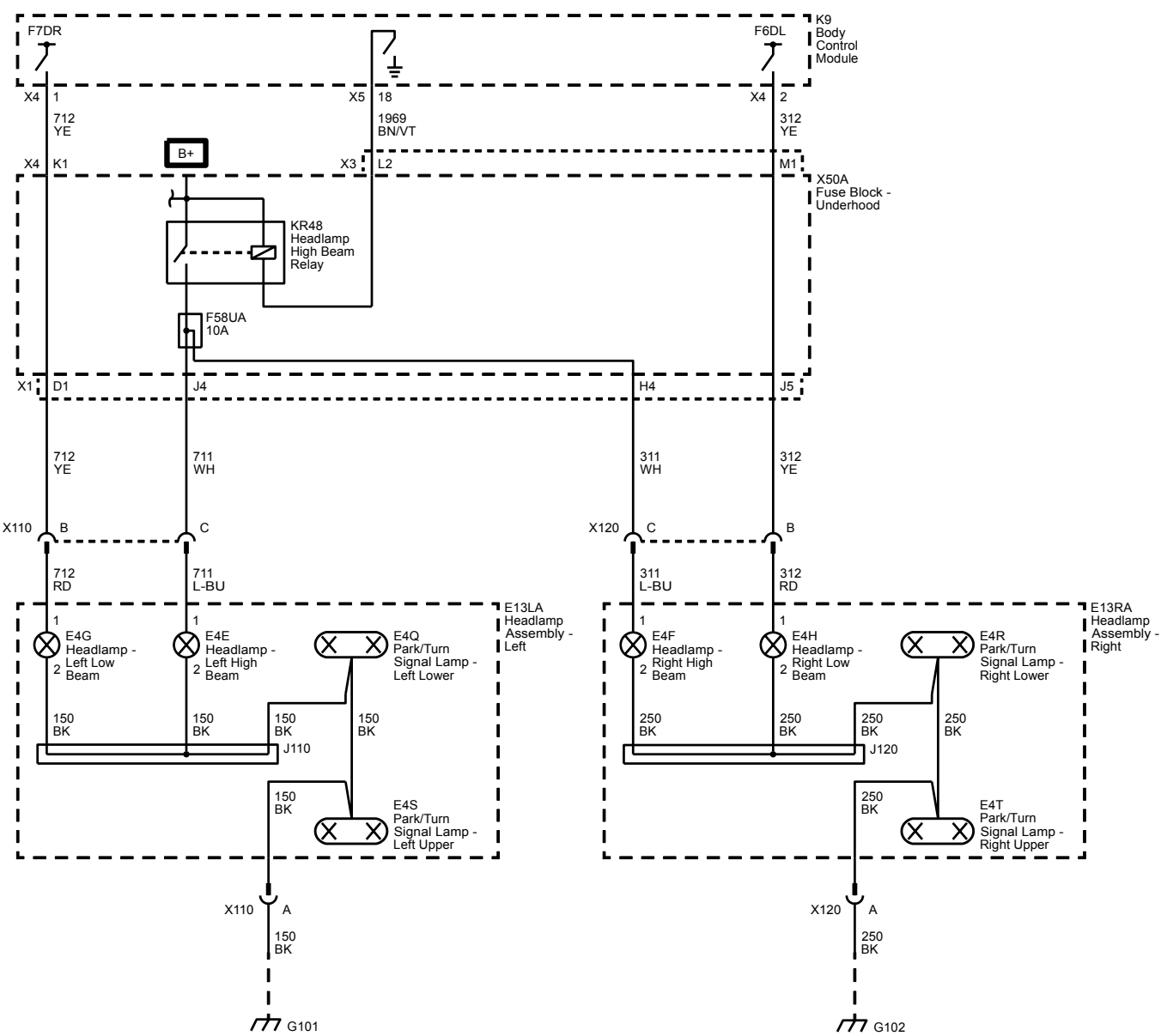
Headlamps (1500 with X88 with T4F)



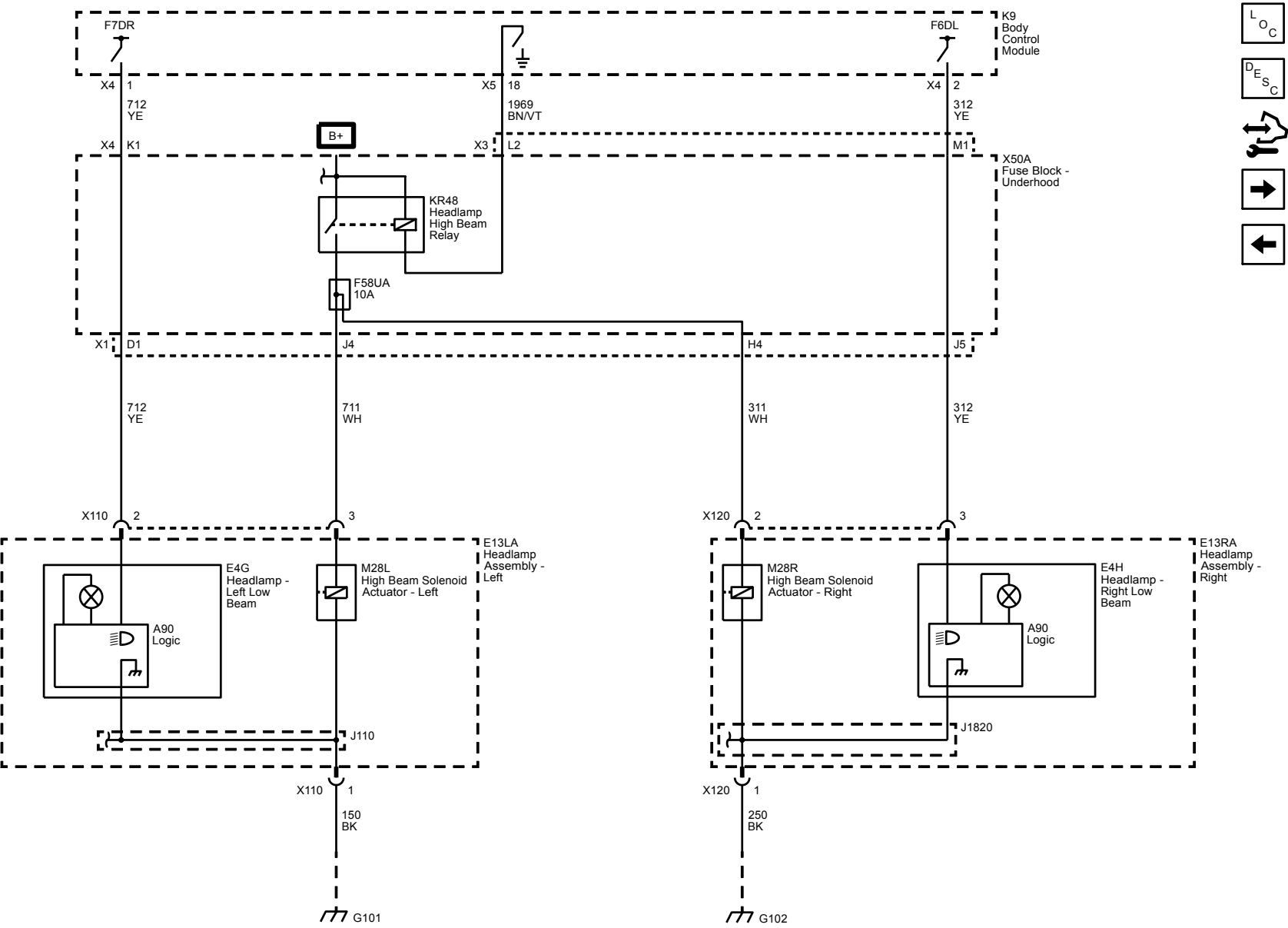
Headlamps (1500 with X88 without T4F)



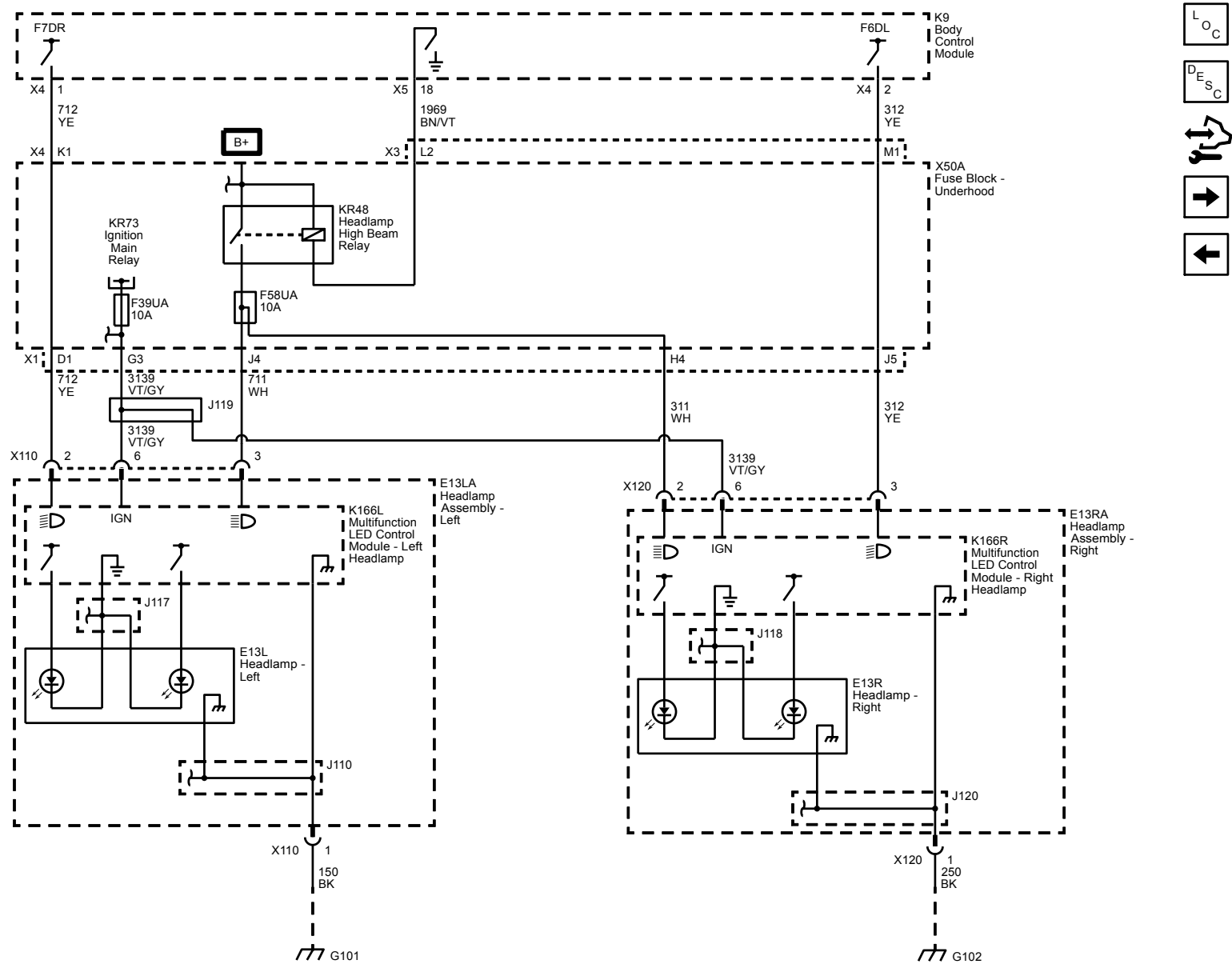
Headlamps (2500/3500 with X88)



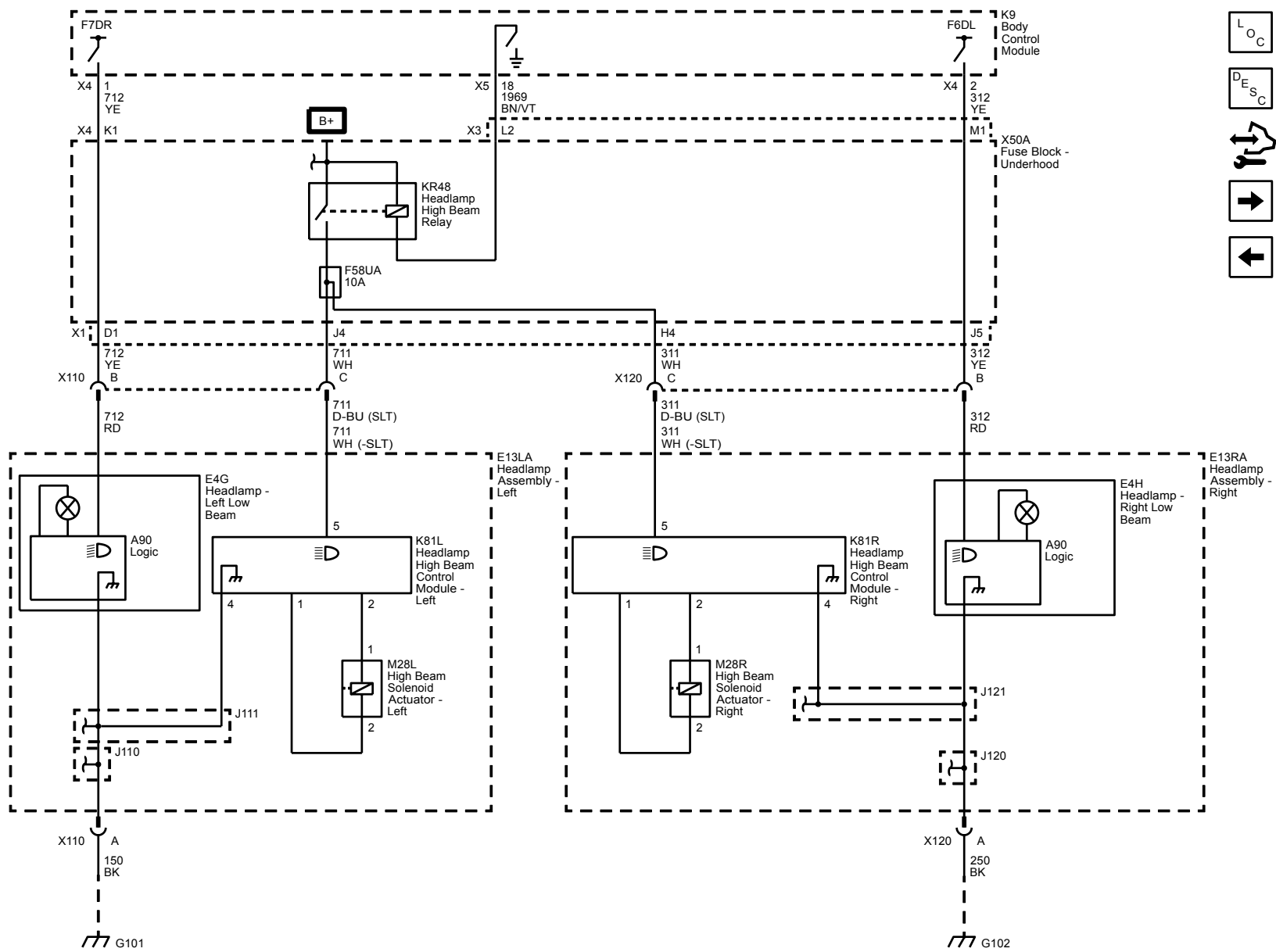
Headlamps (1500/Z88 and T4F)

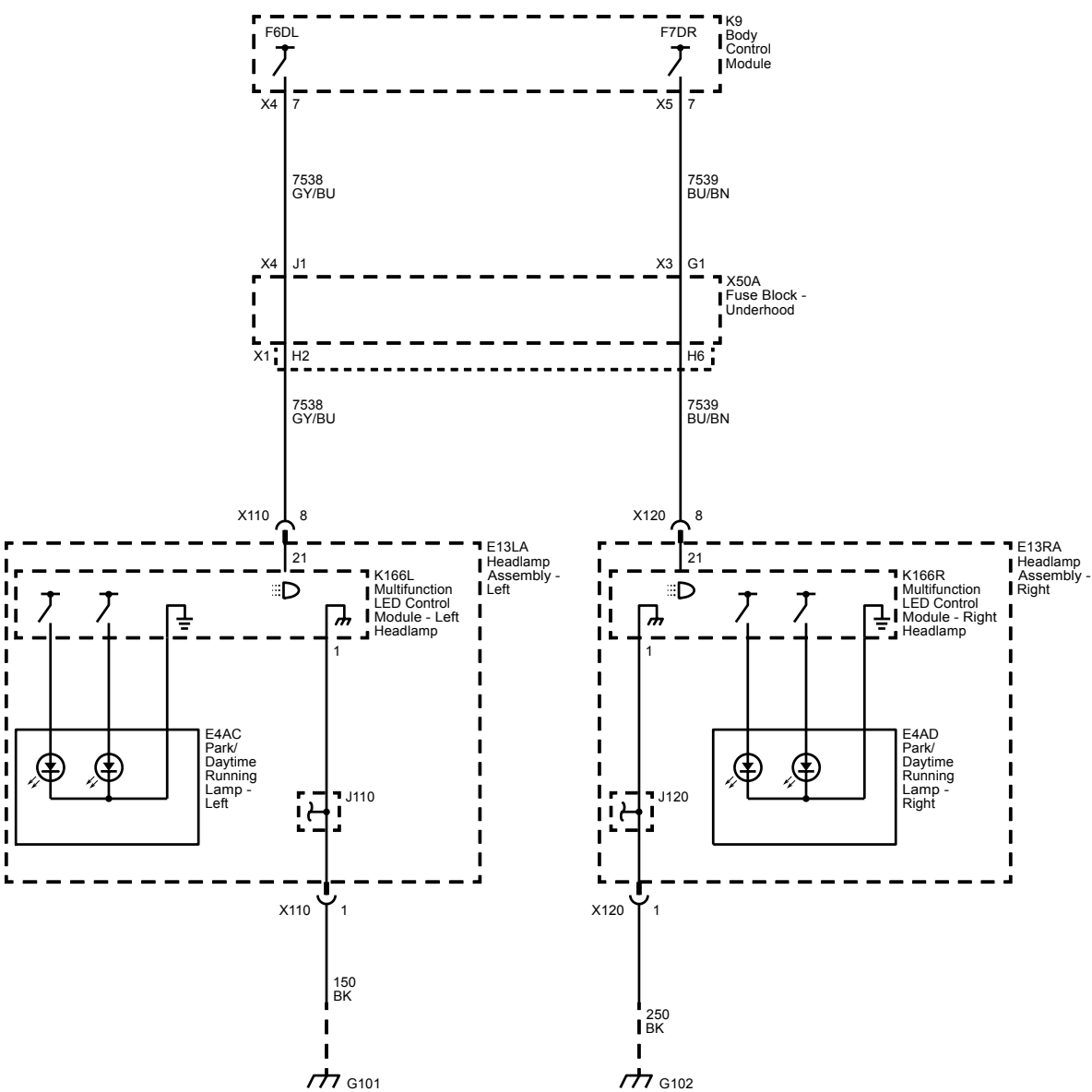


Headlamps (1500/Z88 without T4F)

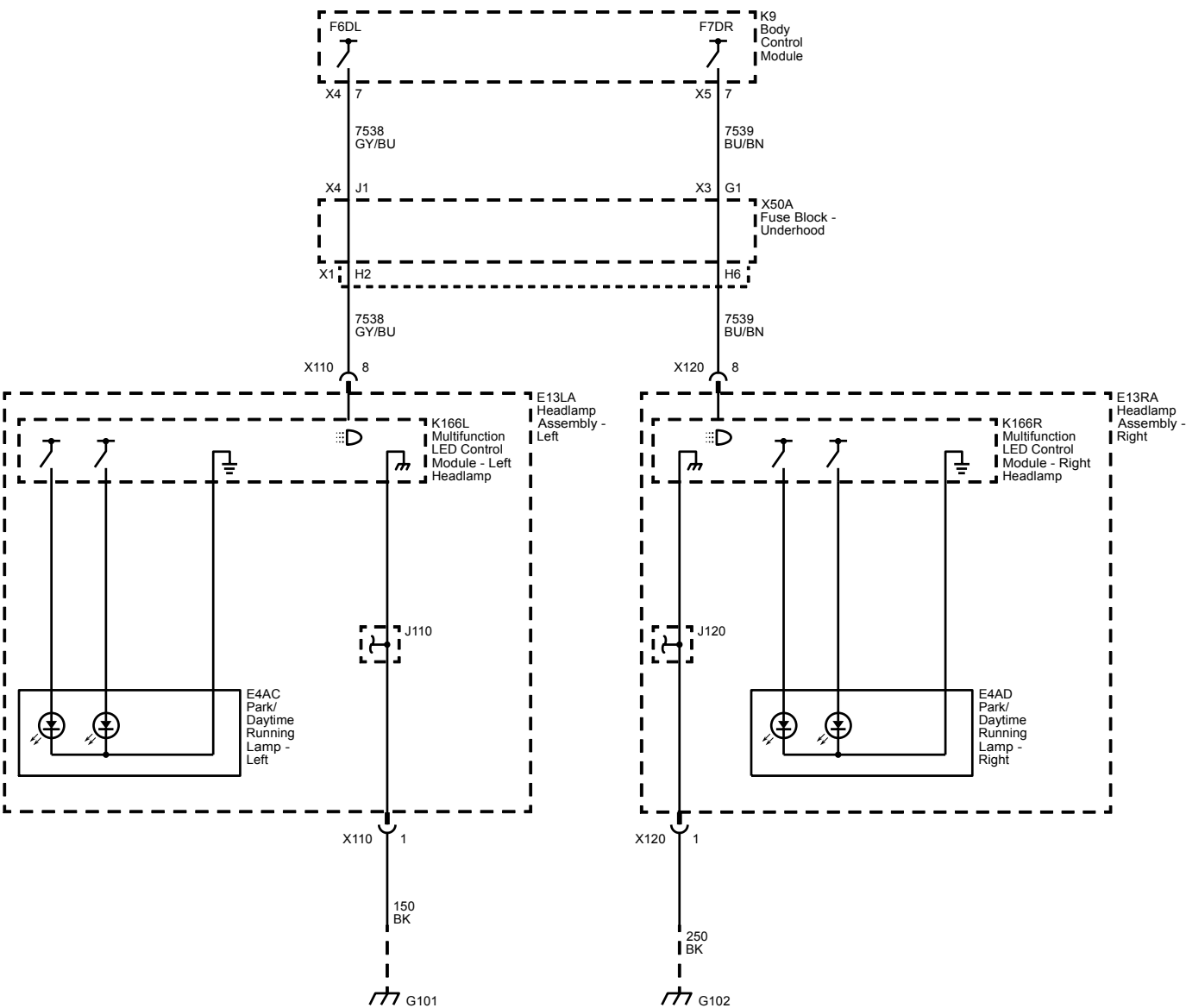


Headlamps (2500/3500 with Z88)

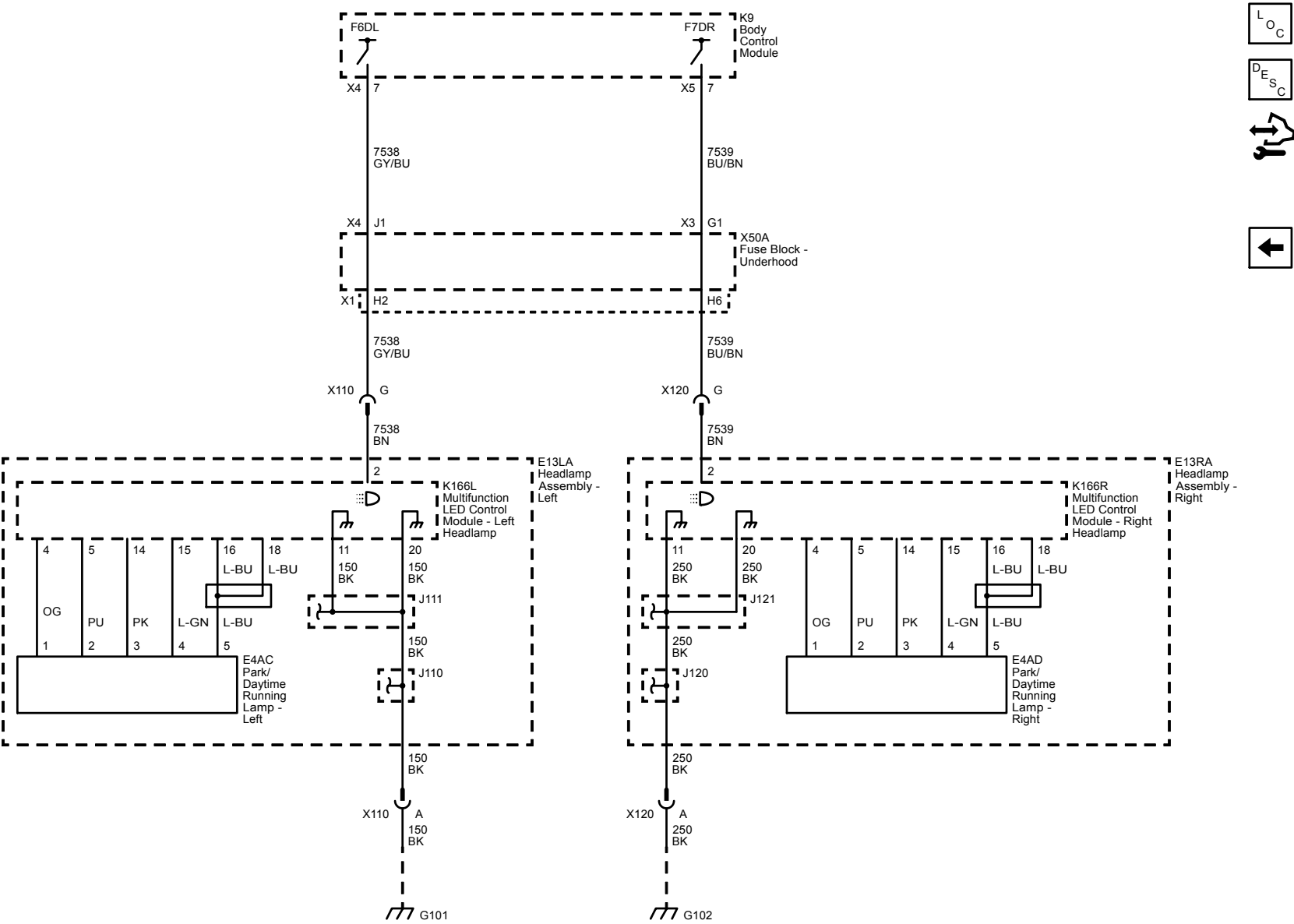




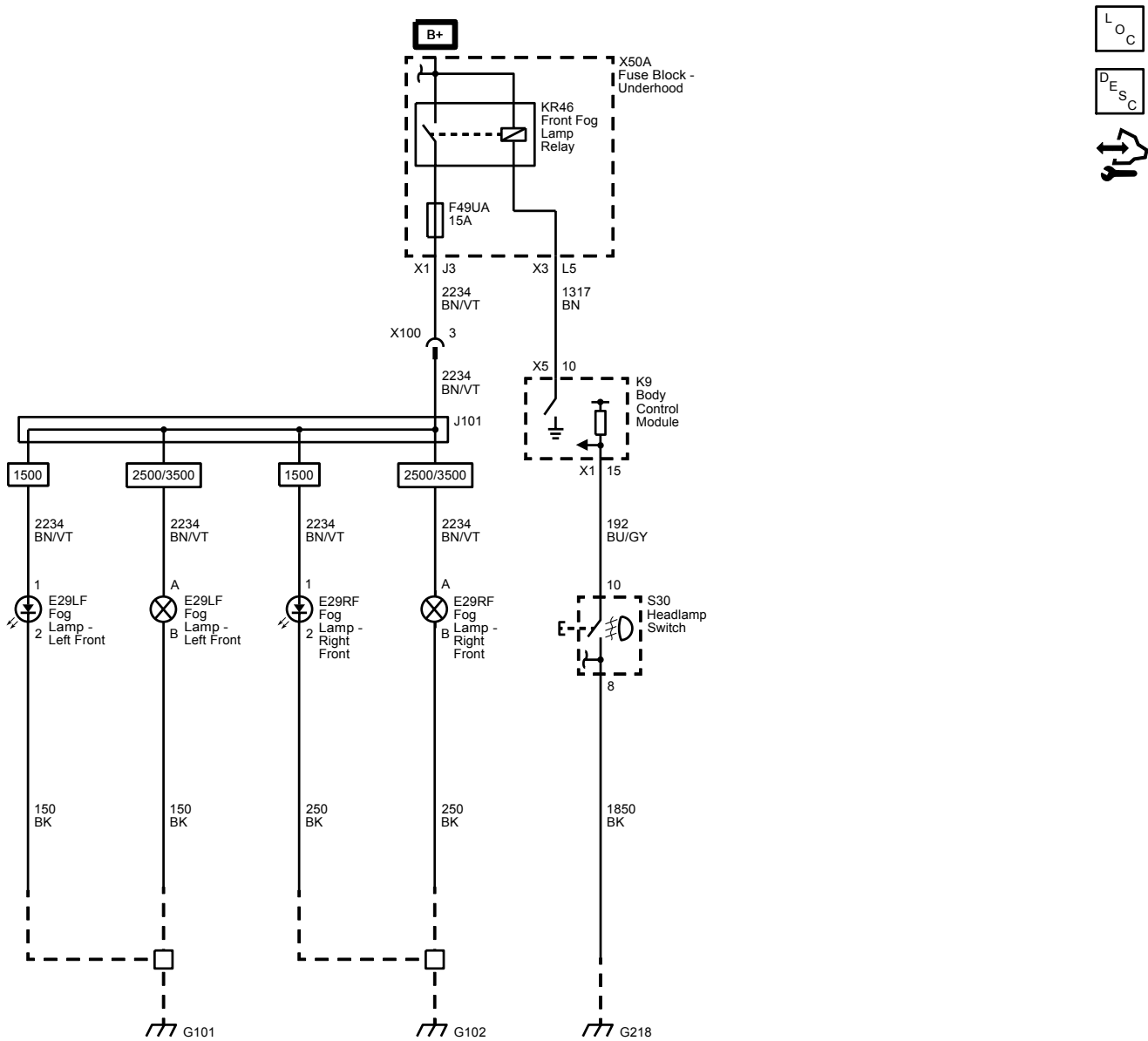
Daytime Running Lamps (1500/Z88)



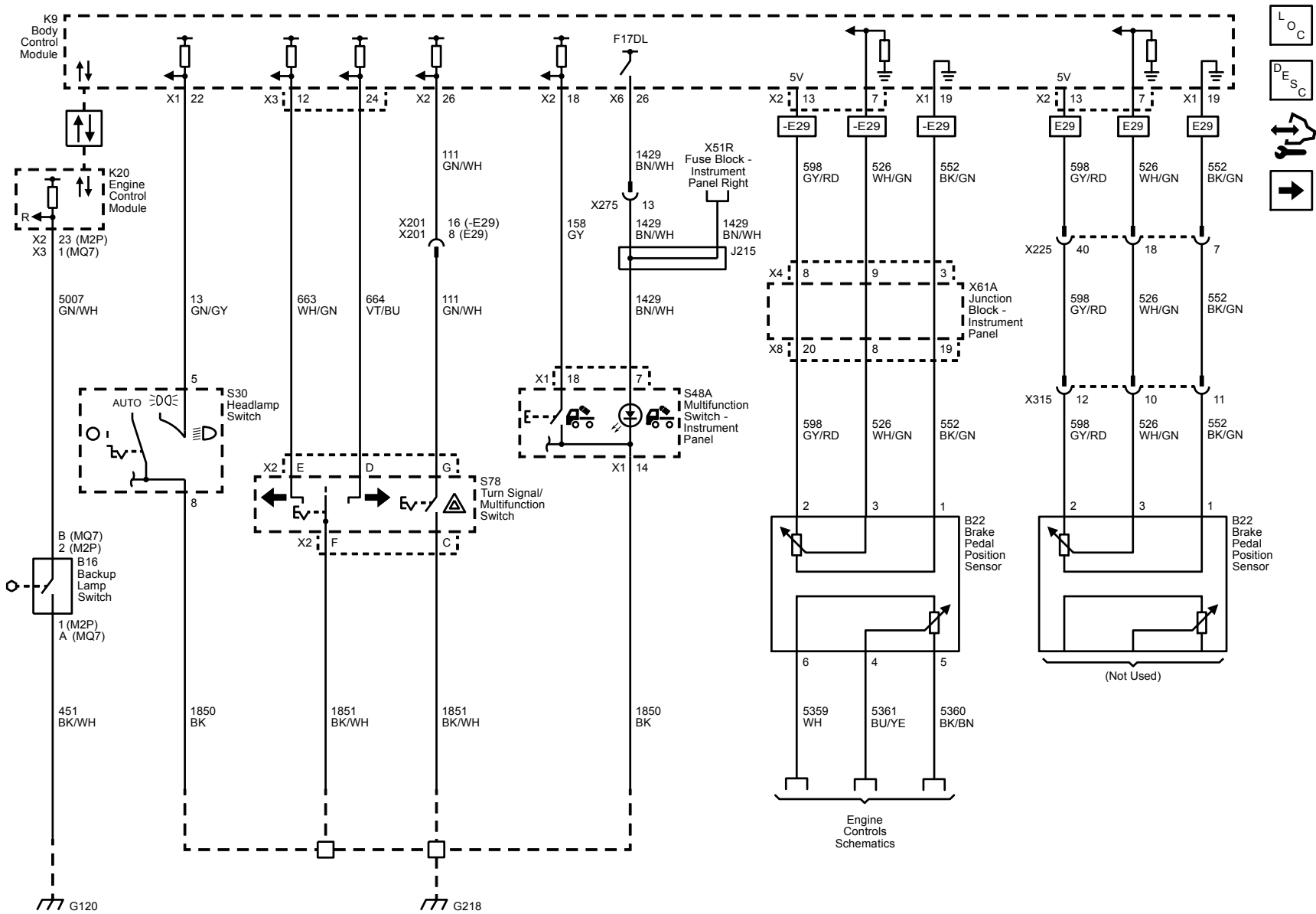
Daytime Running Lamps (2500/3500 with Z88 and SLT)



Fog Lamps (T3U)

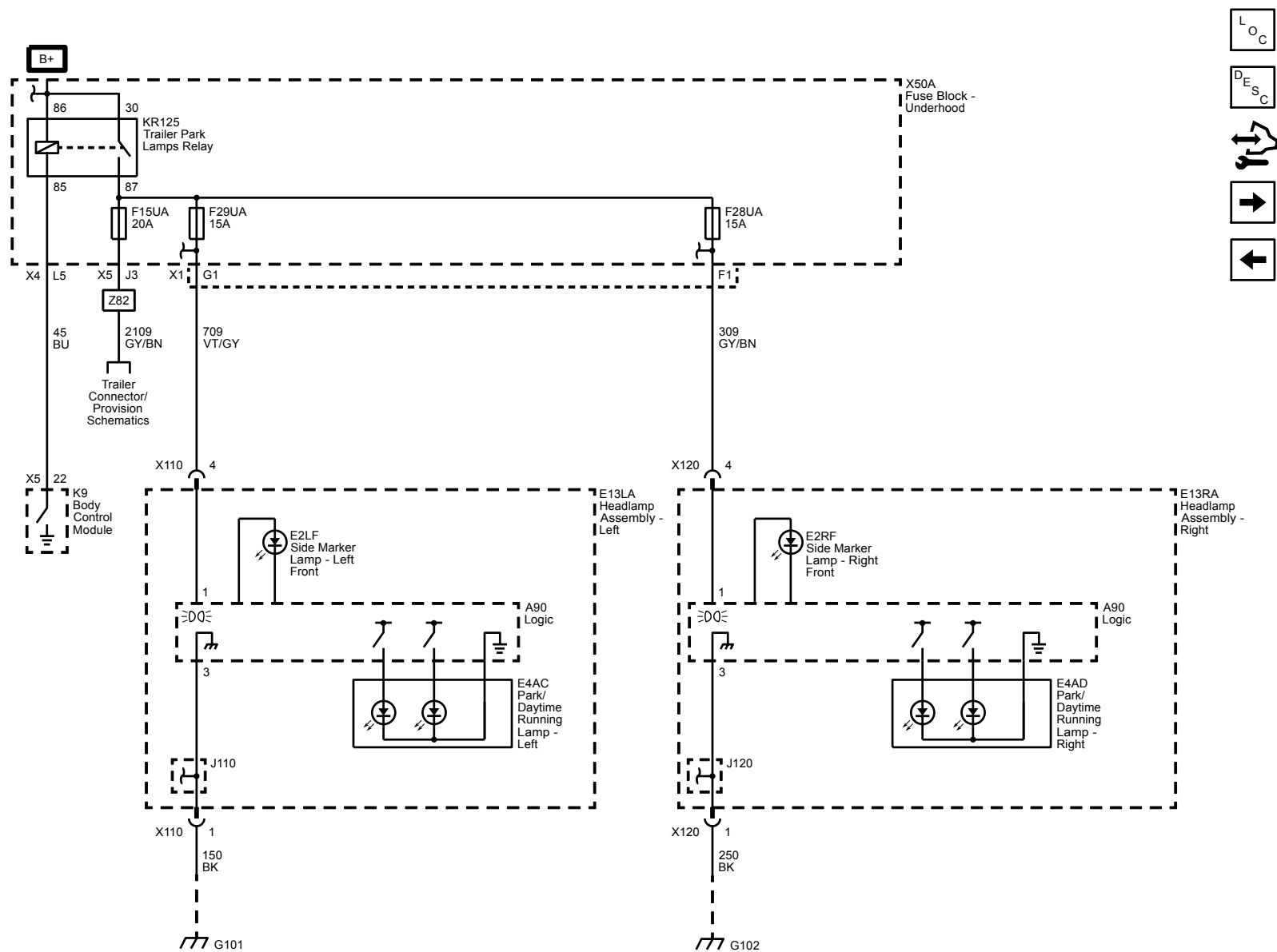


Controls

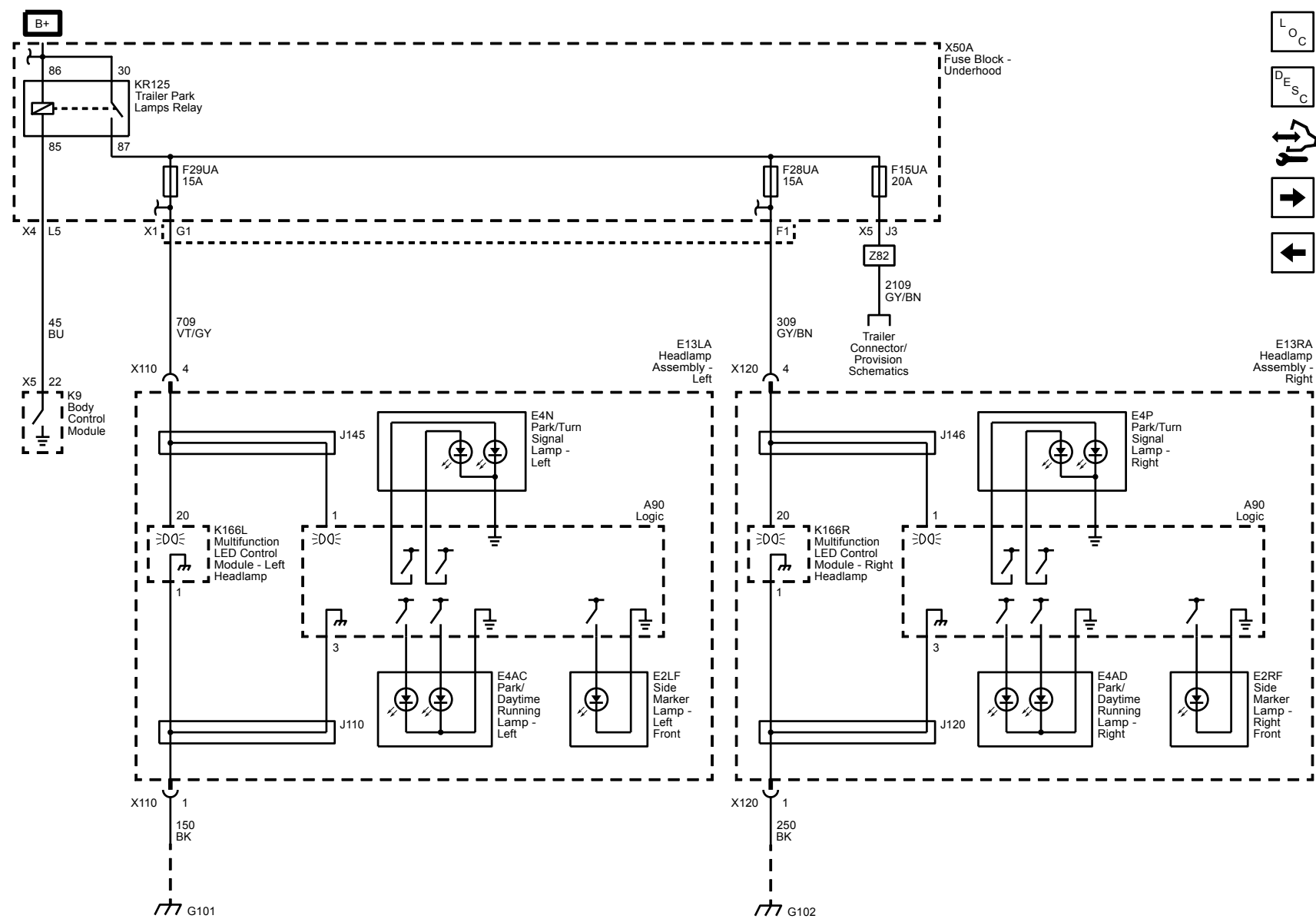


Engine Controls Schematics

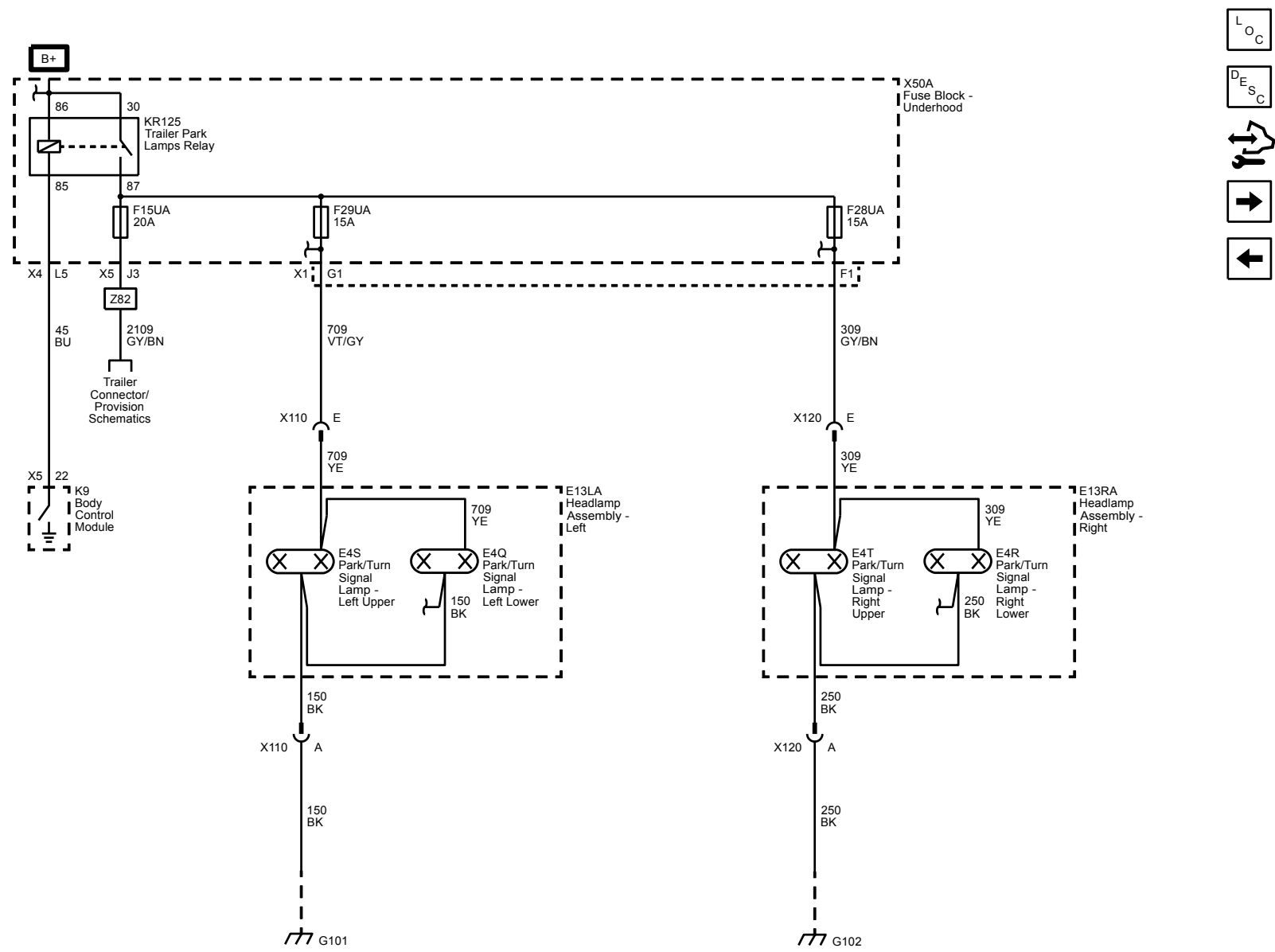
Park Lamps (1500 with X88 with T4F)



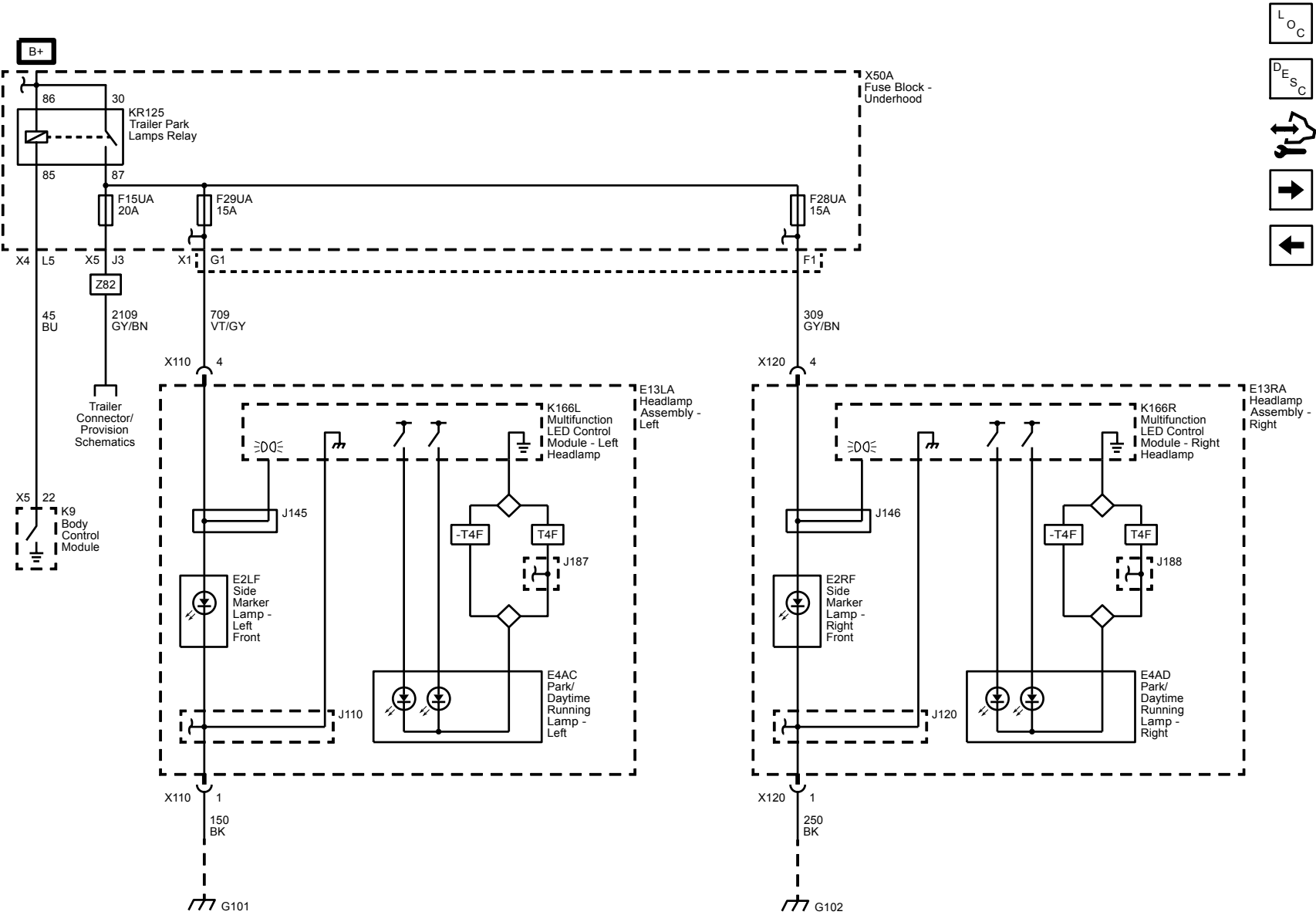
Park Lamps (1500 with X88 without T4F)



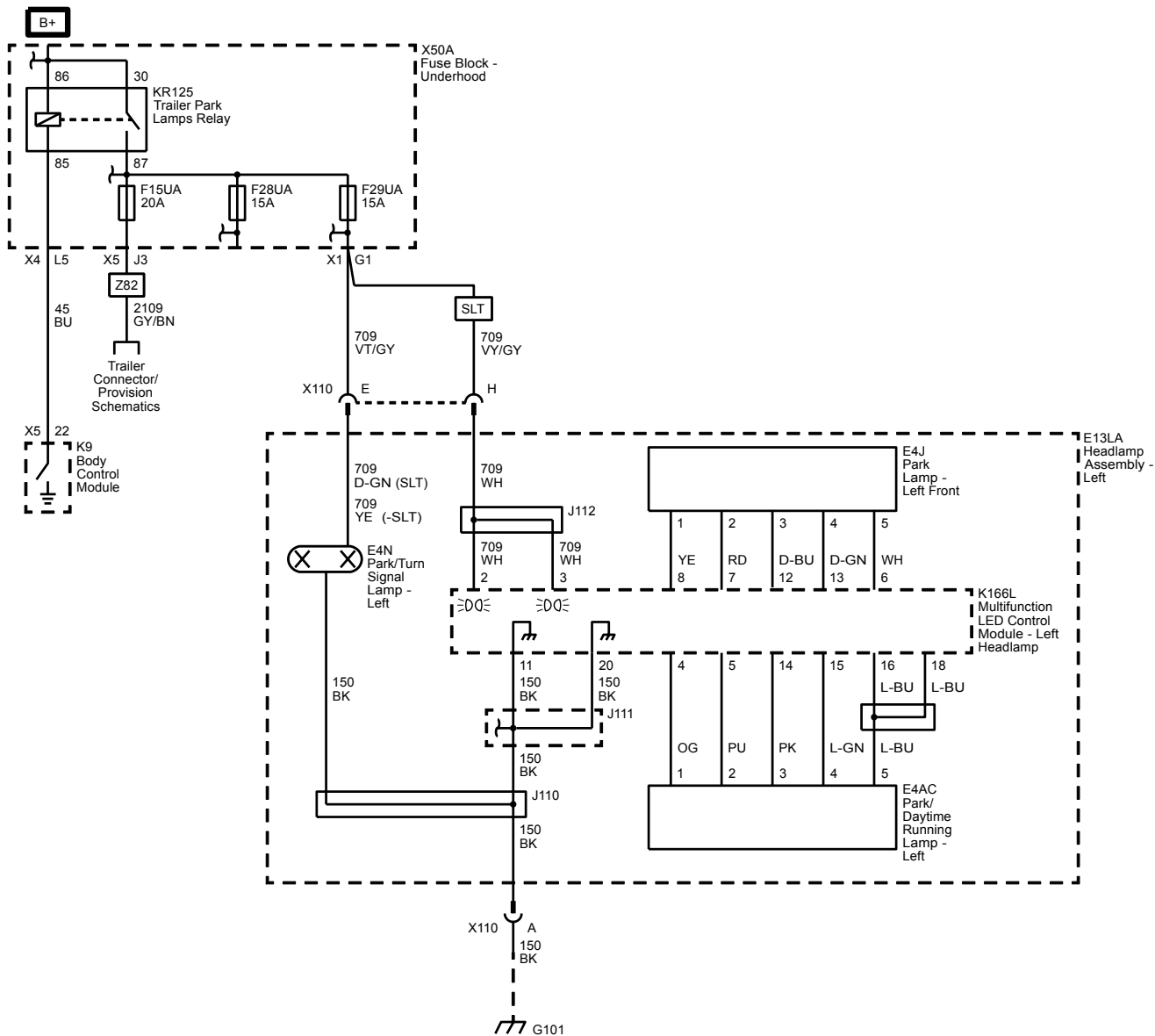
Park Lamps (2500/3500 with Chevrolet/X88)



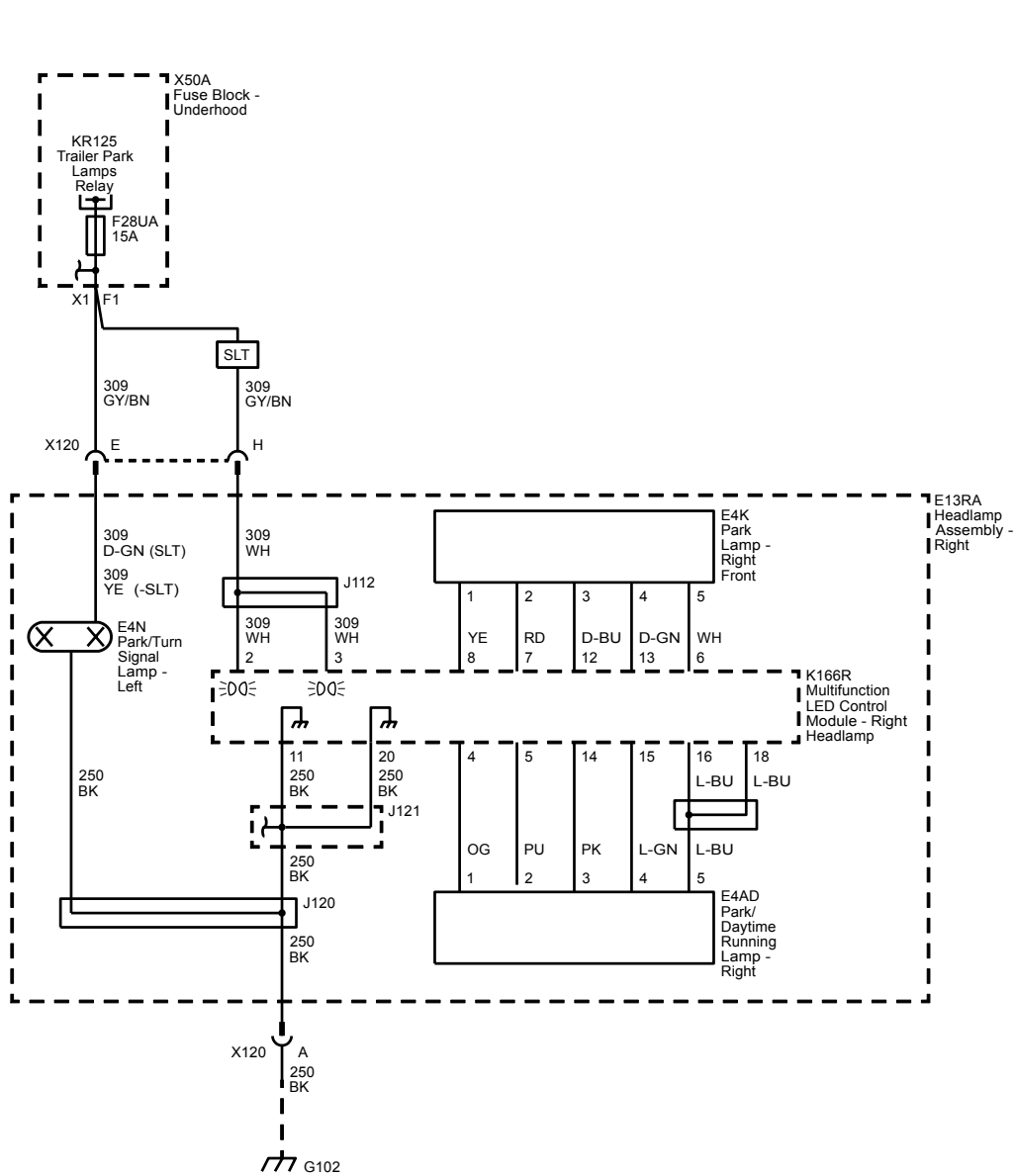
Park Lamps (1500/Z88)



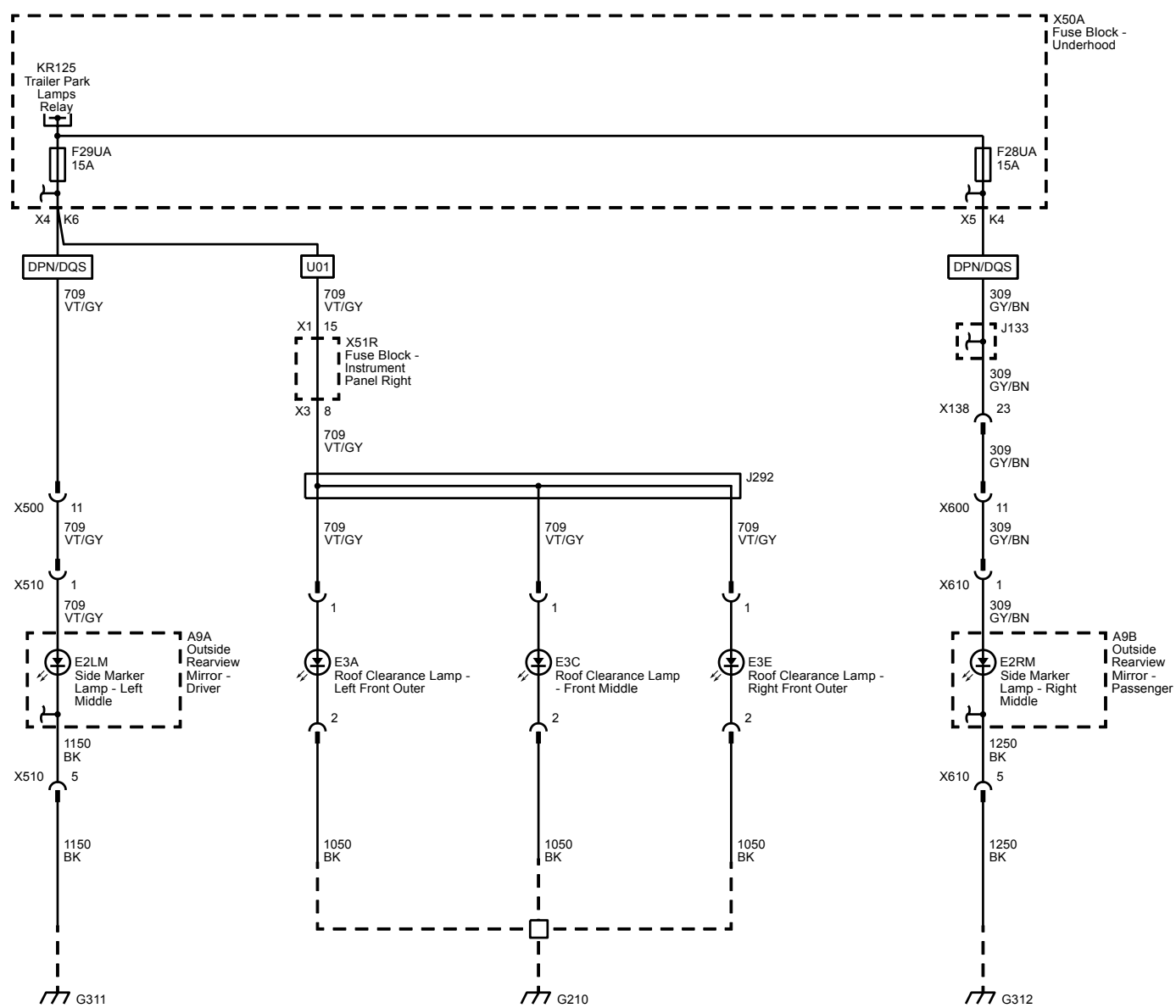
Park Lamps - Left (2500/3500 with GMC/Z88)



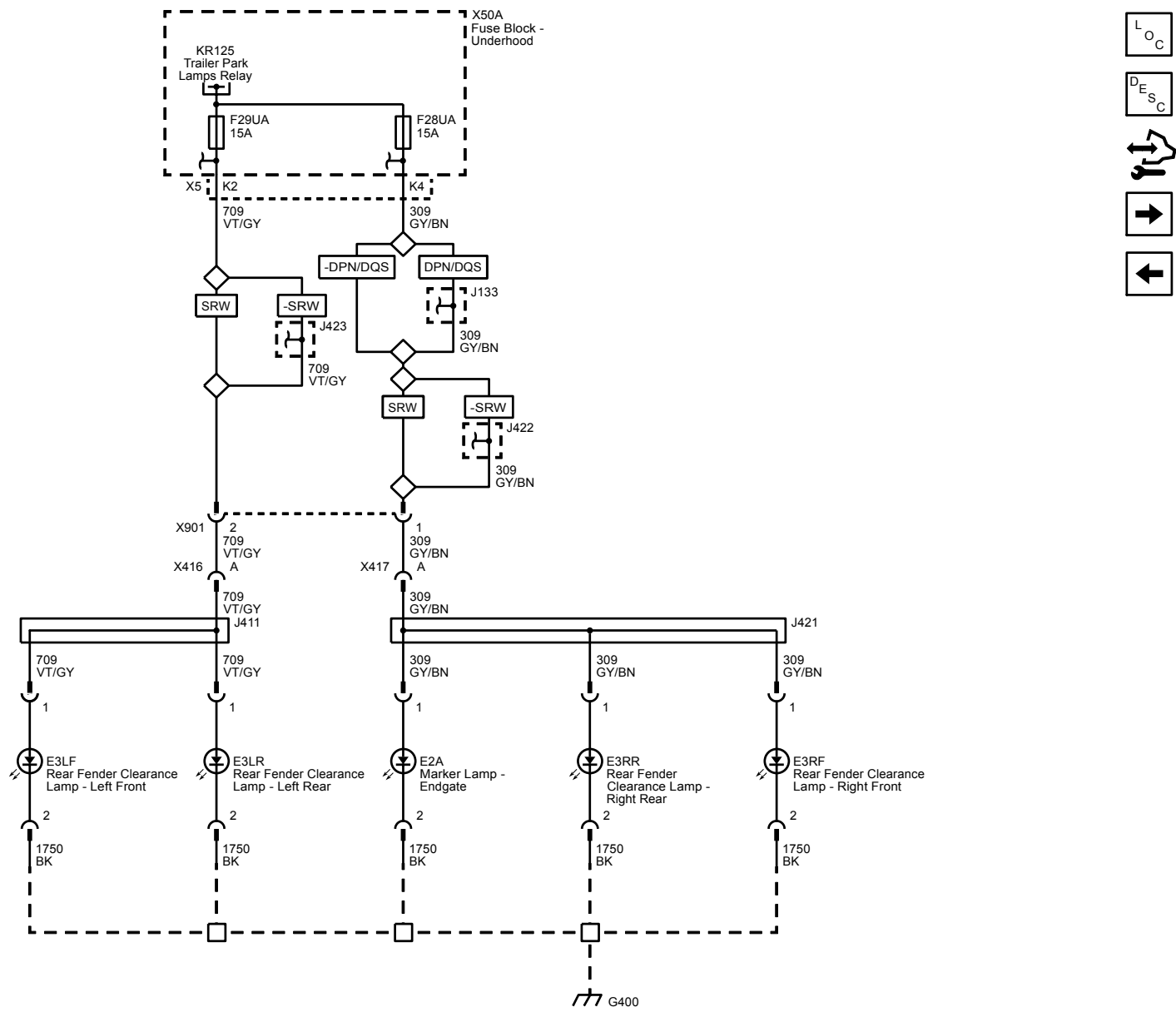
Park Lamps - Right (2500/3500 with GMC/Z88)



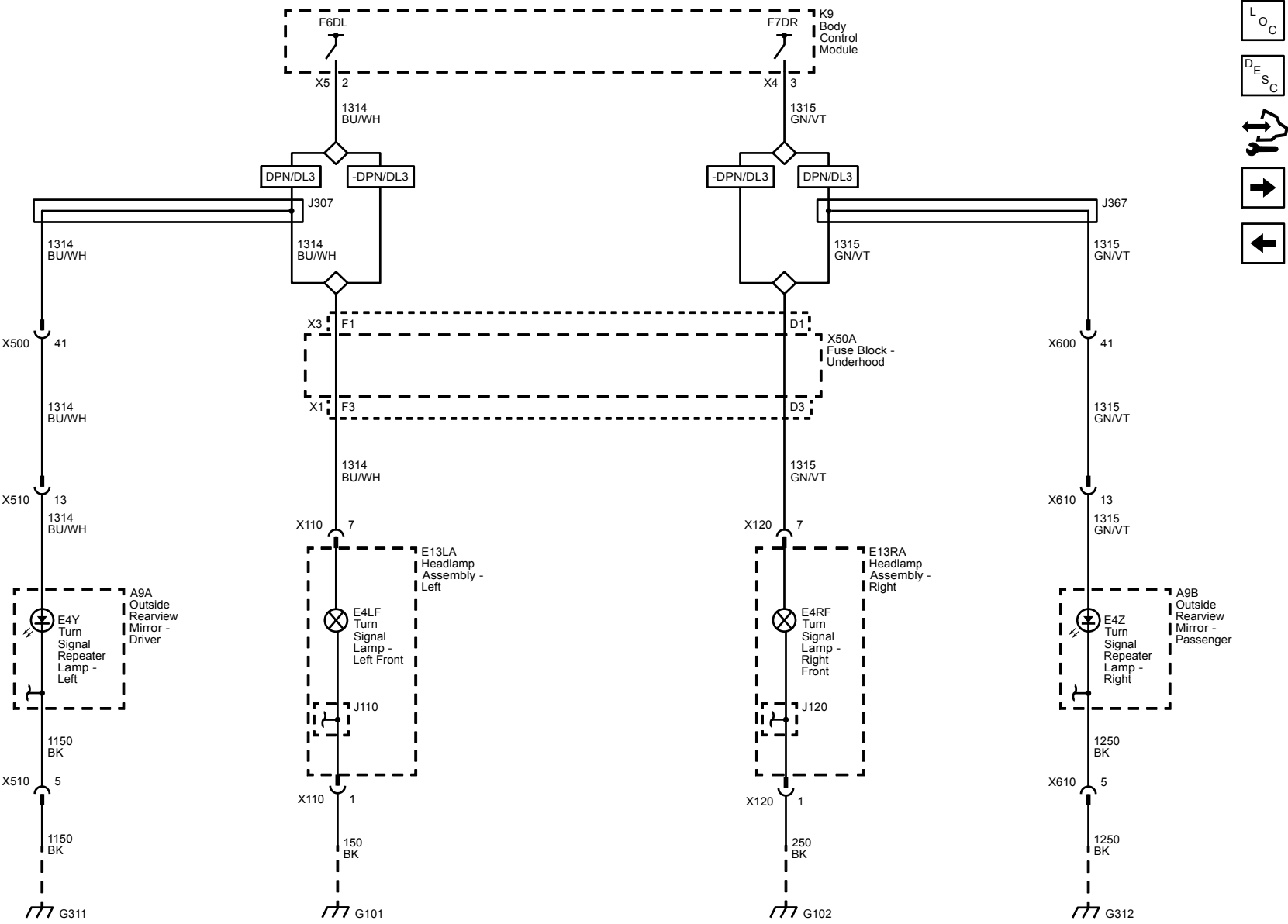
Park Lamps - Mirror (DPN or DQS) and Roof (U01)



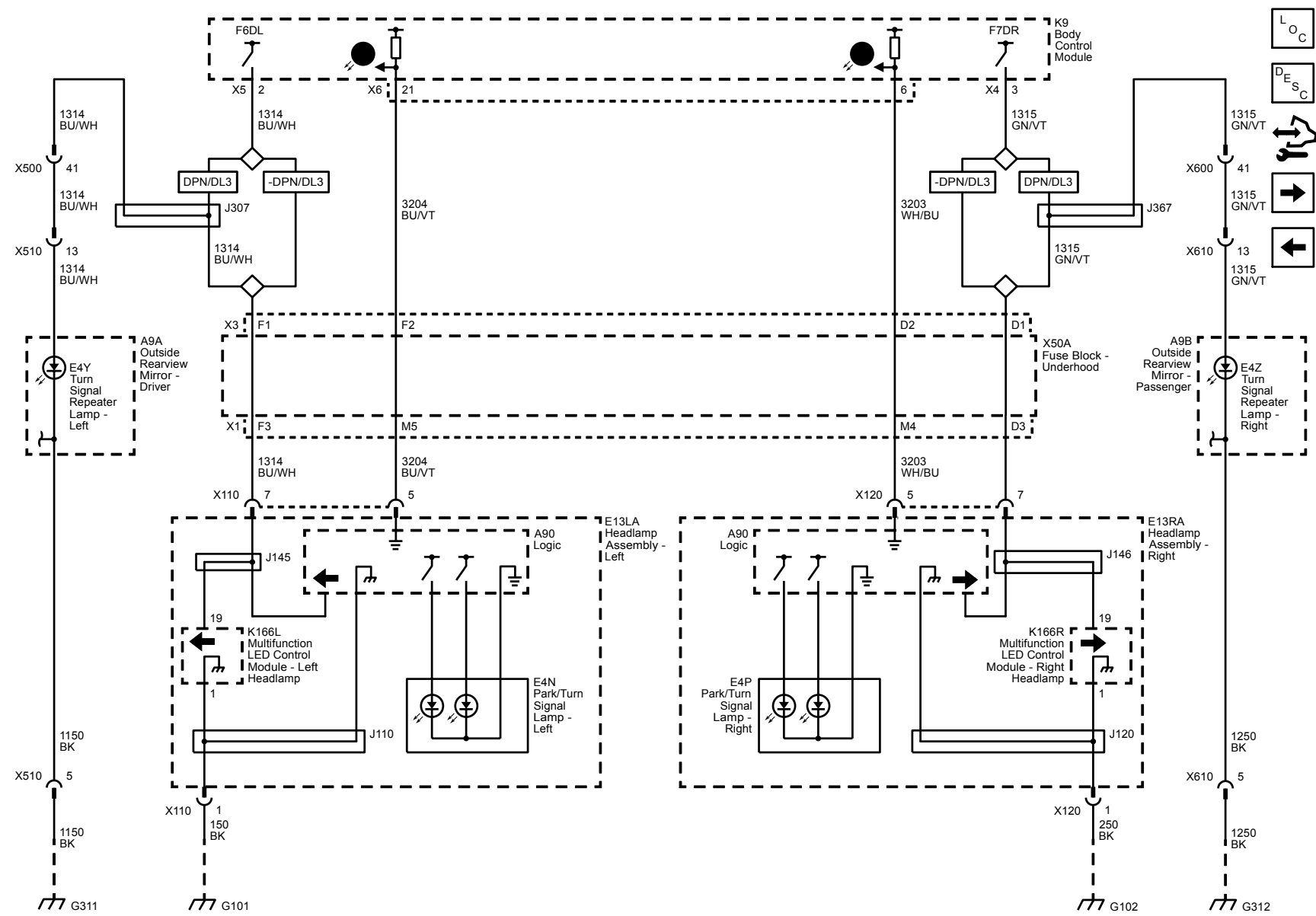
Park Lamps - Rear Clearance (DRW)



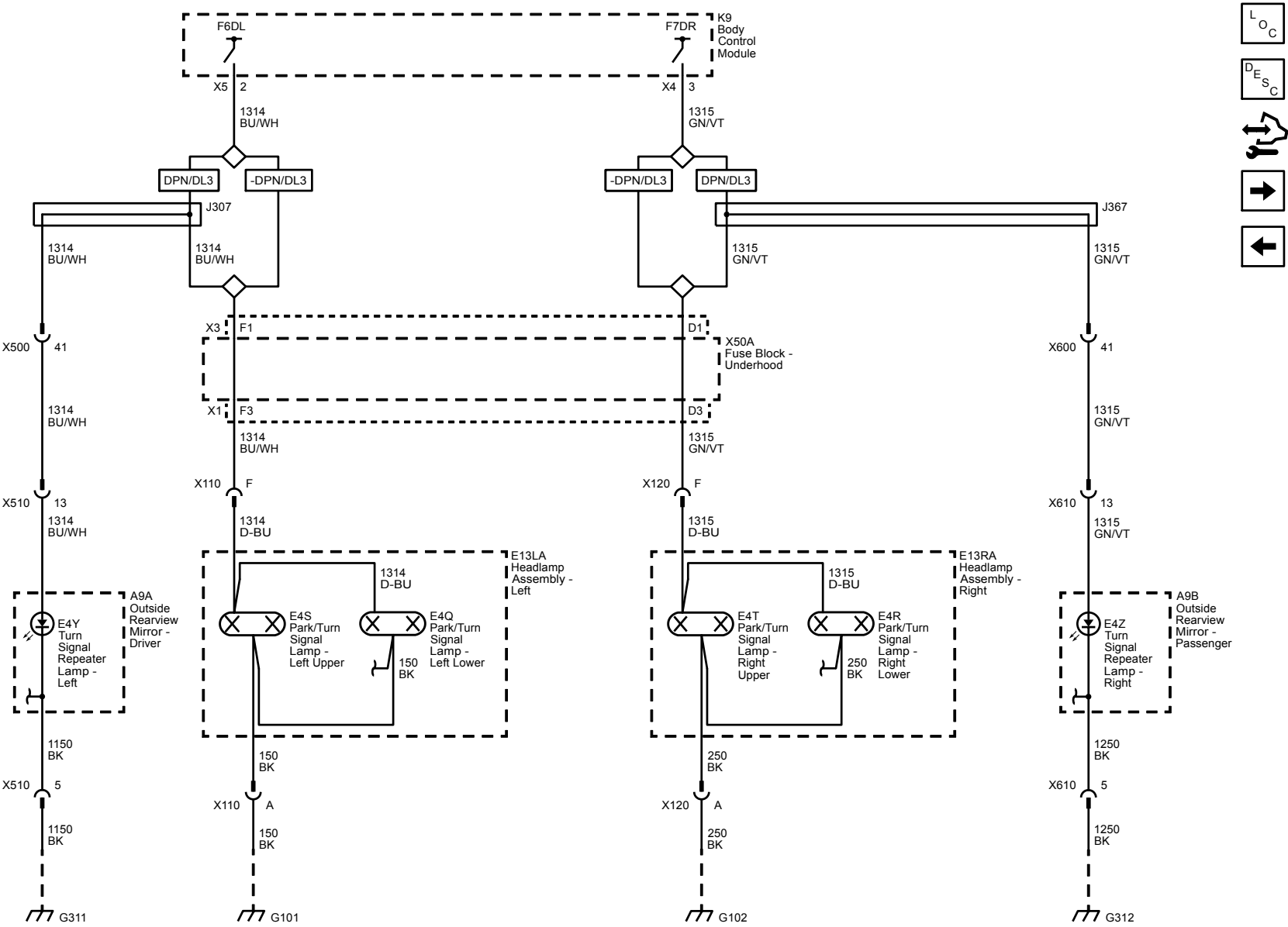
Turn Signal Lamps - Front (1500 with X88 or Z88 with T4F)



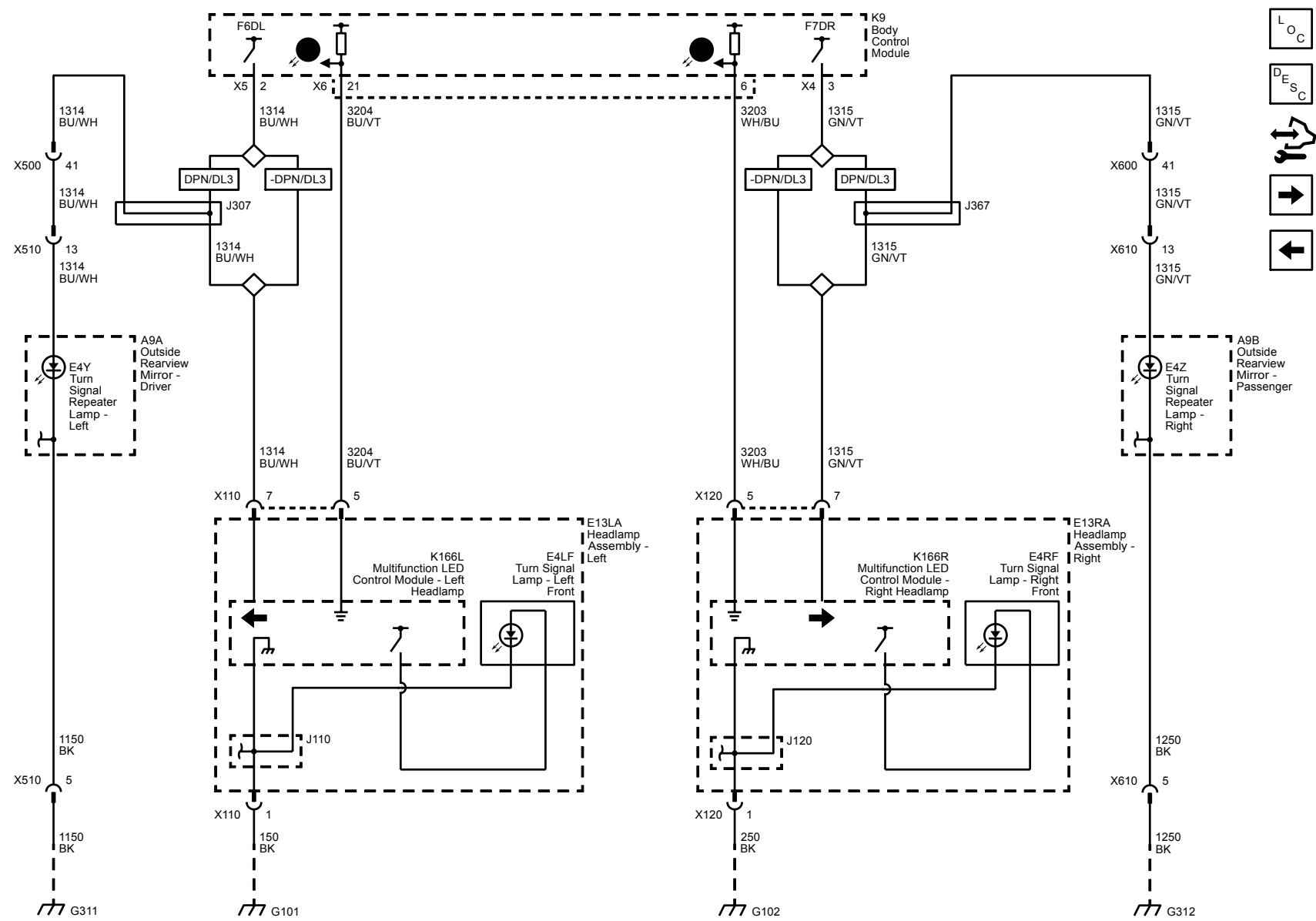
Turn Signal Lamps - Front (1500 with X88 without T4F)



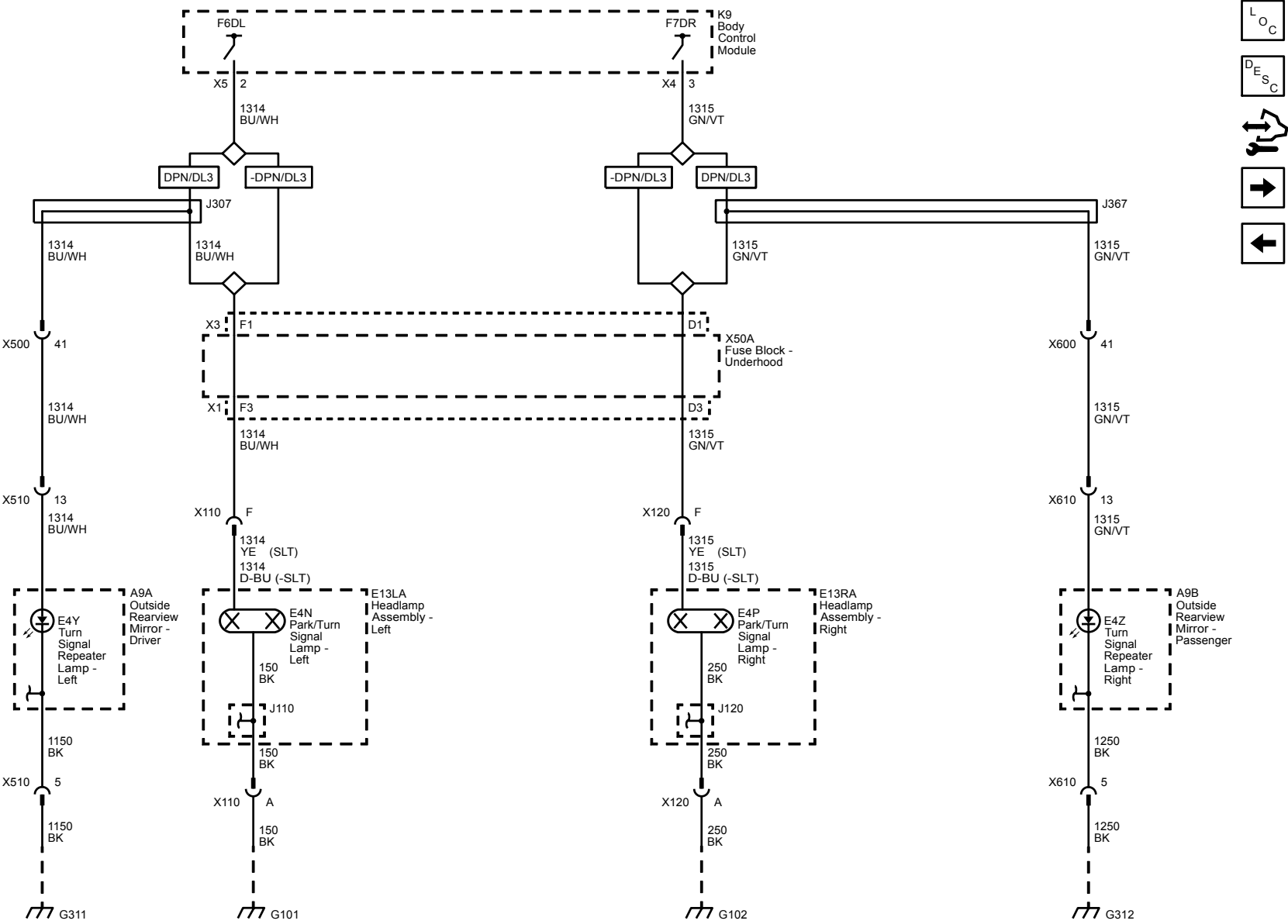
Turn Signal Lamps - Front (2500/3500 with Chevrolet/X88)



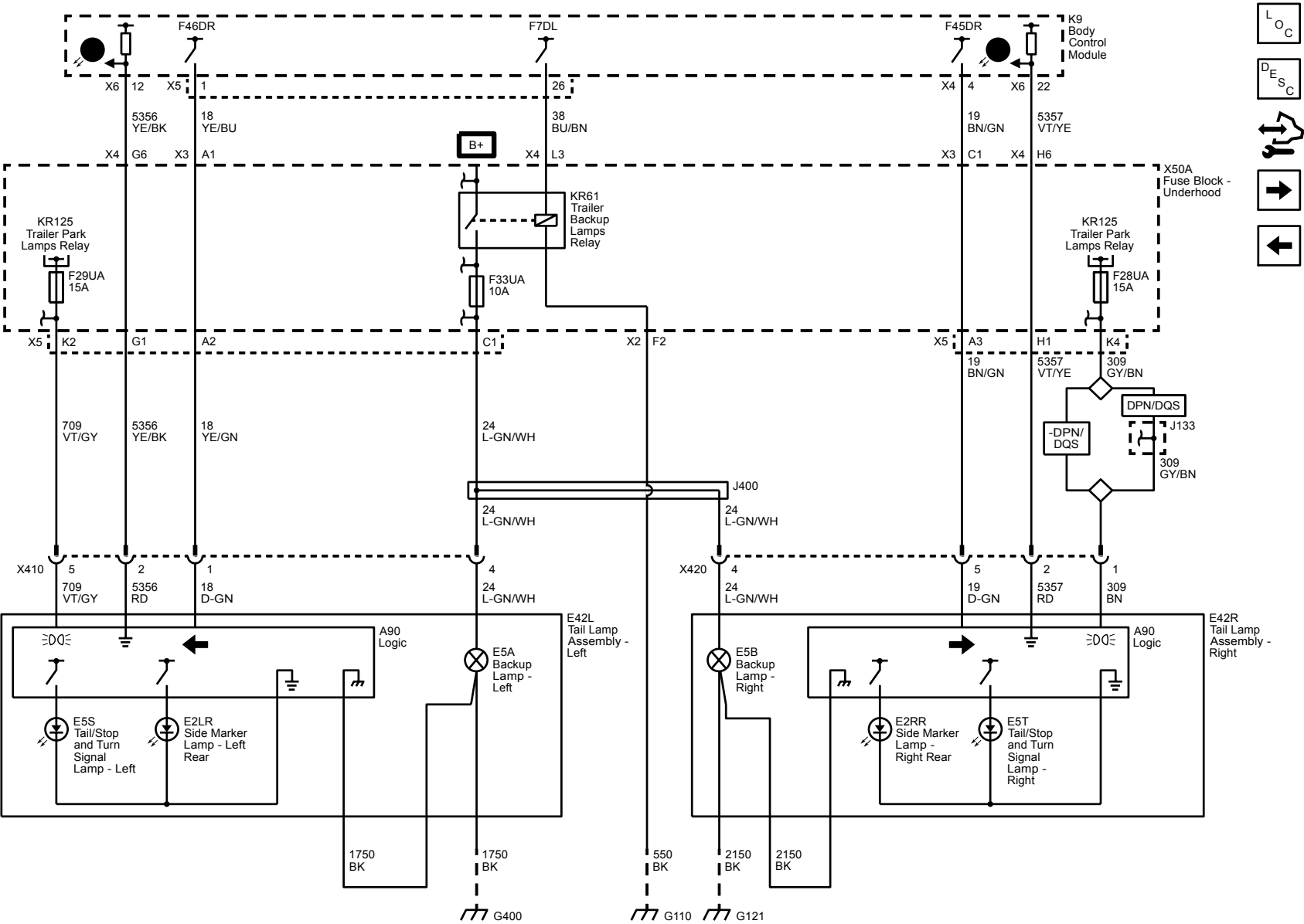
Turn Signal Lamps - Front (1500 with Z88 without T4F)



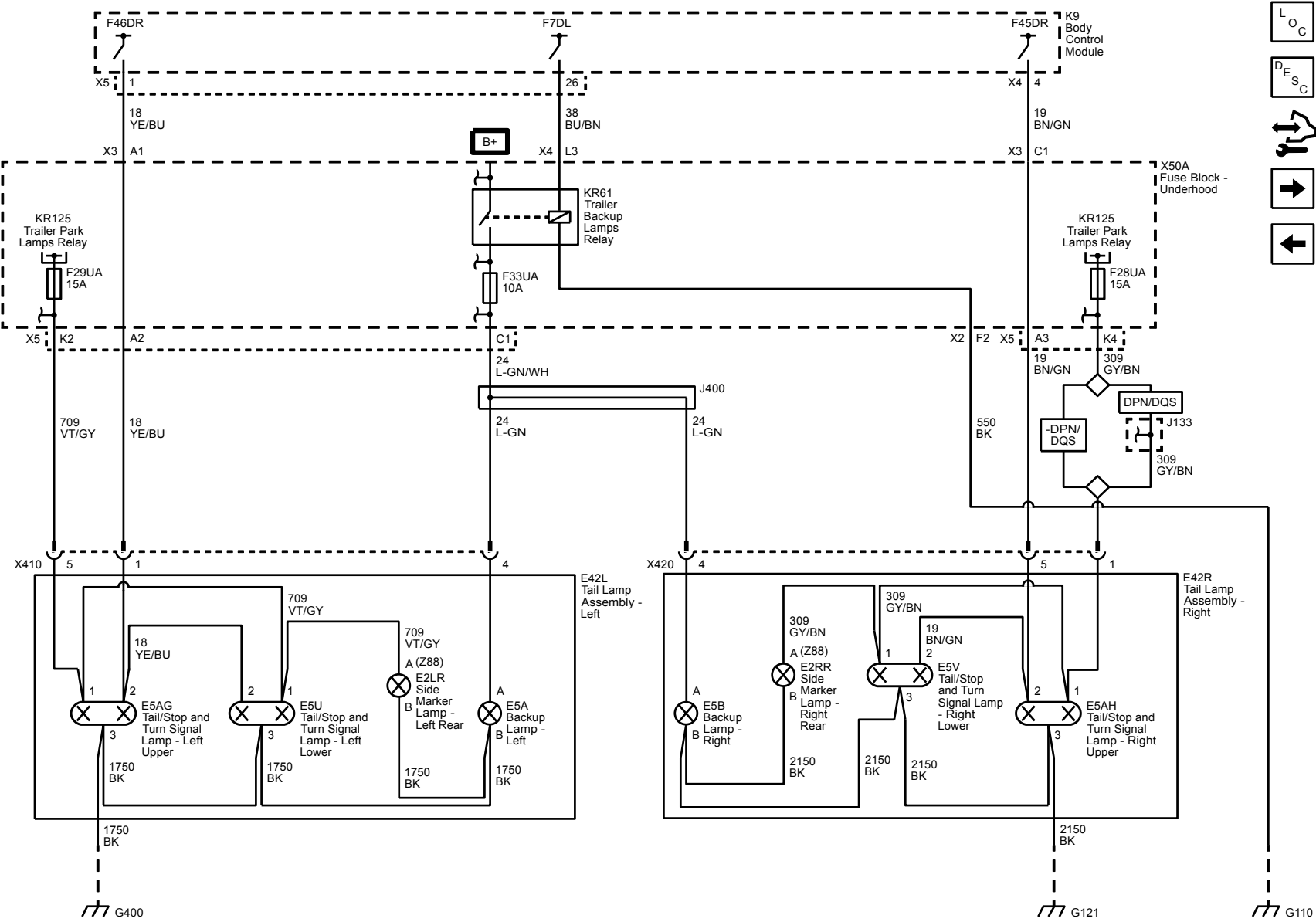
Turn Signal Lamps - Front (2500/3500 with GMC/Z88)



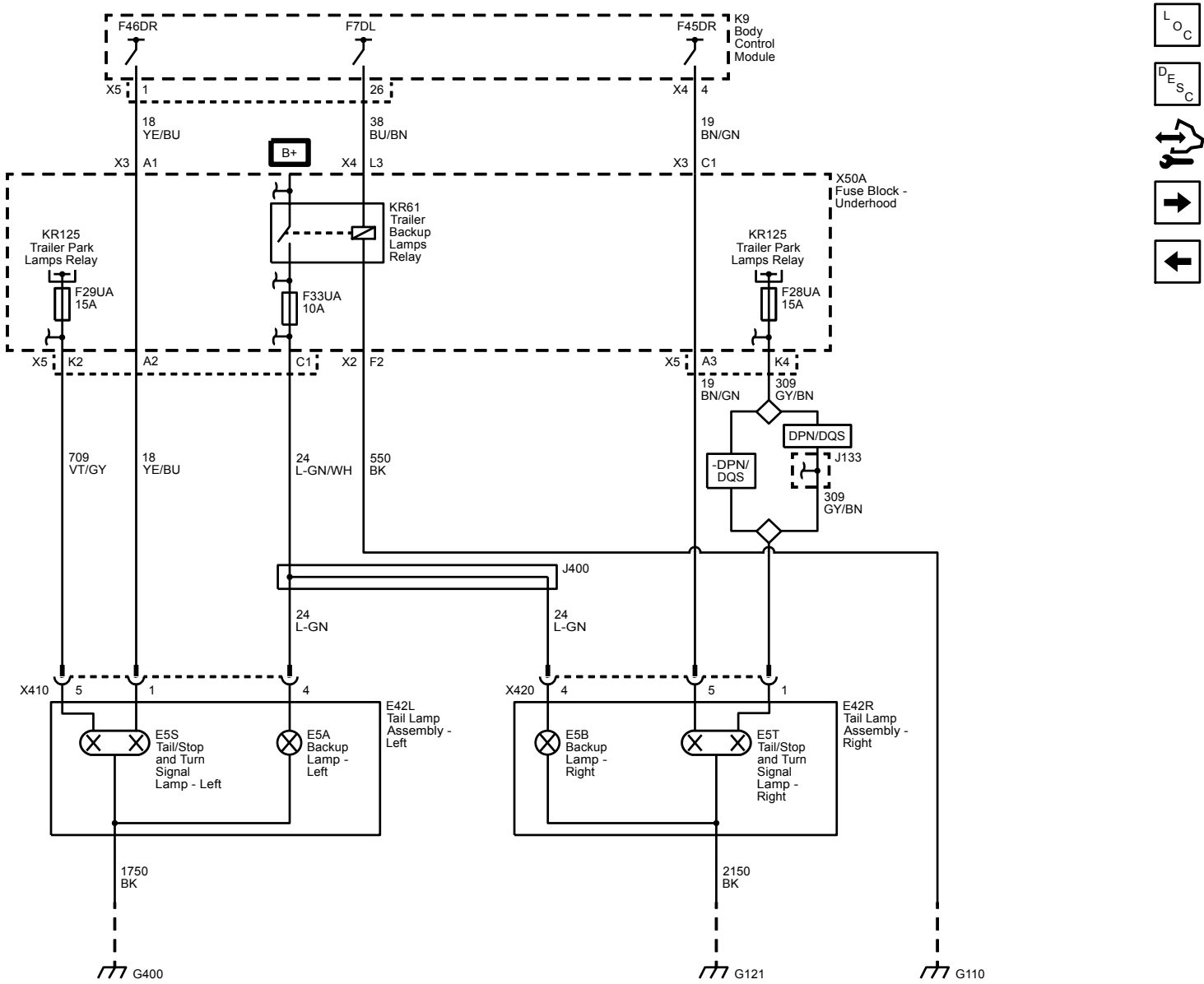
Tail Lamps (LED)



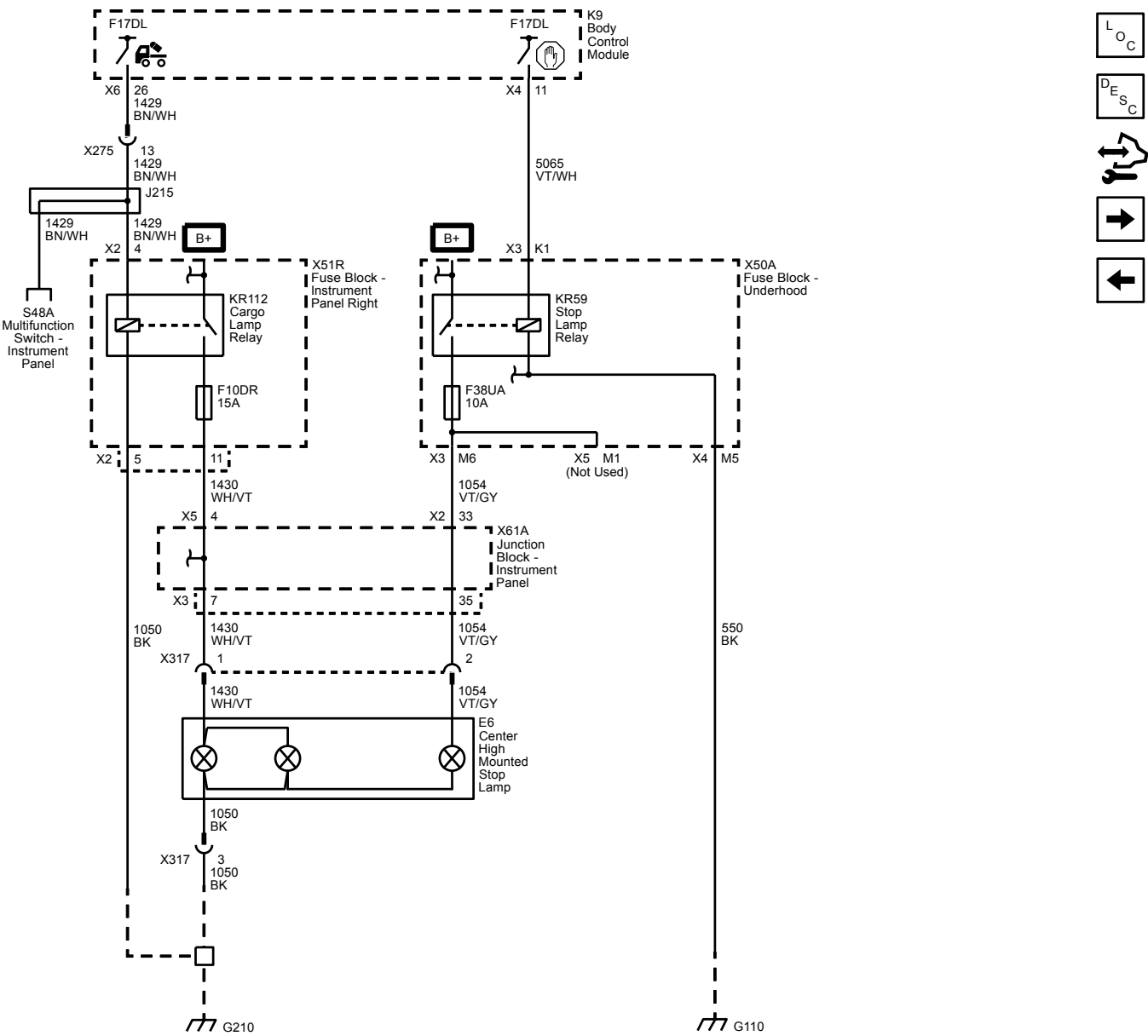
Tail Lamps (without ZW9 or LED)



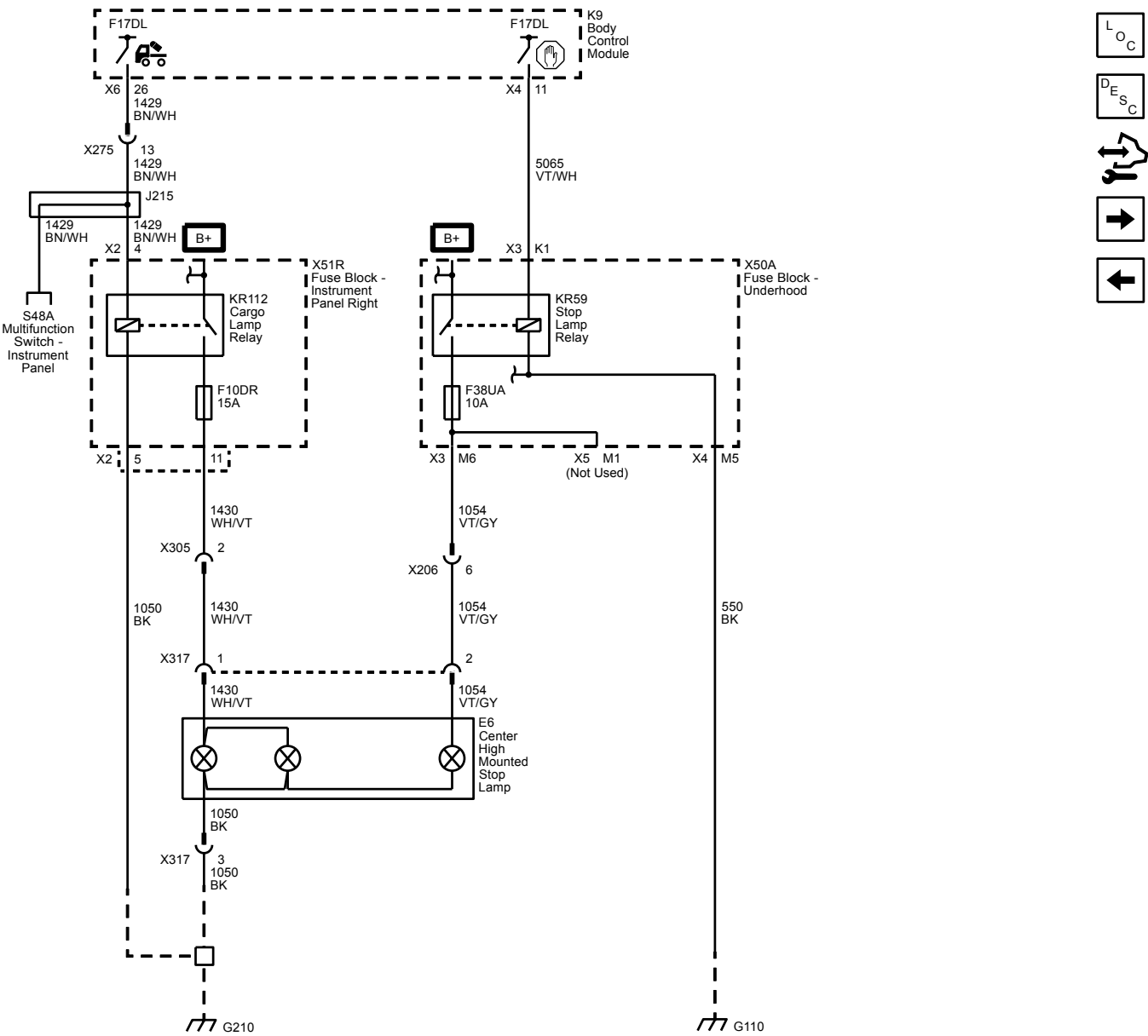
Tail Lamps (ZW9)



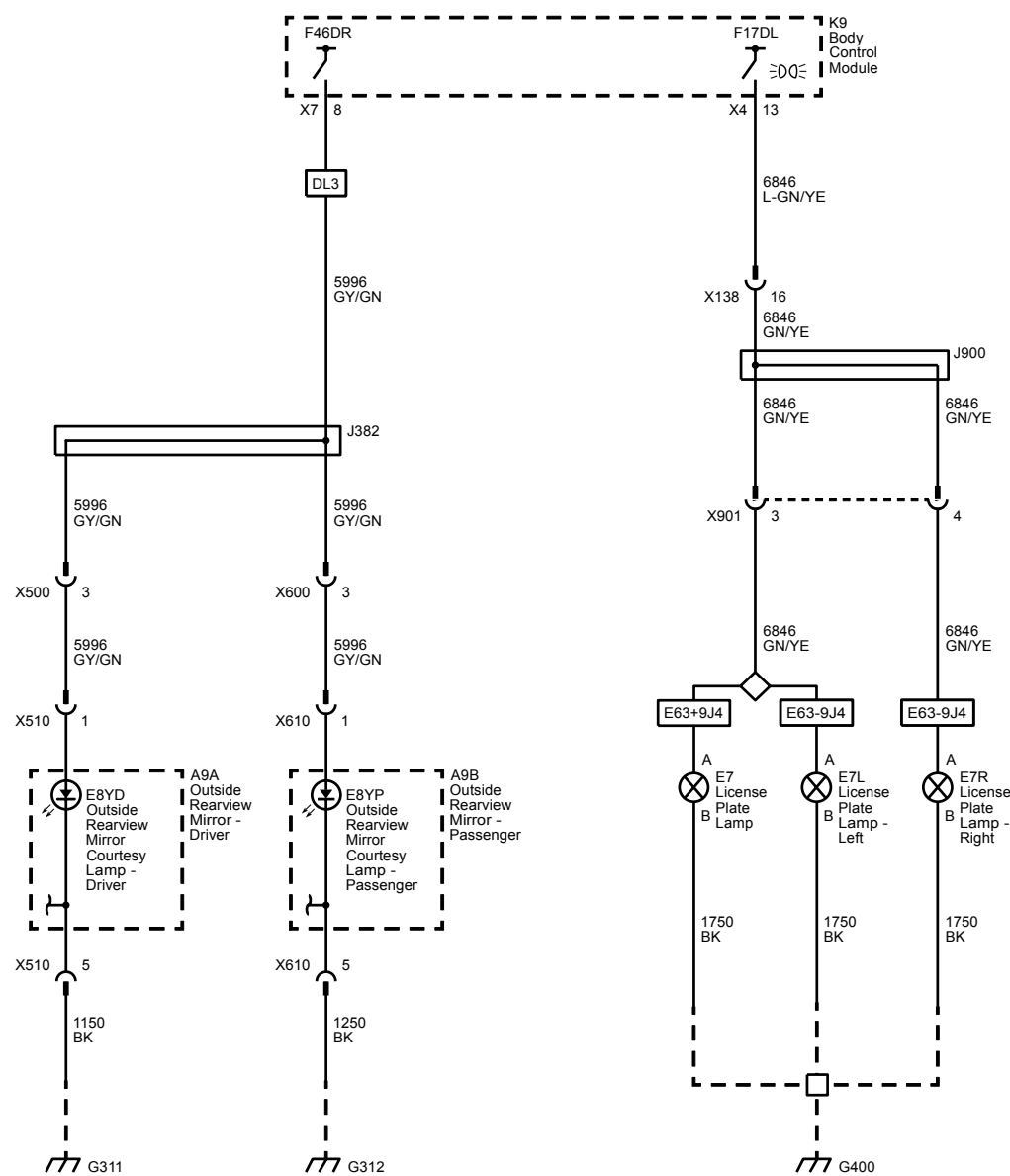
Roof Cargo and Center High Mounted Stop Lamps (except E29)



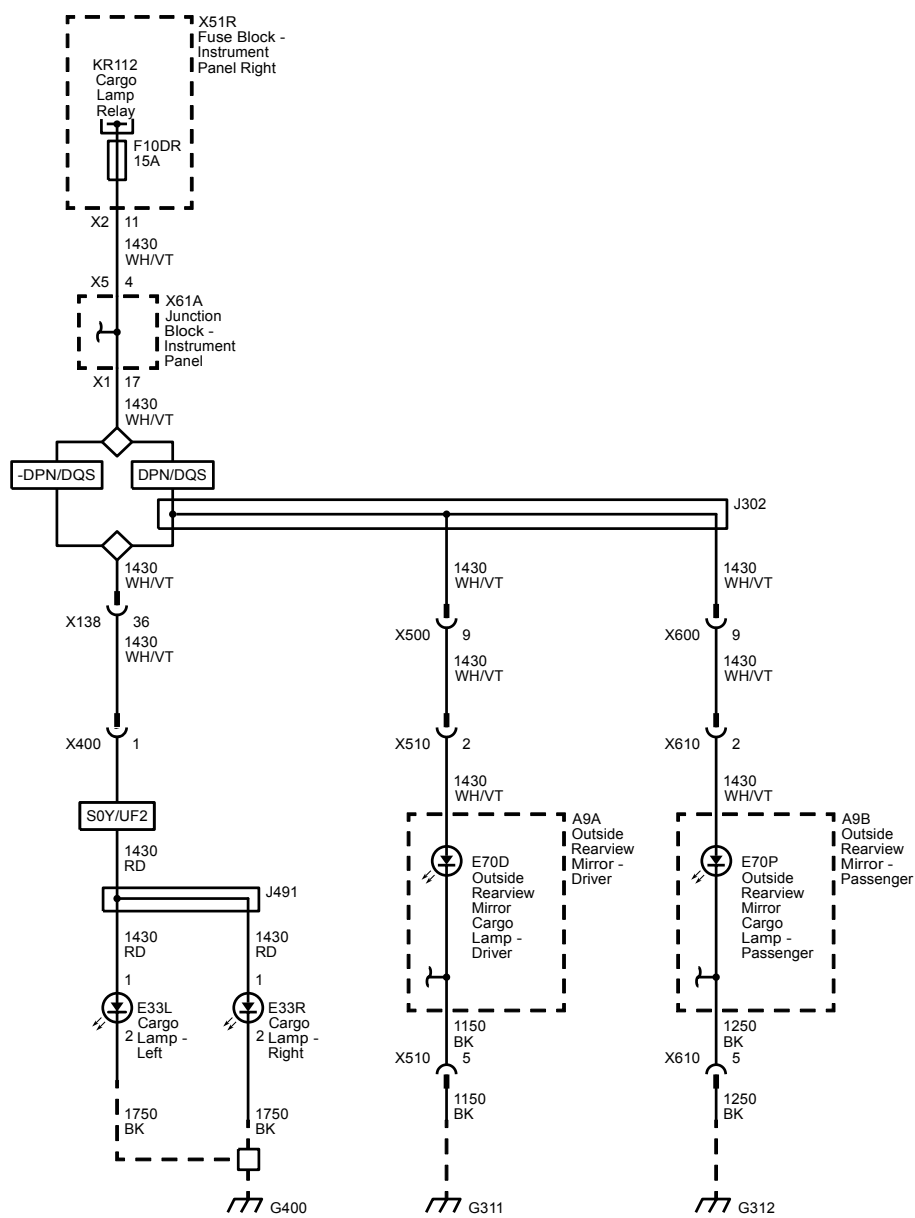
Roof Cargo and Center High Mounted Stop Lamps (E29)



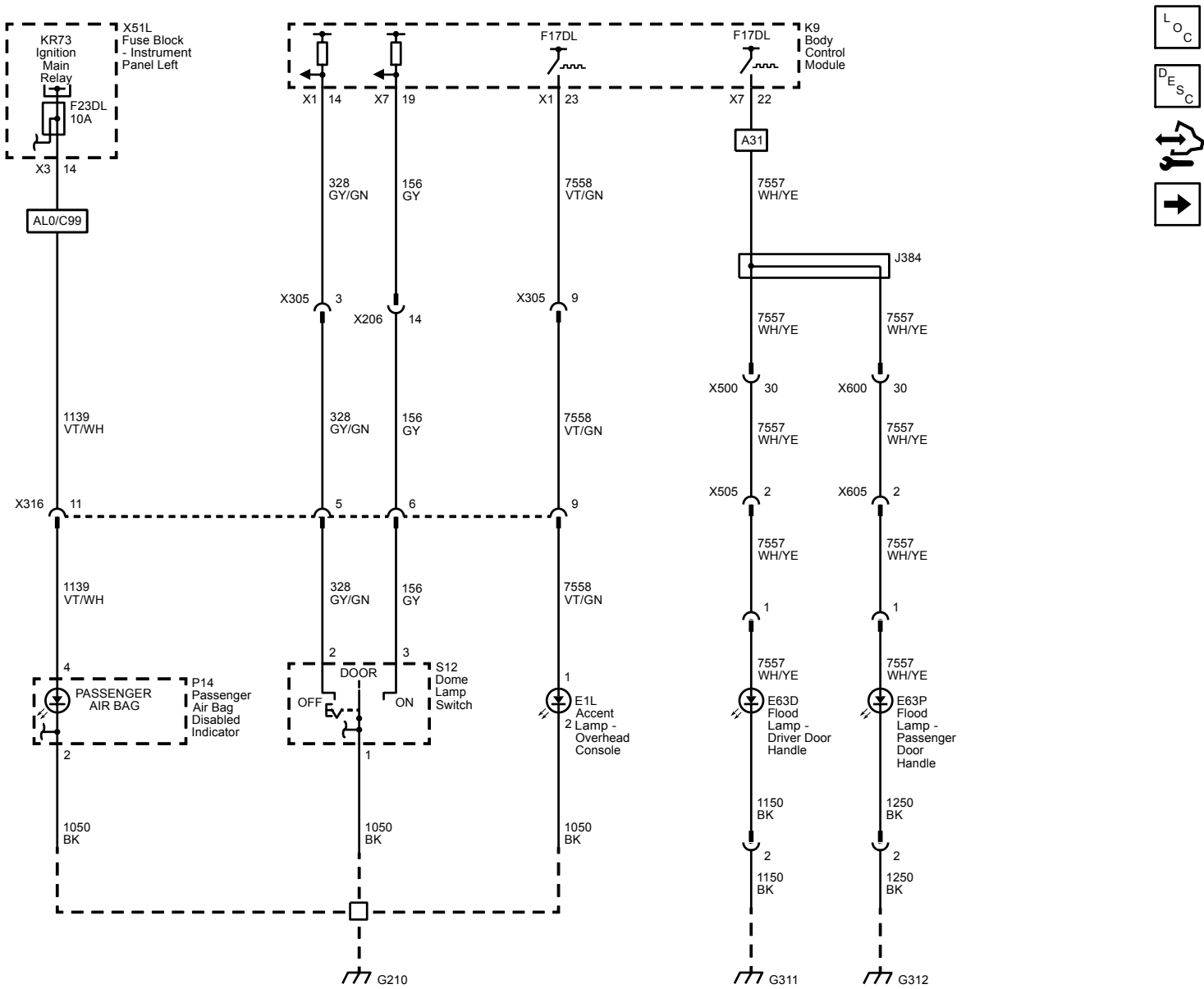
Mirror Courtesy Lamps (DL3) and License Plate Lamps



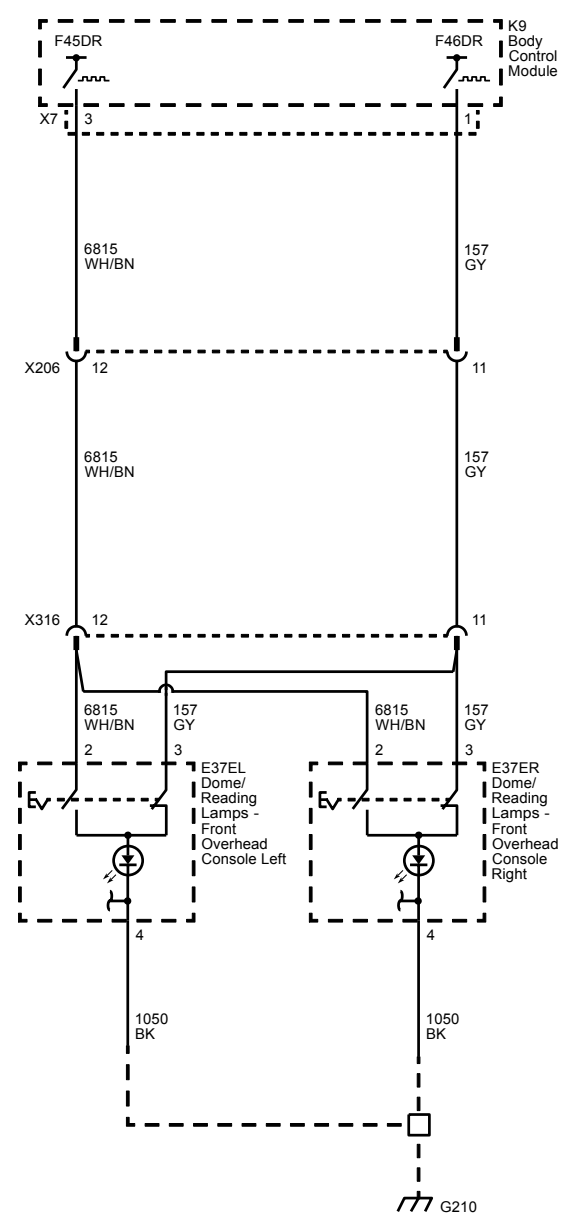
Mirror Cargo Lamps (DPN or DQS) and Cargo Box Lamps (S0Y or UF2)



Controls and Flood Lamps (E29)

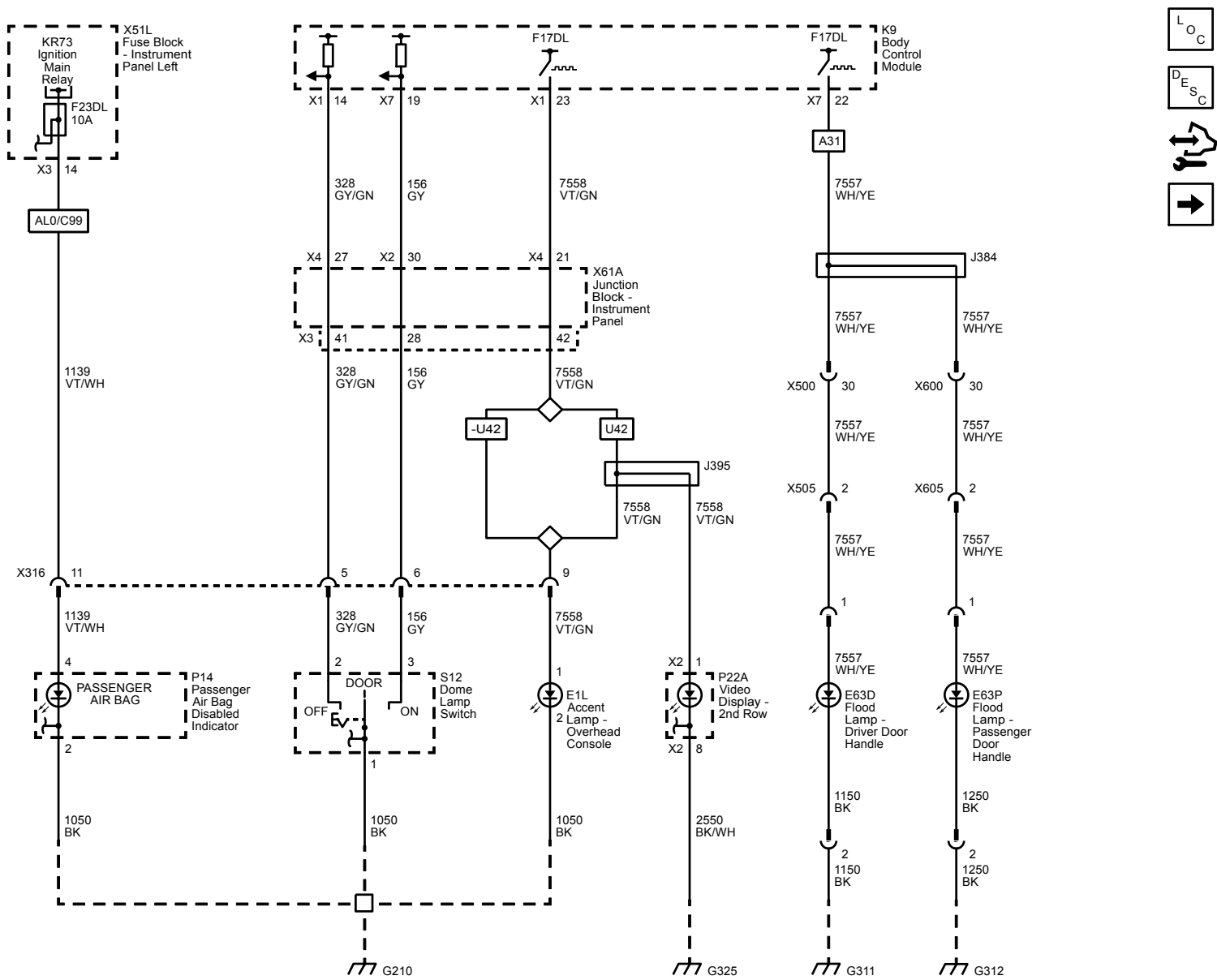


Overhead Lamps (E29)

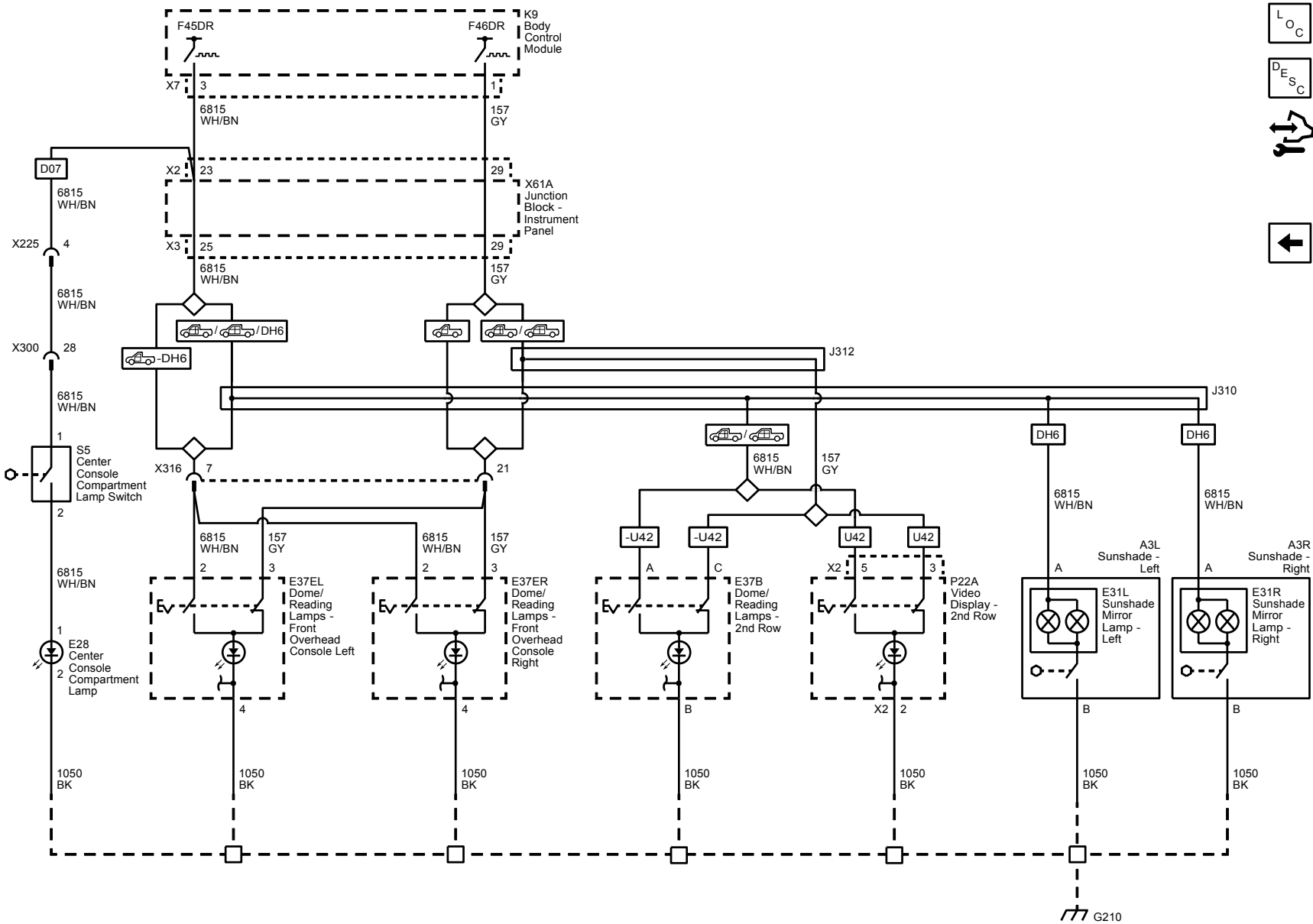


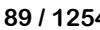
Interior Lights Schematics (without E29)

Controls and Flood Lamps (without E29)

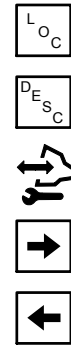
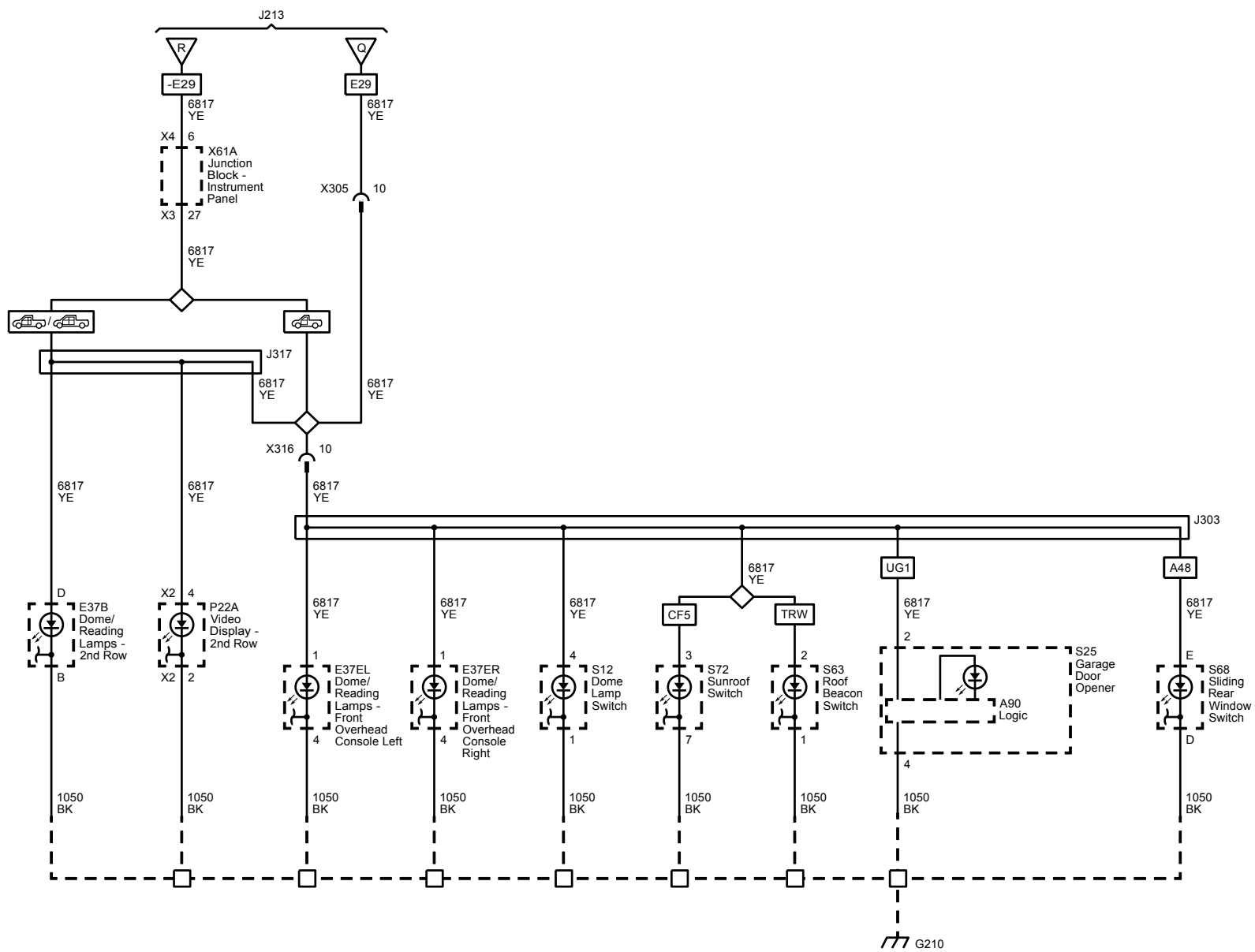


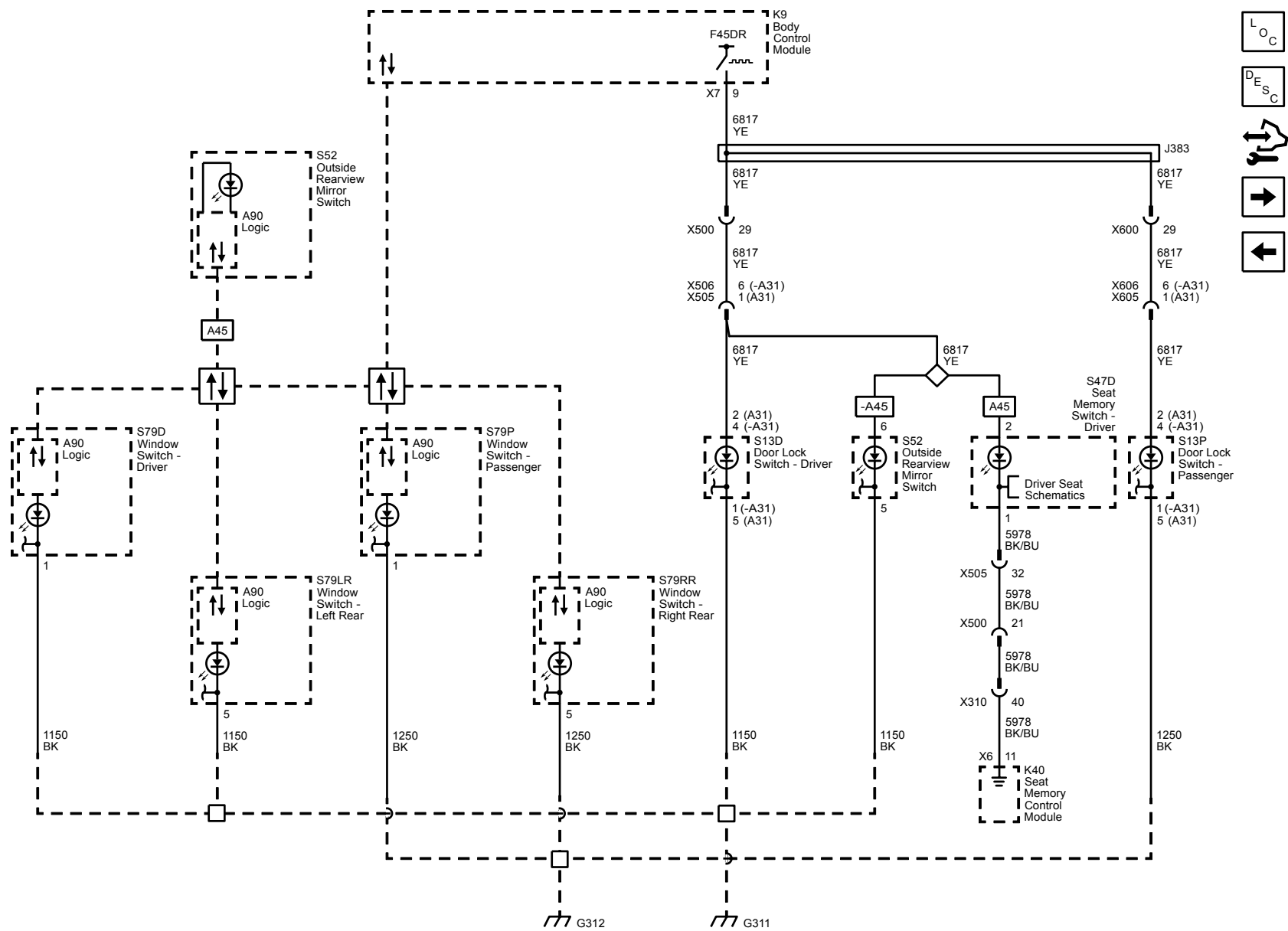
Floor Console Compartment and Overhead Lamps (without E29)

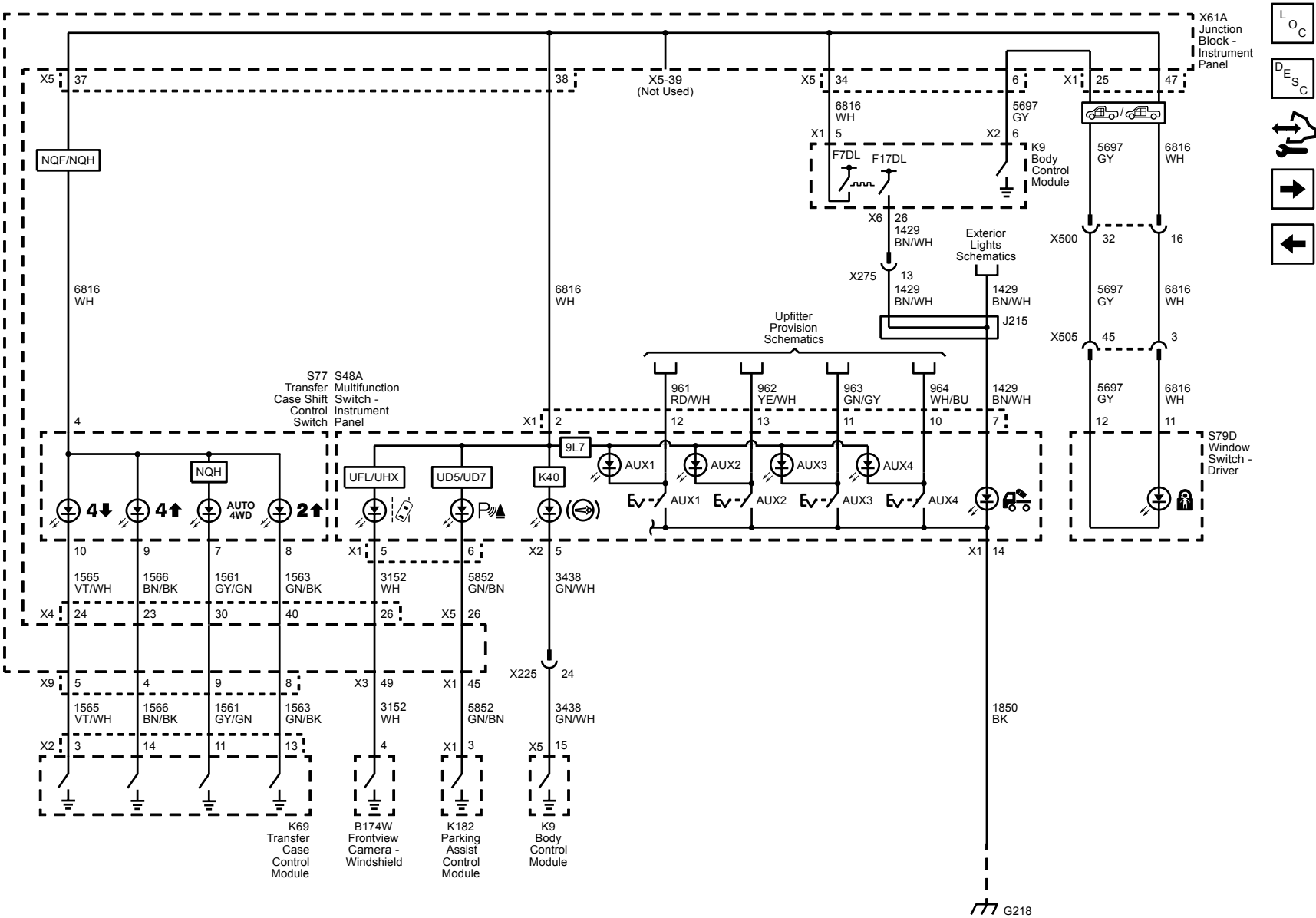


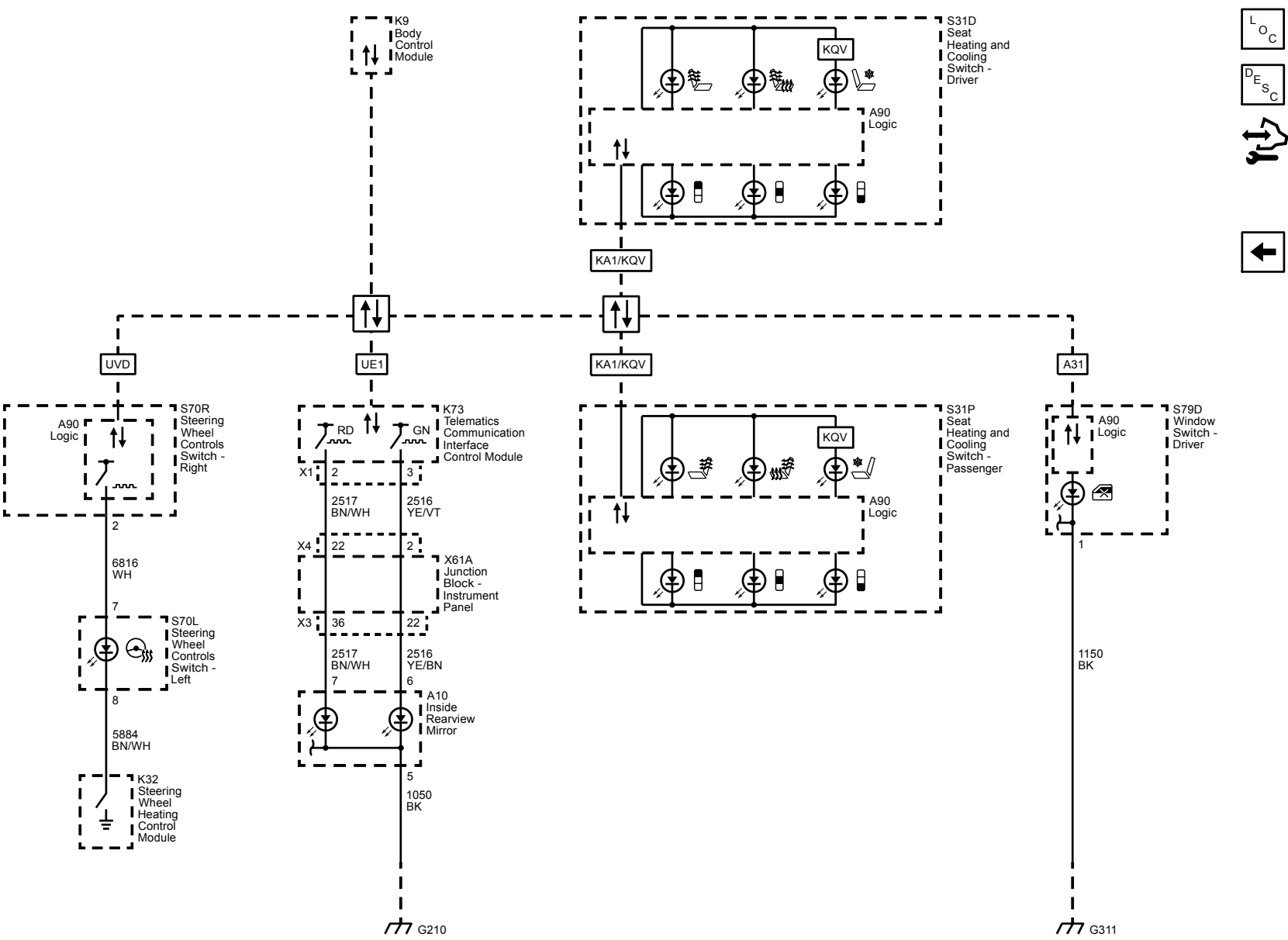


Backlight - Overhead Lamps









Description and Operation

Exterior Lighting Systems Description and Operation

The exterior lighting system consist of the following lamps:

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

Low Beam Headlamps

The headlamps may be turned ON in 3 different ways:

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

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

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

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

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

High Beam Headlamps (Chevrolet)

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.

High Beam Headlamps (GMC)

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 and on to the left and right headlamp high beam control modules located within the headlamp assemblies. The headlamp high beam control modules respond by applying voltage to there respective high beam solenoid actuators located within the headlamp assemblies. With the left and right high beam solenoid actuators active, the solenoid shutters open in each headlamp assembly exposing the remaining portion of the headlamp that was covered by the shutters illuminating the high beams at full intensity.

Automatic High Beam Assist (AHBA)

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

AHBA System Activation

- Vehicle ON
- Headlamp switch placed in the AUTO position
- Headlamp dimmer switch must be in the neutral position

- Outside lighting conditions must be dark
- Vehicle speed greater than 25 mph (40 km/h)

AHBA System Operation

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

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

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

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

AHBA System Deactivation

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

AHBA System Indicator

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

Daytime Running Lamps

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

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

Daytime Running Lamps (Base)

The ambient light sensor is used to monitor outside lighting conditions. The ambient light sensor provides a voltage signal that will vary between 0.2 and 4.9 volts depending on outside lighting conditions. The body control module (BCM) provides a 5 V reference signal to the ambient light sensor and the HVAC control module provides a low reference ground. The BCM monitors the ambient light sensor signal circuit to determine if outside lighting conditions are correct for either daytime running lights or automatic lamp control when the headlamp switch is in the AUTO position. In daylight conditions the BCM will command the low beam headlamps ON. Any function or condition that turns on the headlamps will cancel daytime running lamps operation.

Daytime Running Lamps (GMC with SLT)

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

Flash to Pass

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

Front Fog Lamps

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

Hazard Lamps

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

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

brightness.

Park, Tail, and License Lamps

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

Stop Lamps

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

Turn Signal Lamps

Ground is applied at all times to the turn signal/multifunction switch. The turn signal lamps may only be activated with the ignition switch in the ON or START positions. When the turn signal/multifunction switch is placed in either the TURN RIGHT or TURN LEFT position, ground is applied to the body control module (BCM) through either the right turn or left turn signal switch signal circuit. The BCM responds to the turn signal switch input by applying a pulsating voltage to the front and rear turn signal lamps through there respective control circuits. When a turn signal request is received by the BCM, a serial data message is sent to the instrument cluster requesting the respective turn signal indicator be pulsed ON and OFF.

Backup Lamps

Automatic Transmission

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

Manual Transmission

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

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.

Trailer Lighting (Export)

The trailer lighting control module is supplied with battery voltage as well as ignition voltage from the rear body fuse block and is permanently grounded. For lighting operation, the trailer lighting control module receives serial data messages from the body control module (BCM) indicating what lamps have been activated on the vehicle. The trailer lighting control module responds by applying voltage to the appropriate control circuits for the requested lamps illuminating the lamps on the attached trailer.

For stop lamp operation, the trailer lighting control module receives an input from the center high mount stop lamp control circuit. When the brakes are applied on the vehicle, the trailer lighting control module receives the brake applied input from the center high mount stop lamp control circuit. The trailer lighting control module responds by applying voltage to the trailer stop lamp control circuit illuminating the trailer stop lamps. The trailer lighting control module also receives a serial data message from the BCM indicating that the vehicle brakes have been applied.

Battery Run Down Protection/Inadvertent Power

To provide battery run down protection, the exterior lamps will be deactivated automatically under certain conditions. The BCM monitors the state of the headlamp switch. If the park or headlamp switch is ON when the ignition switch is placed in either the CRANK or RUN position and then placed in the OFF position, the BCM initiates a 10 minute timer. At the end of the 10 minutes, the BCM will turn off the control power output to the park lamp controls as well as the headlamp relay coils, deactivating the exterior lamps. This feature will be cancelled if any power mode other than OFF becomes active. The BCM will disable battery run down protection if any of the following conditions exist. The park or headlamp switch is placed in the ON to OFF position, and back to the ON position during battery run down protection. The BCM determined that the park or headlamp switch was not active when the ignition was turned OFF.

Interior Lighting Systems Description and Operation

Interior Lamps

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

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

Dome Lamps

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

Center Console Compartment Lamp

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

Reading Lamps

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

Sunshade Mirror Lamps

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

Keyless Entry Interior Illumination

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

Interior Lamps Dimming

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

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

- Sun roof tilt switch
- Transfer case shift control switch
- Trailer brake control switch
- Window switch – driver
- Window switch – passenger

With the headlamp switch in the PARK or HEAD position, the park lamp switch signal circuit provides an input to the body control module (BCM). The BCM responds by applying voltage to the park lamps as well as the backlight dimming control circuits illuminating all components with interior backlighting. All interior backlighting turns ON at the dimming level indicated by the instrument panel dimmer switch. The instrument panel dimmer switch is a momentary type switch and utilizes a resistor ladder to increase and decrease the brightness of the interior backlighting components. The instrument panel dimmer switch provides a voltage signal to the BCM that will increase as the brightness of the lights are increased and decrease as the brightness of the lights are decreased. The BCM provides a low reference signal and a B+ circuit to the instrument panel dimmer switch. When the instrument panel dimmer switch is held in the desired position, the dimmed voltage setting is applied from the instrument panel dimmer switch through the instrument panel dimmer switch signal circuit to the BCM. The BCM interprets the signal and applies a pulse width modulated voltage through the backlighting control circuits illuminating the interior backlighting to the requested level of brightness.

Battery Rundown Protection/Inadvertent Power

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

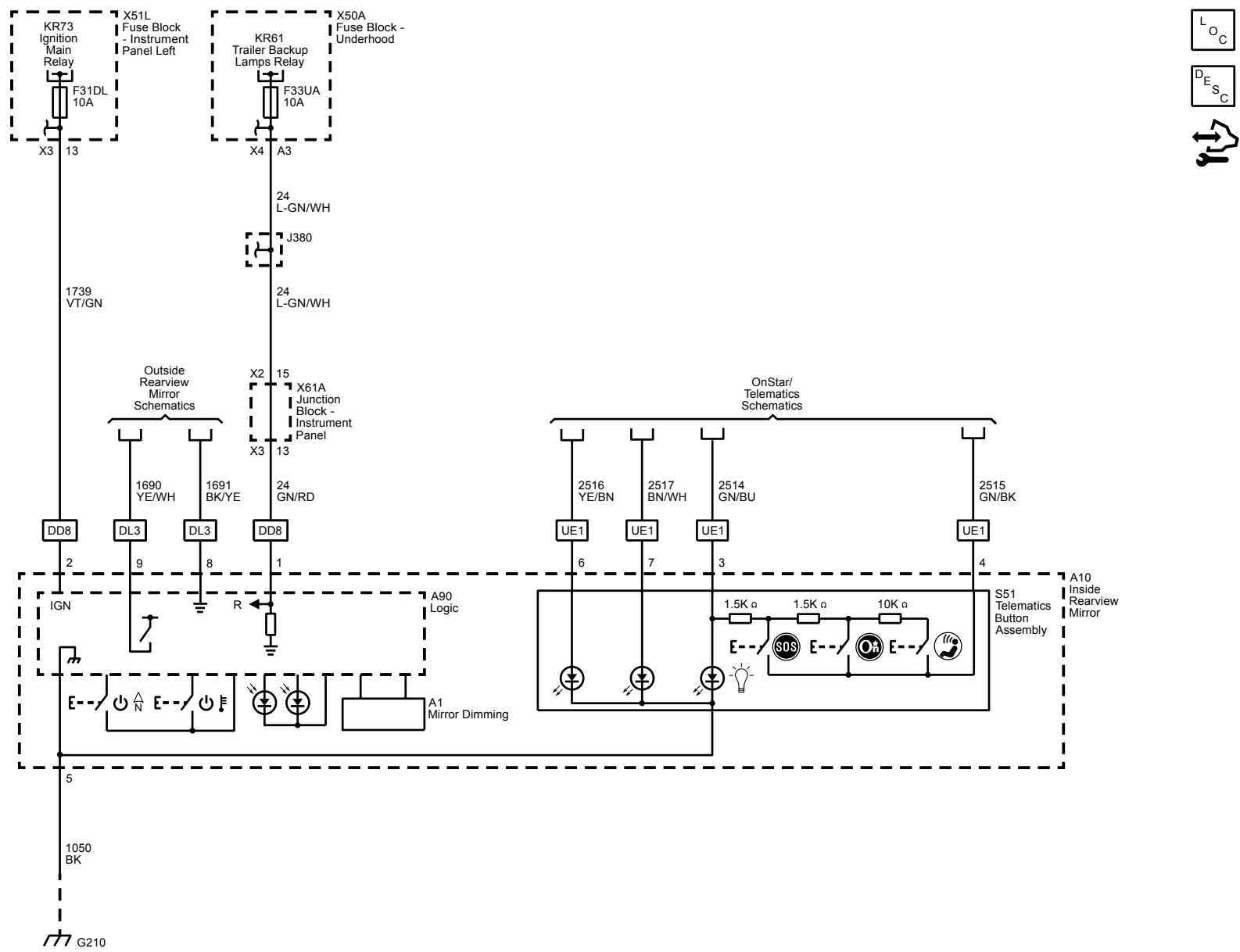
Body Systems

Mirrors

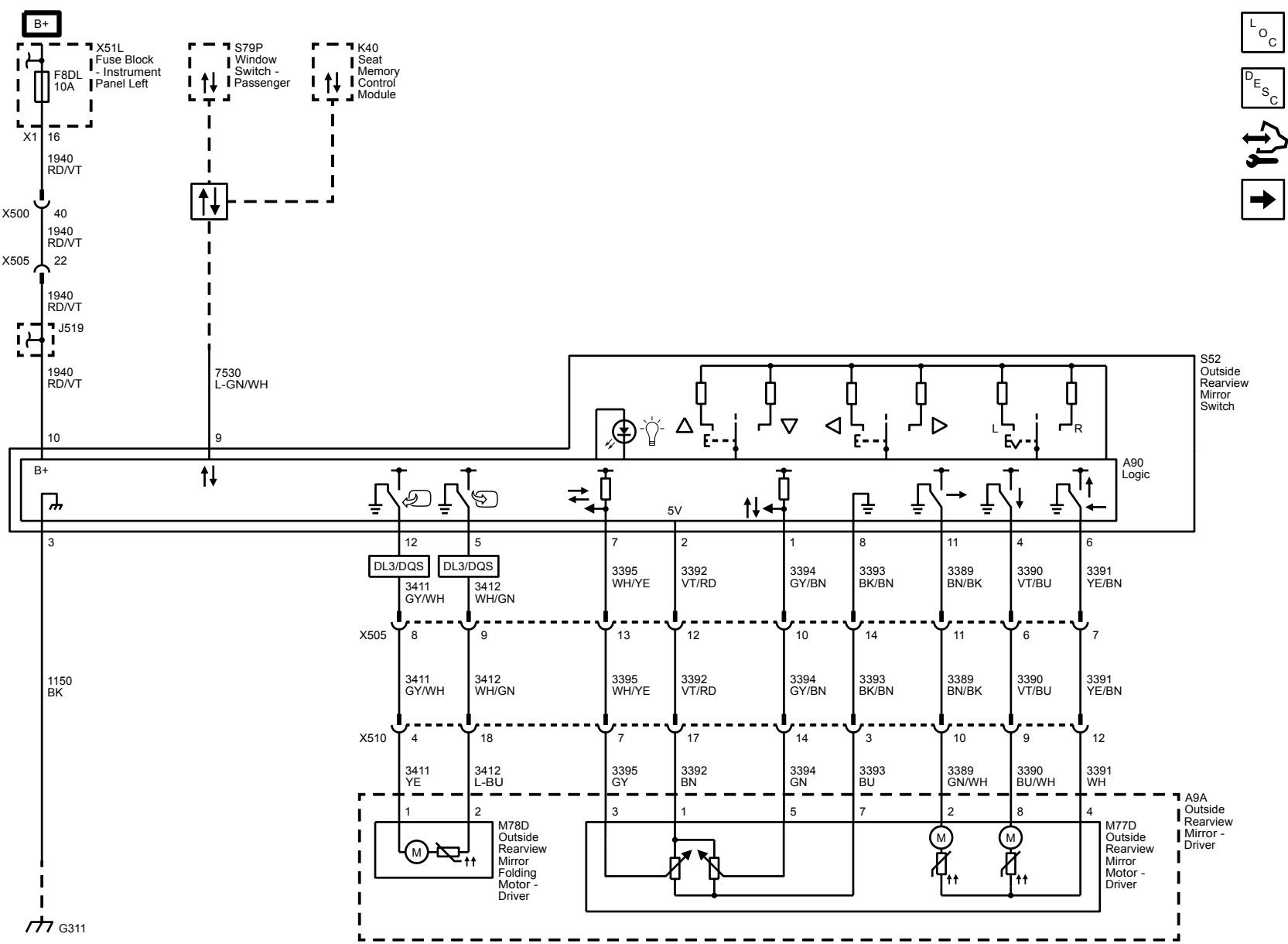
Schematic and Routing Diagrams

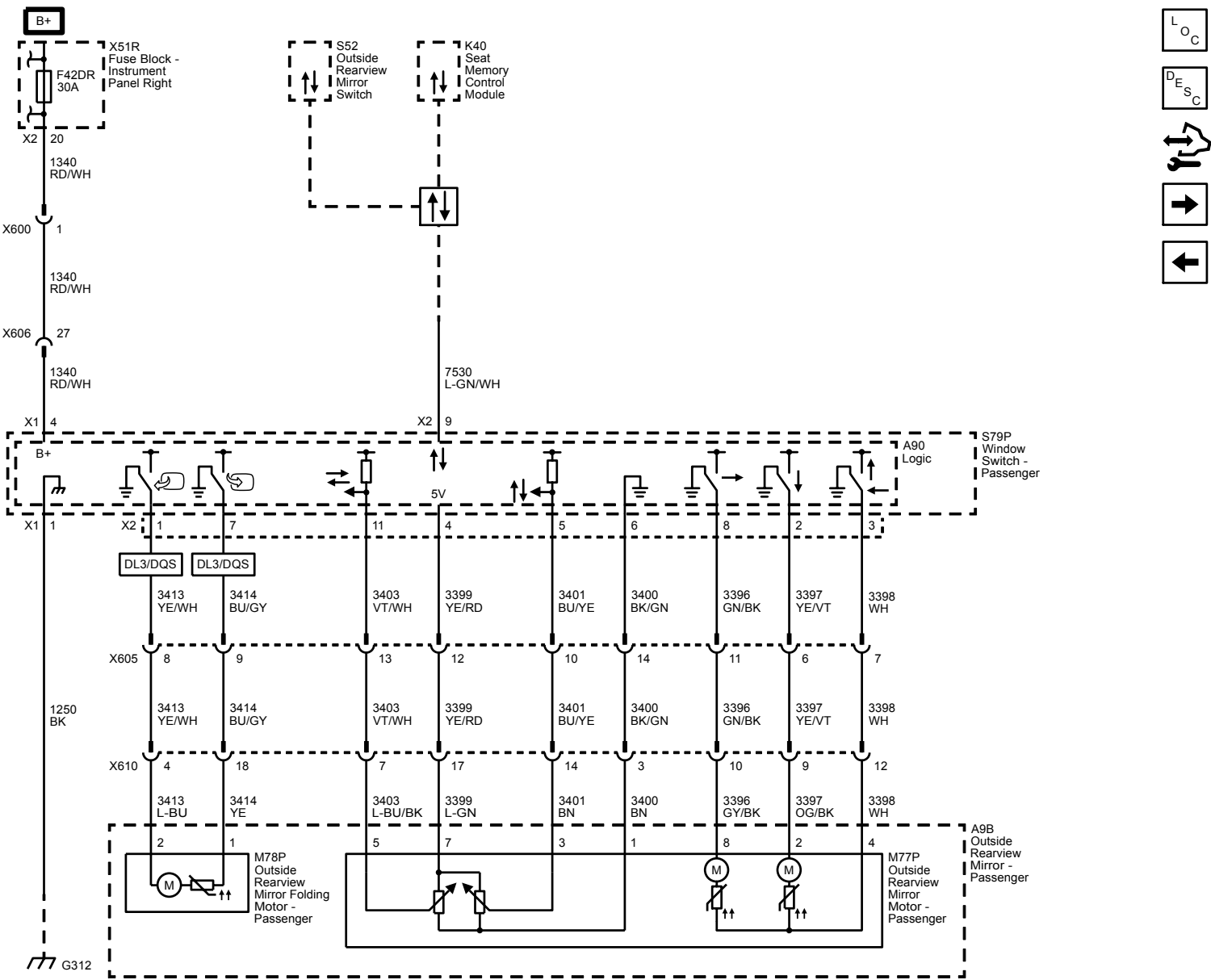
Inside Rearview Mirror Schematics

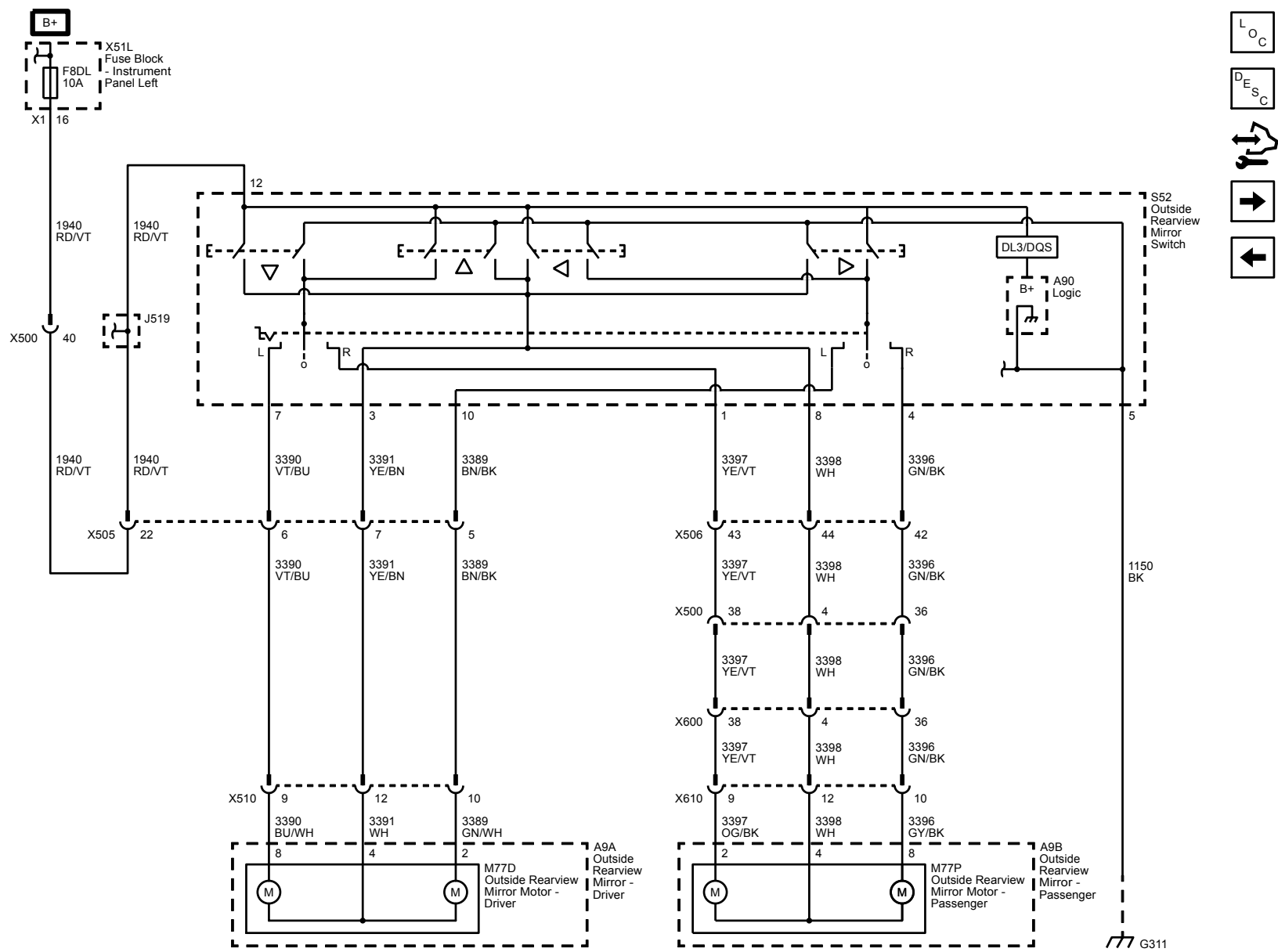
Inside Rearview Mirror



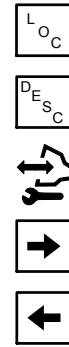
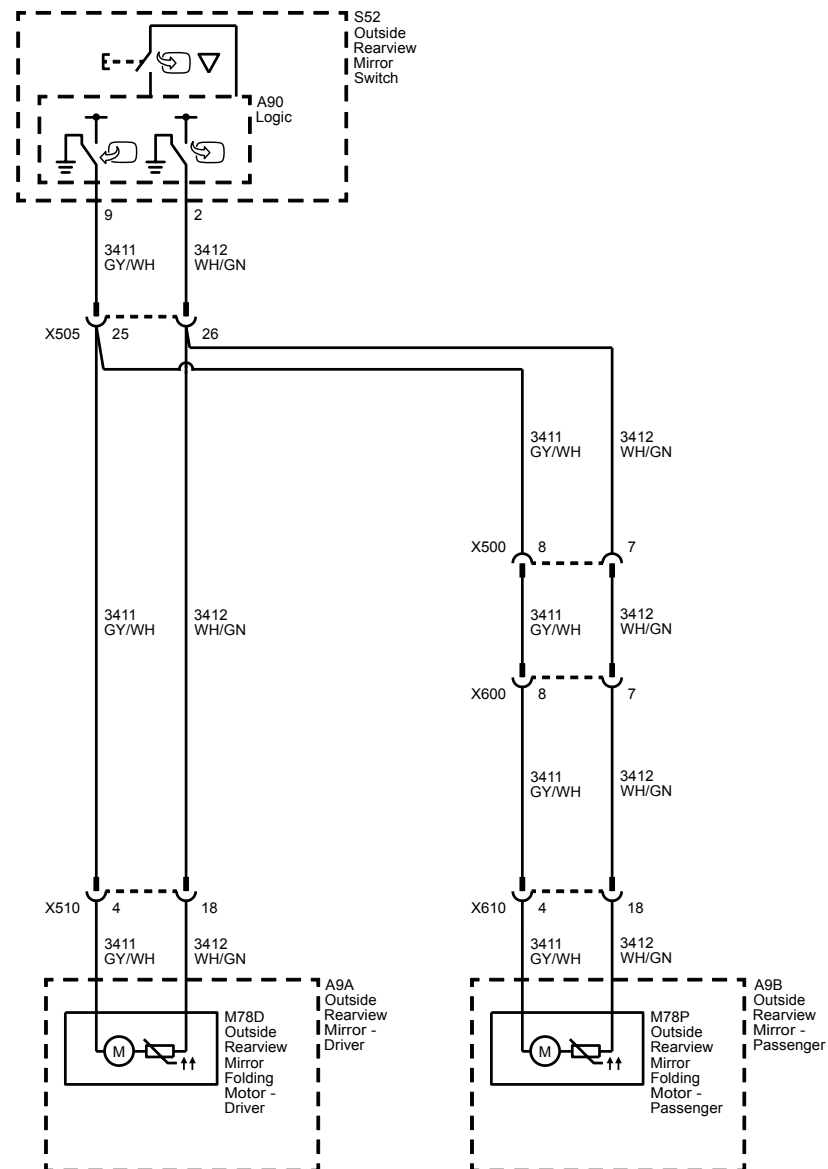
Controls and Driver (A45)

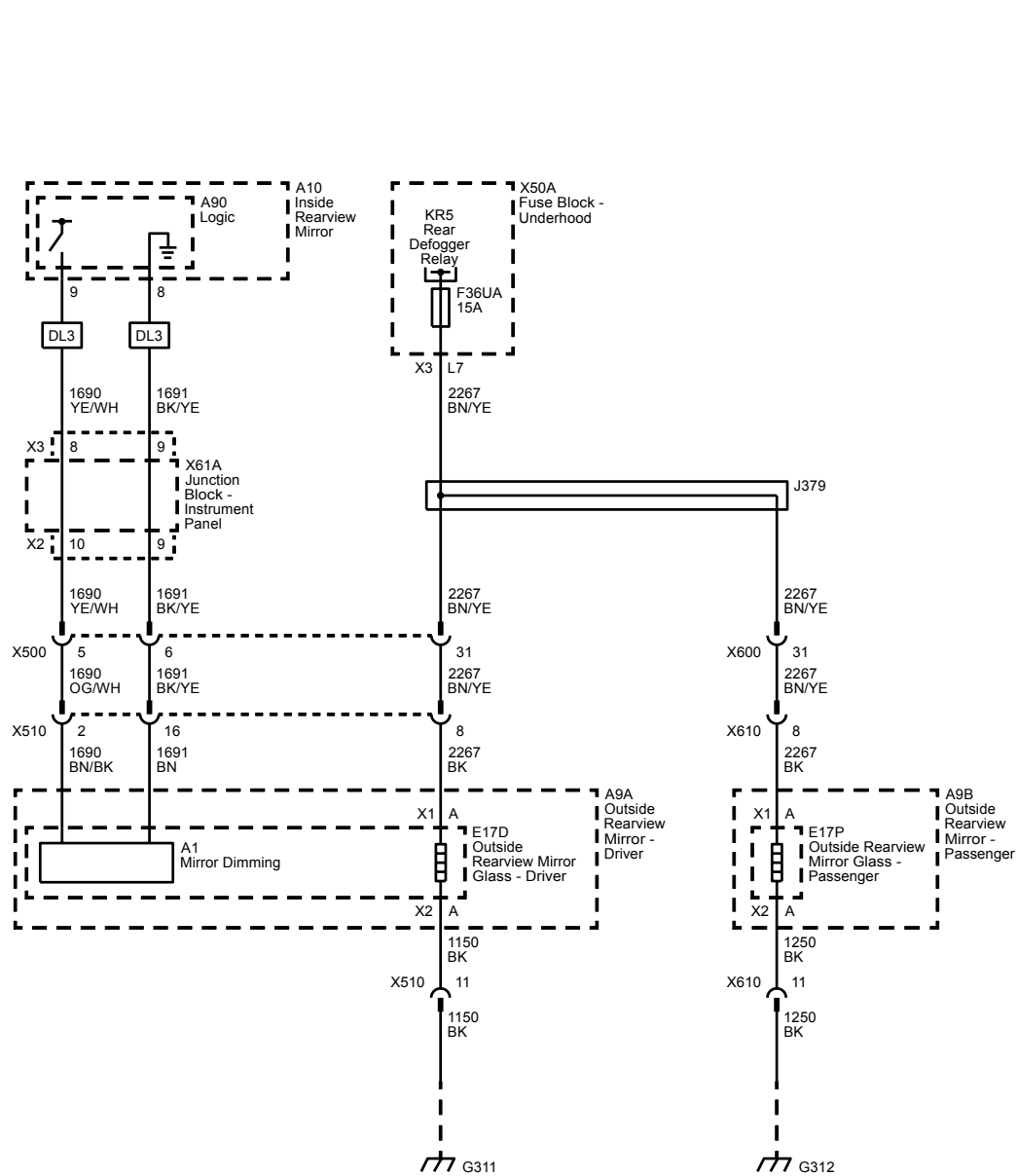






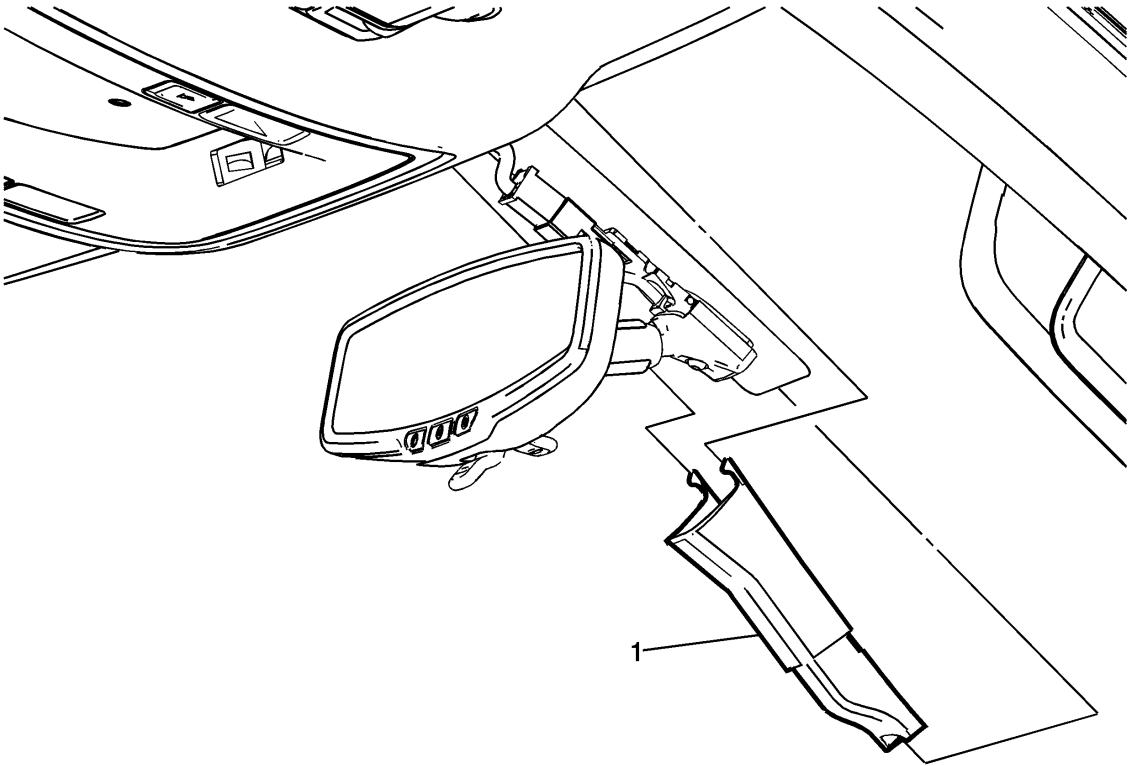
Folding (DL3 or DQS) without (A45)





Repair Instructions

Inside Rearview Mirror Wiring Harness Cover Replacement



Inside Rearview Mirror Wiring Harness Cover Replacement

Callout	Component Name
1	Inside Rearview Mirror Wiring Harness Cover Procedure Slide the bottom cover up into the top cover and gentle pull down and out from window.

Description and Operation

Automatic Day-Night Mirror Description and Operation

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

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

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

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

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

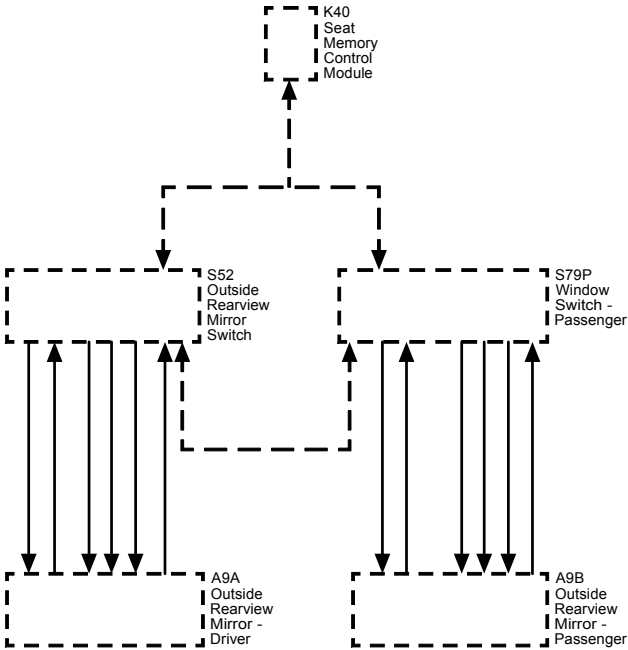
Outside Mirror Description and Operation (With A45)

Power Mirror System Components

The power mirror system consists of the following components:

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

Power Mirrors with A45 Block Diagram



Power Mirror System Controls

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

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

Heated Mirrors

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

Outside Mirror Description and Operation (Without A45)

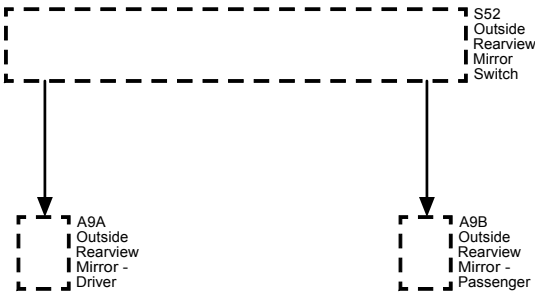
Power Mirror System Components

The power mirror system consists of the following components:

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

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

Power Mirrors Without A45 Block Diagram



Power Mirror System Controls

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

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

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

Power Mirror System Operation

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

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

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

The remainder of the mirror functions operate in the same manner as described above. Placing the mirror control switch in opposing positions, left/right or up/down, will reverse the voltage polarity to the mirror motor, utilizing the same circuits and the mirror will move accordingly.

Heated Mirrors

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

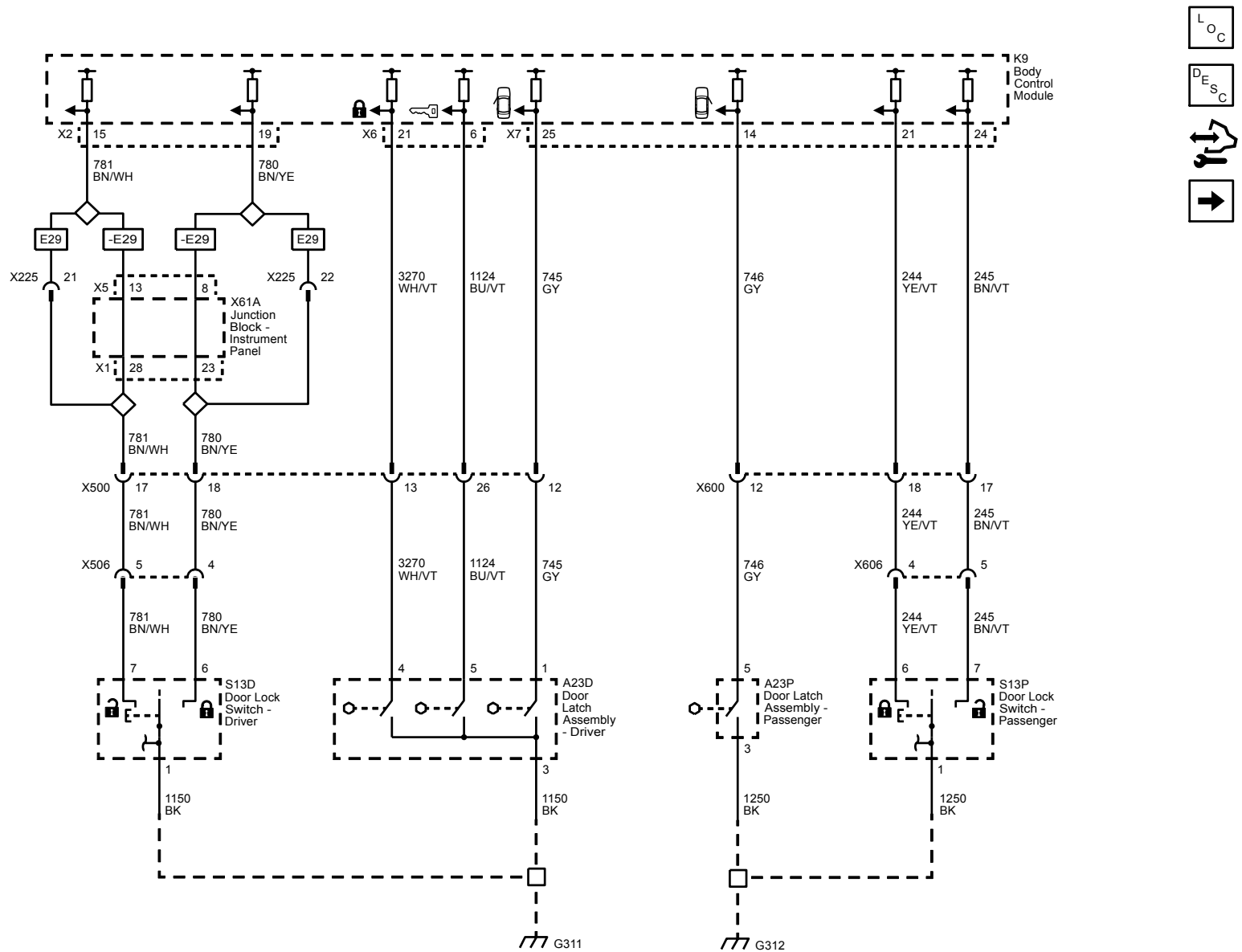
Body Systems

Vehicle Access

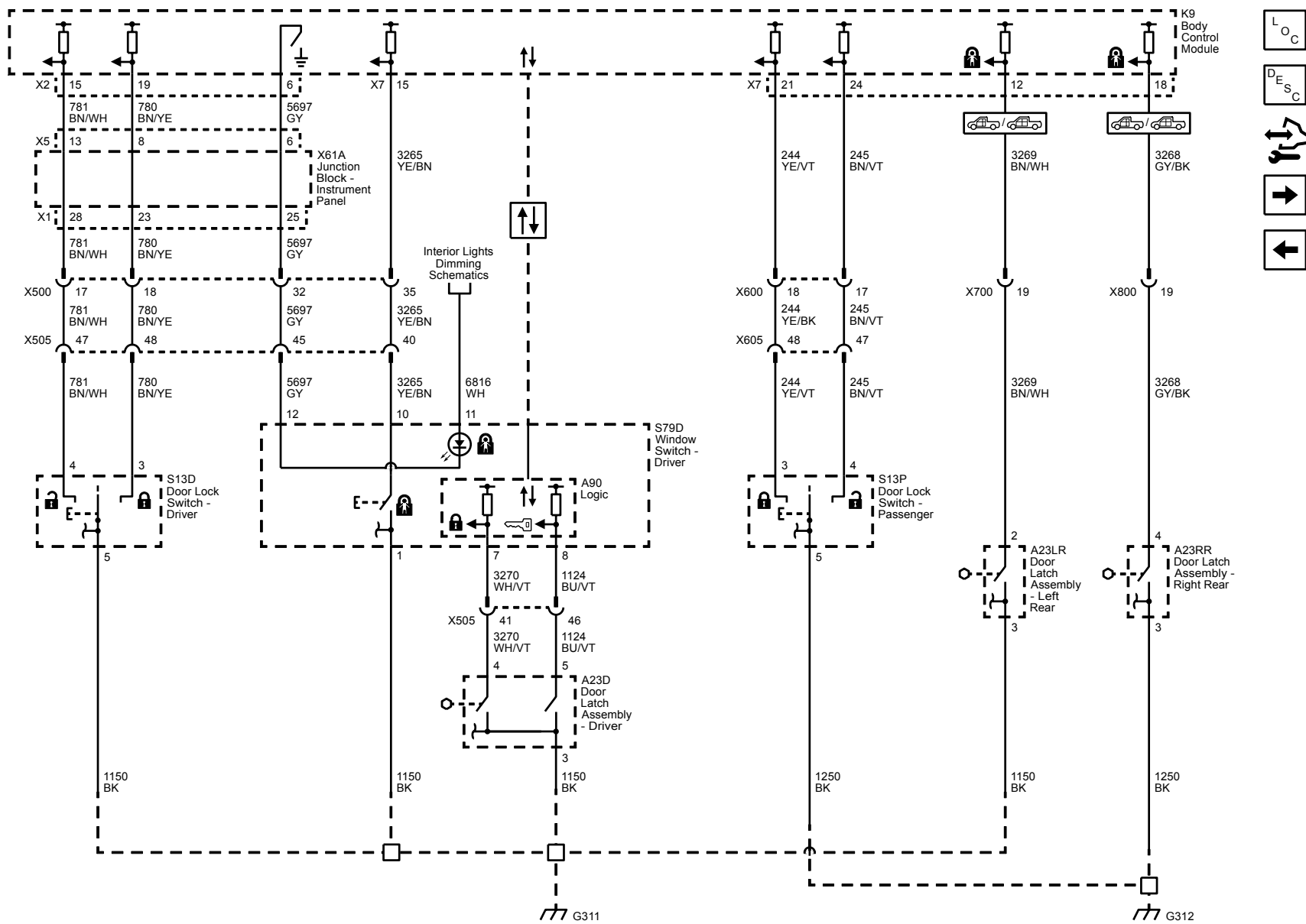
Schematic and Routing Diagrams

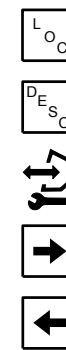
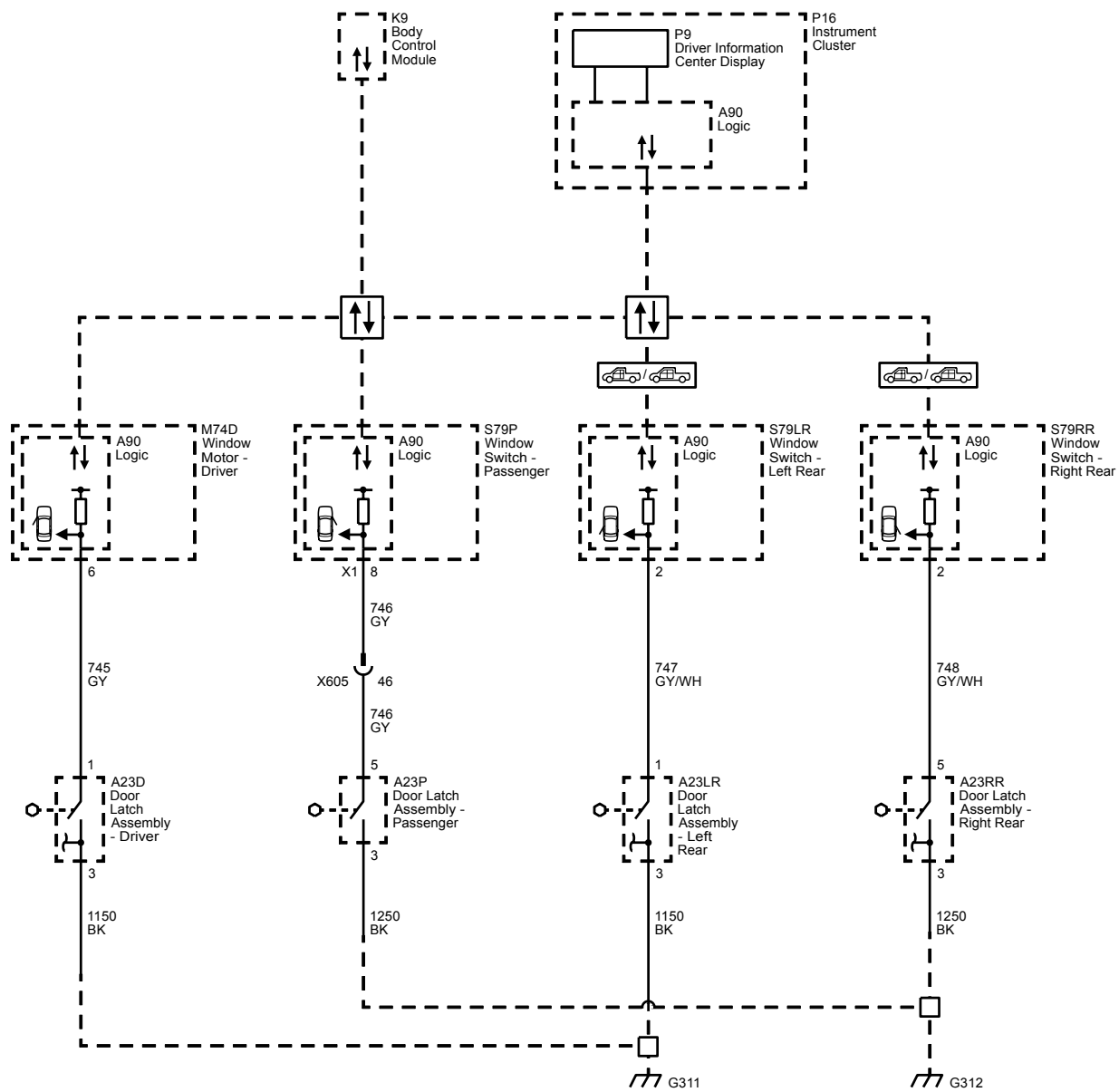
Door Lock/Indicator Schematics

Switches and Indicators (without A31)

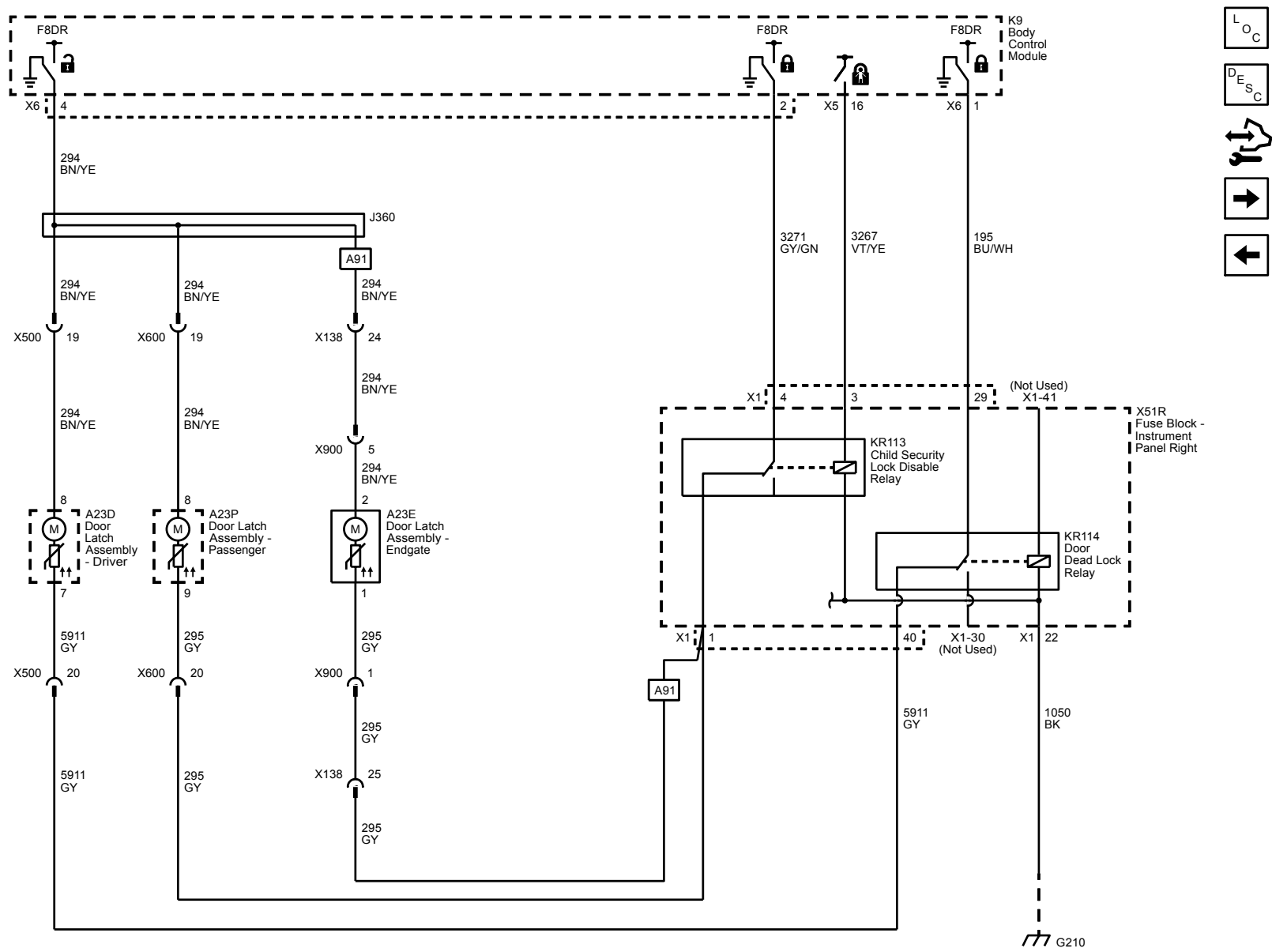


Switches and Child Lock Status (A31)

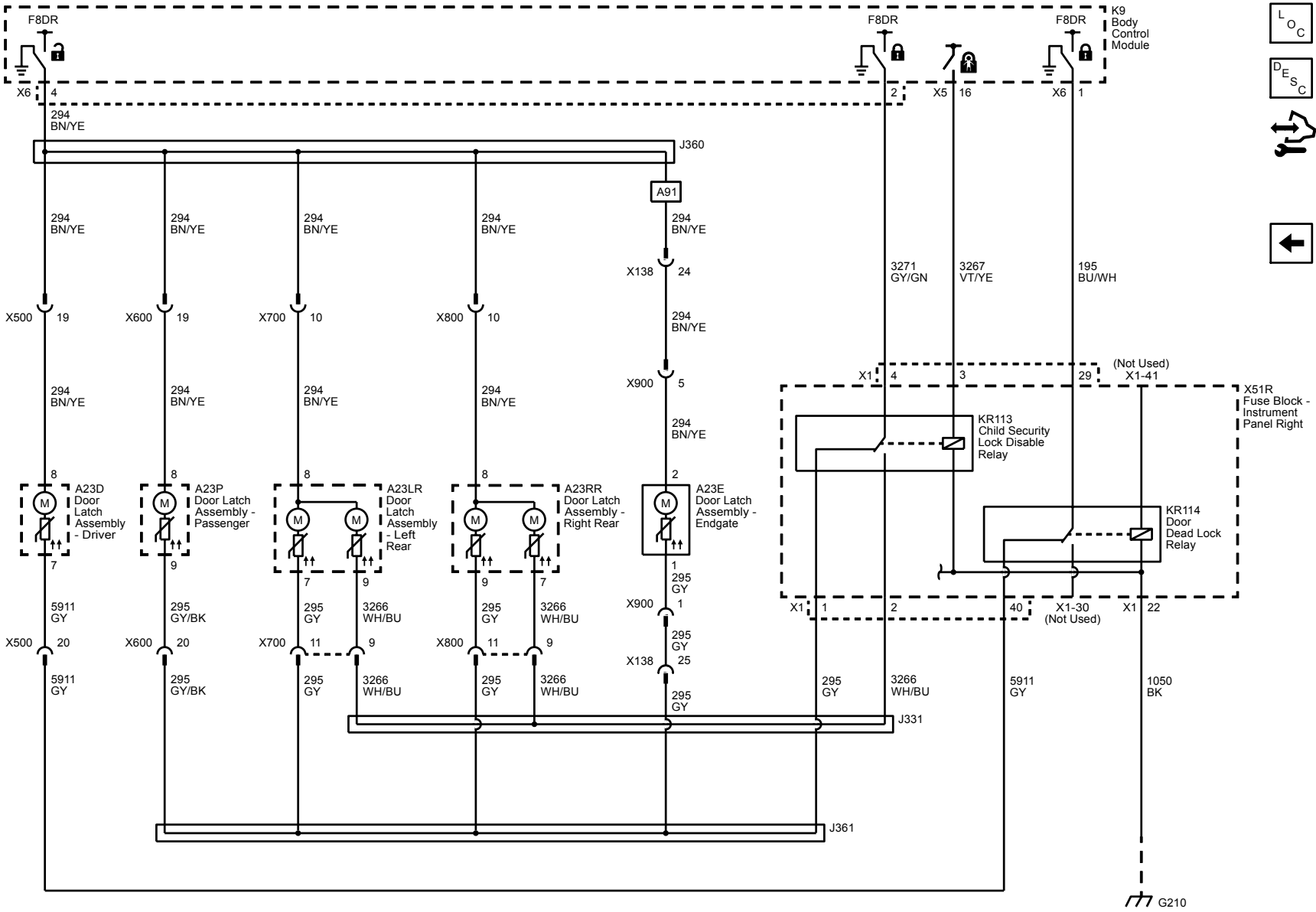




Actuators (2 Door)



Actuators (4 Door)



Description and Operation

Door Ajar Indicator Description and Operation

Door Ajar Indicator System Components

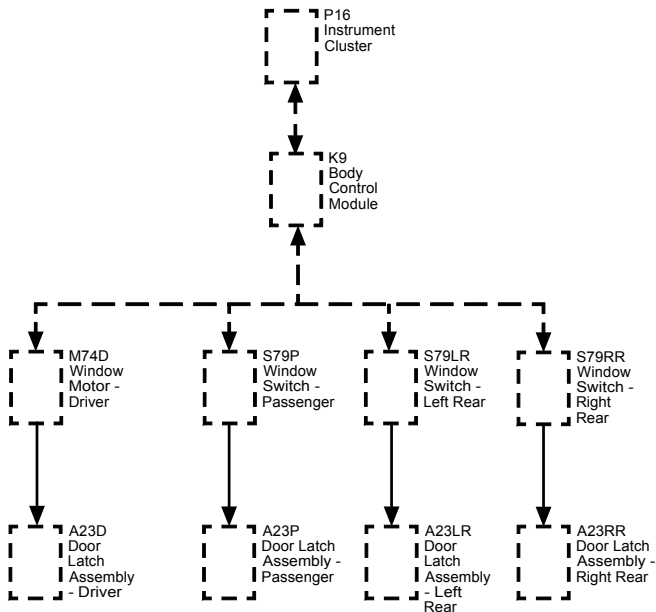
The door ajar indicator system consists of the following components:

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

Door Ajar System

Depending upon if the vehicle is a standard cab, extended cab or crew cab and/or is equipped with express up/down power windows or standard express down power windows or manual crank windows affects how the driver and passenger door ajar signal circuits are configured and monitored.

Door Ajar Indicator With AXG/AED/AEQ Block Diagram



Driver Door Ajar (With AXG)

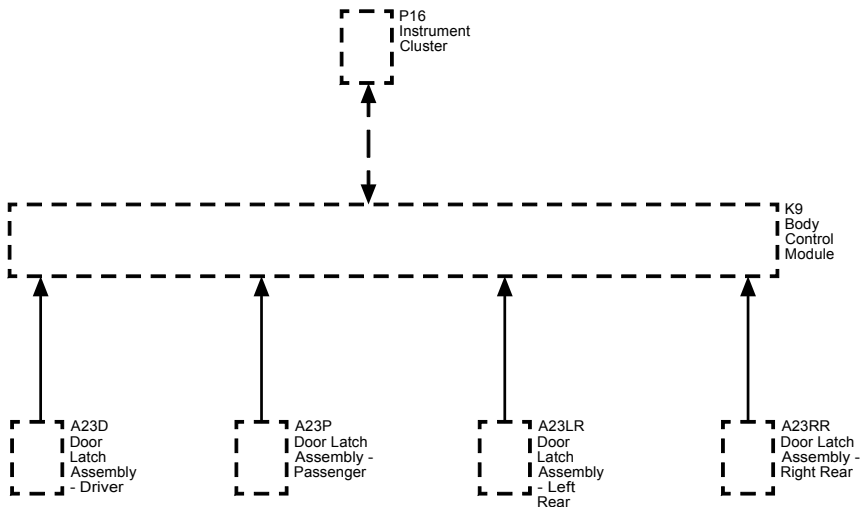
The driver window motor will provide a 12V signal to the driver door ajar switch within the door latch to indicate the status of the door. When the driver door is open, the contract within the ajar switch closes providing a ground part for the signal circuit. The driver window motor will detect the voltage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

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.

Door Ajar Indicator Block Diagram



Driver, Passenger and Rear Doors Ajar (Without AXG, AED or AEQ)

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

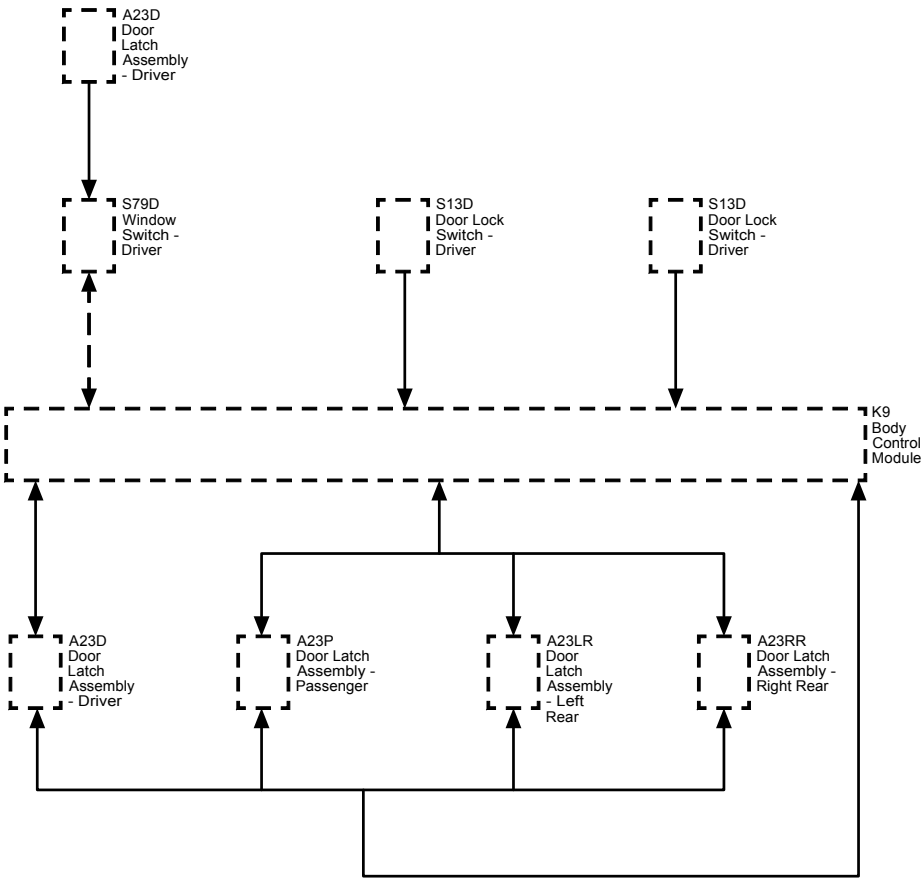
Power Door Locks Description and Operation

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



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.

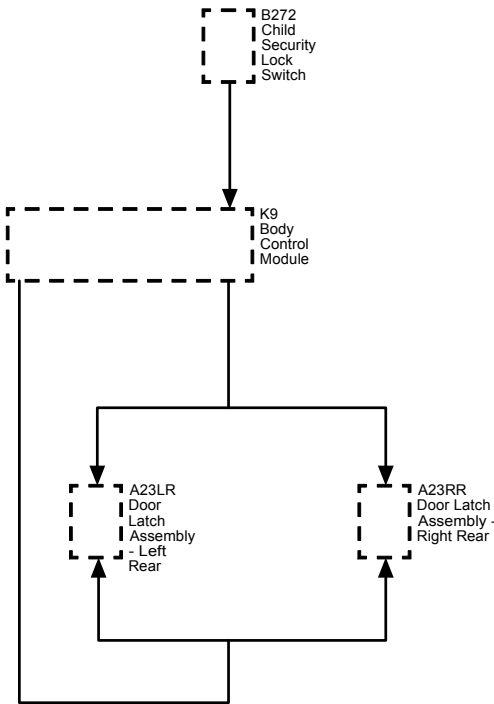
The BCM may also receive a LOCK or UNLOCK command from the keyless entry control module, refer to [Keyless Entry System Description and Operation](#) for information on the keyless entry system

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



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

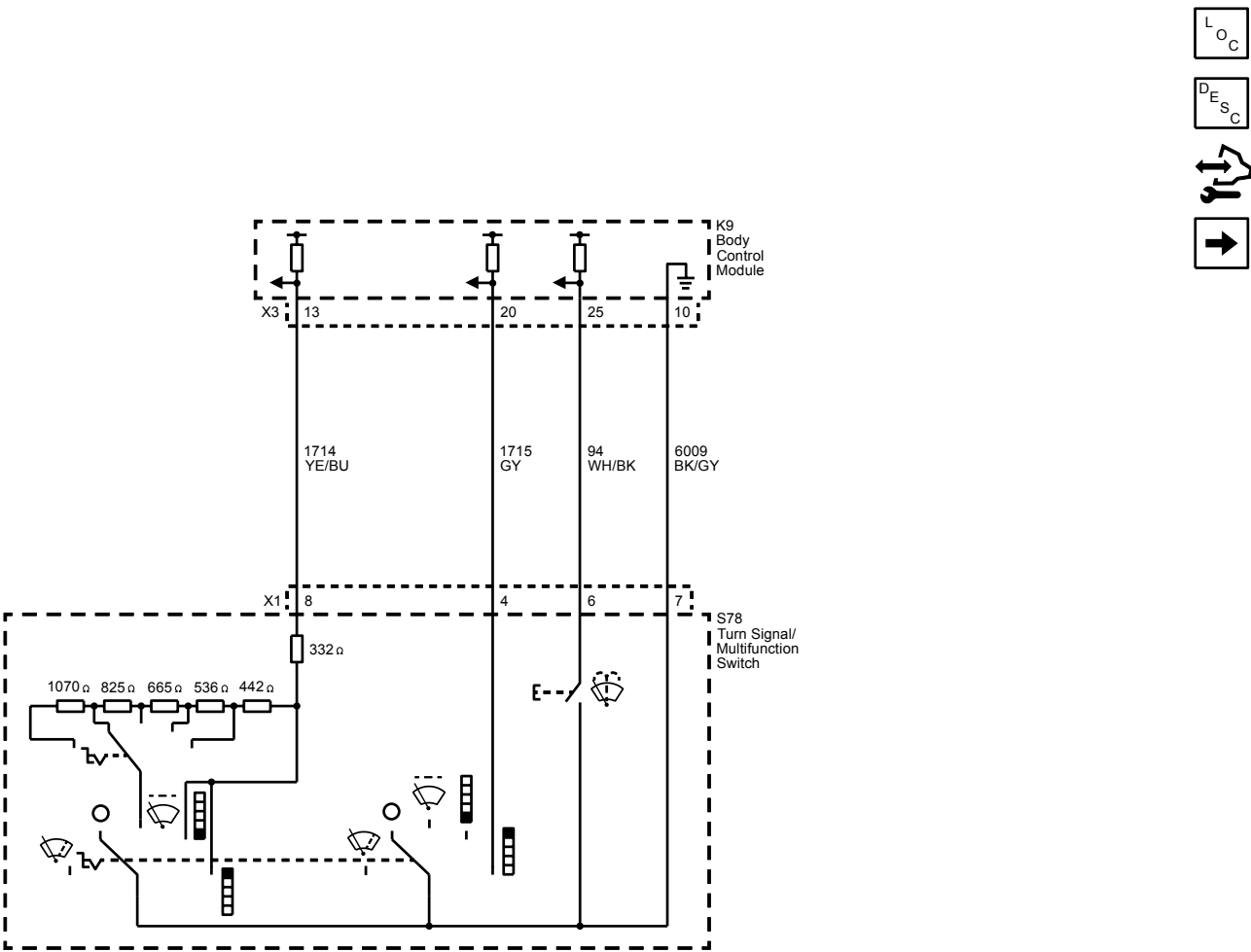
Body Systems

Wipers and Washers

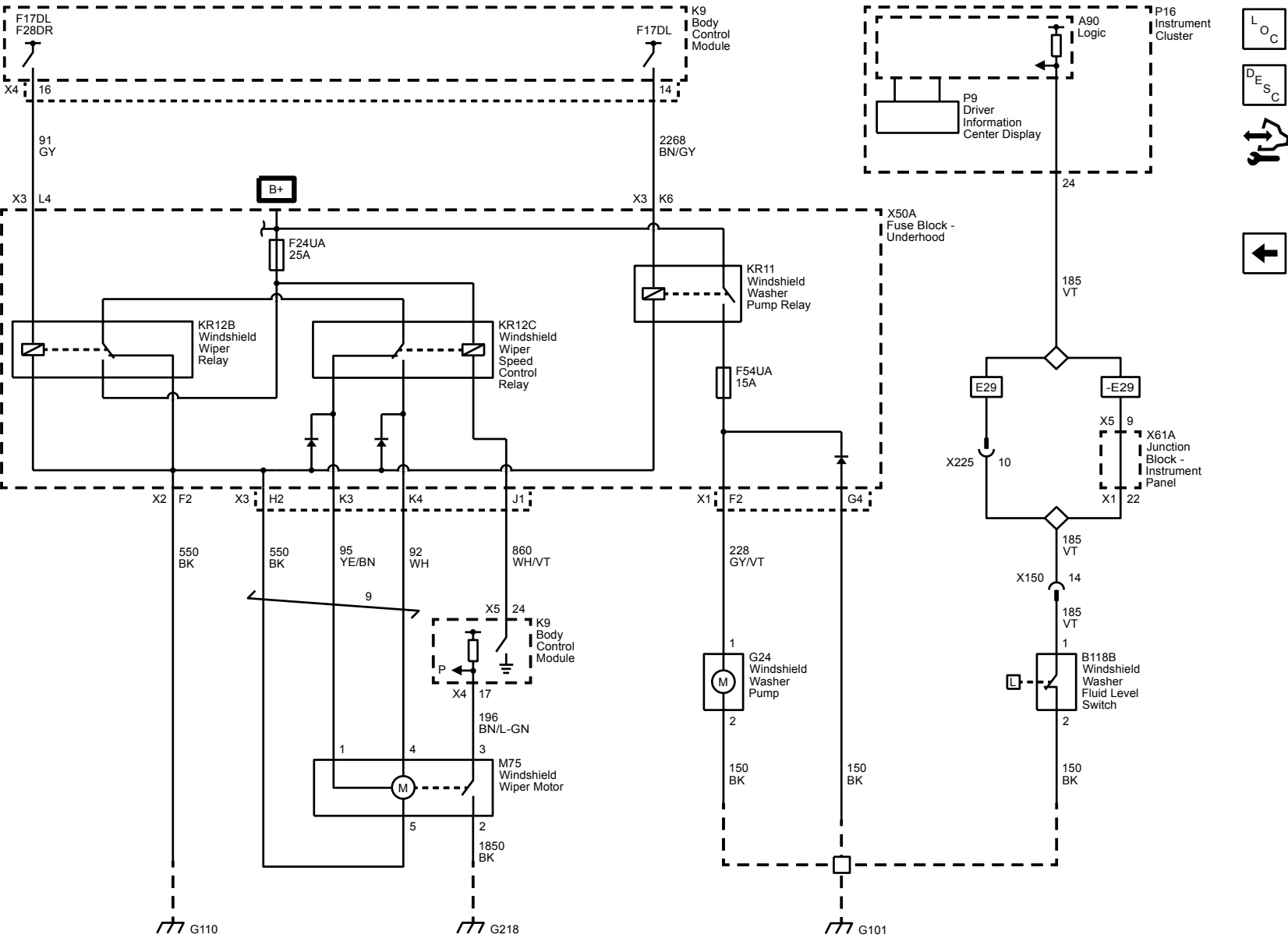
Schematic and Routing Diagrams

Wiper/Washer Schematics

Controls



Wiper Motor and Washer Pump



Description and Operation

Wiper/Washer System Description and Operation

Wiper/Washer System Components

The wiper/washer system consists of the following electrical components:

- Windshield Wiper Relay
- Windshield Wiper Speed Control Relay
- Windshield Washer Pump Relay
- Windshield Washer Fluid Pump
- Windshield Wiper Motor
- Window Wiper/Washer Switch
- Windshield Wiper Motor Fuse
- Windshield Washer Fluid Pump Fuse
- Body Control Module

Windshield Wiper System

The body control module (BCM) determines the front wipe/wash system mode of operation by monitoring several signals from the front wipe/wash switch as indicated in the wiper switch.

The front wipe/wash switch receives a reference ground signal from the BCM. Each input of the BCM provides a switched battery pull-up for each front wiper/washer switch output signal it receives. All the BCM inputs are recognized as active when the wiper switch provides a path to the referenced ground signal. The first signal received by the BCM is the result of 6 resistors in the front wiper switch configured as a resistor ladder network. This signal is connected to a BCM analog to digital input. Depending on the function selected (High, Low, Intermittent 1 thru 5, Mist, Off), the front wiper control switch connects a different set of resistors into the circuit resulting in different voltages appearing on the BCM A/D input. By monitoring this voltage, the BCM determines how to control the wiper motor On/Off Relay. It should be noted that High, Low, and Mist all have the same value on this signal circuit. The second signal received from the front wiper switch is active only when the front wiper switch is in the high speed wiper position. When the wiper switch is not in the high speed position, the switch is open and the signal circuit is pulled to battery by the BCM. When the wiper switch is in the high speed position, the switch pulls the circuit low. The BCM determines how to control the Wiper high/low speed relay from this input. The third signal received from the front wiper switch is from the momentary windshield wash control switch. When the washer switch is not active the switch is open and the signal circuit is pulled to battery by the BCM. When the washer switch is active, the switch pulls the circuit low. The BCM controls the windshield wash and windshield wash activated wiper operation based on this input.

The BCM controls front wiper motor operation through two output signals and the monitoring of one input signal. The two outputs (one high side drive, one low side drive) are used to control two external wiper motor relays: front wiper motor on/off relay: which provides the wiper motor with battery power when it is activated by the high side drive signal (switched battery) from the BCM. When left deactivated, the normally closed contacts provide a ground to the wiper motor. Wiper high/low speed relay: when activated by a low side drive signal (ground) from the BCM, it switches the power supplied by the wiper motors on/off relay to the motors high speed input. When left deactivated, the normally closed contacts connect the power supplied by the wiper motors on/off relay to the motors low speed input. The input used by the BCM is from the park switch located in the wiper motor assembly. When the wiper blades are not in the park position, the wiper park switch is open and the circuit is pulled up to battery by the BCM. When the wiper blades are in the park position at the bottom of the glass, the wiper park switch closes to ground pulling the park signal circuit low.

To initiate low speed operation, the BCM only energizes the front wiper motor on/off relay. This allows battery voltage from the wiper fuse to be applied through the switched contacts of the wiper motor on/off relay, through the normally closed contacts of the wiper high/low speed relay, to the low speed control circuit of the windshield wiper motor.

Redundant high speed switch pass through. The BCM provides redundant circuitry which places battery power on its wiper motor on/off relay output with activation of its low assertion high speed wiper switch input. The BCM shall be capable of doing this, even if the module has lost all microprocessor control. This redundant circuit shall supply power while in the RUN and CRANK power modes. however; while in the CRANK power mode, the pass through shall only be active if the BCM is NOT in a computer operating properly state.

To initiate high speed operation, the BCM energizes both the front wiper motor on/off relay and the wiper high/low speed relay . This allows battery voltage from the wiper fuse to be applied through the switched contacts of the wiper motor on/off relay, through the switched contacts of the wiper high/low speed relay, to the high speed control circuit of the windshield wiper motor.

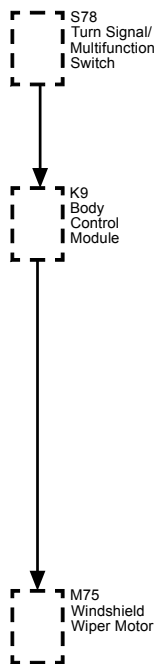
Parking the wiper motor. In order to perform an accurate read of the park switch and to ensure the wipers will come to rest while still in the park position, parking of the wipers only occurs while in a low speed wiper mode. This requires that if the wipers are performing a high speed wiper operation at the time they are required to park, the BCM shall transition the Wipers to low speed by deactivating the wiper high/low relay before attempting to park. In order to park the wipers, the BCM monitors the park circuit until the park switch pulls the park circuit to ground. At this time, the BCM will immediately deactivate the wiper motor on/off relay. The relay contacts will switch back to their normally closed position and will apply ground to the wiper motor power inputs through the normally closed contacts of the wiper high/low relay. This deactivates and dynamically brakes the wiper motor in the park position. When the wiper switch is turned to the OFF position while the wiper motor is somewhere in mid-cycle, the BCM will continue to operate the motor until the wipers reach the park position. If the BCM is running the wiper motor and does not see a state transition of the park switch after 8 s, the wipers will stop immediately when the wiper switch is turned to OFF. If the ignition is turned OFF while the wipers are in mid-cycle, the wipers will stop immediately, regardless of position. The BCM will park the wipers next time the ignition is turned ON.

The windshield wiper system MIST operation is identical to LOW speed operation, except that the MIST switch is a press and release type switch. When the wiper switch is moved to the MIST position and released, low speed wiper motor operation is started and will continue until 1 cycle is complete. If the wiper switch is moved to the MIST position and held, the wiper motor will operate in the LOW speed mode until the switch is released.

Windshield wiper intermittent operation is a low speed wiper motor function with a variable delay interval between the wiper motor cycles. The duration of the delay is controlled by the front wiper control switches intermittent 1 thru intermittent 5 settings. The wiper operation is as follows

1. The BCM will initiate a single wipe by activating its front wiper ON/OFF relay output.
2. At the completion of a single wipe, the BCM will park the wipers as described above.
3. The BCM will then pause the wipers in their park position for the time duration associated with intermittent delay switch setting.
4. When the delay time expires repeat Steps 1 and 3 until the system is turned off or taken out of intermittent mode. If the wiper switch is moved from a longer delay interval to a shorter delay interval, the BCM will command an immediate wipe cycle and reset the delay timer to the shorter delay interval.

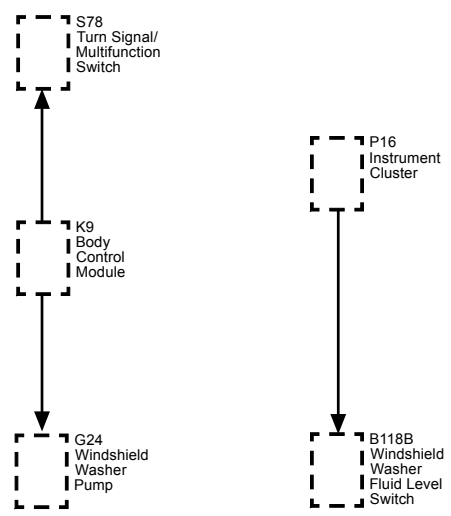
Intermittent wiper operation may be vehicle speed sensitive. When enabled, the speed compensated intermittent feature causes the intermittent wiper delay intervals to become shorter as a function of increased speed. As vehicle speed is reduced the intervals will become closer to the predetermined



Windshield Washer System

The BCM controls the windshield wash operation and windshield wash activated wiper operation. When the BCM detects the activation of the momentary windshield wash control switch, it activates its washer pump relay drive output which supplies battery power to the coil of the washer pump relay. This energizes the relay, which switches battery power to the pump motor. The BCM will also activate continuous low speed windshield wipes as described above. Upon deactivation of the windshield wash control switch, the wiper control module (BCM) shall deactivate the wash motor and will also park the wiper motor as described above unless the drip wipe feature is enabled. On some vehicles the drip wipe feature will be enabled and cause the system to provide additional wiping of the windshield after the switch has been released and fluid is no longer being applied. The front wash feature may attempt to detect a stuck switch. When enabled, activation of the wash feature shall be limited to 10 seconds.

On vehicles with the Rear Wash feature a single reversing wash motor may be utilized for both the front and rear wash operation. In this system the wash motor is operated in one direction to spray fluid on the front windshield and then operated in the reverse direction to spray fluid on the rear window. The BCM Controls the reversing wash motor through two High Side Drive outputs. One controls the Front Wiper Motor Relay and one controls the Rear Wiper Relay.



Brakes

Park Brake

Description and Operation

Park Brake System Description and Operation

System Component Description

The park brake system consists of the following:

Park Brake Pedal Assembly: Receives and transfers park brake system apply input force from driver to park brake cable system. Releases park brake system apply force on vehicles without a park brake release handle through the partial application of the park brake pedal.

Park Brake Release Handle Assembly (If equipped): Releases applied park brake system when pulled.

Park Brake Cables: Transfers input force received from park brake pedal, through park brake cable equalizer, to park brake apply lever.

Park Brake Cable Equalizer: Evenly distributes input force to both the left and right park brake units.

Park Brake Apply Lever: Multiplies and transfers input force to park brake actuator.

Park Brake Actuator/Adjuster: Uses multiplied input force from apply lever to expand park brake shoe toward the friction surface of the drum-in-hat portion of the rear brake rotor.

Threaded park brake actuators are also used to control clearance between the park brake shoe and the friction surface of the drum-in-hat portion of the rear brake rotor.

Park Brake Shoe: Applies mechanical output force from park brake actuator to friction surface of the drum-in-hat portion of the rear brake rotor.

System Operation

Park brake apply input force is received by the park brake pedal assembly being depressed, transferred and evenly distributed, through the park brake cables and the park brake cable equalizer, to the left and right park brake apply levers. The park brake apply levers multiply and transfer the apply input force to the park brake actuators which expand the park brake shoe toward the friction surface of the drum-in-hat portion of the rear brake rotor in order to prevent the rotation of the rear tire and wheel assemblies. The park brake release handle assembly, if equipped, or the partial application of the park brake pedal releases an applied park brake system when it is pulled rearward.

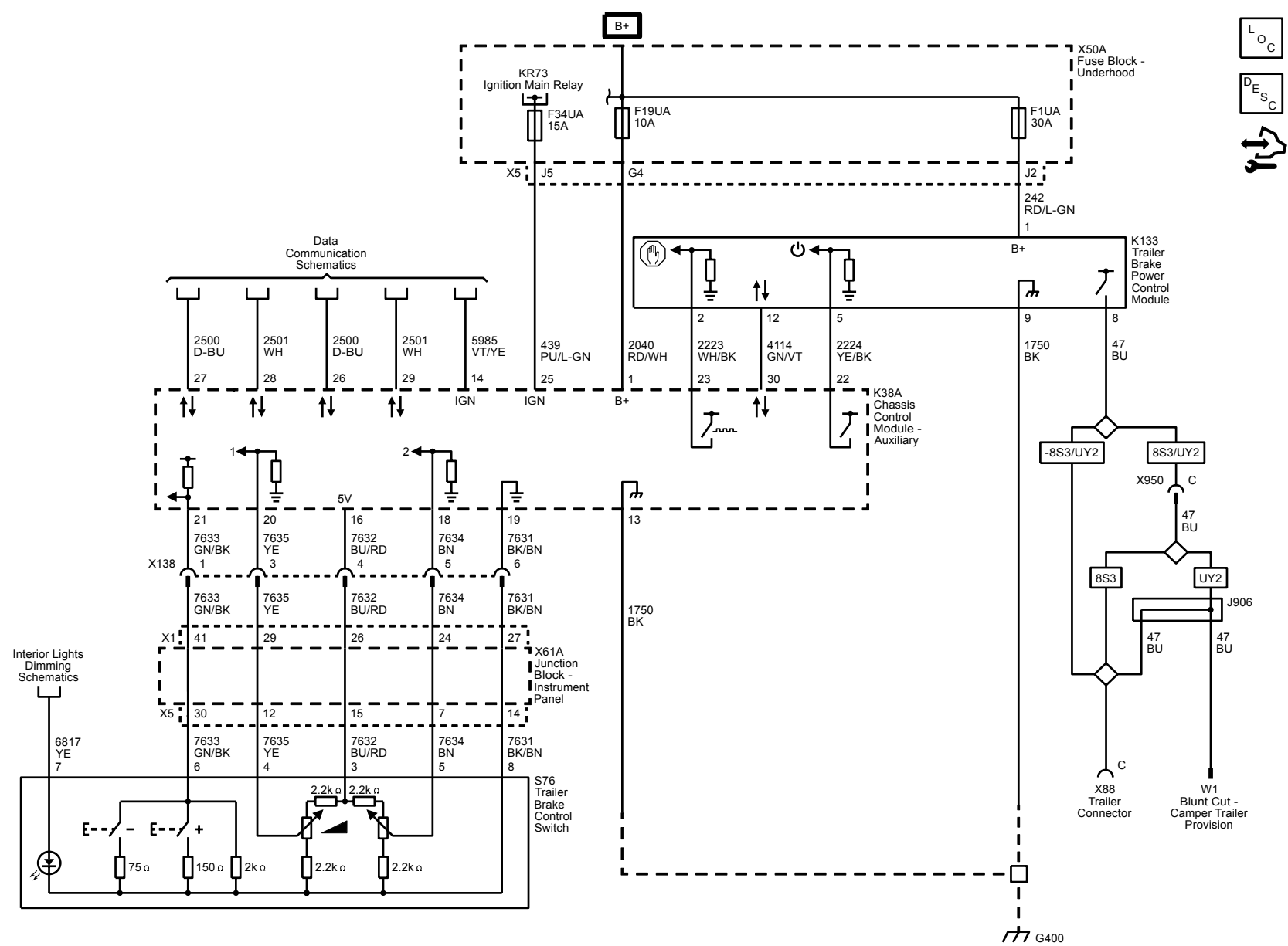
Brakes

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:

- K38 Chassis Control Module
- 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

The K38 Chassis Control Module (CCM) 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 if 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 if 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.

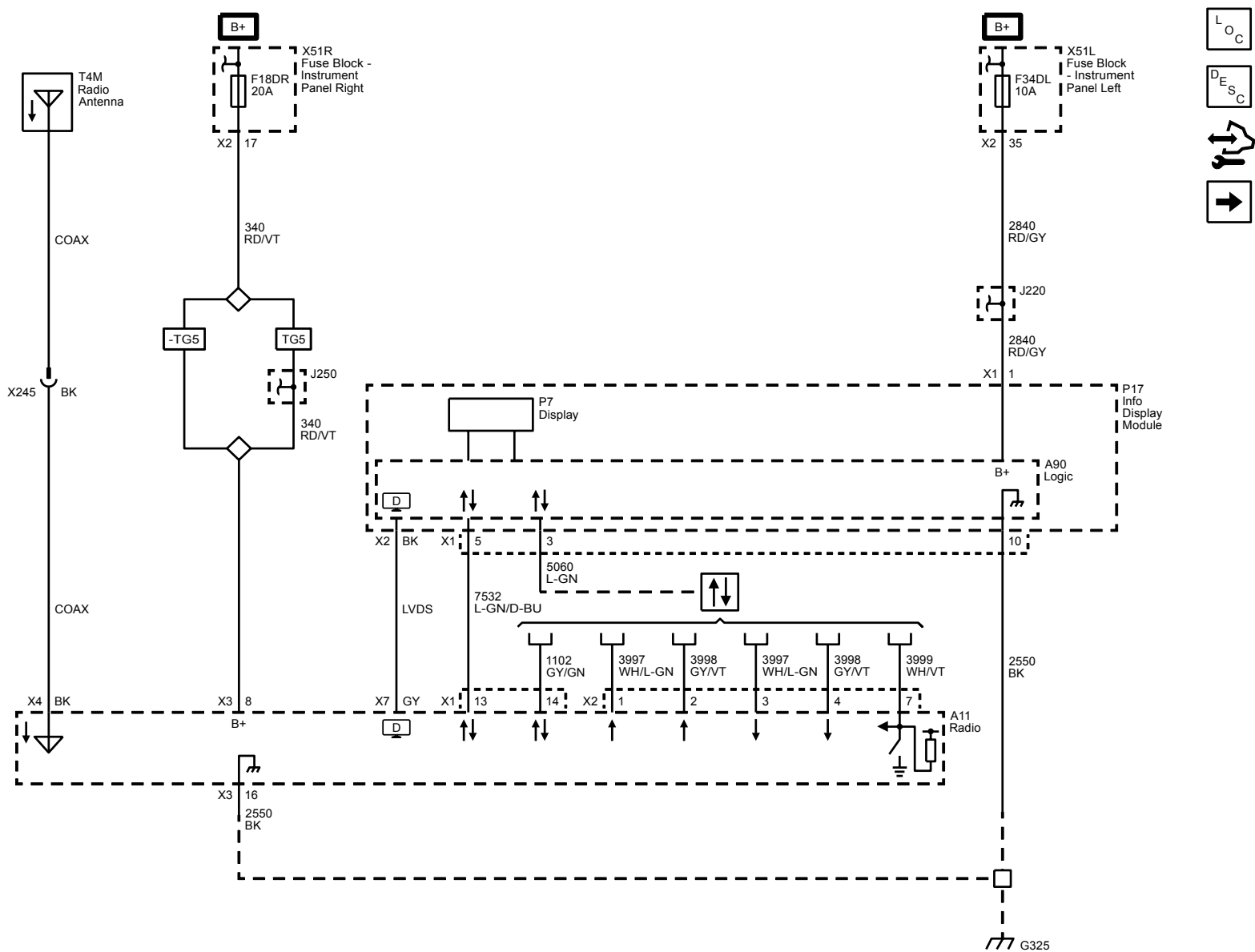
Driver Information and Entertainment

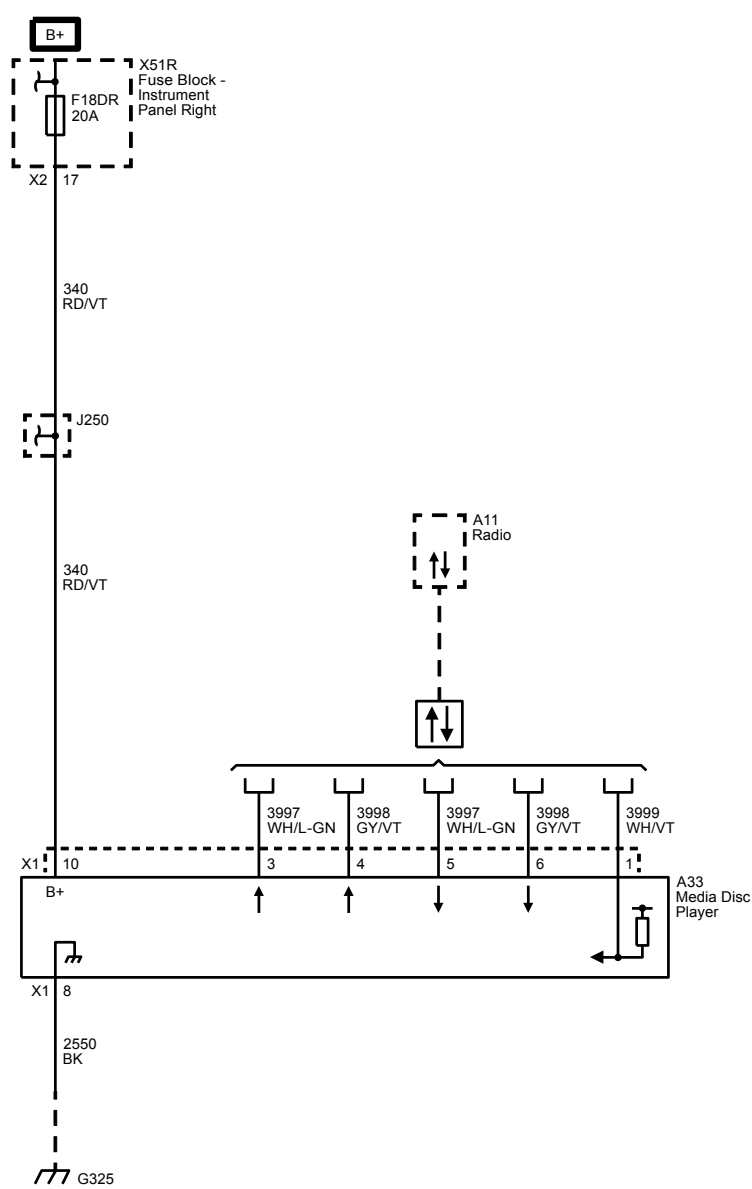
Cellular, Entertainment, and Navigation

Schematic and Routing Diagrams

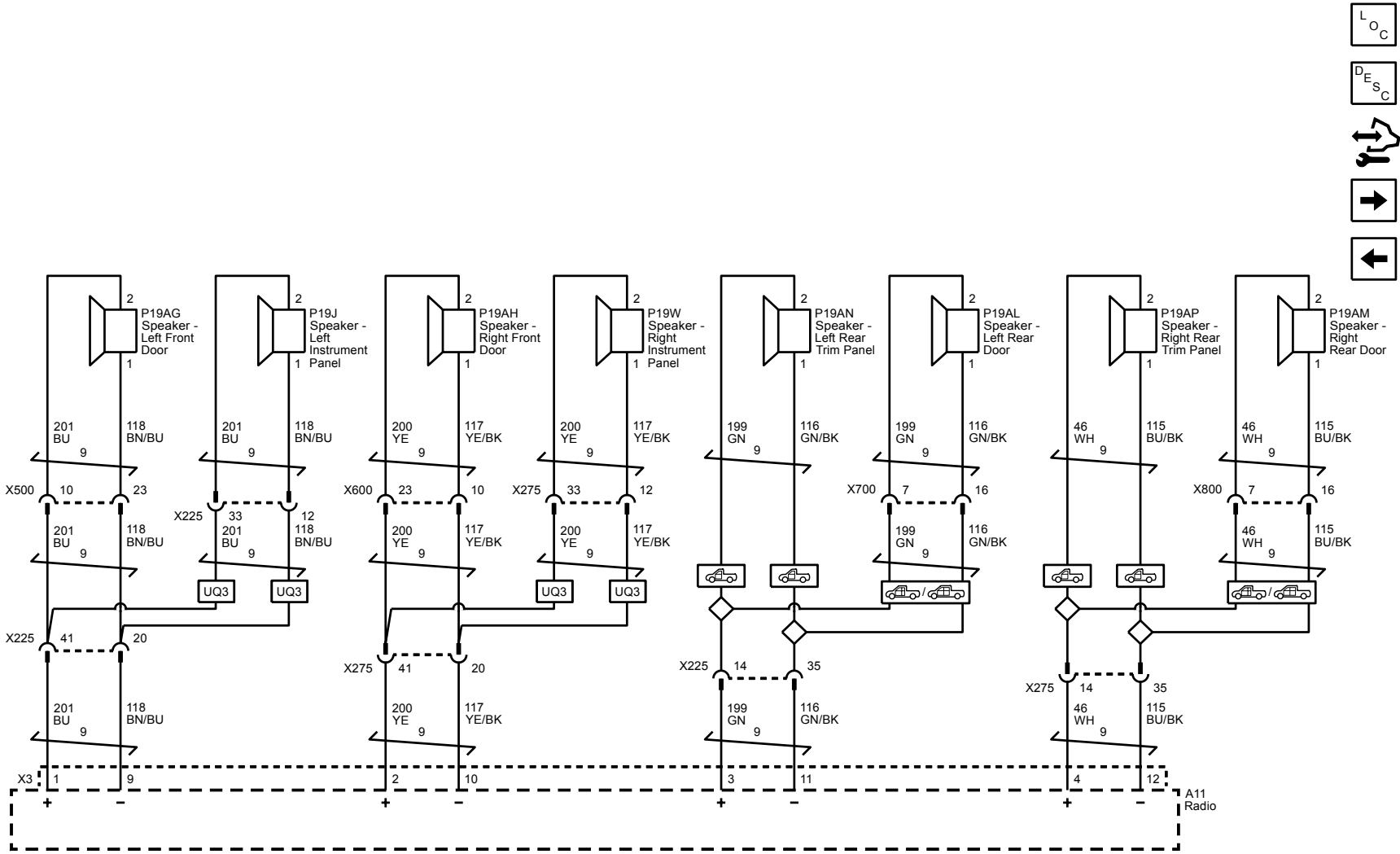
Radio/Navigation System Schematics (IO3)

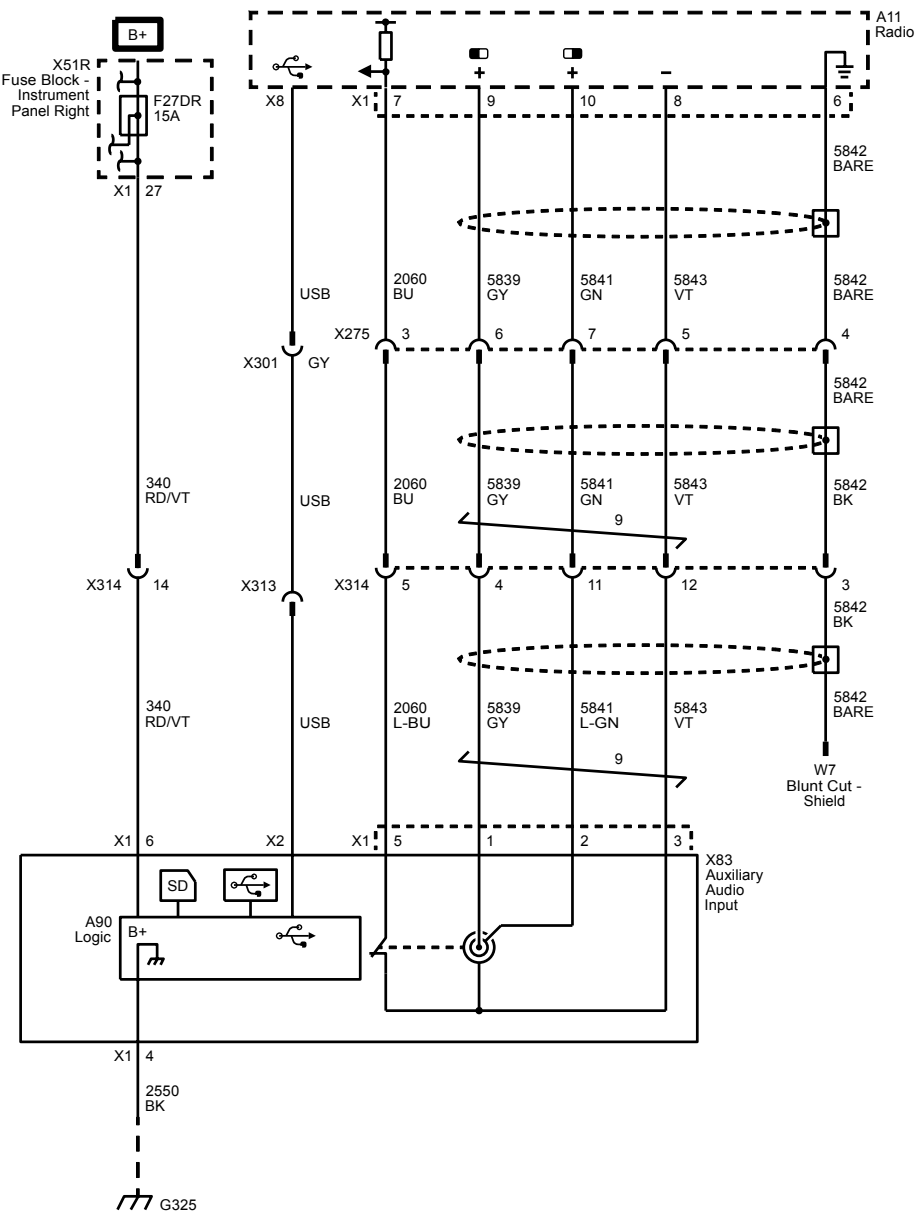
Radio Power, Ground, Serial Data and Antenna

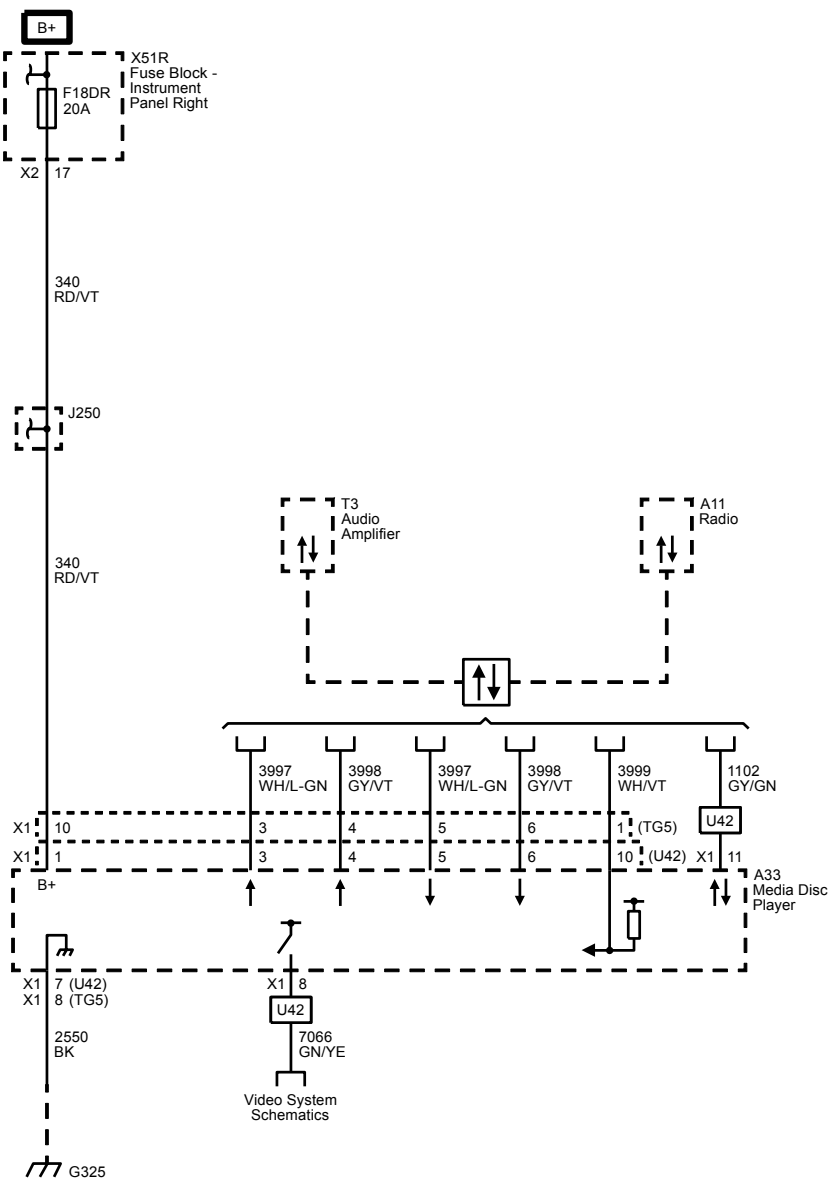


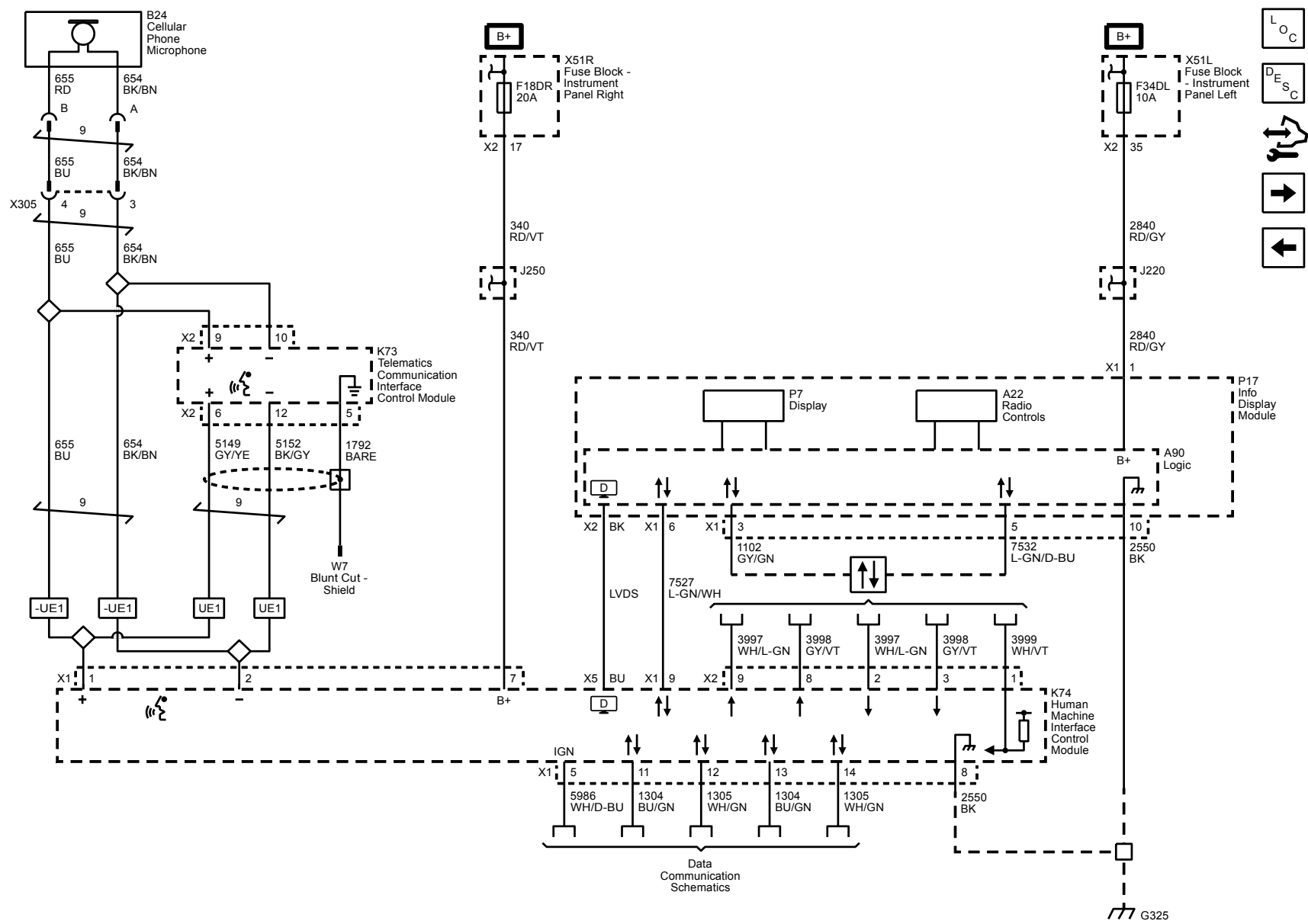


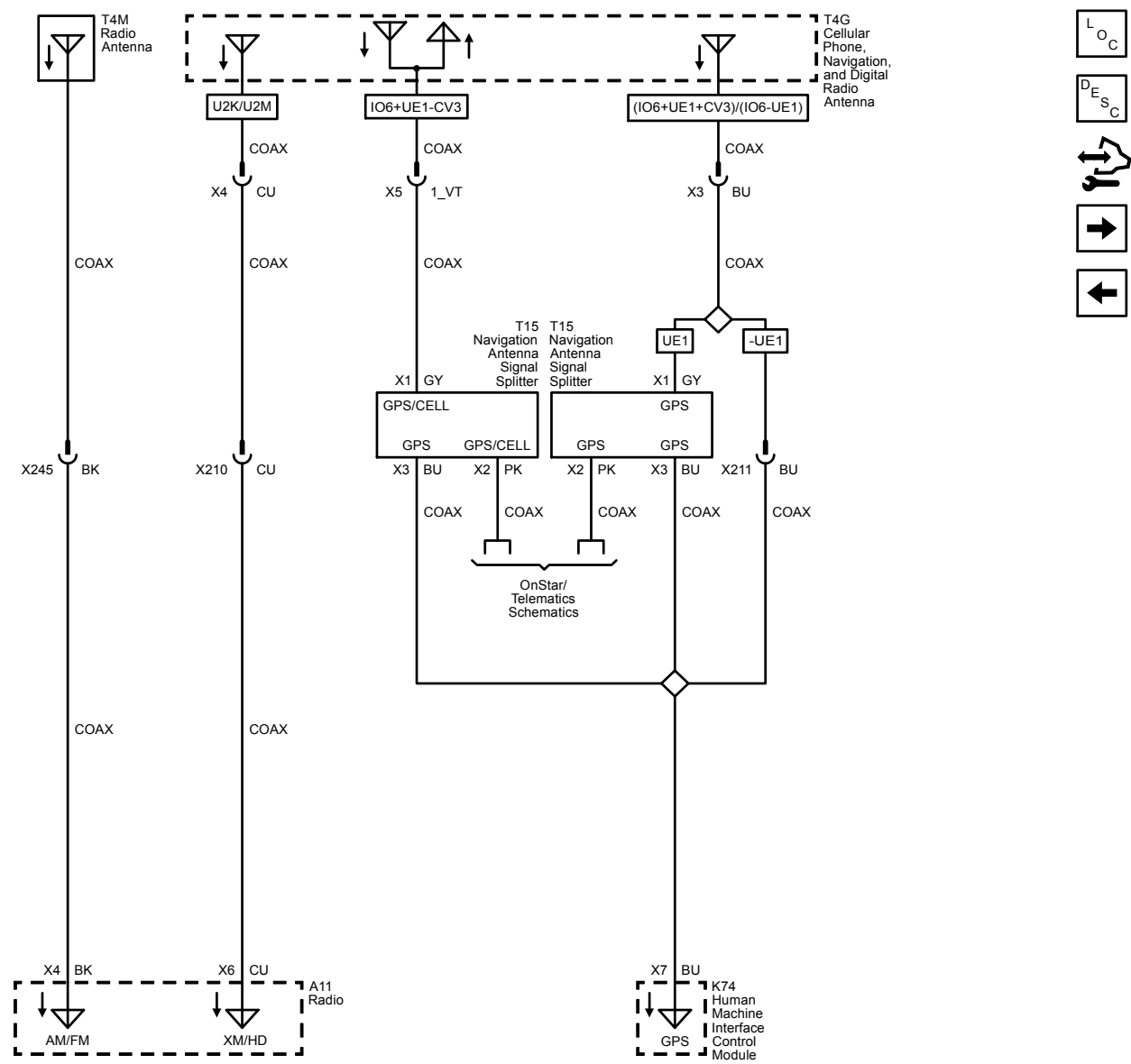
Speakers (UQ3 or UQ5)

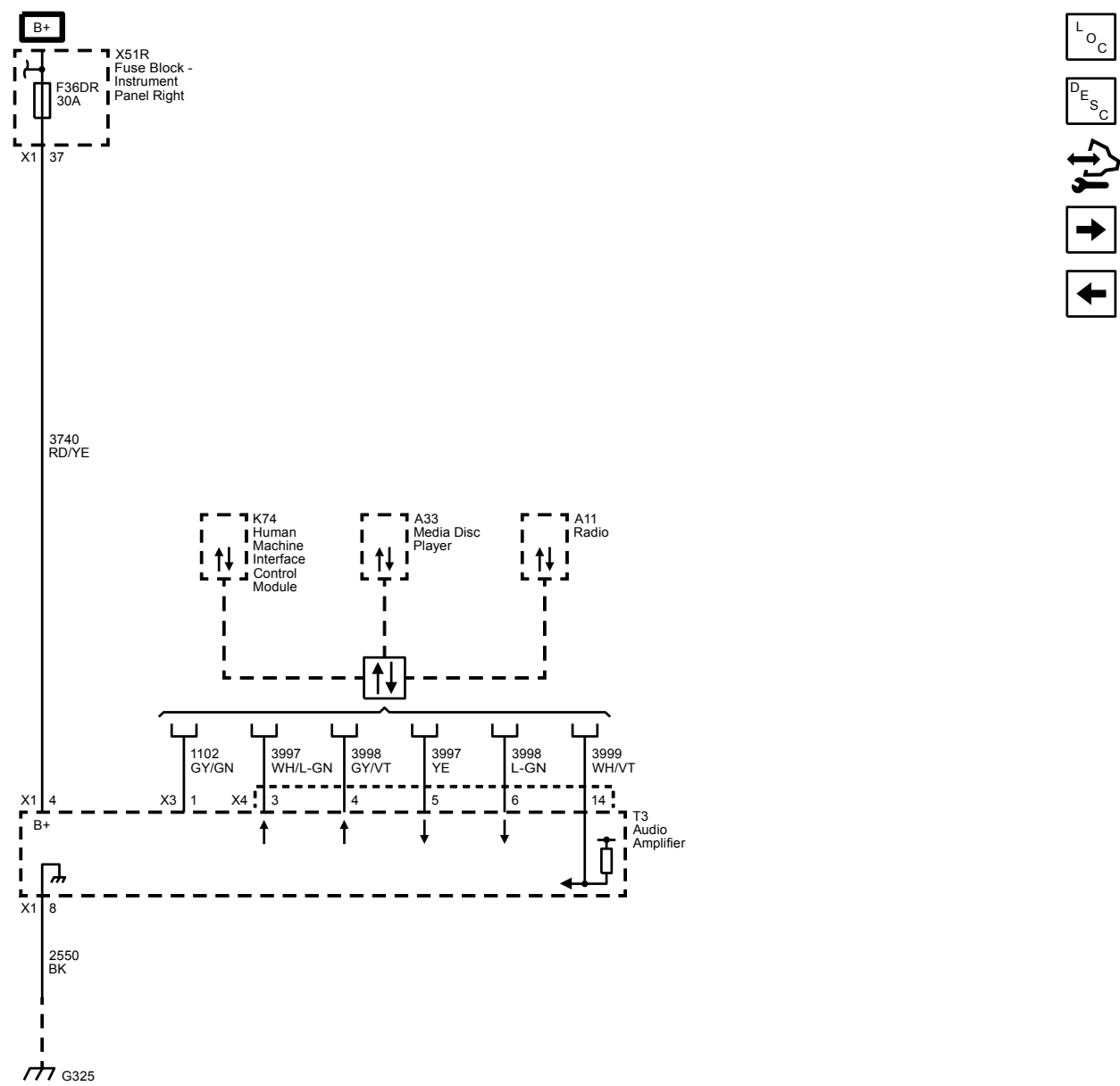




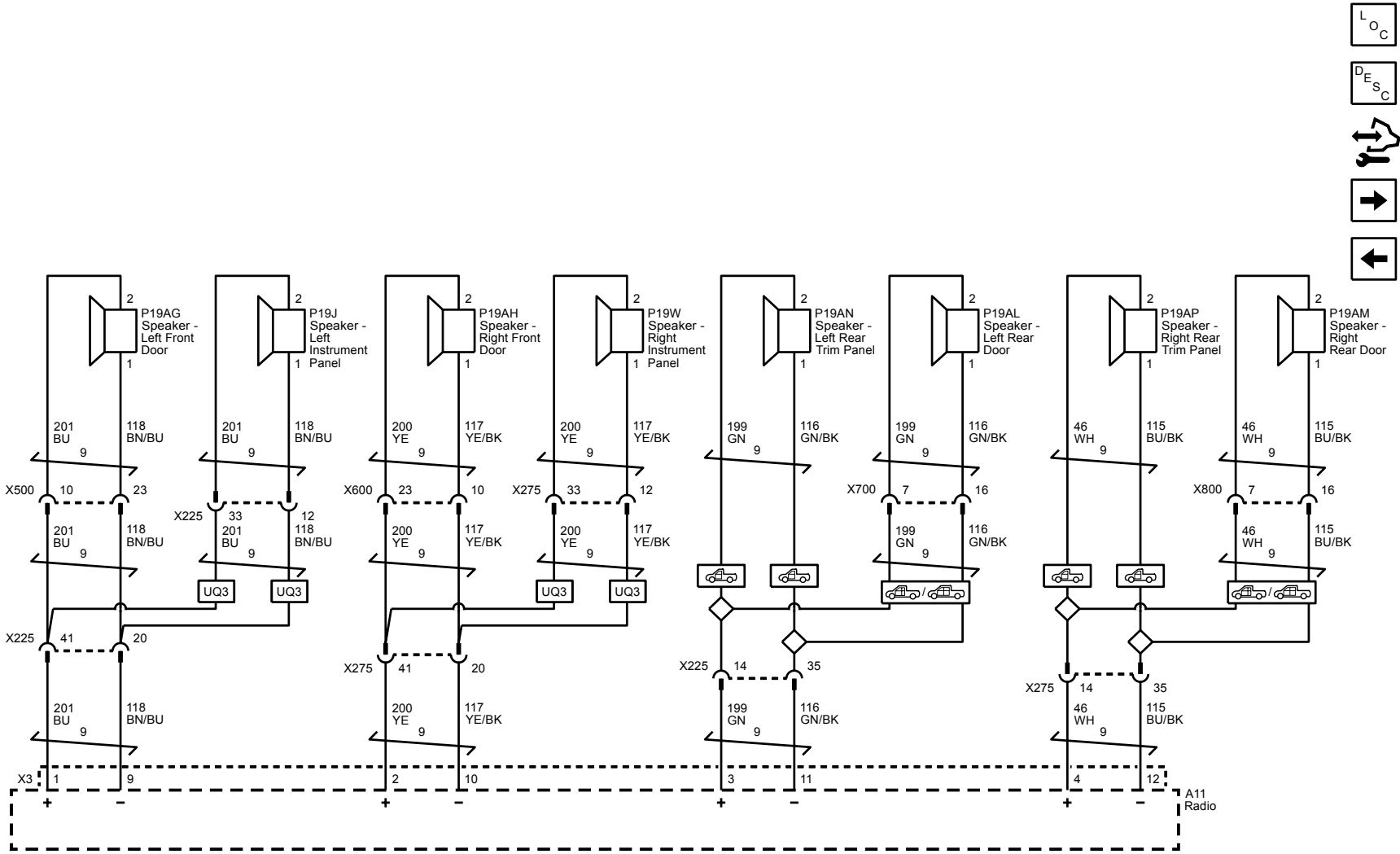


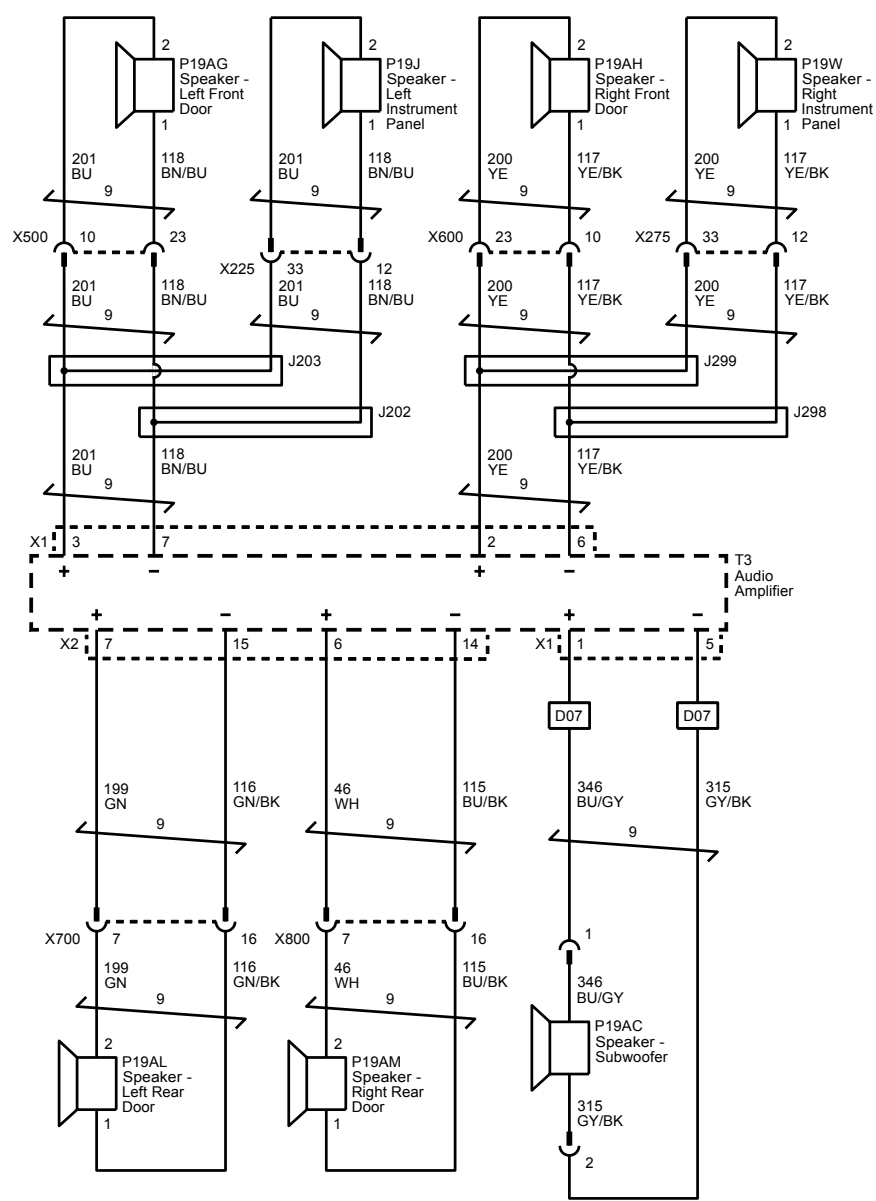


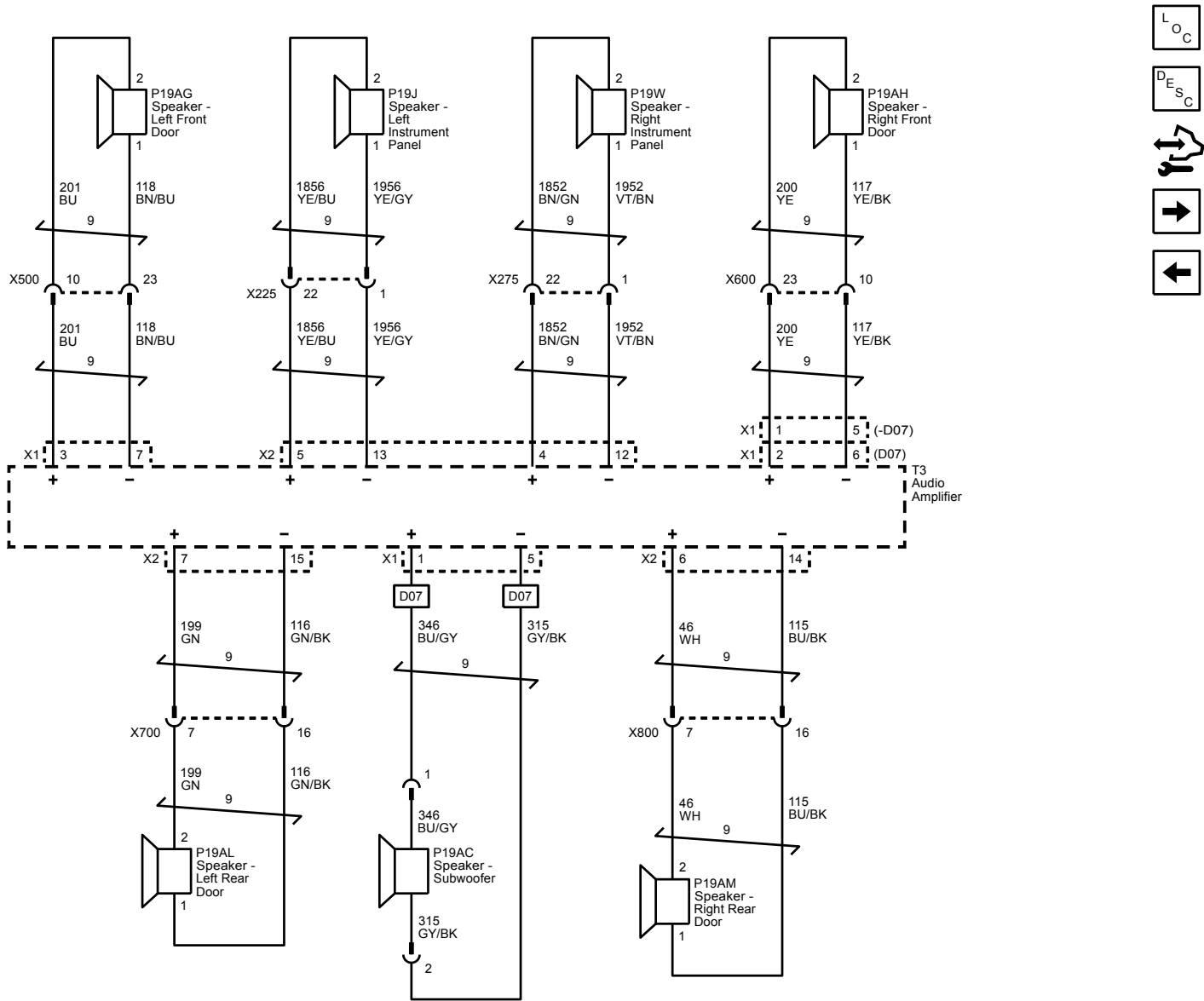




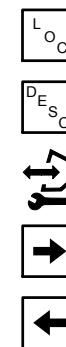
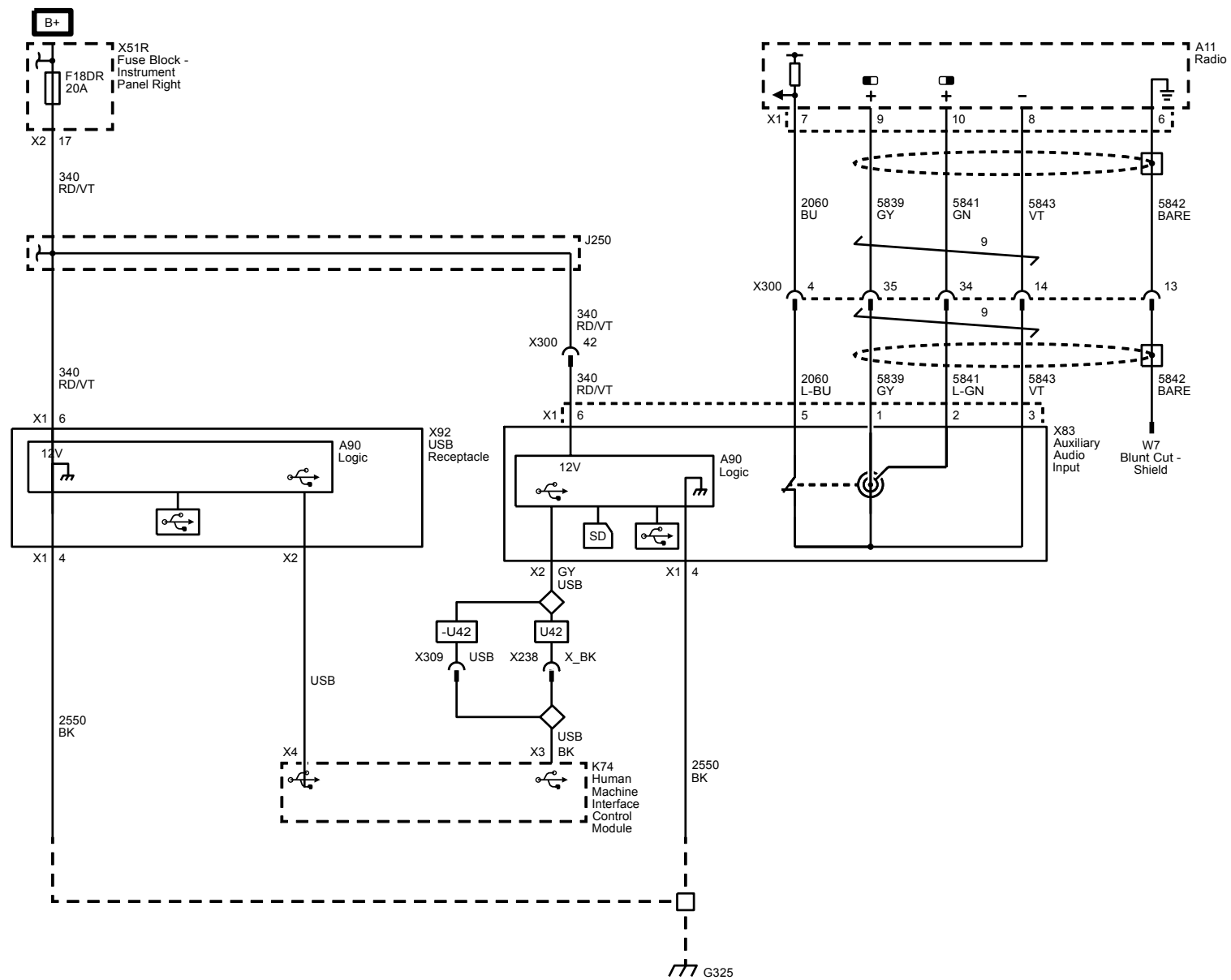
Speakers (UQ3 or UQ5)

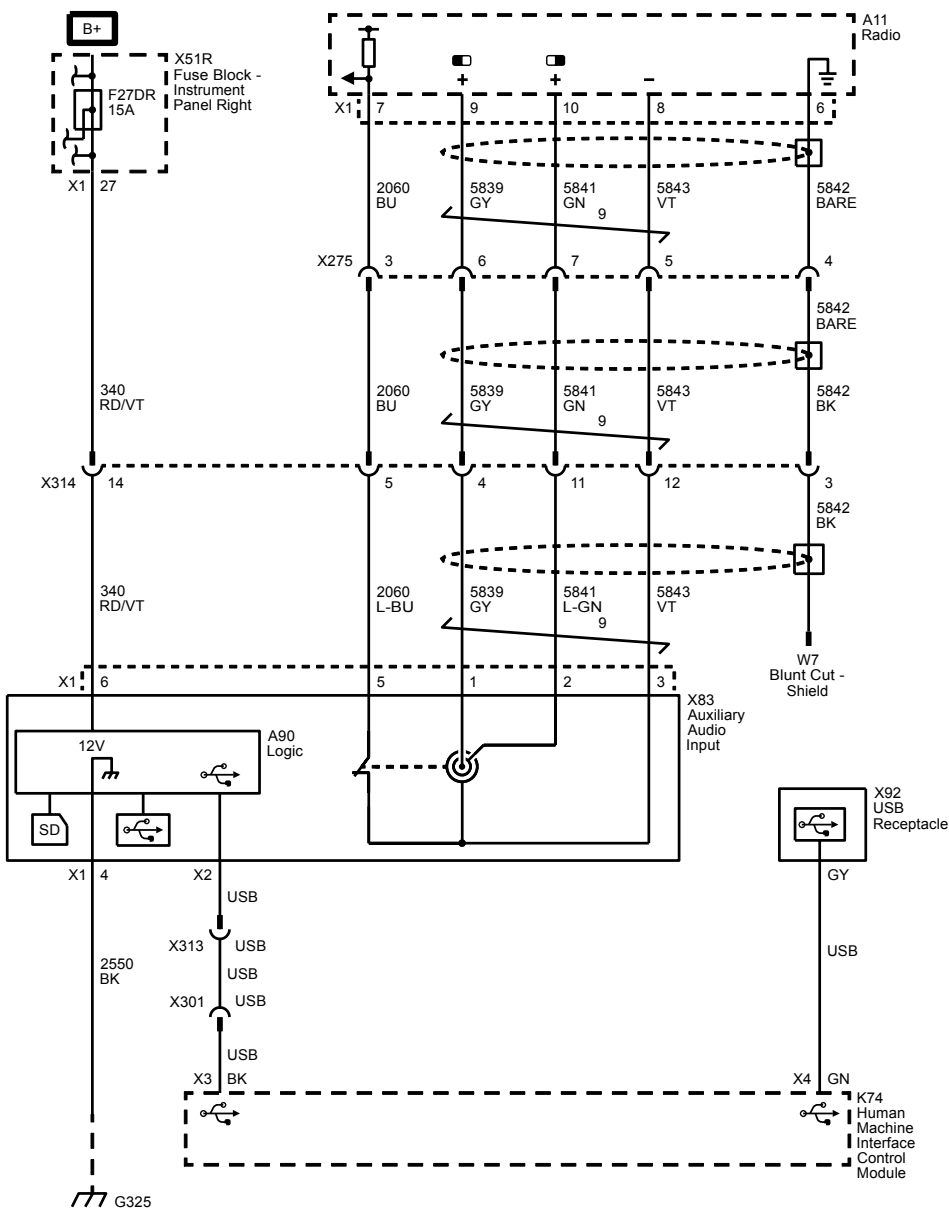




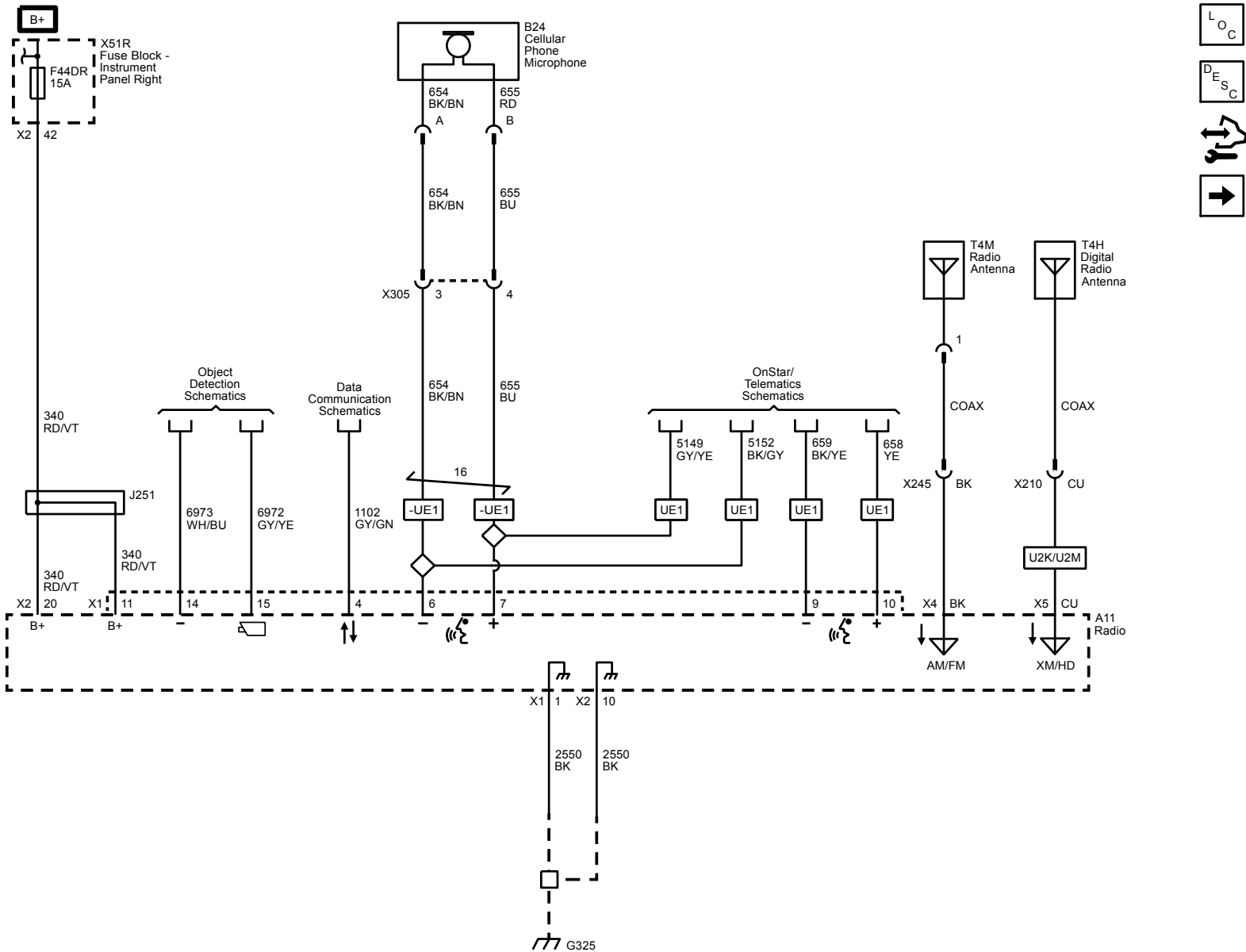


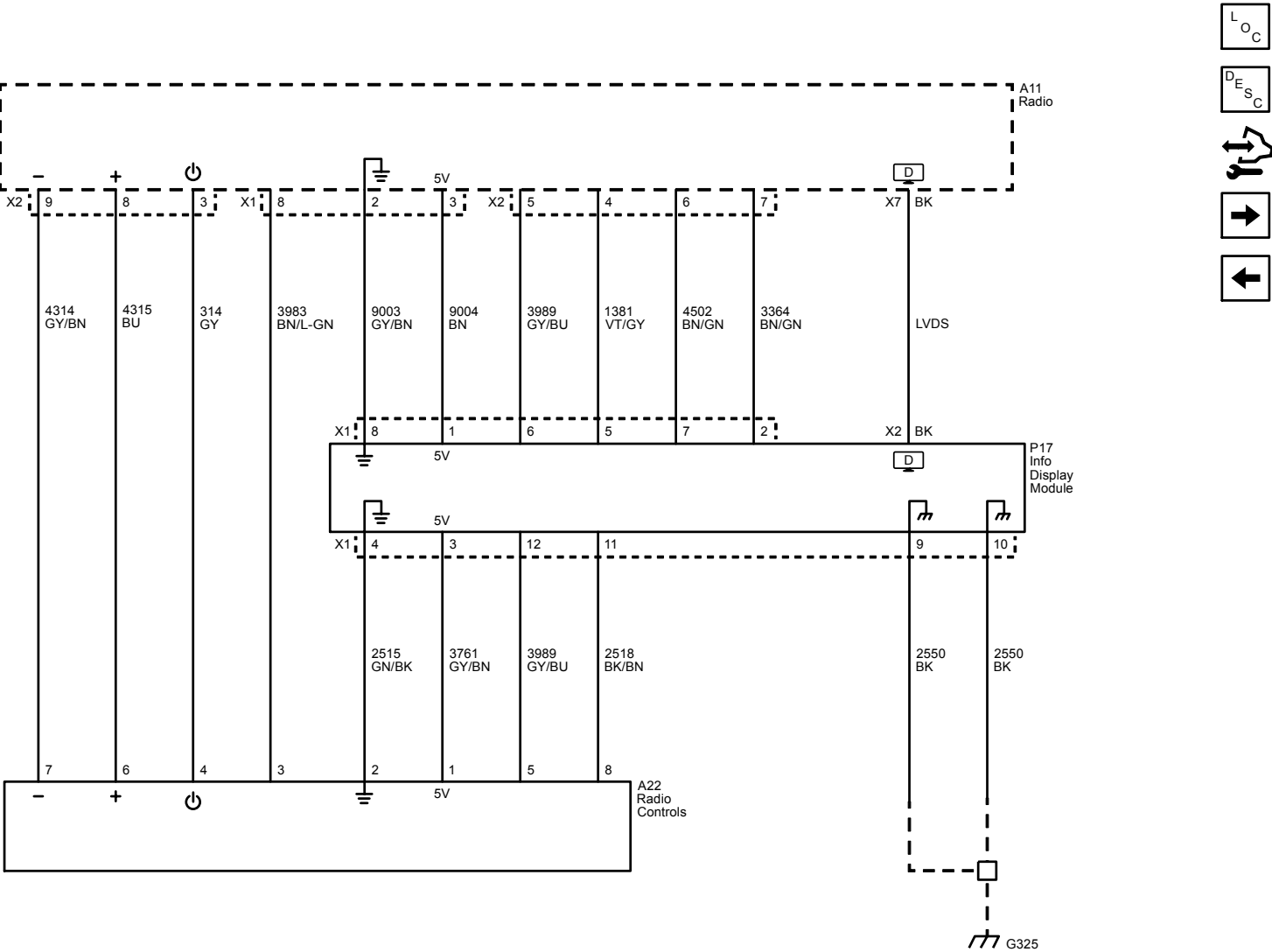
Auxiliary Inputs (D07)



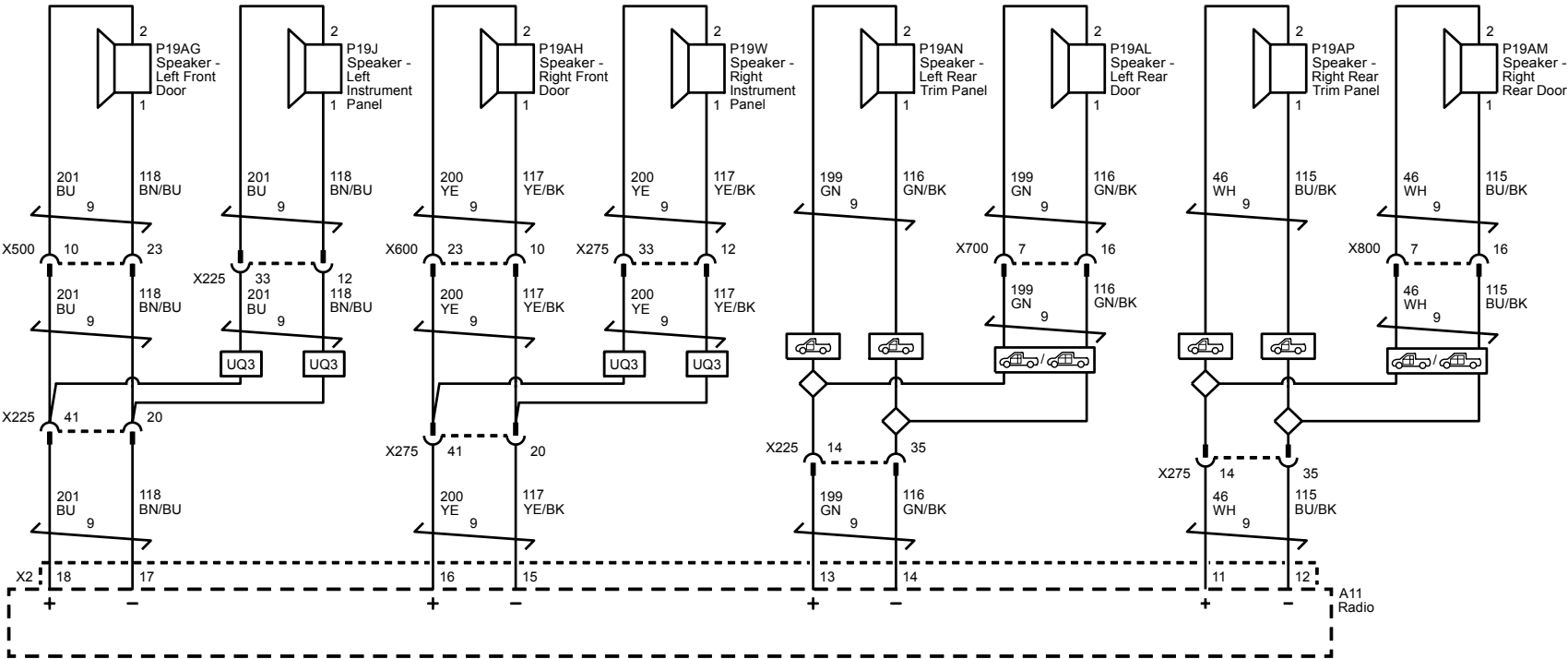


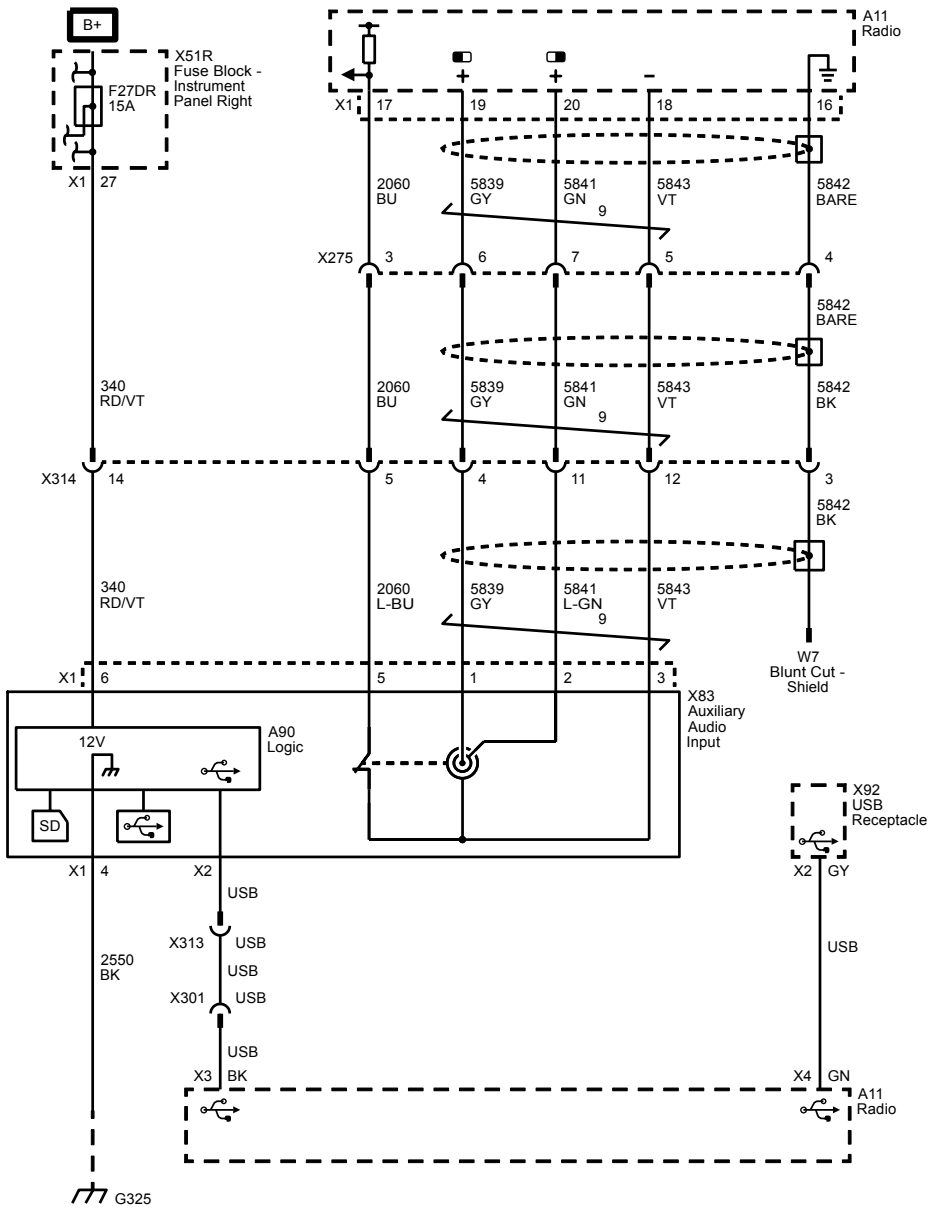
Radio Power, Ground, Serial Data and Antenna



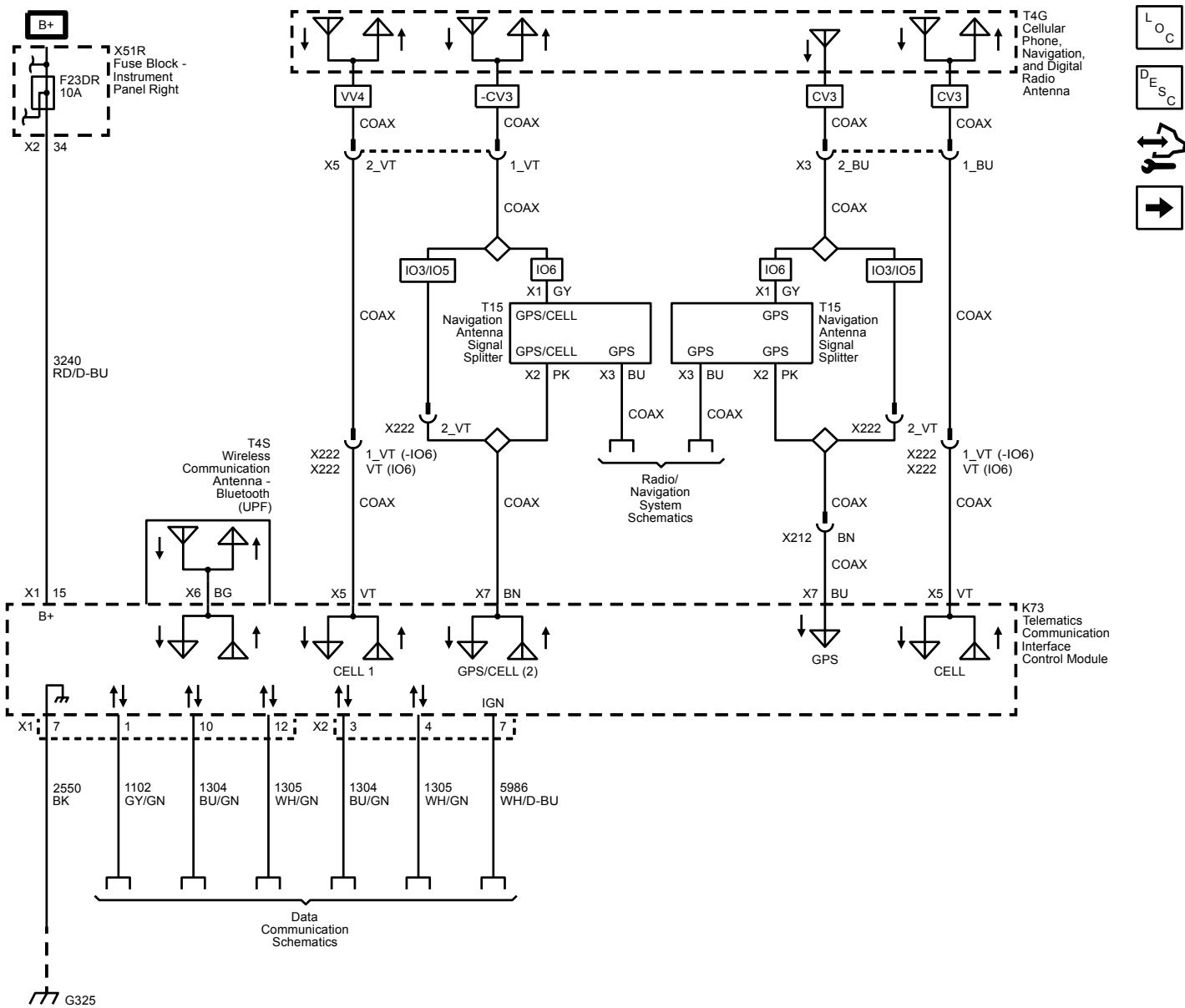


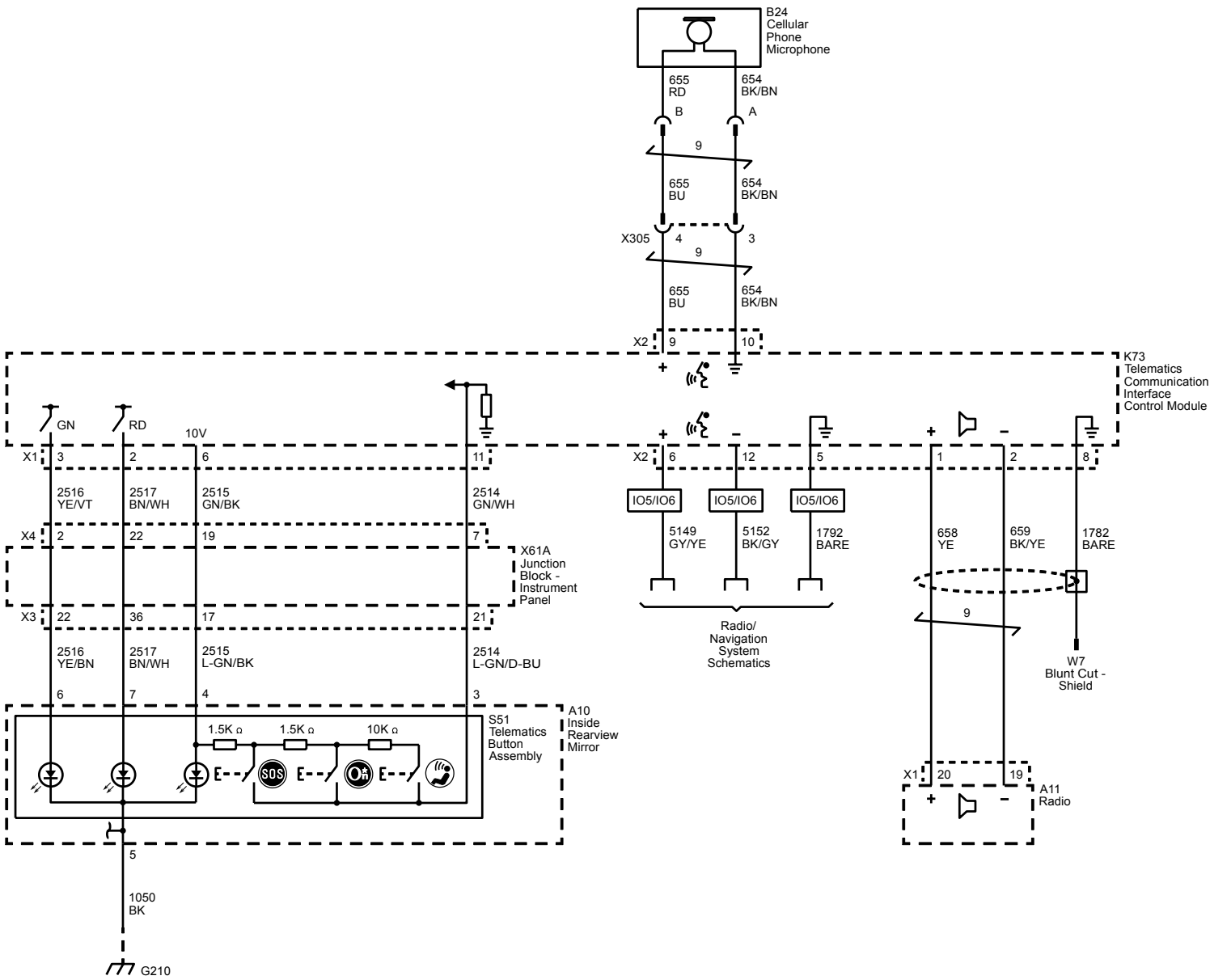
Speakers (UQ3 or UQ5)

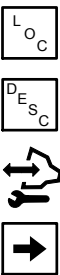




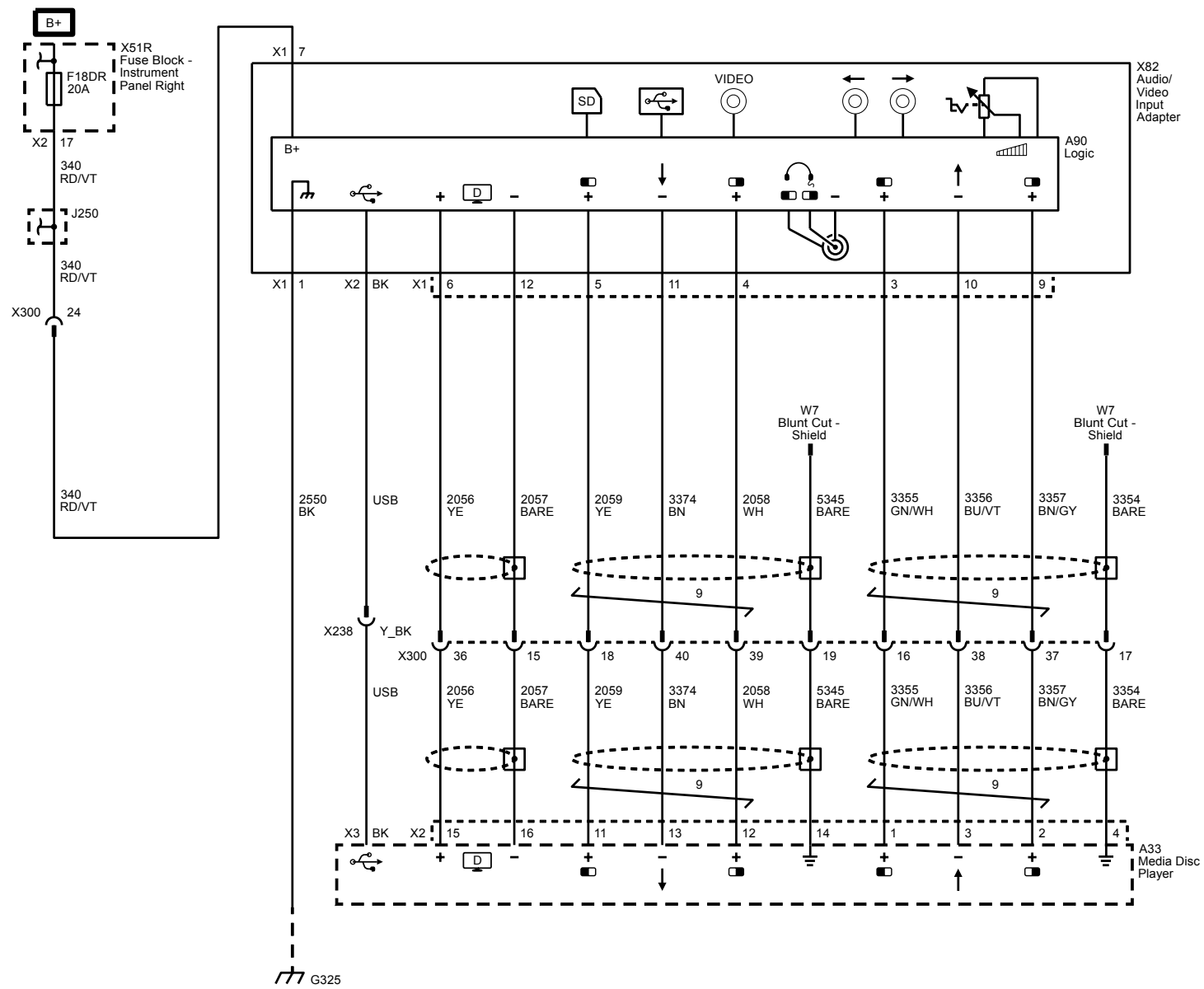
Power, Ground, Serial Data and Antennas (UE1)







Video Inputs



Description and Operation

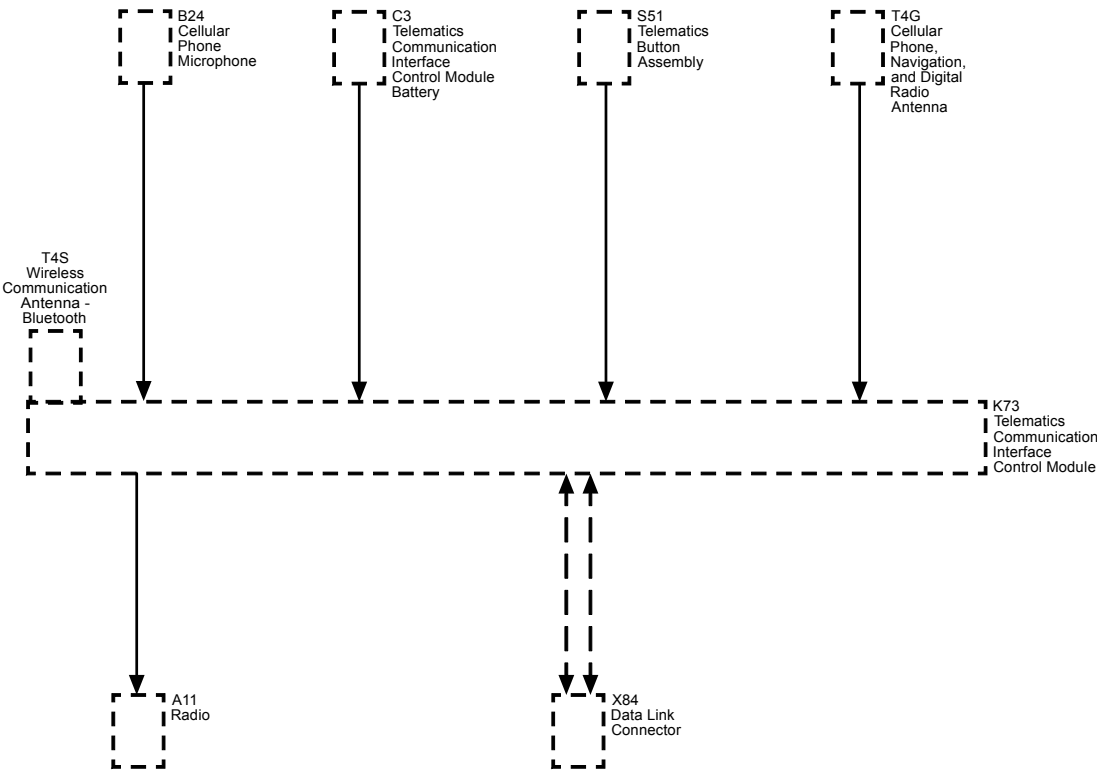
OnStar Description and Operation

This OnStar® system consists of the following components:

- Telematics communication interface control module
- OnStar® three button assembly
- Microphone
- Cellular antenna
- Navigation antenna
- Bluetooth® antenna (If equipped)
- Back up battery (If equipped)
- WiFi Hotspot (If equipped)
- TTY (Teletypewriter)

This system also interfaces with the factory installed vehicle audio system.

Onstar Block Diagram



Telematics Communication Interface Control Module

The OnStar Generation 10 system uses Global System for Mobile Communication (GSM) to communicate data and voice signals over the national cellular network. The module may also have the ability to act as a Wireless Local Area Network (WLAN) Wi-Fi hotspot similar to a home wireless router. The module houses an internal WLAN antenna enabling hotspot connectivity and streaming high speed media to the entertainment system. The module

also may enable Teletypewriter (TTY) and be capable of Bluetooth communication utilizing an internal antenna. The module is capable of up to 4G LTE speeds and houses 2 technology systems, one to process Global Positioning System (GPS) data, and another for cellular information. The module sends and receives all cellular communications over two cellular antennas and cellular antenna coax cables.

The OnStar Gen 10 system has two antenna inputs, a primary cellular signal and a combined GPS/secondary cellular signal. The OnStar® system uses the United States Global Positioning System (GPS) signals to provide location on demand. GPS is a space-based satellite navigation system that provides location and time information in all weather conditions, anywhere on or near Earth where there is an unobstructed line of sight to four or more GPS satellites.

The module also has the capability of activating certain features such as, the horn, remote engine starting, initiating door lock/unlock, or activating the exterior lamps using the serial data circuits. These functions can be commanded by the OnStar® Call Center per a customer request or mobile device app depending on vehicle and customer subscription.

Dedicated circuits are used to connect the telematics communication interface control module to a microphone, the button assembly, radio, and if equipped the Back Up Battery (BUB). The telematics communication interface control module communicates with the rest of the vehicle over the serial data bus.

Power is provided by a dedicated, fused B+ circuit. Ground is provided through the vehicle wiring harness attached to the module. The power mode state is determined by the telematics communication interface control module through serial data messaging.

OnStar® Three Button Assembly

- The OnStar® button assembly may be part of the rearview mirror, or a separate, stand alone unit. The button assembly is comprised of 3 buttons or 3 capacitive touch buttons and status LED's or an error indicator. The buttons are defined as follows:
 - The answer/end button, which is black with a white phone icon or a white driver figure seated with voice signals near its face, allows the user to answer and end calls or initiate speech recognition.
 - The blue OnStar® call center button, which displays the OnStar® logo, allows the user to connect to the OnStar® call center.
 - The emergency button, which displays white letters "SOS" with red background, sends a high priority emergency call to the OnStar® call center when pressed.

If the LED does not illuminate, this may indicate that the customers OnStar® subscription is not active or has expired. Push the blue OnStar button to connect to an advisor who can then verify the account status.

The telematics communication interface control module supplies 10 volts to the OnStar® button assembly on the keypad supply voltage circuit. When pressed, each button completes a circuit across a resistor allowing a specific voltage to be returned to the telematics communication interface control module on the keypad signal circuit. Depending upon the voltage range returned the telematics communication interface control module is able to identify which button has been pressed.

The OnStar® status LED or error indicator is located near the buttons. The LED is green when the system is ON and operating normally. When any indicator is illuminated and flashing, it is an indication that a call is in progress. When the LED is red, this indicates a system malfunction is present. In the event there is a system malfunction and the OnStar® system is still able to make a call, the LED will flash red during the call.

Each LED or error indicator is controlled by either the telematics communication interface control module over dedicated LED signal circuits or by low speed GM LAN serial data depending on the inside rearview mirror option. Ground for the LED is provided by the wiring harness attached to the button assembly.

Secondary OnStar® Controls

Some vehicles may have an additional button that when pushed can engage the OnStar® system. The button may be a symbol of a face with sound waves, or may say MUTE, or be a symbol of a radio speaker with a slash through it.

By engaging the OnStar® system with this feature, the user can interact with the system by use of voice commands. A complete list of these commands is supplied in the information provided to the customer. If the information is not available for reference, at any command prompt the user can say "HELP" and the telematics communication interface control module will return an audible list of available commands.

OnStar® Microphone

The cellular microphone can be part of the rearview mirror assembly, or a stand-alone unit in the headliner or roof console. In either case, the telematics communication interface control module supplies approximately 10V to the microphone on the cellular microphone signal circuit. The microphone modifies the 10V depending on the volume and voice being detected. A cellular microphone low reference circuit or a drain wire provides a ground for the microphone. The microphone signal circuits pass through the telematics communication interface control module to support entertainment voice recognition.

Cellular and GPS Antennas

The combination antenna will have any of the following antenna elements when equipped with OnStar:

- Primary cellular element
- Secondary cellular element
- GPS element
- Digital radio element
- AM/FM element

The Gen 10 OnStar® system uses 2 cellular antenna elements to send and receive cellular data, the primary cellular element and the secondary cellular element. The primary cellular signal is carried by a coax cable that connects the antenna directly to the telematics communication interface control module. Details of the secondary cellular signal are further described below.

The GPS antenna element is used to collect the signals of the orbiting GPS satellites. Within the antenna is housed a low noise amplifier that allows for a more broad and precise reception of this data. Also housed within the antenna is circuitry to combine the GPS signal and the secondary cellular signal. Without navigation, the combination GPS/secondary cellular signal is carried by a coax cable that connects directly to the telematics communication interface control module. The cable also provides a path for DC current for powering the antenna. With navigation, the combination GPS/secondary cellular signal is carried by a coax cable that connects to the navigation signal splitter. The splitter supplies the GPS signal to the navigation/entertainment system and the GPS/cellular signal to the telematics communication interface control module.

The digital radio element collects digital radio signals from two satellites and where necessary terrestrial repeaters. The digital radio signal is carried by a coax cable and connected to the digital radio receiver. Refer to Radio/Audio System Description and Operation for further details.

The radio signal is sent from a broadcast station and is then received by the AM/FM radio antenna element. The AM/FM radio signal is carried by a coax cable and is connected to the radio. Refer to Radio/Audio System Description and Operation for further details.

OnStar® RemoteLink

OnStar® RemoteLink is a mobile app to link mobile devices to a vehicle for limited diagnostics and feature controls. After downloading the app and registering the device, vehicle owners with an eligible vehicle can use their mobile devices to access real-time data from their vehicle and perform specific commands remotely.

All communication between the app and the vehicle is powered by OnStar's® advanced connected vehicle technology. An active OnStar® account as well as a valid OnStar® username and password are required to use the app. The remote commands must be enabled by logging into the user's OnStar® account prior to using the app. Refer to the owners manual for available vehicle data and control features.

Compass Heading

The telematics communication interface module has a compass feature to calculate vehicle direction which is displayed via the instrument panel cluster or designated display. The compass heading is determined by dead reckoning until the GPS 3d fix is established. The dead reckoning is accomplished by using the yaw rate sensors and wheel ticks to determine heading changes from a GPS known heading. The GPS 3d fix heading is determined by the deferential of two locations. If “CAL” is displayed on the Instrument Panel Cluster or designated display refer to the owners manual for steps to calibrate the compass.

Bluetooth® (If Equipped)

Bluetooth® wireless technology is a short-range communications technology intended to replace the cables connecting portable and/or fixed devices while maintaining high levels of security. Only vehicles with steering wheel controls will have Bluetooth® functionality. In order to utilize the vehicle's Bluetooth® system, a Bluetooth® equipped cellular phone is required.

The Bluetooth® antenna is internal to the telematics communication interface control module, radio or human machine interface module and is used to send and receive signals from a Bluetooth® enabled cellular phone. The available features and functions are determined by the software within the device being used and the telematics communication interface control module. The operating range of the signal from the vehicle is approximately 30 feet. Note that the operating range is dependent upon the cellular phone being used and battery level of the phone.

With Bluetooth® technology customers can experience hands-free calling as their Bluetooth® capable cellular phones are wirelessly connected to the vehicle. It will allow customers to place and receive calls using the steering wheel controls and voice recognition. The vehicle audio system will allow you to listen to your call through the vehicle speakers and adjust volume through steering wheel or radio controls.

Not all Bluetooth® cellular phones are guaranteed to work with the vehicle's Bluetooth® system. Based on the cellular phone's service provider and the manufacturer's implementation of Bluetooth®, not all phones support all available Bluetooth® functionality. Bluetooth® enabled cellular phones will be tested for vehicle compatibility and a feature compatibility list will be provided via the GM Bluetooth® website: <http://www.gm.com/vc/bluetooth/>

Bluetooth® Features Supported

The following is a list of features supported by the Bluetooth® system. Note that not all devices will support all of the listed functions.

- Automatic reconnection – highest priority phone will automatically be connected to vehicle when vehicle ignition is on
- Hands-free dialing- via digits, redial, name tags (phone number saved to a nametag via voice recognition)
- Answering a call
- Ending a call
- Mute a Call
- Rejecting a call – ignore an incoming call
- Call Waiting
- Three-way Calling – initiated from hands-free system
- Send Number During a Call – this is used when calling a menu-driven phone system
- Transfer a Call – transfer call from vehicle to cellular phone and visa versa
- Voice Pass-Thru – allow access to the voice recognition commands on the cellular phone

Pairing a Bluetooth® Cellular Phone to the Vehicle

In order to use hands-free calling, the cellular phone must be paired to the vehicle. Up to five devices can be paired to the vehicle at one time, but only one can be connected at any given time. To pair a phone, the customer must know how to operate the Bluetooth® functionality of their phone. The pairing process must only be done one time for each phone, unless that phone's information is deleted. The system will always generate a password and will provide that password if the device you are pairing does not support Secure Simple Pairing (SSP). If the device being paired does support SSP the system will not provide the password and automatically pair the device. For safety reasons, the pairing process is disabled while the vehicle is moving.

Once the Bluetooth® cellular phone has been paired with vehicle, it will automatically connect to the vehicle when the ignition is on and the device is on. When more than one paired phone is in the vehicle, the phone with the highest priority will be connected. If the cellular phone is in use while getting into the vehicle, the phone can be switched to hands-free mode with the press of a button. In addition, a call in progress can be transferred from the vehicle hands-free mode to the phone to continue the call as the customer exits the vehicle.

Complete pairing instructions are provided in the Vehicle Owners Manual.

Back-up Battery (If Equipped)

Note: Do not disconnect the main vehicle battery or remove the OnStar® fuse with the ignition key in any position other than OFF. Disconnecting power to the OnStar® module in any way while the ignition is ON or with retained accessory power activated may cause activation of the OnStar® Back-Up Battery. This action is per design as the back-up battery is designed to provide power to the telematics communication interface control module so an emergency notification call can be made after an event where the main battery is disabled. Once the Back-Up Battery is activated it will stay on until the power is restored back to the telematics communication interface control module. The telematics communication interface control module naturally chooses the main supply voltage as it's default supply, but if the main supply is removed or lost for any reason the OnStar® module will use the Back-Up Battery as a power supply as long as the default supply can not be detected. The back-up battery is not rechargeable and once discharged below 9.5 volts the back-up battery must be replaced.

Certain OnStar® equipped vehicles may also be equipped with a back-up battery. The back-up battery is a non-rechargeable, lithium battery intended to provide an auxiliary power source for the telematics communication interface control module in the event where power from the main vehicle battery is lost.

The back-up battery is intended to have a limited life span of approximately 4 years and is designed to maintain an open circuit voltage between 16 V and 9 V throughout this period. This allows the battery to power the basic functions of the telematics communication interface control module for least one 200 second (5 minute) call at the end of the 4 year span, should the main vehicle battery be lost. In the case of a vehicle losing vehicle battery power, OnStar will switch over to the backup battery based on an internal algorithm. It will look for an air-bag deploy, or near-deploy, messages from the SDM. If there are no messages the OnStar module will stay wake for a few minutes longer and monitor the buttons in the mirror. If not pressed, the modules will power down and shut off completely.

The back-up battery is connected to the telematics communication interface control module through the back-up battery positive voltage circuit and back-up battery ground circuit and is protected from a short circuit by means of an internal fuse. In the event the back-up battery, battery positive voltage circuit is shorted to the back-up battery ground circuit or chassis ground, the fuse will open and render the back-up battery permanently inoperable. The status of the back-up battery and its associated wiring is monitored by the telematics communication interface control module.

WiFi Hotspot

The telematics communication interface control module acts as a Wireless Local Area Network (WLAN) WiFi hotspot router and uses direct 4G LTE connectivity to the internet. It has the ability to connect up to 7 devices at one time. A data plan is required and when purchased, a security default password is established. There are several ways to change the SSID or password, by placing a call to the OnStar Call Center, by using the Gen 10 mobile app

or through the scan tool.

The system utilizes a secure autoconnect feature between the telematics communication interface control module and the radio/HMI. No user interaction is required, it is always available and ready to connect to a dedicated in car device. The ignition must be in Run, Accessory or RAP for WiFi to operate.

Audio System Interface

When the OnStar® requires audio output, a serial data message is sent to the audio system to mute all radio functions and transmit OnStar® originated audio. The OnStar® audio is transmitted to the vehicle audio system by a dedicated signal circuit and a low reference circuit.

The audio system will mute and an audible ring will be heard though the speakers if the vehicle receives a call with the radio ON.

On some vehicles, the HVAC blower speed may be reduced when the OnStar® system is active to aid in reducing interior noise. When the system is no longer active, the blower speed will return to its previous setting.

OnStar® Sleep Cycle

The OnStar® system uses a unique sleep cycle to allow the system to receive cellular calls while the ignition is in the OFF position and retained accessory power mode has ended. This cycle enables the telematics communication interface control module to perform remote functions, such as door unlock, as commanded over the air by the OnStar® Call Center, and to continue to maintain an acceptable level of battery electrical drain.

The OnStar® system uses 4 states of readiness, depending upon the type of cellular market the vehicle is in when the ignition is put into the OFF state:

- High power
- Low power
- Sleep
- Digital standby

The high power state is in effect whenever the ignition is in the ON or RUN position, or retained accessory power is enabled, and the OnStar® system is sending or receiving calls or when the system is performing a remote function.

The low power state is in effect when the OnStar® system is idle with the ignition in the ON or RUN position, or with retained accessory power enabled.

The sleep state is entered after the vehicle has been shut off and the retained accessory power has timed out while in an analog cellular area. At a predetermined time recorded within the telematics communication interface control module, the system re-enters the low power state to listen for a call from the OnStar® Call Center for 1 minute. After this interval, the system will again return to the sleep state for 9 minutes. If a call is sent during the 1 minute interval, the OnStar® system will receive the call and immediately go into the high power mode to perform any requested functions. If no call is received during the 1 minute interval, the system will go back into the sleep mode for another 9 minutes. This process will continue for up to 48 hours, after which the OnStar® system will turn off until the ignition is turned to the ON or RUN position.

The digital standby power state is entered after the vehicle has been shut off and the retained accessory power has timed out while in a digital cellular area. When in digital standby mode, the OnStar® module is able to perform all remote functions as commanded by an OnStar® advisor at any time, for a continuous 120 hours. After 120 hours, the OnStar® module will go into sleep mode until a wake up signal from the vehicle is seen by the telematics communication interface control module. If the OnStar module loses the digital cellular signal it will revert to analog mode and follow the standard sleep state (9 minutes OFF, 1 minute standby) based on the time of the GPS signals, this will continue until a digital cellular signal is again received.

If the OnStar® system loses battery power while the system is in a standby or sleep mode, the system will remain OFF until battery power is restored and the ignition is turned to the ON or RUN position.

Features

OnStar® Personal Calling

The hands free, OnStar® personal calling cellular phone feature is an additional feature of the OnStar® system. This feature is embedded within the telematics communication interface control module; however it must be activated by an OnStar® advisor. OnStar® personal calling operates similar to most hand held cellular phones in that the availability for its usage is based on minutes or units. The customer must have a current OnStar® subscription, as this feature cannot be utilized without it. To use OnStar® personal calling, the customer must also purchase units (minutes) as outlined in the owners guide provided with the OnStar® system. Units begin to deplete, 1 unit is equal to 1 minute, as the customer makes outbound phone calls, answers inbound phone calls, or while connected to the OnStar® virtual advisor. In addition, units may also have an expiration date, depending upon the type of units purchased.

Customers have the ability to store telephone numbers within the module, referenced by a nametag for the convenience of frequently dialed numbers. After storing a nametag, the user can dial this number by initiating the OnStar® personal calling feature, speaking the word "call," and repeating the nametag assigned.

Turn by Turn Navigation

Turn by Turn Navigation allows the driver to contact OnStar® to obtain directions for driving from a current location to a desired location. The Turn by Turn Navigation system stores your planned route and continually checks your position along that route, when you deviate from the planned route, the system will recognize this and prompt the driver with verbal prompts for how to proceed. The driver then responds verbally to direct the system to continue the current routing or to recalculate the route because of a missed turn.

Advisor Record Feature

The Advisor Record Feature allows the user to store any information given during a call with an OnStar® Advisor. Recording is activated by pressing the blue OnStar button during a call; pressing the button a second time stops the recording. The stored information can be played back by pressing the phone button on the three button assembly and using the voice command “Advisor Playback”.

Teletypewriter (TTY) Users

OnStar has the ability to communicate to deaf, hard-of-hearing, or speech-impaired customers while in the vehicle. The available dealer-installed TTY system can provide in-vehicle access to all of the OnStar services, except Virtual Advisor and OnStar Turn-by-Turn Navigation.

Deactivated OnStar® Accounts

In the event a customer has not renewed their OnStar® account after expiration or the account was never activated, OnStar® will make a discrete cellular call to the vehicle to deactivate the OnStar® system. Before taking this action, customers are notified that the OnStar® system in their vehicle will be deactivated unless they elect to renew the account. After the OnStar® account has been deactivated, customers will experience the following:

- The OnStar® status LED will not illuminate.
- The OnStar® system will NOT attempt to connect to the OnStar® Call Center in the event of a collision or if the vehicle's front air bags deploy for any other reason.
- An emergency button press will play a demo message indicating the service has been deactivated.
- An OnStar® Call Center button press will connect the customer with a dedicated sales team who can sell an OnStar® subscription and reactivate the vehicle. Depending on the type of OnStar® hardware in the vehicle,

the customer may first hear a demonstration message stating there is no current OnStar® subscription for the vehicle, and directing the customer what to do to activate services.

- OnStar® personal calling will not be available, as this feature requires the customer to have a current OnStar® account. Attempts to use this feature may result in cellular connection failure messages and the inability to connect to the number dialed.

Certain vehicles that have never had an active OnStar® account, or that have been deactivated, may be unable to establish a connection with the OnStar® Call Center. When normal published diagnostic procedures do not indicate a possible cause for the no connect concern, the vehicle may have been deactivated. For deactivated vehicles, a no connect response should be considered normal operation. Further diagnosis and subsequent repair is only necessary should the customer elect to become an active OnStar® subscriber or renew the account subscription.

OnStar® Cellular, GPS, and Diagnostic Limitations

The proper operation of the OnStar® System is dependent on several elements outside the components integrated into the vehicle. These include the National Cellular Network Infrastructure, the cellular telephone carriers within the network, and the GPS.

The cellular operation of the OnStar® system may be inhibited by factors such as the users range from an analog or digital cellular tower, the state of the cellular carrier’s equipment, and the location where the call is placed. Making an OnStar® key press in areas that lack sufficient cellular coverage or have a temporary equipment failure will result in either the inability of a call to complete with a data transfer or the complete inability to connect to the OnStar® Call Center. The OnStar® system may also experience connection issues if the identification numbers for the module, station identification number, electronic serial number or manufacturers electronic ID, are not recognized by the cellular carriers local signal receiving towers.

The satellites that orbit earth providing the OnStar system with GPS data have almost no failures associated with them. In the event of a no GPS concern, the failure will likely lie with the inability of the system to gain GPS signals because of its location, i.e. in a parking structure, hardware failure, or being mistaken with an OnStar® call which has reached the Call Center without vehicle data.

During diagnostic testing of the OnStar® system, the technician should ensure the vehicle is located in an area that has a clear unobstructed view of the open sky, and preferably, an area where analog or digital cellular calls have been successfully placed. These areas can be found by successfully making an OnStar® keypress in a known good OnStar® equipped vehicle and confirming success with the OnStar® Call Center advisor. Such places can be used as a permanent reference for future OnStar® testing.

Mobile Identification Number and Mobile Directory Number

The telematics communication interface control module utilizes 2 numbers for cellular device identification, call routing and connection, a mobile identification number and a mobile directory number. The mobile identification number represents the number used by the cellular carrier for call routing purposes while the mobile directory number represents the number dialed to reach the cellular device.

Operation of the OnStar® Speech Recognition Systems

OnStar® users communicate with 2 speech recognition systems. Speech recognition allows the user to speak to one computer in the vehicle, and one reached over a phone line. The computer tries to understand the users command, and responds by speaking back, or by taking the appropriate action, e.g. dialing the phone.

- Personal Calling uses a speech recognition system that resides in the vehicle. When the user presses the phone button, the system states, Ready, and listens for the user's command. The user can speak commands to control the hands-free phone.
- Virtual advisor is a remote speech recognition system that the caller can access by making a phone call. The user connects to virtual advisor by requesting it during personal calling use. The user is then transferred to the virtual advisor server and talks to it via a cellular connection.

The OnStar® speech recognition systems use speech technology that is designed to understand a wide range of American English speakers. Although there is no one right way to speak English, the system will work best when users try to modify their pronunciation should they encounter difficulty. Users who do not obtain good results are advised to try the tips and workarounds found in the Infotainment System Manual or the Owners Manual.

Radio/Audio System Description and Operation (IO3)

The entertainment system on this vehicle may have several different configurations available to it. To determine the specific configuration of the vehicle, please see the Service Parts ID Label, and refer to [RPO Code List](#). Each item in the list below represents topics covered in detail below.

- Data Communications
- Remote Radio Receiver
- Media Disc Player
- Audio Amplifier (If equipped)
- Speaker Operation
- Infotainment Controls and Display
- Antenna System
- Radio Reception
- Theft Deterrent
- Auxiliary Audio Input Jack
- USB Port and SD Card Reader
- Valet Mode
- OnStar ®
- Steering Wheel Controls (If equipped)
- Auto Volume Control

Data Communications

The infotainment system communicates with other devices on multiple serial data networks during operation. The infotainment system utilizes the Media Oriented Systems Transport (MOST) bus, Local Interconnect Network (LIN) and GMLAN to establish communications. For additional information refer to [Data Link Communications Description and Operation](#)

Remote Radio Receiver

The radio is the MOST BUS master. The radio also communicates with other components and systems within the vehicle via GMLAN.

The remote radio receiver is responsible for receiving all broadcast audio bands. Broadcast signals from AM, FM, and XM bands are transmitted to the radio via the vehicle antenna systems.

Radio Power

The radio receives battery power and ground from the vehicle harness.

The radio does not use a discrete ignition feed circuit for power moding. The power mode master provides the system power mode to the radio via serial data messages. The power mode master determines the system power mode by processing power mode information from ignition switch inputs. Serial data power modes supported by the radio are OFF, ACCESSORY, RUN, and CRANK REQUEST.

Radio Audio Outputs

When not equipped with an amplifier, the radio outputs all audio signals to the speakers via the vehicle wiring harness.

When equipped with an amplifier, the radio outputs all audio signals digitally over the MOST bus.

Media Disc Player

The media disc player is responsible for playing optical media for the infotainment system.

The media disc player receives control information and outputs digital audio over the MOST bus.

The media disc player receives battery power and ground from the vehicle harness.

Audio Amplifier (If equipped)

Amplifier Interface

A fused battery voltage circuit provides the main amplifier power. The audio amplifier is a participant on the MOST network. The audio amplifier receives audio signals and control information from the MOST bus. The audio amplifier also communicates with other components and systems within the vehicle via GMLAN.

Amplifier Operation

The purpose of the amplifier is to increase the power of a voltage or current signal. The output signal of an amplifier may consist of the same frequencies as the input signal or it may consist of only a portion of the frequencies as in the case of a subwoofer or midrange speaker. The audio amplifier amplifies the signal and sends it to the appropriate speakers.

Each of the audio output channel circuits (+) and (–), at the audio amplifier have a DC bias voltage that is approximately one half of the battery voltage. When using a DMM, each of the audio output channel circuits will measure approximately 6.5V DC. The audio being played on the system is produced by a varying AC voltage that is centered around the DC bias voltage on the same circuit. The AC voltage is what causes the speaker cone to move and produce sound. Both the DC bias voltage and the AC voltage signals are needed for the audio system to properly produce sound.

The audio amplifier is also responsible for operation of active noise cancellation. Refer to [CELL Link Error - Link target cell \(cell ID 194567\) is invalid for this publication.](#) for more information.

Speaker Operation

Speakers turn electrical energy into mechanical energy to move air, using a permanent magnet and an electromagnet. The electromagnet is energized when the radio or amplifier (if equipped) delivers current to the voice coil on

the speaker. The voice coil will form a north and south pole that will cause the voice coil and the speaker cone to move in relation to the permanent magnet. The current delivered to the speaker is rapidly changing alternating current (A/C). This causes the speaker cone to move in two directions producing sound.

Infotainment Controls and Display

The infotainment display and controls are a separate component from the radio, combined into an assembly. The assembly contains the control knobs and buttons for all audio and HVAC functions and the information display. The assembly is supplied battery voltage and ground from the vehicle harness.

The radio communicates with the assembly via a LIN serial data circuit. Messages communicated include the following:

- Wake-up/power state messages
- Diagnostic information
- Button presses/knob rotations
- Commands for the state of indicators
- Back-lighting dimming level

The radio sends the display digital video data for on-screen display through a dedicated video cable.

HVAC data for controls and status indicators is communicated between the HVAC controls and the HVAC control module with a separate LIN serial data circuit. HVAC status screen information from the HVAC control module is transmitted to the radio on the GMLAN serial data circuit.

Antenna System

Mast Antenna

The mast antenna is responsible for AM and FM radio reception. The antenna is attached to a base. The coaxial cable is connected to the base, and this cable is connected to the radio.

Multi-Band Antenna

The multi-band antenna is located on the roof of the vehicle. This type of antenna may be used with the AM/FM radio, but is primarily for cellular, GPS signals, and XM signals, if the vehicle has these features. Keep this antenna clear of snow and ice build up for clear reception. If the vehicle has a sunroof, the performance of the system may be affected if the sunroof is open. Loading items onto the roof of the vehicle can interfere with the performance of the system, ensure the multi-band antenna is not obstructed.

Radio Reception

AM/FM Radio Signal

The radio signal is sent from a broadcast station and is then received by an antenna. The strength of the signal received depends on the following:

- The power output (wattage) of the broadcasting station
- The location of the vehicle (or receiver) relative to the broadcast tower.
- Height of the broadcast antenna
- Height of the receiving antenna
- Obstacles between the tower and the receiver
- Atmospheric conditions
- What band (AM or FM) the station is broadcasting
- Type of antenna and the ground plane

Digital Radio Receiver (If equipped)

The XM satellite receiver is integrated into the radio. XM satellite radio provides digital radio reception. The XM signal is broadcast from two satellites and, where necessary, terrestrial repeaters. The high power satellites allow the antenna to receive the XM signal even when foliage and other partial obstructions block the antennas view of the satellite. Terrestrial repeaters are used in dense urban areas. These repeaters will receive the satellite signal and re-broadcast them at much higher power levels in order to ensure reception in areas with densely packed tall buildings. A service fee is required in order to receive the XM service.

Radio Data System (RDS)

The RDS feature is available only on FM stations that broadcast RDS information. This system relies upon receiving specific information from these stations and only works when the information is available. While the radio is tuned to an FM-RDS station, the station name or call letters display. RDS data is carried in what is known as a "subcarrier". A subcarrier is a frequency that the FM broadcaster is authorized to use to send data that is not audible in the main audio program.

RDS functions will only work with FM broadcast stations that are broadcasting RDS data. Not all FM Broadcast stations broadcast RDS data or offer all of the RDS services.

The information displayed is dependent upon the information broadcast by the particular station. The information may vary greatly between stations. RDS functions may not work properly when reception is weak, reception is of poor quality, or RDS is not implemented properly by the FM Broadcaster. In some cases, a radio station broadcasting incorrect information may cause the RDS features of the radio to appear to work improperly.

With RDS, the radio can do the following:

- Display text information such as: station identification, type of programming, and general information (artist and song title, station messages, call in phone numbers, etc.).
- Seek to stations broadcasting the selected type of programming
- Receive announcements concerning local and national emergencies
- Receive alert warnings of local or national emergencies. When an alert announcement comes on the current radio station, ALERT! displays. You will hear the announcement, even if the volume is low or a CD is playing. If a CD is playing, play stops during the announcement. Alert announcements cannot be turned off. ALERT! is not affected by tests of the emergency broadcast system. This feature is not supported by all RDS stations.

Theft Deterrent

The radio theft deterrent system is intended to disable or limit radio functionality if incorrect vehicle information is received by the radio. The radio disables functionality if the VIN information received by the radio does not match the VIN information that has been learned by the radio. The radio receives this information via serial data. A possible cause of incorrect VIN info could be the radio was originally installed in another vehicle.

The radio has the following theft operating modes as part of the theft deterrent system:

- Normal Mode: The radio has learned a correct VIN sequence and the VIN information received via serial data matches the learned VIN sequence. In this mode the radio has full functionality.
- No VIN Mode: The radio has not received or learned a correct VIN sequence. In this mode the radio has limited functionality.
- Theft Detected Mode: The radio has learned a correct VIN sequence and the VIN information received via serial data does NOT match the learned VIN sequence. In this mode the radio may be disabled or have limited functionality. The radio display will indicate that theft protection is active.

Auxiliary Audio Input Jack (If equipped)

The infotainment system may have a 3.5mm (1/8 in.) auxiliary audio input jack located in the center console. The auxiliary audio input jack interfaces directly with the radio. When a portable audio playback device is connected to the auxiliary jack, an internal switch detects the connection and the radio will switch to AUX as the audio source. Audio signals from the device are sent to the radio from the auxiliary jack via the left, right, and common audio signal circuits.

- When a device is first connected to the 3.5mm (1/8 in.) input jack the infotainment system automatically switches to that device. If an auxiliary device has already been connected, press the AUX or CD/AUX button to select the device.
- Playback of an audio device that is connected to the 3.5mm jack can only be controlled using the controls on the device.
- The volume control on the device may need to be adjusted to ensure sufficient playback volume through the infotainment system.

USB Port and SD Card Reader

The USB port and the card reader slot interface with a hub device, internal to the auxiliary jack, USB, and memory card receptacle assembly. The auxiliary jack, USB, and memory card receptacle assembly receives fused battery voltage and ground from the harness to power the internal hub device as well as providing additional amperage to power USB devices.

The internal hub device interfaces directly with the radio via a standard USB cable. A Mini type USB connector is used to connect the cable at the USB port and at the radio and at the auxiliary jack, USB, and memory card receptacle. Standard USB male to female connections are typically used for connecting USB cables together where an in-line connection is required. An in-line cable connection is typically found between the console and I/P harness.

USB Port

The USB port allows connectivity to the infotainment system from portable media players or a USB storage device (memory stick/ flash drive). When a device is connected to the USB port, the system detects the device and switches to USB as the audio source. Once connected, the device can be controlled from the radio controls.

Not all portable media player devices or file types are compatible. Connection to USB HUB devices is not supported.

Refer to the owner’s manual for information on USB devices, control, and operation.

SD Card Reader

The infotainment system uses the SD card reader as a mass storage device, similar to a USB storage device.

Refer to the owners manual for information on media types supported via the SD card reader.

Valet Mode

Valet Mode is a customer enabled feature of the infotainment system, found in the settings menu, if equipped. The customer creates and inputs a four digit code using the infotainment controls. Confirming the code and selecting LOCK will lock the infotainment system, steering wheel controls and other vehicle features, dependant on vehicle equipment. The vehicle will remain in valet mode until the same four digit code is reentered.

In the event that the four digit code is forgotten, the scan tool can be used to clear the Valet Mode Code.

OnStar ® (If equipped)

When OnStar is activated, a serial data message is sent to the radio that activates a software program. When the software begins its process, the fade goes to the front, Bass and Treble are set to the mid range, the outputs are mono, and the audio source is OnStar. OnStar takes priority over any other audio source. All of these actions are preset values stored in the radio.

For additional OnStar information, refer to [OnStar Description and Operation](#).

Steering Wheel Controls (If equipped)

Some audio functions are available using the steering wheel controls. The steering wheel controls duplicate the function of the primary controls available on the radio.

For additional information on steering wheel controls, refer to [Steering Wheel Controls Description and Operation](#).

Auto Volume Control

With auto volume control, the audio system will adjust automatically to make up for road and wind noise as you drive, by increasing the volume as vehicle speed increases. To use auto volume control, set the volume at the desired level, and then select either Low, Medium, or High. To turn auto volume control off, select the Off screen button.

Radio/Audio System Description and Operation (IO5/IO6)

The entertainment system on this vehicle may have several different configurations available to it. To determine the specific configuration of the vehicle, please see the Service Parts ID Label, and refer to [RPO Code List](#).

Each item in the list below represents topics covered in detail below.

- Data Communications
- Remote Radio Receiver
- Human Machine Interface Module
- Media Disc Player
- Audio Amplifier (If equipped)
- Speaker Operation
- Infotainment Controls and Display
- Antenna System
- Radio Reception
- Theft Deterrent
- Bluetooth ® (if equipped)
- Applications (if equipped)
- Auxiliary Audio Input Jack
- USB Port and SD Card Reader
- Navigation System Components and Features (if equipped)
- Valet Mode
- OnStar ®
- Steering Wheel Controls (If equipped)
- Auto Volume Control

Data Communications

The infotainment system communicates with other devices on multiple serial data networks during operation. The infotainment system utilizes the Media Oriented Systems Transport (MOST) bus, Local Interconnect Network (LIN) and GMLAN to establish communications. For additional information refer to [Data Link Communications Description and Operation](#)

Remote Radio Receiver

The radio is the MOST BUS master. The radio also communicates with other components and systems within the vehicle via GMLAN.

The remote radio receiver is responsible for receiving all broadcast audio bands. Broadcast signals from AM, FM, and XM bands are transmitted to the radio via the vehicle antenna systems.

Radio Power

The radio receives battery power and ground from the vehicle harness.

The radio does not use a discrete ignition feed circuit for power moding. The power mode master provides the system power mode to the radio via serial data messages. The power mode master determines the system power mode by processing power mode information from ignition switch inputs. Serial data power modes supported by the radio are OFF, ACCESSORY, RUN, and CRANK REQUEST.

Radio Audio Outputs

When not equipped with an amplifier, the radio outputs all audio signals to the speakers via the vehicle wiring harness.

When equipped with an amplifier, the radio outputs all audio signals digitally over the MOST bus.

Human Machine Interface Module

The human machine interface module is responsible for the following: Video for the infotainment display, Bluetooth ®, USB, memory card reader, and speech recognition functions.

The human machine interface module communicates with the info display module via the LIN bus for control information, touch communications and dimming level. Digital video data is sent to the display through a dedicated video cable.

Media Disc Player

The media disc player is responsible for playing optical media for the infotainment system.

The media disc player receives control information and outputs digital audio over the MOST bus.

The media disc player receives battery power and ground from the vehicle harness.

Audio Amplifier (If equipped)

Amplifier Interface

The amplifier receives battery power and ground from the vehicle harness. . The audio amplifier is a participant on the MOST network. The audio amplifier receives audio signals and control information from the MOST bus.

Amplifier Operation

The purpose of the amplifier is to increase the power of a voltage or current signal. The output signal of an amplifier may consist of the same frequencies as the input signal or it may consist of only a portion of the frequencies as in the case of a subwoofer or midrange speaker. The audio amplifier amplifies the signal and sends it to the appropriate speakers.

Each of the audio output channel circuits (+) and (–), at the audio amplifier have a DC bias voltage that is approximately one half of the battery voltage. When using a DMM, each of the audio output channel circuits will measure approximately 6.5V DC. The audio being played on the system is produced by a varying AC voltage that is centered around the DC bias voltage on the same circuit. The AC voltage is what causes the speaker cone to move and produce sound. Both the DC bias voltage and the AC voltage signals are needed for the audio system to properly produce sound.

The audio amplifier is also responsible for operation of active noise cancellation. Refer to [CELL Link Error - Link target cell \(cell ID 194567\) is invalid for this publication.](#) for more information.

Speaker Operation

Speakers turn electrical energy into mechanical energy to move air, using a permanent magnet and an electromagnet. The electromagnet is energized when the radio or amplifier (if equipped) delivers current to the voice coil on the speaker. The voice coil will form a north and south pole that will cause the voice coil and the speaker cone to move in relation to the permanent magnet. The current delivered to the speaker is rapidly changing alternating current (A/C). This causes the speaker cone to move in two directions producing sound.

Infotainment Controls and Display

The infotainment display and controls are a separate component from the radio, combined into an assembly. The assembly contains the control knobs and buttons for all audio and HVAC functions and the information display. The assembly is supplied battery voltage and ground from the vehicle harness.

Control information, touch communications and dimming level for the display are communicated via a LIN serial data circuit to the human machine interface module.

The human machine interface module sends the display digital video data for on-screen display through a dedicated video cable.

The controls communicate via a LIN serial data circuit with the remote radio receiver . Messages communicated include the following:

- Wake-up/power state messages
- Diagnostic information
- Button presses/knob rotations
- Commands for the state of indicators
- Back-lighting dimming level

HVAC data for controls and status indicators is communicated between the HVAC controls and the HVAC control module with a separate LIN serial data circuit. HVAC status screen information from the HVAC control module is transmitted to the radio on the GMLAN serial data circuit. The radio communicates the desired screen information to the human machine interface module to be sent to the information display using the video data circuits.

Antenna System

Mast Antenna

The mast antenna is responsible for AM and FM radio reception. The antenna is attached to a base. The coaxial cable is connected to the base, and this cable is connected to the radio.

Multi-Band Antenna

The multi-band antenna is located on the roof of the vehicle. This type of antenna may be used with the AM/FM radio, but is primarily for cellular, GPS signals, and XM signals, if the vehicle has these features. Keep this antenna clear of snow and ice build up for clear reception. If the vehicle has a sunroof, the performance of the system may be affected if the sunroof is open. Loading items onto the roof of the vehicle can interfere with the performance of the system, ensure the multi-band antenna is not obstructed.

Radio Reception

AM/FM Radio Signal

The radio signal is sent from a broadcast station and is then received by an antenna. The strength of the signal received depends on the following:

- The power output (wattage) of the broadcasting station
- The location of the vehicle (or receiver) relative to the broadcast tower.
- Height of the broadcast antenna
- Height of the receiving antenna
- Obstacles between the tower and the receiver
- Atmospheric conditions
- What band (AM or FM) the station is broadcasting
- Type of antenna and the ground plane

Digital Radio Receiver (If equipped)

The XM satellite receiver is integrated into the radio. XM satellite radio provides digital radio reception. The XM signal is broadcast from two satellites and, where necessary, terrestrial repeaters. The high power satellites allow the antenna to receive the XM signal even when foliage and other partial obstructions block the antennas view of the satellite. Terrestrial repeaters are used in dense urban areas. These repeaters will receive the satellite signal and re-broadcast them at much higher power levels in order to ensure reception in areas with densely packed tall buildings. A service fee is required in order to receive the XM service.

Radio Data System (RDS)

The RDS feature is available only on FM stations that broadcast RDS information. This system relies upon receiving specific information from these stations and only works when the information is available. While the radio is tuned to an FM-RDS station, the station name or call letters display. RDS data is carried in what is known as a "subcarrier". A subcarrier is a frequency that the FM broadcaster is authorized to use to send data that is not audible in the main audio program.

RDS functions will only work with FM broadcast stations that are broadcasting RDS data. Not all FM Broadcast stations broadcast RDS data or offer all of the RDS services.

The information displayed is dependent upon the information broadcast by the particular station. The information may vary greatly between stations. RDS functions may not work properly when reception is weak, reception is of poor quality, or RDS is not implemented properly by the FM Broadcaster. In some cases, a radio station broadcasting incorrect information may cause the RDS features of the radio to appear to work improperly.

With RDS, the radio can do the following:

- Display text information such as: station identification, type of programming, and general information (artist and song title, station messages, call in phone numbers, etc.).
- Seek to stations broadcasting the selected type of programming
- Receive announcements concerning local and national emergencies
- Receive alert warnings of local or national emergencies. When an alert announcement comes on the current radio station, ALERT! displays. You will hear the announcement, even if the volume is low or a CD is playing. If a CD is playing, play stops during the announcement. Alert announcements cannot be turned off. ALERT! is not affected by tests of the emergency broadcast system. This feature is not supported by all RDS stations.

Theft Deterrent

The radio theft deterrent system is intended to disable or limit radio functionality if incorrect vehicle information is received by the radio. The radio disables functionality if the VIN information received by the radio does not match the VIN information that has been learned by the radio. The radio receives this information via serial data. A possible cause of incorrect VIN info could be the radio was originally installed in another vehicle.

The radio has the following theft operating modes as part of the theft deterrent system:

- Normal Mode: The radio has learned a correct VIN sequence and the VIN information received via serial data matches the learned VIN sequence. In this mode the radio has full functionality.
- No VIN Mode: The radio has not received or learned a correct VIN sequence. In this mode the radio has limited functionality.
- Theft Detected Mode: The radio has learned a correct VIN sequence and the VIN information received via serial data does NOT match the learned VIN sequence. In this mode the radio may be disabled or have limited functionality. The radio display will indicate that theft protection is active.

Bluetooth ® (If equipped)

Bluetooth ® wireless technology is a short-range communications technology intended to replace the cables connecting portable and/or fixed devices while maintaining high levels of security. The operating range of the signal is approximately 30 feet.

The available features and functions are determined by the type of device and the software within the devices being used. For a feature or function to operate, it must be supported in both devices.

The first connection between devices is established through a process called pairing. In order to pair two devices, a password (passkey) has to be exchanged between the two devices. One device will generate the password, the other device accepts the password to complete the process. Once the devices are paired, future connections between the devices will occur automatically when the devices are on and within range of each other.

The Bluetooth ® hardware is internal to the human machine interface module. The human machine interface module supports streaming of data (music, voice, information) from cellular phones and other mobile devices that support those features. The human machine interface module is also capable of interfacing with cellular phones for hands-free features.

- The device must be paired to the system to use the available Bluetooth ® feature(s). The pairing process must only be performed once for each device, unless that device's information is deleted.
- Up to five devices can be paired, but only one can be connected at any given time.
- Streaming Audio allows playing music from the mobile device wirelessly. Music stored on the mobile device can be viewed and controlled from the display.
- To stream audio from a mobile device, the device must be unlocked, and any additional applications should be closed.

Refer to the vehicle owners manual, supplements, and the device manufacturers information for pairing instructions.

Applications (If equipped)

When the system is equipped with Bluetooth ®, the system is capable of using applications, commonly referred to as apps.

The term application refers to any piece of software that works on a system (hardware) that is being operated by it's own software. Applications are typically small software programs which uses the hardware to perform a specific task, as opposed to operating the entire system.

- For an application to be used, it must be installed on both the vehicle infotainment system and a compatible mobile device.
- The device must be connected to the system. this may be done wirelessly via Bluetooth ®, or via the vehicle USB port. Refer to the device manufacturers information for the proper connection method.
- When the device is connected, the vehicle infotainment system is used to remotely access and control the application on the mobile device.
- The application must work correctly on the device to work with the vehicle infotainment system.
- The user may be required to log-in to the application on the mobile device before using the application from the vehicle controls.
- Using applications will use the device's data plan.
- The device must be unlocked, and any additional applications should be closed.

Refer to the owner's manual and supplements for information on mobile devices, control, and operation.

Auxiliary Audio Input Jack (If equipped)

The infotainment system may have a 3.5mm (1/8 in.) auxiliary audio input jack located in the center console. The auxiliary audio input jack interfaces directly with the radio. When a portable audio playback device is connected to the auxiliary jack, an internal switch detects the connection and the radio will switch to AUX as the audio source. Audio signals from the device are sent to the radio from the auxiliary jack via the left, right, and common audio signal circuits.

- When a device is first connected to the 3.5mm (1/8 in.) input jack the infotainment system automatically switches to that device. If an auxiliary device has already been connected, press the AUX or CD/AUX button to select the device.

- Playback of an audio device that is connected to the 3.5mm jack can only be controlled using the controls on the device.
- The volume control on the device may need to be adjusted to ensure sufficient playback volume through the infotainment system.

USB Port and SD Card Reader

The USB port and the card reader slot interface with a hub device, internal to the auxiliary jack, USB, and memory card receptacle assembly. The auxiliary jack, USB, and memory card receptacle assembly receives fused battery voltage and ground from the harness to power the internal hub device as well as providing additional amperage to power USB devices.

The internal hub device interfaces directly with the human machine interface module via a standard USB cable. A Mini type USB connector is used to connect the cable at the USB port and at the human machine interface module and at the auxiliary jack, USB, and memory card receptacle. Standard USB male to female connections are typically used for connecting USB cables together where an in-line connection is required. An in-line cable connection is typically found between the console and I/P harness.

USB Port

The USB port allows connectivity to the infotainment system from portable media players or a USB storage device (memory stick/ flash drive). When a device is connected to the USB port, the system detects the device and switches to USB as the audio source. Once connected, the device can be controlled from the radio controls.

Not all portable media player devices or file types are compatible. Connection to USB HUB devices is not supported.

Refer to the owner’s manual for information on USB devices, control, and operation.

SD Card Reader

The infotainment system uses the SD card reader as a mass storage device, similar to a USB storage device.

Refer to the owners manual for information on media types supported via the SD card reader.

Navigation System Components and Features (if equipped)

The human machine interface module provides navigation functionality, if equipped. The human machine interface module provides the following:

- Connection to the global positioning system (GPS) antenna, which provides the vehicle position information.
- Map data for navigation and map route guidance, stored in the human machine interface modules internal memory.
- Route guidance with verbal prompts to the operator.
- Traffic and weather information for display on the navigation system map (with active subscription, where available).

Global Positioning System (GPS) Antenna

The global positioning system (GPS) antenna is part of the multi-band antenna located on the roof of the vehicle. The GPS antenna is used to collect the signals of the orbiting GPS satellites. Within the antenna is housed a low noise amplifier that allows for a more broad and precise reception of this data. The GPS antenna amplifier is powered through the coaxial cable.

The antenna is connected to the human machine interface module directly, or through a signal splitter. The signal splitter is a component for dividing the navigation signal into two paths without any transmission loss. This allows the use of a single GPS antenna to provide a signal to both the human machine interface module and the telematics communication interface module.

Route Guidance

The map will display the route to the selected destination. Voice prompts alert the operator of upcoming events (turns) and arrivals at the destination. The navigation system will automatically recalculate if the route is not followed. The human machine interface module uses data received from the global positioning system (GPS) satellites, the vehicle speed signal. and serial data information to accurately display the current position of the vehicle.

Points of Interest

The map database provides point of interest information. Points of interests are locations that are frequently visited. Points of interest can be can be displayed on the map or set as a destination. The following are some of the available Points of interests:

- Gas Station
- Restaurant
- College
- Police Station

Valet Mode

Valet Mode is a customer enabled feature of the infotainment system, found in the settings menu, if equipped. The customer creates and inputs a four digit code using the infotainment controls. Confirming the code and selecting LOCK will lock the infotainment system, steering wheel controls and other vehicle features, dependant on vehicle equipment. The vehicle will remain in valet mode until the same four digit code is reentered.

In the event that the four digit code is forgotten, the scan tool can be used to clear the Valet Mode Code.

OnStar ® (If equipped)

When OnStar is activated, a serial data message is sent to the radio that activates a software program. When the software begins its process, the fade goes to the front, Bass and Treble are set to the mid range, the outputs are mono, and the audio source is OnStar. OnStar takes priority over any other audio source. All of these actions are preset values stored in the radio.

For additional OnStar information, refer to [OnStar Description and Operation](#).

Steering Wheel Controls (If equipped)

Some audio functions are available using the steering wheel controls. The steering wheel controls duplicate the function of the primary controls available on the radio.

For additional information on steering wheel controls, refer to [Steering Wheel Controls Description and Operation](#).

Auto Volume Control

With auto volume control, the audio system will adjust automatically to make up for road and wind noise as you drive, by increasing the volume as vehicle speed increases. To use auto volume control, set the volume at the

desired level, and then select either Low, Medium, or High. To turn auto volume control off, select the Off screen button.

Radio/Audio System Description and Operation (IOB)

The entertainment system on this vehicle may have several different configurations available to it. To determine the specific configuration of the vehicle, please see the Service Parts ID Label, and refer to [RPO Code List](#).

Each item in the list below represents topics covered in detail below.

- Radio Circuit Operation
- Information Display and Controls
- Antenna System
- Radio Reception
- Speaker Operation
- Audio Amplifier (If equipped)
- Theft Deterrent
- Bluetooth ® (if equipped)
- Auxiliary Audio Input Jack (If equipped)
- USB Port (If equipped)
- OnStar ®
- Steering Wheel Controls (If equipped)
- SCV (Speed Compensated Volume)
- FOTA (Firmware Over The Air)

Radio Circuit Operation

Radio Power

The radio is supplied power by a fused B+ circuit. The radio does not use a discrete ignition feed circuit for power moding. The power mode master provides the system power mode to the radio via serial data messages. The power mode master determines the system power mode by processing power mode information from ignition switch inputs. Serial data power modes supported by the radio are OFF, ACCESSORY, RUN, and CRANK REQUEST.

Radio Retained Accessory Power

The radio retained accessory power system is controlled by serial data. The activation/termination is the same as relay operation (see Retained Accessory Power Description and Operation) with one exception; the only door switch that will turn off the radio during retained accessory power is the driver door open switch.

Radio Grounds

The vehicle harness provides a ground for the radio circuits. The radio may also be case grounded.

Radio Data Link Communication

The radio communicates with other modules via serial data.

Radio Audio Outputs

Each of the audio output channel circuits (+) and (-), at the radio have a DC bias voltage that is approximately one half of battery voltage. The audio being played on the system is produced by a varying AC voltage that is centered around the DC bias voltage on the same circuit. The AC voltage is what causes the speaker cone to move and produce sound. The frequency (Hz) of the AC voltage signal is directly related to the frequency of the input (audio source playing) to the audio system. Both the DC bias voltage and the AC voltage signals are needed for the audio system to properly produce sound.

Information Display and Controls

The info display module and radio controls can be separate components from the radio or combined with the radio into one assembly.

When the info display module and radio controls are separate the radio controls communicate radio control inputs directly to the radio through discrete circuits for volume up, volume down and power ON button. It also uses a series of resistors through a single signal circuit when the home, seek up, seek down and phone buttons are pressed. After receiving the message the radio will perform the requested function. The info display module receives digital video data from the radio for on-screen display information through the LVDS (Low Voltage Differential Signal) cable. The radio communicates with the info display module over the radio display touch interrupt request signal for touch screen inputs.

Antenna System

Multi-Band Antenna

The multi-band antenna is located on the roof of the vehicle. This type of antenna may be used with the AM/FM radio, but is primarily for cellular and GPS signals, if the vehicle has these features. Keep this antenna clear of snow and ice build up for clear reception. If the vehicle has a sunroof, the performance of the system may be affected if the sunroof is open. Loading items onto the roof of the vehicle can interfere with the performance of the system, ensure the multi-band antenna is not obstructed.

Active Antenna

The active antenna system uses an integral antenna applied as an appliqué to the rear glass. The antenna module receives both AM and FM signals from the rear glass antenna. The antenna is part of the rear window and looks similar to the defogger grid. One antenna receives AM signals while the other antenna receives FM signals. Any damage to the antenna requires replacing the glass.

The radio antenna module is enabled when the radio is turned on. The radio provides battery voltage to the antenna module using the center conductor of the antenna coaxial cable. When a 12 V signal is seen by the module on the center conductor of the antenna coax, both AM and FM signals are amplified.

Radio Reception

AM/FM Radio Signal

The radio signal is sent from a broadcast station and is then received by an antenna. The strength of the signal received depends on the following:

- The power output (wattage) of the broadcasting station
- The location of the vehicle (or receiver) relative to the broadcast tower.
- Height of the broadcast antenna
- Height of the receiving antenna
- Obstacles between the tower and the receiver
- Atmospheric conditions
- What band (AM or FM) the station is broadcasting
- Type of antenna and the ground plane

Radio Data System (RDS)

The RDS feature is available only on FM stations that broadcast RDS information. This system relies upon receiving specific information from these stations and only works when the information is available. While the radio is tuned to an FM-RDS station, the station name or call letters display. RDS data is carried in what is known as a "subcarrier". A subcarrier is a frequency that the FM broadcaster is authorized to use to send data that is not audible in the main audio program.

RDS functions will only work with FM broadcast stations that are broadcasting RDS data. Not all FM Broadcast stations broadcast RDS data or offer all of the RDS services.

The information displayed is dependent upon the information broadcast by the particular station. The information may vary greatly between stations. RDS functions may not work properly when reception is weak, reception is of poor quality, or RDS is not implemented properly by the FM Broadcaster. In some cases, a radio station broadcasting incorrect information may cause the RDS features of the radio to appear to work improperly.

With RDS, the radio can do the following:

- Display text information such as: station identification, type of programming, and general information (artist and song title, station messages, call in phone numbers, etc.).
- Seek to stations broadcasting the selected type of programming
- Receive announcements concerning local and national emergencies
- Receive alert warnings of local or national emergencies. When an alert announcement comes on the current radio station, ALERT! displays. You will hear the announcement, even if the volume is low or if an auxiliary device is playing. If an auxiliary device is playing, play stops during the announcement. Alert announcements cannot be turned off. ALERT! is not affected by tests of the emergency broadcast system. This feature is not supported by all RDS stations.

Digital Radio Receiver (If equipped)

The vehicle may have one of two digital radio options, satellite transmitted (XM-Sirius) or terrestrial Digital Audio Broadcast (DAB) depending on geographical area.

XM-Sirius

The XM satellite receiver is integrated into the radio. XM satellite radio provides digital radio reception. The XM signal is broadcast from two satellites and, where necessary, terrestrial repeaters. The high power satellites allow the antenna to receive the XM signal even when foliage and other partial obstructions block the antennas view of the satellite. Terrestrial repeaters are used in dense urban areas. These repeaters will receive the satellite signal and re-broadcast them at much higher power levels in order to ensure reception in areas with densely packed tall buildings. A service fee is required in order to receive the XM service.

Digital Audio Broadcast (DAB)

The DAB receiver is integrated into the radio. DAB radio provides digital radio reception. The DAB signal is broadcast from terrestrial transmitters. Services available can include: main radio stations, additional stations (news, sports, etc..) and data services (digital images, video and other data). The availability of services is dependent upon broadcasters in the area. The strength of the DAB signal depends on the following:

- The power output (wattage) of the broadcasting station
- Location of the vehicle (or receiver) relative to the broadcast tower
- Height of the broadcast antenna
- Height of the receiving antenna
- Obstacles between the tower and the receiver
- Type of antenna and the ground plane

Speaker Operation

Speakers turn electrical energy into mechanical energy to move air, using a permanent magnet and an electromagnet. The electromagnet is energized when the radio or amplifier (if equipped) delivers current to the voice coil on the speaker. The voice coil will form a north and south pole that will cause the voice coil and the speaker cone to move in relation to the permanent magnet. The current delivered to the speaker is rapidly changing alternating current (A/C). This causes the speaker cone to move in two directions producing sound.

Audio Amplifier (If equipped)

Amplifier Interface

A fused battery voltage circuit provides the main amplifier power. A switched 12 V output from the radio is used to control the power - state of the amplifier. To respond quickly to audio input and control signals, the amplifier is ON in all vehicle power modes except OFF and CRANK Request. The internal amplifier bridges are fully powered and unmuted when the amplifier receives the switched 12 V input.

Amplifier Operation

The purpose of the amplifier is to increase the power of a voltage or current signal. The output signal of an amplifier may consist of the same frequencies as the input signal or it may consist of only a portion of the frequencies as in the case of a subwoofer or midrange speaker. The radio creates a low level stereo audio output signal, which is sent at the user-defined volume level to the audio amplifier. The audio amplifier amplifies the signal and sends it to the appropriate speakers. Each of the audio output channel circuits (+) and (-), from the amplifier have a DC bias voltage that is approximately one half of battery voltage. The audio being played on the system is produced by a varying AC voltage that is centered around the DC bias voltage on the same circuit. The AC voltage is what causes the speaker cone to move and produce sound. The frequency (Hz) of the AC voltage signal is directly related to the frequency of the input (audio source playing) to the audio system. Both the DC bias voltage and the AC voltage signals are needed for the audio system to properly produce sound.

Theft Deterrent

The radio theft deterrent system is intended to disable or limit radio functionality if incorrect vehicle information is received by the radio. The radio disables functionality if the VIN information received by the radio does not match the VIN information that has been learned by the radio. The radio receives this information via serial data. A possible cause of incorrect VIN info could be the radio was originally installed in another vehicle.

The radio has the following theft operating modes as part of the theft deterrent system:

- Normal Mode: The radio has learned a correct VIN sequence and the VIN information received via serial data matches the learned VIN sequence. In this mode the radio has full functionality.
- No VIN Mode: The radio has not received or learned a correct VIN sequence. In this mode the radio has limited functionality.
- Theft Detected Mode: The radio has learned a correct VIN sequence and the VIN information received via serial data does NOT match the learned VIN sequence. In this mode the radio may be disabled or have limited functionality. The radio display will indicate that theft protection is active.

Bluetooth® (If Equipped)

Bluetooth® wireless technology is a short-range communications technology intended to replace the cables connecting portable and/or fixed devices while maintaining high levels of security. Only vehicles with steering wheel controls will have Bluetooth® functionality. In order to utilize the vehicle’s Bluetooth® system, a Bluetooth® equipped cellular phone is required.

The Bluetooth® antenna is internal to the telematics communication interface control module, radio or human machine interface module and is used to send and receive signals from a Bluetooth® enabled cellular phone. The available features and functions are determined by the software within the device being used and the telematics communication interface control module. The operating range of the signal from the vehicle is approximately 30 feet. Note that the operating range is dependent upon the cellular phone being used and battery level of the phone.

With Bluetooth® technology customers can experience hands-free calling as their Bluetooth® capable cellular phones are wirelessly connected to the vehicle. It will allow customers to place and receive calls using the steering wheel controls and voice recognition. The vehicle audio system will allow you to listen to your call through the vehicle speakers and adjust volume through steering wheel or radio controls.

Not all Bluetooth® cellular phones are guaranteed to work with the vehicle’s Bluetooth® system. Based on the cellular phone’s service provider and the manufacturer’s implementation of Bluetooth®, not all phones support all available Bluetooth® functionality. Bluetooth® enabled cellular phones will be tested for vehicle compatibility and a feature compatibility list will be provided via the GM Bluetooth® website: <http://www.gm.com/vc/bluetooth/>

Bluetooth® Features Supported

The following is a list of features supported by the Bluetooth® system. Note that not all devices will support all of the listed functions.

- Automatic reconnection – highest priority phone will automatically be connected to vehicle when vehicle ignition is on
- Hands-free dialing- via digits, redial, name tags (phone number saved to a nametag via voice recognition)
- Answering a call
- Ending a call
- Mute a Call
- Rejecting a call – ignore an incoming call
- Call Waiting
- Three-way Calling – initiated from hands-free system
- Send Number During a Call – this is used when calling a menu-driven phone system
- Transfer a Call – transfer call from vehicle to cellular phone and visa versa
- Voice Pass-Thru – allow access to the voice recognition commands on the cellular phone

Auxiliary Audio Input Jack (If equipped)

The infotainment system may have a 3.5mm (1/8 in.) auxiliary audio input jack located in the center console or on the radio faceplate. The auxiliary audio input jack interfaces directly with the radio. When a portable audio playback device is connected to the auxiliary jack, an internal switch detects the connection and the radio will switch to AUX as the audio source. Audio signals from the device are sent to the radio from the auxiliary jack via the left, right, and common audio signal circuits.

- When a device is first connected to the 3.5mm (1/8 in.) input jack the infotainment system automatically switches to that device. If an auxiliary device has already been connected, press the Media or AUX button to select the device.
- Playback of an audio device that is connected to the 3.5mm jack can only be controlled using the controls on the device.
- The volume control on the device may need to be adjusted to ensure sufficient playback volume through the infotainment system.

USB Port (If Equipped)

The infotainment system may have a USB connector located in the center console. The USB connector interfaces directly with the radio. The USB connector supports both USB standards 1.1 and 2.0.

USB Supported Devices:

- USB Flash Sticks (Thumb Drives)
- Portable USB Hard Drives

- Portable Digital Media Players (iPOD®, ZUNE®, etc)

Depending on the USB device, some devices may not be recognized, or some features/functions may not be able to be controlled with the radio controls. USB HUB devices are not supported.

Refer to the owner’s manual for information on USB devices, control, and operation.

OnStar ® (If equipped)

When OnStar is activated, a serial data message is sent to the radio that activates a software program. When the software begins its process, the fade goes to the front, Bass and Treble are set to the mid range, the outputs are mono, and the audio source is OnStar. OnStar takes priority over any other audio source. All of these actions are preset values stored in the radio.

Steering Wheel Controls (If equipped)

Some audio functions are available using the steering wheel controls. The steering wheel controls duplicate the function of the primary controls available on the radio.

For additional information on steering wheel controls, refer to Steering Wheel Controls Description and Operation.

Speed Compensated Volume

With Speed Compensated Volume the audio system will adjust automatically to make up for road and wind noise as you drive, by increasing the volume as vehicle speed increases. To use speed compensated volume, set the volume to the desired level, then select either Low, Medium, or High. To turn SCV off select the Off screen button.

Firmware Over The Air

The Firmware Over The Air feature was designed to reflash software remotely. Remote reflash is an in-vehicle feature that enables the installation of a software package to update the infotainment system without requiring service test equipment to be physically connected to the vehicle. Remote reflash will utilize a long range or short range connection from the host module to a remote IT system.

Video Entertainment System Description and Operation

Each item in the list below represents topics covered below:

- Rear Seat Entertainment System Components
- Media Disc Player
- Video Display Screens
- Remote Control
- Wireless Headphones
- Wired Headphone Jack
- Auxiliary Inputs

Rear Seat Entertainment System Components

The rear seat entertainment system includes:

- The disc player for playing optical media.
- A video display screen
- An infrared module located in the rear video display
- Two sets of wireless infrared headphones
- A wireless infrared remote control
- An auxiliary input assembly

Media Disc Player

The media disc player is responsible for playing optical media for the infotainment system, refer to the Owners Manual for supported media types.

The media disc player is a separate component from the radio. The media disc player receives power, ground and serial data from the vehicle harness. The media disc player receives control information and outputs audio to the infotainment system over the MOST bus. The media disc player provides a discrete circuit to control the power state of the rear displays.

The media disc player is also the control module for the rear seat entertainment system, responsible for video output, infrared audio, screen controls and source selections for the system. All information to the video screen is communicated over the LVDS cable. One cable is connected to the front display, and a second cable is connected to the rear display.

Video Display Screens

Front Display

When the vehicle is in PARK, the front display is capable of showing video sourced from the media disc player. Information is transmitted to the display from the media disc player via the blue LVDS cable. On screen controls are available to provide the operator with playback controls and other options.

Rear Display

The second row overhead display is located in the headliner. The display screen shows video from the media disc player, or an AUX input device.

The display receives power and ground from the vehicle harness. A discrete control circuit from the media disc player is used to control the power state of the display. The display receives all other video, audio, and control information via the LVDS cable.

The display contains the infrared transmitters for the wireless headphones and the remote control. During operation, the infrared transmitters may be visible as illuminated LEDs.

Remote Control

The wireless remote control is used to operate the system from the rear seat. Infrared signals from the remote control are received by the infrared receivers in display. The remote control can be used to turn the rear screen on or off, to change system settings, and to select the source for the screen from the media available to the infotainment system. Refer to the Owners Manual for additional information on remote control functions.

Direct sunlight or very bright light may affect the ability of the infrared receivers to respond to signals from the remote control. Objects blocking the line of sight may also affect the function of the remote control.

Wireless Headphones

Wireless headphones allow for rear seat passengers to listen to an audio source without disturbing the listening of front seat passengers. The wireless headphones receive audio signals from the infrared transmitter in the display. This transmission is line of sight only, so audio quality may be degraded if anything blocks the transmitter signal from reaching the headphones.

A power button on the headphone is used to turn the headphone on. A red LED illuminates when the headphone is turned ON. The headphones automatically turn OFF if they lose the infrared signal from the system for approximately 4 minutes in order to preserve their battery power. The signal may be lost if the system is turned off or if the headphones are out of range of the infrared signal transmitters.

Each set of headphones has a rotary volume control on one of the earpieces. To adjust the volume, adjust this control.

Audio to the wireless headphones is provided over 2 channels. Audio for channel 1 or channel 2 is selected from one of the available sources using the remote control. Pressing the button in the center of the headphone volume control will switch the headphone between channels.

Auxiliary Inputs

The rear seat entertainment system has an auxiliary input assembly that contains a USB port, an SD card reader, RCA type audio/video jacks, and a wired headphone jack with volume control. Refer to the Owners Manual for information on compatible devices and supported media types/formats.

USB port and SD Card Reader

The USB port and SD card reader slot interface with a hub device, internal to the assembly. The assembly receives fused battery voltage and ground from the harness to power the internal hub device as well as providing

additional amperage to power USB devices.

The internal hub device interfaces directly with the media disc player via a standard USB cable. A Mini type USB connector is used to connect the cable at the media disc player and the auxiliary input assembly. Mini type USB male to female connections are used for connecting USB cables together where an in-line connection is required. An in-line cable connection is typically found between the console and I/P harness.

The USB port allows connectivity to the rear seat entertainment system from portable media players or a USB storage device (memory stick/ flash drive). The rear seat entertainment uses the SD card reader as a mass storage device, similar to a USB storage device.

Once a supported device is connected to the USB port or SD card reader, the device may be sourced to one or both of the rear displays using the remote control.

Video

The local video input is the standard yellow RCA color-coded jacks. A composite video signal from a device can be attached to this input and is then available to be sourced to one or both of the rear screens. To use this video input, connect the auxiliary device cables to the RCA jacks and power ON both the auxiliary device and the rear seat entertainment system.

Power for the device is not supplied by this connection. The rear seat entertainment system cannot control the operation of devices connected to the RCA jacks. All operation of the device must be done using the controls available on the device.

Wired Headphone Jack

The wired headphone jack is used to connect an additional set of headphones to the system. Audio for the wired headphone jack can be from either the left or the right screen source, and is selected using the remote control.

Audio to the wired headphone jack is transmitted through the vehicle harness from the media disc player. A rotary control near the headphone jack is used to adjust the volume.

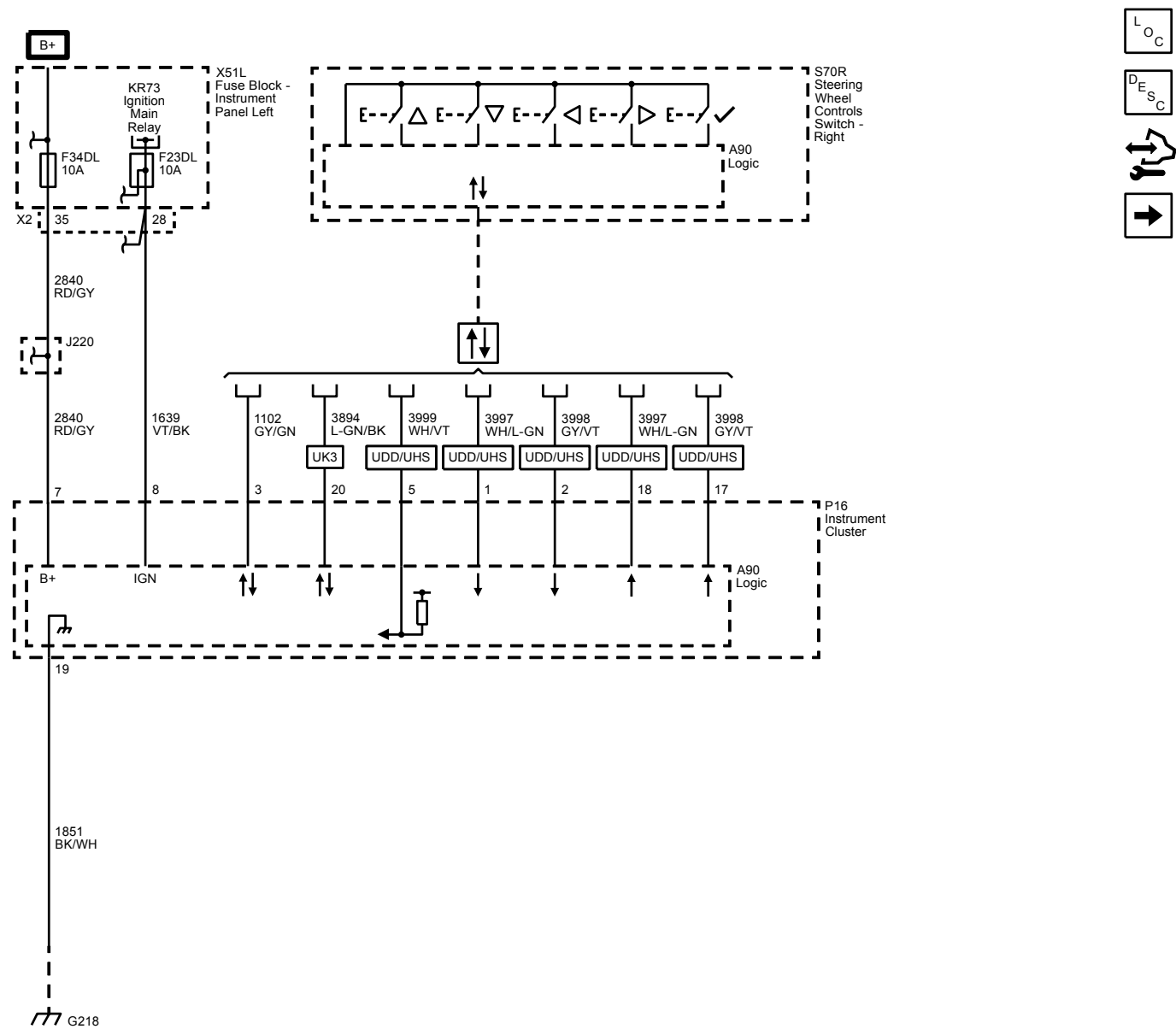
Driver Information and Entertainment

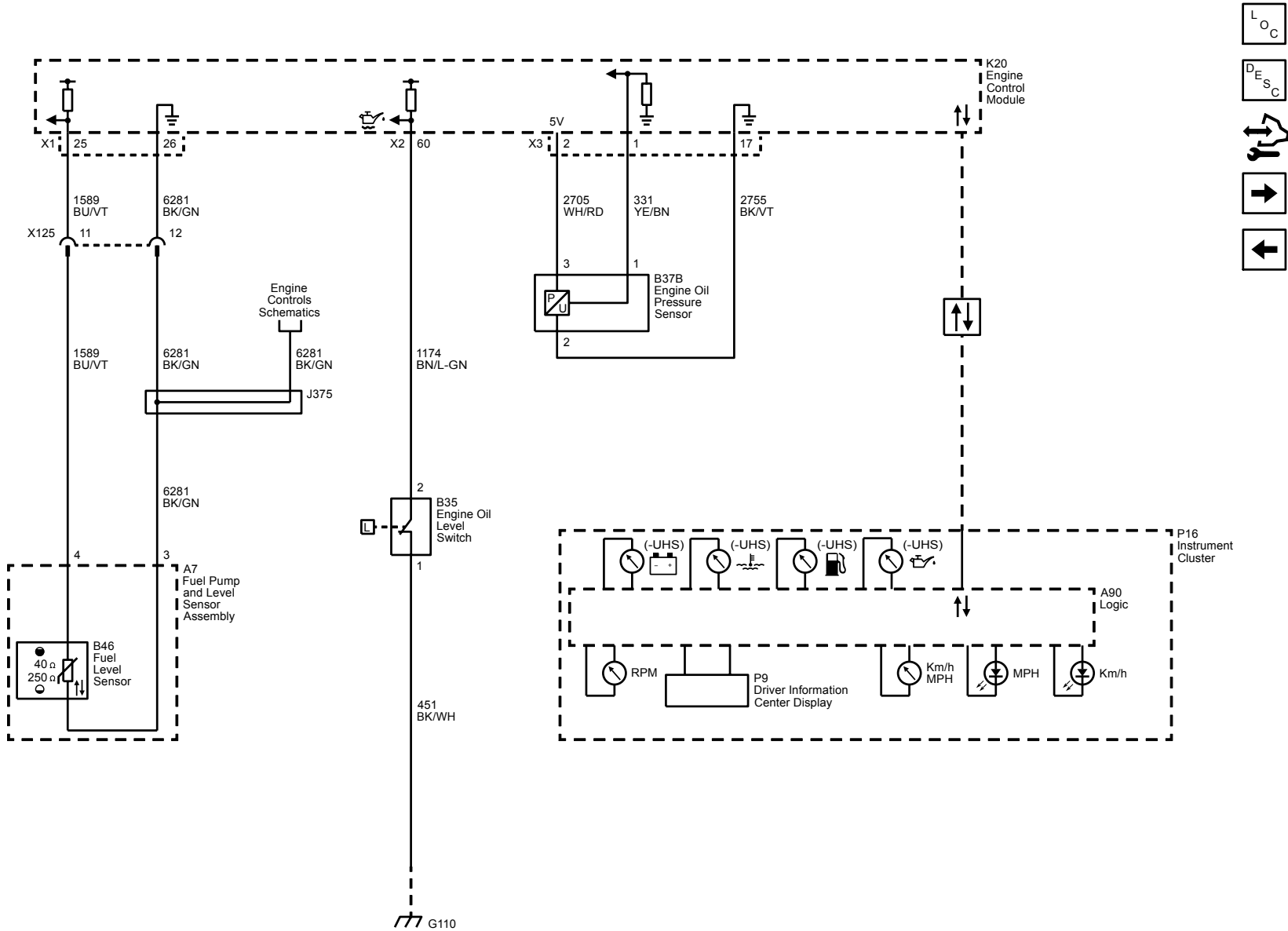
Displays and Gauges

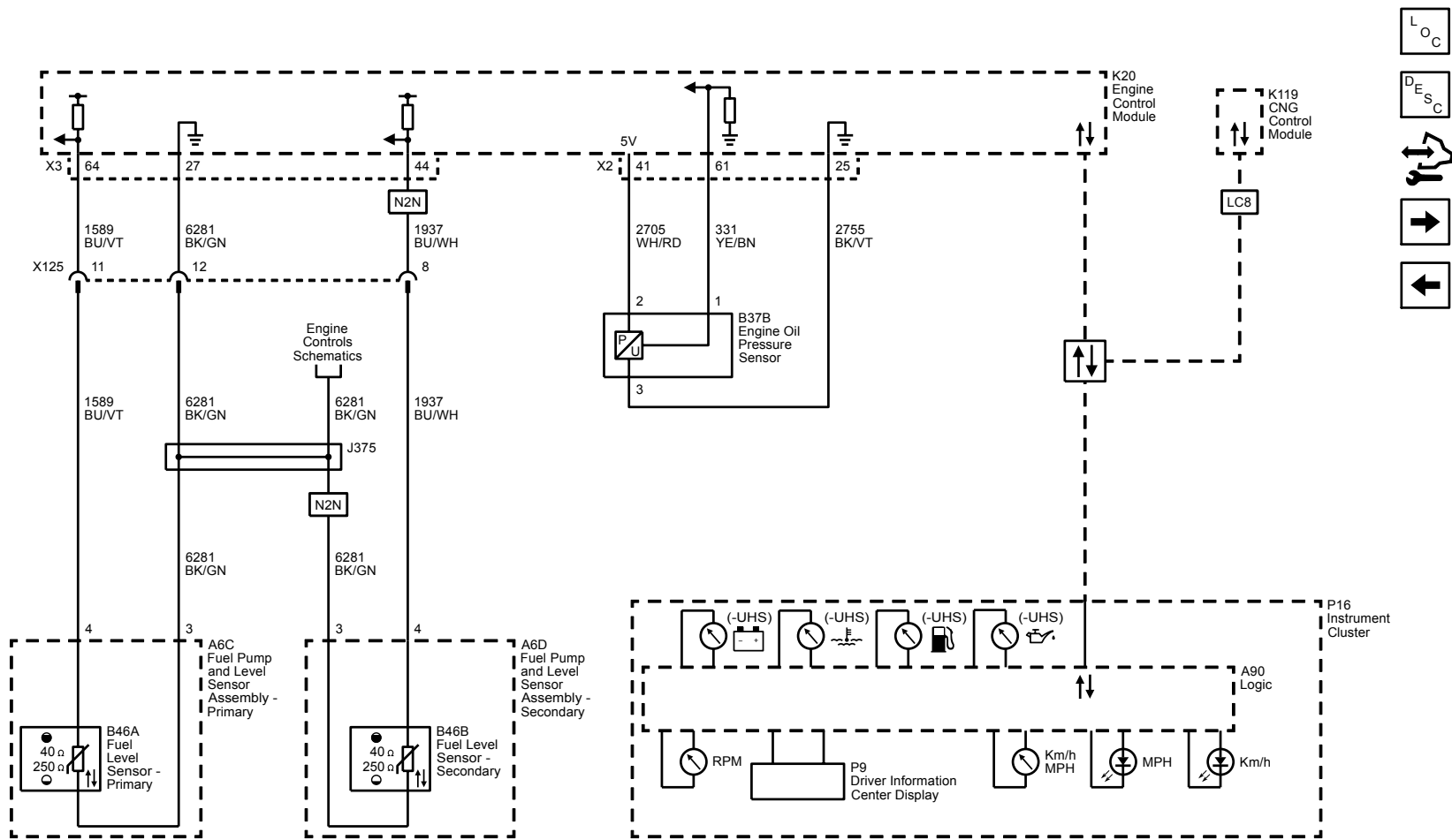
Schematic and Routing Diagrams

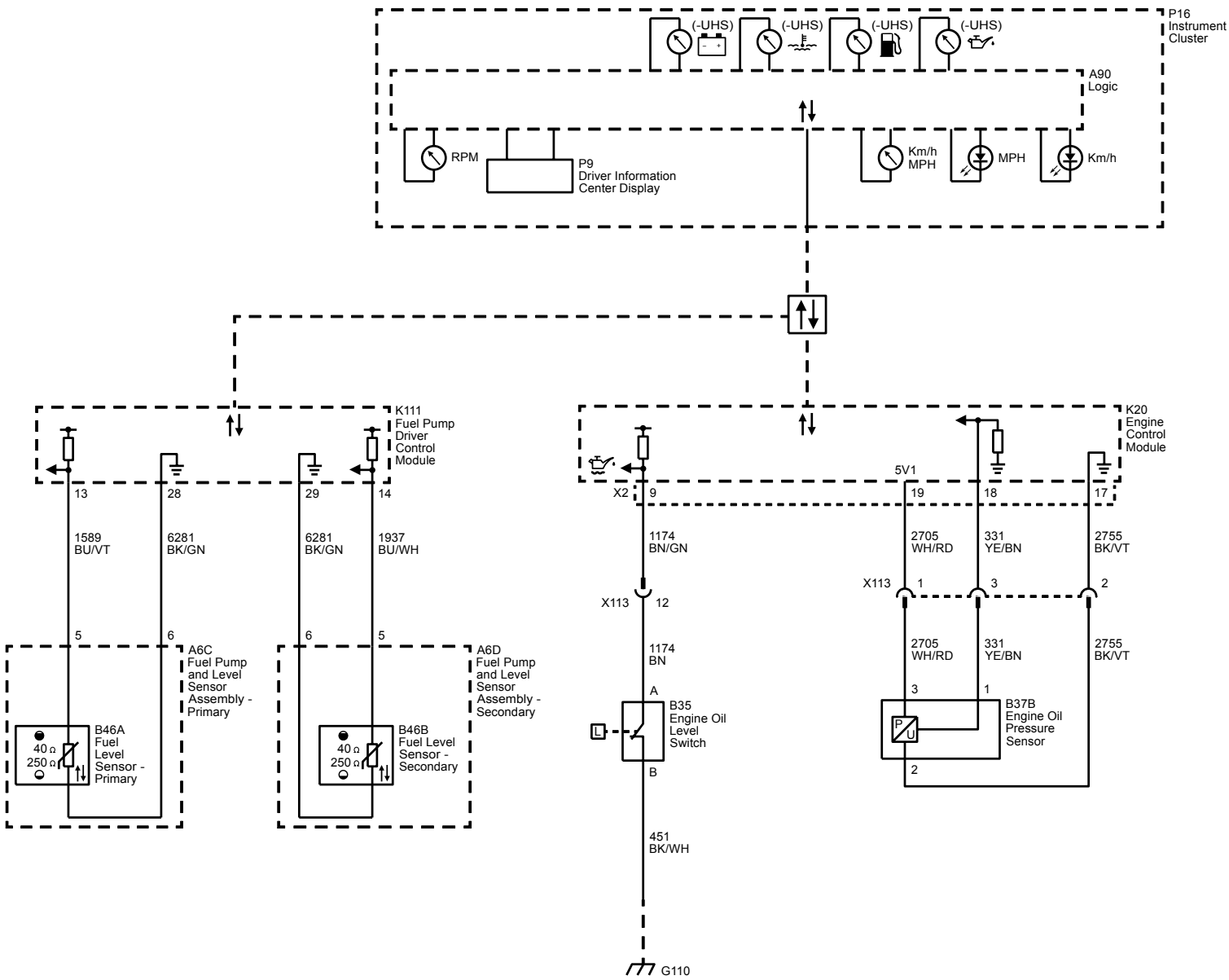
Instrument Cluster Schematics

Power, Ground and Serial Data

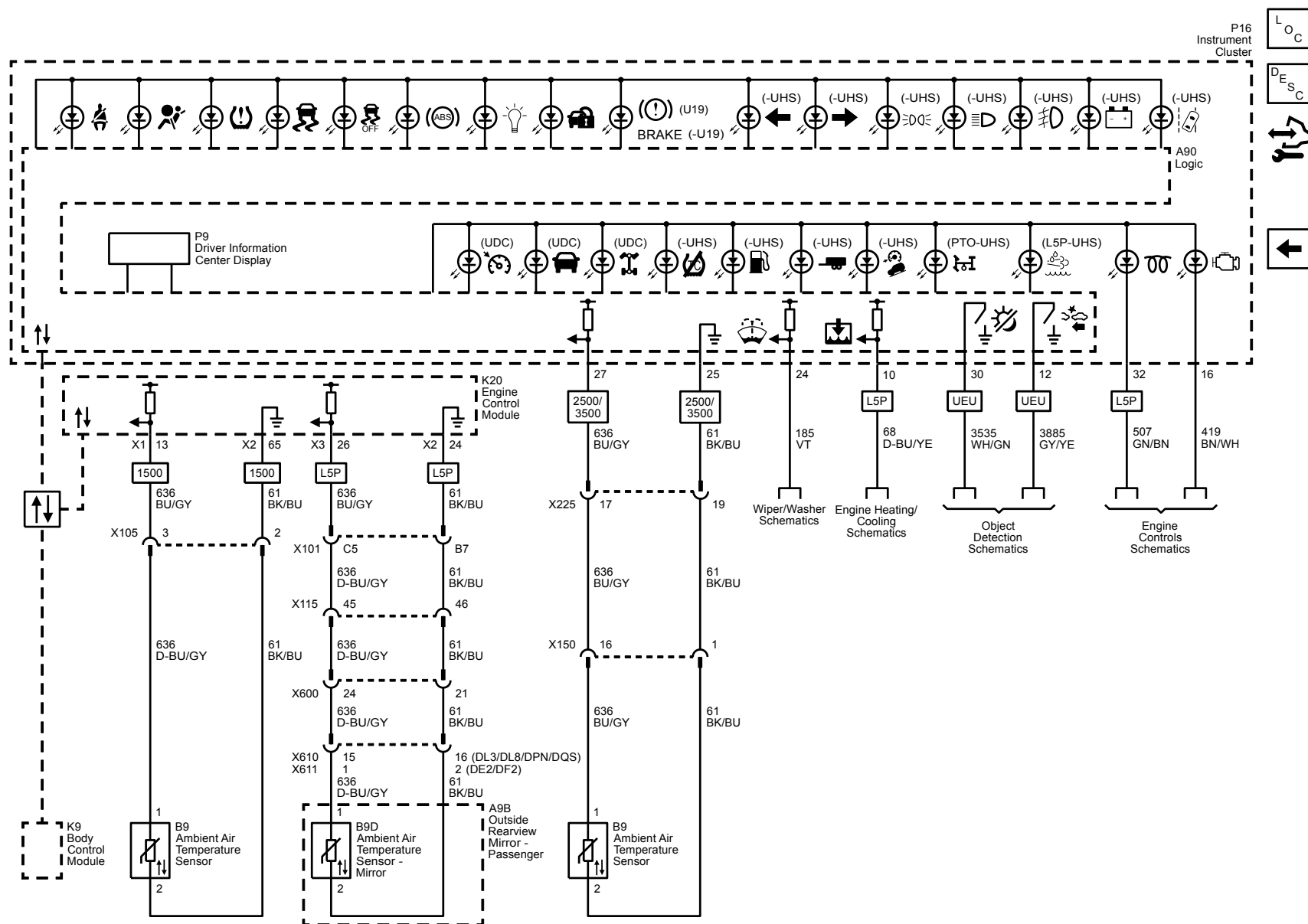




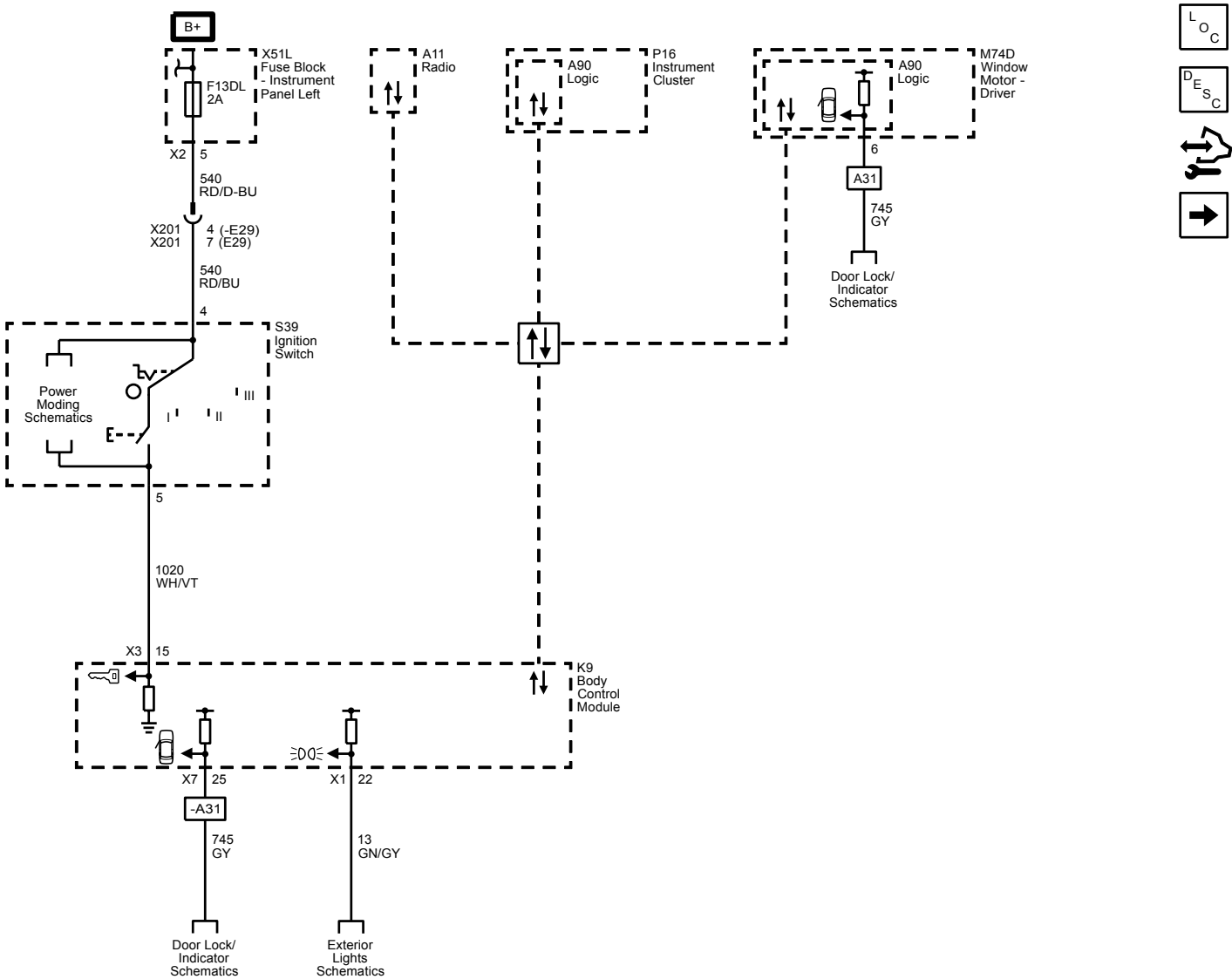




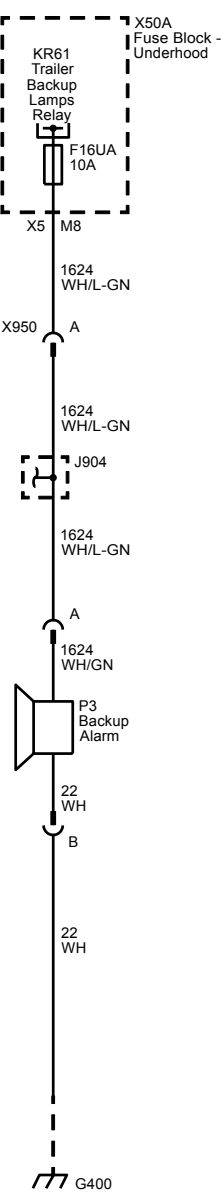
Indicators and Ambient Temperature



Audible Warnings



Backup Alarm (8S3)



Description and Operation

Audible Warnings Description and Operation

The audible warnings alert the driver of a system concern or a critical vehicle condition. If equipped with an serial data communicating audio amplifier, the audio amplifier generates the audible warnings through the speakers. If not equipped with an audio amplifier, the radio generates the audible warnings through the speakers. The radio or audio amplifier receives audible warning requests via serial data. If the radio or audio amplifier receives multiple audible warning requests, the warning with the highest priority sounds first. Different audible warnings may sound with a different frequency or a different chime pattern, depending on the system or module making the request. The chime volume may be selectable through vehicle personalization.

Audible Warnings or Chimes

The following is a list of common audible warnings or chimes. For additional chimes or complete system description, refer to the appropriate system’s Description and Operation or the vehicle owner’s manual.

- Driver Seat Belt Reminder – If the vehicle is started and the seat belt is unbuckled, the BCM requests the radio or audio amplifier sound a chime to indicated that the belt is unbuckled. This is accompanied by a flashing driver seat belt indicator on the instrument cluster. If the belt remains unbuckled, the chime cycle may continue multiple times if the vehicle is driven and the indicator will remain on solid.
- Passenger Seat Belt Reminder – If the passenger presence system determines that their is an occupant in the passenger seat and the vehicle is started with the passenger seat belt unbuckled, the BCM requests the radio or audio amplifier sound a chime to indicated that the belt is unbuckled. This is accompanied by a flashing passenger seat belt indicator. If the belt remains unbuckled, the chime cycle may continue multiple times if the vehicle is driven and the indicator will remain on solid. If an object is placed on the passenger seat, the passenger presence system may interpret this as a passenger occupying the seat. Because the passenger seat belt is unbuckled, the passenger seat belt reminder chime will sound. To correct this, remove the object from the passenger seat.
- Exterior Lamps On Warning – If the exterior lamps are left on after the ignition is turned off and the driver door is opened, the BCM will request the radio or audio amplifier sound a chime as an indicator that the exterior lamps are on.
- Electric Parking Brake (if equipped) – If the electric parking brake switch is pressed while the vehicle is in motion, the parking brake control module will request the radio or audio amplifier sound a chime. To release the parking brake, the brake pedal must be pressed when the electric parking brake switch is pressed. If the brake pedal is not pressed, the parking brake control module will request the radio or audio amplifier sound a chime. A message will also appear on the driver information center.
- Delayed Locking – If the keyless entry transmitter is not in the vehicle and the door lock switch is pressed with the driver door open, the BCM will request the radio or audio amplifier sound a chime three times to indicate that the vehicle has entered a delayed locking state. The doors will automatically lock five seconds after the last door is closed.
- Object Detection – The object detection system sends various chime requests to the radio or audio amplifier during normal operation.

Additional Warnings

The following warnings have an associated instrument cluster indicator or driver information center message:

- Turn Signal Indicators – The radio or audio amplifier activates the audible warning as requested by the BCM.
- Vehicle Overspeed Message – The radio or audio amplifier activates the audible warning as requested by the BCM.
- Fuel Level Low Message – The radio or audio amplifier activates the audible warning as requested by the BCM.
- Oil Pressure Indicator – The radio or audio amplifier activates the audible warning as requested by the BCM.
- Tire Pressure Low Indicator – The radio or audio amplifier activates the audible warning as requested by the BCM.
- Antilock Brake Indicator – The radio or audio amplifier activates the audible warning as requested by the electronic brake control module.
- Engine Cooling System Messages – The radio or audio amplifier activates the audible warning as requested by the engine control module.
- Transmission Messages – The radio or audio amplifier activates the audible warning as requested by the transmission control module.

Backup Alarm (with 8S3)

When transmission placed in reverse, the Body Control Module (BCM) activates the KR61 Trailer Backup Lamps Relay which supplies 12V to the reverse lamps and the Backup Alarm simultaneously.

Indicator/Warning Message Description and Operation

INDICATOR LIGHT ON

Refer to the OWNER’S MANUAL for the descriptions and explanations of all indicator lights.

For diagnosis and repair information related to an indicator light refer to the System Diagnosis and the Description of Operation that the message relates to.

MESSAGE DISPLAYED

Refer to the OWNER’S MANUAL for descriptions and explanations of all messages displayed.

For diagnosis and repair information related to a displayed message refer to the System Diagnosis and the Description of Operation that the message relates to.

CHANGE TIMING BELT MESSAGE

The Instrument Cluster monitors the odometer mileage to determine when timing belt (if equipped) replacement may be necessary. After the vehicle has accumulated approximately 100,000 miles (160,000 kilometers), the Instrument Cluster may display the CHANGE TIMING BELT message. After the engine timing belt has been replaced, reset the CHANGE TIMING BELT message by locating and removing the fuses that supply power to the Instrument Cluster for two minutes.

BRAKES OVERHEATED

The Electronic Brake Control Module monitors brake usage and compares it to an internal thermal model to determine if the brakes could become overheated. If the Electronic Brake Control Module determines the brakes pads have exceeded a desirable temperature based on the thermal model, it sends a serial data message to the Instrument Cluster to display the BRAKES OVERHEATED message. The message remains displayed until the estimated temperature returns to a desirable range.

Transmission Shift Lever Position Indicator

The Transmission Shift Lever Position Indicator (if equipped) is located on the center console and indicates the current transmission shift lever position. The Transmission Shift Lever Position Indicator receives power and ground and is controlled by the Body Control Module (BCM) via serial data. The Transmission Control Module determines transmission shift lever position based on signals from the Transmission Internal Mode Switch and sends the shift lever position information to the BCM via serial data.

- The BCM detects a loss of serial data communications with the ECM.
- The instrument cluster detects a loss of serial data communications with the BCM.

Speedometer

The instrument cluster displays the vehicle speed based on the information from the ECM. The ECM sends the vehicle speed information via serial data to the BCM. The BCM then sends the vehicle speed information via serial data to the instrument cluster to display the vehicle speed.

Odometer

The instrument cluster displays the vehicle odometer in the driver information center. The ECM send a distance rolling count message via serial data to the body control module (BCM). The BCM uses this information to calculate the vehicle odometer. This odometer value is then sent to the instrument cluster. The instrument cluster does not calculate the odometer.

The odometer value is stored in multiple modules. The instrument cluster is a secondary storage module for the odometer, while the BCM is the primary storage and accumulator.

In addition to storing the odometer value for the vehicle, the instrument cluster and the BCM store the VIN. Software checks are performed to ensure these modules, and their stored odometer information, can not be move or transferred between different vehicles.

Tachometer

The instrument cluster displays the engine speed based on the information from the ECM. The ECM converts the data from the crankshaft position sensor to an engine revolution signal. The ECM sends the engine speed information via serial data to the BCM. The BCM then sends the information via serial data to the instrument cluster to display the engine speed.

Compass

The vehicle compass information is gather through the compass module or vehicle communication interface module (VCIM). The compass module or VCIM determines vehicle direction and communicates this with the BCM through serial data. The BCM sends the compass information to the instrument cluster via serial data, where it is displayed.

Outside Air Temperature (1500 series)

The Ambient Air Temperature Sensor is located behind the grille and varies it's resistance with temperature. The Engine Control Module (ECM) reads the resistance value to determine temperature. The time of and rate of the temperature update is based on an algorithm in the ECM software. Factors such as, last reading, current reading, length of time vehicle is been off/on, power mode, vehicle speed, driven distance, and sensor location are all considered by the ECM to know when to update the displayed temperature. For example, if the sensor is located near the engine compartment, and the vehicle has been turned off for only 10 minutes then restarted, the ECM will wait until the vehicle is driven to get more accurate air flow across the sensor before it updates the display.

Outside Air Temperature (2500/3500 series)

The Ambient Air Temperature Sensor is located behind the grille and varies it's resistance with temperature. The Instrument Cluster reads the resistance value to determine temperature. The time of and rate of the temperature update is based on an algorithm in the Instrument Cluster software. Factors such as, last reading, current reading, length of time vehicle is been off/on, power mode, vehicle speed, driven distance, and sensor location are all considered by the Instrument Cluster to know when to update the displayed temperature on the Info Display Module. For example, if the sensor is located near the engine compartment, and the vehicle has been turned off for only 10 minutes then restarted, the Instrument Cluster will wait until the vehicle is driven to get more accurate air flow across the sensor before it updates the display.

On vehicles with diesel engines and RPO AVF, there is an additional Ambient Air Temperature Sensor in the Passenger Outside Rearview Mirror. The Engine Control Module (ECM) reads the resistance value of this sensor to determine outside temperature. This temperature reading is only used for powertrain purposes and is not used for the displayed temperature on the Info Display Module.

Driver Information Center Display (with RPO UDD)

The driver information center is located in the lower middle portion of the instrument cluster, between the speedometer and the tachometer. The driver information center displays information about the vehicle and allows the operator to access applications. It also displays warning messages if a system problem is detected.

The driver information center is made up of three zones. The left zone is a list of the applications that can be displayed. The right zone contains choices to customize what information is displayed for the respective application chosen. In the middle is the interactive application display zone. The application display zone allows access to the navigation application, audio application, phone application, or settings applications. The information display zone contains multiple pages that display vehicle information. The compass and PRNDL are displayed at all times in the lower portion of the display zone.

The driver information center can also be configured with several different themes. Changing the theme is accomplished using the infotainment system faceplate settings page. The chosen theme is used for both the faceplate and the driver information center displays.

Instrument Cluster Configuration (with RPO UHS, UDV)

The instrument cluster is highly interactive and reconfigurable. The operator can select from four different display configures and each of these configuration may contain one, two, or three separate display zones. Regardless of which configuration is selected, the vehicle odometer and PRNDL are always displayed in the lower left and lower right corners of the display.

The different display configurations are:

- **Simple** – The most basic of the available configurations, the Simple configuration includes four static information display zones and one interactive information display zone. The infotainment display zone is located on the left side of the display and displays phone, turn-by-turn navigation, and audio information. The speedometer and compass are located in the upper middle of the display. On the right side of the display is a graphical representation of the fuel level and fuel range.
Below the speedometer, in the lower middle of the display, is the interactive information display zone. The information display zone contains multiple pages that can be scrolled through and selected using the steering wheel mounted driver information center switch.
- **Performance** – The Performance configuration contains three static information zones, one interactive information display zone, and one interactive application display zone. The speedometer and tachometer/fuel level gauge are located on the left and right of the display. In between the speedometer and tachometer is a static information display zone that displays current information while the operator scrolls through other pages in the interactive application display zone.
In the middle of the speedometer is an interactive information display zone. This display zone has a limited number of selection and will only display a digital speedometer, a navigation map, a settings page with sub-menus, or a blank page.
Below the tachometer and extending into the lower middle of the display is an interactive application display zone. The application display zone allows access to the navigation application, audio application, phone application, settings application, or information application. Unlike the information display zone that is located within the speedometer, the information application is fully featured and allows access to all available information pages.
- **Balanced** – The Balanced configuration contains three static information zones, two interactive information display zones, and one interactive application display zone. The tachometer is located on the left side of the display, the speedometer in the middle, and the coolant temperature/fuel level gauge on the right.

Located in the tachometer is an interactive information display zone.

In the speedometer is an interactive information display zone. This display zone has a limited number of selection and will only display a digital speedometer, a navigation map, a settings page with sub-menus, or a blank page.

An interactive application display zone is located in the coolant temperature/fuel level gauge. The application display zone allows access to the navigation application, audio application, phone application, or settings application.

- Enhanced – The Enhanced configuration contains four static information zones, two interactive information display zones, and one interactive application display zone. The speedometer in the upper middle of the display, a navigation map or compass in located on the upper left, and a fuel level gauge and fuel range display on the right.

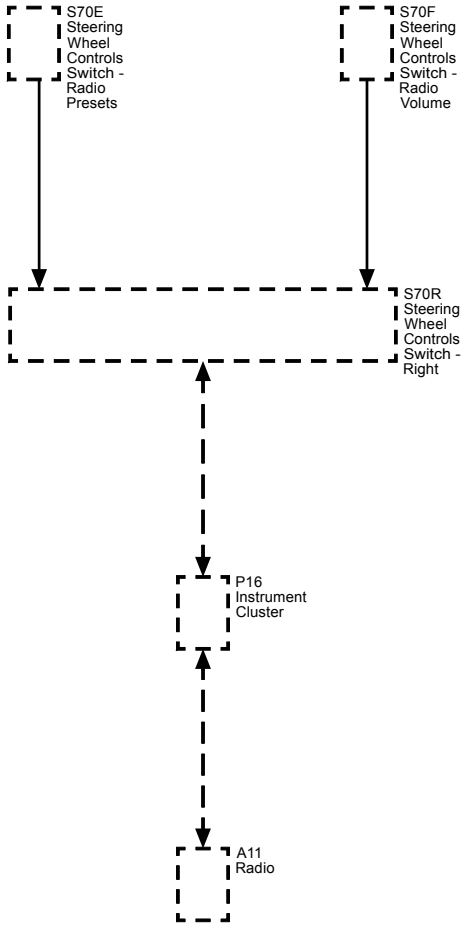
Located on the left and right lower portion of the display are interactive information display zones.

An interactive application display zone is located in the middle of the display. The application display zone allows access to the navigation application, audio application, phone application, or settings application.

Description and Operation

Steering Wheel Controls Description and Operation

Secondary Controls Block Diagram



The steering wheel control switches duplicate the function of the primary controls of the associated component, through a network of momentary contact switches.

The Steering Wheel Controls are divided into a right-hand set and left-hand set. The right-hand switch is connected to the IPC LIN serial data and provides input from the left-hand, left-hand rear, and right-hand rear switches

The right-hand switch controller consists of UP/DOWN/LEFT/RIGHT directional, center “select” , Push-to-Talk, and Mute buttons. The LEFT/RIGHT buttons navigate the display regions of the cluster. The UP/DOWN buttons navigate the menus. The right-hand rear switch consists of volume up and volume down buttons. The left-hand rear switch consists of favorite up and favorite down buttons.

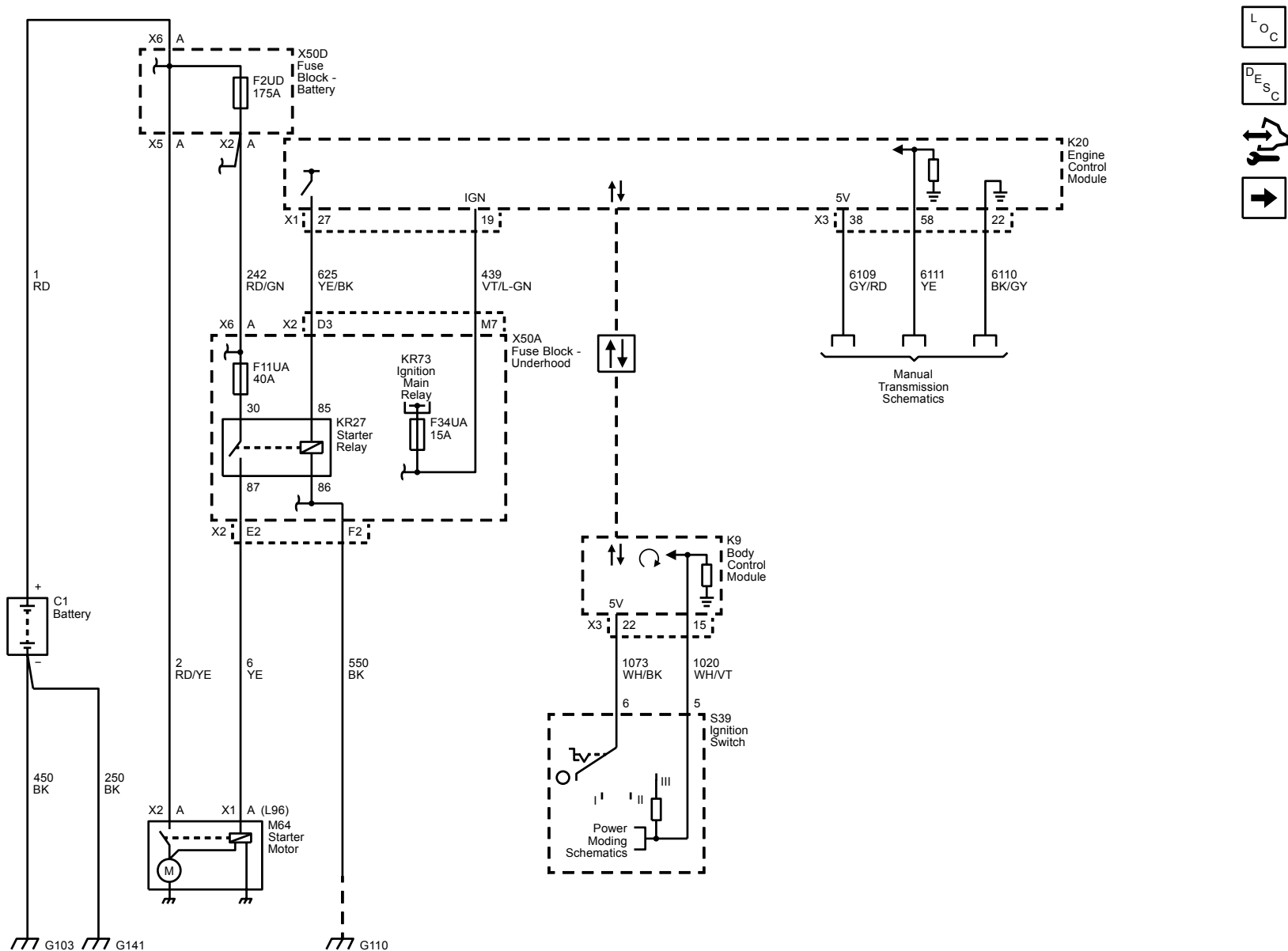
Engine/Propulsion

12 V Starting and Charging

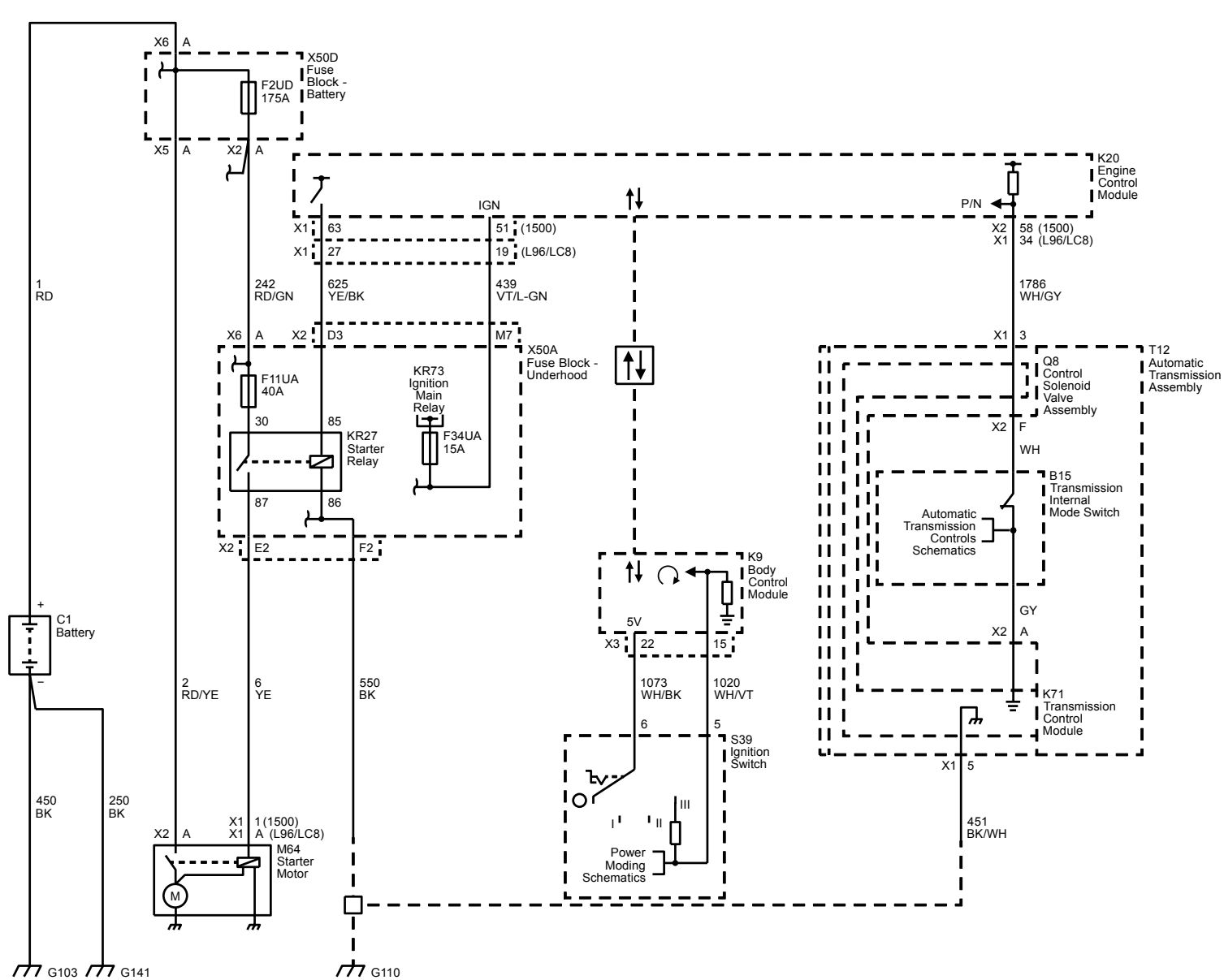
Schematic and Routing Diagrams

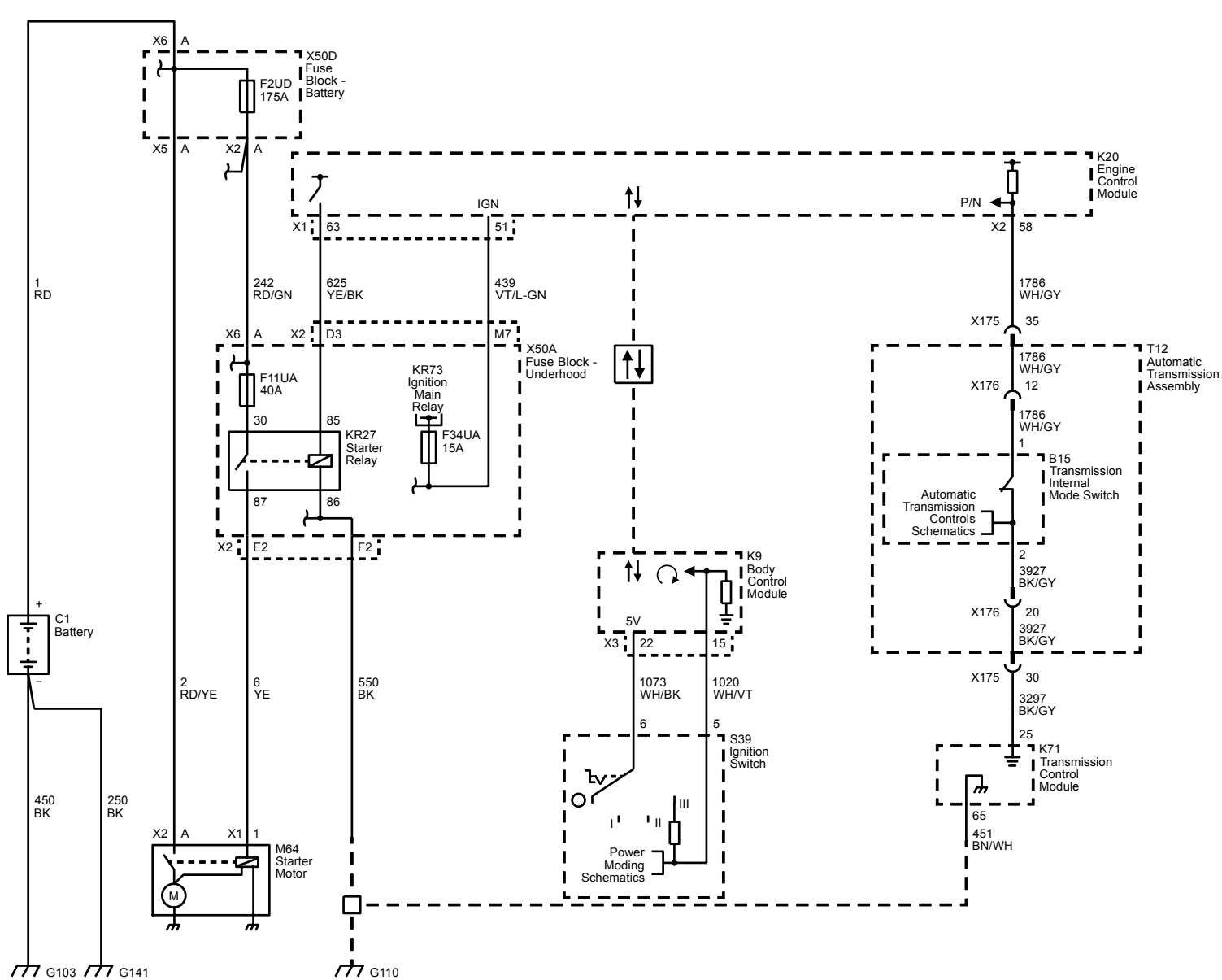
Starting and Charging Schematics

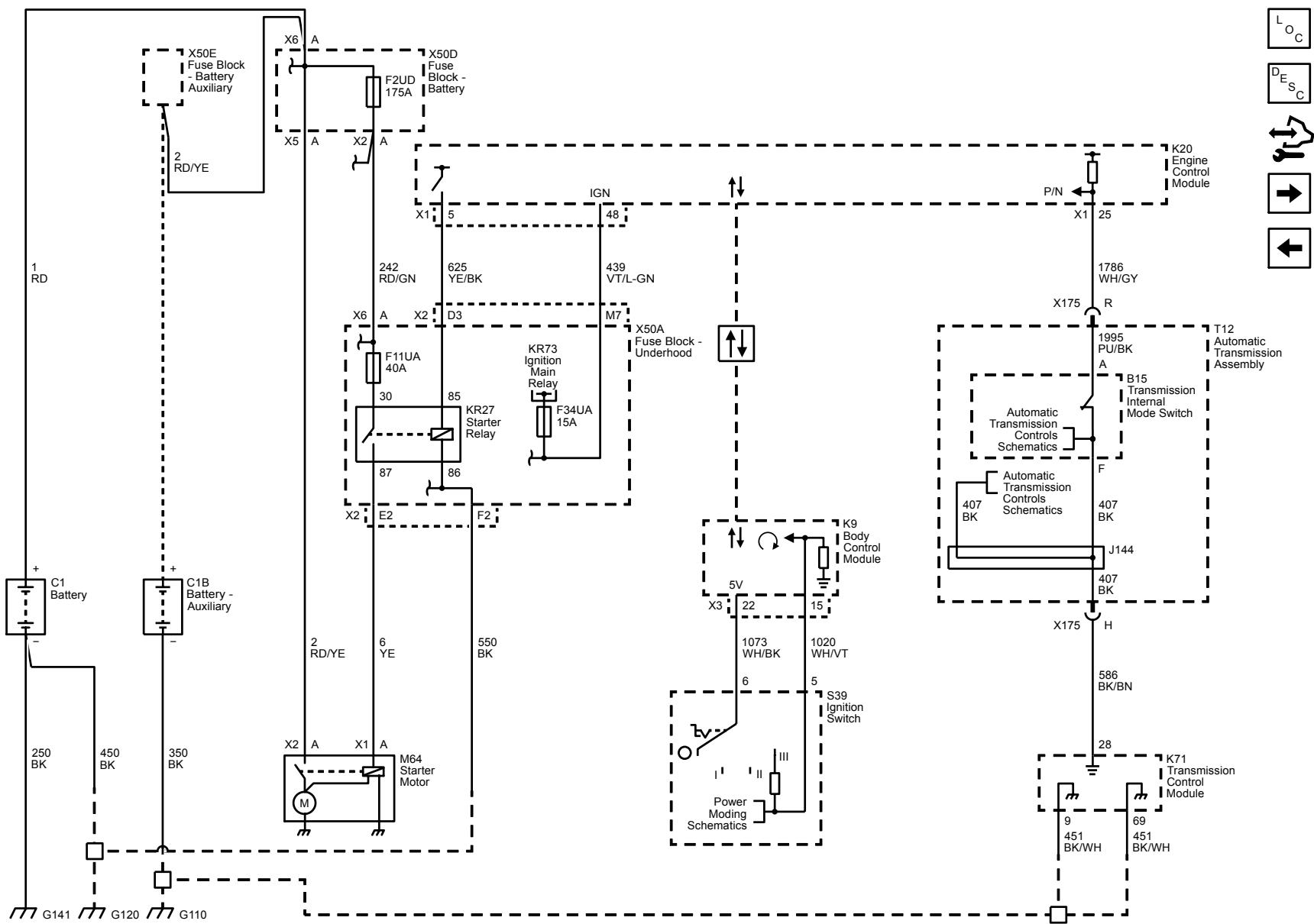
Starting - Manual Transmission (M2P or MQ7)

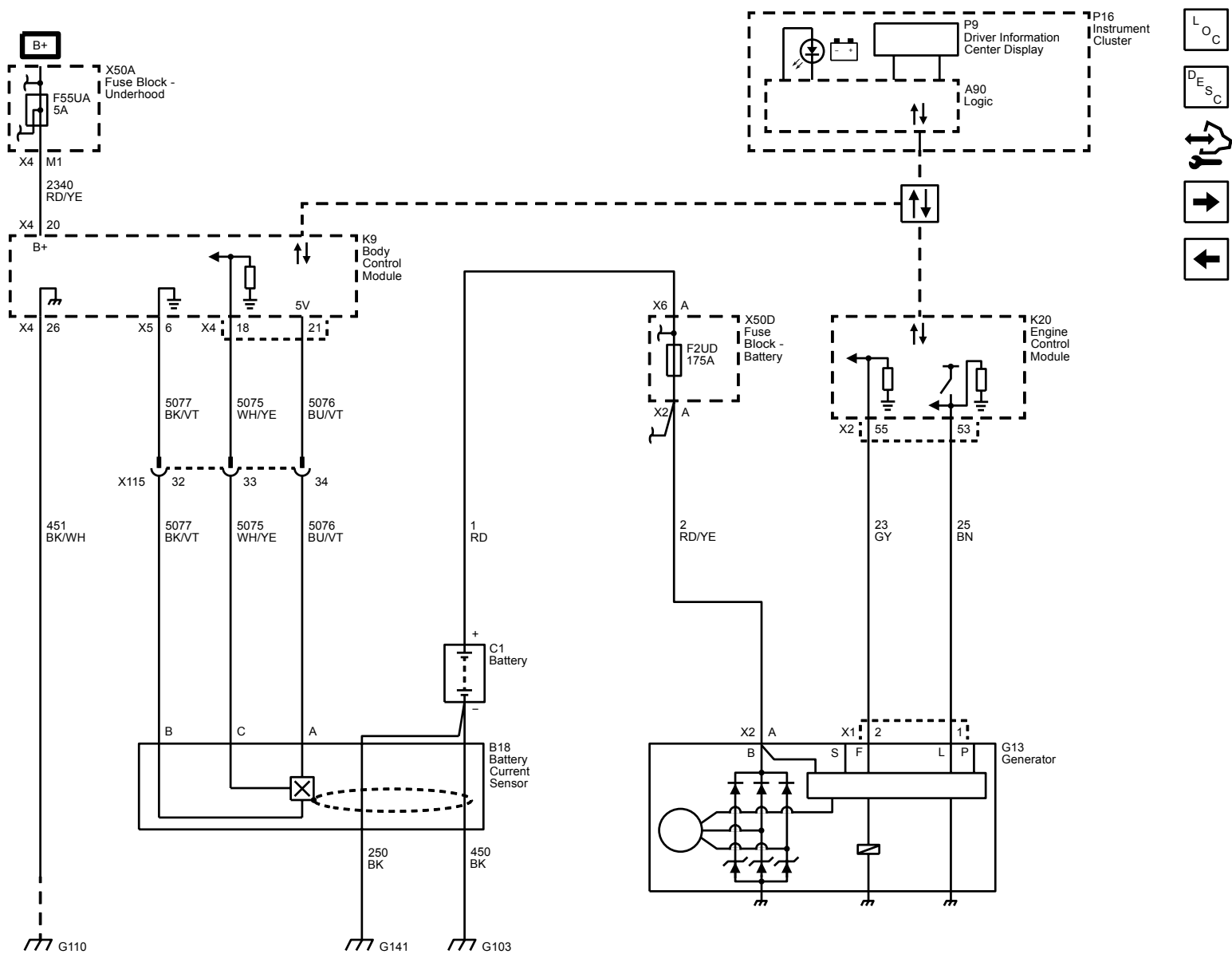


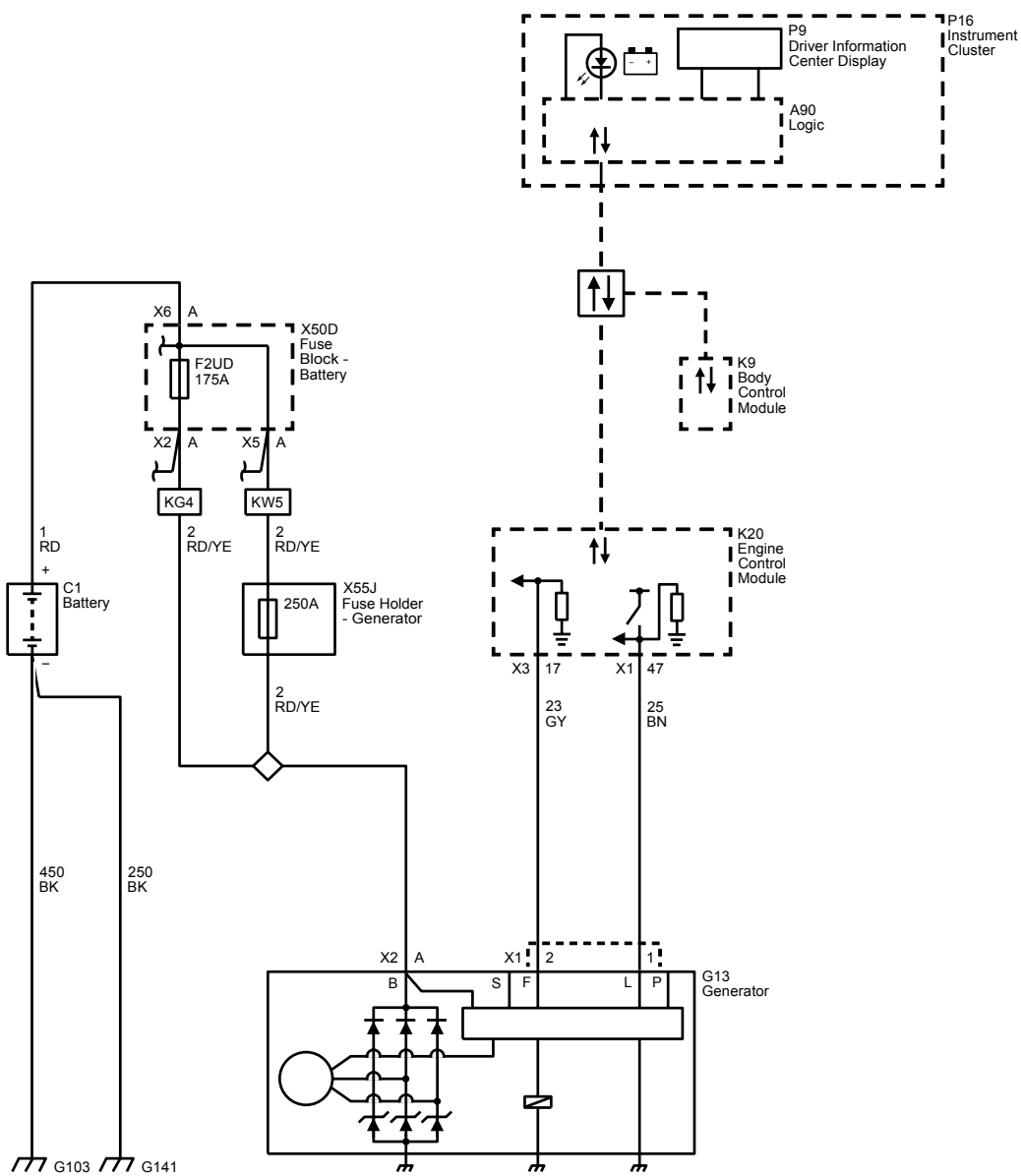
Starting - Automatic Transmission (MYC or MYD)

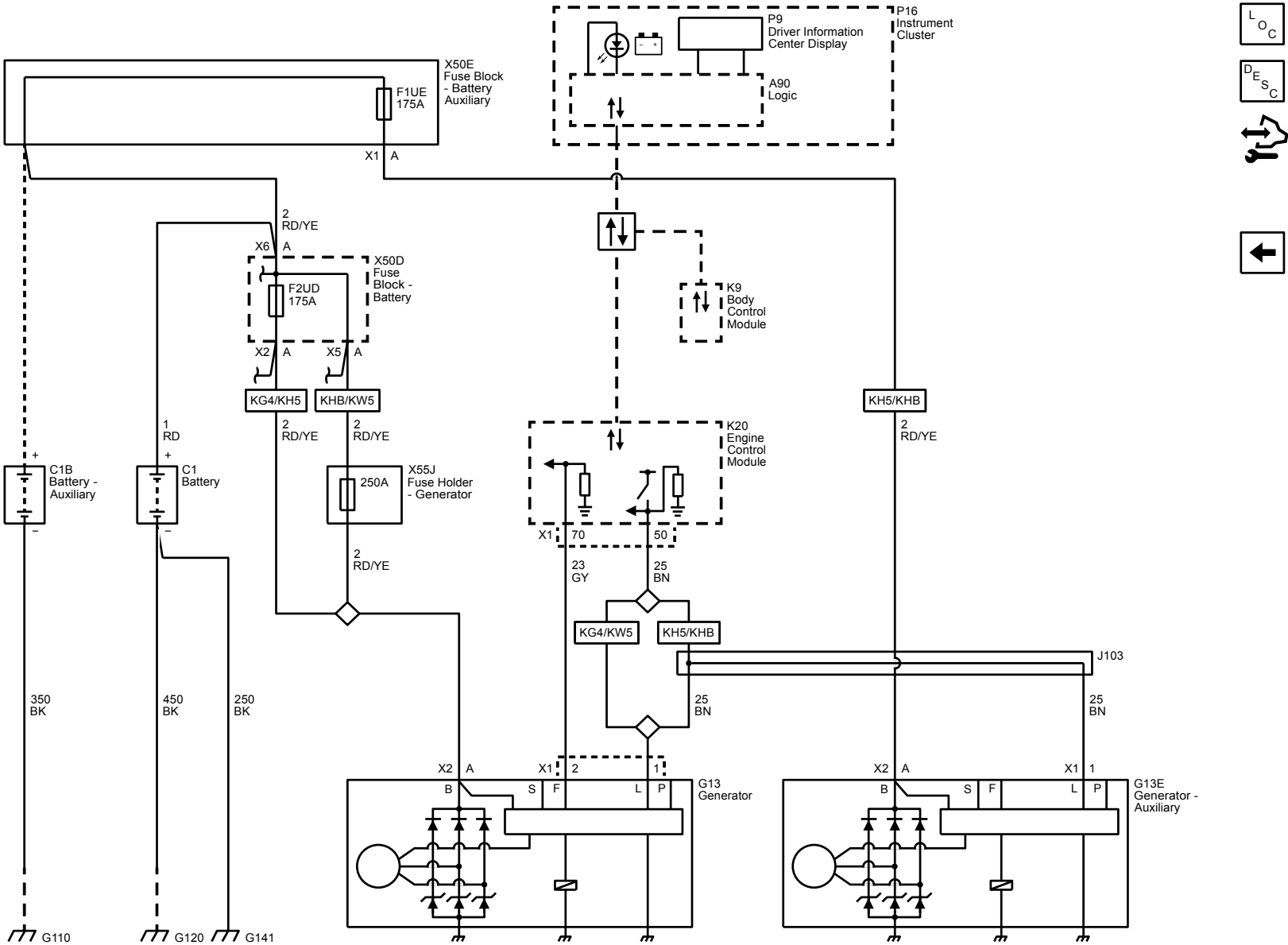




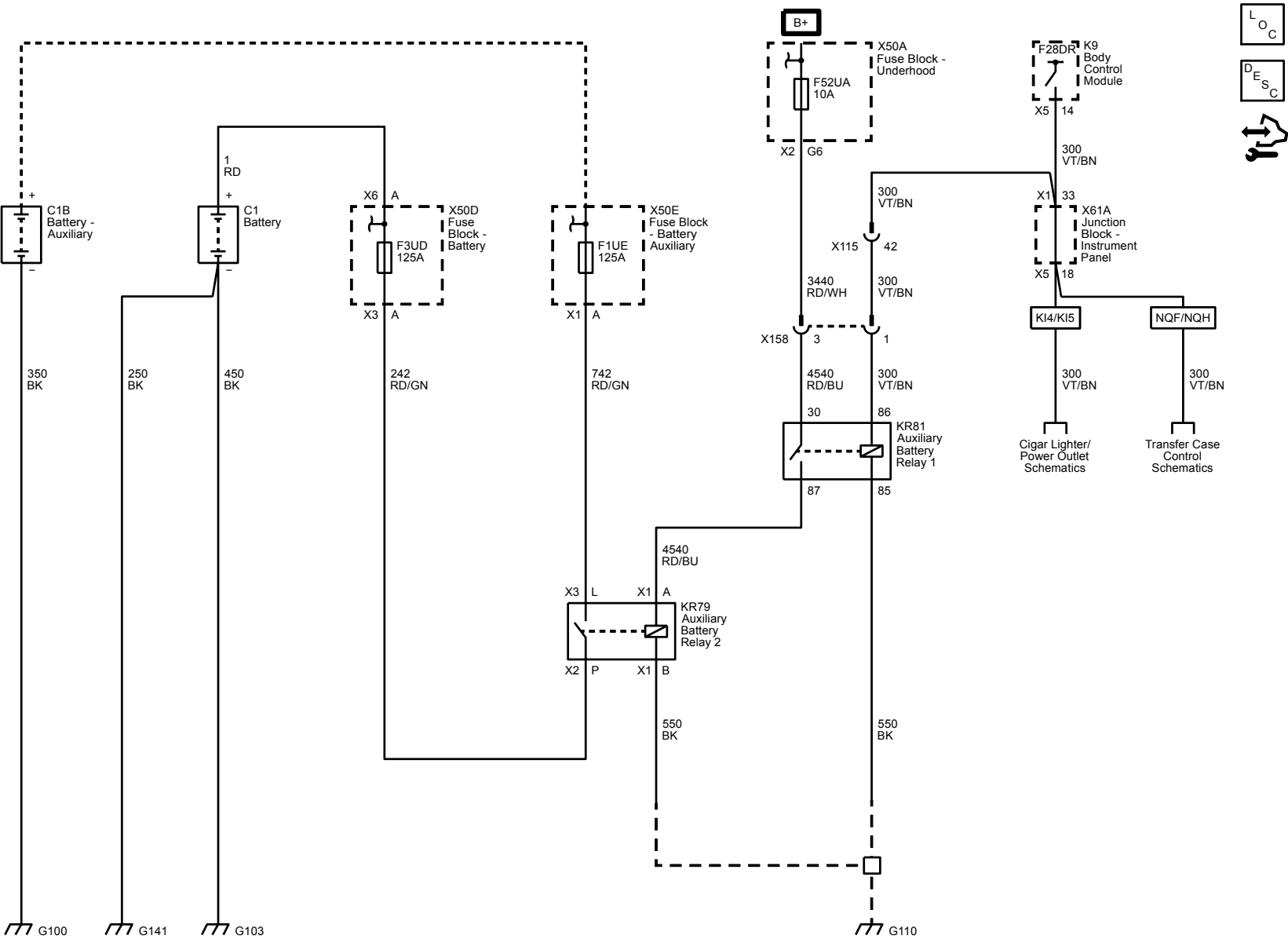








Auxiliary Battery Relays (K4B or K4D)



Description and Operation

Battery Description and Operation

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

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

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

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

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

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

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

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

Battery Low Start Vehicle Message

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

Battery Ratings

A battery has 2 ratings:

- Cold cranking amperage
- Amperage hours

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

Amperage Hours

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

Cold Cranking Amperage

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

Charging System Description and Operation

Electrical Power Management Overview

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

- It monitors the battery voltage and estimates the battery condition.
- It takes corrective actions by boosting idle speeds, and adjusting the regulated voltage.
- It performs diagnostics and driver notification.

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

The state-of-charge can be used as a diagnostic tool to tell the customer or the dealer the condition of the battery. Throughout ignition-on, the algorithm continuously estimates state-of-charge based on adjusted net amp hours, battery capacity, initial state-of-charge, and temperature.

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

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

The Charging System Description and Operation is divided into 3 sections. The first section describes the charging system components and their integration into the electrical power management. The second section describes charging system operation. The third section describes the instrument panel cluster operation of the charge indicator, driver information center messages, and voltmeter operation.

Charging System Components

Generator

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

Body Control Module (BCM)

The body control module (BCM) is a GMLAN device. It communicates with the engine control module (ECM) and the instrument panel cluster for electrical power management (electrical power management) operation. The BCM determines the output of the generator and sends the information to the ECM for control of the generator turn on signal circuit. It monitors the generator field duty cycle signal circuit information sent from the ECM for control of the generator. It monitors a battery current sensor, the battery positive voltage circuit, and estimated battery temperature to determine battery state of charge. The BCM performs idle boost.

Battery Current Sensor

The battery current sensor is a serviceable component that is connected to either the negative or positive battery cable at the battery. The battery current sensor is a 3-wire hall effect current sensor. The battery current sensor monitors the battery current. It directly inputs to the BCM. It creates a 5-volt pulse width modulation (PWM) signal of 128 Hz with a duty cycle of 0–100 percent. Normal duty cycle is between 5–95 percent. Between 0–5 percent and 95–100 percent are for diagnostic purposes.

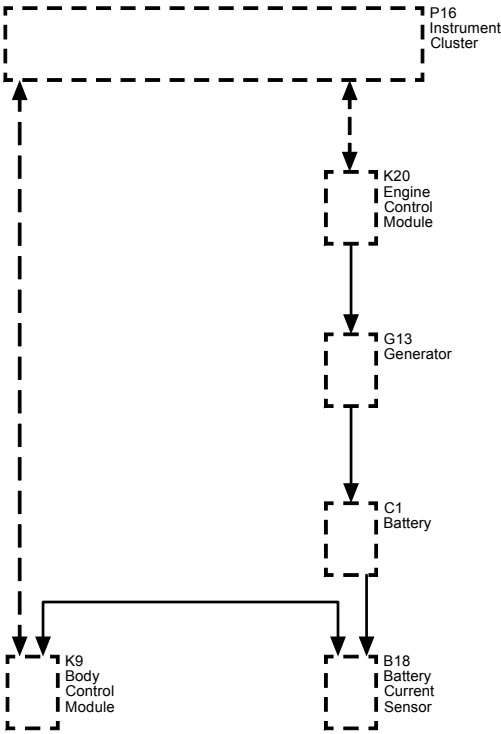
Engine Control Module (ECM)

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

Instrument Panel Cluster

The instrument panel cluster provides the customer notification in case a concern with the charging system. There are 2 means of notification, a charge indicator and a driver information center message of SERVICE BATTERY CHARGING SYSTEM if equipped.

Charging System Block Diagram



Charging System Operation

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

- Battery Sulfation Mode
- Charge Mode
- Fuel Economy Mode
- Headlamp Mode
- Start Up Mode
- Voltage Reduction Mode

The engine control module (ECM) controls the generator through the generator turn ON signal circuit. The ECM monitors the generator performance though the generator field duty cycle signal circuit. The signal is a pulse width modulation (PWM) signal of 128 Hz with a duty cycle of 0–100 percent. Normal duty cycle is between 5–95 percent. Between 0–5 percent and 95–100 percent are for diagnostic purposes. The following table shows the commanded duty cycle and output voltage of the generator:

Commanded Duty Cycle	Generator Output Voltage
10%	11 V
20%	11.56 V
30%	12.12 V
40%	12.68 V
50%	13.25 V
60%	13.81 V
70%	14.37 V

80%	14.94 V
90%	15.5 V

The generator provides a feedback signal of the generator voltage output through the generator field duty cycle signal circuit to the ECM. This information is sent to the body control module (BCM). The signal is PWM signal of 128 Hz with a duty cycle of 0–100 percent. Normal duty cycle is between 5–99 percent. Between 0–5 percent and 100 percent are for diagnostic purposes.

Battery Sulfation Mode

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

Charge Mode

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

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

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

Fuel Economy Mode

The BCM will enter Fuel Economy Mode when the estimated battery temperature is at least 0°C (32°F) but less than or equal to 80°C (176°F), the calculated battery current is less than 15 amperes and greater than –8 amperes, and the battery state-of-charge is greater than or equal to 80 percent. Its targeted generator output voltage is the open circuit voltage of the battery and can be between 12.5–13.1 V. The BCM will exit this mode and enter Charge Mode when any of the conditions described above are present.

Headlamp Mode

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

Start Up Mode

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

Voltage Reduction Mode

The BCM will enter Voltage Reduction Mode when the calculated ambient air temperature is above 0°C (32°F). The calculated battery current is less than 1 ampere and greater than –7 amperes, and the generator field duty cycle is less than 99 percent. Its targeted generator output voltage is 12.9 V. The BCM will exit this mode once the criteria are met for Charge Mode.

Instrument Panel Cluster Operation

Charge Indicator Operation

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

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

Display Message: BATTERY NOT CHARGING SERVICE CHARGING SYSTEM or SERVICE BATTERY CHARGING SYSTEM

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

Electrical Power Management Description and Operation (Gasoline)

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

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

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

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

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

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

Electrical Power Management Description and Operation (Diesel)

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

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

The idle boost operation is a means of improving generator performance during a low voltage or low battery state-of-charge condition. Idle boost consists of three steps: idle boost 1, idle boost 2, and idle boost 3 (approximately 750, 900, and 1050 rpm respectively). Idle boost is activated in incremental steps, idle boost 1 must be active before idle boost 2 can be active.

Each electrical power management function, either idle boost or load shed, is discrete. No two functions are active at the same time. The criteria used by the body control module (BCM) to regulate electrical power management are outlined below:

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

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

Starting System Description and Operation

The starter motors are non-repairable starter motors. 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.

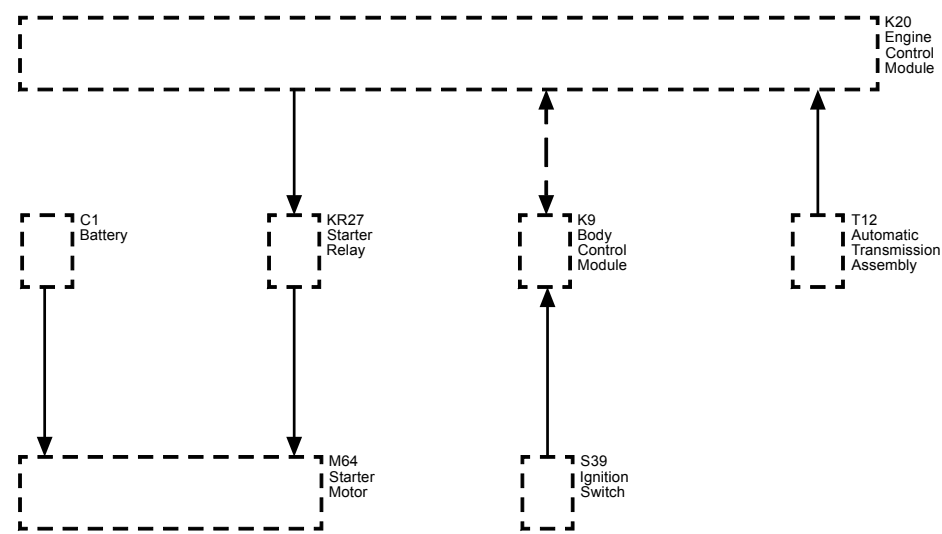
When the ignition switch is released from the START position, the START relay opens and battery voltage is removed from the starter solenoid S terminal. Current flows from the motor contacts through both windings to the ground at the end of the hold-in winding. However, the direction of the current flow 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.

Circuit Description (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



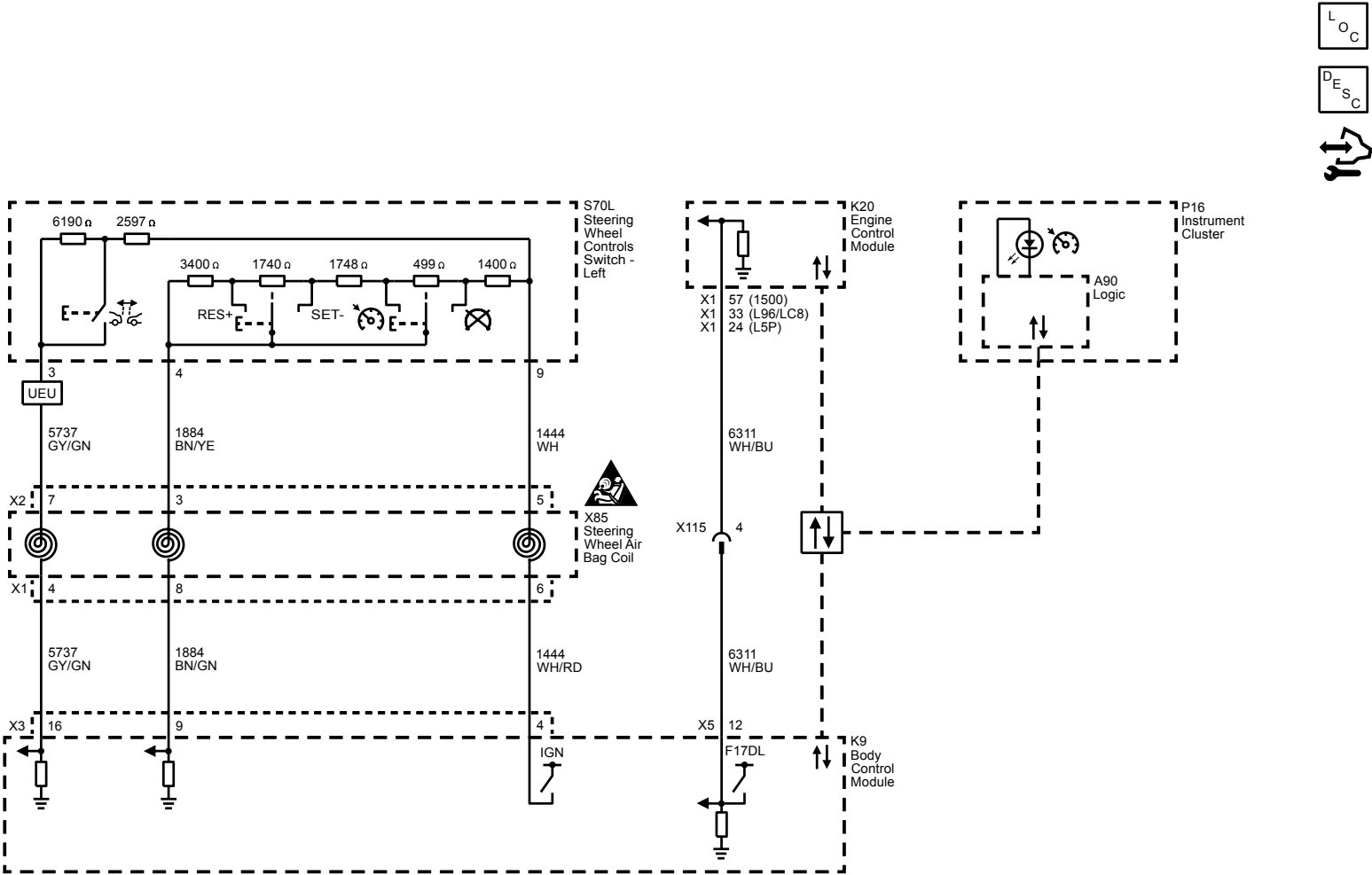
Engine/Propulsion

Cruise Control

Schematic and Routing Diagrams

Cruise Control Schematics

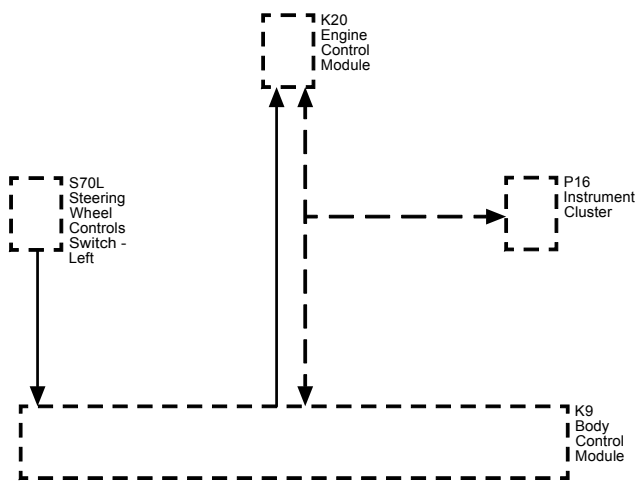
Cruise Control



Description and Operation

Cruise Control Description and Operation

Cruise Control System Block Diagram



Cruise control is a speed control system that maintains a desired vehicle speed under normal driving conditions at speeds above 40 km/h (25 mph). Steep grades may cause variations in the selected vehicle speeds.

The following are the main components of the Cruise Control System:

- The accelerator pedal
- The brake pedal position (BPP) sensor
- The body control module (BCM)
- The cruise on/off switch
- The cruise control cancel switch
- The + RES switch (equivalent to resume/accelerate switch)
- The – SET switch (equivalent to set/coast switch)
- The engine control module (ECM)
- The throttle actuator control (TAC) motor (gasoline engines only)
- The vehicle speed sensor

The body control module (BCM) monitors the signal circuit of the cruise control switches, which are located on the steering wheel. The BCM relays the cruise control switch status to the engine control module (ECM) via the serial data circuit. The ECM uses the status of the cruise control switch to determine when to capture and maintain the vehicle speed. The ECM monitors the vehicle speed signal circuit in order to determine the desired vehicle speed.

Voltage is supplied to the cruise control switch via the steering wheel control switch reference voltage circuit supplied by the BCM. The cruise control function switches are arranged in a resistive ladder design, with each cruise control function switch having a different resistance value. The BCM detects a specific voltage value that is associated with the cruise control function switch being activated. The BCM sends a serial data message to the ECM indicating that the on/off switch is active. Similarly, when the normally open + RES switch or the normally open – SET switch are pressed, the switch closes and the BCM detects the predetermined voltage signal on the cruise control resume/accel and set/coast switch signal circuit. The BCM sends a serial data message to the ECM indicating that the + RES switch or the – SET switch is active.

Cruise Control Engaged

The Cruise Control System will engage and adjust vehicle speeds, based on the activation of the following cruise control switches, which are located on the steering wheel:

- On/Off

- + RES
- – SET

To engage the Cruise Control System, ensure that the vehicle speed is above 40.2 km/h (25 mph), turn the cruise On/Off switch ON and momentarily press the – SET switch. The ECM will engage the Cruise Control System and record the vehicle speed. The ECM sends a serial data message to the instrument panel cluster (IPC) in order to illuminate the Cruise Engaged indicator in the IPC. Refer to the vehicle owner’s manual for the location and operation of the cruise control On/Off indicators and driver information center (DIC) messages.

Pressing the accelerator pedal while the Cruise Control System is engaged, allows the driver to override the Cruise Control System in order to accelerate the vehicle beyond the current set vehicle speed. When the accelerator pedal is released, the vehicle will decelerate and resume the current set vehicle speed.

The driver can also override the current set vehicle speed via the – SET switch and the + RES switch. When the Cruise Control System is engaged, pressing and holding the – SET switch will allow the vehicle to decelerate from the current set vehicle speed without deactivating the Cruise Control System. When the – SET switch is released, the ECM will record the vehicle speed and maintain the vehicle speed as the new set vehicle speed. When the Cruise Control System is engaged, momentarily pressing the – SET switch will allow the vehicle to decelerate at a vehicle specific calibratable increment, commonly 1.6 km/h (1 mph), each time that the – SET is momentarily pressed, with a minimum vehicle speed of 38 km/h (24 mph). Refer to the vehicle Owner’s Manual for more information.

Pressing and holding the + RES switch, when the Cruise Control System is engaged, will allow the vehicle to accelerate to a greater vehicle speed than the current set vehicle speed. When the + RES switch is released, the ECM will record the vehicle speed and maintain the vehicle speed as the new set vehicle speed. When the Cruise Control System is engaged, momentarily pressing the + RES switch will allow the vehicle to accelerate at a vehicle specific calibratable increment, commonly 1.6 km/h (1 mph), each time that the + RES switch is momentarily pressed. Momentarily activating the + RES switch will recall the previous vehicle speed, after the cruise control system has been disengaged by pressing the brake pedal, or CANCEL switch. Refer to the vehicle Owner’s Manual for more information.

Cruise Control Disengaged

The engine control module (ECM) disengages the cruise control operation based on the signals from the following switches:

- The brake pedal position (BPP) sensor
- The On/Off switch
- The cruise control cancel switch

The Cruise Control System will disengage when the brake pedal is applied. The body control module (BCM) monitors the BPP sensor via the BPP sensor signal circuit as the voltage signal increases while the pedal is further applied. The ECM monitors the BPP signal through a discrete input and a serial data message signal from the BCM indicating the brake status. When either signal indicates the brake pedal is applied, the ECM will disengage the cruise control system.

The Cruise Control System will also disengage when the cruise control on/off switch is switched OFF, or the cruise control cancel switch is activated. The body control module (BCM) determines when the cruise control cancel switch is activated. When the normally open cancel switch is closed, the BCM detects the predetermined voltage signal on the cruise control function switch circuit. The vehicle speed stored in the memory of the engine control module will be erased when the cruise control On/Off switch is turned OFF, or the ignition switch is turned OFF. The BCM sends a serial data message to the ECM in order to disengage the cruise control system. When the Cruise Control System has been disengaged, the ECM sends a serial message to the instrument panel cluster (IPC) in order to turn OFF the Cruise Engaged indicator.

Every time the Cruise Control System is disengaged, the ECM will keep track of the reason for system disengagement. The last 8 disengagement reasons will be recorded within the ECM memory. The scan tool will display the last 8 Cruise Disengage History parameters, in which one out of approximately 50 possible reasons will be displayed in each of these 8 parameters. For the disengagement reason to be displayed within the scan tool parameter the Cruise Control System is active and disengagement is requested.

When engagement of the system is requested but an engagement inhibit is present, the most recent inhibit reason is recorded in the ECM history. The scan tool will display the most recent inhibit reason, in which one out of approximately 50 possible reasons will be displayed.

Cruise Control Inhibited

The engine control module (ECM) inhibits the cruise control operation when any of the following conditions exist:

- The ECM has not detected a brake pedal activation from the body control module (BCM) this ignition cycle.
- A Cruise Control System DTC has been set.
- The vehicle speed is less than 38.6 km/h (24 mph).
- The vehicle speed is too high.
- The vehicle is in PARK, REVERSE, NEUTRAL, or 1st gear.
- The engine RPM is low.
- The engine RPM is high.
- The system voltage is not between 9 volts and 16 volts.
- The Antilock Brake System (ABS)/Traction Control System (TCS) is active for more than a calibratable time (typically 0.3 to 0.7 seconds).

Cruise Control Inhibit Reasons

This is a general list of inhibit reasons. Not every inhibit reason is applicable to all vehicles. Refer to the scan tool inhibit reason list for the last 8 reasons that have been recorded during the current ignition cycle.

Scan Tool Name	Description	Long Description
ACC BRAKE INOP	Adaptive Cruise Control Automatic Braking Failed	Adaptive Cruise Control Automatic Braking Inoperative

ACC DATA	Serial data fault for Adaptive Cruise Control Throttle Control and Brake Control signals sent by Adaptive Cruise Control module	Adaptive Cruise Control Module serial data fault is active or communication has been lost between ACC module and ECM.
ACC INHIBIT	Adaptive Cruise Control Inhibited	Adaptive Cruise Control Inhibited
ACC OPTION	Adaptive Cruise Control option mismatch	Cruise control type (adaptive cruise or conventional cruise) mismatched between ECM and BCM.
ACCEL RATE	High acceleration	Vehicle acceleration rate is too high.
ACCEL Time	Rate Limiting Fault	Cruise torque request rate limiting active too long
APP OVERRIDE	Pedal greater than cruise (override)	Driver has overridden cruise control set speed with accelerator pedal for greater than an allowable time.
Auto Brk Data	Automatic Braking Engine Torque Request Signal Communication Malfunction	ECM to EBCM serial data fault is active or communication has been lost between ECM and EBCM.
AXLE RANGE	Rear Axle Low	Rear axle in low range
BPP DATA	DTC P0703 active or maximum time elapsed without receiving valid Brake Pedal Position signal.	Serial data fault is active or communication has been lost with module sending brake pedal apply state
BPP DTC	Brake Pedal Position signal invalid	Brake Pedal Apply Circuit fault has been detected.
BPP Not Learned	Brake Apply Sensor Home Position Not Learned	Brake Pedal Position Sensor Released Position Not Learned.
BRAKE	Brake pedal apply	Brake Pedal was applied.
Brk Ped Press	Brake Pedal Driver Applied Pressure Detected	A Brake Pedal Apply has been detected based on brake pedal pressure as measured by the EBCM.
Calc Eng Torque	Calculated Torque	Engine torque calculation is incorrect.
CANCEL	Cancel switch active	Cancel Switch was depressed.
CLUTCH	Clutch switch active	Clutch Pedal was applied.
COAST DISENGAGE	Coast disengage	Cruise control is in coast mode with the Set/Coast switch depressed and is requesting no throttle
COAST SPEED LOW	Coast below low speed inhibit	Set / Coast switch was depressed. Vehicle slowed below minimum cruise operating speed.
Cruise Brk Inop	Brake System Malfunction	EBCM has detected a failure that does not allow automatic braking to be performed.
CRUISE S/W	Sequence of completion checks	Cruise control software execution error has occurred.
CRUISE SW DATA	Serial data fault (Cruise switch serial communication fault)	Cruise switch serial data fault is active or communication has been lost with module sending cruise switch states
CRUISE SW. OFF	On/Off switch in Off state	Cruise On/Off switch turned Off
DECEL RATE	High deceleration	Vehicle deceleration rate is too high.
DLC OVERRIDE	ALDL	Scan Tool plugged into ALDL connector

DTC SET	Malfunction in PCM/ECM (DTC active)	DTC is active or in history that inhibits cruise control operation.
D WHL SPD HI	Driven Whl Spd Greater (wheel slip detection)	Driven wheel speed greater than Non Driven wheel speed (slip detection)
D WHL SPD LOW	Un-driven Whl speed Greater	Non Driven wheel speed greater than driven wheel speed
ECM INHIBIT	PCM/ECM inhibit (RAM corruption)	ECM internal communication error
ECM RESET	ECM Running Reset	ECM Running Reset occurred
ECT OVERTEMP	Engine metal overtemp active	Engine over temperature. Overheated.
ENG RUN TIME	Engine run time not elapsed	Engine has not been running long enough, typically five seconds.
ENGINE SPEED	Engine speed too low or too high	Engine RPM too low (near stall) or too high (near engine RPM fuel shutoff).
FIRST GEAR	1st Gear	Transmission is engaged in 1st gear
HIGH SPEED	Vehicle speed exceeds high speed threshold	Vehicle speed has exceeded maximum cruise operating speed
HIGH VOLTAGE	Voltage above high voltage threshold	Ignition Voltage High at ECM (typically 18 volts)
ILLEGAL MODE	Illegal cruise mode	Cruise control mode is incorrect based on switch states.
LOST FWD GEAR	Transmission in neutral. Reverse or park	Gear selector not in forward gear
LOW SPEED	Vehicle speed drops below low speed threshold	Vehicle speed dropped below the cruise control minimum operating speed. May be due to hilly terrain and low vehicle speed. Manual transmission gear selection and engine torque may contribute to this disengagement reason.
LOW VOLTAGE	Voltage below low voltage threshold	Ignition Voltage Low at ECM (typically 9 volts)
MEMORY DTC	Memory Failure	Control module memory failure detected.
MPH LIMIT	MPH Limited Fuel (Vehicle overspeed fuel cut-off active)	Vehicle overspeed protection active with fuel cut off active
M/T Gear Changed	Manual transmission out of gear with no clutch pedal apply	Manual transmission shifted to Neutral without clutch pedal being applied.
NONE	None	This disengagement reason may be displayed after a dead battery repair or module replacement.
OVER SET SPEED	Over schedule	Vehicle speed has exceeded driver selected set speed by more than an allowable amount. This may occur while driving down a significant grade or driver overriding cruise while performing a passing maneuver.
PARK BRAKE	Park Brake Switch signal Active	Parking Brake Applied

PEDAL INITIALIZE	Brake before cruise	The brake pedal has not been seen as applied prior to driver request to engage cruise with set switch. A brake pedal apply must be seen before allowing cruise engagement during each key cycle. On a vehicle equipped with a manual transmission, a clutch pedal apply may satisfy the brake pedal apply criteria.
PTO ACTIVE	Power Take Off Active	Power Take Off is active.
Ram DTC	Processor Integrity Fault (Ram corruption)	ECM software error has occurred
RPM LIMIT	Injectors Disabled (Engine overspeed fuel cut-off active)	Engine RPM limiter active with fuel cut off active.
S/C ON SPEED HI	Over schedule tap-down	Set/Coast switch selected, vehicle speed is above set speed and does not decrease. May be due to traveling down hill
SIMUL S/C-R/A	SET and RESUME switches simultaneously active	Set/Coast and Resume Accelerate switches pressed simultaneously
SL/W Sys On	Speed Limiter / Warning On/Off switch turned on	Driver has turned on the Speed Limiter/Warning on/off switch. Cruise is disabled / inhibited and cruise on/off switch will be set to OFF.
SW. INVALID	Analog cruise switch input out of range	Cruise switch voltage signal in invalid range
TAC INHIBIT	ETC prevents cruise operation	Electronic Throttle Control has detected a failure in the throttle control hardware
TCS	Traction control active	Traction Control was Active
TRANS DTC	Trans Gear Fault	Transmission DTC is active or in history that inhibits cruise control operation
UNDER SET SPEED	Under schedule	Vehicle speed is below cruise control set speed by more than an allowable amount
VSES	Vehicle stability active	Vehicle Stability Control was active
4WD Low	4WD Low	Transfer case in low range

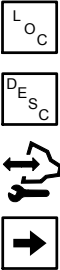
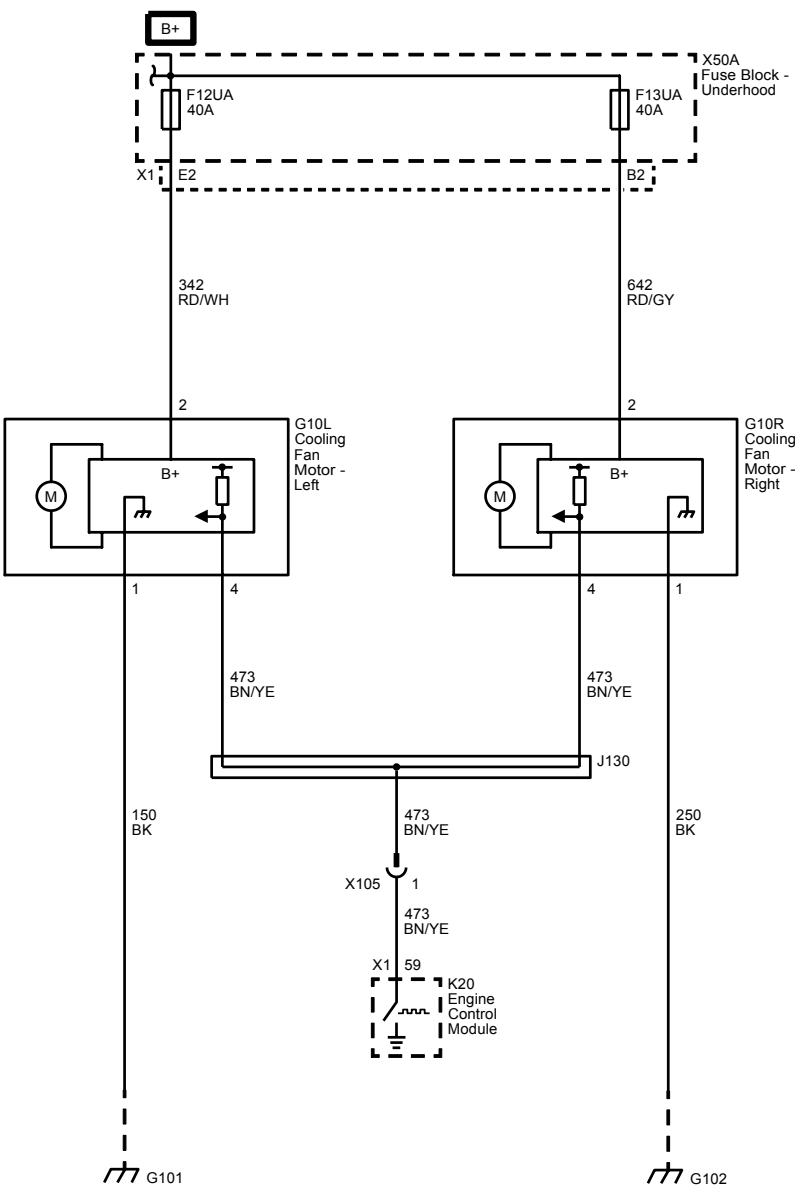
Engine/Propulsion

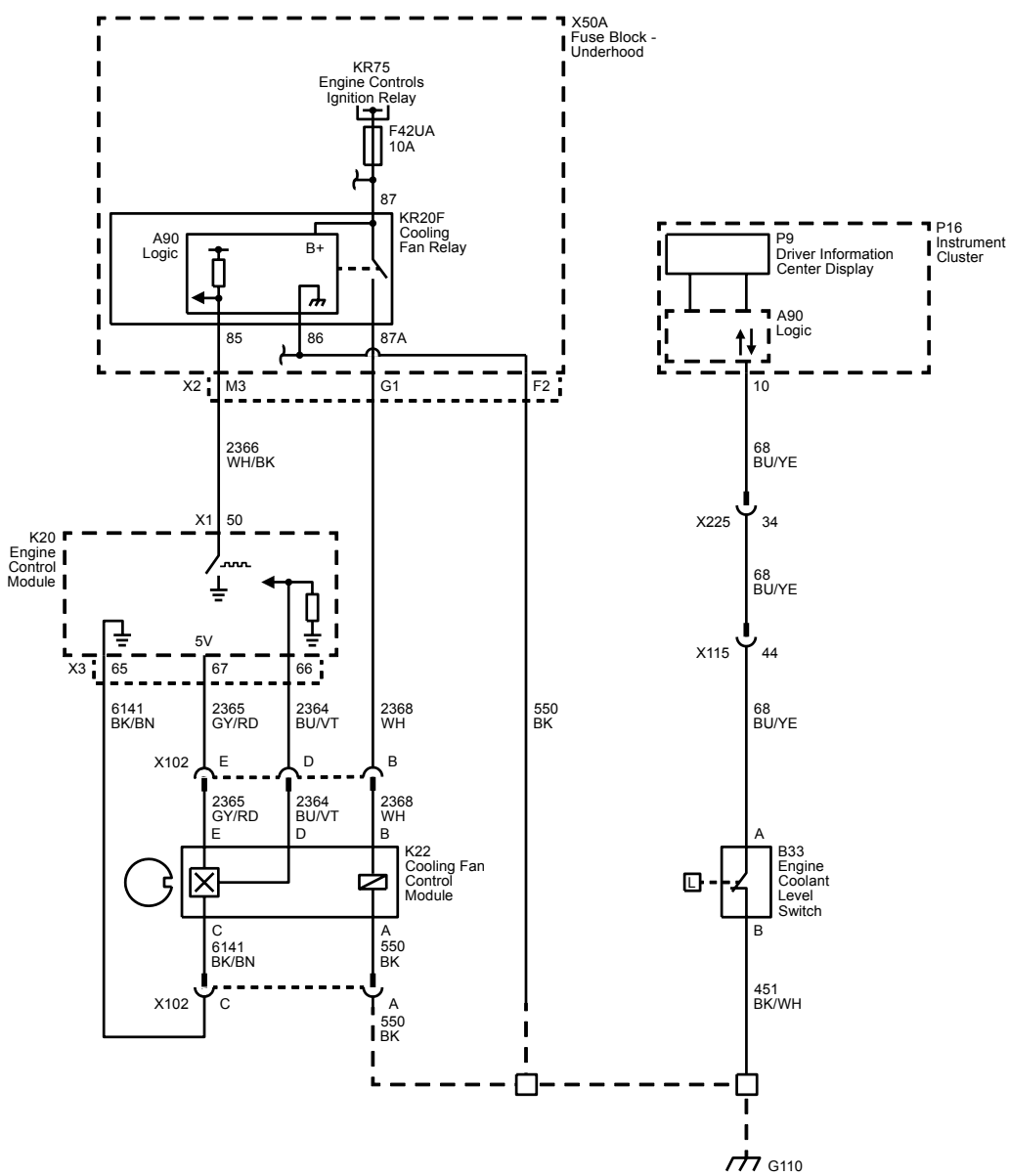
Engine Heating and Cooling

Schematic and Routing Diagrams

Engine Heating/Cooling Schematics

Dual Fan (1500)





Description and Operation

Cooling Fan Description and Operation (L5P)

Cooling Fan Control

The purpose of the electro-viscous (EV) fan clutch is to maintain powertrain cooling requirements. The engine control module (ECM) monitors the following sensors to regulate the fan speed:

- Engine coolant temperature sensor
- A/C refrigerant pressure sensor
- Vehicle speed sensor
- Intake air temperature sensor
- Transmission fluid temperature sensor
- Ambient air temperature sensor
- Cooling fan speed sensor

The ECM controls the EV fan clutch operation. The ECM regulates a 12-volt pulse width modulated signal (PWM) to the cooling fan relay. The PWM signal determines the ON time of the relay. As the ECM command increases, so does the ON time of the relay. The relay ON time directly controls the amount of time the solenoid, which is internal to the fan clutch, is energized. When the solenoid in the fan clutch is energized, it opens the spring loaded valve and allows fluid to flow from the storage chamber to the fluid coupling of the cooling fan clutch, which increases the fan speed. When the solenoid is de-energized, the spring loaded valve closes, and allows the fluid in the coupling of the fan clutch to drain back to the storage chamber, which reduces fan speed. The rapid modulation of the fan clutch solenoid valve gives the ECM the ability to precisely control the amount of fluid that remains in the fluid coupler, allowing more effective regulation of the fan speed and powertrain cooling requirements.

The fan clutch supplies a feedback signal to the ECM, as an actual fan speed input. The fan speed sensor is a hall effect sensor which is internal to the fan clutch. The ECM supplies a 5-volt reference and a low reference to the hall effect sensor. The hall effect sensor returns a signal pulse through the cooling fan speed signal circuit in response to the reluctor track passing by the magnetic field of the hall effect sensor.

The scan tool can operate the cooling fan clutch. This is done through the controls function menu screen. Cooling fan clutch engagement can take up to 2 minutes with a 100 percent command and the engine speed at 2,000 RPM. The lower the engine speed, the longer it will take for the fan to engage. Cooling fan disengagement can take up to 2 minutes with the engine speed at 2,000 RPM. The lower the engine speed, the longer it will take to disengage. In lower ambient air temperatures the cooling fan will engage in less time, however, it will take longer to disengage due to the properties of the fluid vs. temperature.

Under certain conditions the cooling fan may be engaged at engine start. The cooling may have been engaged at the time the engine was turned off. Or, fluid may bleed from the storage chamber into the fluid coupling of the cooling fan clutch while the engine is off. Although the fan clutch is commanded off during a cold start, this is the most likely time a vehicle driver will notice that the fan noise is excessive in comparison to engine starts when the fan clutch is disengaged.

Cooling Fan Description and Operation (L83, L86, LV1, LV3, or L8B)

Cooling Fan Control

The engine cooling fan system is composed of 2 electric cooling fans, fan motors, and 2 control modules. The engine control module (ECM) controls the fan speed by sending a pulse width modulated (PWM) signal to the cooling fan control modules. The cooling fan control module varies the voltage drop across the cooling fan motors in relation to the pulse width modulated signal, which allows the cooling fans to operate at variable speeds.

The cooling fan speed is effected by many different conditions and the ECM will adjust the duty cycle from 0–100 percent based on cooling system requirements. The scan tool output control is only capable of operating the cooling fan increments, between 10–90 percent. 90 percent is considered high speed fan. When multiple cooling fan speed requests are received, the ECM operates the fan at the highest of speed requests. The ECM commands the fans ON under the following conditions:

- The engine coolant temperature is warmer than a predetermined temperature.
- The engine oil temperature is warmer than a predetermined temperature.
- The A/C pressure reaches a predetermined pressure.
- If the engine coolant temperature at key-off is warmer than a predetermined value, or the A/C pressure is greater than a predetermined value, the cooling fan will operate at a low speed. The fan will shut OFF if the temperature or pressure drops below the predetermined value, but will only operate for 2 minutes, regardless of the coolant temperature or A/C pressure.

Cooling System Electronic Component Description and Operation

Coolant Heater

The coolant heater operates using 110 V AC external power and is designed to warm the coolant in the engine block area for improved starting in very cold weather. The coolant heater also helps reduce fuel consumption when a cold engine is warming up. The unit is equipped with a detachable AC power cord. A weather shield on the cord is provided to protect the plug when not in use.

Engine or Radiator Coolant Temperature Sensor

The engine coolant temperature (ECT) sensor or radiator coolant temperature (RCT) sensor is a variable resistor that measures the temperature of the engine or radiator coolant. The ECM supplies 5 V to the sensor signal circuit and a ground for the low reference circuit.

Engine Coolant Thermostat Heater

The ECM controls the pulse width modulated (PWM) thermostat heater circuit. The engine coolant thermostat heater helps control coolant flow and regulates the engine operating temperature. The ignition relay supplies 12 V to the thermostat through a fuse. The ECM controls the engine coolant thermostat heater by grounding the control circuit with a solid state device called a driver. The driver is equipped with a feedback circuit that is pulled-up to a voltage. The ECM can determine if the control circuit is open, shorted to ground, or shorted to a voltage by monitoring the feedback voltage.

Electronic Coolant Pump

The switchable water pump is always ON in the default position. When commanded, an actuator disengages a clutch that decouples the pump from the engine. An Engine Material Sensor has been introduced on the engine head for the switchable water pump control and engine protection purposes. The engine metal temperature (EMT) sensor is present only if the switchable water pump is present in the specific application.

Engine Metal Temperature Sensor/Cylinder Head Temperature Sensor

The cylinder head temperature sensor is a variable resistor that measures the temperature of the cylinder head. The engine control module (ECM) supplies 5 V to the cylinder head temperature sensor signal circuit and a ground for the low reference circuit.

Electro-Viscous (EV) Fan Clutch

The ECM controls the EV fan clutch operation. The ECM regulates a 12-volt pulse width modulated signal (PWM) to the cooling fan relay. The PWM signal determines the ON time of the relay. As the ECM command increases, so does the ON time of the relay. The relay ON time directly controls the amount of time the solenoid, which is internal to the fan clutch, is energized. When the solenoid in the fan clutch is energized, it opens the spring loaded valve and allows fluid to flow from the storage chamber to the fluid coupling of the cooling fan clutch, which increases the fan speed. When the solenoid is de-energized, the spring loaded valve closes, and allows the fluid in the coupling of the fan clutch to drain back to the storage chamber, which reduces fan speed. The rapid modulation of the fan clutch solenoid valve gives the ECM the ability to precisely control the amount of fluid that remains in the fluid coupler, allowing more effective regulation of the fan speed and powertrain cooling requirements.

Cooling System Description and Operation

Engine Coolant Indicators

ENGINE COOLANT HOT

The instrument panel cluster (IPC) displays ENGINE COOLANT HOT message when the IPC receives a message from the powertrain control module (PCM) requesting illumination of this driver warning.

ENGINE OVERHEATED

The IPC displays ENGINE OVERHEATED message when the IPC receives a message from the PCM requesting illumination of this driver warning.

REDUCED ENGINE POWER

The IPC displays REDUCED ENGINE POWER message when the IPC detects a reduced engine power condition from the PCM. The IPC receives a message from the PCM requesting illumination when the engine temperature exceeds a calibrated value.

Coolant Heater (If Equipped)

The optional engine coolant heater (RPO K05) operates using 110-volt AC external power and is designed to warm the coolant in the engine block area for improved starting in very cold weather –18°C (0°F). The coolant heater helps reduce fuel consumption when a cold engine is warming up. The unit is equipped with a detachable AC power cord. A weather shield on the cord is provided to protect the plug when not in use.

Cooling System

The cooling system's function is to maintain an efficient engine operating temperature during all engine speeds and operating conditions. The cooling system is designed to remove approximately one-third of the heat produced by the burning of the air-fuel mixture. When the engine is cold, the coolant does not flow to the radiator until the thermostat opens. This allows the engine to warm quickly.

Cooling Cycle

Coolant is drawn from the radiator outlet and into the water pump inlet by the water pump. Coolant will then be pumped through the water pump outlet and into the engine block. In the engine block, the coolant circulates through the water jackets surrounding the cylinders, where it absorbs heat.

Some coolant is also pumped from the water pump to the heater core, then back to the water pump. This provides the passenger compartment with heat and defrost.

The coolant is then forced through the cylinder head gasket openings and into the cylinder heads. In the cylinder heads, the coolant flows through the water jackets surrounding the combustion chambers and valve seats, where it absorbs additional heat.

Coolant

The engine coolant is a solution made up of a 50-50 mixture of DEX-COOL and suitable drinking water. The coolant solution carries excess heat away from the engine to the radiator, where the heat is dissipated to the atmosphere.

Radiator

The radiator is a heat exchanger. It consists of a core and two tanks. The aluminum core is a tube and fin crossflow design that extends from the inlet tank to the outlet tank. Fins are placed around the outside of the tubes to improve heat transfer to the atmosphere.

The inlet and outlet tanks are a molded, high temperature, nylon reinforced plastic material. A high temperature rubber gasket seals the tank flange edge to the aluminum core. The tanks are clamped to the core with clinch tabs. The tabs are part of the aluminum header at each end of the core.

The radiator also has a drain cock (except HD), located in the bottom of the right hand tank. The drain cock unit includes the drain cock and drain cock seal.

The radiator removes heat from the coolant passing through it. The fins on the core transfer heat from the coolant passing through the tubes. As air passes between the fins, it absorbs heat and cools the coolant.

Surge Tank

The surge tank is a plastic tank with a threaded pressure cap. The tank is mounted at a point higher than all other coolant passages. The surge tank provides an air space in the cooling system that allows the coolant to expand and contract. The surge tank provides a coolant fill point and a central air bleed location.

During vehicle use, the coolant heats and expands. Increased coolant volume flows into the surge tank. The increased coolant volume can in some conditions push past the pressure cap and through a channel into the overflow bottle. As the coolant circulates, the air is allowed to bubble out. This air is then transferred to the overflow bottle, through the surge tank cap, where it returns to the atmosphere. Coolant without air bubbles absorbs heat much better than coolant with bubbles. When the engine cools, the coolant, without air bubbles, contracts back into the surge tank from the bottom of the overflow bottle.

Radiator Surge Tank (L5P)



The L5P radiator surge tank comes with 2 different radiator surge tank caps. The top radiator surge tank cap (1) used to fill the system, is a non-pressurized radiator surge tank cap with left hand threads. The side radiator surge

tank cap (2), is a pressurized radiator surge tank cap.

This radiator surge tank has the liquid volume at the top and the air portion at the bottom of the tank. The purpose of this design is to ensure that the liquid volume will be at the highest level in the cooling system. When thermal expansion occurs (due increase in the system temperature and pressure), the liquid raises to the top of the radiator surge tank and then goes to the air portion through the left side channel. When the liquid reaches the bottom and starts to fill the lower portion, the intention is that all liquid will be contained in the lower portion.

Note: The assumption is that there will be approximately 6% expansion, but the system can contain 8% to 9%.

When the system starts to cool (lose heat), the coolant contracts, and this causes a vacuum effect resulting in the upper portion exerting a suction on the liquid that is in the lower portion. This suction continues until the system cools completely.

The air contained in the lower portion exerts a pressure on the bottle walls, and when this pressure reaches the value of 20 PSI (140 KPa) the check valve in the pressurized radiator surge tank cap opens and allows excess pressure to escape, flowing through the lower overflow port.

The top radiator surge tank cap has 3 seals (instead of the 2 seals used in the side radiator surge tank cap) to protect the customer and/or service personnel from hot fluid exiting through the top portion of the neck itself, during hot engine conditions, and redirects the fluid to the lower part of the radiator surge tank.

The channel at the left of the radiator surge tank has the function of protecting the customer and/or service personnel if the fill radiator surge tank cap is accidentally opened during a hot condition. If the radiator surge tank cap is opened when the fluid is hot, the hot fluid will flow through the fill neck using an internal channel. This channel will not allow fluid passage, under pressure and/or hot conditions, and hence, there is no requirement for a pressurized radiator surge tank cap.

Radiator Surge Tank Cap

The pressure radiator surge tank cap seals the cooling system. It contains a blow off or pressure relief valve and a vacuum or atmospheric valve. The pressure valve is held against its seat by a spring, which protects the radiator from excessive cooling system pressure. The vacuum valve is held against its seat by a spring, which permits opening of the valve to relieve vacuum created in the cooling system as it cools off. The vacuum, if not relieved, might cause the radiator and/or coolant hoses to collapse.

The pressure radiator surge tank cap allows cooling system pressure to build up as the temperature increases. As the pressure builds, the boiling point of the coolant increases. Engine coolant can be safely run at a temperature much higher than the boiling point of the coolant at atmospheric pressure. The hotter the coolant is, the faster the heat transfers from the radiator to the cooler, passing air.

The pressure in the cooling system can get too high. When the cooling system pressure exceeds the rating of the pressure radiator surge tank cap, it raises the pressure valve, venting the excess pressure.

As the engine cools down, the temperature of the coolant drops and a vacuum is created in the cooling system. This vacuum causes the vacuum valve to open, allowing outside air into the radiator surge tank. This equalizes the pressure in the cooling system with atmospheric pressure, preventing the radiator and coolant hoses from collapsing.

Air Baffles and Seals

The cooling system uses deflectors, air baffles and air seals to increase cooling system capability. Deflectors are installed under the vehicle to redirect airflow beneath the vehicle and through the radiator to increase engine cooling. Air baffles are also used to direct airflow through the radiator and increase cooling capability. Air seals prevent air from bypassing the radiator and A/C condenser, and prevent recirculation of hot air for better hot weather cooling and A/C condenser performance.

Transmission Oil Cooler

The transmission oil cooler is a heat exchanger. It is located inside the right side (V6) or left side (V8), end tank of the radiator. The transmission fluid temperature is regulated by the temperature of the engine coolant that surrounds the oil cooler as the transmission fluid passes through the cooler.

The transmission oil pump, pumps the fluid through the transmission oil cooler feed line to the oil cooler. The fluid then flows through the cooler while the engine coolant absorbs heat from the fluid. The fluid is then pumped through the transmission oil cooler return line, to the transmission.

Engine Oil Cooler (If Equipped)

The engine oil cooler is a heat exchanger located inside the left side end tank of the radiator. The engine oil temperature is controlled by the temperature of the engine coolant that surrounds the oil cooler in the radiator.

The engine oil pump, pumps the oil through the engine oil cooler line to the oil cooler. The oil then flows through the cooler where the engine coolant absorbs heat from the oil. The oil is then pumped through the oil cooler return line, to the engine block system.

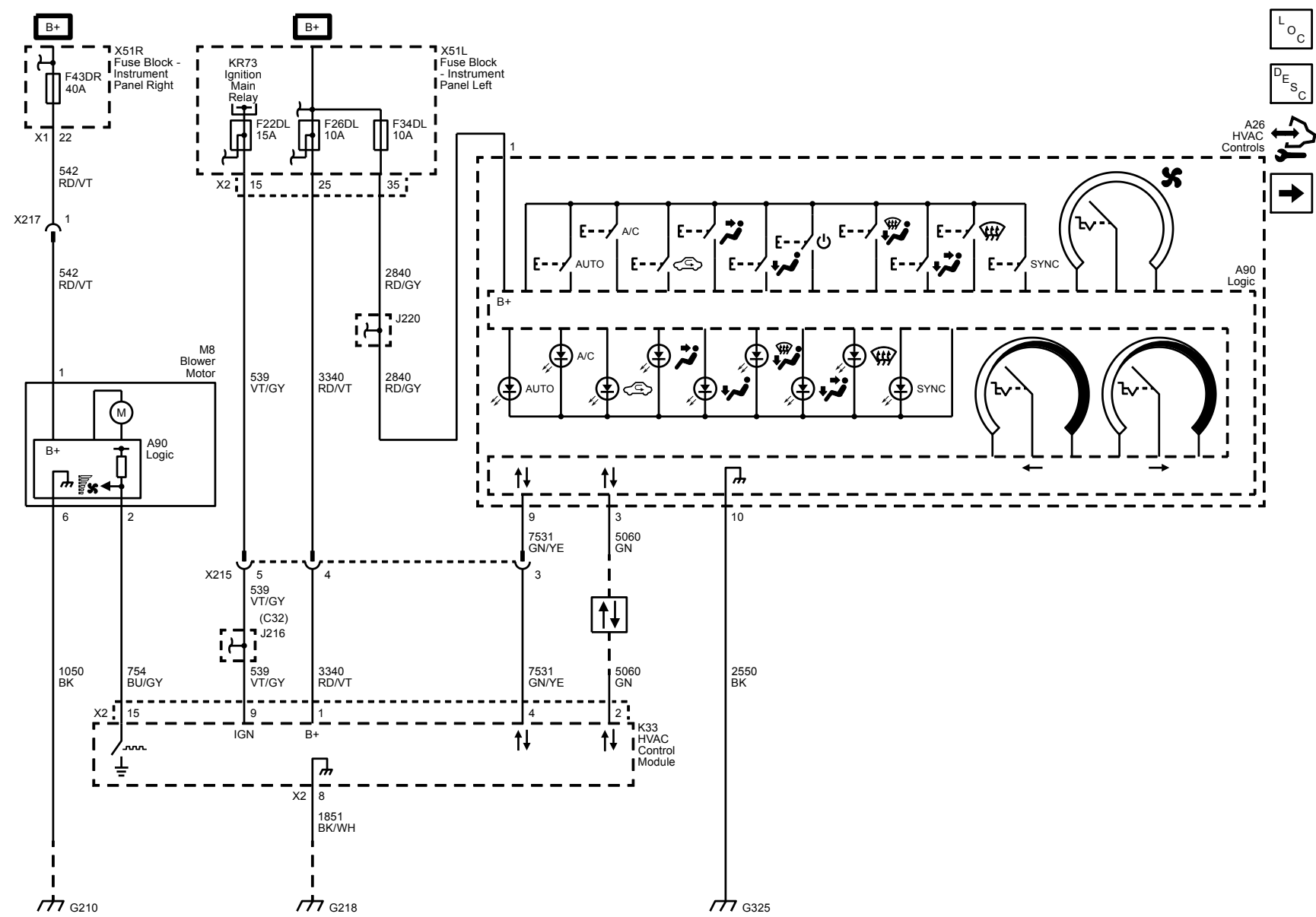
HVAC

HVAC - Automatic

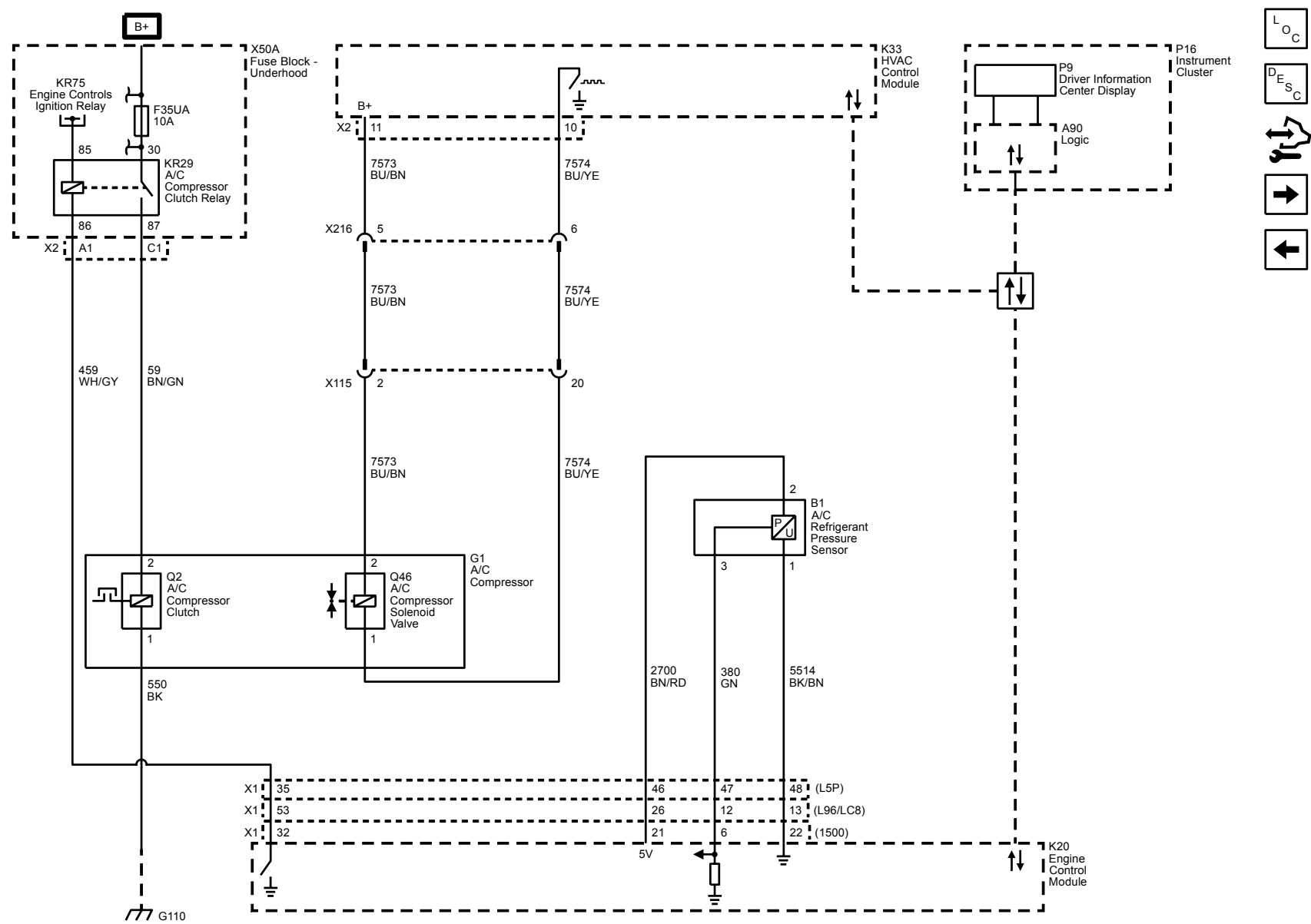
Schematic and Routing Diagrams

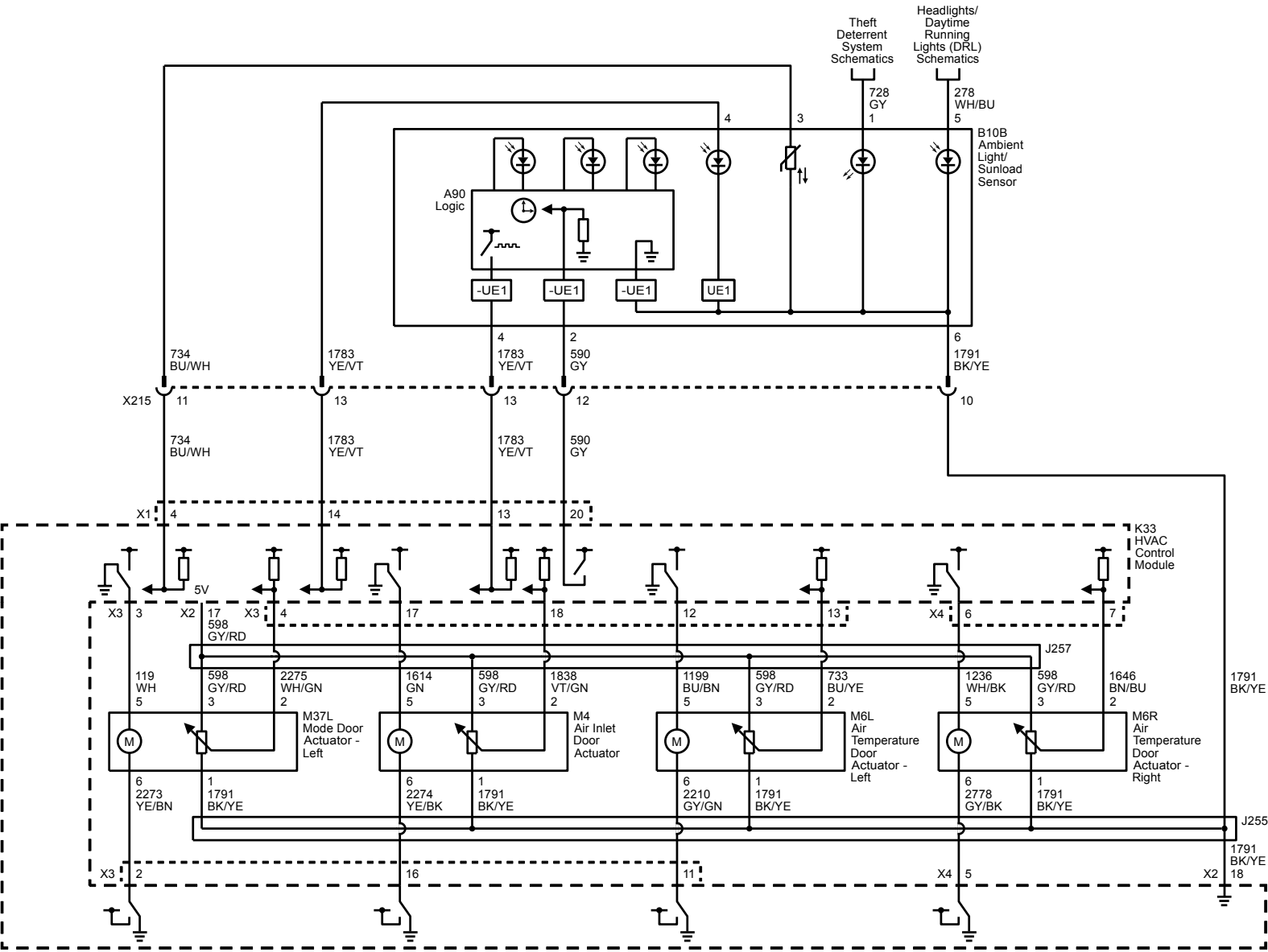
HVAC Schematics

Power, Ground, Serial Data and Controls

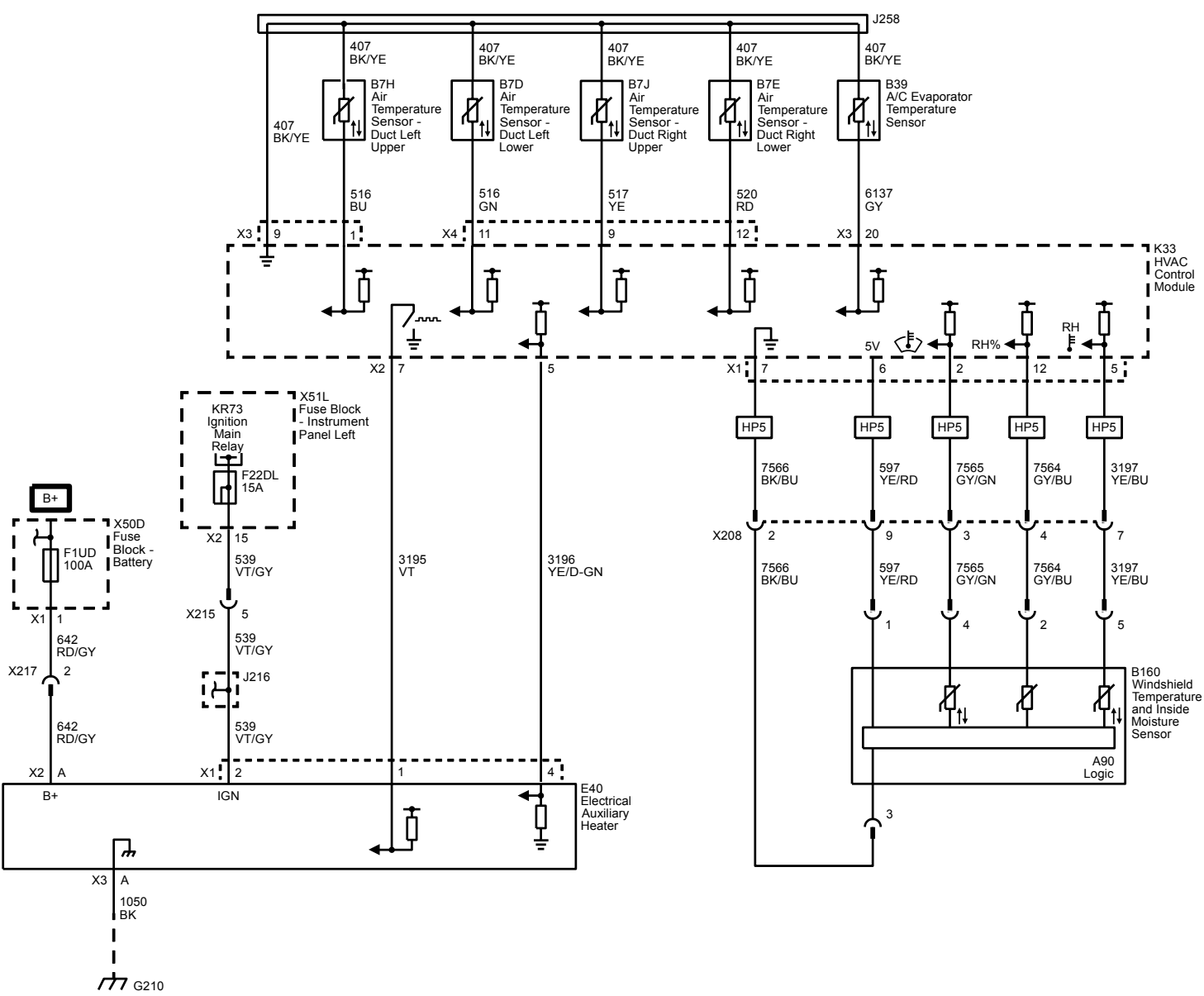


A/C Compressor Controls

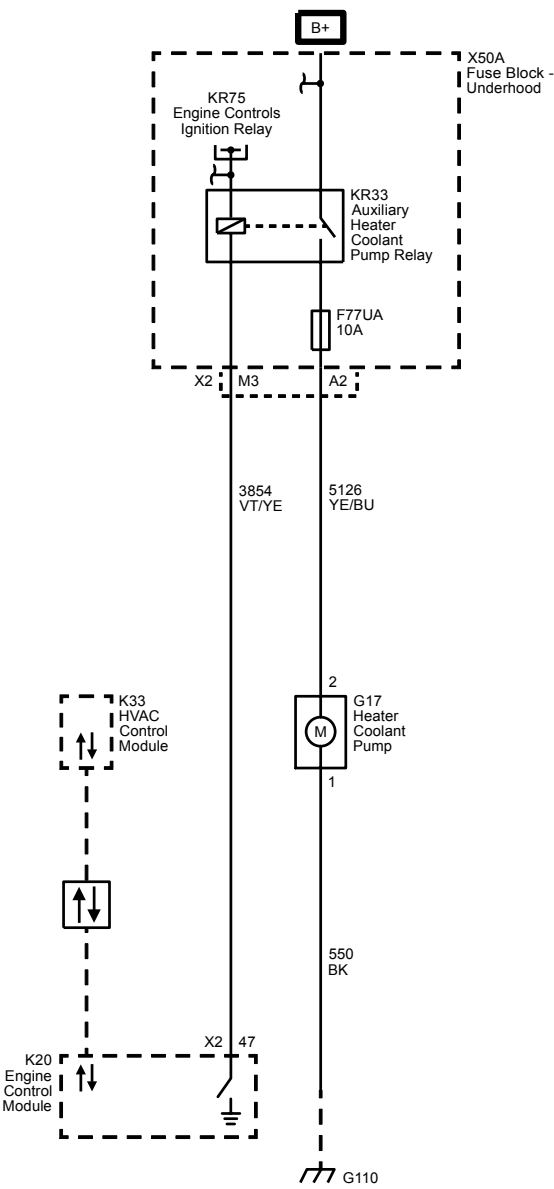




Auxiliary Heater (C32) and Temperature Sensors



Heater Coolant Pump (HP5)



Description and Operation

Automatic HVAC Description and Operation

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

- HVAC Control Components
- Air Speed (Front)
- Air Speed (Rear)
- Air Delivery (Front)
- Air Delivery (Rear)
- Heating and A/C Operation
- Recirculation Operation
- Automatic Operation
- Engine Coolant
- A/C Cycle

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
Purge	Yes
Personalization	Yes
Actuator Calibration	Yes

Actuators

Doors in the HVAC case assembly are used to control air flow. The HVAC control module operates the doors through the use of actuators, with one actuator being used for each door. The system has the following air control doors and associated actuators: mode, left and right 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 control module is an interface between the HVAC control module and the blower motor. The blower motor speed control from the HVAC control module, battery positive and ground circuits enable the blower motor control module to operate. The HVAC control module provides a pulse width modulation (PWM) signal to the blower motor control module in order to command the blower motor speed. The blower motor control module transfers the PWM signal into a corresponding blower motor voltage.

Duct Temperature Sensors

The air temperature sensors are 2-wire negative temperature co-efficient thermistors. The sensors operate within a temperature range of –40 to +85°C (–40 to +185°F). The sensors are installed in the air distribution ducts and measure the temperature of the air that streams from the ducts. The HVAC control module uses these values to adjust the mixed air flap position according to the requested temperature.

Evaporator Temperature Sensor

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

A/C Refrigerant Pressure Sensor

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

A/C Compressor

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

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

Ambient Light/Sunload Sensor

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

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

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

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 flap to the calculated position. Depending on the position of the flap, air is distributed through various ducts leading to the outlets in the dash. Turning the mode flap 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 flap to direct the airflow. If the interior temperature should be increased, the mixed air flap is put into the position in which more air streams through the heater core. If the interior temperature should be decreased, the mixed air flap 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 switch position 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 flap opens in order to circulate the air within the vehicle. In fresh air mode the recirculation flap is closed in order to route outside air into the vehicle.

Automatic Operation

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

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

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

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

- Monitors the following sensors:
 - Ambient air temperature sensor
 - Lower left duct air temperature sensor
 - Lower right duct air temperature sensor
 - Upper left duct air temperature sensor
 - Upper right duct air temperature sensor
 - Ambient light/sunload sensor
- Regulate the blower motor speed
- Position the air temperature actuators
- Position the mode door actuator
- Position the recirculation actuator
- Request A/C operation
- Control of the A/C compressor

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

high speed and the air temperature actuators stays in the full heat position.

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

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

Electric Auxiliary Heater

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

Engine Coolant

Engine coolant is the essential element of the heating system. The thermostat controls the normal engine operating coolant temperature. The thermostat also creates a restriction for the cooling system that promotes a positive coolant flow and helps prevent cavitation.

Coolant enters the heater core through the inlet heater hose, in a pressurized state. The heater core is located inside the HVAC control module. The ambient air drawn through the HVAC control module absorbs the heat of the coolant flowing through the heater core. Heated air is distributed to the passenger compartment, through the HVAC control module, for passenger comfort. Opening or closing the air temperature flap controls the amount of heat delivered to the passenger compartment. The coolant exits the heater core through the return heater hose and recirculates back to the engine cooling system.

A/C Cycle

Refrigerant is the key element in an air conditioning system. There are currently two approved Environmental Protection Agency refrigerants. They are R134a and R-1234yf, and either one could be used in this vehicle. R-1234yf is a newly EPA approved refrigerant, and it will require the use of an updated Air Conditioning Refrigerant Recovery/Recharge Cart/System. Refer to [CELL Link Error - Link target cell \(cell ID 48139\) is invalid for this publication.](#) for correct tool usage. Both refrigerants are very low temperature gases that can transfer the undesirable heat and moisture from the passenger compartment to the outside air.

The compressor builds pressure on the vapor refrigerant. 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 A/C refrigerant pressure sensor fails 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 to the Receiver/Dehydrator(R/D).

The R/D contains desiccant that absorbs moisture that may be in the refrigerant system. The R/D also acts as a storage vessel to ensure that a steady flow of liquid reaches the thermal expansion valve. The refrigerant exits the R/D and flows through the liquid line to the thermal expansion valve.

The thermal expansion valve is located at the front of dash and attaches to the evaporator inlet and outlet pipes. The thermal expansion valve is the dividing point for the high and the low pressure sides of the A/C system. As the refrigerant passes through the thermal expansion valve, the pressure on the refrigerant is lowered. The thermal expansion valve also meters the amount of liquid refrigerant that can flow into the evaporator.

Refrigerant exiting the thermal expansion valve flows into the evaporator core in a low pressure, liquid state. Ambient air is drawn through the HVAC control module and passes through the evaporator core. Warm and moist air will cause the liquid refrigerant boil inside of 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 A/C compressor, in a vapor state, and completing the A/C cycle of heat removal. At the A/C compressor, the refrigerant is compressed again and the cycle of heat removal is repeated.

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

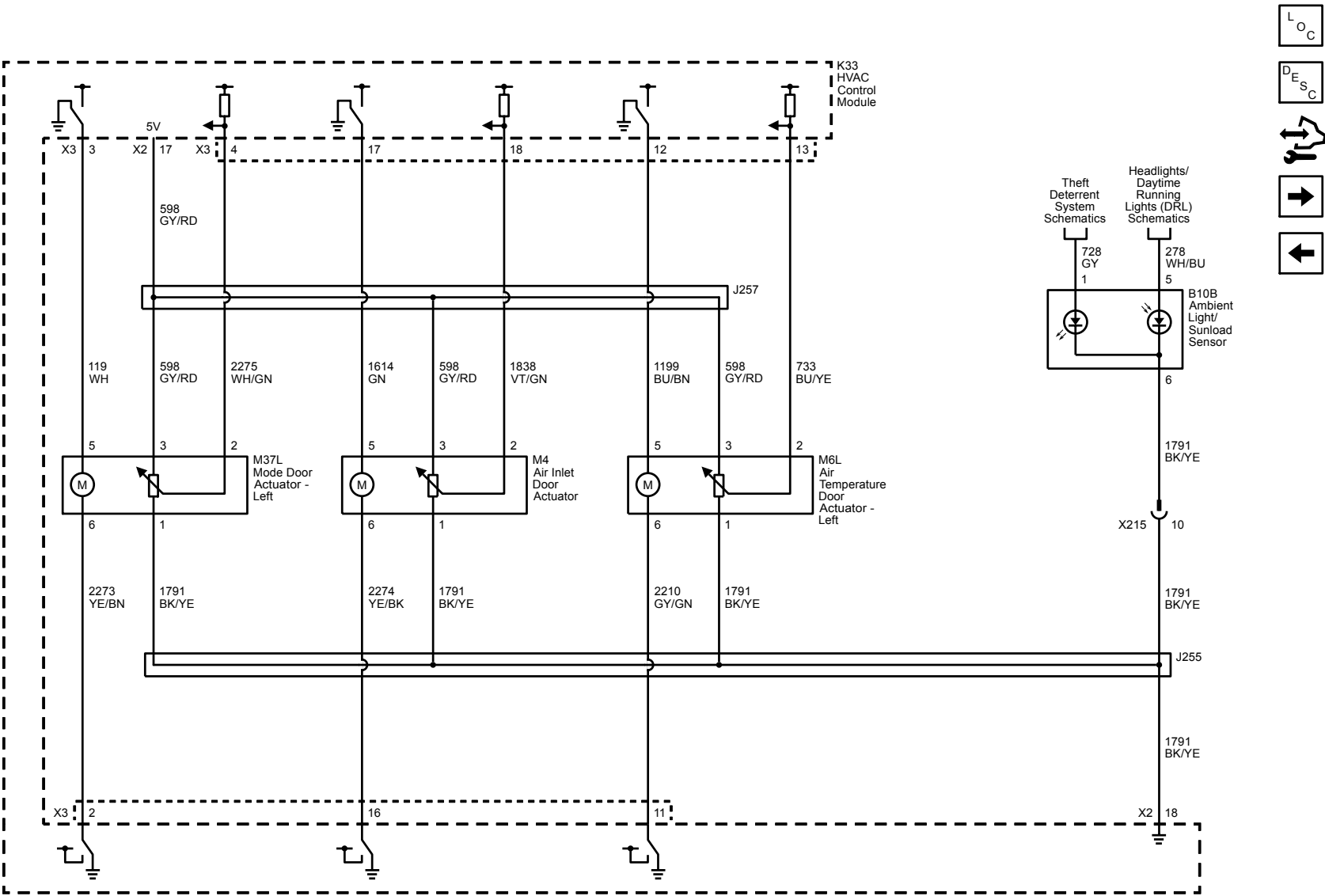
HVAC

HVAC - Manual

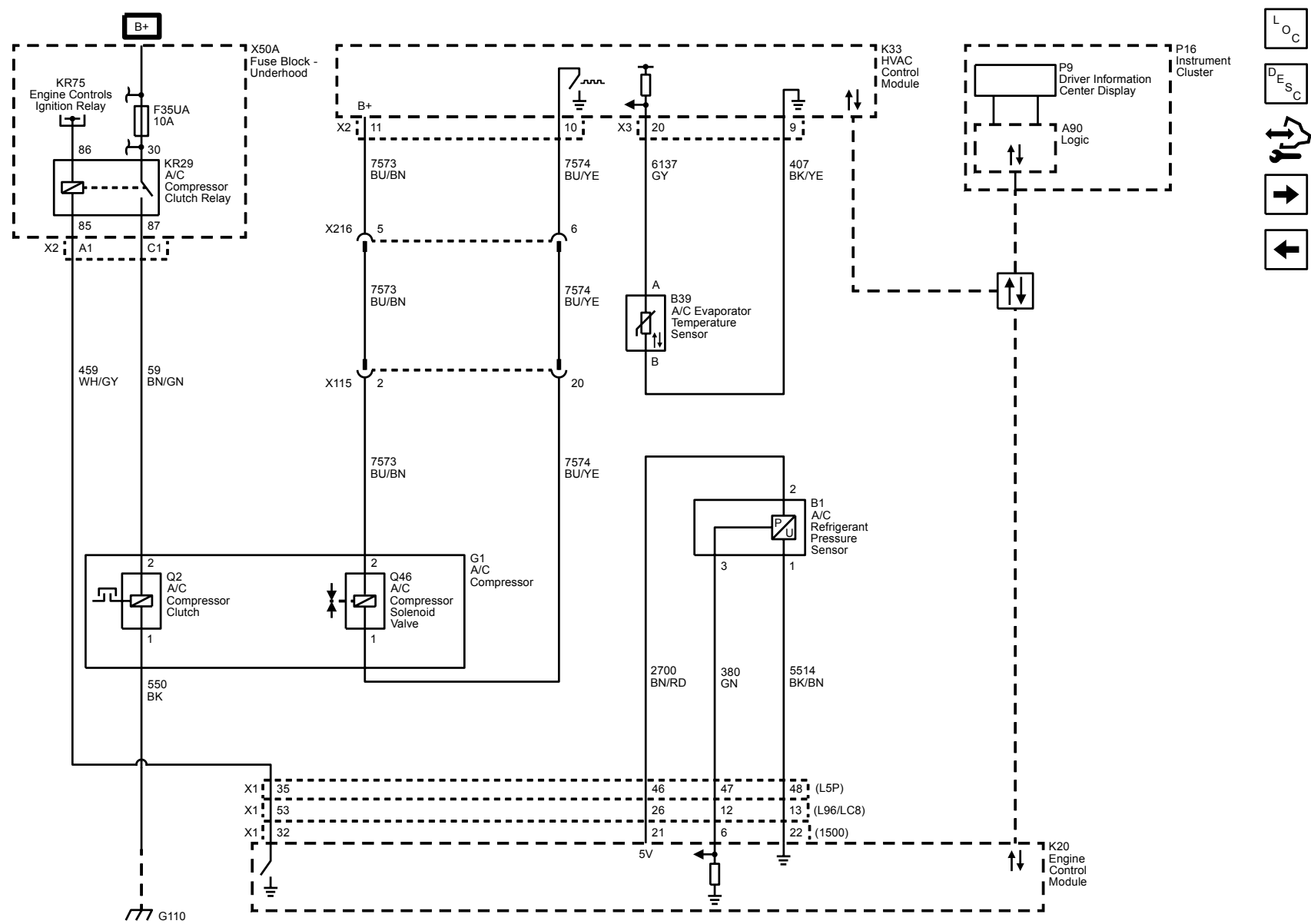
Schematic and Routing Diagrams

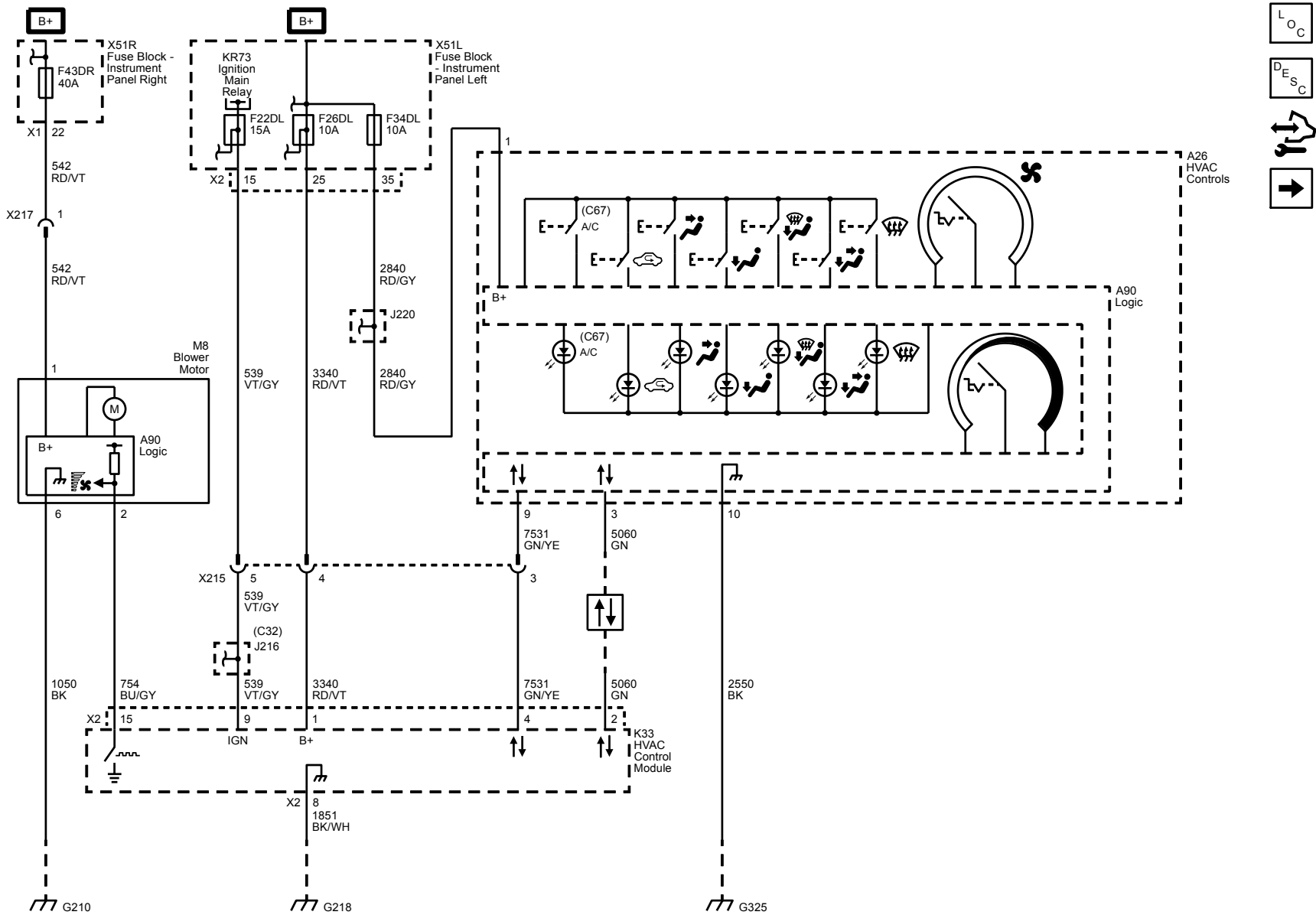
HVAC Schematics

Ambient Light/Sunload Sensor and Mode Doors

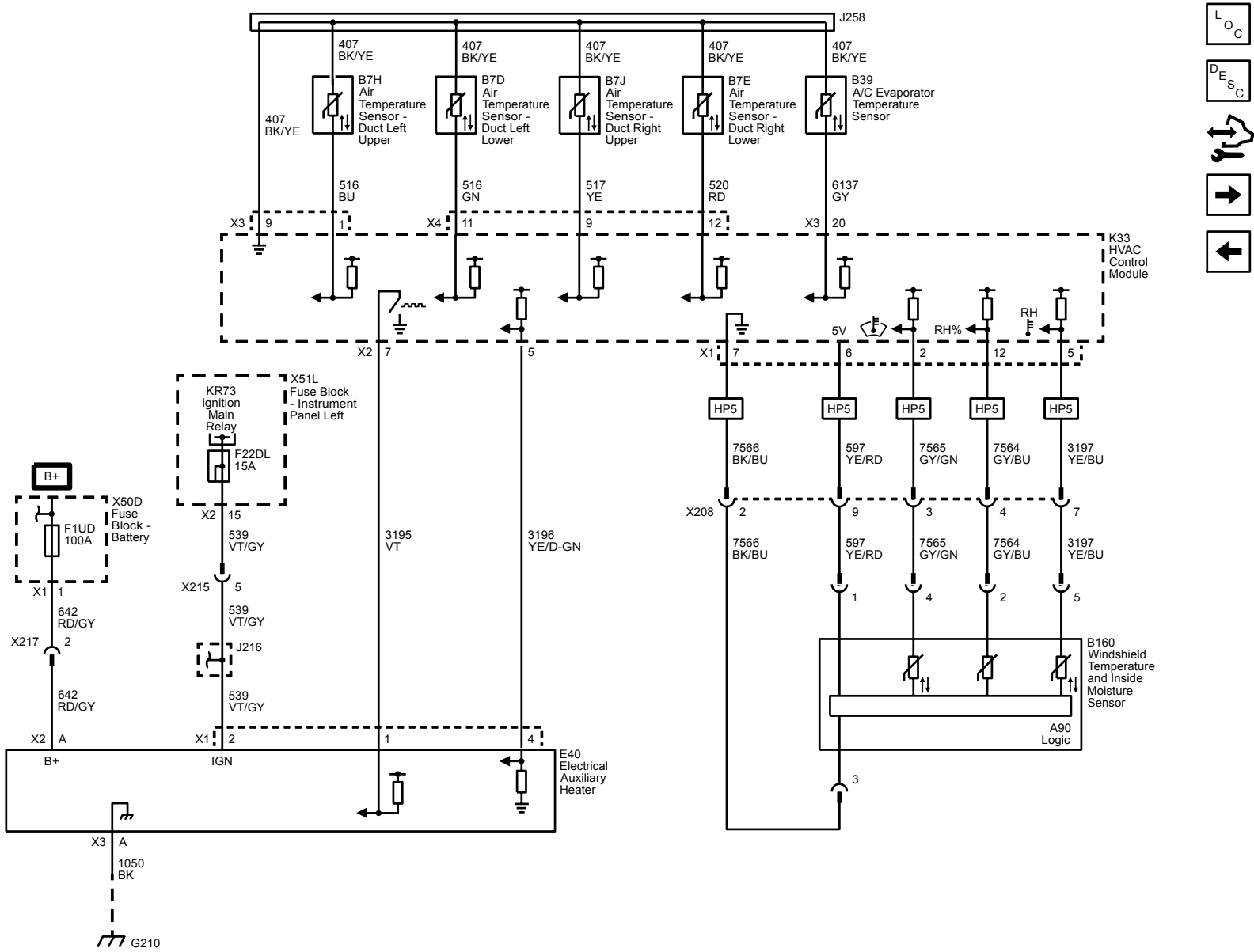


A/C Compressor Controls

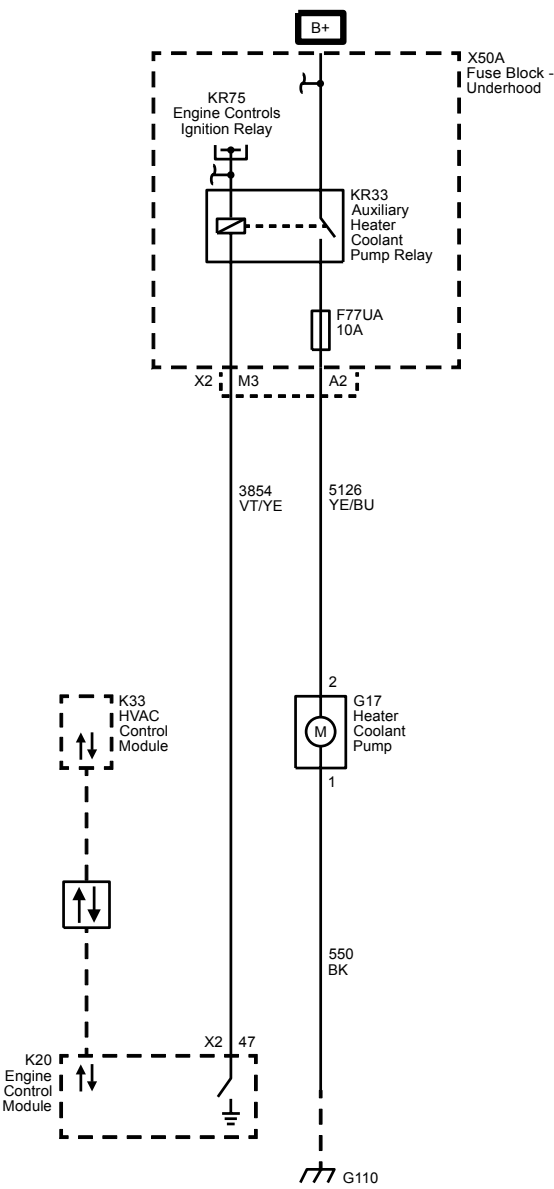




Auxiliary Heater (C32) and Temperature Sensors



Heater Coolant Pump (HP5)



Description and Operation

Manual HVAC Description and Operation

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

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

HVAC Control Components

HVAC Controls

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

HVAC Control Module

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

The HVAC control module supports the following features:

Feature	Availability
Afterblow	Yes
Personalization	Yes
Actuator Calibration	Yes

Actuators

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

Each actuator used in the system is a 5-wire 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 Assembly

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.

Air Delivery

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

- Defrost
- Defog
- Panel
- Floor

The desired air distribution mode can be selected with the air distribution switches at the HVAC controls. The HVAC controls delivers the values to the HVAC control module via LIN-Bus. The HVAC control module controls the air distribution actuator so that it drives the flap to the calculated position. Depending on the position of the flap, air is distributed through various ducts leading to the outlets in the dash. Turning the mode flap 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 flap to induce the airflow. If the interior temperature should be increased, the mixed air flap is put into the position in which more air streams through the heater core. If the interior temperature should be decreased, the mixed air flap is put into the position in which more air streams through the evaporator core.

Recirculation Operation

The recirculation switch is part of the HVAC controls. The selected recirculation switch position is sent to the HVAC control module via LIN-Bus. The HVAC control module controls the air intake through the recirculation actuator. The recirculation switch closes the recirculation flap in order to circulate the air within the vehicle. Through renewed selection of the recirculation switch, the recirculation flap is opened again in order 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 opens the recirculation flap and outside air is circulated to the windshield to reduce fogging.

Electric Auxiliary Heater

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

Engine Coolant

Engine coolant is the essential element of the heating system. The thermostat controls the normal engine operating coolant temperature. The thermostat also creates a restriction for the cooling system that promotes a positive coolant flow and helps prevent cavitation.

Coolant enters the heater core through the inlet heater hose, in a pressurized state. The heater core is located inside the HVAC module. The ambient air drawn through the HVAC module absorbs the heat of the coolant flowing through the heater core. Heated air is distributed to the passenger compartment, through the HVAC module, for passenger comfort. Opening or closing the air temperature flap controls the amount of heat delivered to the passenger compartment. The coolant exits the heater core through the return heater hose and recirculates back to the engine cooling system.

A/C Cycle

Refrigerant is the key element in an air conditioning system. R-134a is presently the only Environmental Protection Agency approved refrigerant for automotive use. R-134a is a very low temperature gas that can transfer the undesirable heat and moisture from the passenger compartment to the outside air.

The compressor builds pressure on the vapor refrigerant. 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 A/C refrigerant pressure sensor fails 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 to the Receiver/Dehydrator (R/D).

The R/D contains desiccant that absorbs moisture that may be in the refrigerant system. The R/D also acts as a storage vessel to ensure that a steady flow of liquid reaches the thermal expansion valve. The refrigerant exits the R/D and flows through the liquid line to the thermal expansion valve.

The thermal expansion valve is located at the front of dash and attaches to the evaporator inlet and outlet pipes. The thermal expansion valve is the dividing point for the high and the low pressure sides of the A/C system. As the refrigerant passes through the thermal expansion valve, the pressure on the refrigerant is lowered. The thermal expansion valve also meters the amount of liquid refrigerant that can flow into the evaporator.

Refrigerant exiting the thermal expansion valve 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 boil inside of 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 A/C compressor, in a vapor state, and completing the A/C cycle of heat removal. At the A/C 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 heat and moisture removed from the passenger compartment will also change form, or condense, and is discharged from the HVAC module as water.

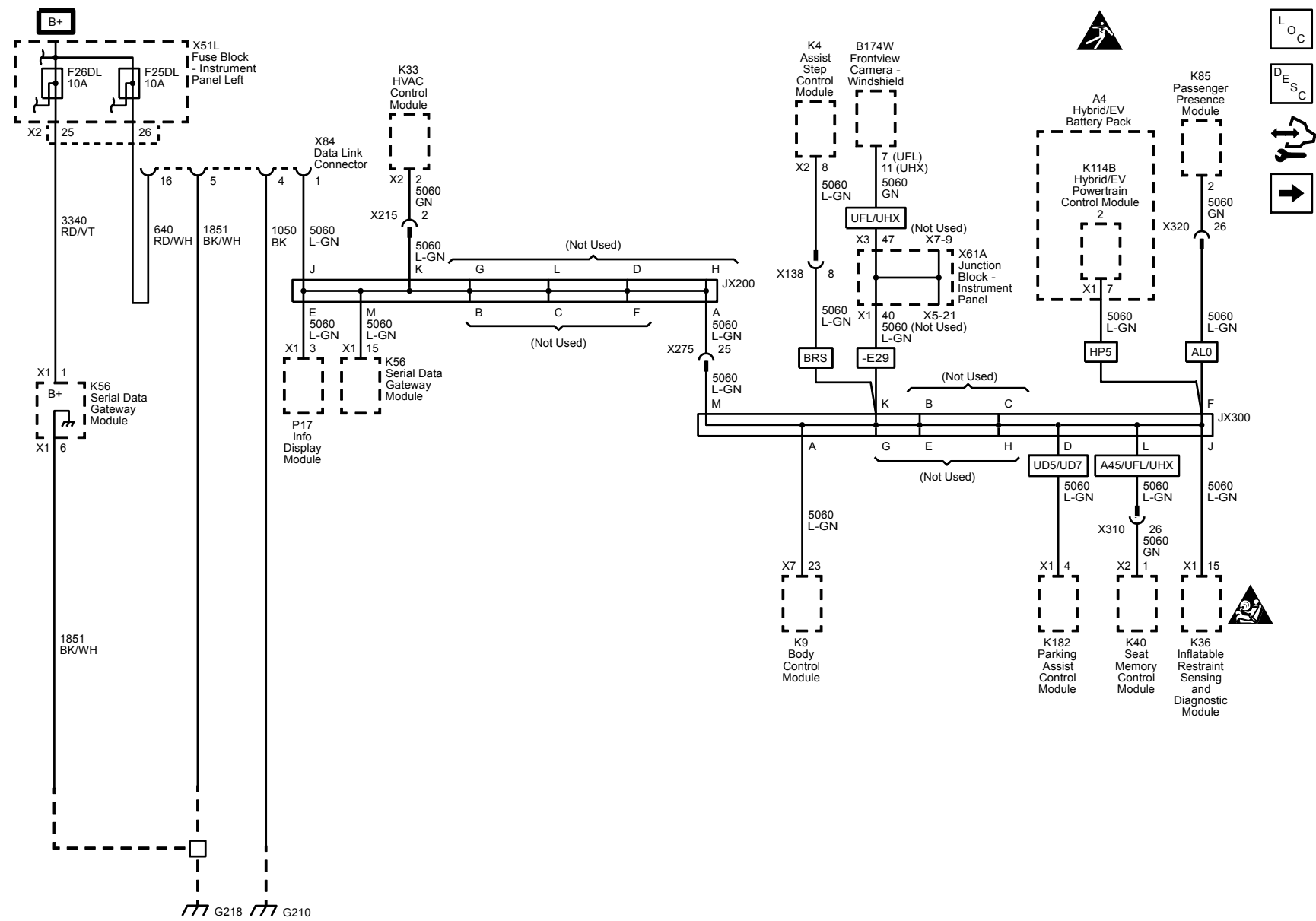
Power and Signal Distribution

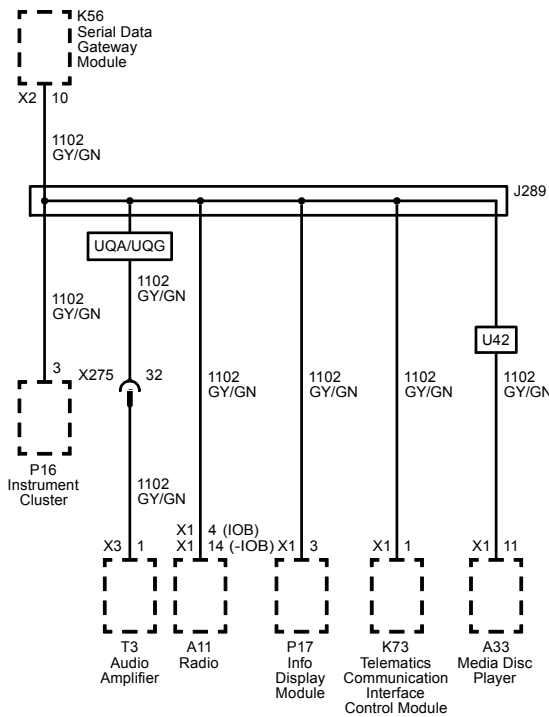
Data Communications

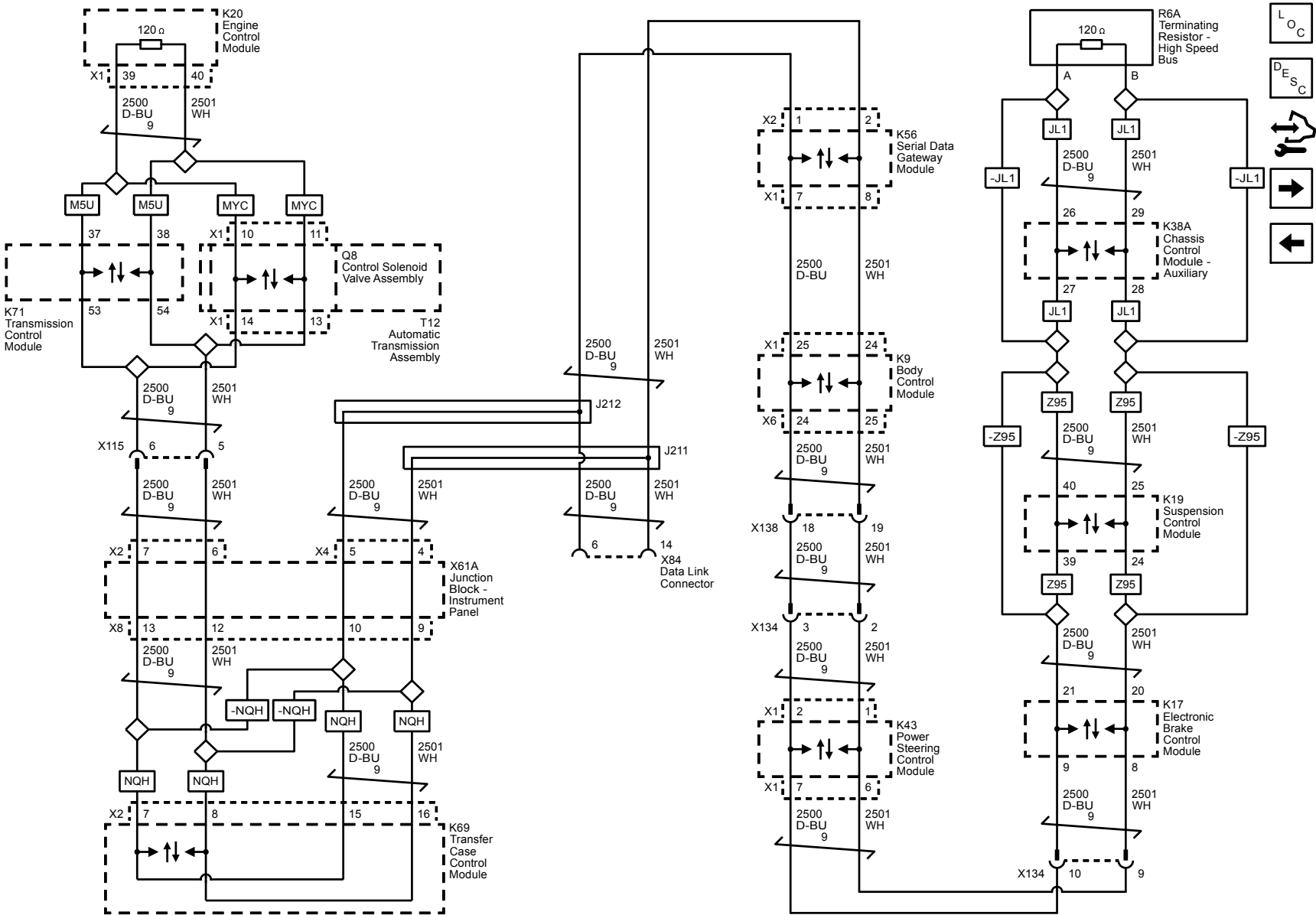
Schematic and Routing Diagrams

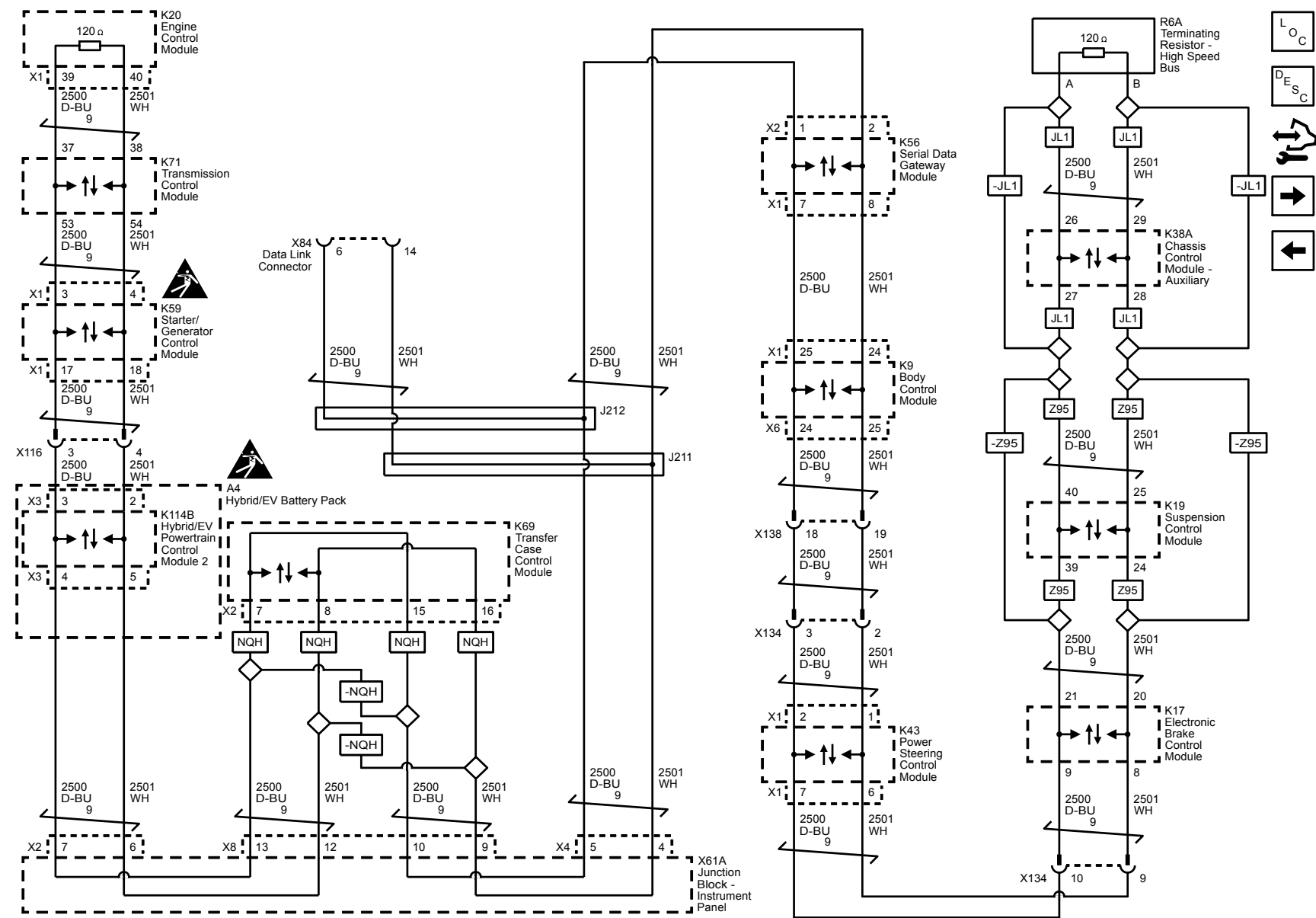
Data Communication Schematics

Data Link Power and Ground, and Low Speed GMLAN

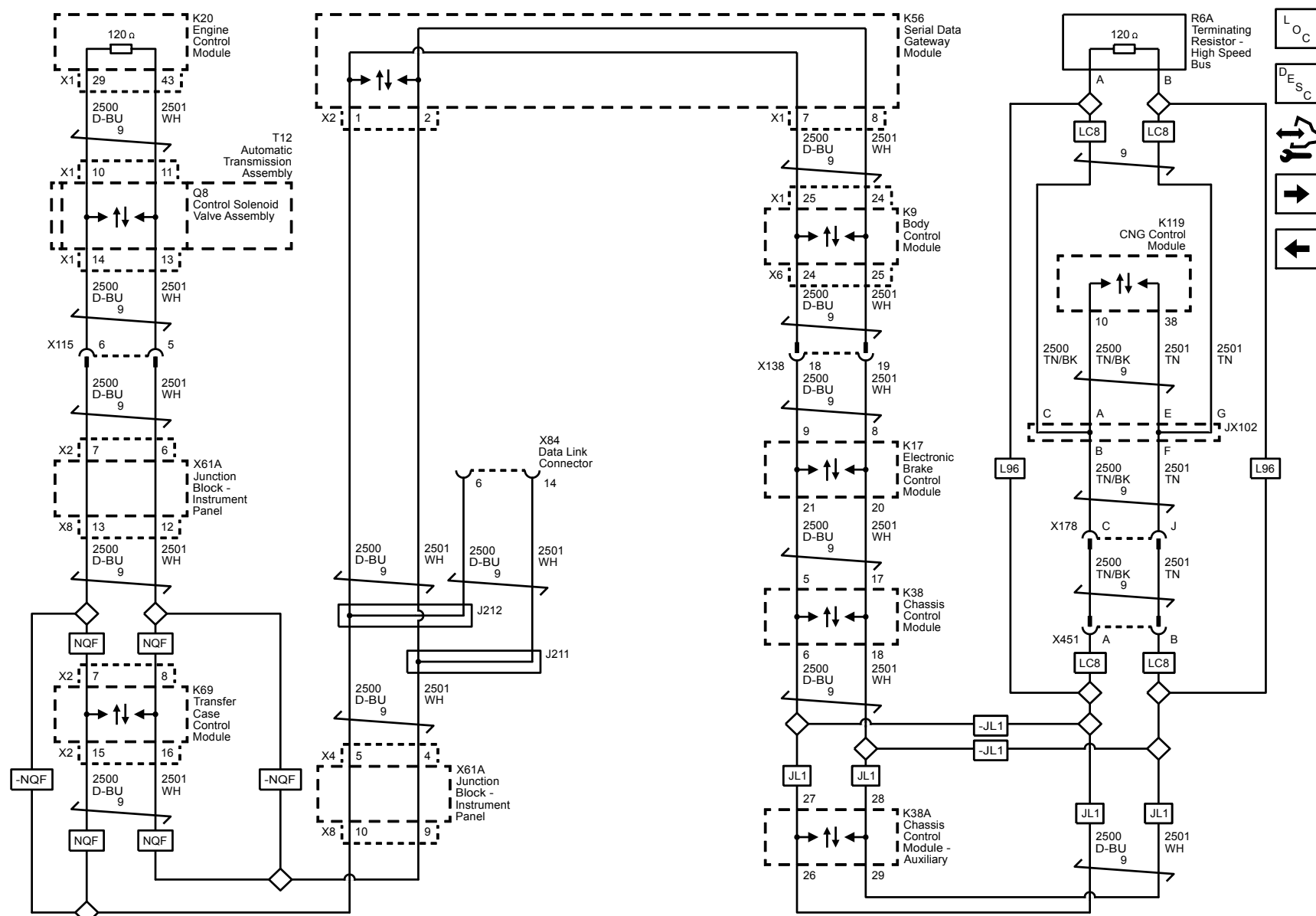


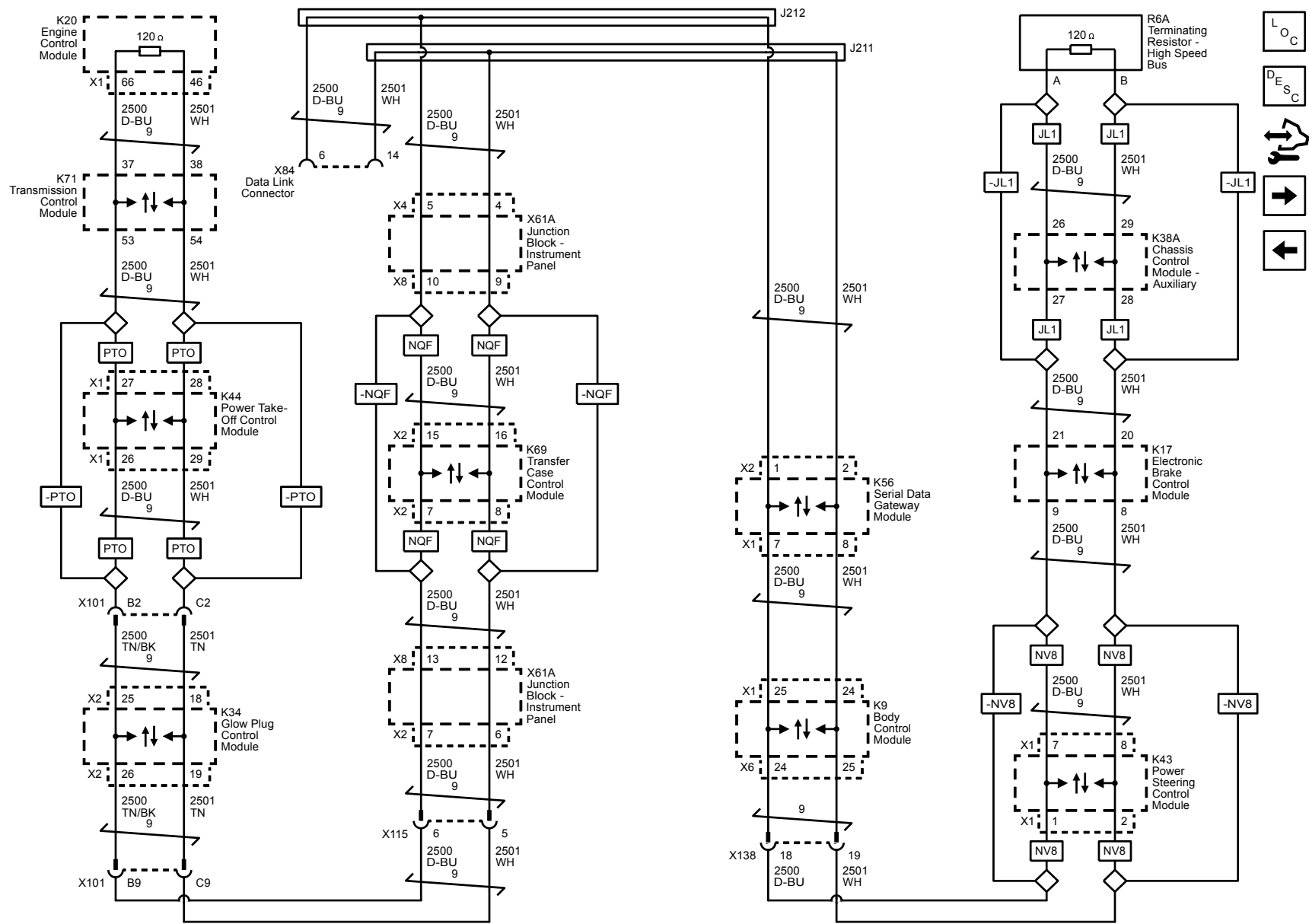


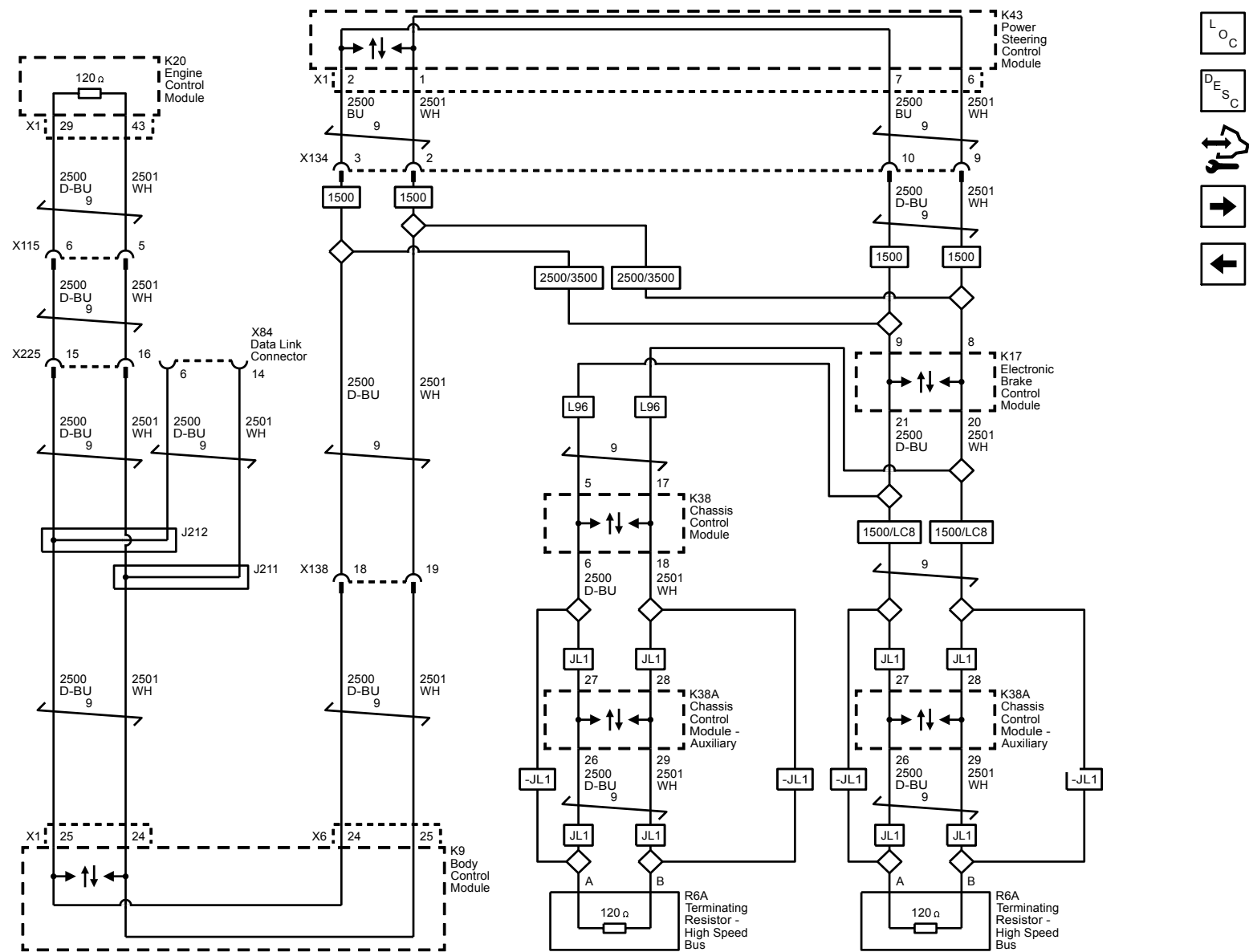


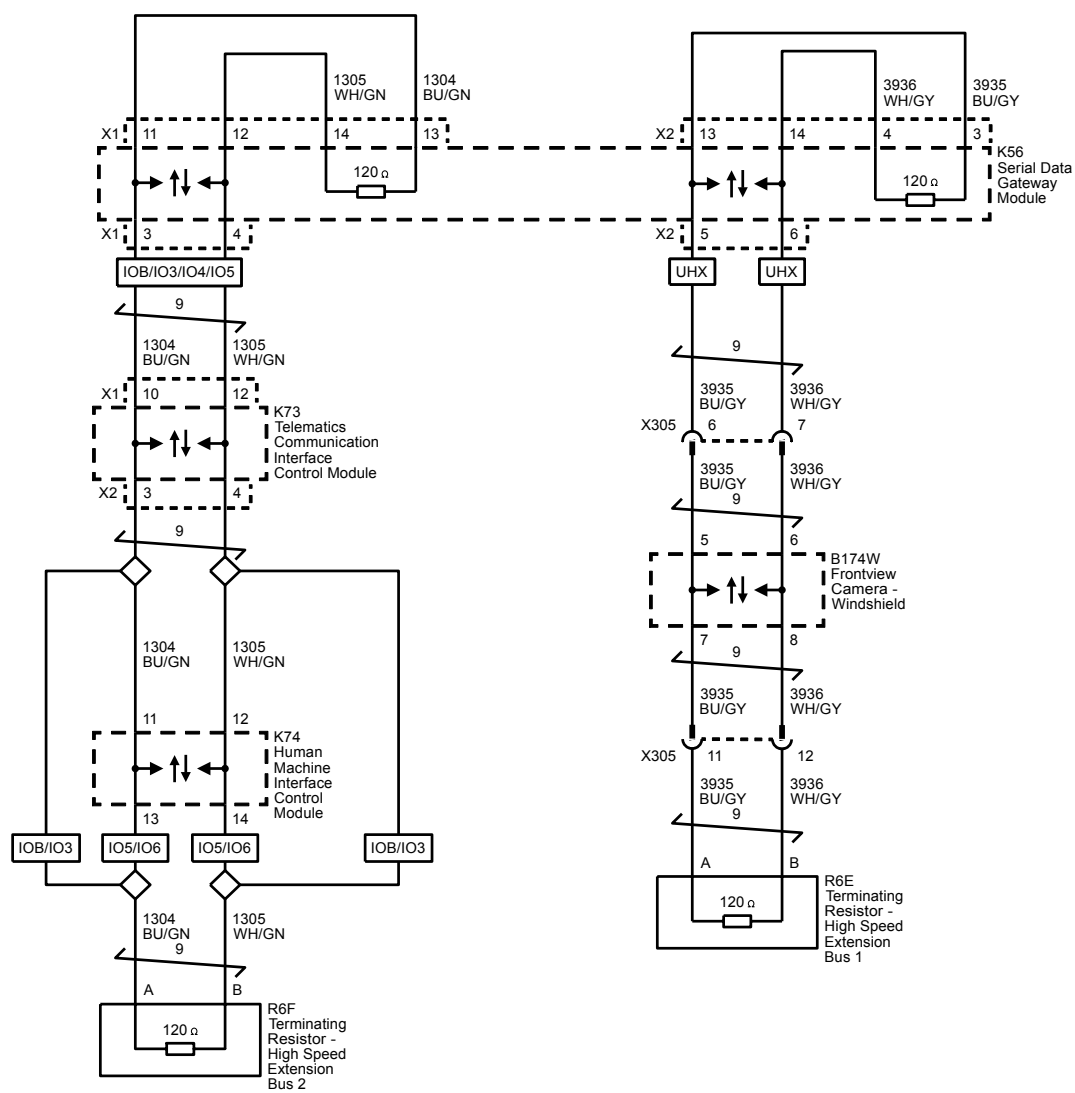


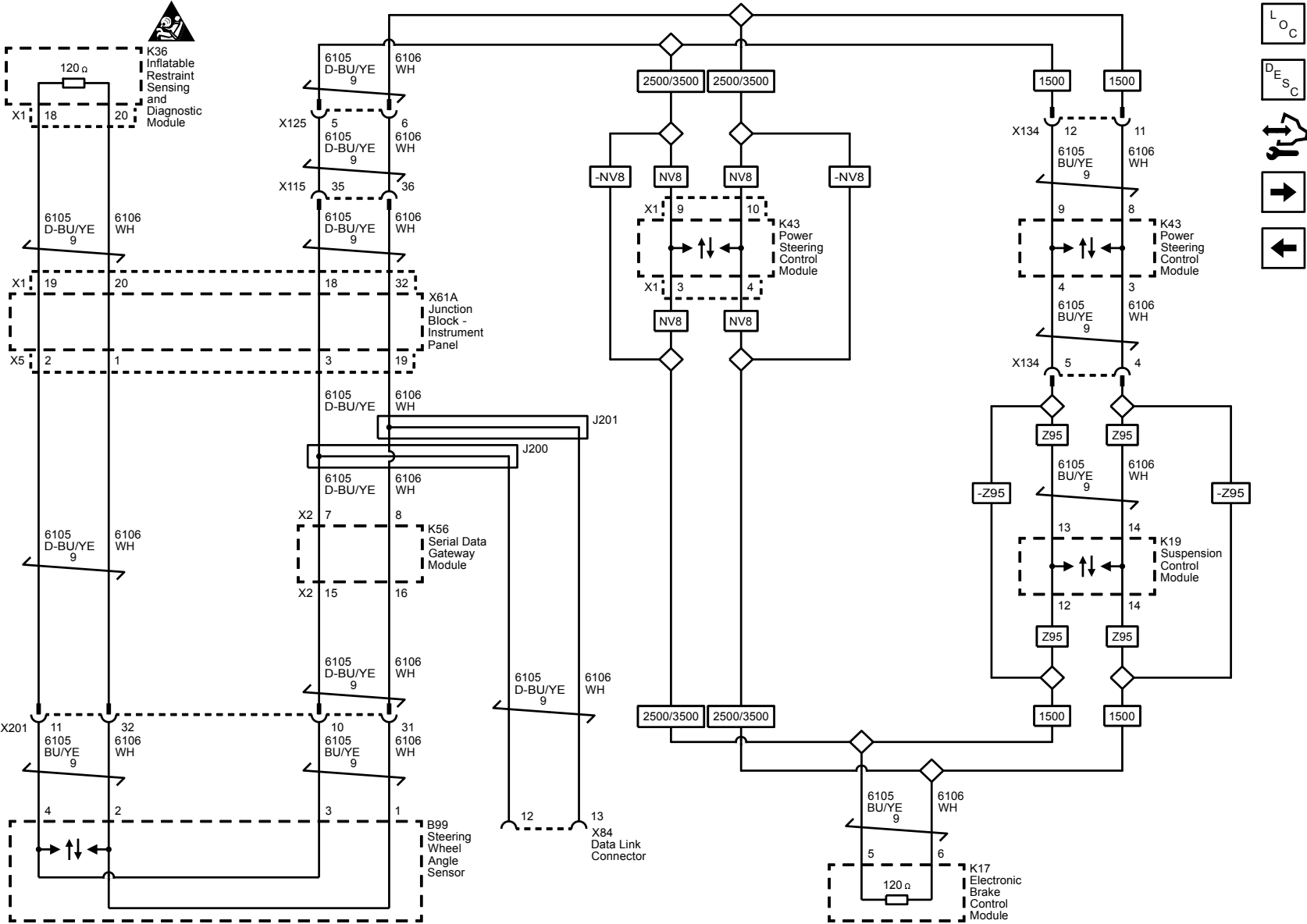
High Speed GMLAN (2500/3500 except E29 or L5P)

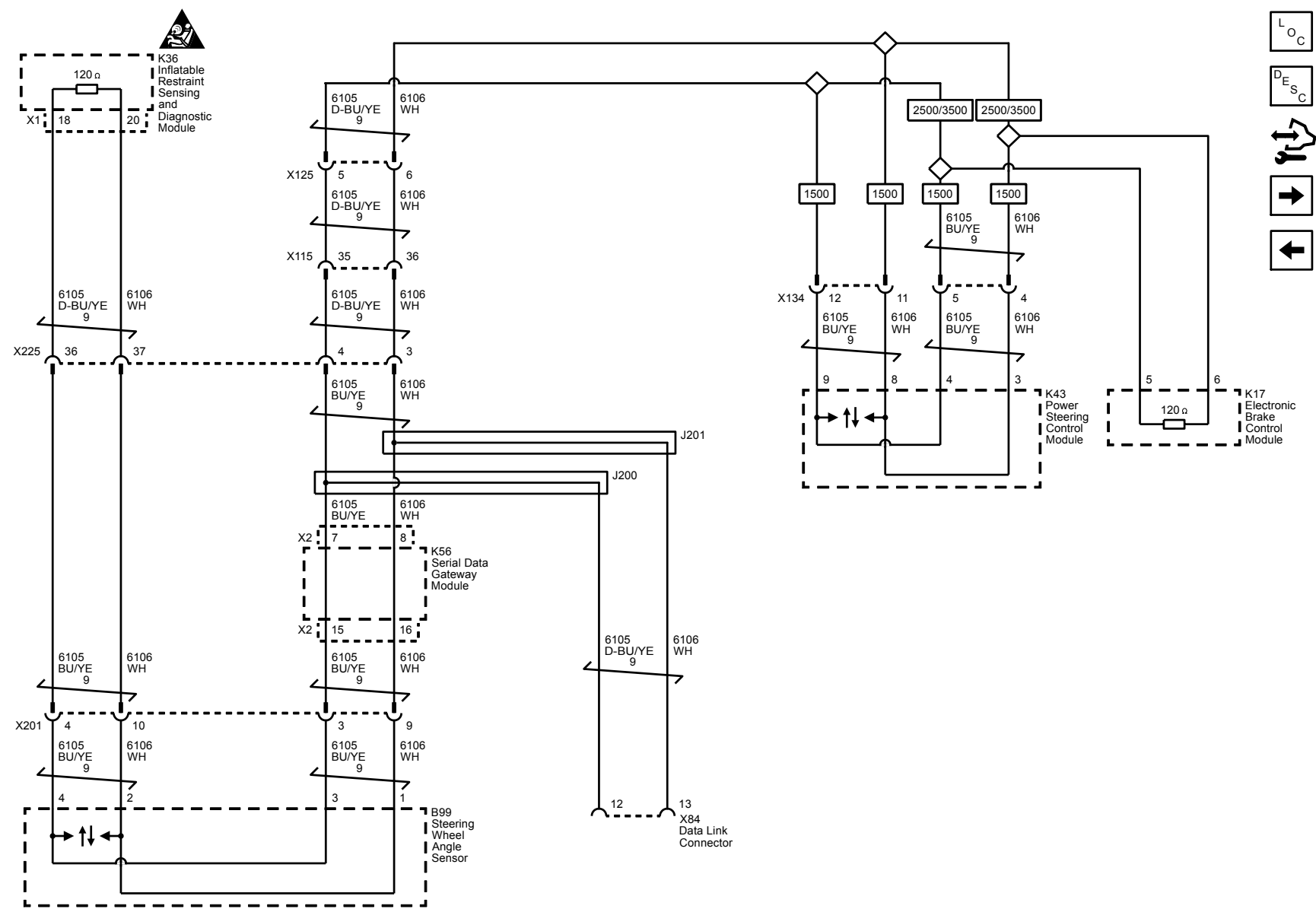


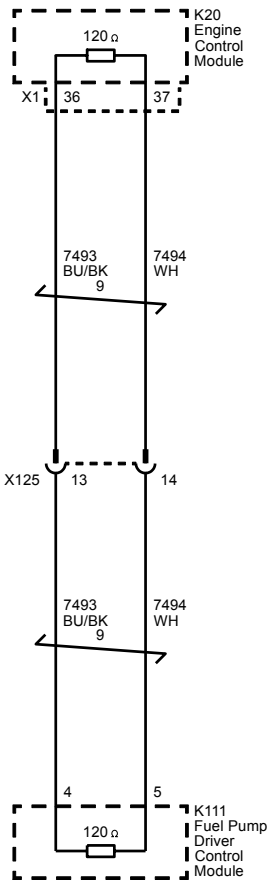


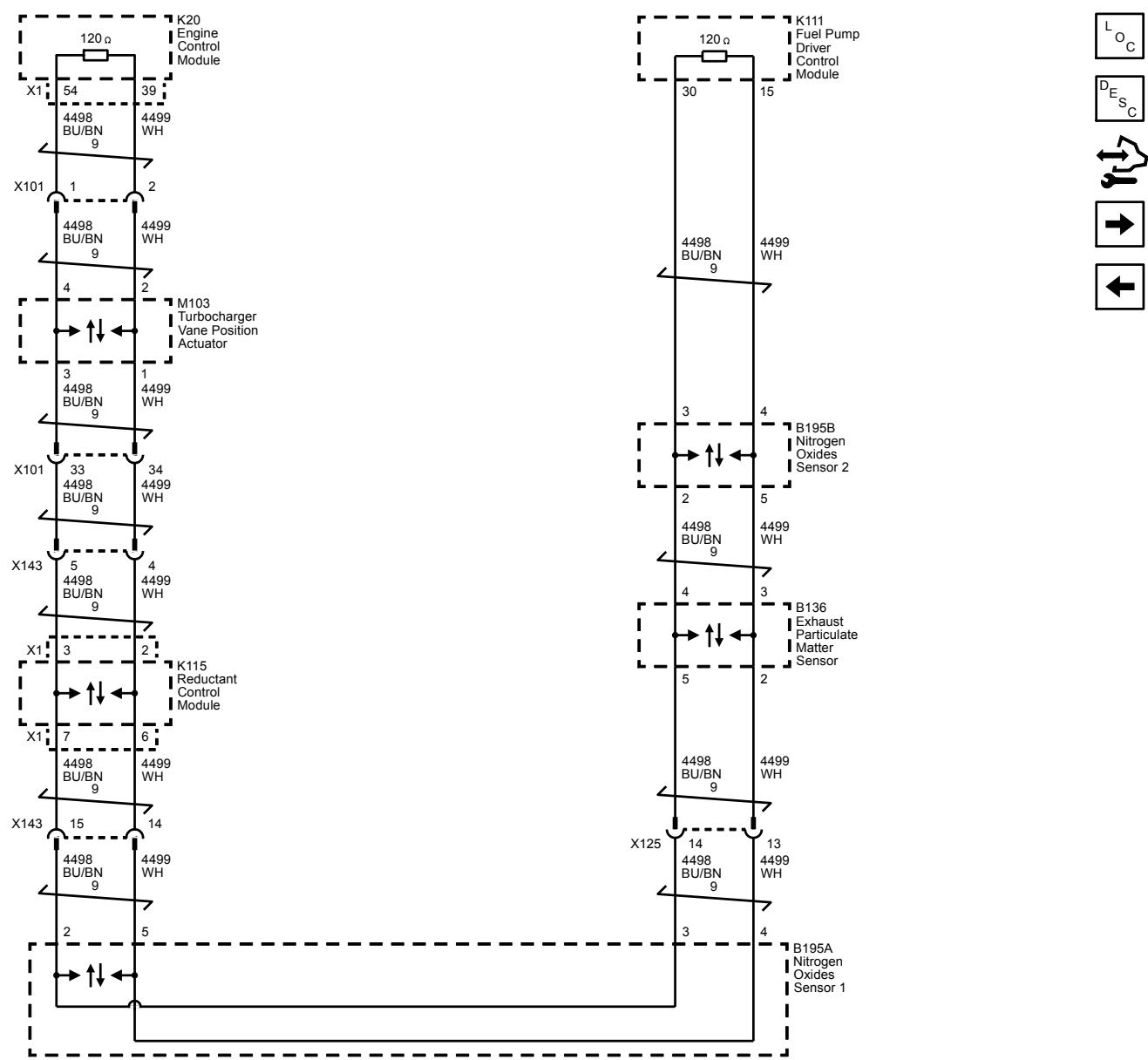


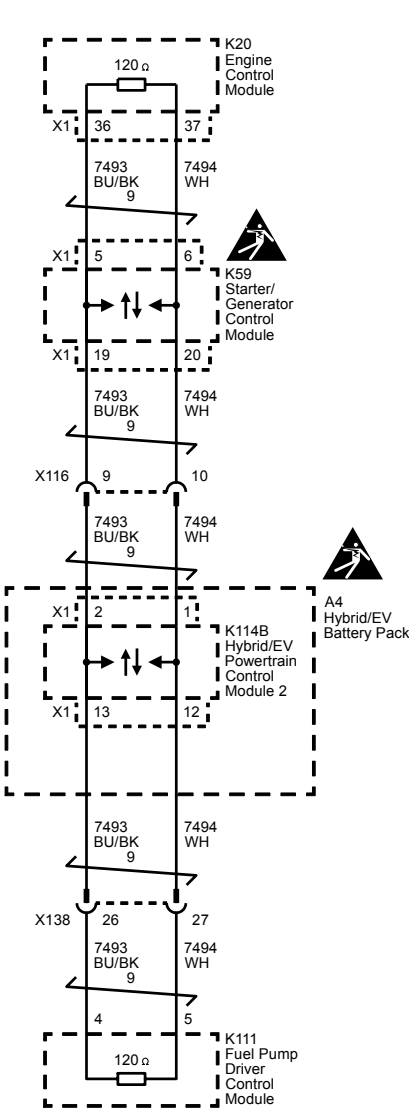


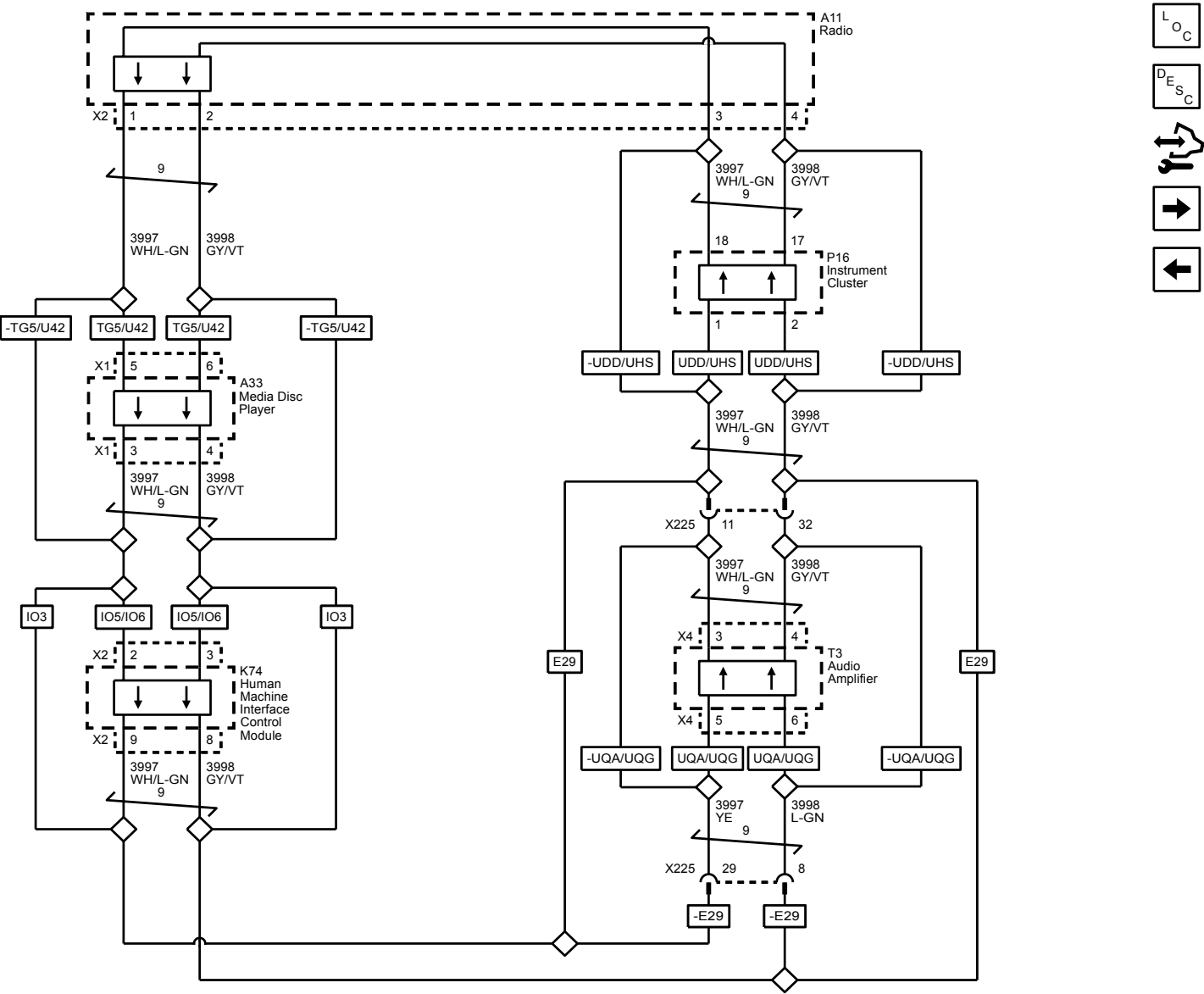


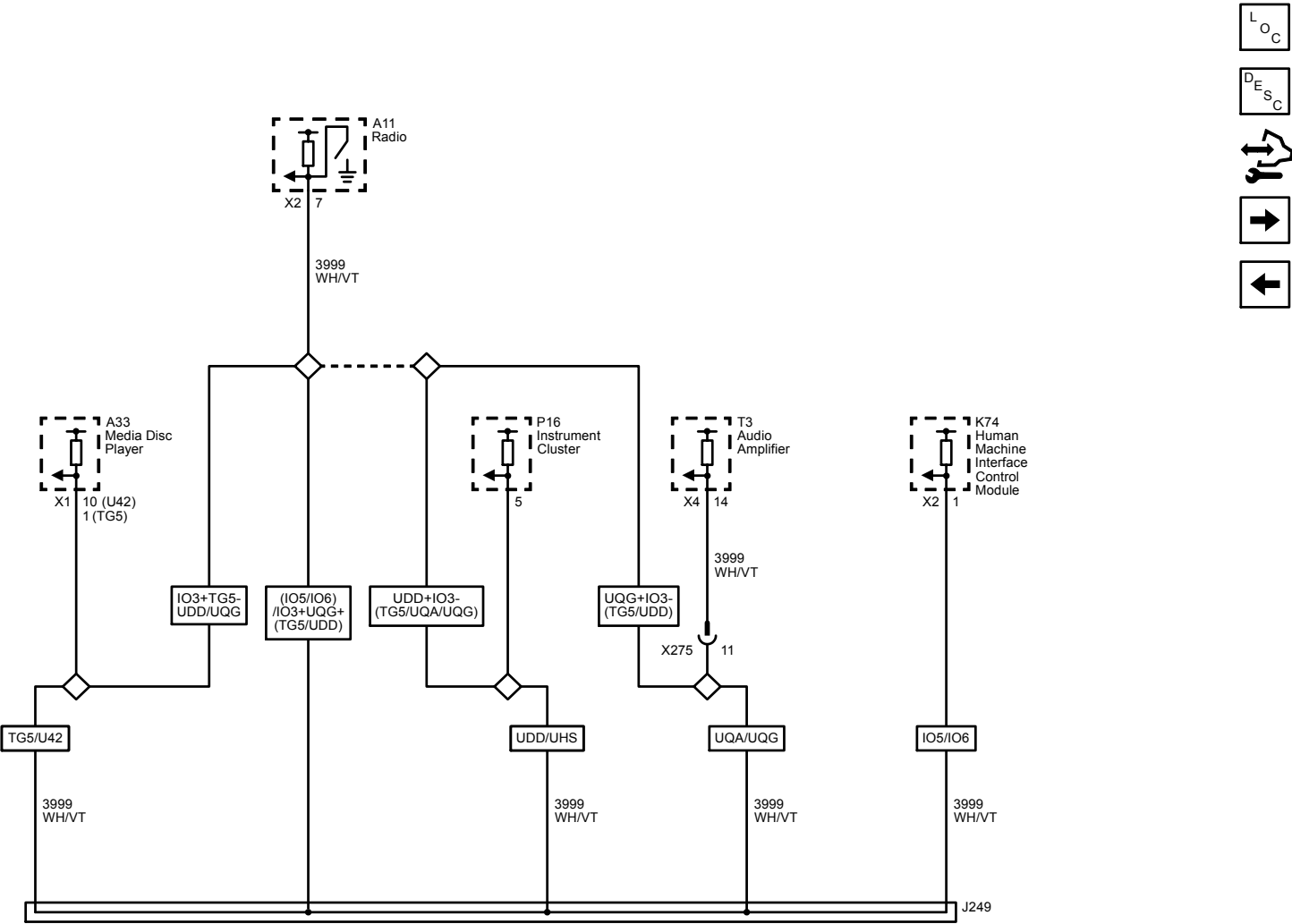




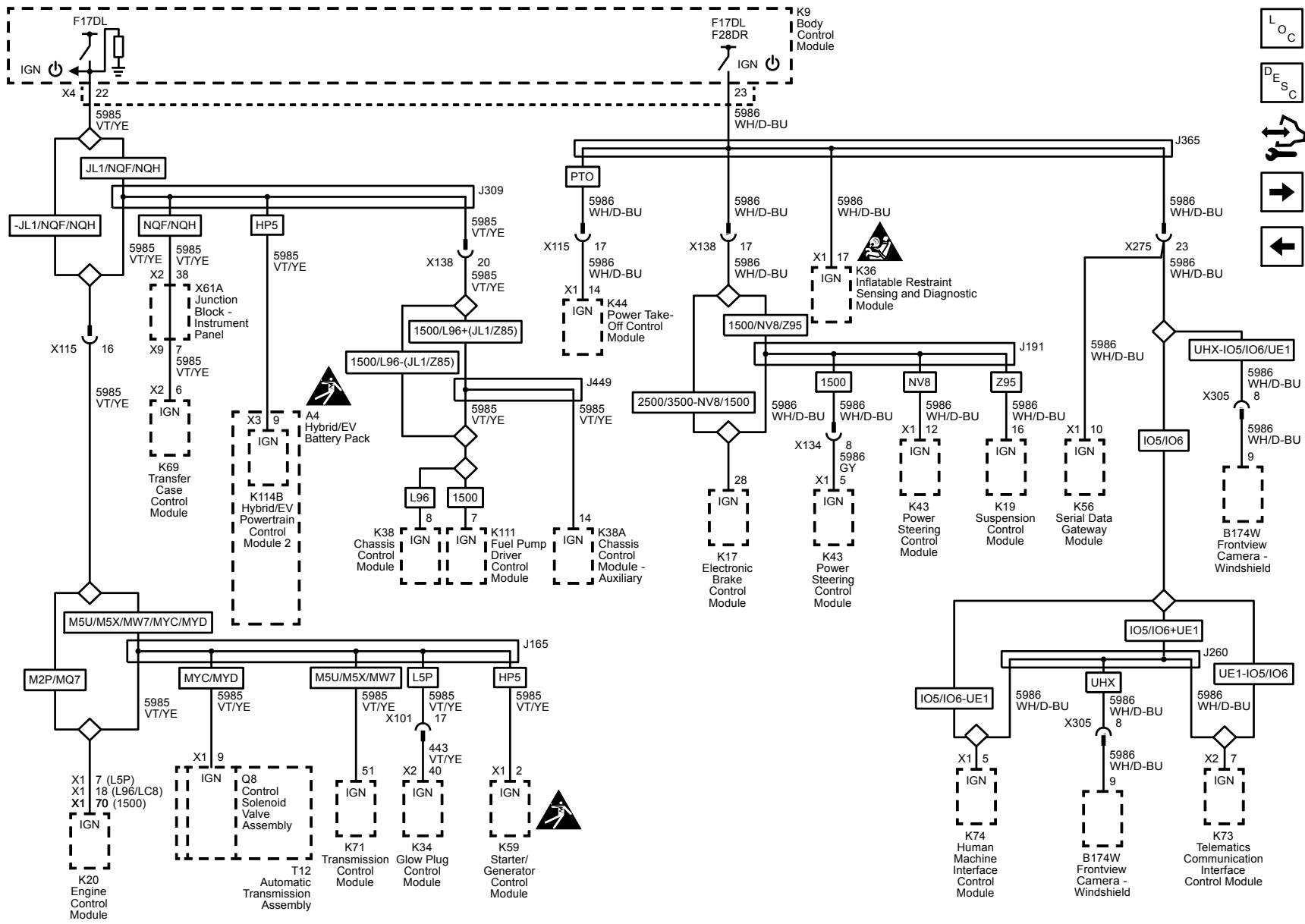




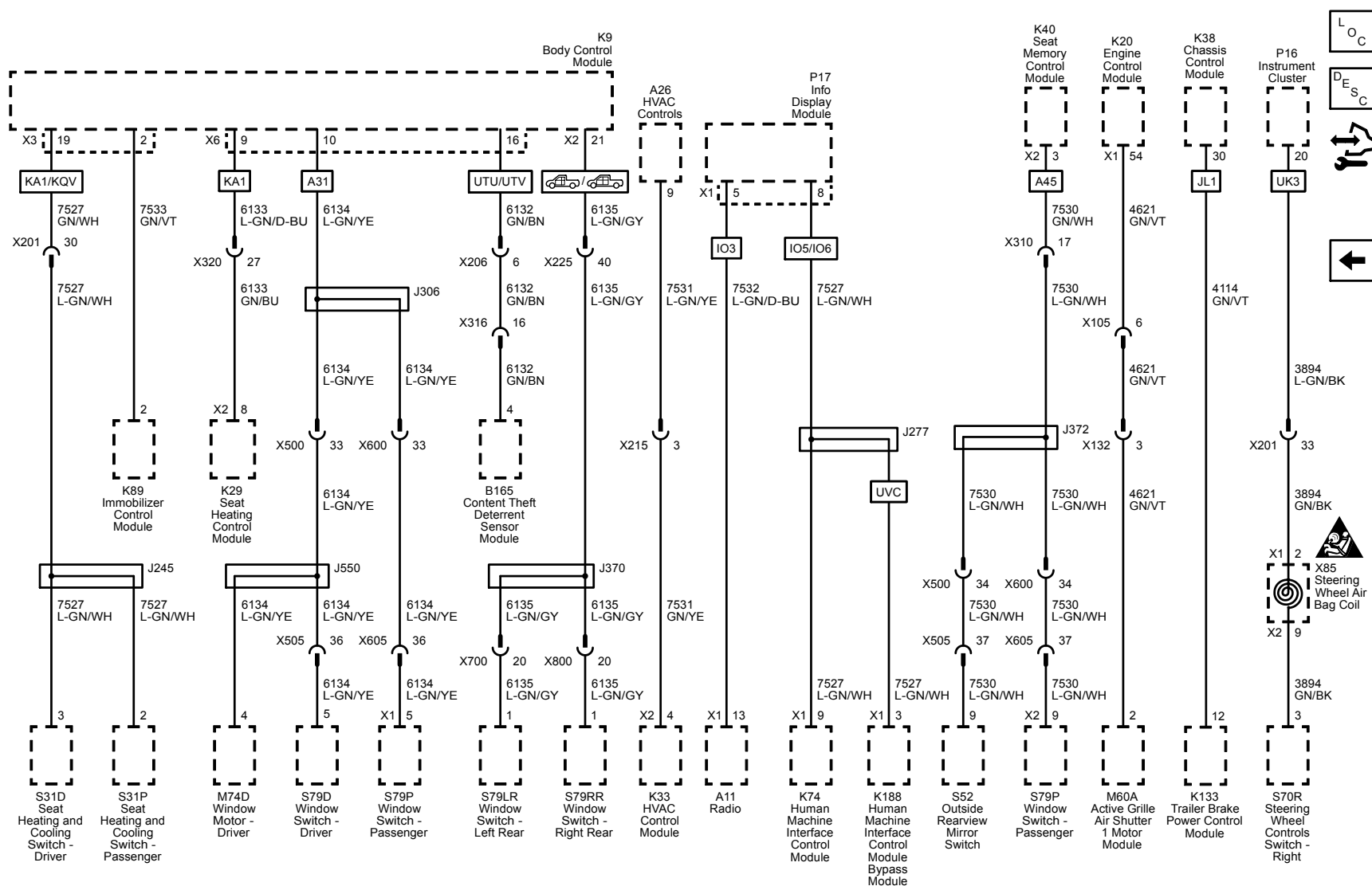




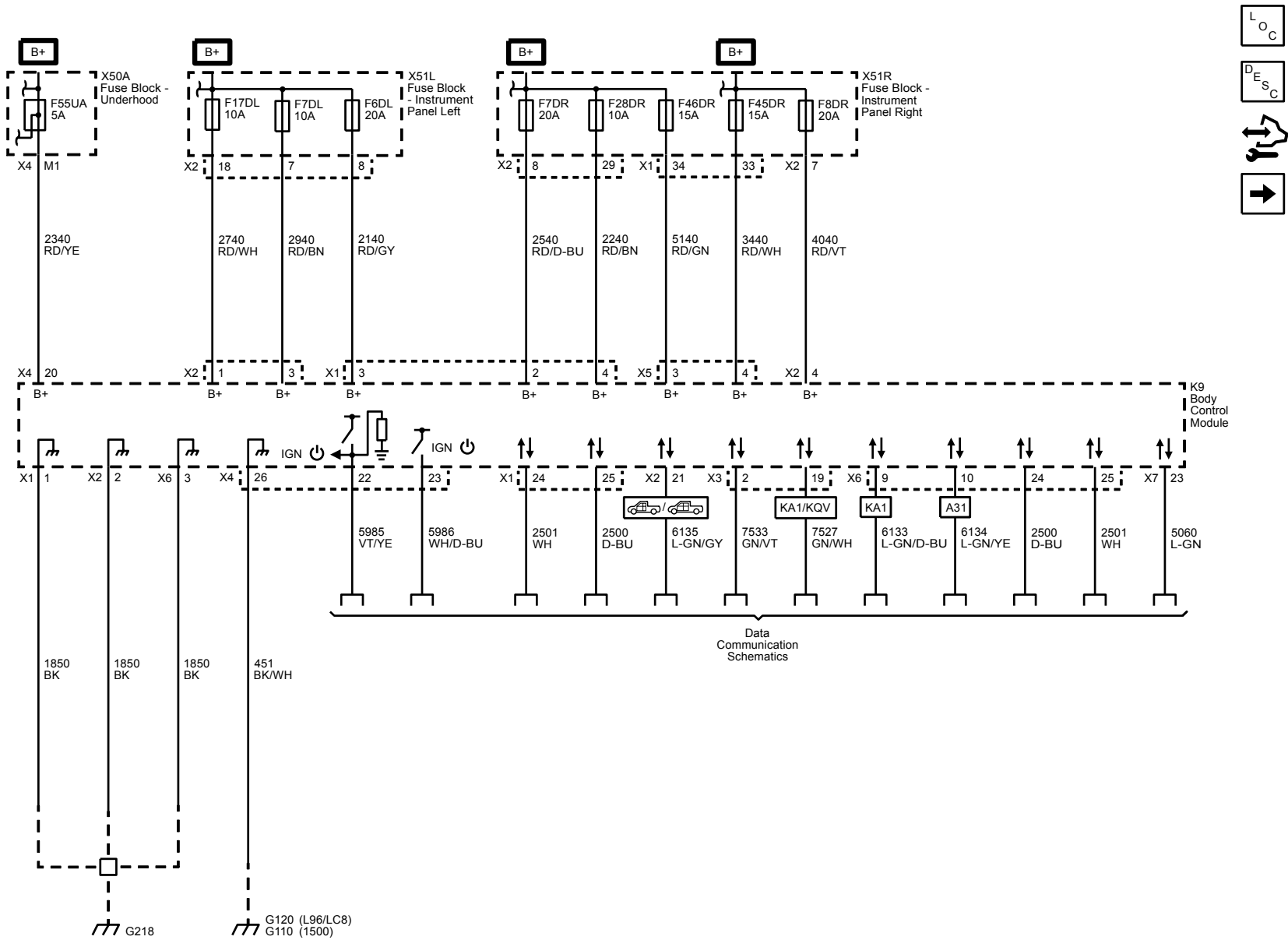
Accessory Wakeup and Communications Enable

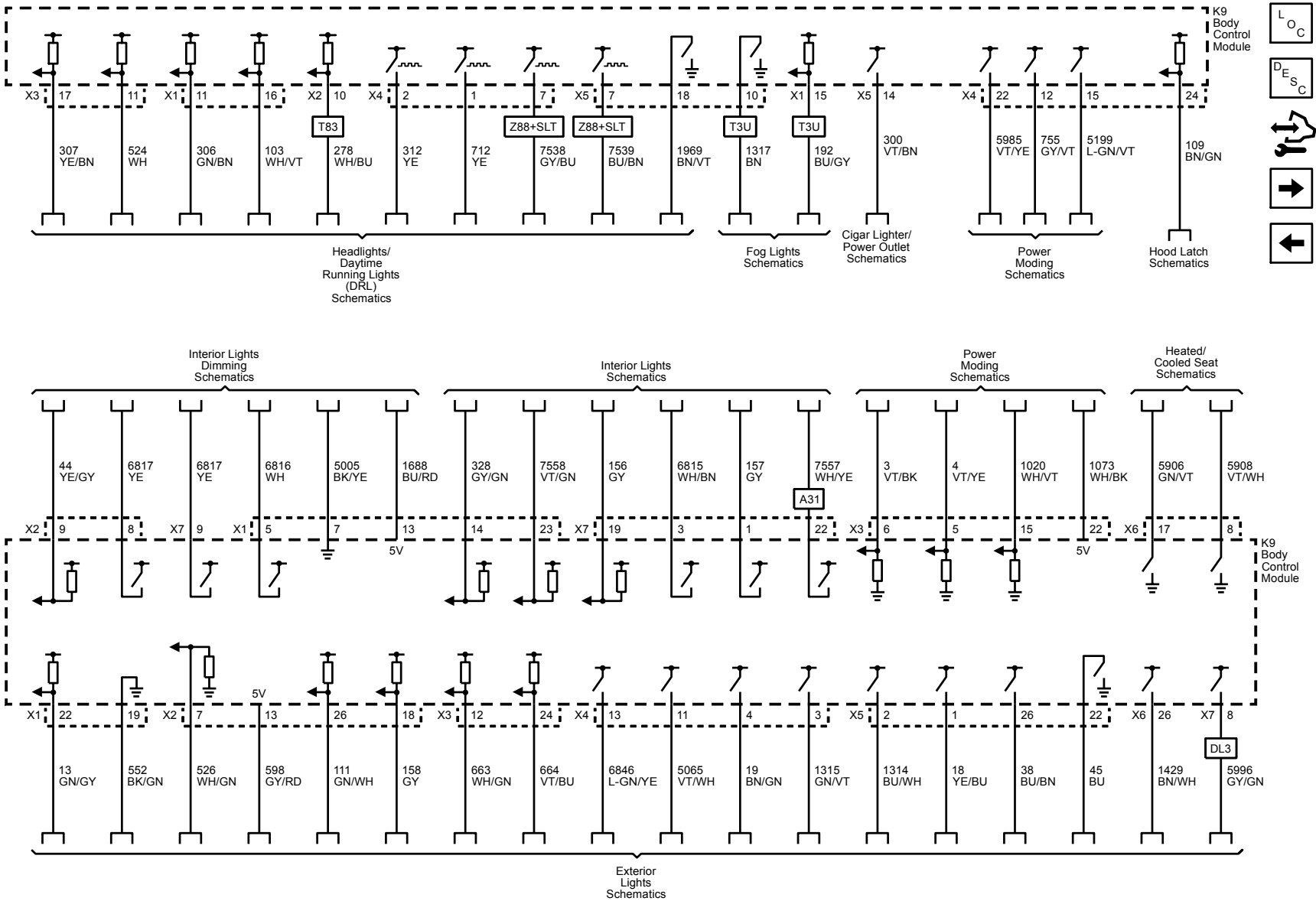


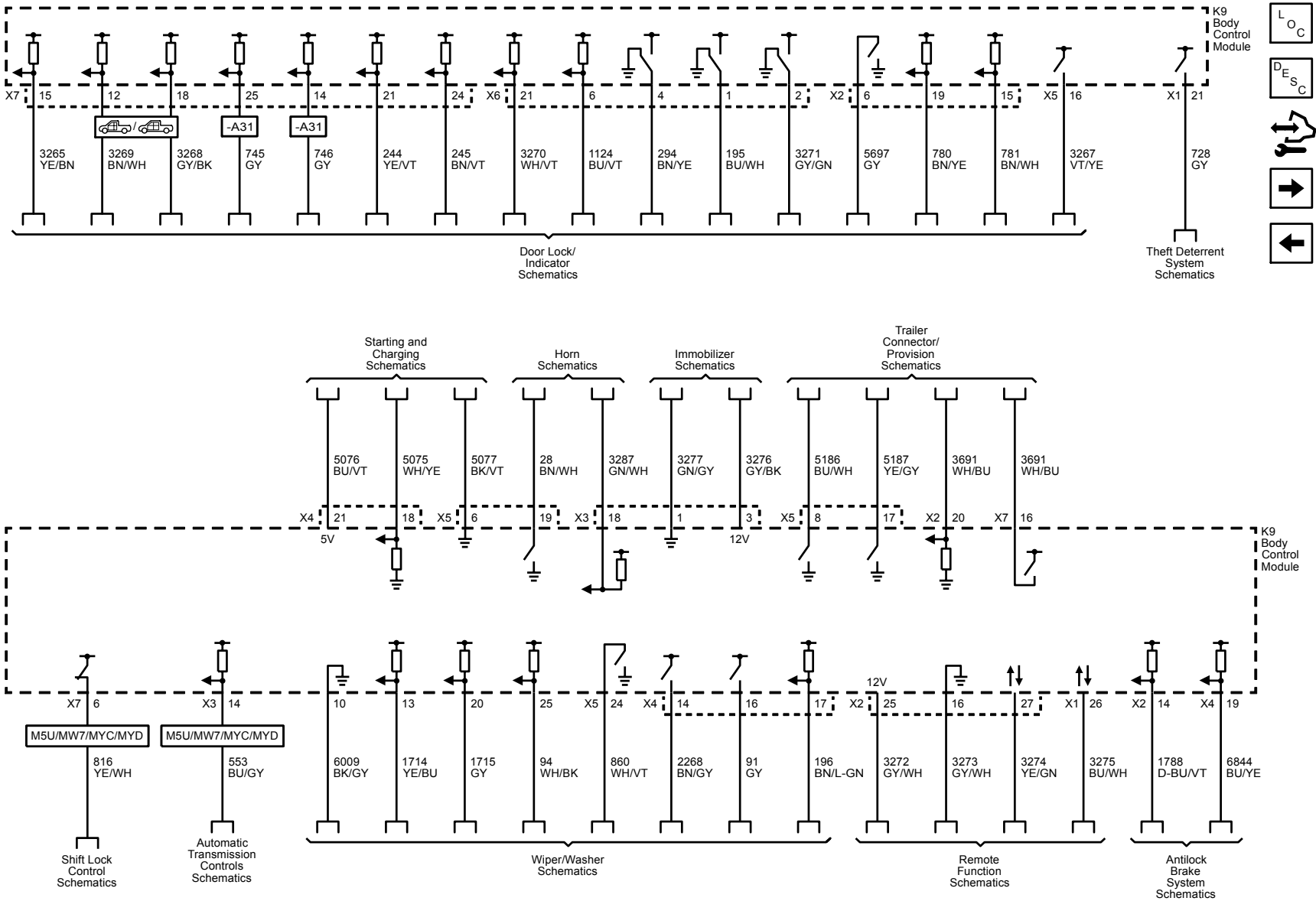
Linear Interconnect Network

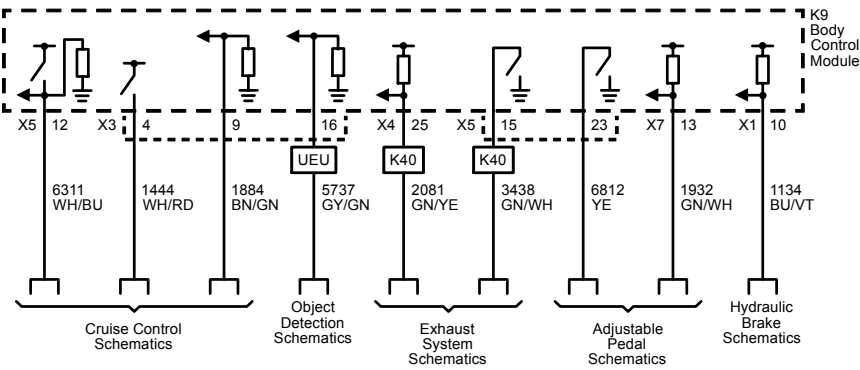


Module Power, Ground and Serial Data









Description and Operation

Body Control System Description and Operation

The body control system consists of the body control module (BCM), communications, and various input and outputs. Some inputs, outputs and messages require other modules to interact with the BCM. The BCM also has discrete input and output terminals to control the vehicle's body functions. The BCM is wired to the high speed GMLAN serial data bus, low speed GMLAN serial data bus and Multiple LIN buses and acts as a gateway between them.

Power Mode Master

This vehicle body control module (BCM) functions as the power mode master (PMM). The ignition switch is a low current switch with multiple discrete ignition switch signals to the PMM for determining the power mode that will be sent over the serial data circuits to the other modules that need this information; the PMM will activate relays and other direct outputs of the PMM as needed. Refer to [Power Mode Description and Operation](#) for a complete description of power mode functions.

Gateway

The body control module (BCM) in this vehicle functions as a gateway or translator. The purpose of the gateway is to translate serial data messages between the GMLAN high speed bus and the GMLAN low speed bus for communication between the various modules. The gateway will interact with each network according to that network's transmission protocol.

All communication between the BCM and a scan tool is on the high speed GMLAN serial data circuits. A lost communication DTC typically is set in modules other than the module with a communication failure.

Body Control

The various body control module (BCM) input and output circuits are illustrated in the corresponding functional areas on the BCM electrical schematics. Refer to the [Body Control System Schematics](#) for more detailed information.

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](#) 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 [CELL Link Error - Link target cell \(cell ID 148085\) is invalid for this publication.](#) 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.

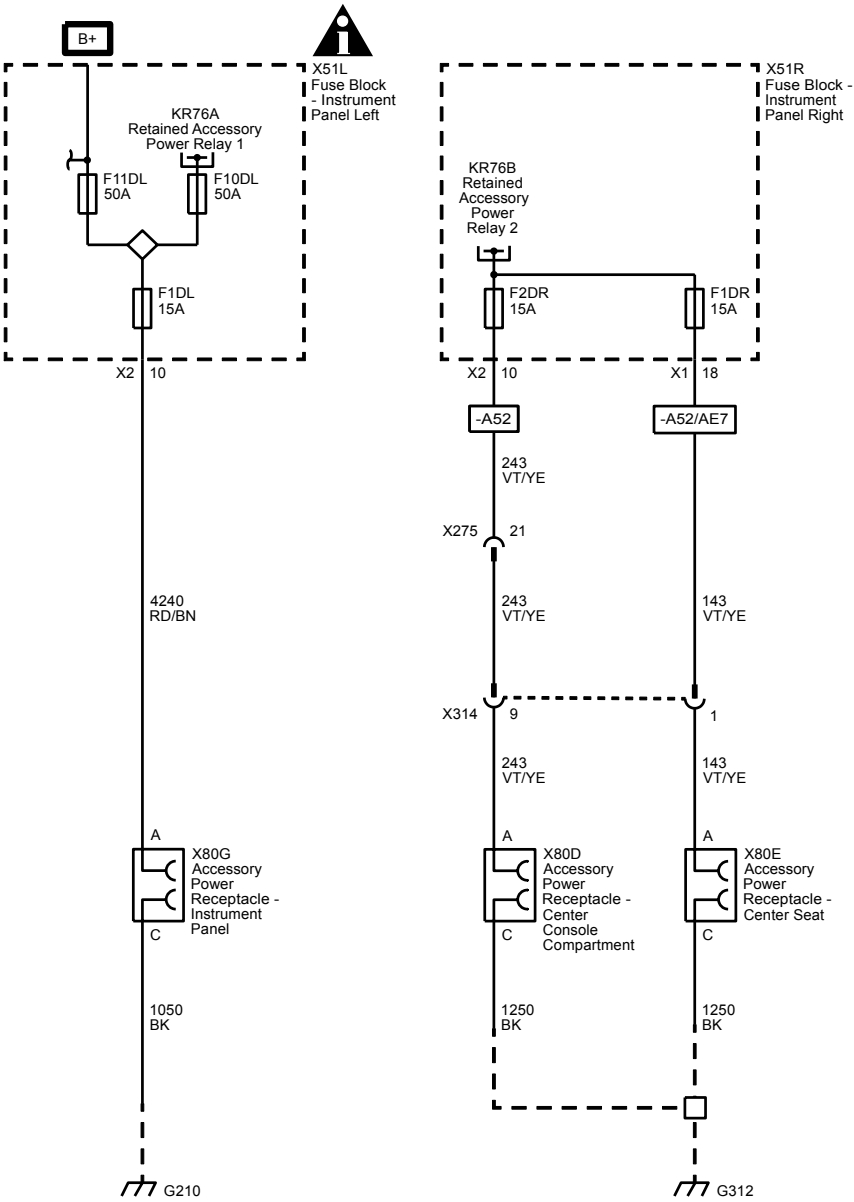
Power and Signal Distribution

Power Outlets

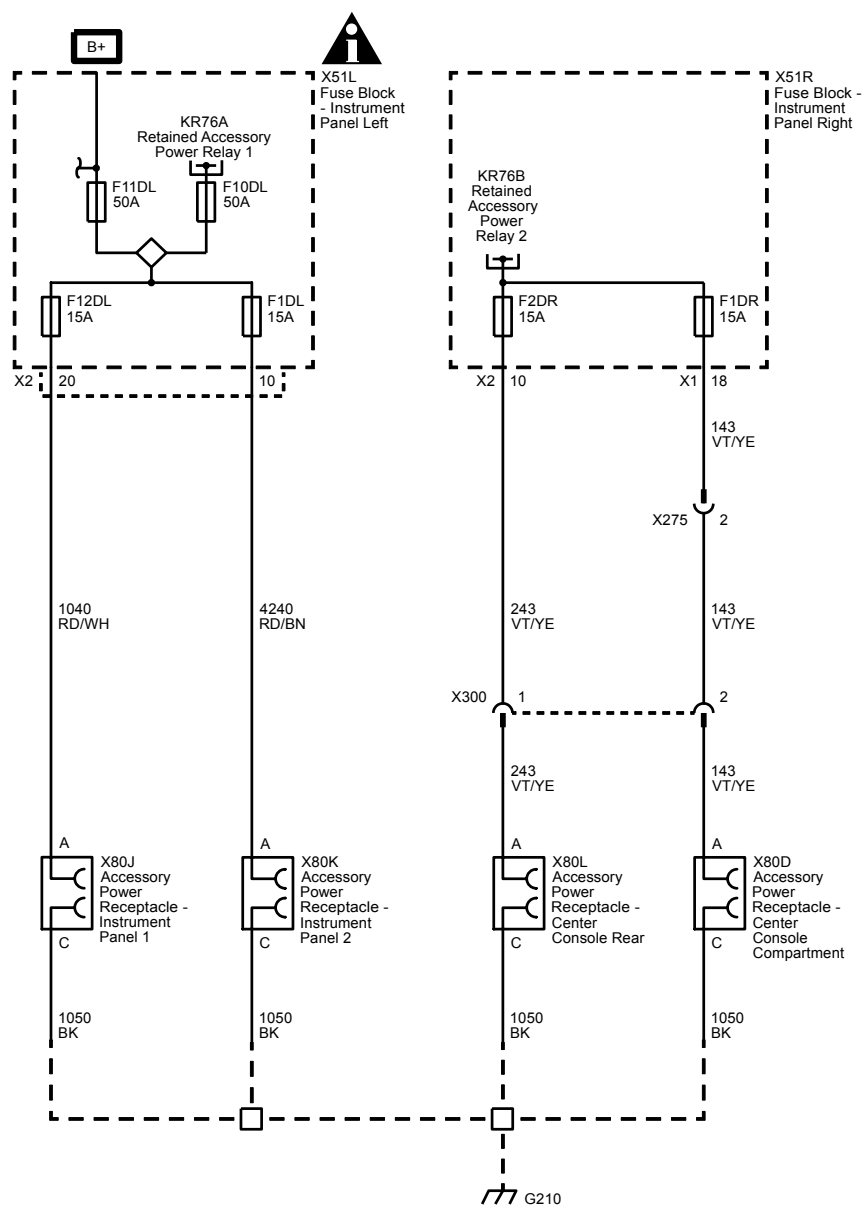
Schematic and Routing Diagrams

Cigar Lighter/Power Outlet Schematics

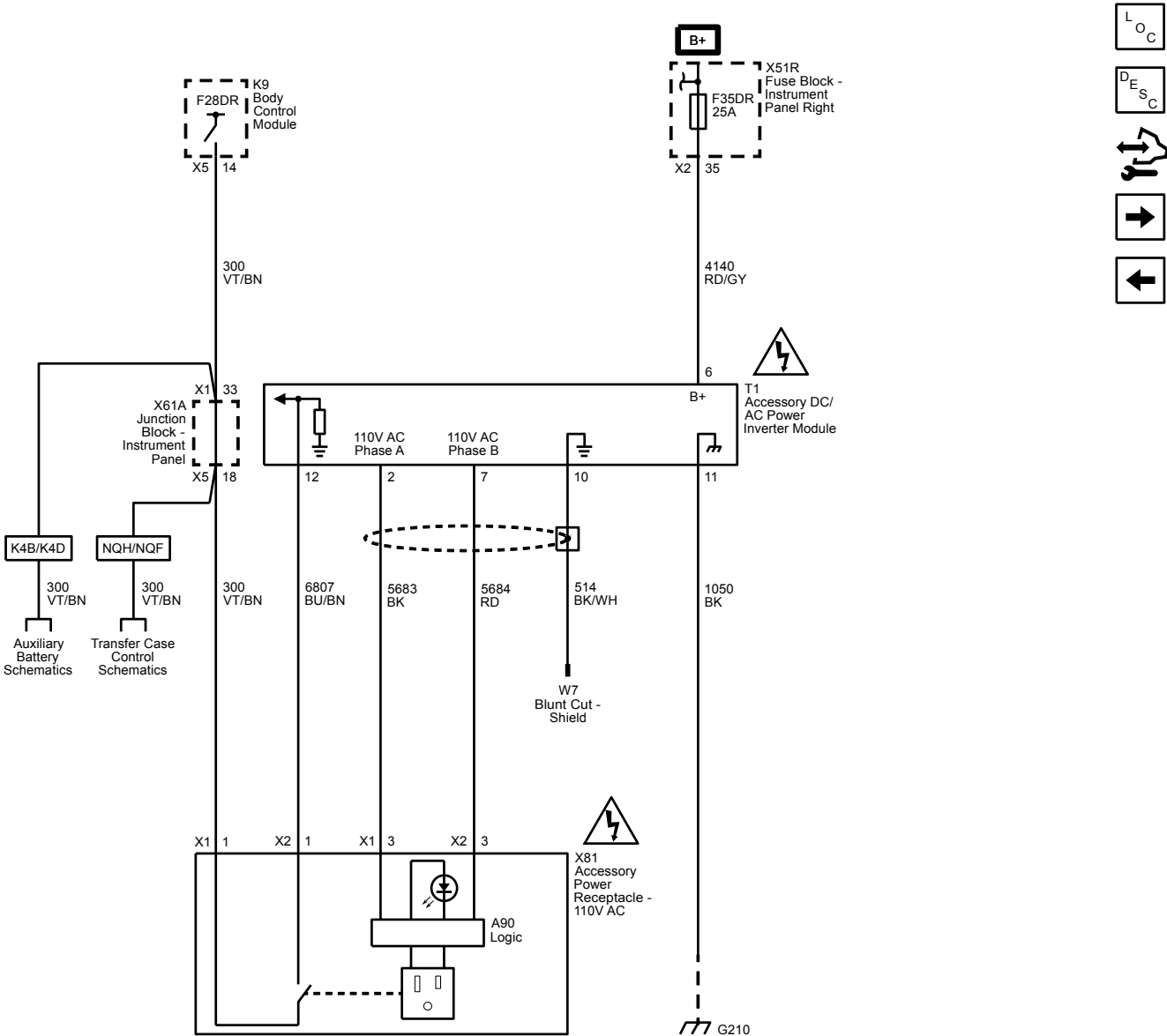
12-Volt DC Power Outlets (Bench Seat - D09)

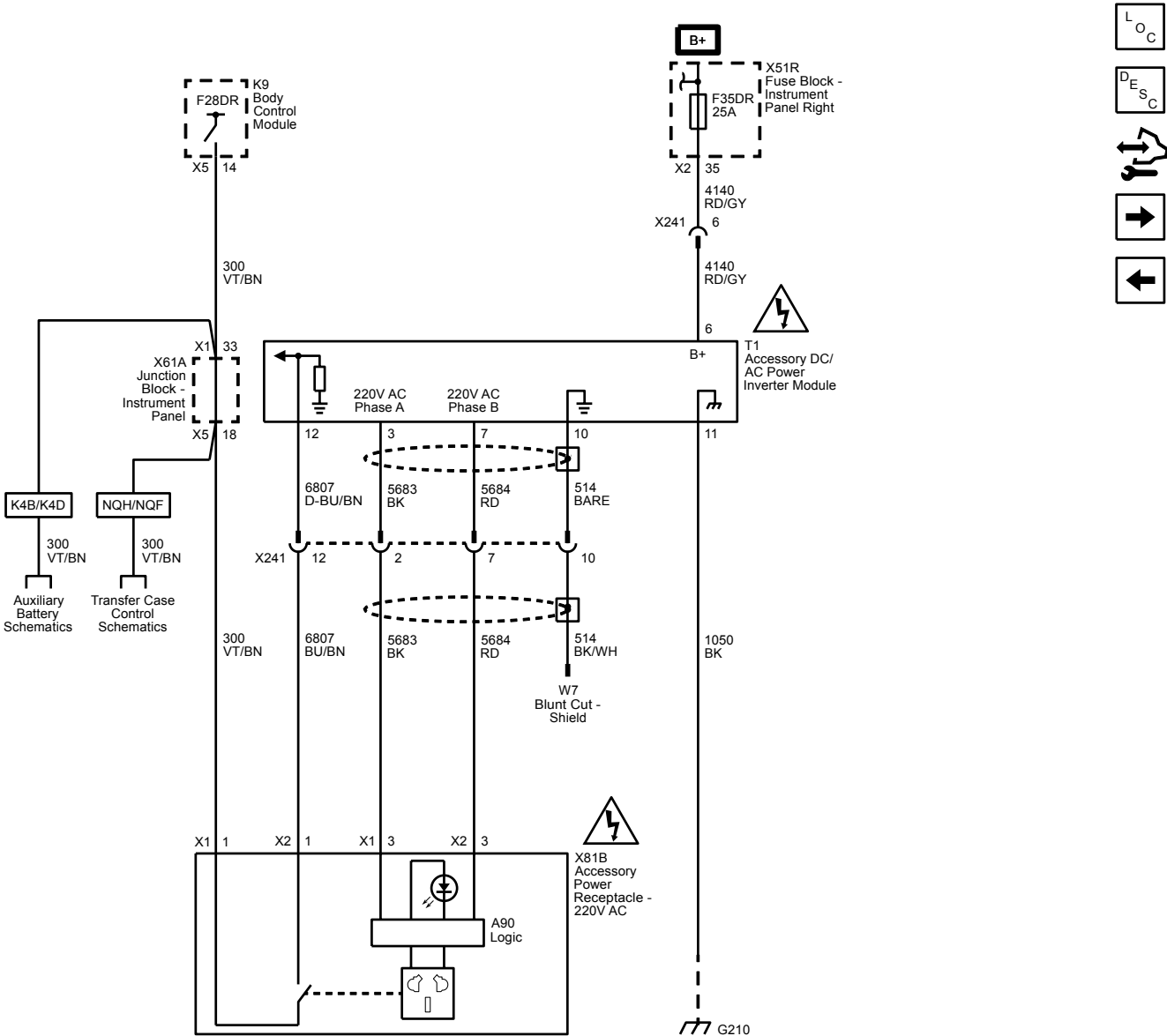


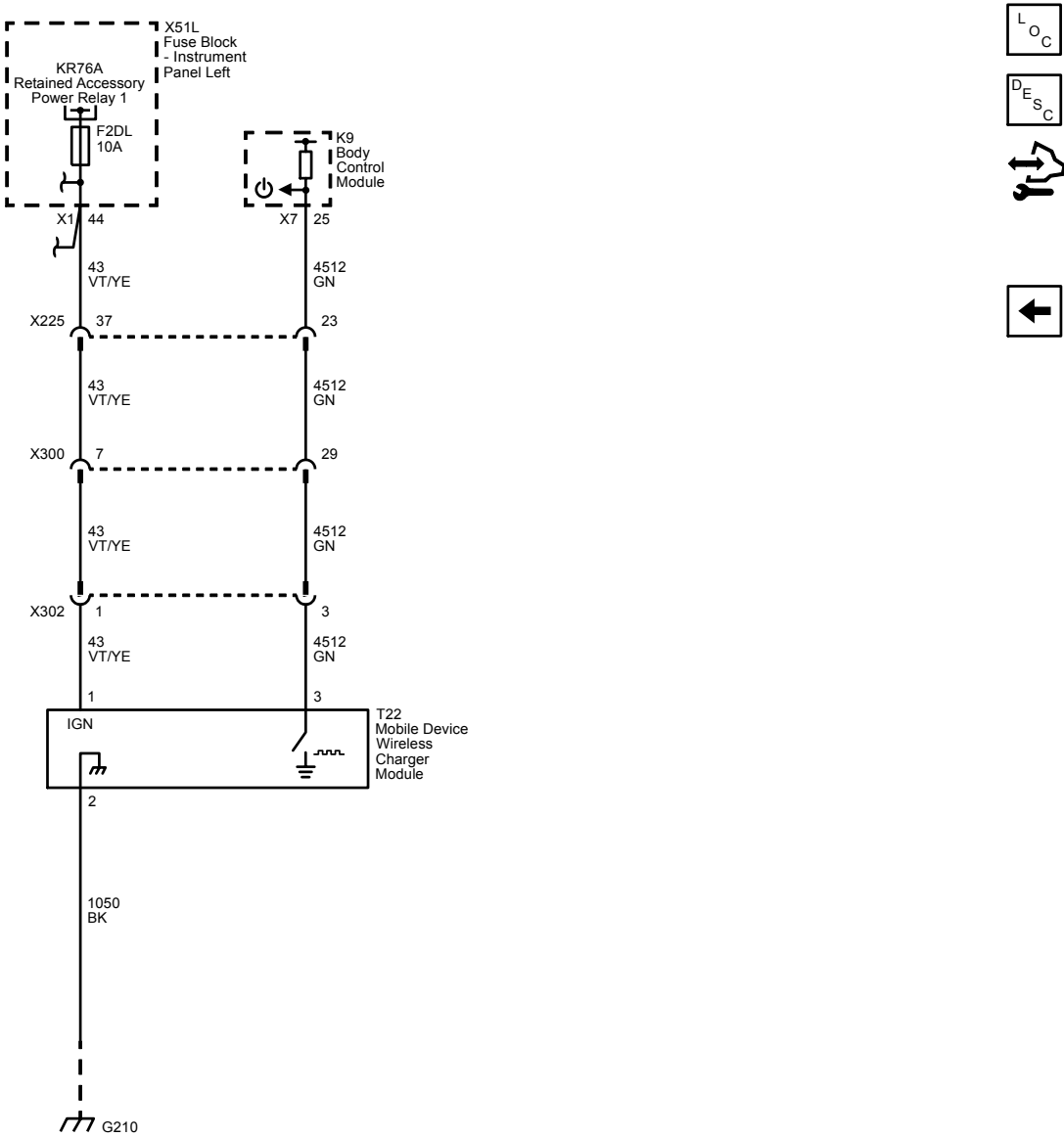
12-Volt DC Power Outlets (with Console - D07)



110-Volt AC Power Outlet (K14)





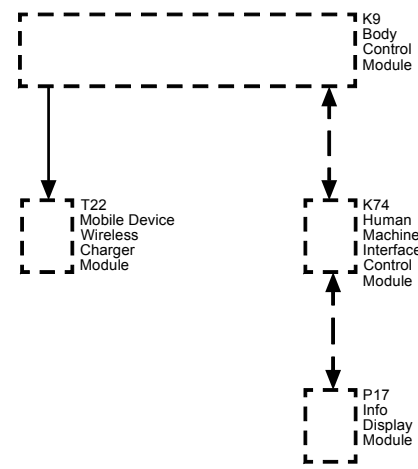


Description and Operation

Mobile Device Wireless Charger Description and Operation

Mobile Device Wireless Charging System

Mobile Device Wireless Charging System Block Diagram



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.

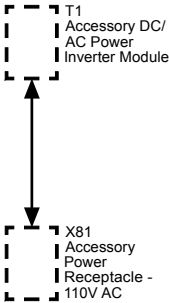
Power Outlets Description and Operation

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



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

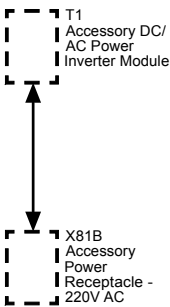
The accessory DC/AC power inverter module will turn OFF if the current in the 110 V circuit is greater than 3.8 A for 1 s , or 2.5 A for 10 s . The module will turn ON again, when the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 s delay.

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.

230 Volt Power Outlet Receptacle System Description

Power Outlets Block Diagram



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.

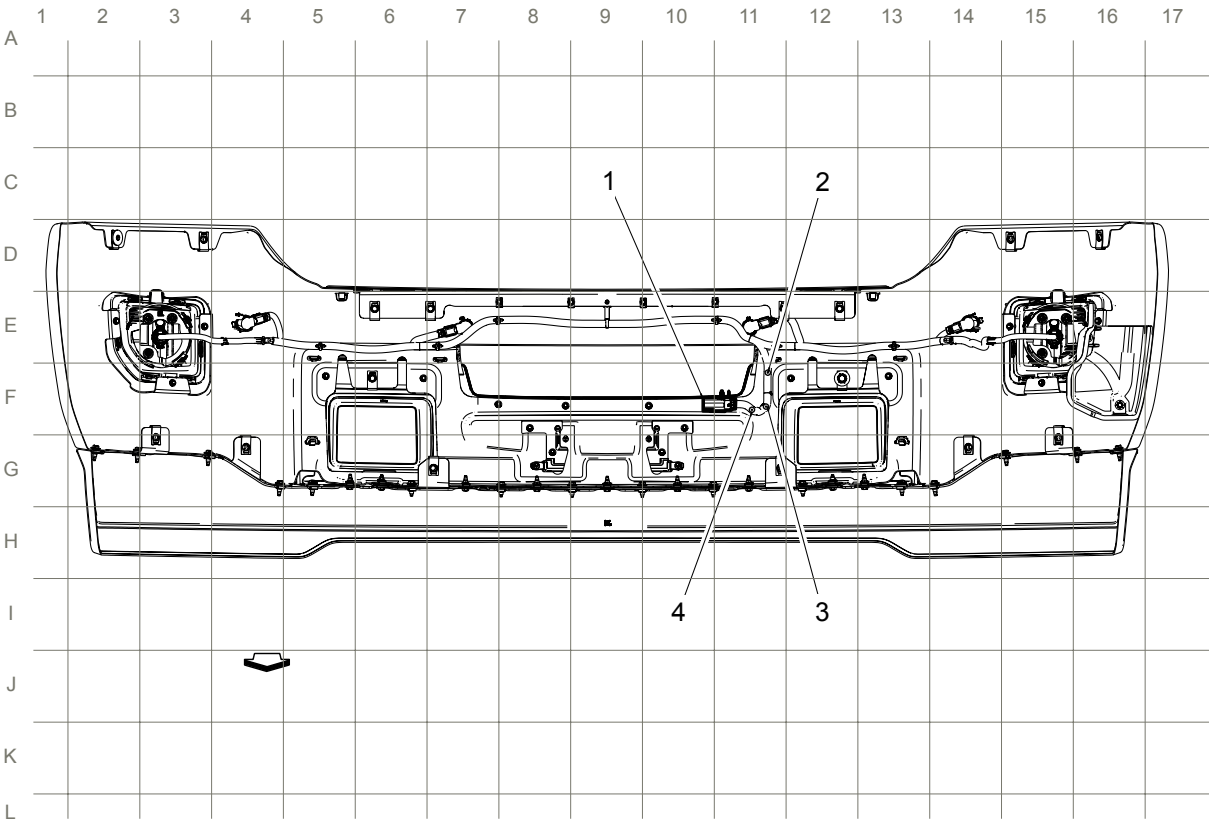
Power and Signal Distribution

Wiring Systems and Power Management

Schematic and Routing Diagrams

Harness Routing Views

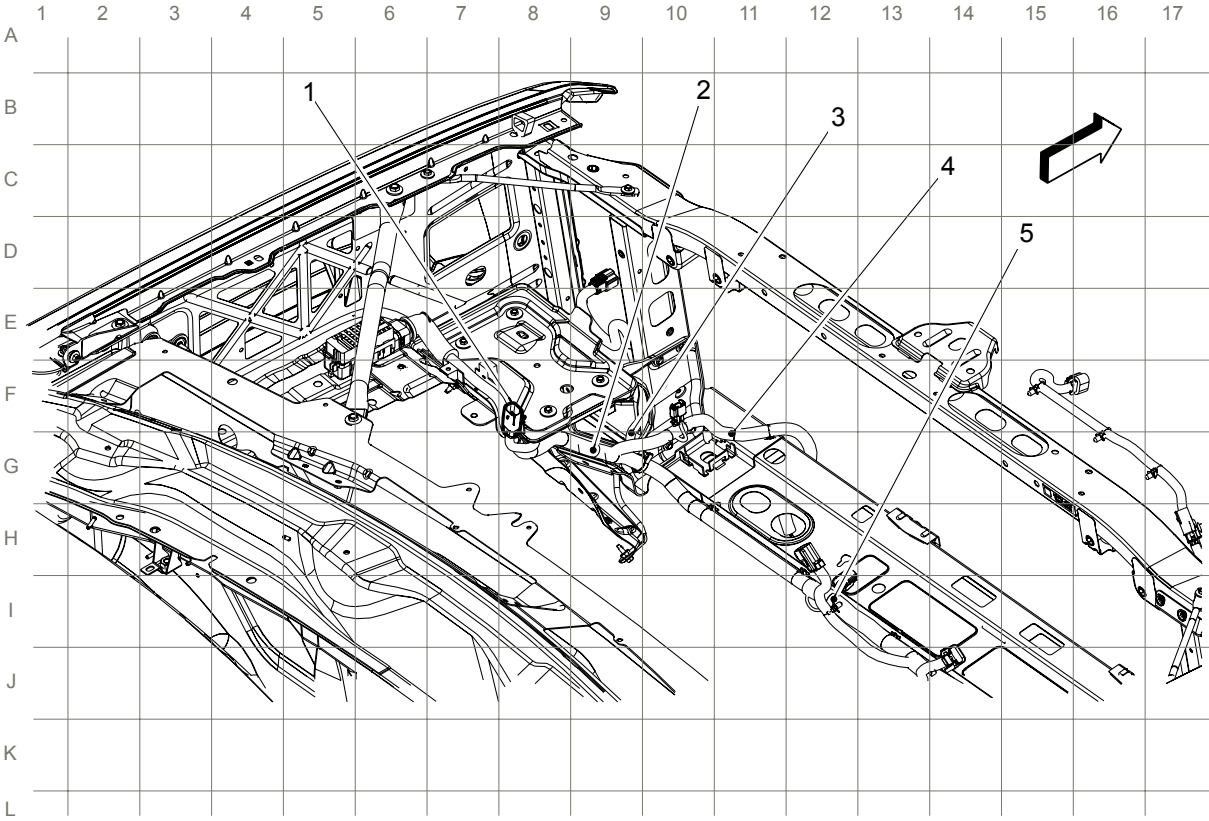
Front Bumper Harness Routing



Items

- 1. X100 (T3U or UD5)
- 2. J107
- 3. J105
- 4. J101

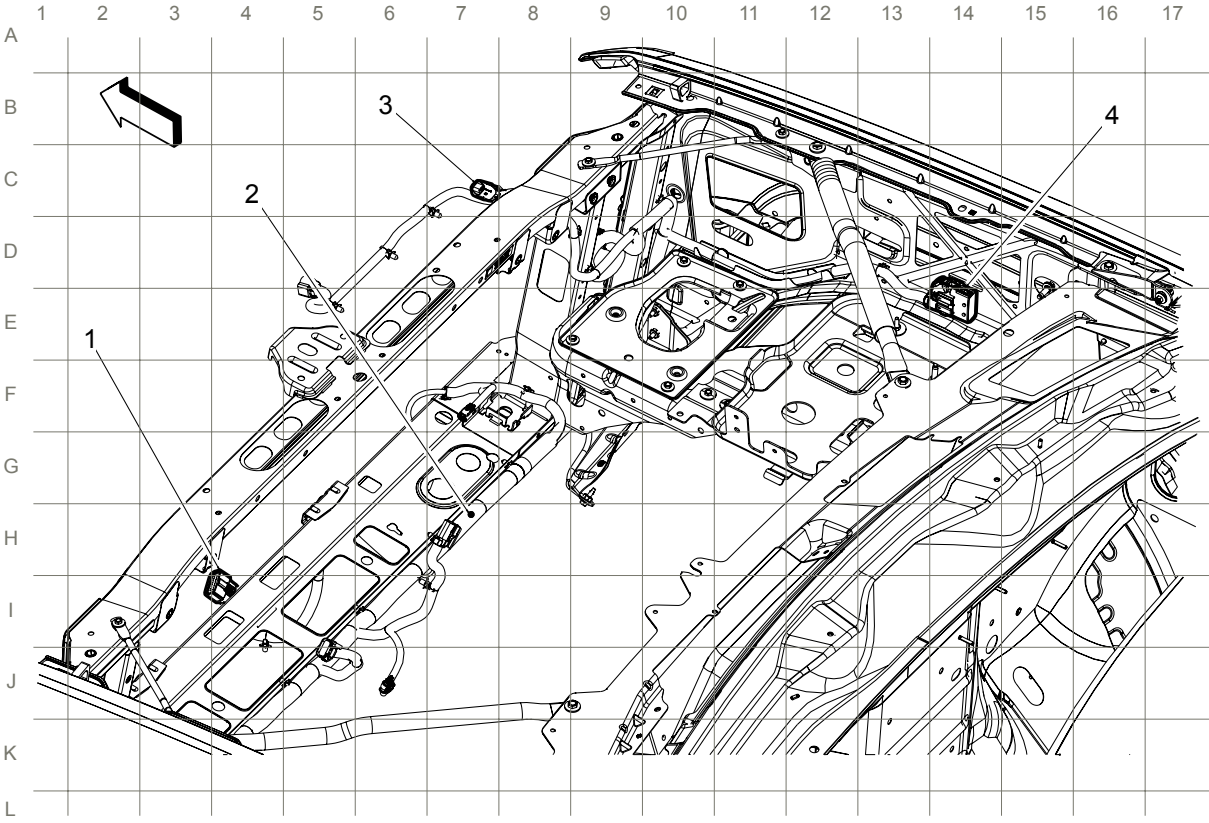
Forward Lamp Harness Routing - Left Engine Compartment (HP5)



Items

- 1. X105 (1500)
- 2. J119
- 3. J115
- 4. J114
- 5. J130

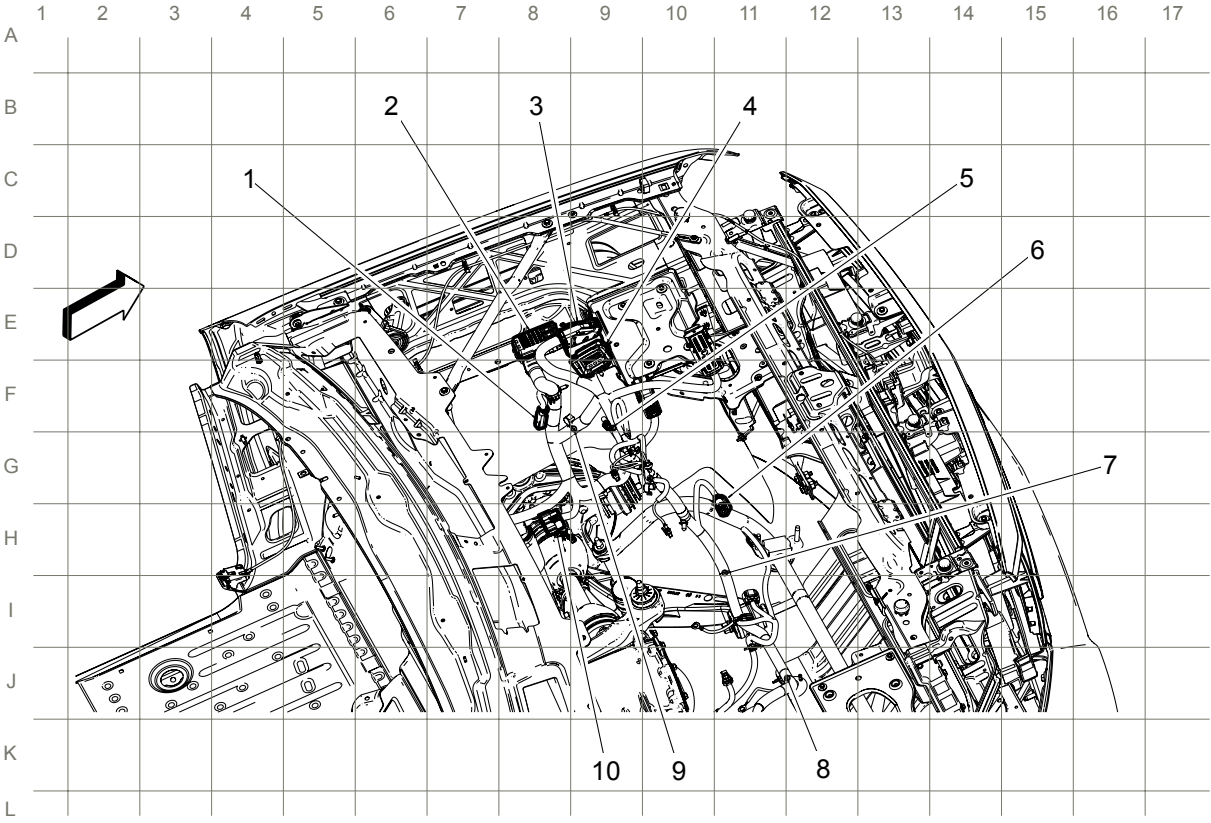
Forward Lamp Harness Routing - Right Engine Compartment (HP5)



Items

- 1. X110
- 2. J125
- 3. X132 (HP5)
- 4. X150

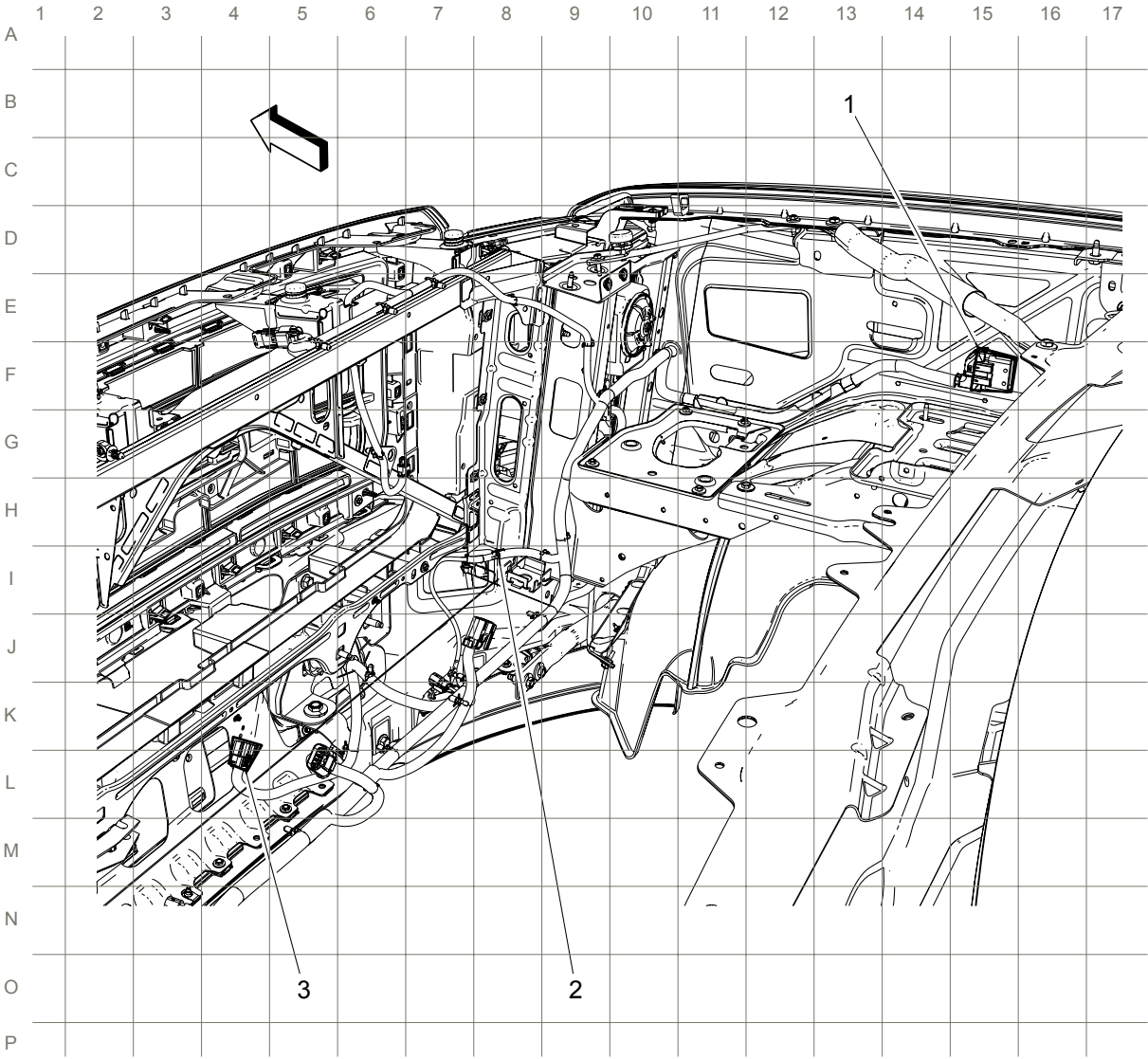
Engine Compartment Left Harness Routing



Items

- 1. X111 (NQF, NQG or NQH)
- 2. X50A Fuse Block - Underhood
- 3. X115
- 4. X101 (L5P)
- 5. J124
- 6. X102 (L5P)
- 7. J113 (L5P)
- 8. J126
- 9. J165
- 10. X125

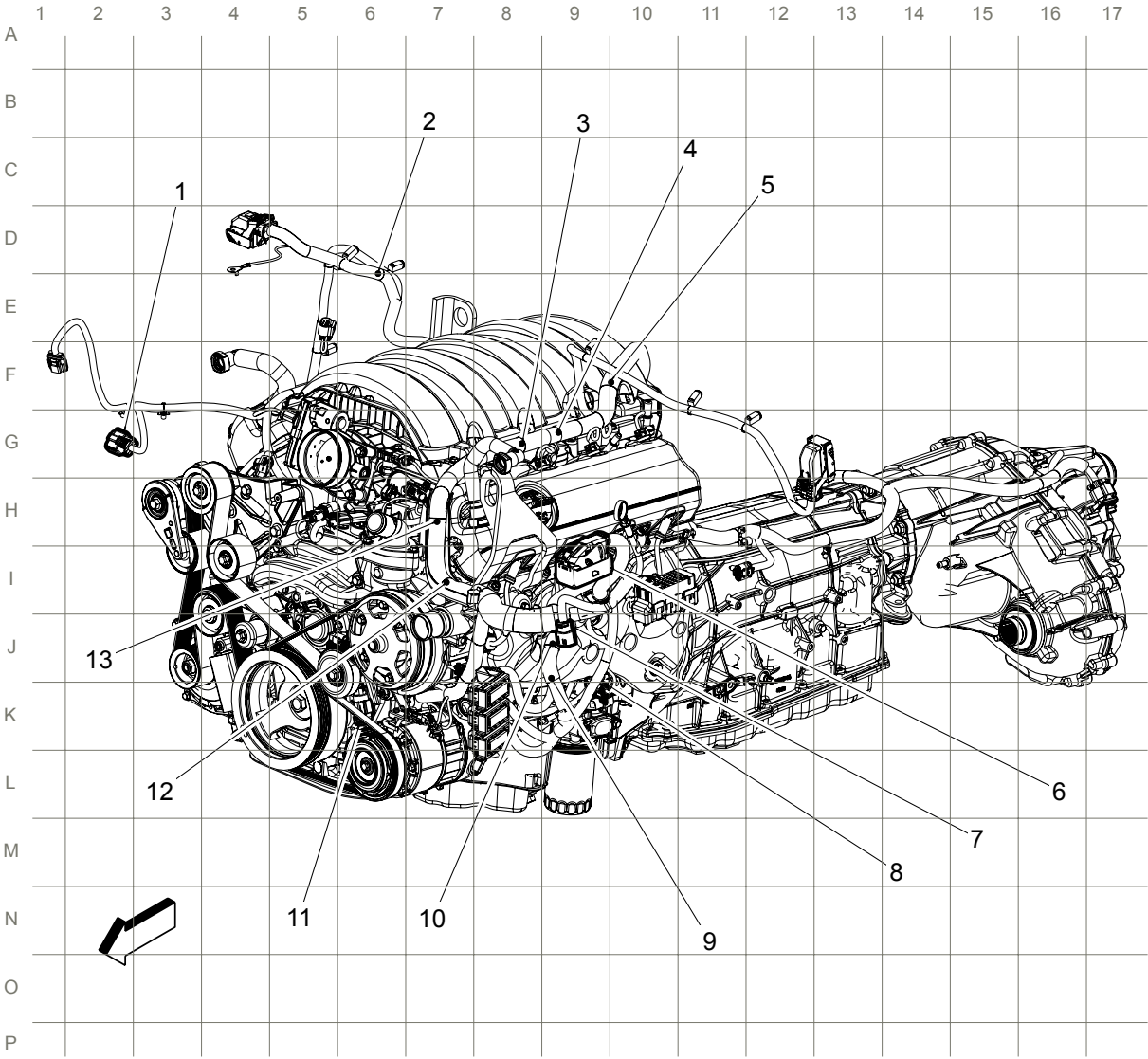
Engine Compartment Right Harness Routing



Items

- 1. X150
- 2. J125
- 3. X100 (T3U or UD5)

Engine Harness Routing - Left Front (L8B)



Items

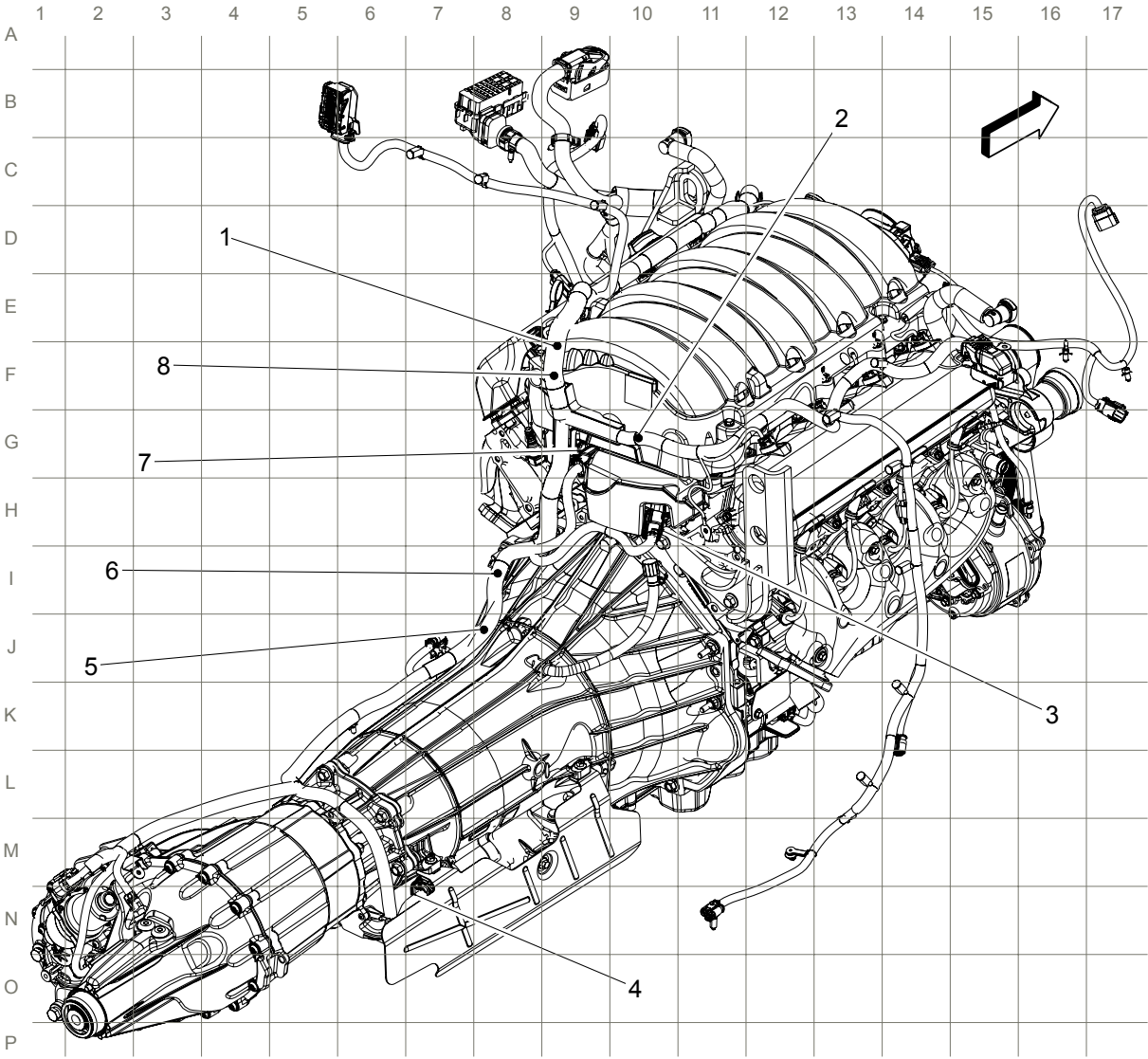
- 1. X116 (HP5)
- 2. J100 (HP5)
- 3. J126
- 4. J128 (HP5)
- 5. J165
- 6. X115
- 7. X105 (1500)
- 8. X111 (NQF, NQG or NQH)
- 9. J125
- 10. J124
- 11. X154 (1500)

11. J161 (1000)

12. J163

13. J161

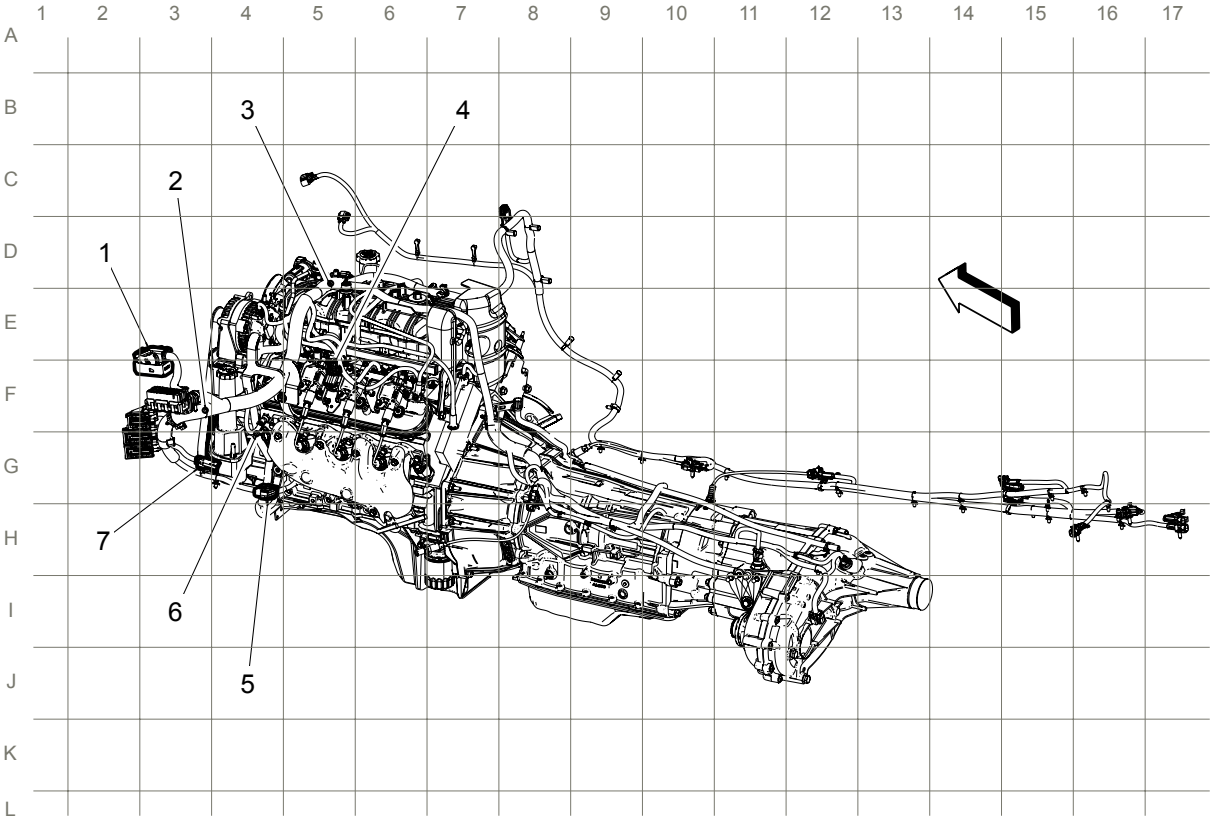
Engine Harness Routing - Right Rear (L8B)



Items

- 1. J167
- 2. J166
- 3. X161 (1500)
- 4. X175
- 5. J179
- 6. J178 (M5U/M5X)
- 7. X160 (1500)
- 8. J162

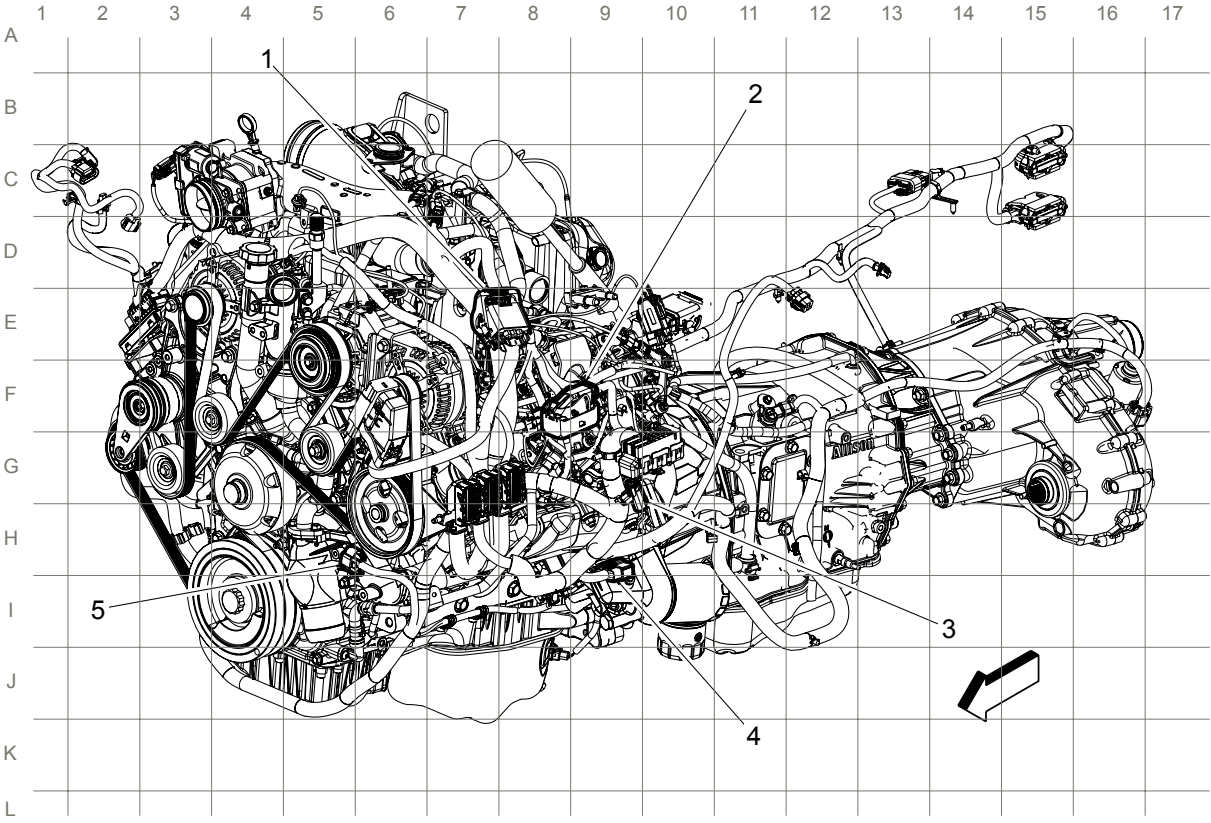
Left Side of Engine Harness Routing (L96)



Items

- 1. X115
- 2. J165
- 3. J123
- 4. X171 (L96 or LC8)
- 5. X125
- 6. J125
- 7. X111 (NQF, NQG or NQH)

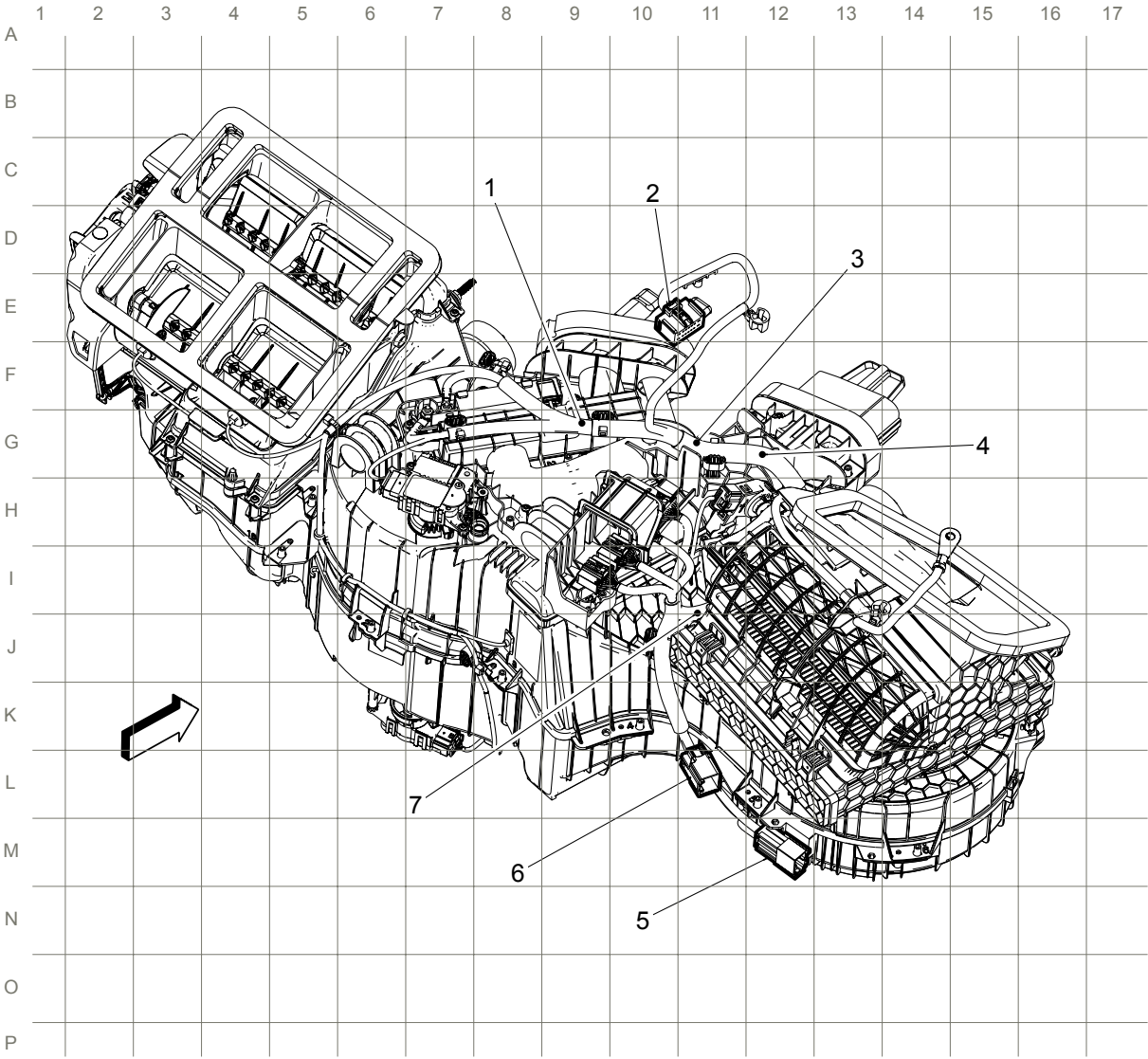
Left Side of Engine Harness Routing (L5P)



Items

- 1. X101 (L5P)
- 2. X115
- 3. X111 (NQF, NQG or NQH)
- 4. X125
- 5. X102 (L5P)

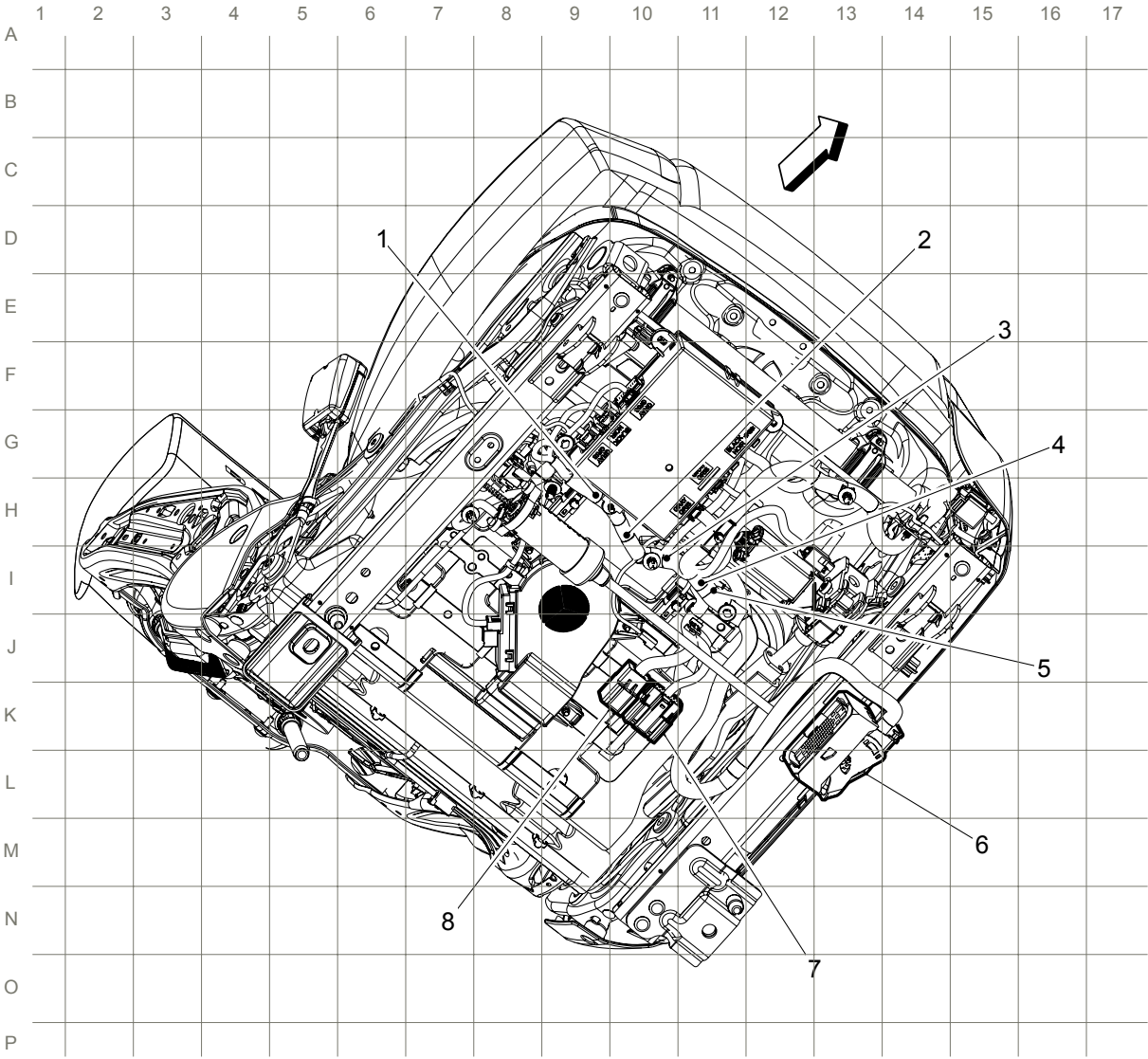
HVAC Assembly Harness Routing



Items

- 1. J258
- 2. X215
- 3. J255
- 4. J216
- 5. X217
- 6. X216
- 7. J257

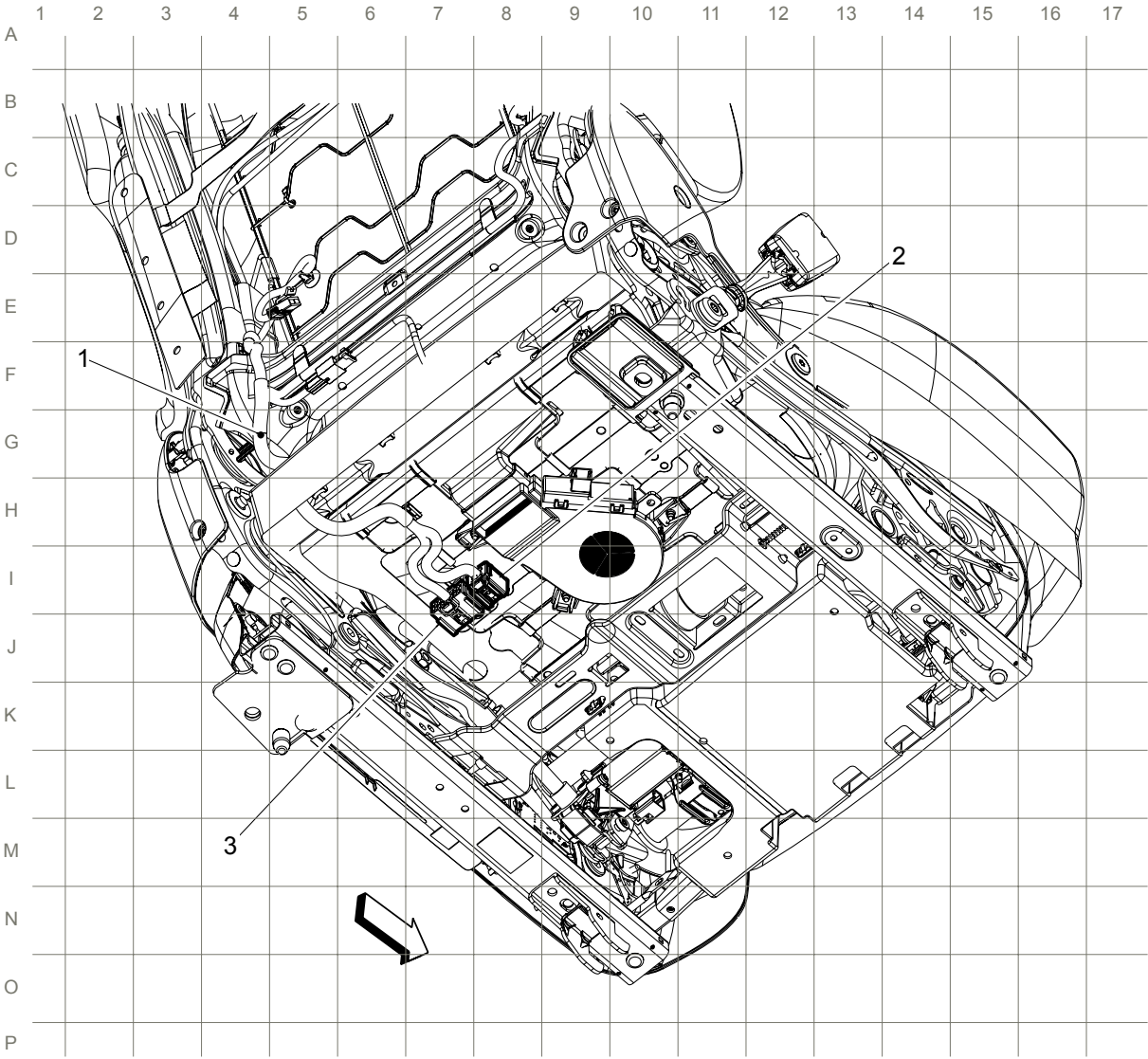
Bottom of Driver Seat Harness Routing



Items

- 1. J314
- 2. J315
- 3. J313
- 4. J316
- 5. J317
- 6. X310
- 7. X312
- 8. X311

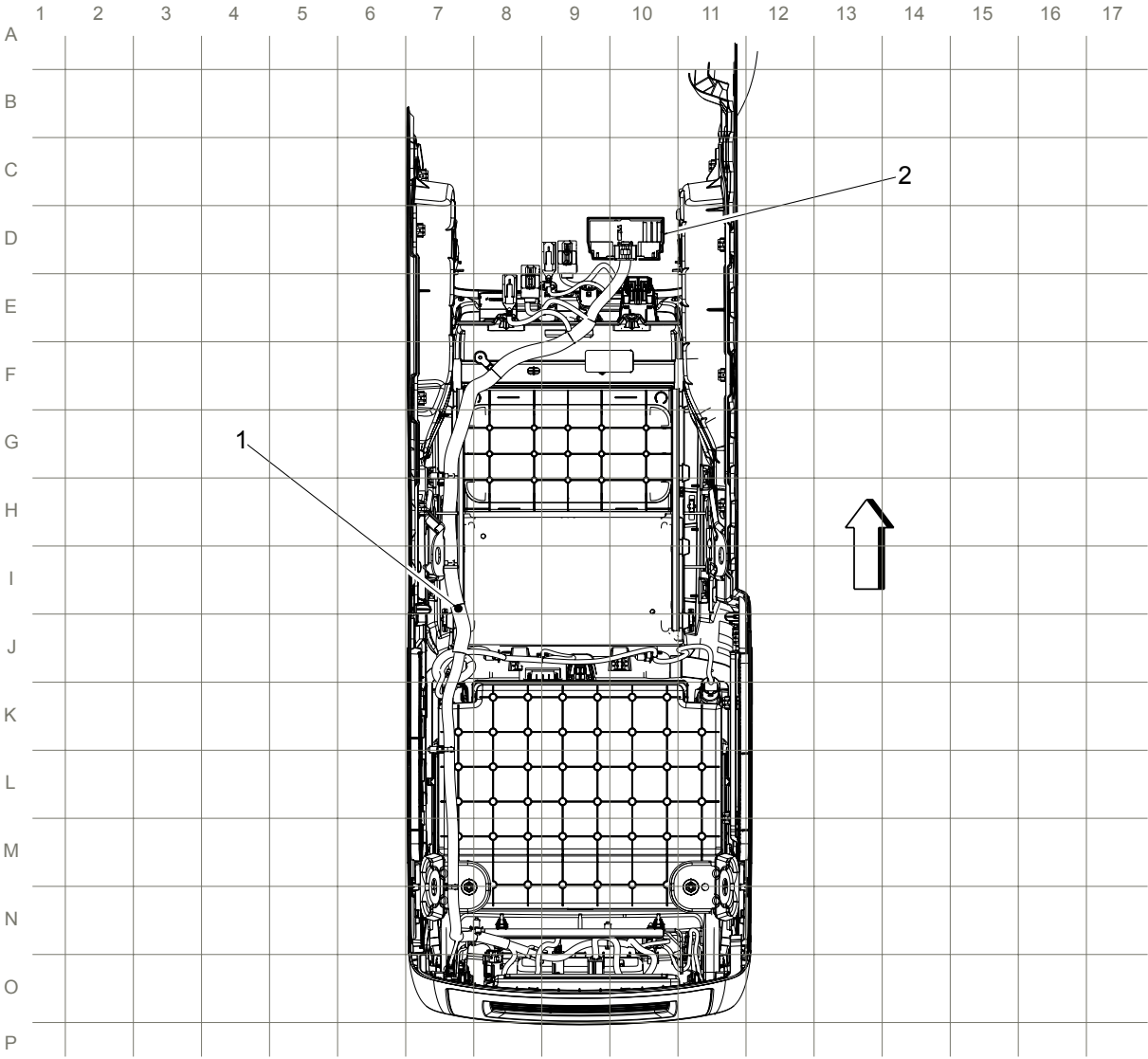
Back of Driver Seat Harness Routing



Items

- 1. J313
- 2. X311
- 3. X312

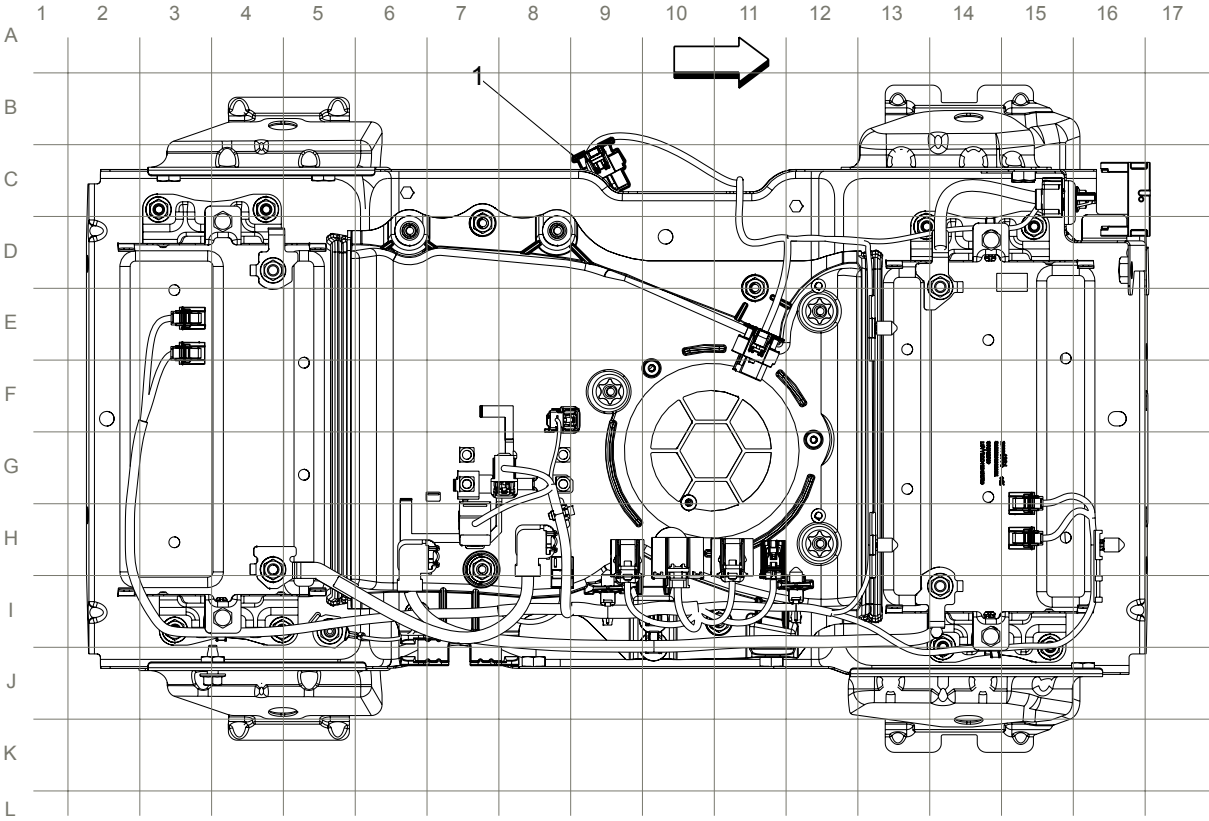
Floor Console Harness Routing



Items

- 1. J358
- 2. X300 (D07)

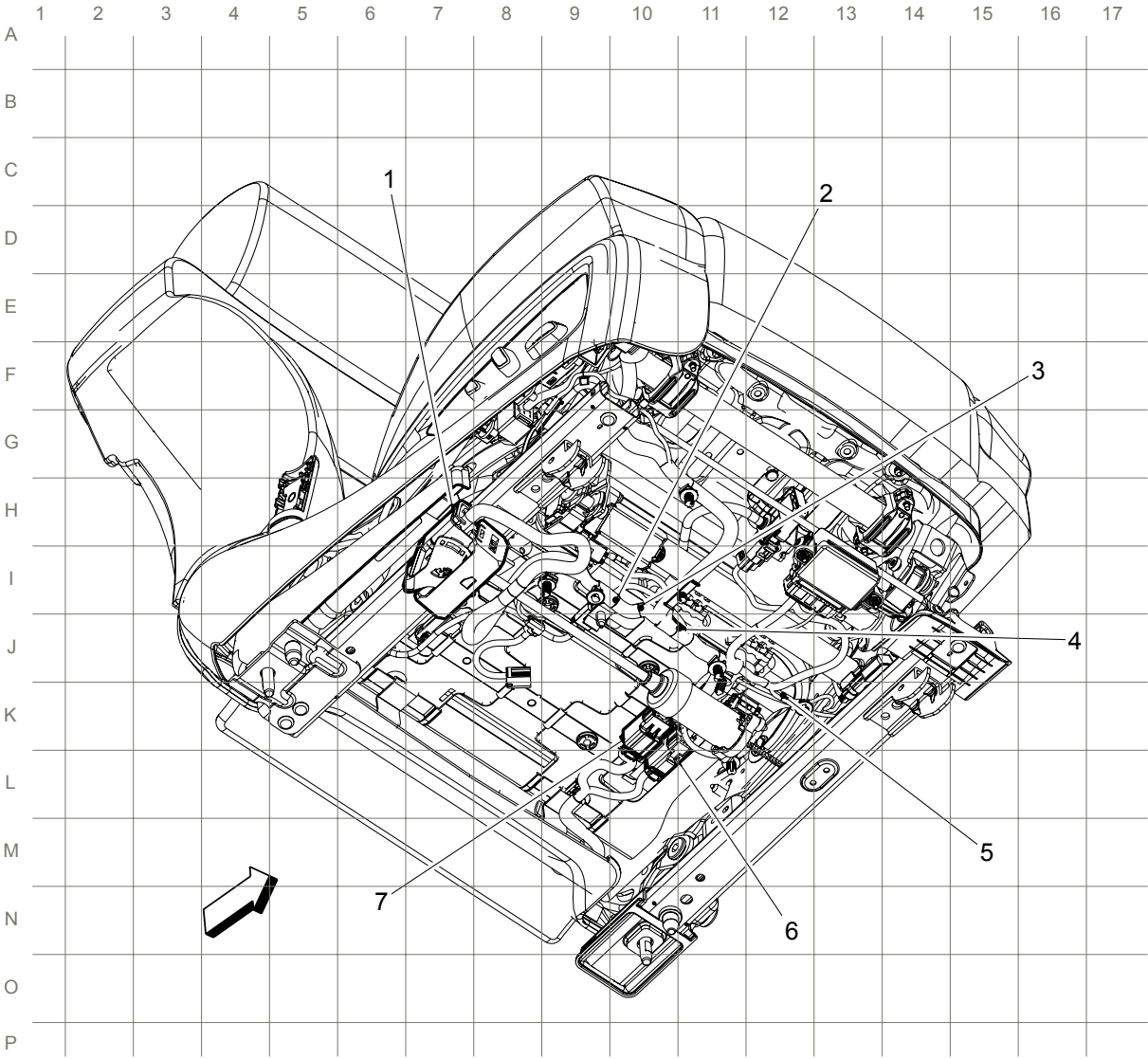
High Voltage Battery Monitoring Harness Routing (HP5)



Items

- 1. X363 (HP5)

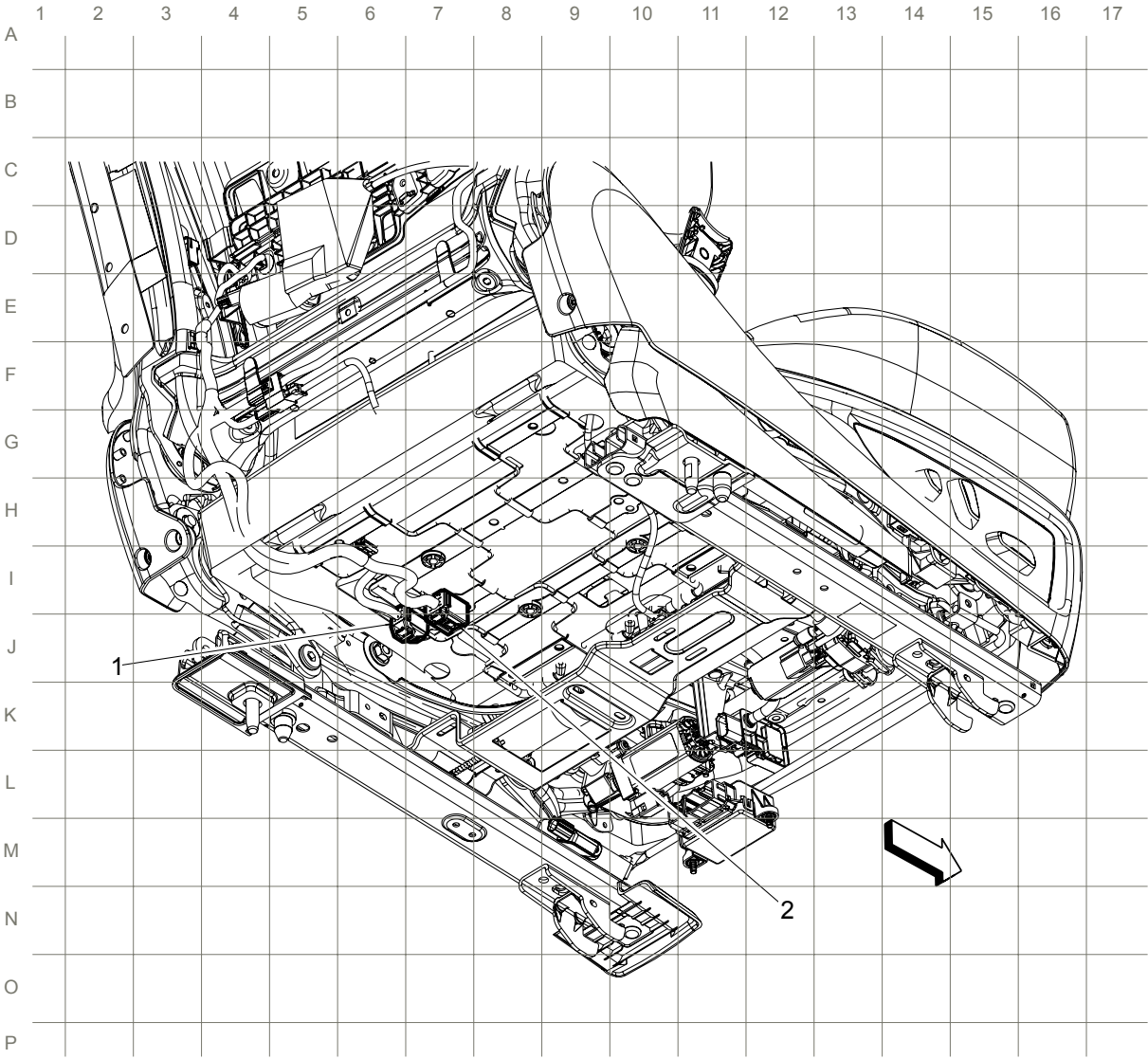
Bottom of Passenger Seat Harness Routing



Items

- 1. X320
- 2. J323
- 3. J327
- 4. J326
- 5. J324
- 6. X322
- 7. X321

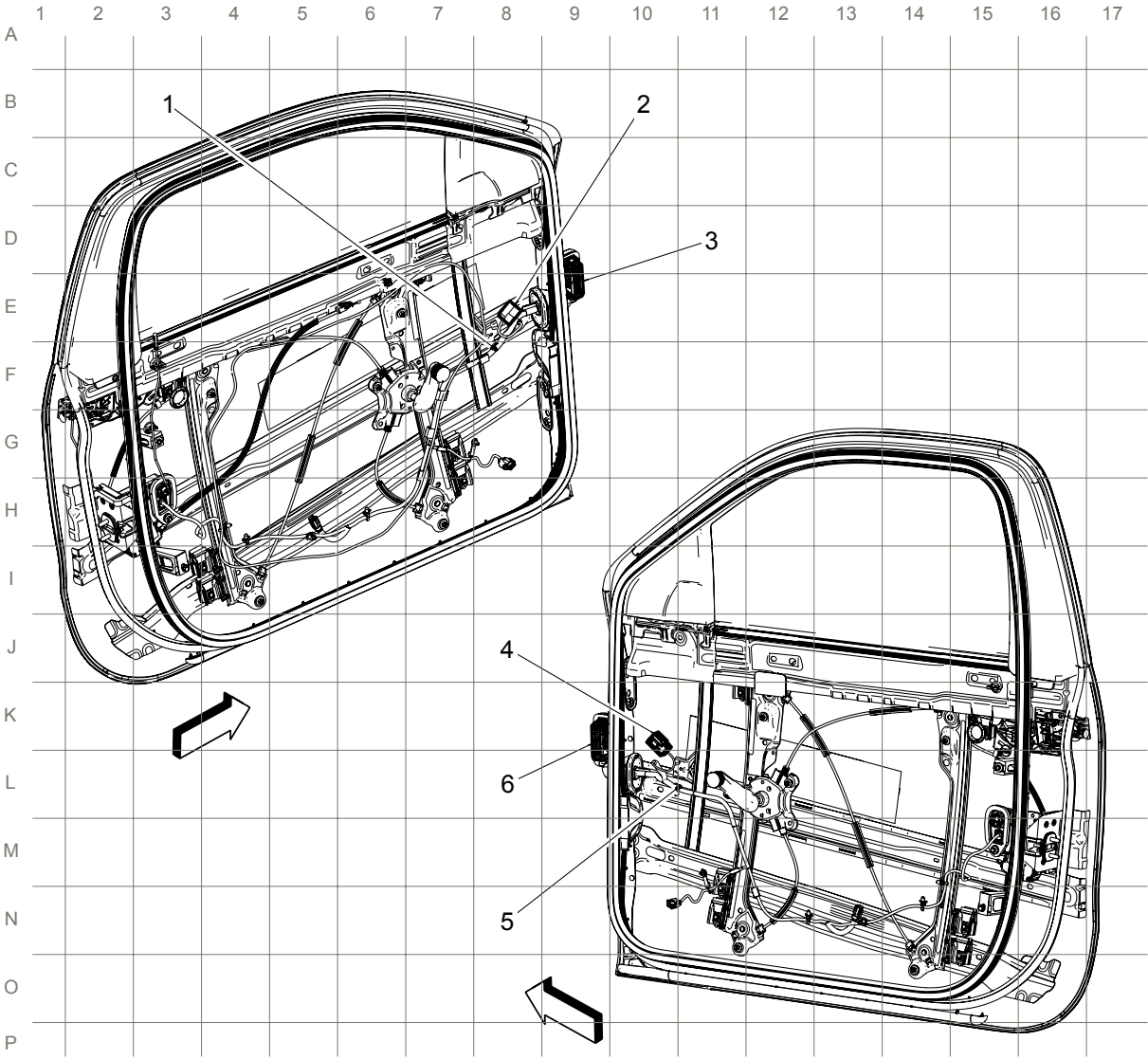
Back of Passenger Seat Harness Routing



Items

- 1. X322
- 2. X321

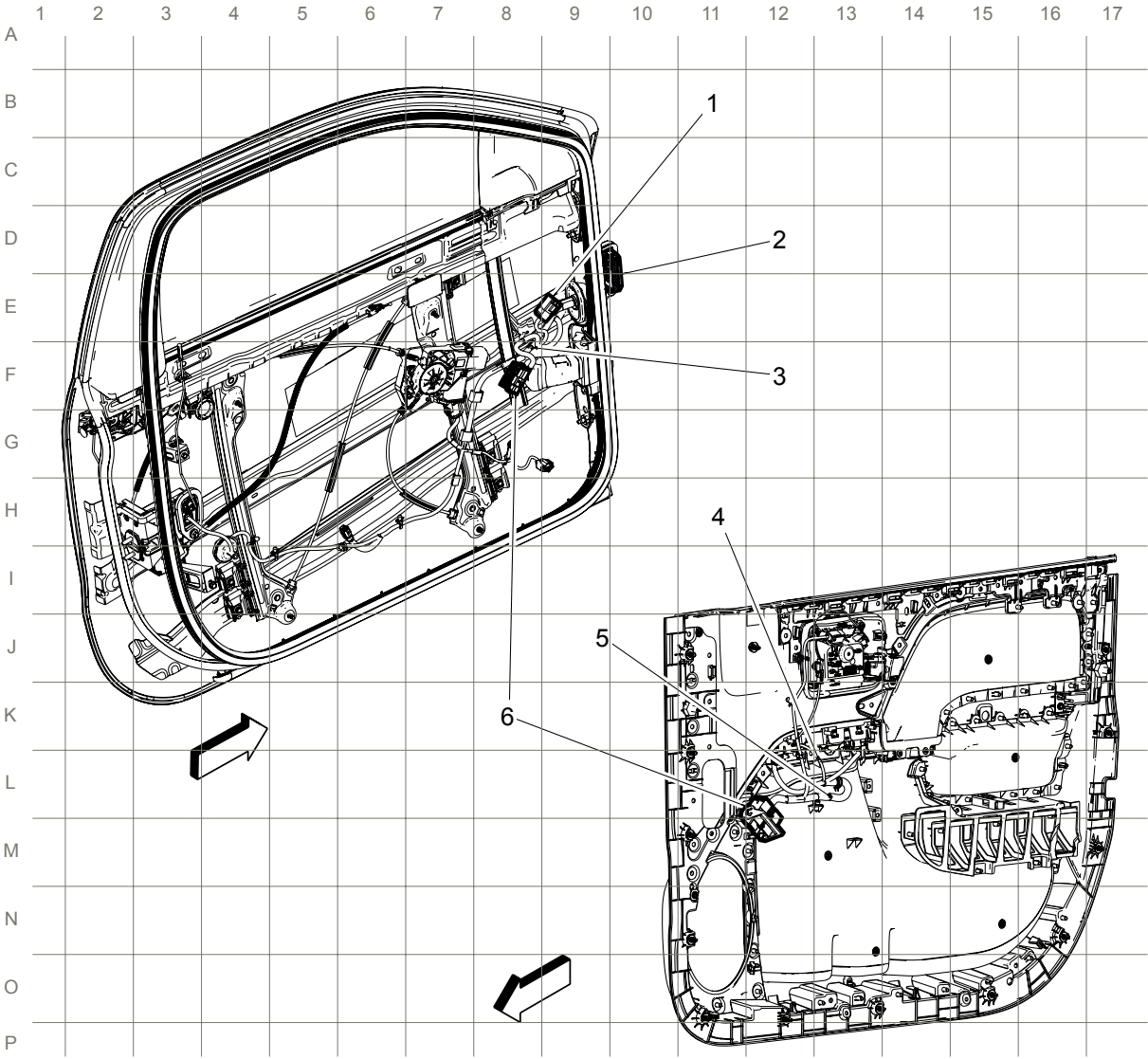
Doors (Regular Cab with Manual Windows) Harness Routing



Items

- 1. J515
- 2. X506 (without A31)
- 3. X500
- 4. X606 (without A31)
- 5. J615
- 6. X600

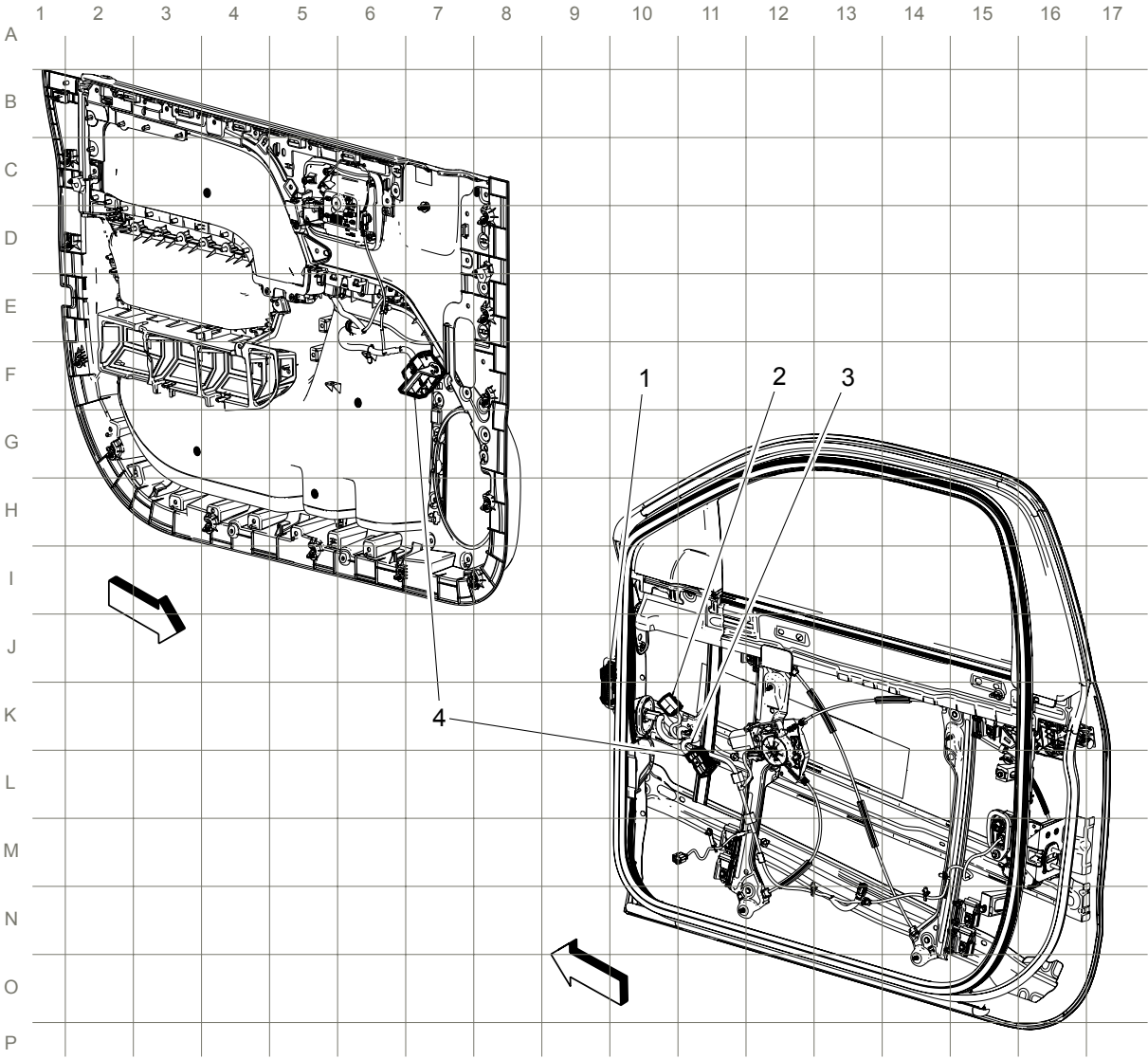
Driver Door Harness Routing



Items

- 1. X510 (DL3, DL8, DPN or DQS)
- 2. X500
- 3. J550
- 4. J515
- 5. J519
- 6. X505 (A31)

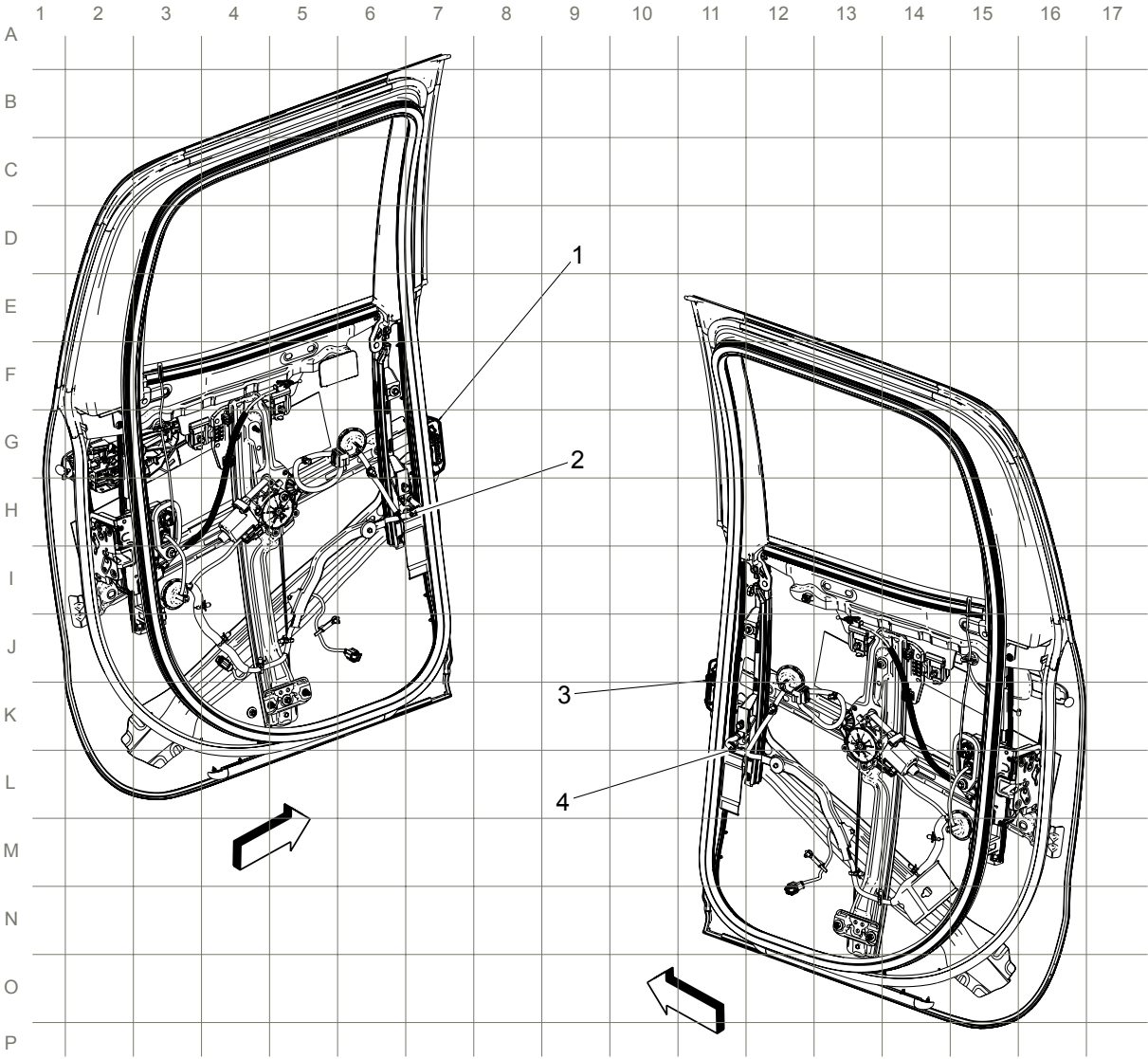
Passenger Door Harness Routing



Items

- 1. X600
- 2. X610 (DL3, DL8, DPN or DQS)
- 3. J615
- 4. X605 (A31)

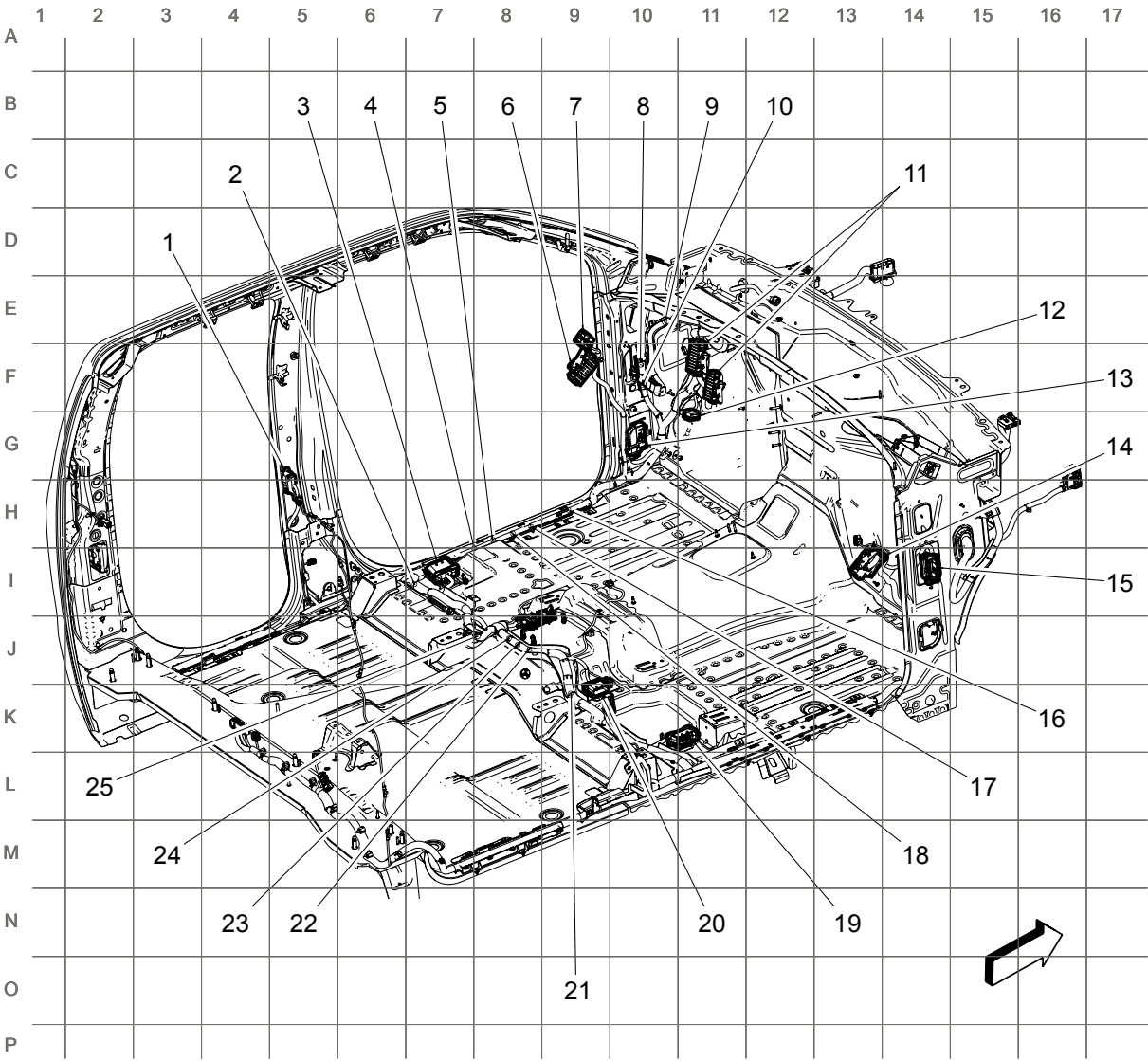
Rear Doors Harness Routing



Items

- 1. X700 (Extended or Crew Cab)
- 2. J715
- 3. X800 (Extended or Crew Cab)
- 4. J815

Passenger Compartment Left Harness Routing



Items

- 1. X700 (Extended or Crew Cab)
- 2. J331
- 3. X310
- 4. J305
- 5. J306
- 6. X51L Fuse Block - Instrument Panel Left
- 7. X206
- 8. J201
- 9. J380
- 10. J202
- 11. X61A Junction Block - Instrument Panel (except E29)

11. X51A Junction Block - Instrument Panel (except L29)

12. X315

13. X225

14. X51R Fuse Block - Instrument Panel Right

15. X600

16. J307

17. J308

18. J309

19. X320

20. X314 (except D07)

21. J379

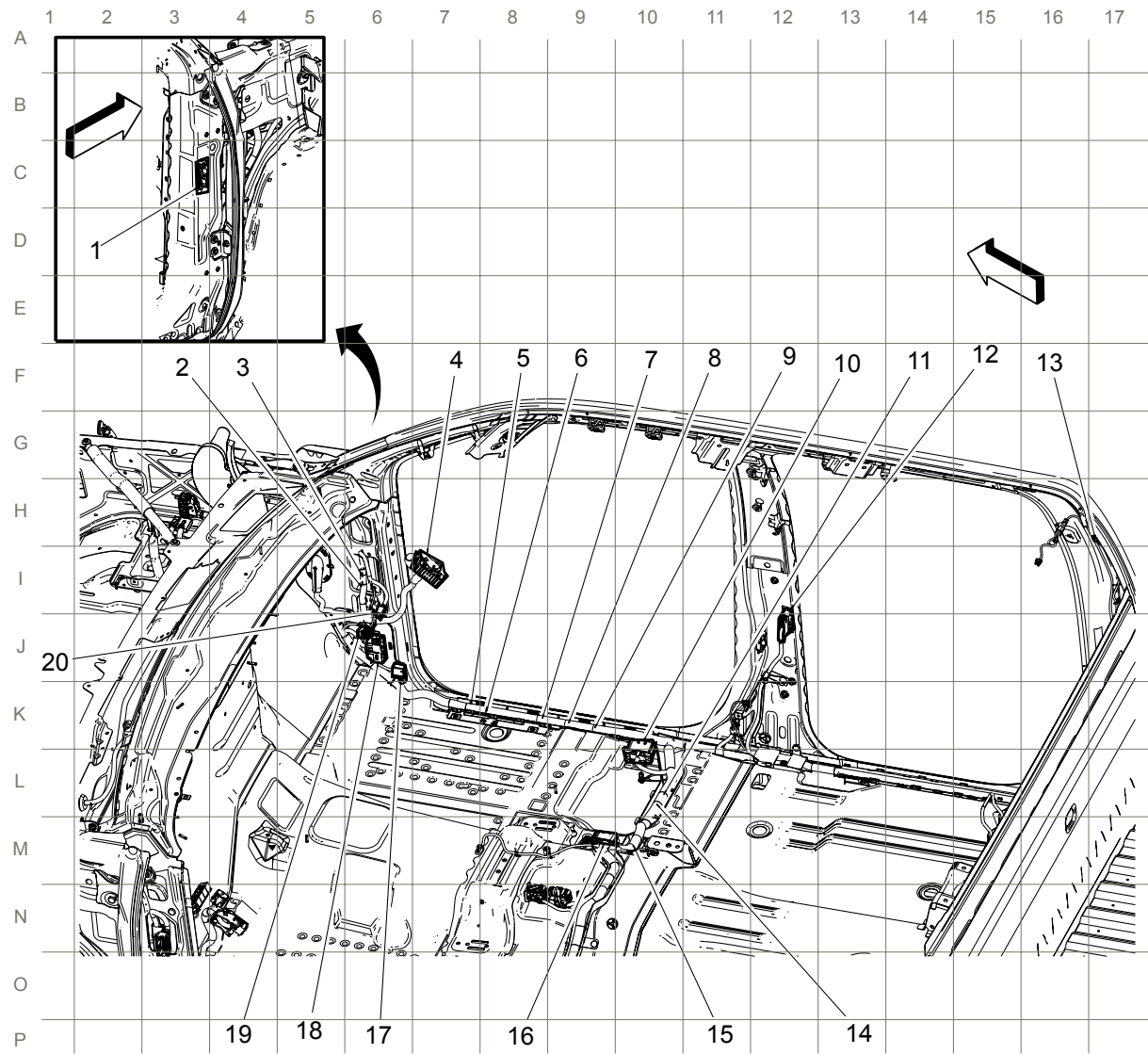
22. J383

23. J382

24. J361

25. J384

Passenger Compartment Right Harness Routing



Items

- 1. X600
- 2. J298
- 3. J299
- 4. X51R Fuse Block - Instrument Panel Right
- 5. J367
- 6. J365
- 7. J362
- 8. J367
- 9. J360
- 10. X310
- 11. J372

11. X312

12. X800 (Extended or Crew Cab)

13. X390

14. J260

15. J350

16. X314 (except D07)

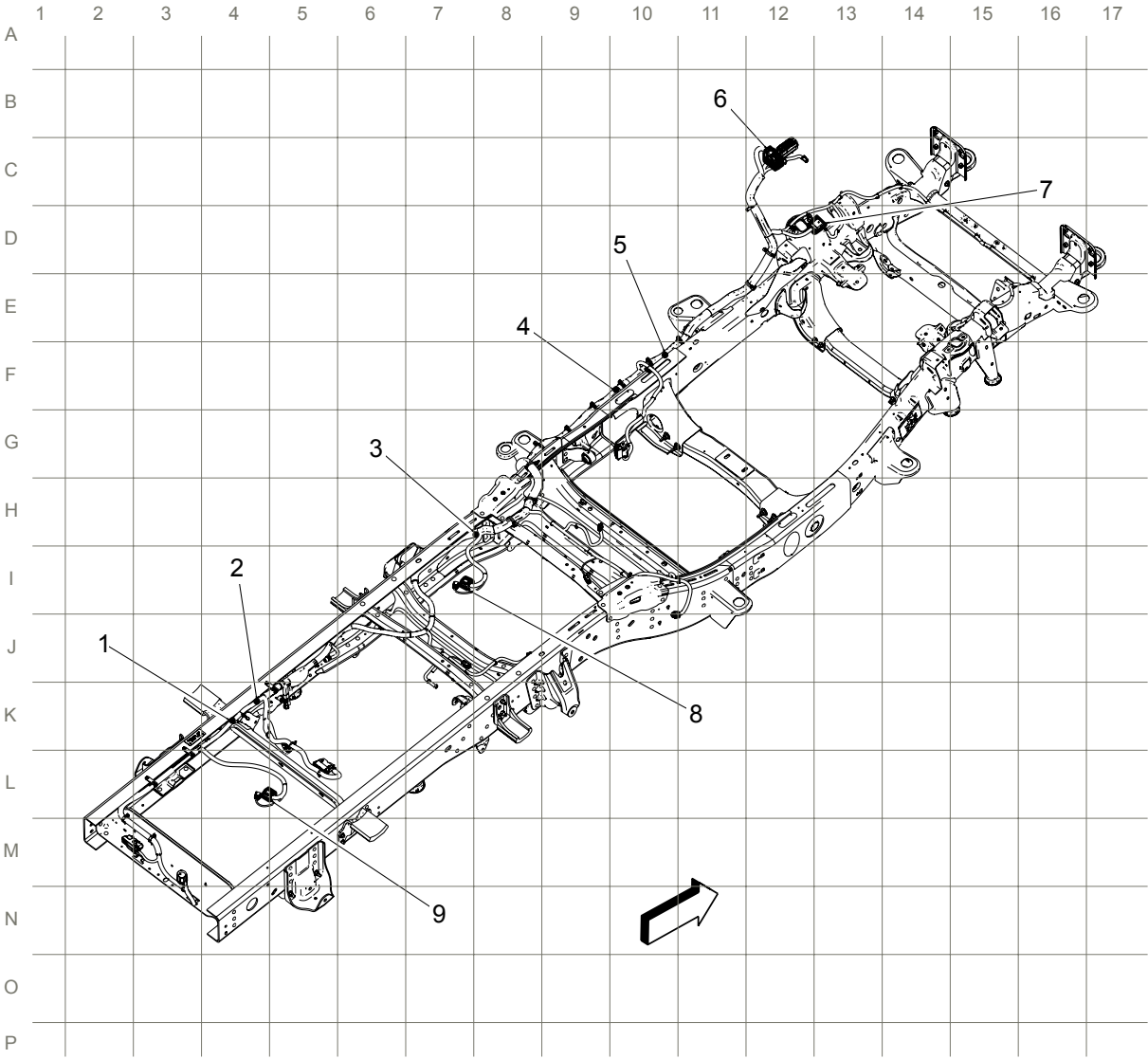
17. JX300

18. X275

19. X216

20. X217

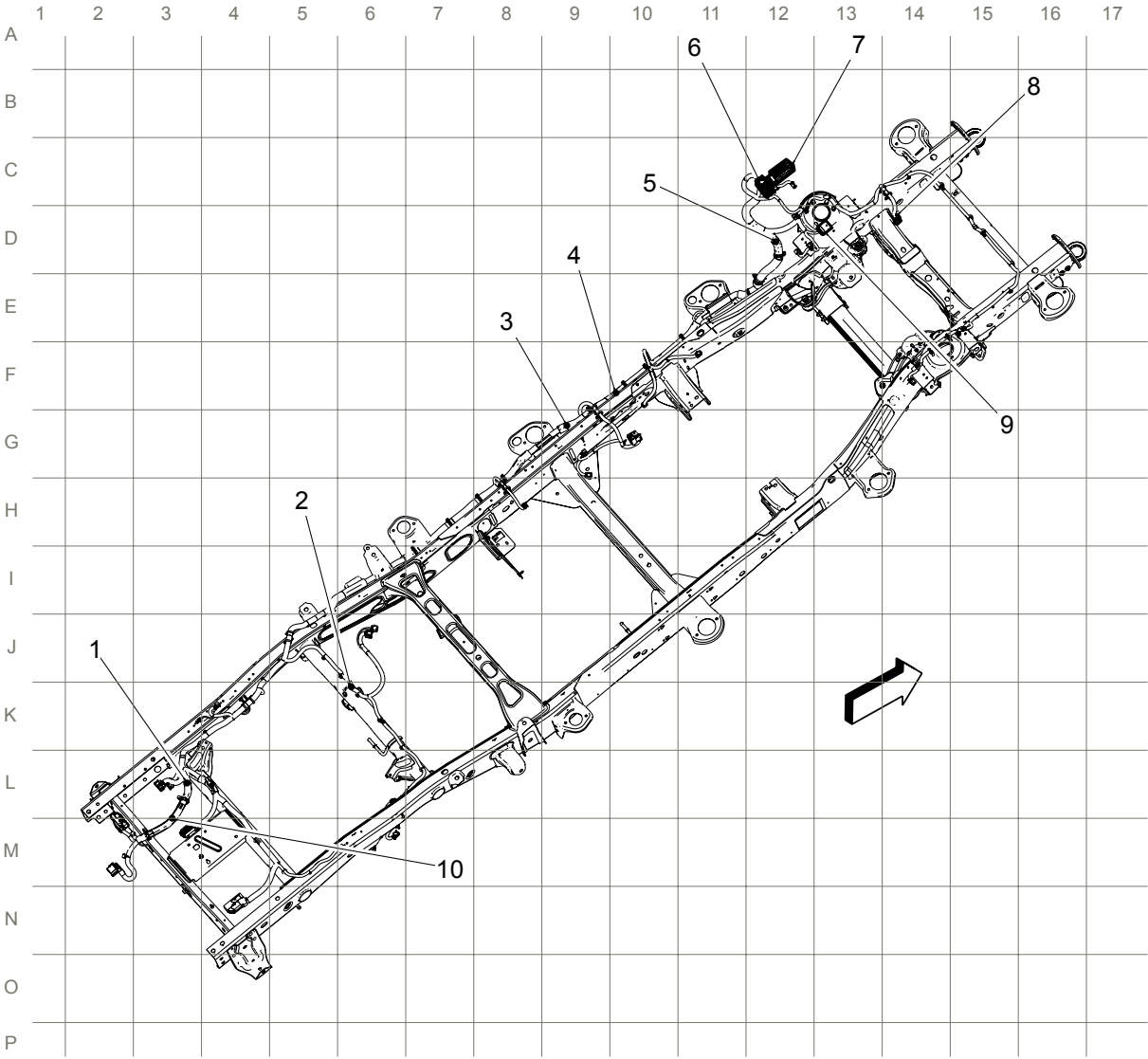
Chassis Cab Harness Routing



Items

- 1. J451
- 2. J450
- 3. J375
- 4. J356
- 5. J355
- 6. X138
- 7. X125
- 8. X350 (LC8)
- 9. X351 (U42)

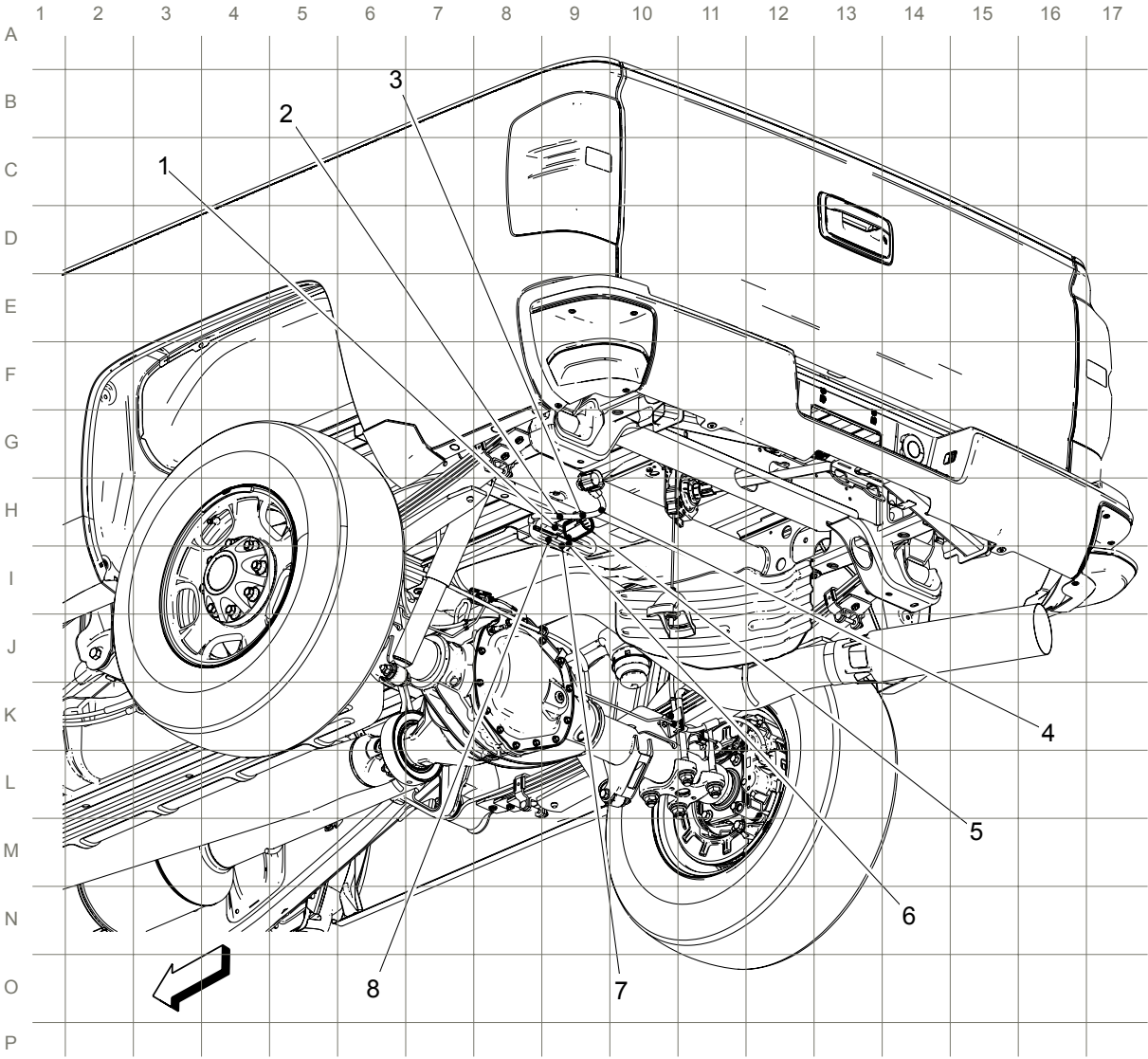
Chassis Harness Routing



Items

- 1. J451
- 2. J375
- 3. J356
- 4. J355
- 5. J191
- 6. X138
- 7. X50A Fuse Block - Underhood
- 8. X134 (1500)
- 9. X125
- 10. J450

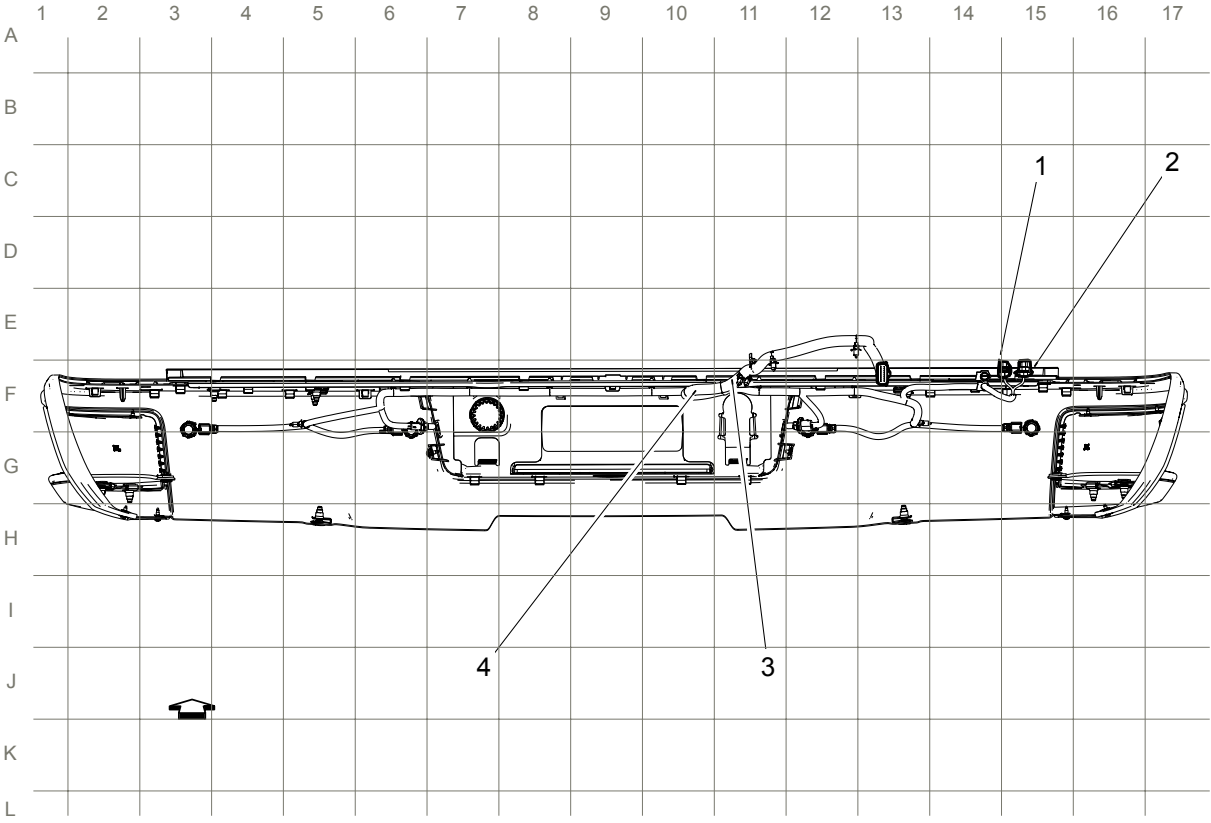
Chassis Jumper Harness Routing (UY2)



Items

- 1. J905
- 2. J907
- 3. J903
- 4. J906
- 5. X950 (8S3 or UY2)
- 6. J904
- 7. J902
- 8. J901

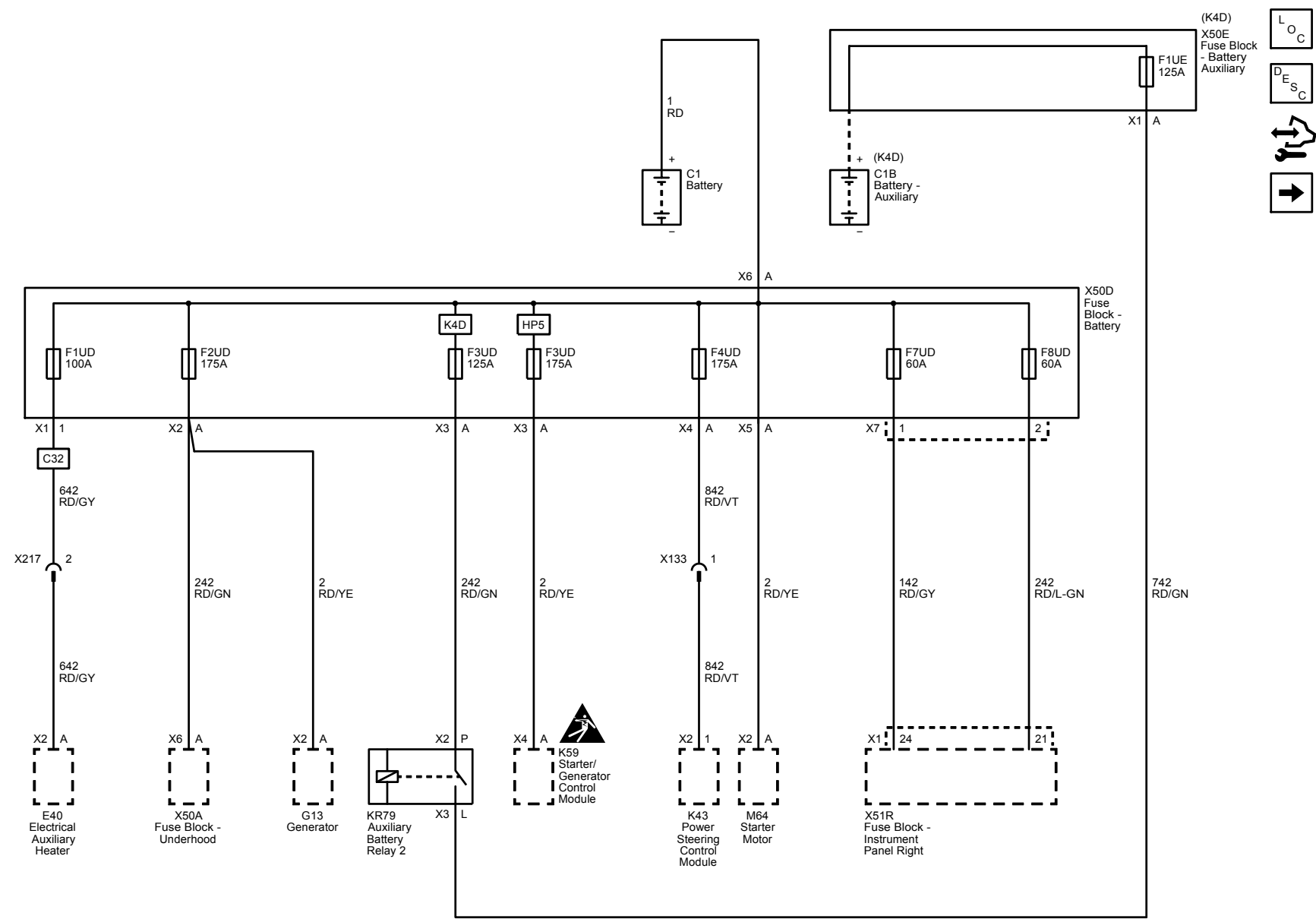
Rear Bumper Harness Routing



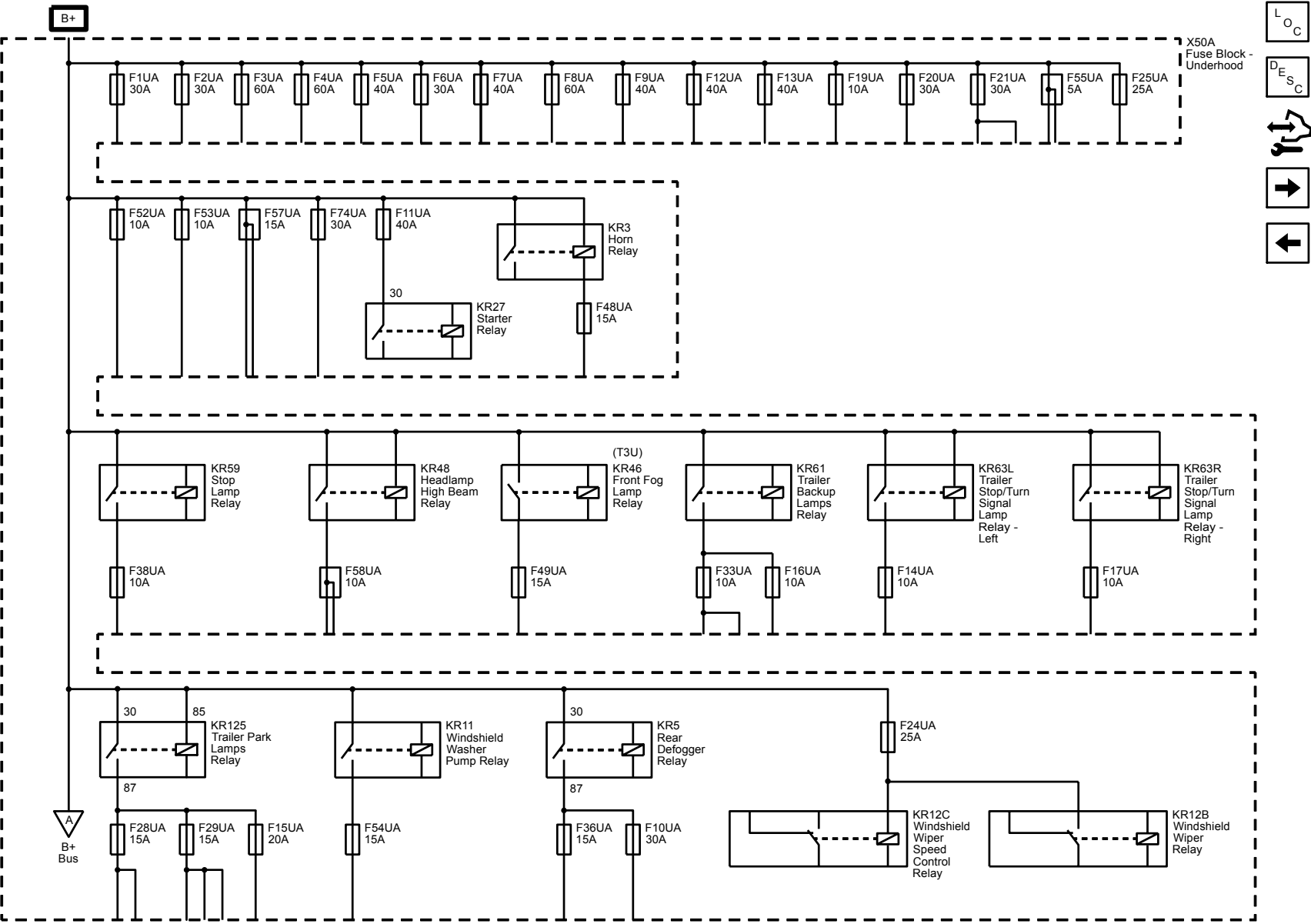
Items

- 1. X417
- 2. X416
- 3. J490
- 4. J495

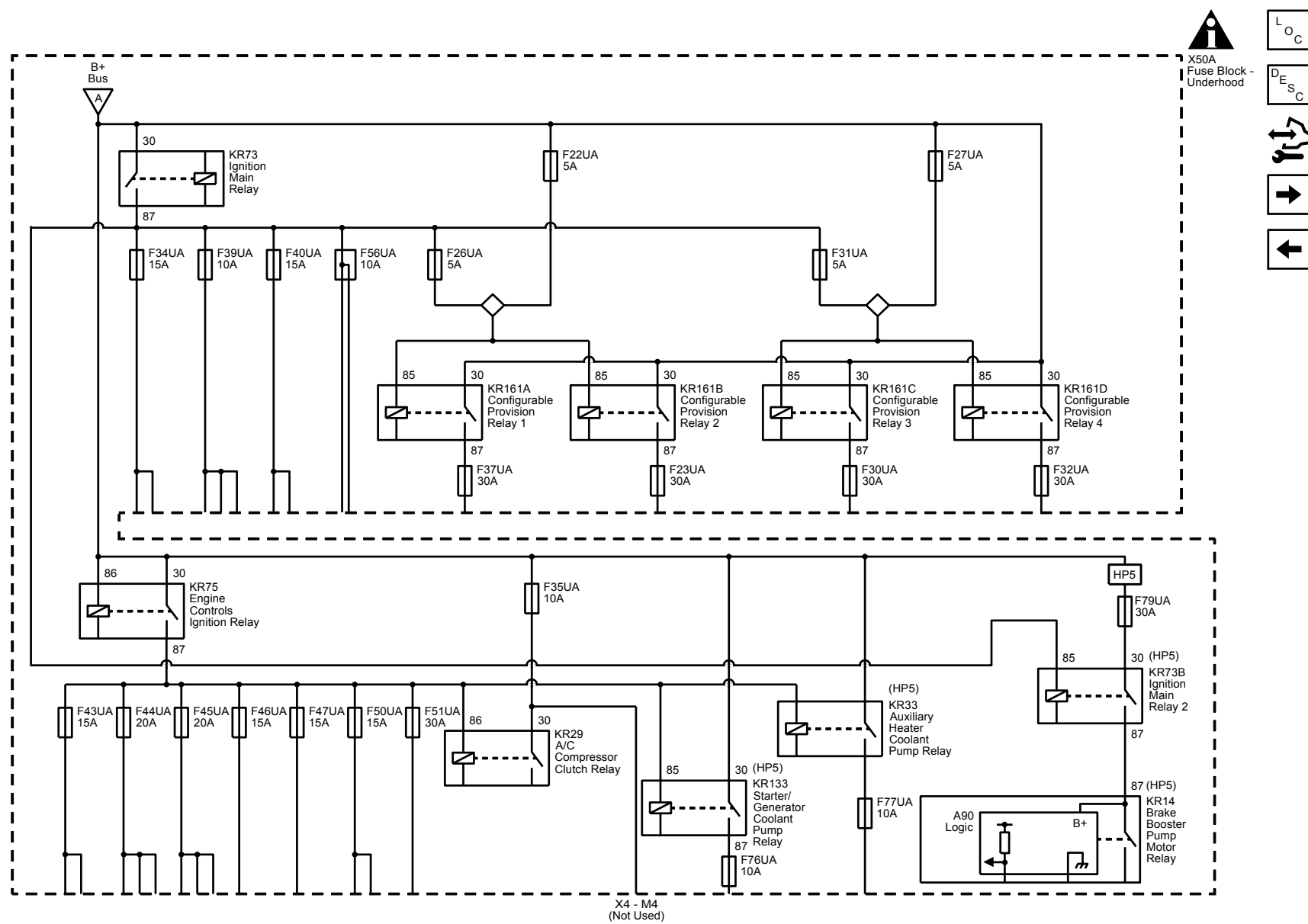
X50D Fuse Block - Battery and X50E Fuse Block - Battery Auxiliary (1500)



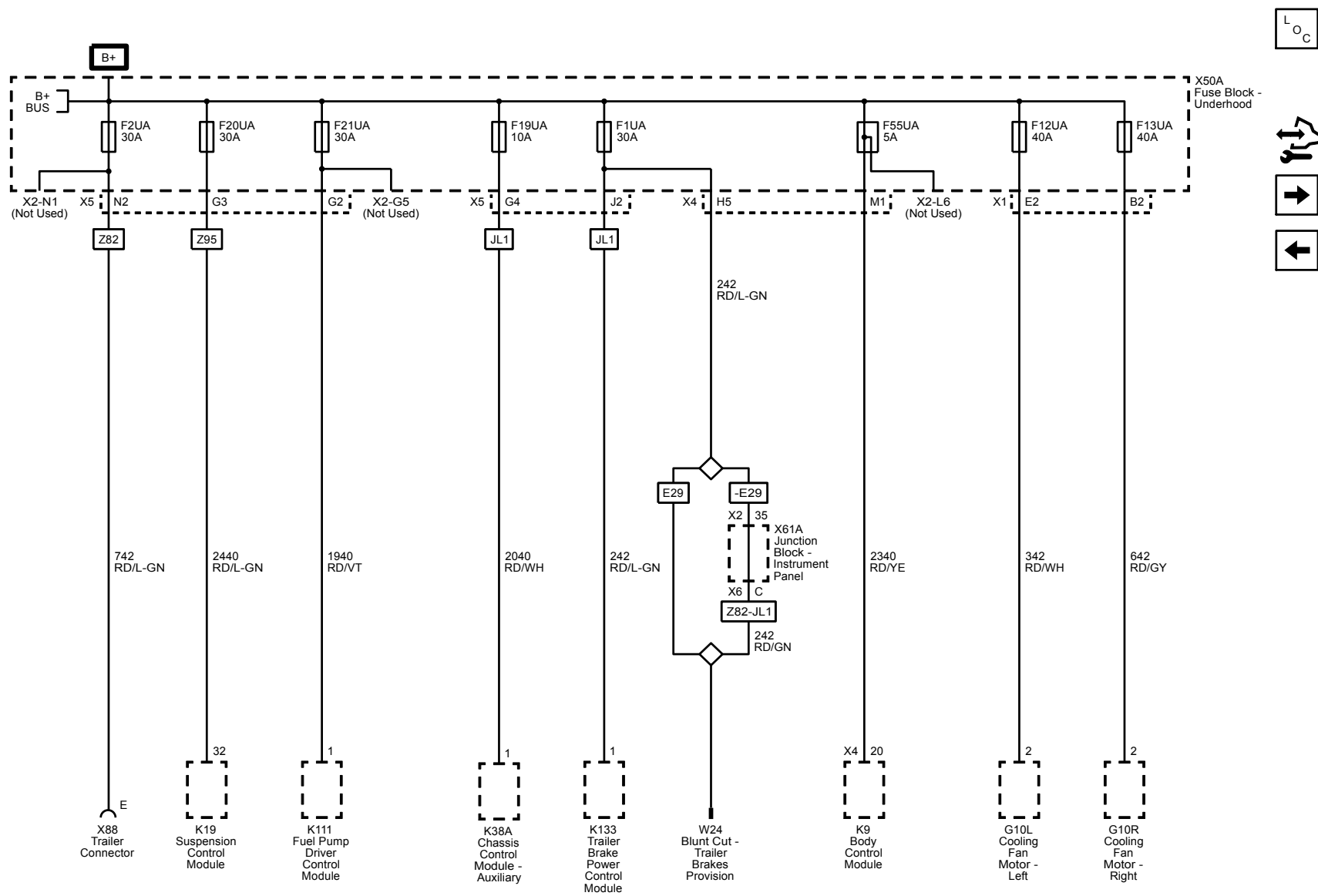
B+ Bus X50A Fuse Block - Underhood 1 of 2 (1500)



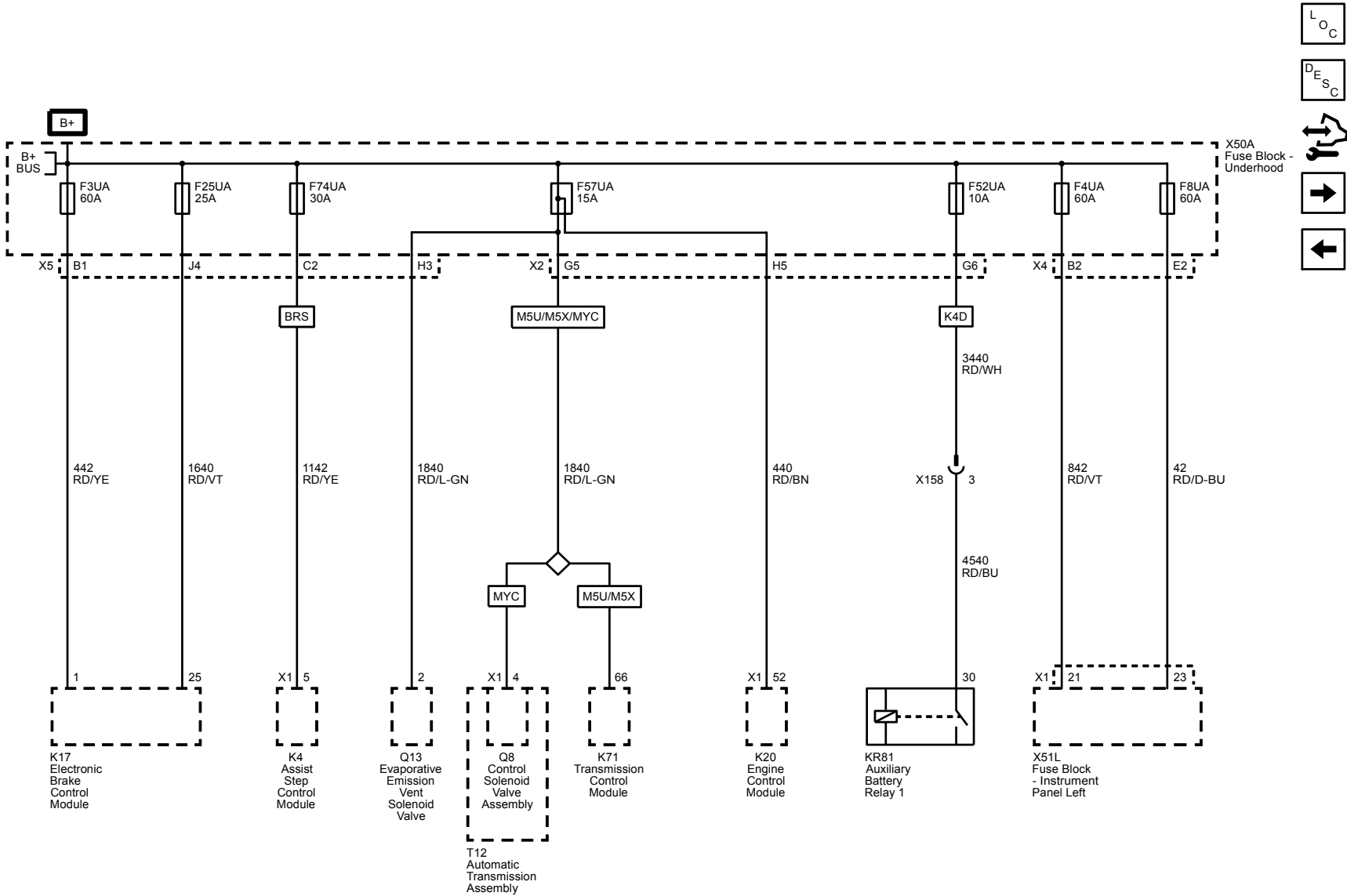
B+ Bus X50A Fuse Block - Underhood 2 of 2 (1500)

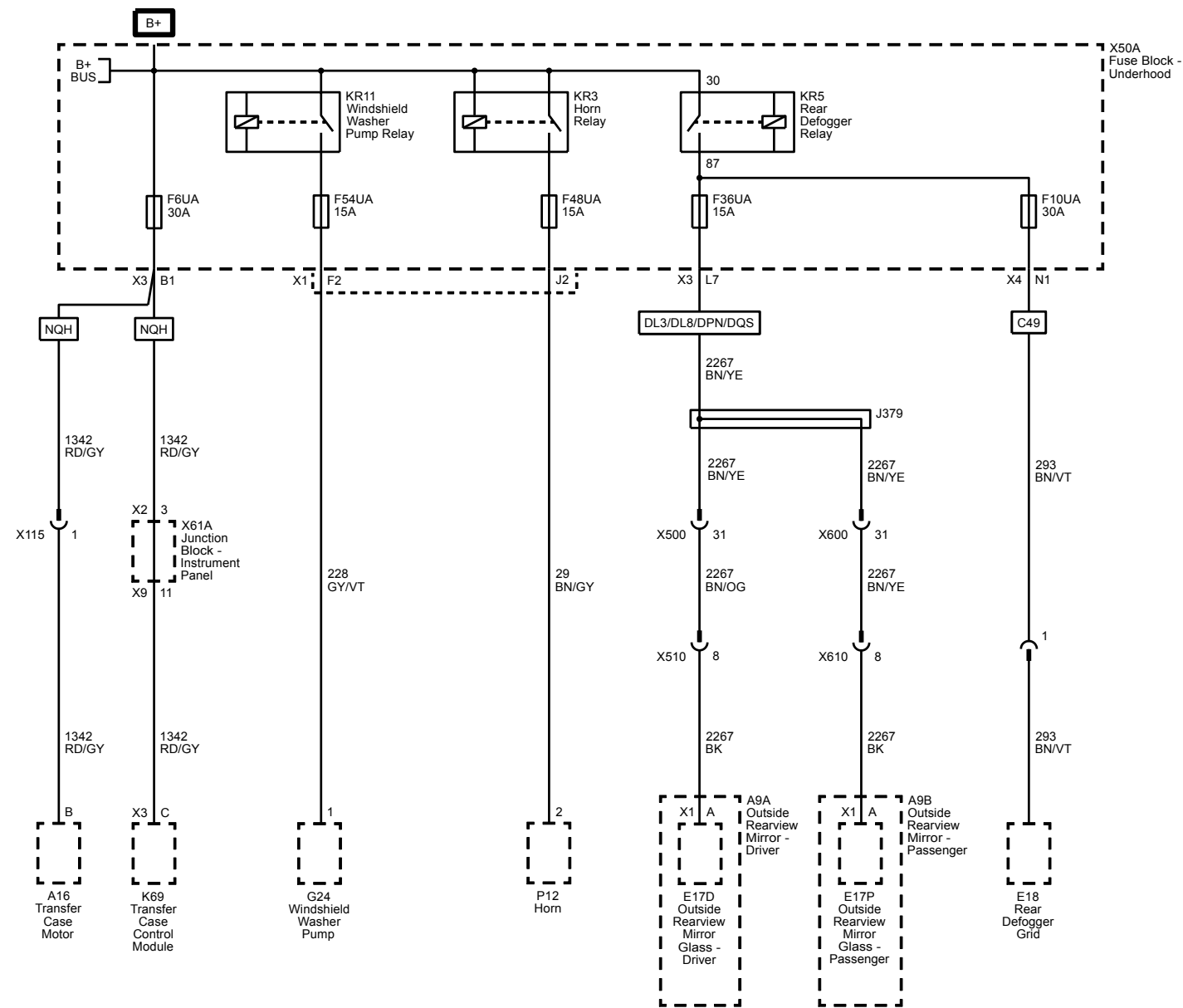


F10UA, F20UA, F120UA, F130UA, F190UA, F200UA, F210UA and F550UA Fuses (1500)

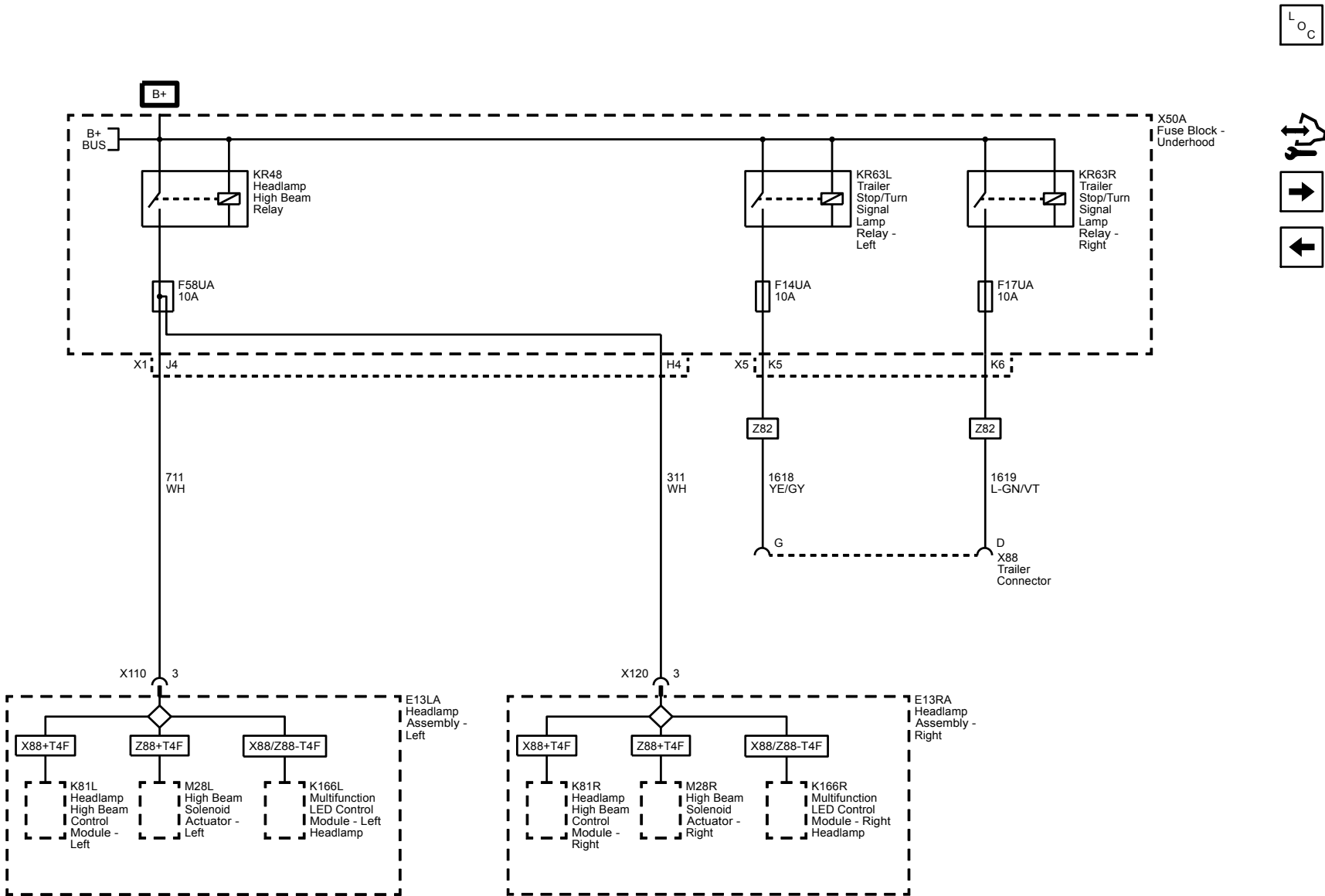


F3UA, F4UA, F8UA, F25UA, F52UA, F57UA, and F74UA Fuses (1500)

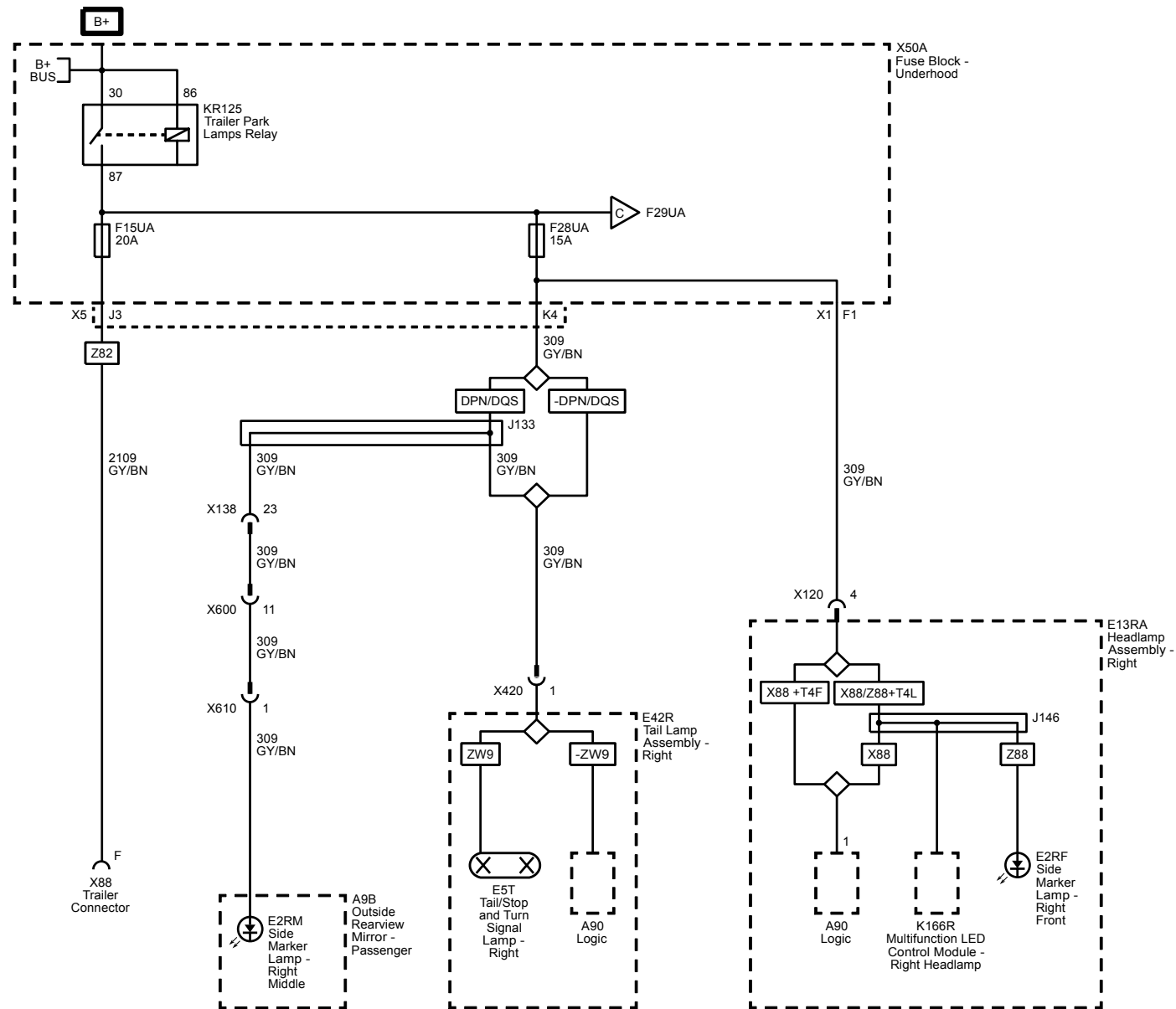




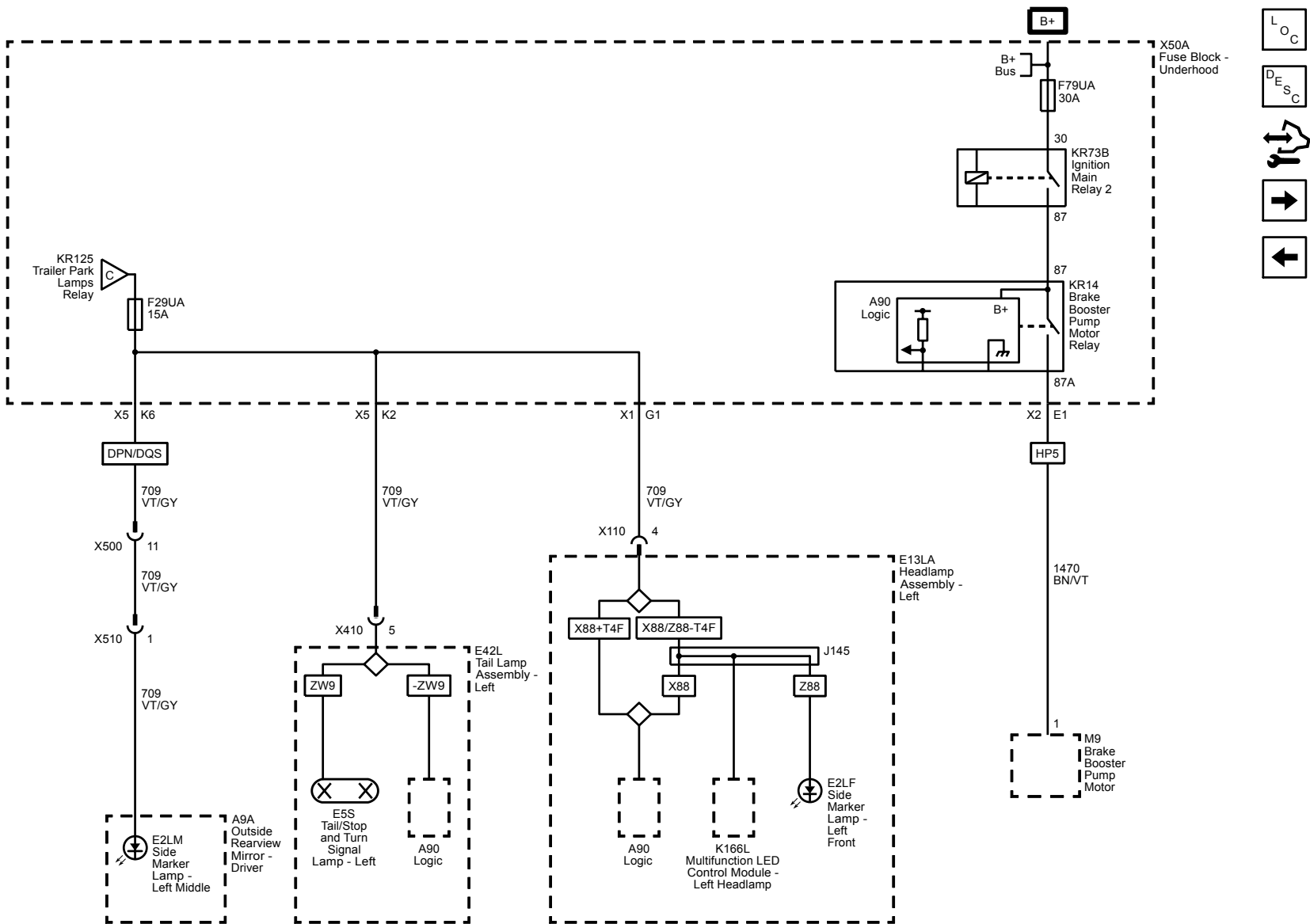
F14UA, F17UA and F58UA Fuses (1500)



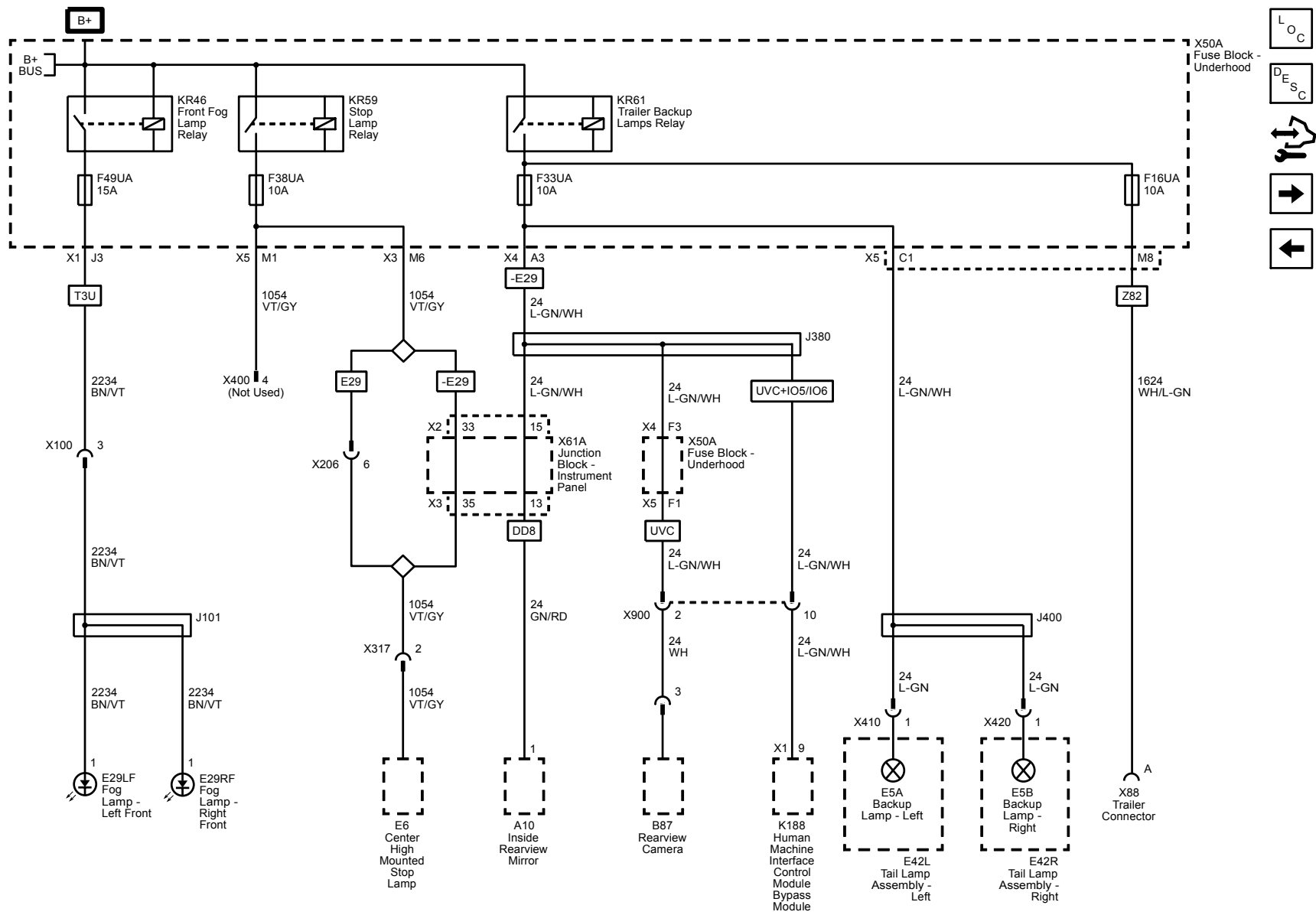
F15UA and F28UA Fuses (1500)



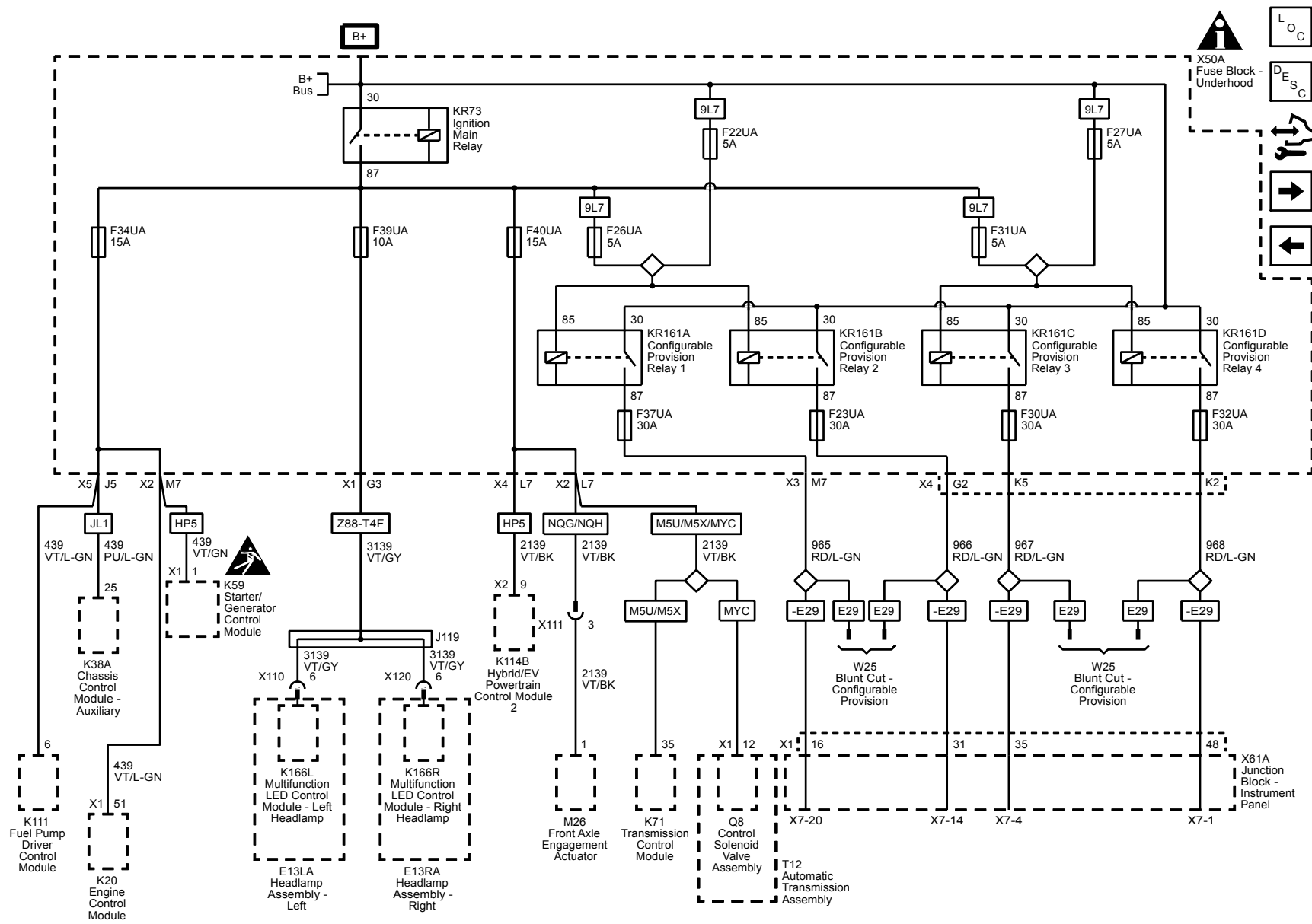
F29UA Fuse (1500)



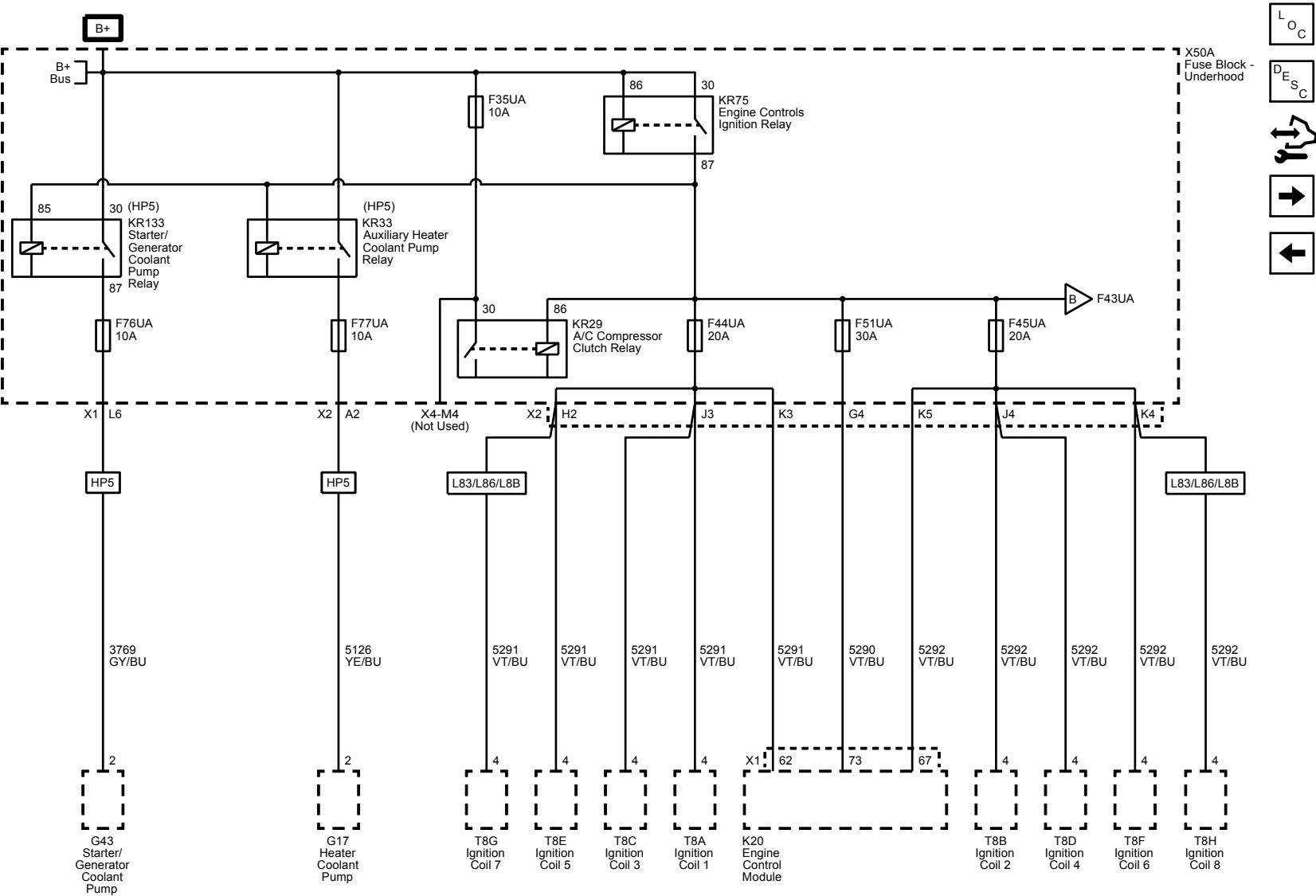
F16UA, F33UA, F38UA and F49UA Fuses (1500)



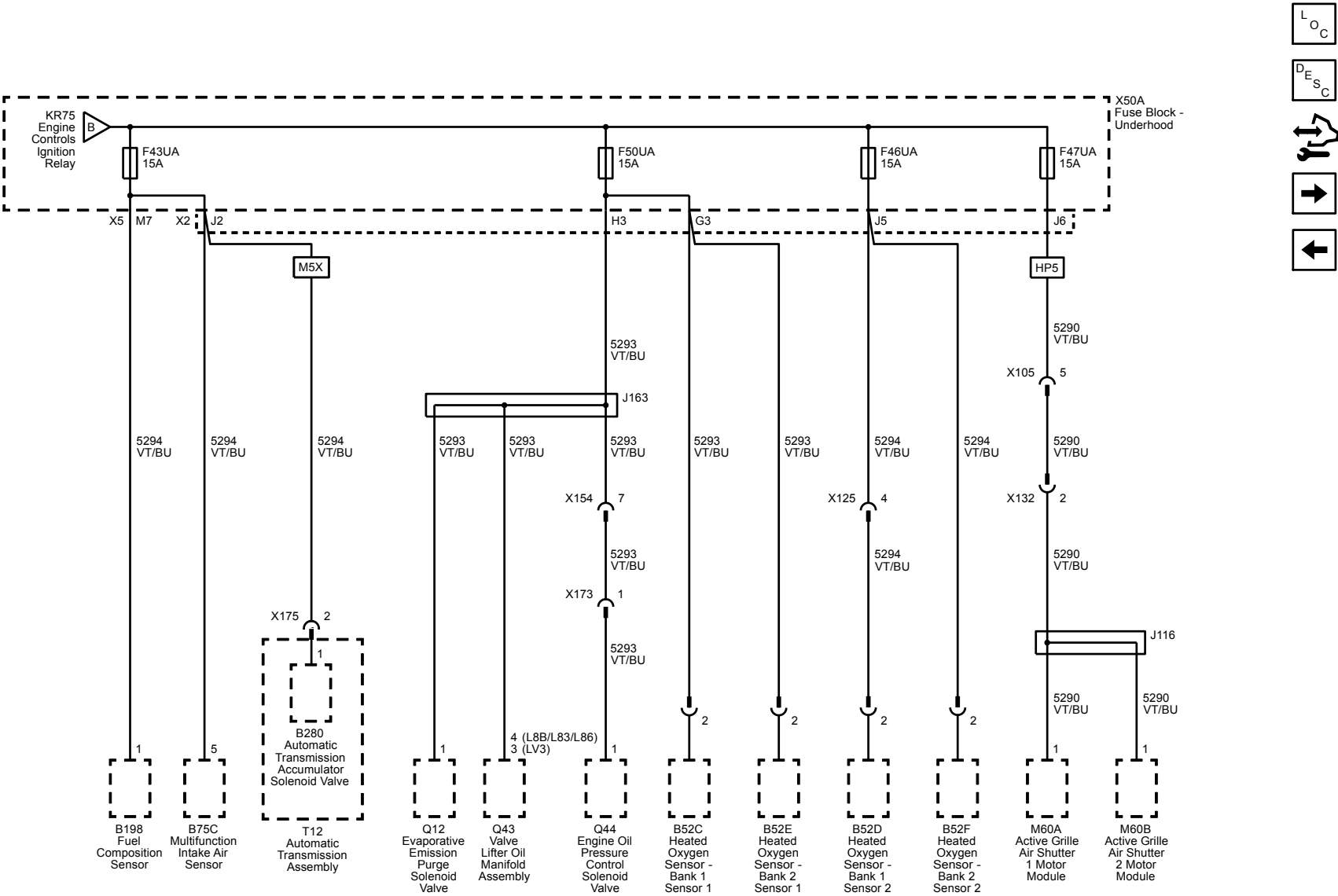
F22UA, F23UA, F26UA, F27UA, F30UA, F31UA, F32UA, F34UA, F37UA, F39UA and F40UA Fuses (1500)



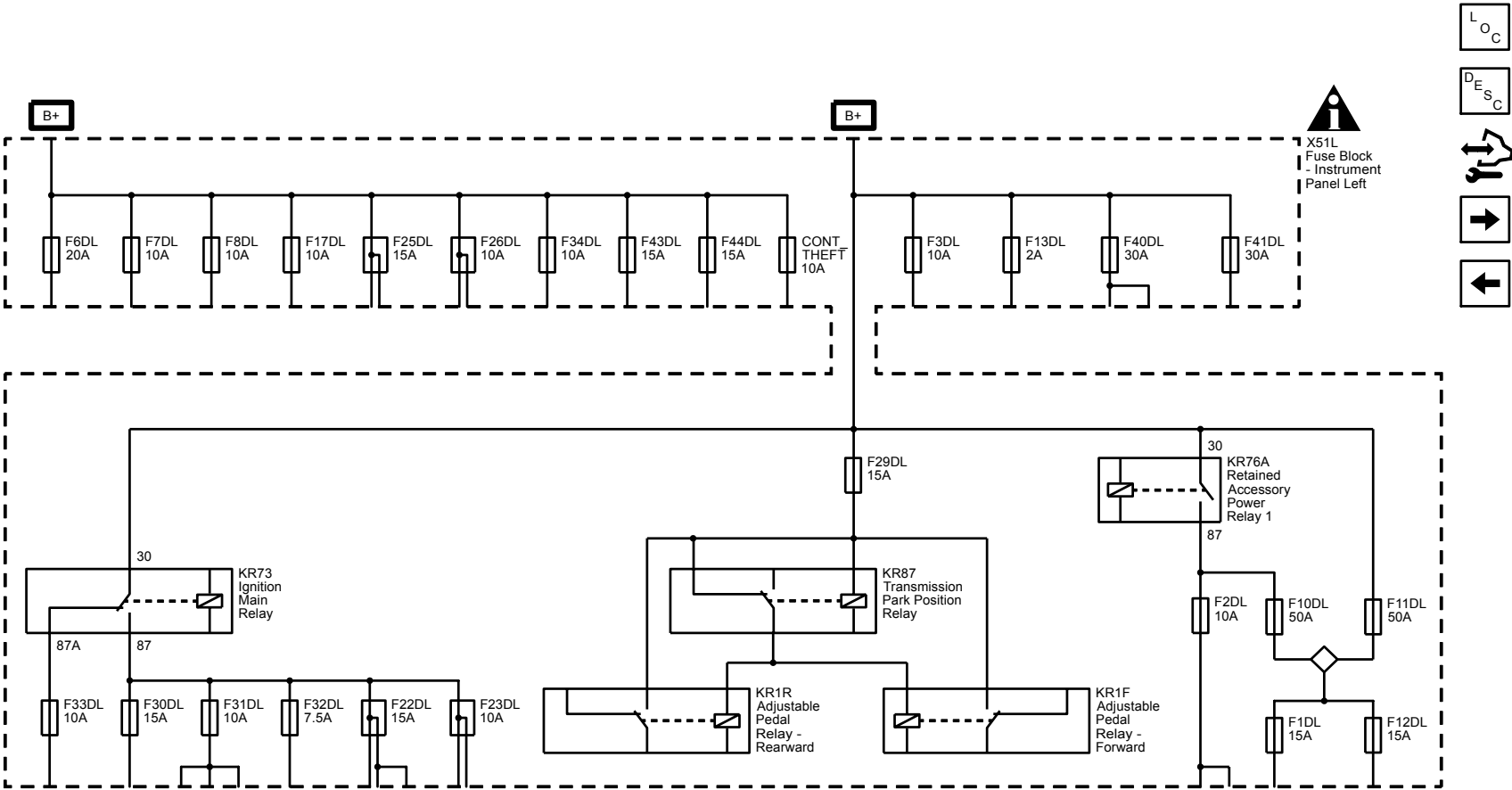
F35UA, F44UA, F45UA and F51UA Fuses (1500)



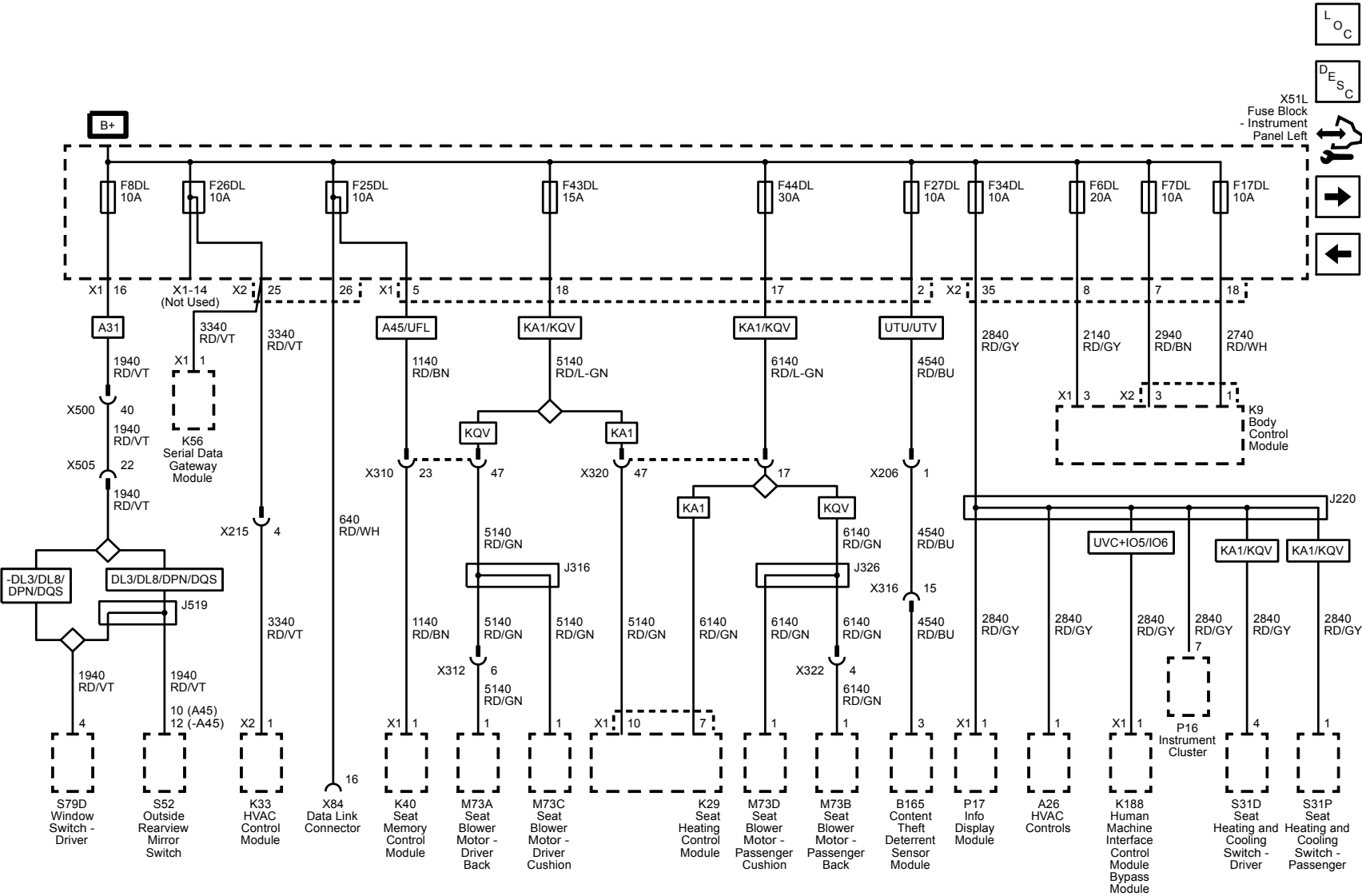
F43UA, F46UA and F50UA Fuses (1500)



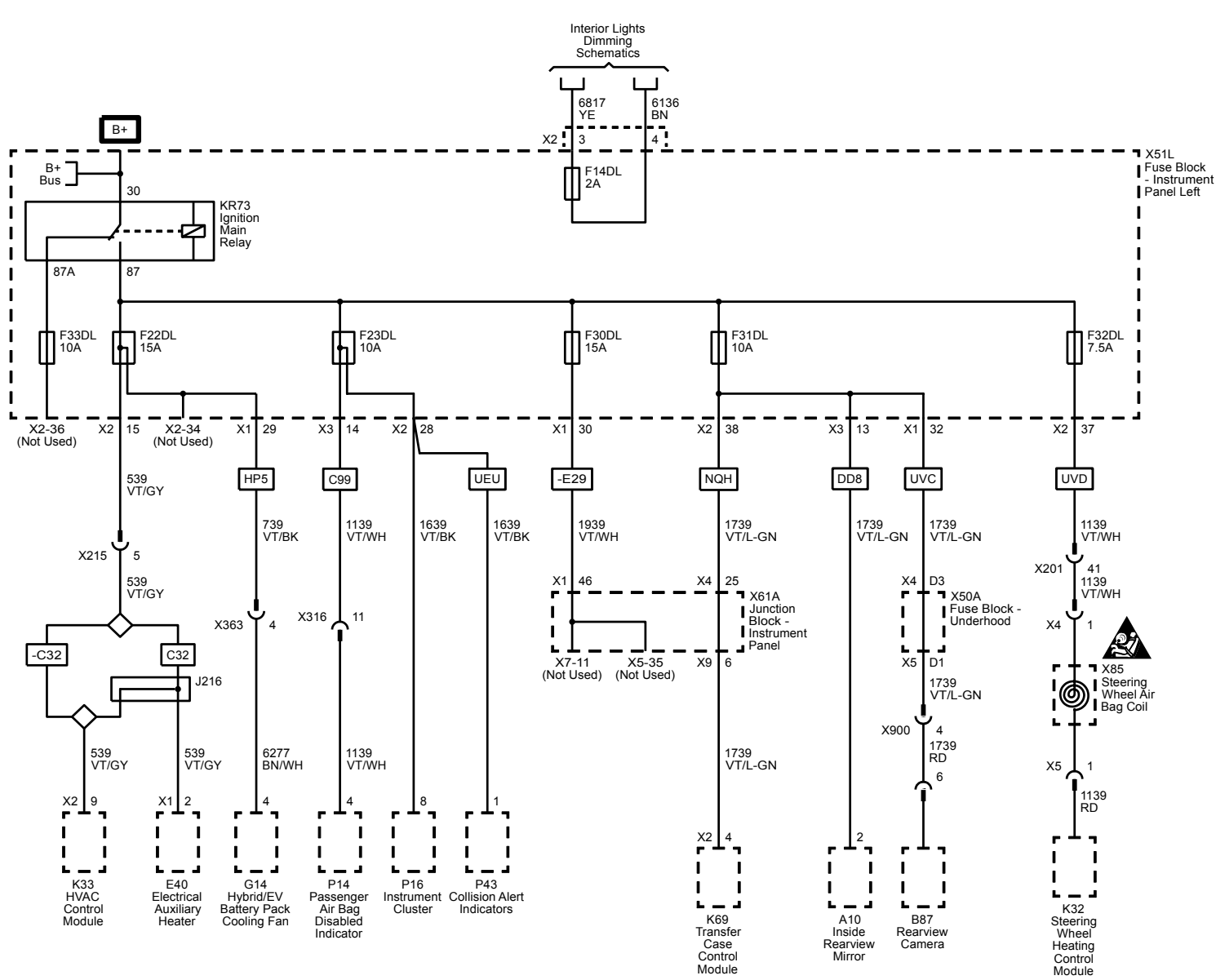
B+ Bus X51L Fuse Block - Instrument Panel Left (1500)



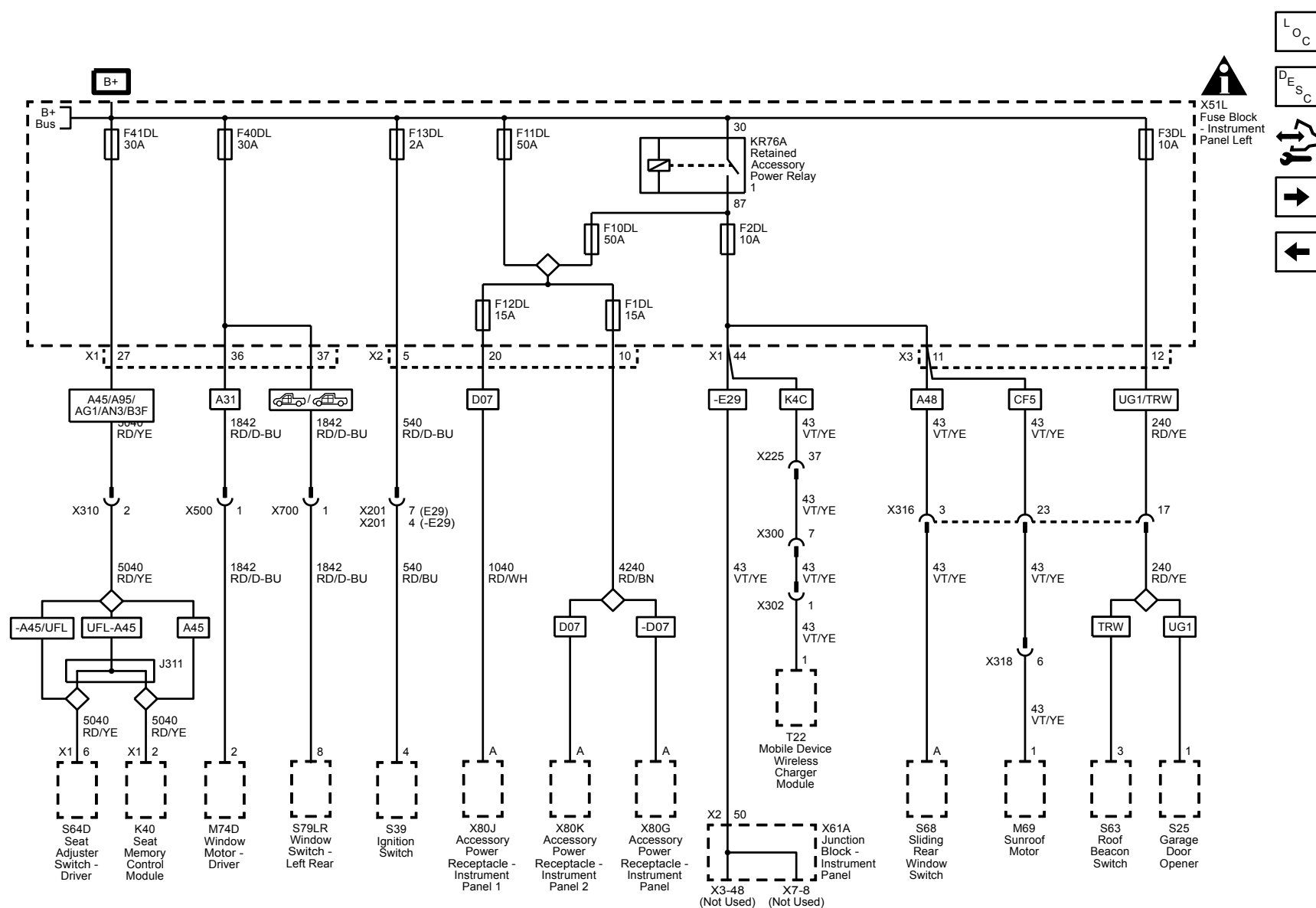
F6DL, F7DL, F8DL, F17DL, F25DL, F26DL, F27DL, F34DL, F43DL, and F44DL Fuses (1500)



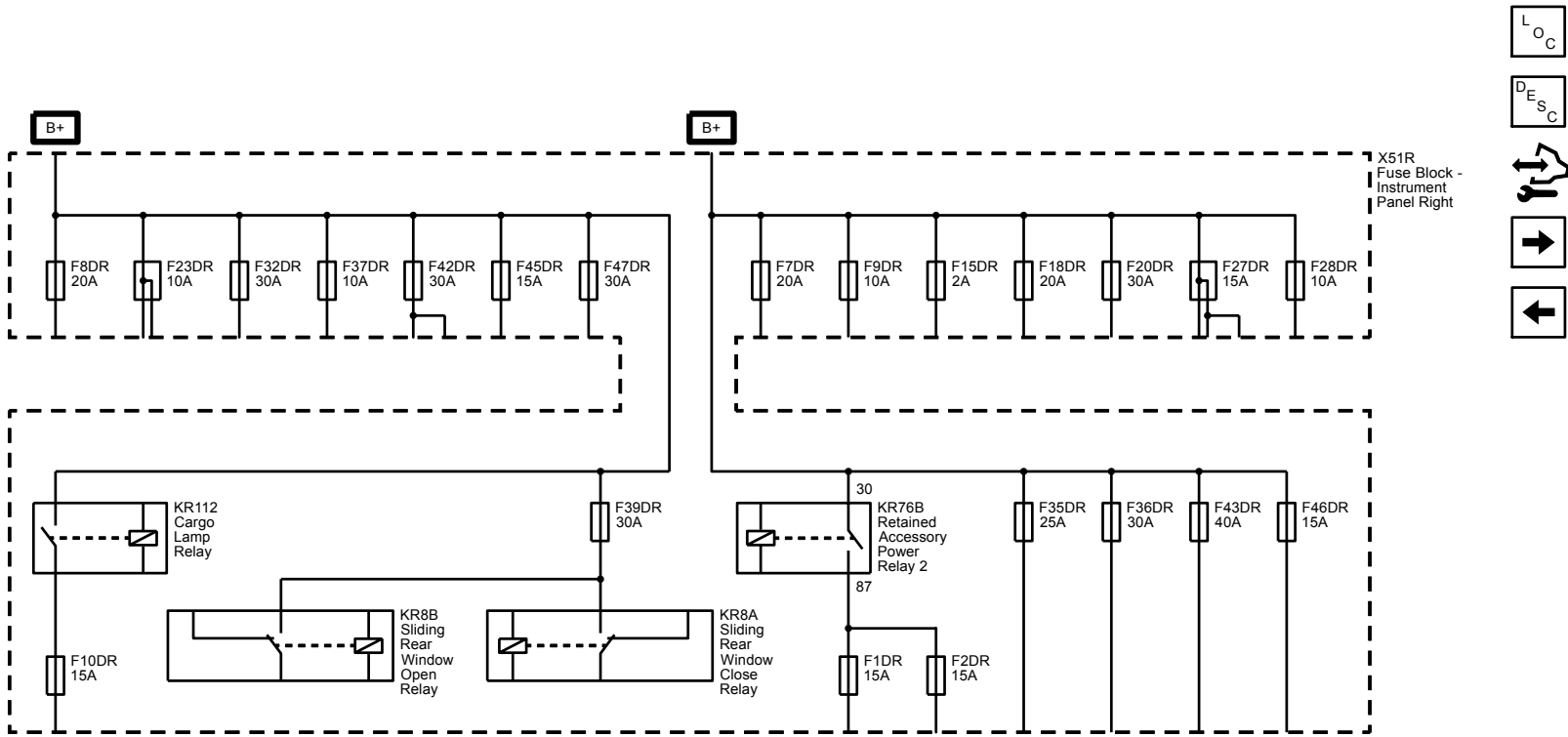
F14DL, F22DL, F23DL, F30DL, F31DL, F32DL and F33DL Fuses (1500)



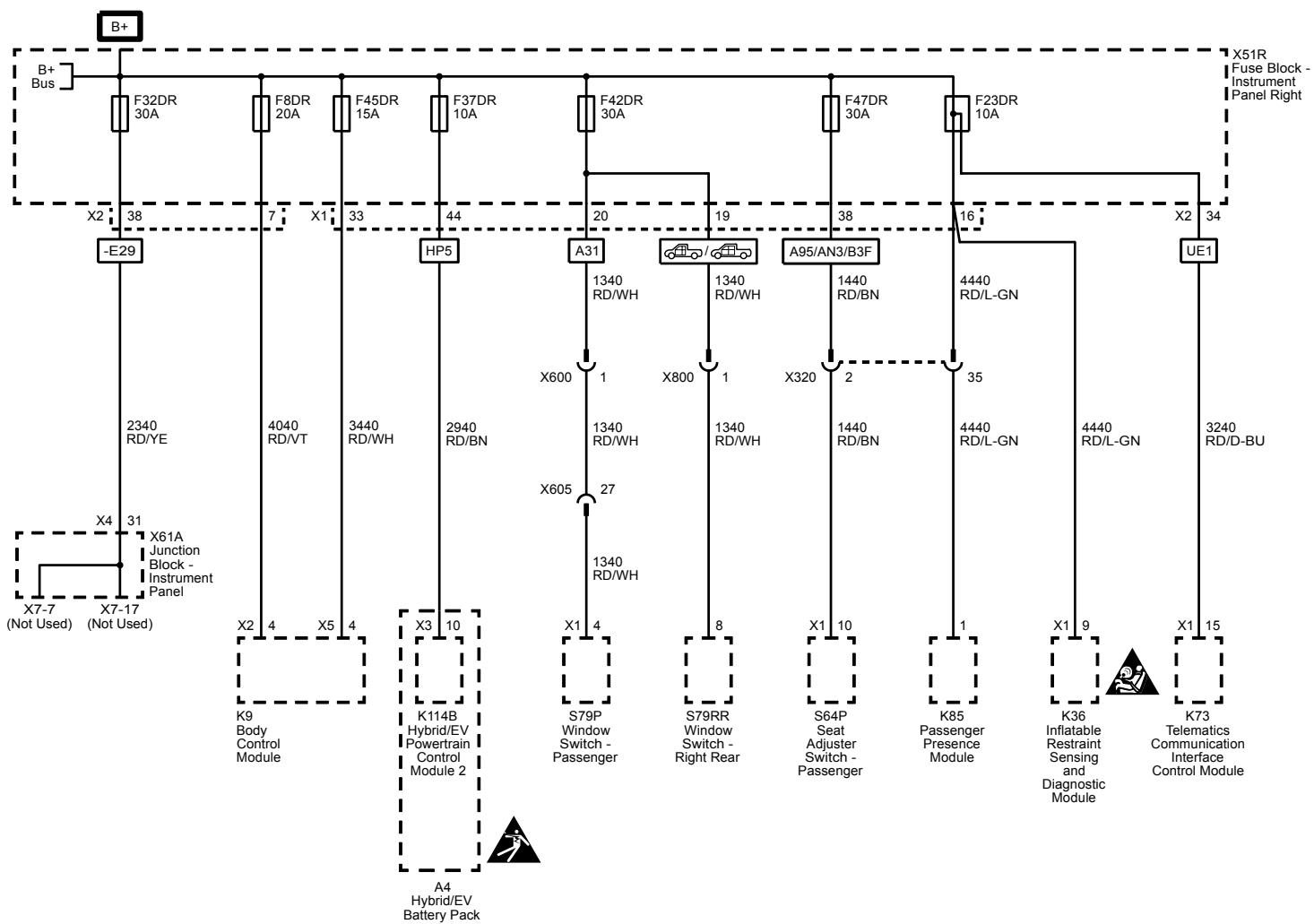
F1DL, F2DL, F3DL, F10DL, F11DL, F12DL, F13DL, F40DL and F41DL Fuses (1500)



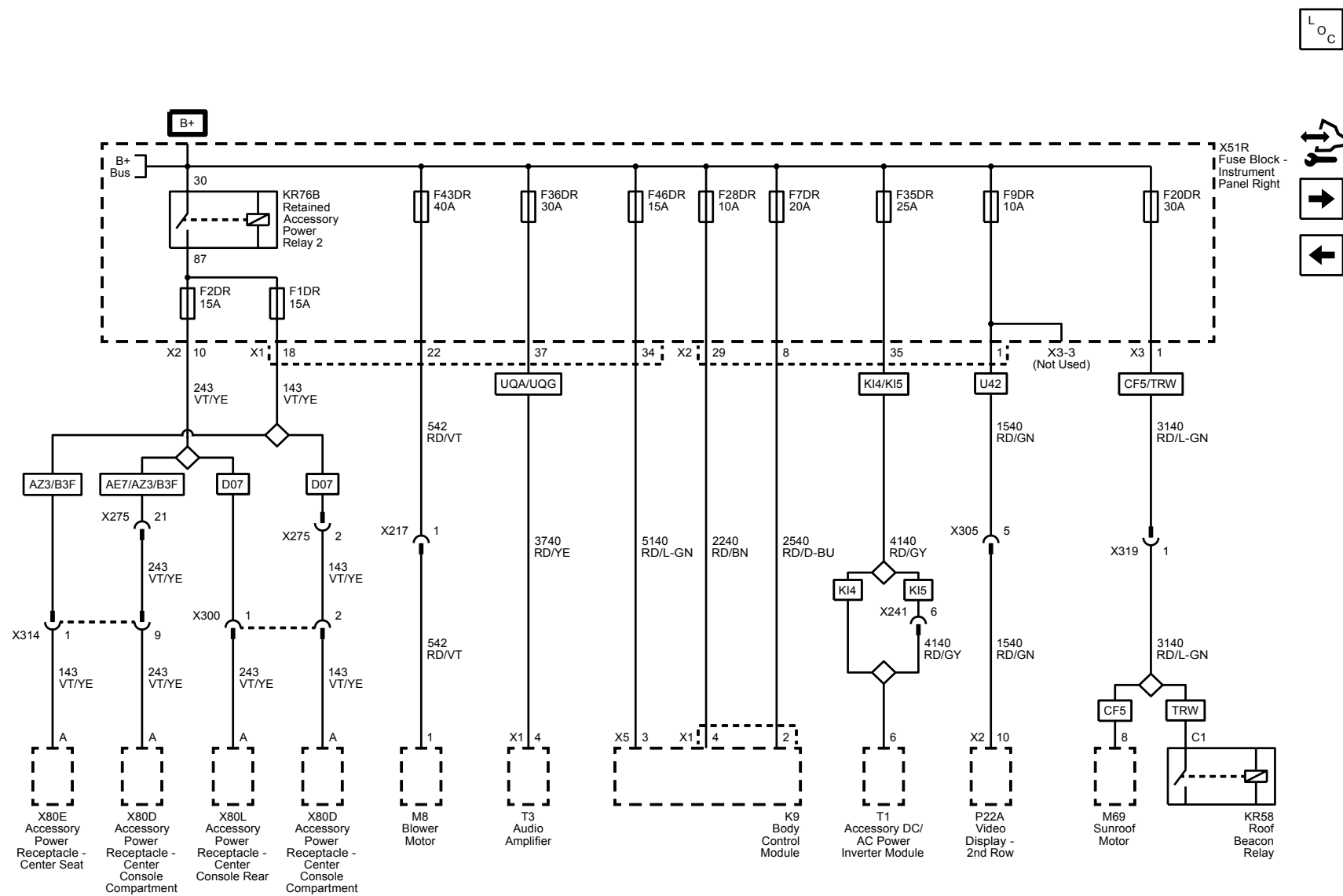
B+ Bus X51R Fuse Block - Instrument Panel Right (1500)



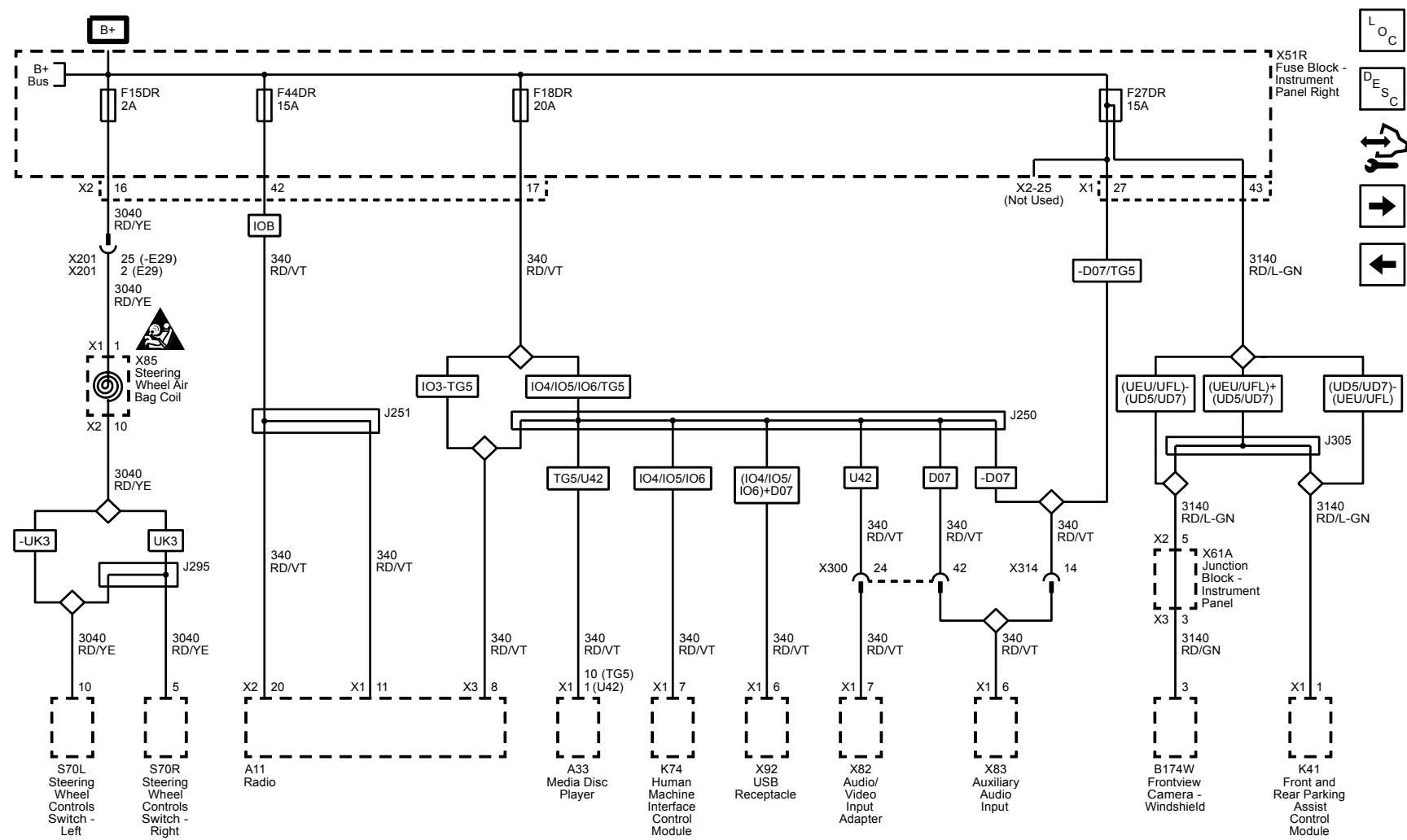
F8DR, F23DR, F32DR, F42DR, F45DR and F47DR Fuses (1500)



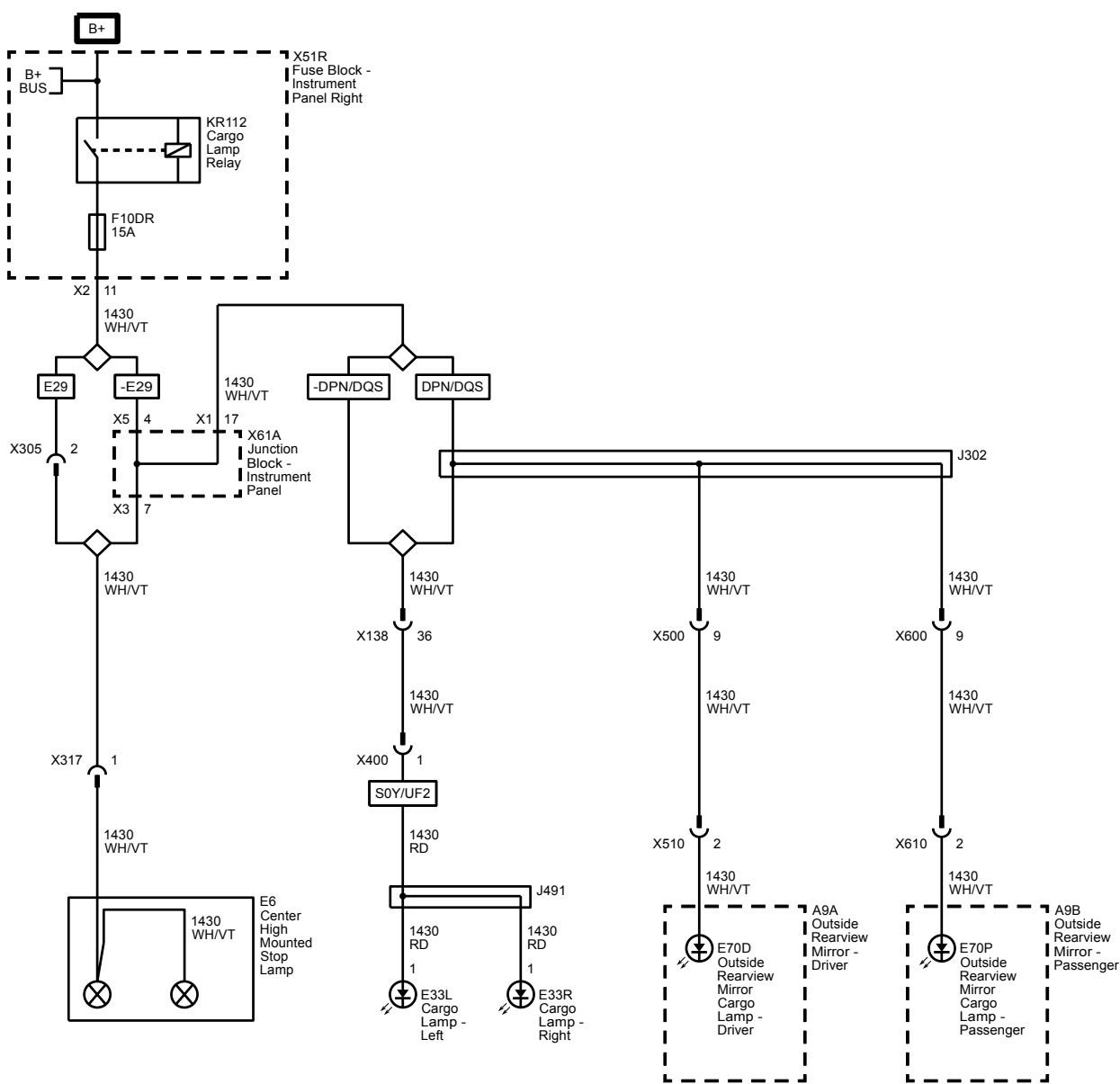
F1DR, F2DR, F7DR, F9DR, F20DR, F28DR, F35DR, F36DR, F43DR and F46DR Fuses (1500)



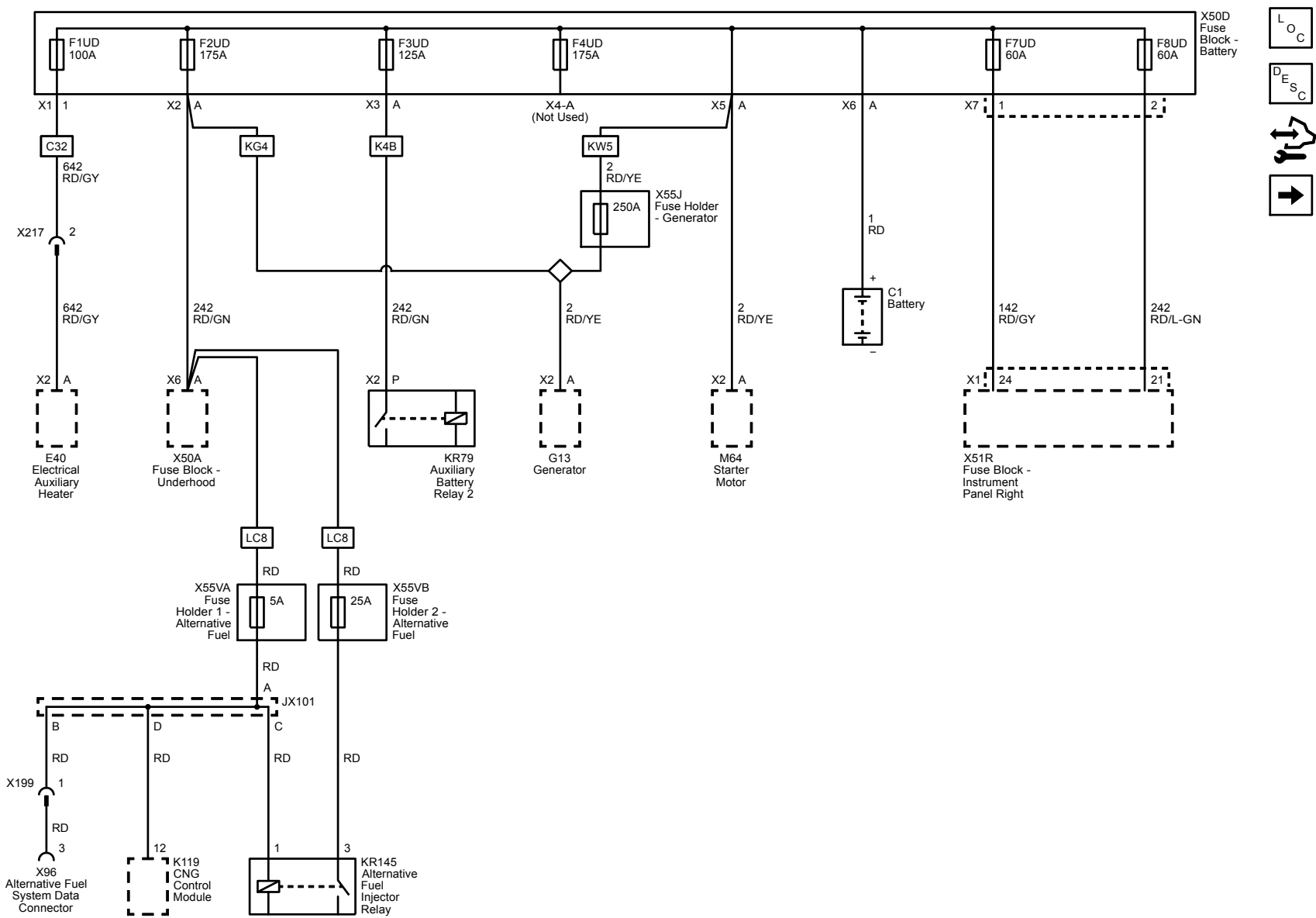
F15DR, F18DR, F27DR and F44DR Fuses (1500)



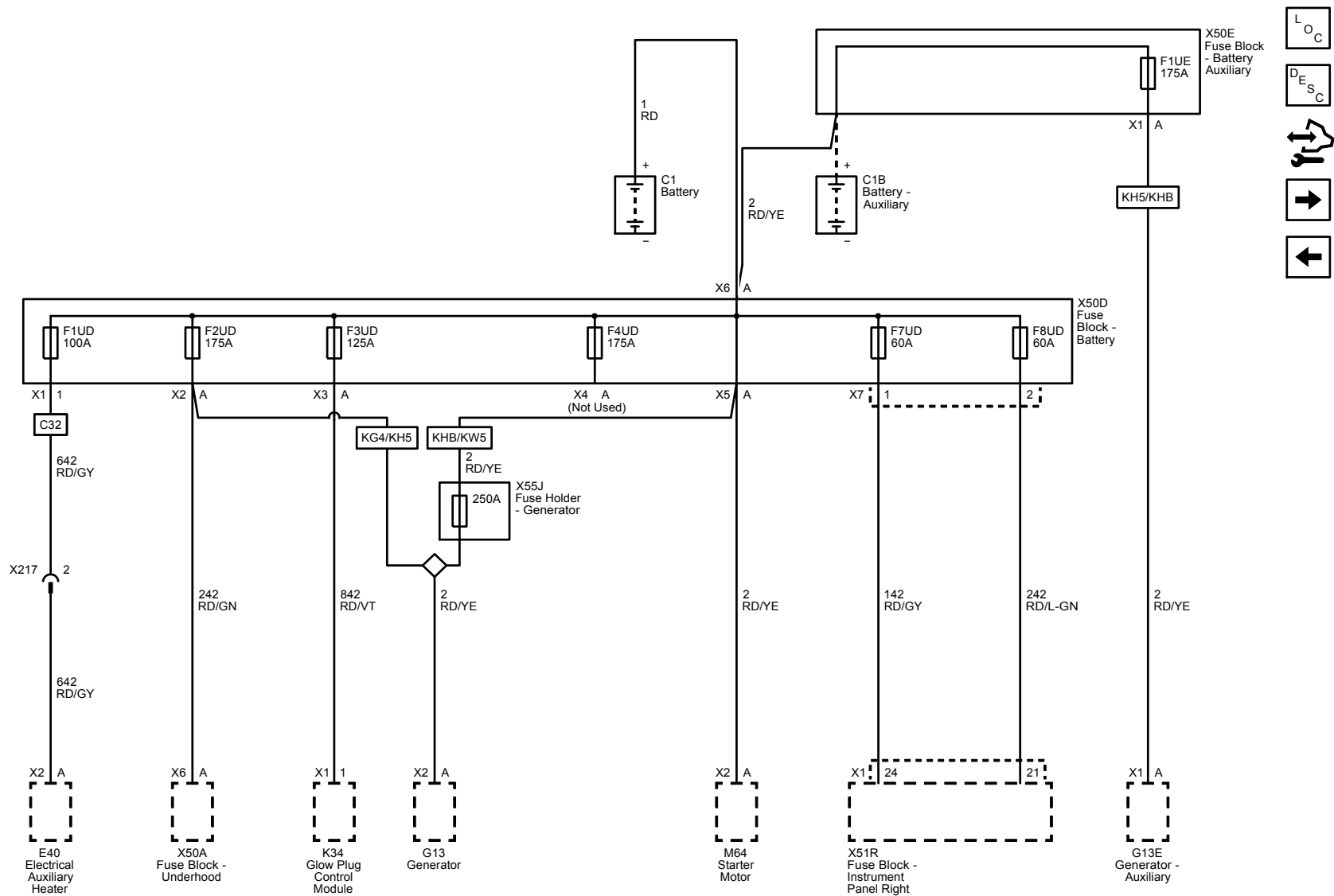
F10DR Fuse (1500)



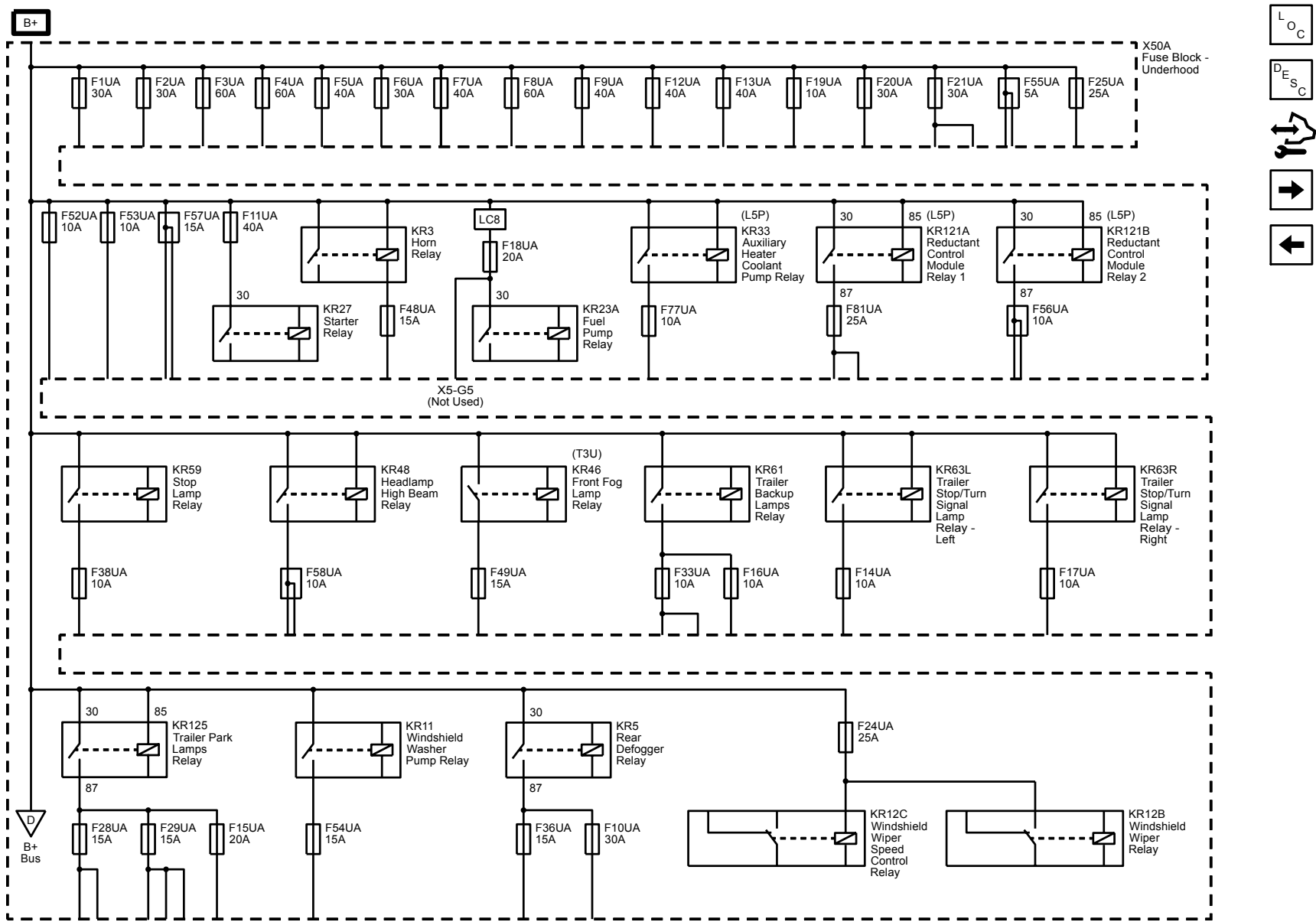
X50D Fuse Block - Battery (2500/3500 with L96 or LC8)

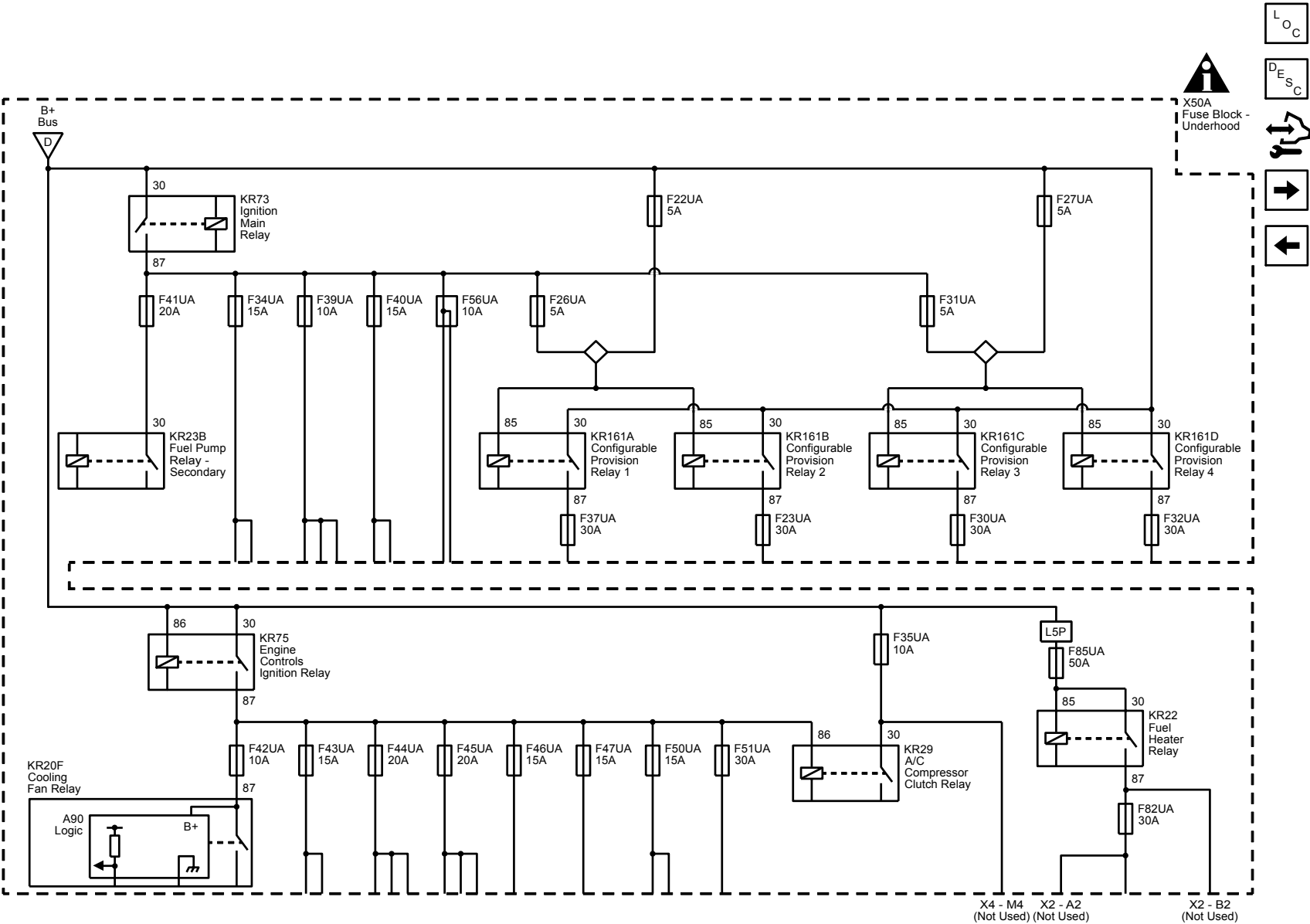


X50D Fuse Block - Battery (2500/3500 with L5P)

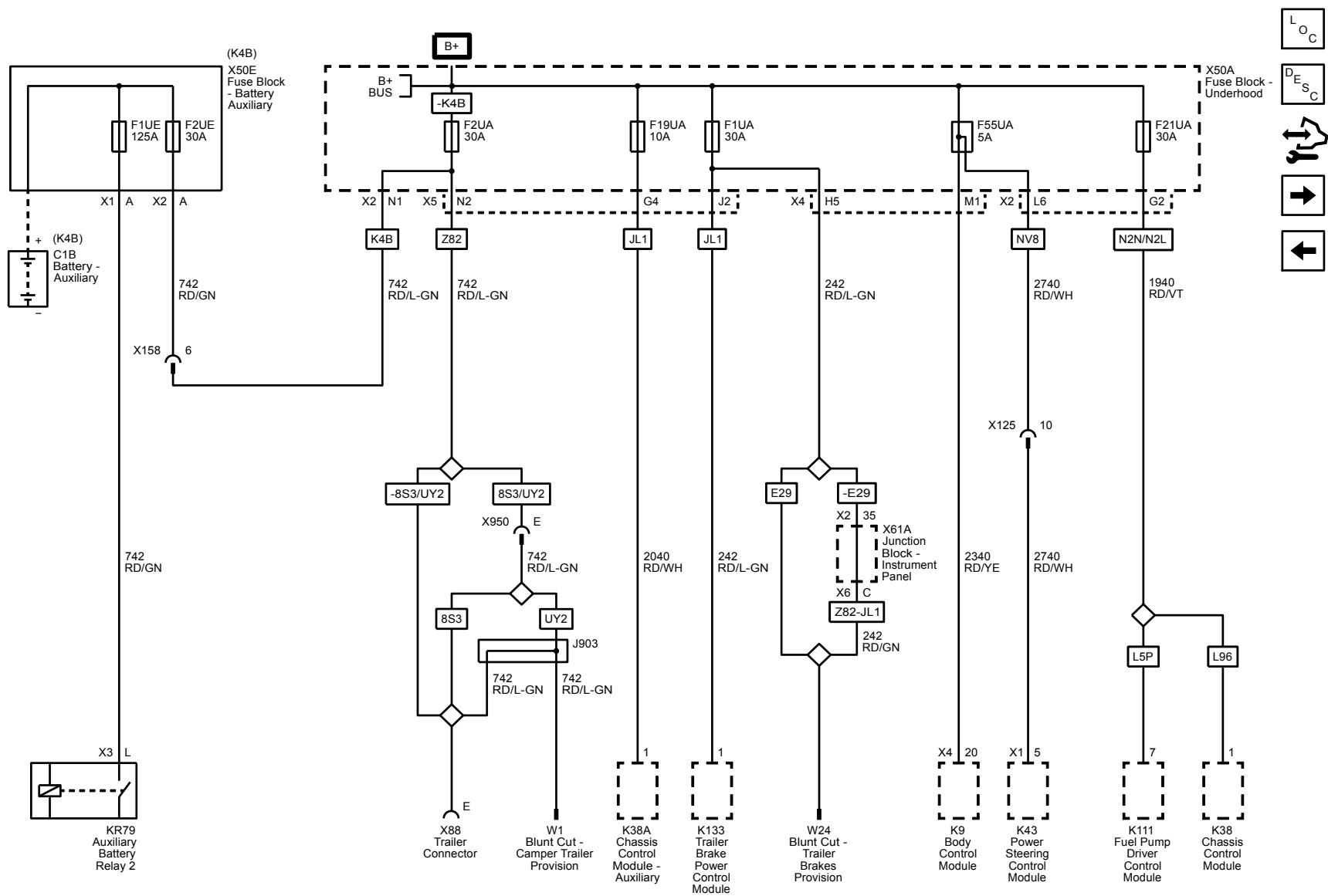


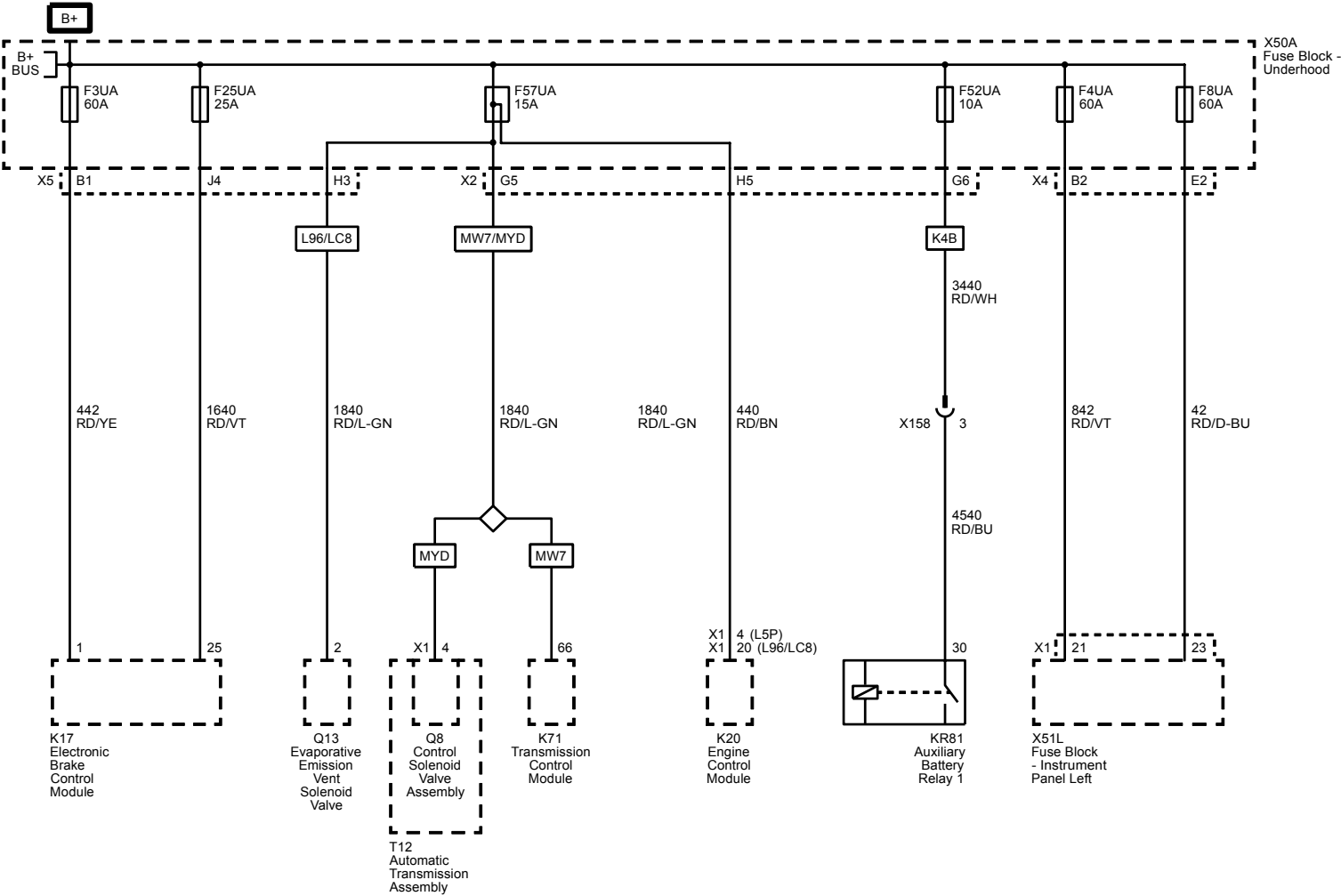
B+ Bus X50A Fuse Block - Underhood 1 of 2 (2500/3500)



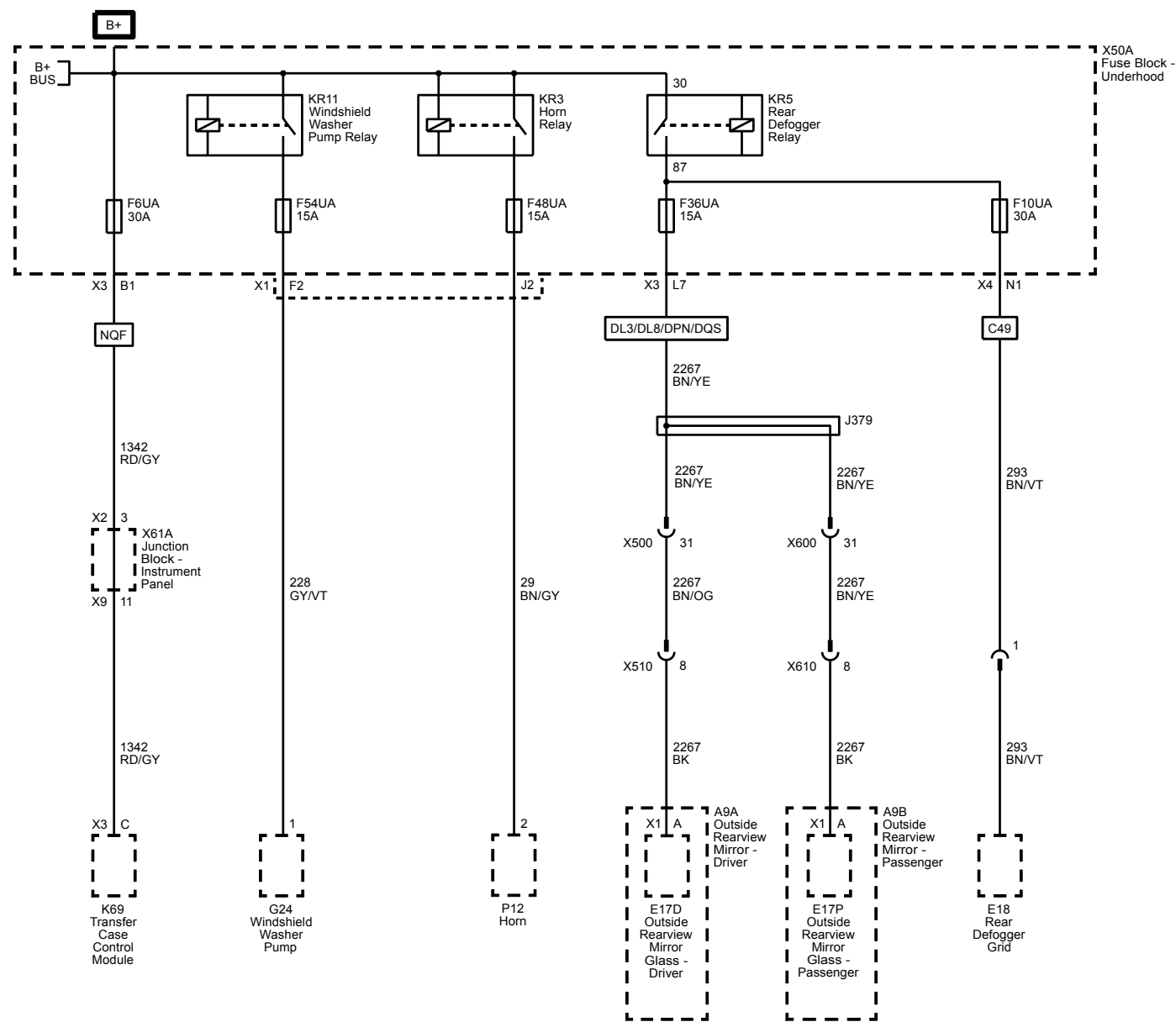


F1UA, F1UE, F2UA, F2UE, F19UA, F21UA, and F55UA Fuses (2500/3500)

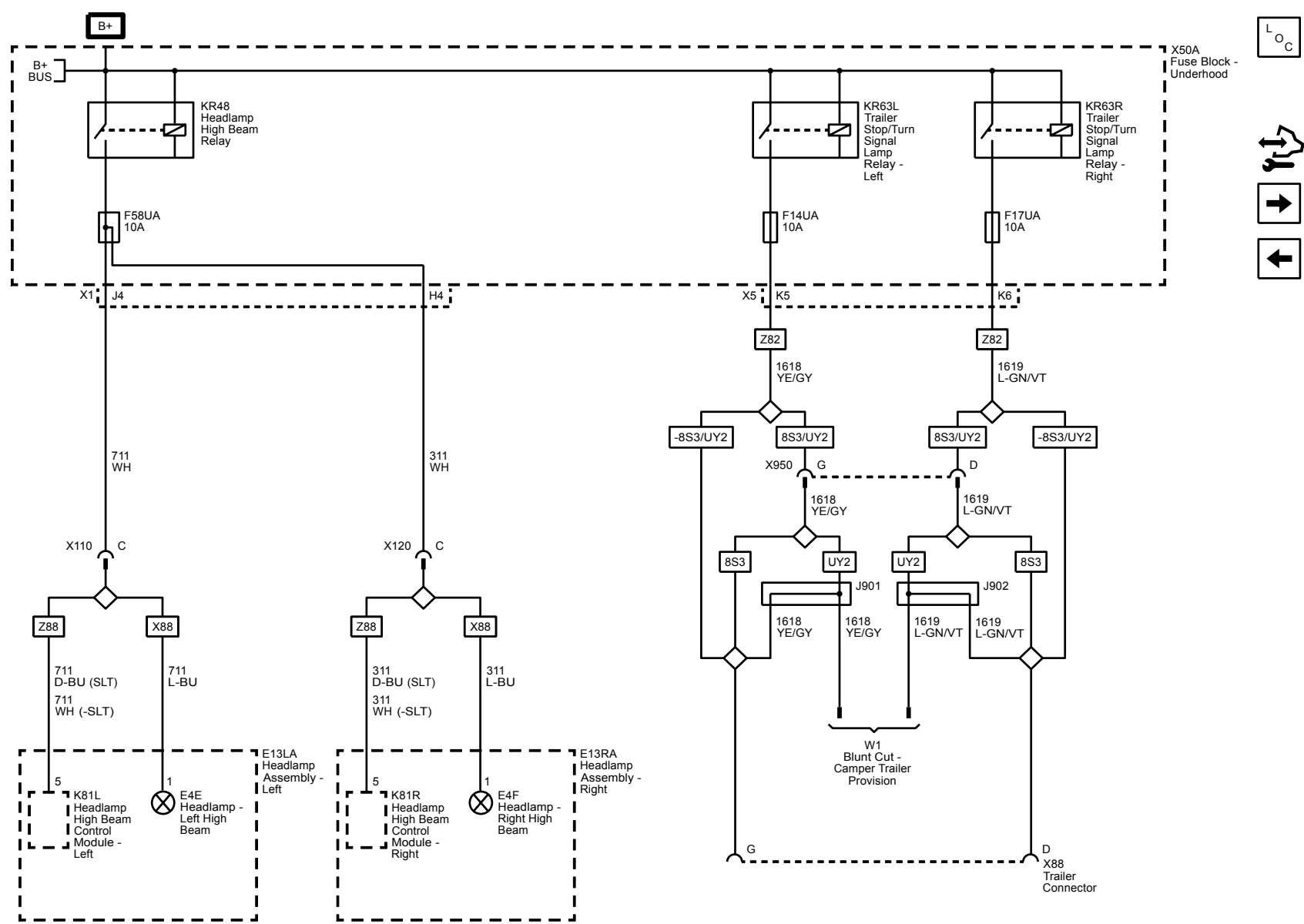




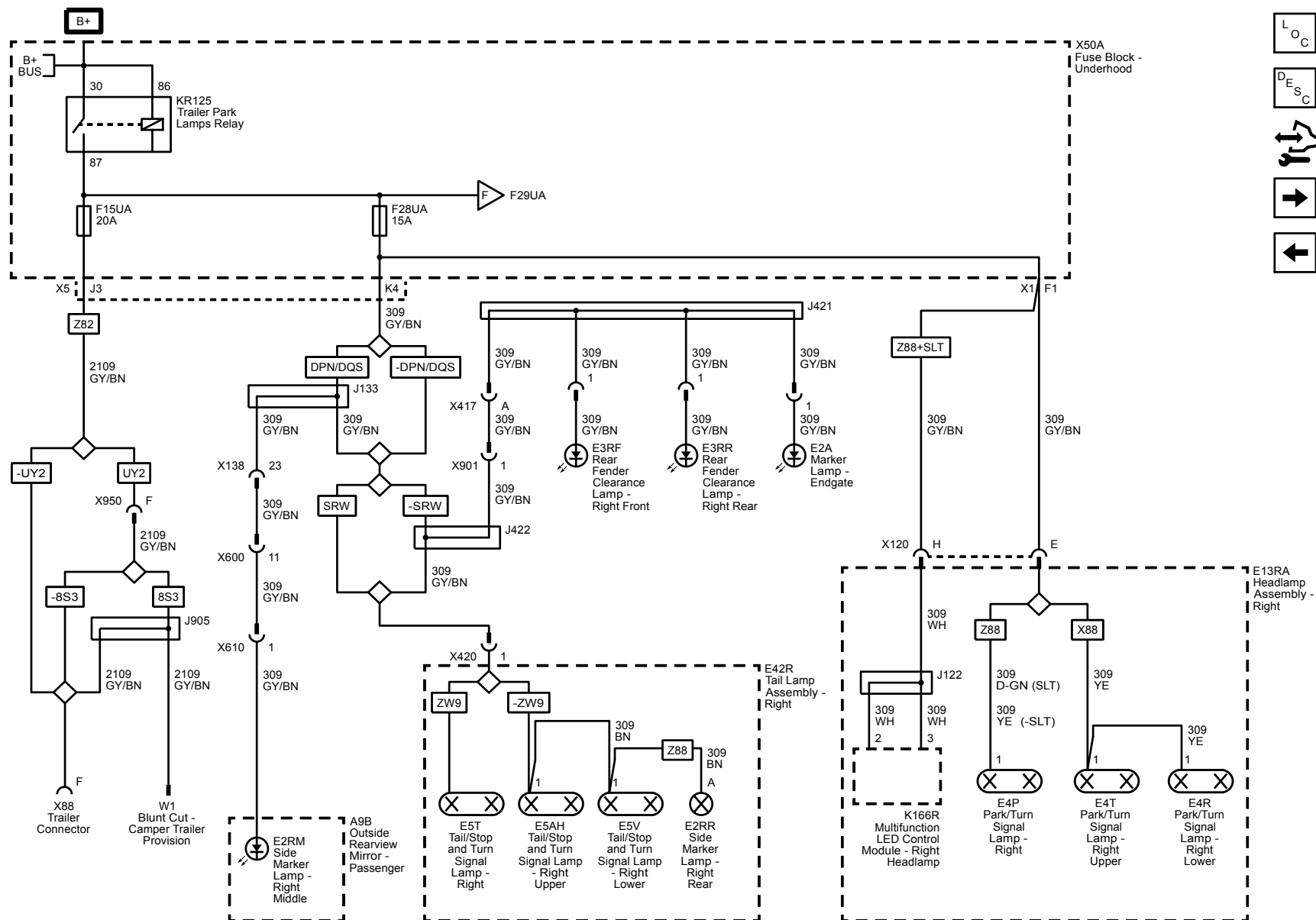
F6UA, F10UA, F36UA, F48UA and F54UA Fuses (2500/3500)

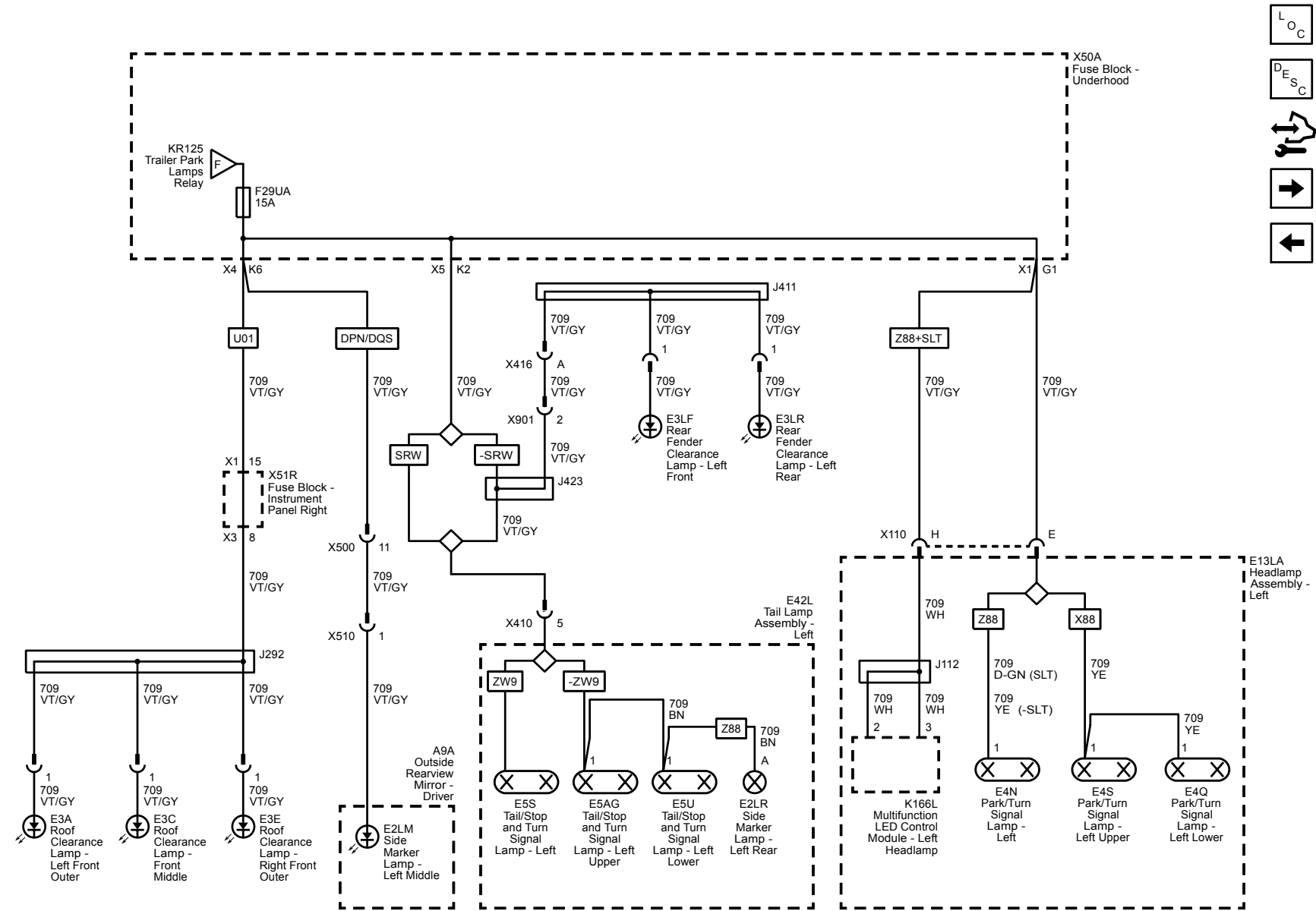


F14UA, F17UA and F58UA Fuses (2500/3500)

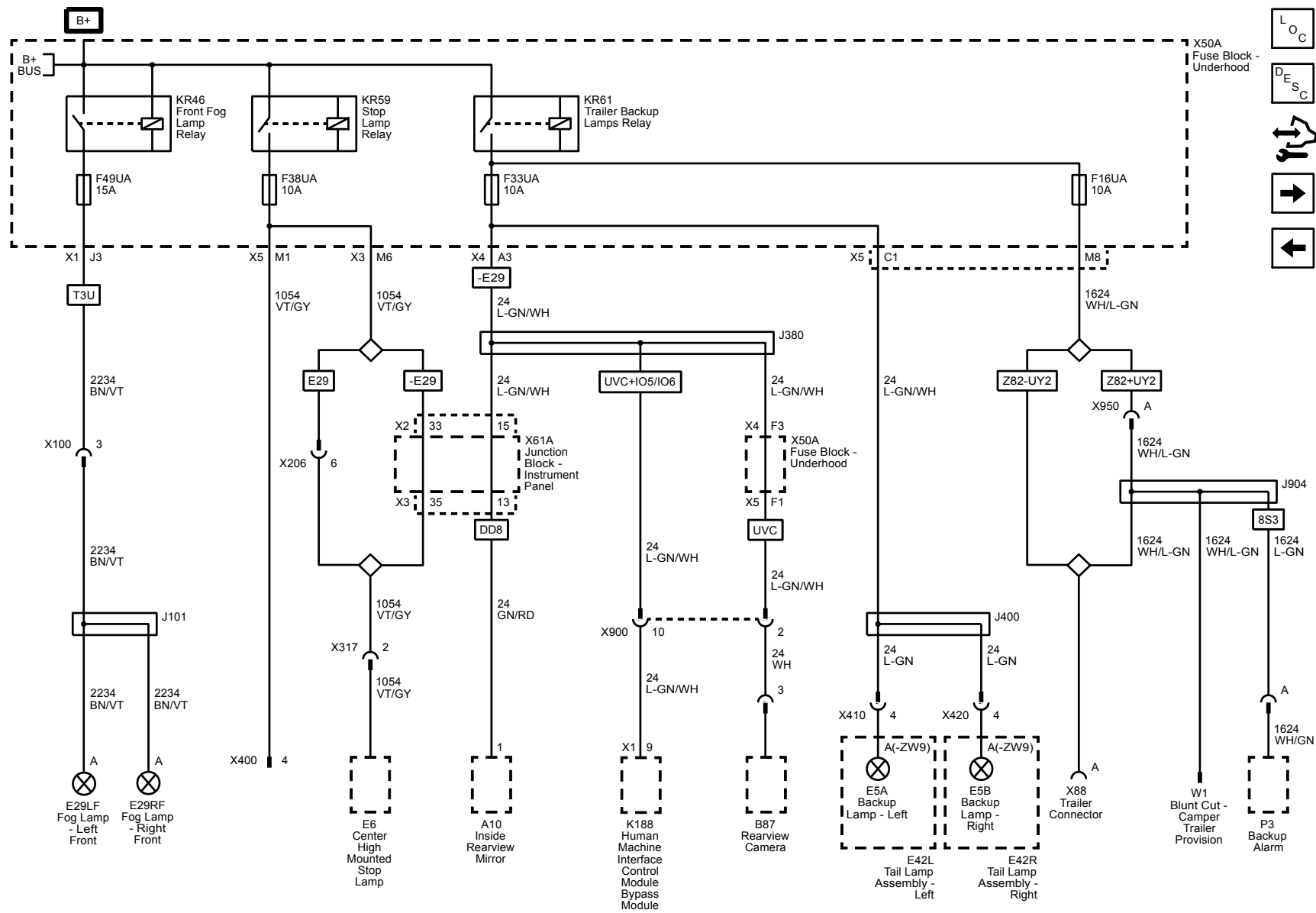


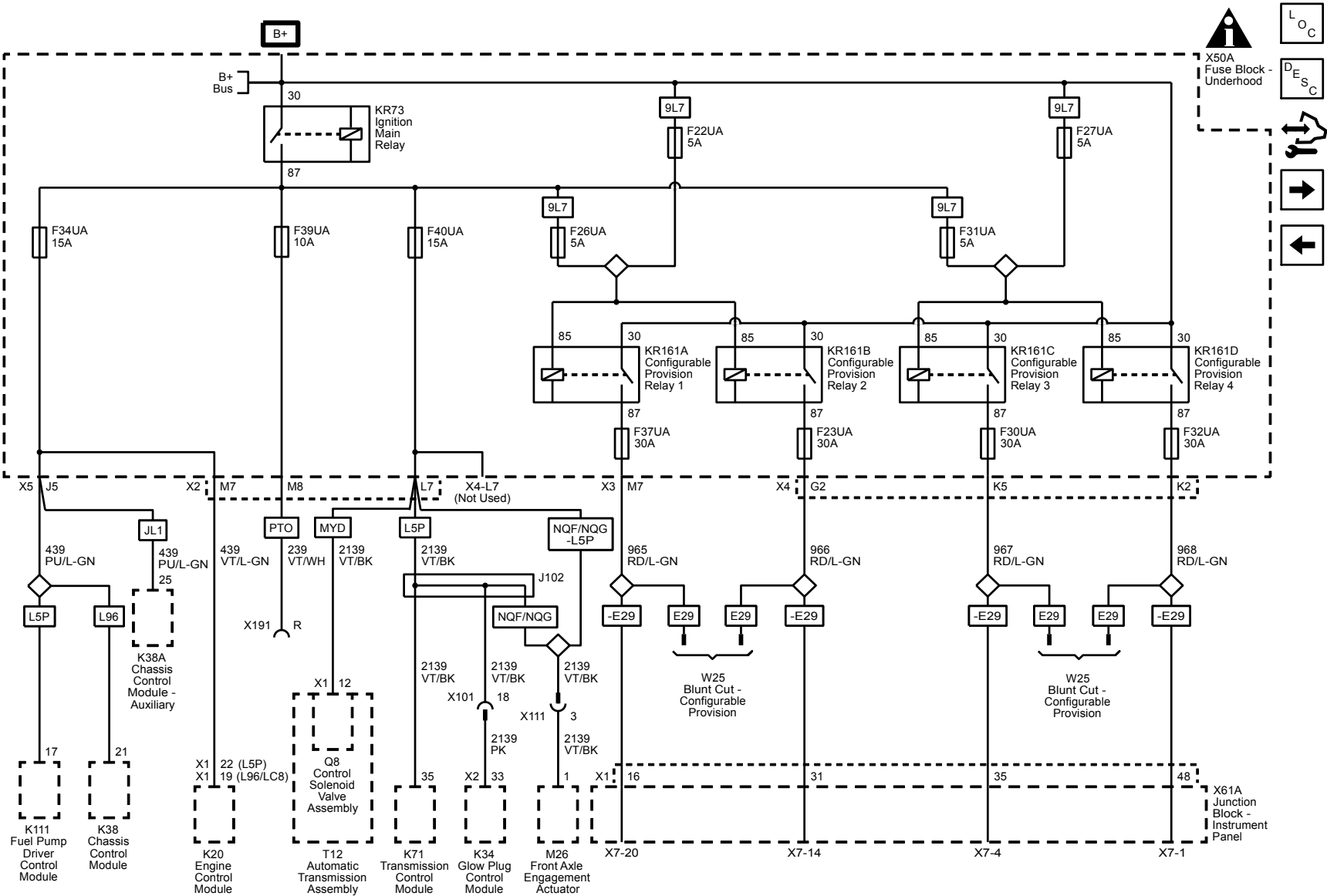
F15UA and F28UA Fuses (2500/3500)



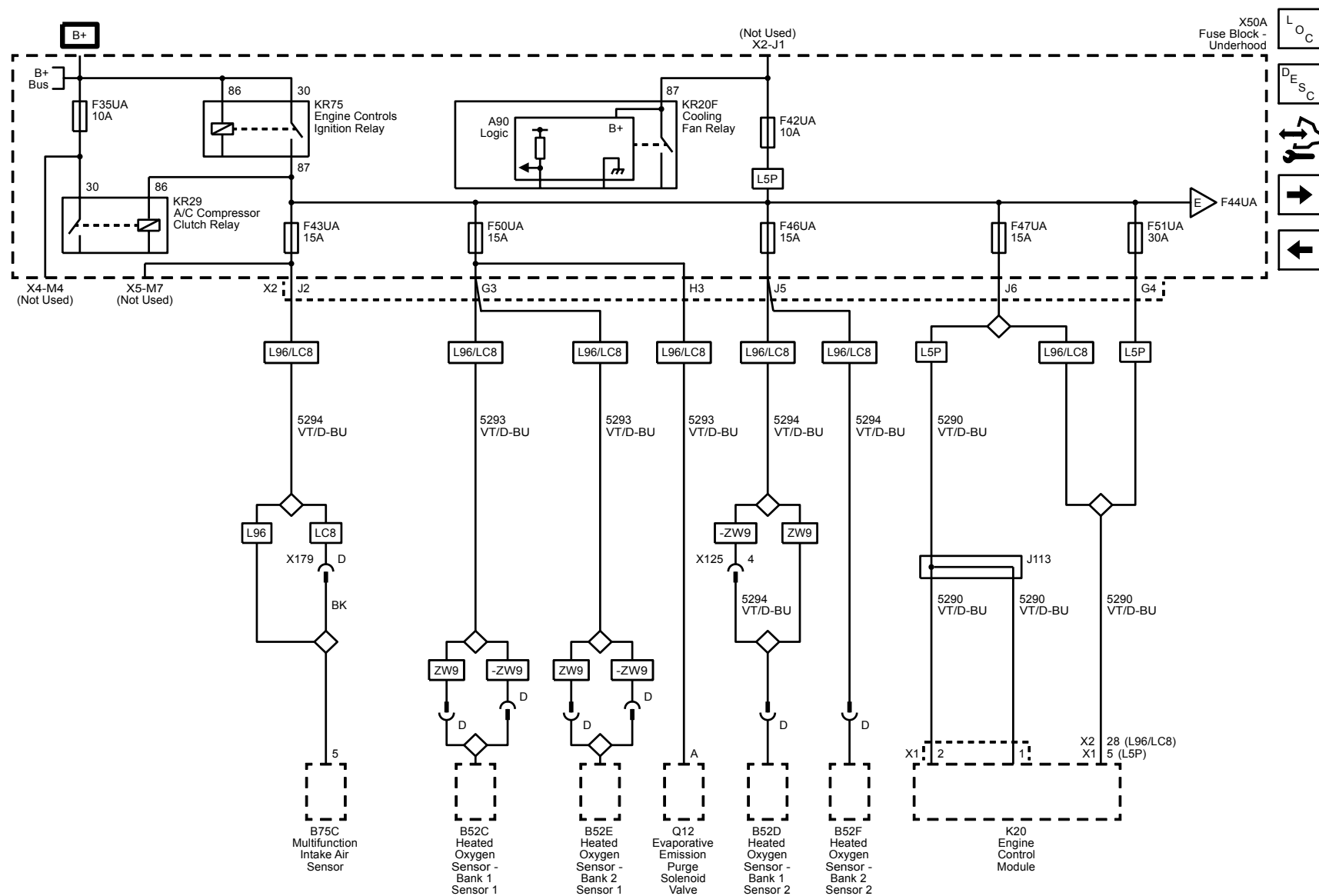


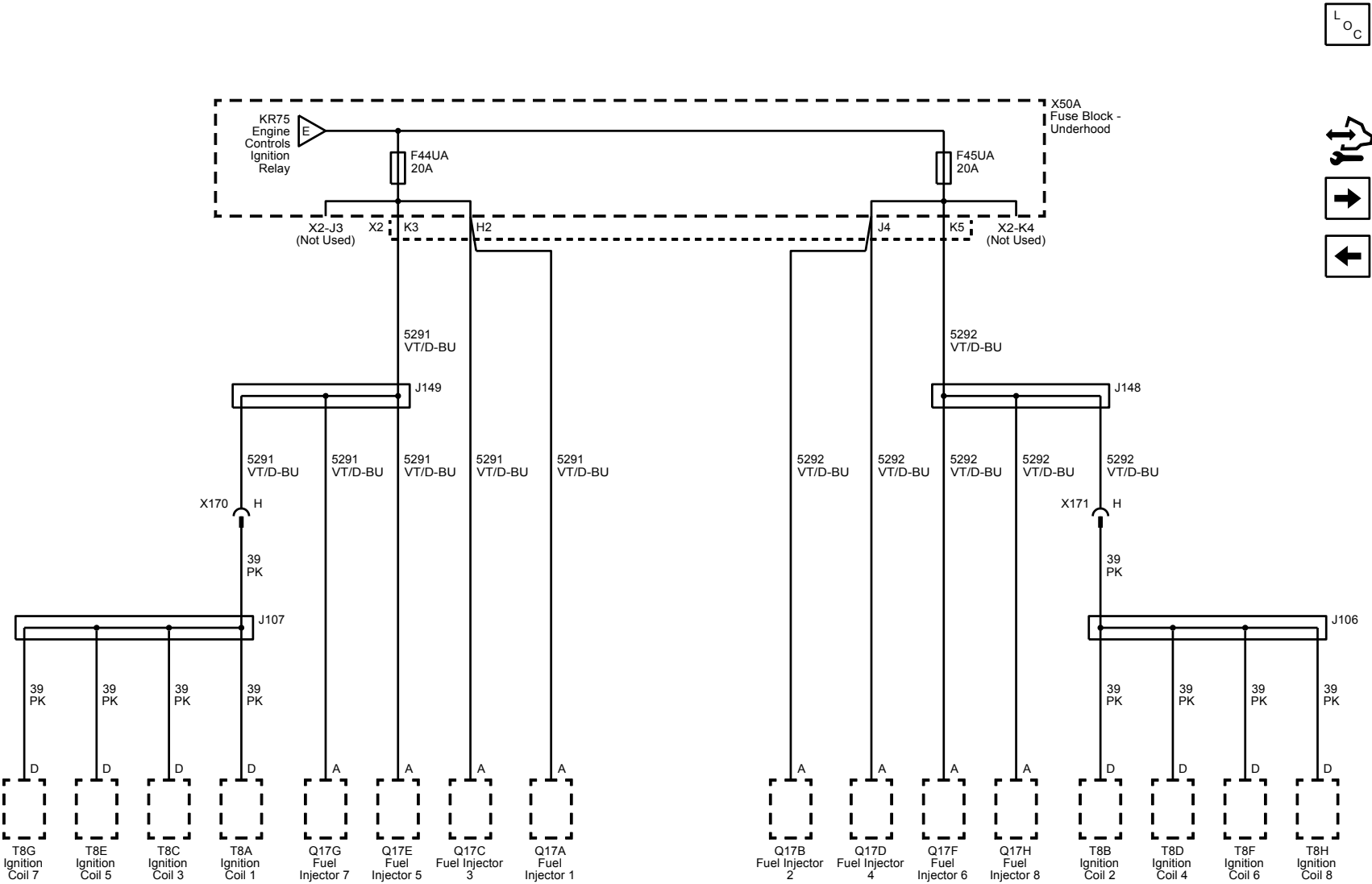
F16UA, F33UA, F38UA and F49UA Fuses (2500/3500)

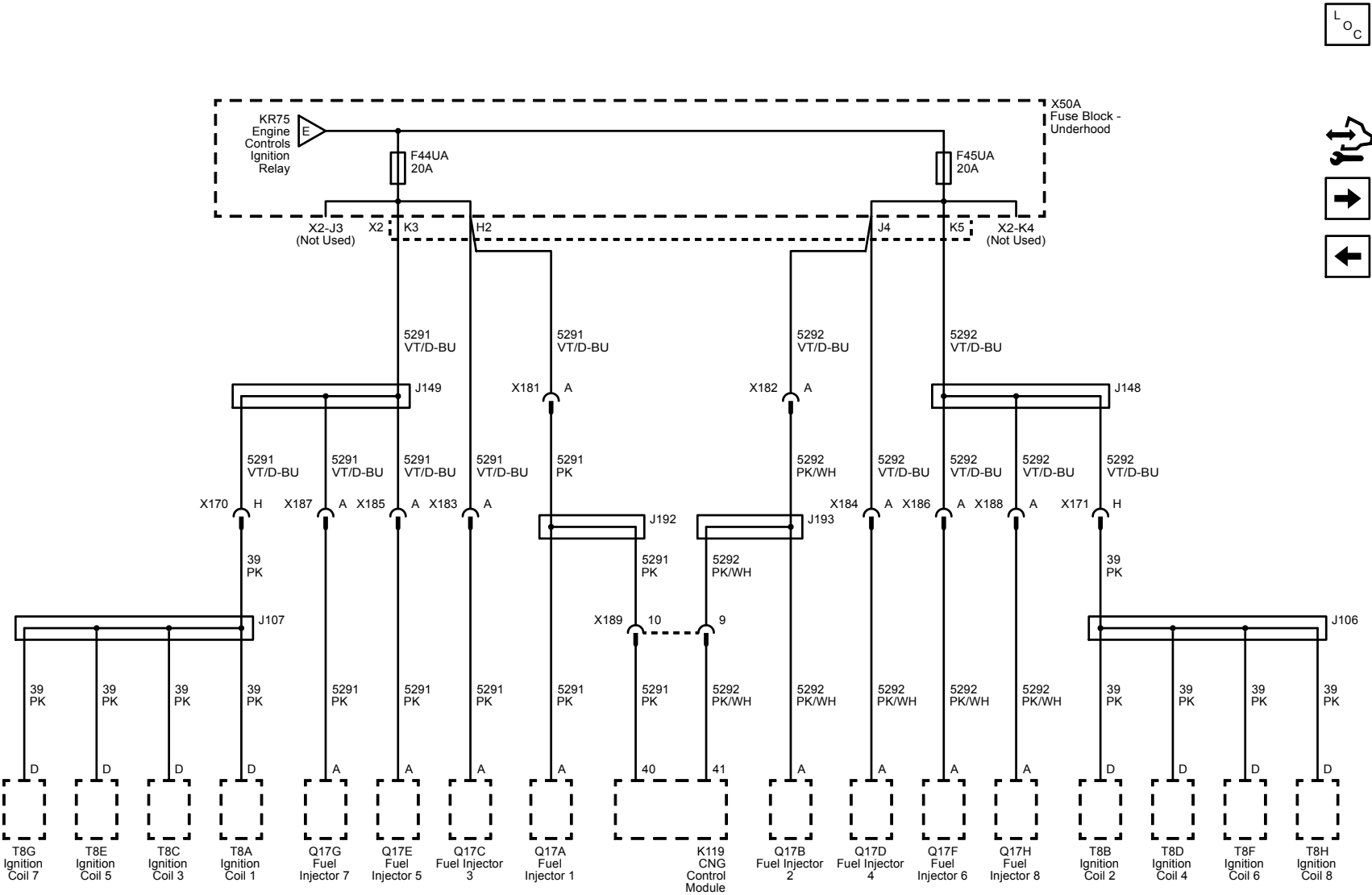




F35UA, F42UA, F43UA, F46UA, F47UA, F50UA and F51UA Fuses (2500/3500)



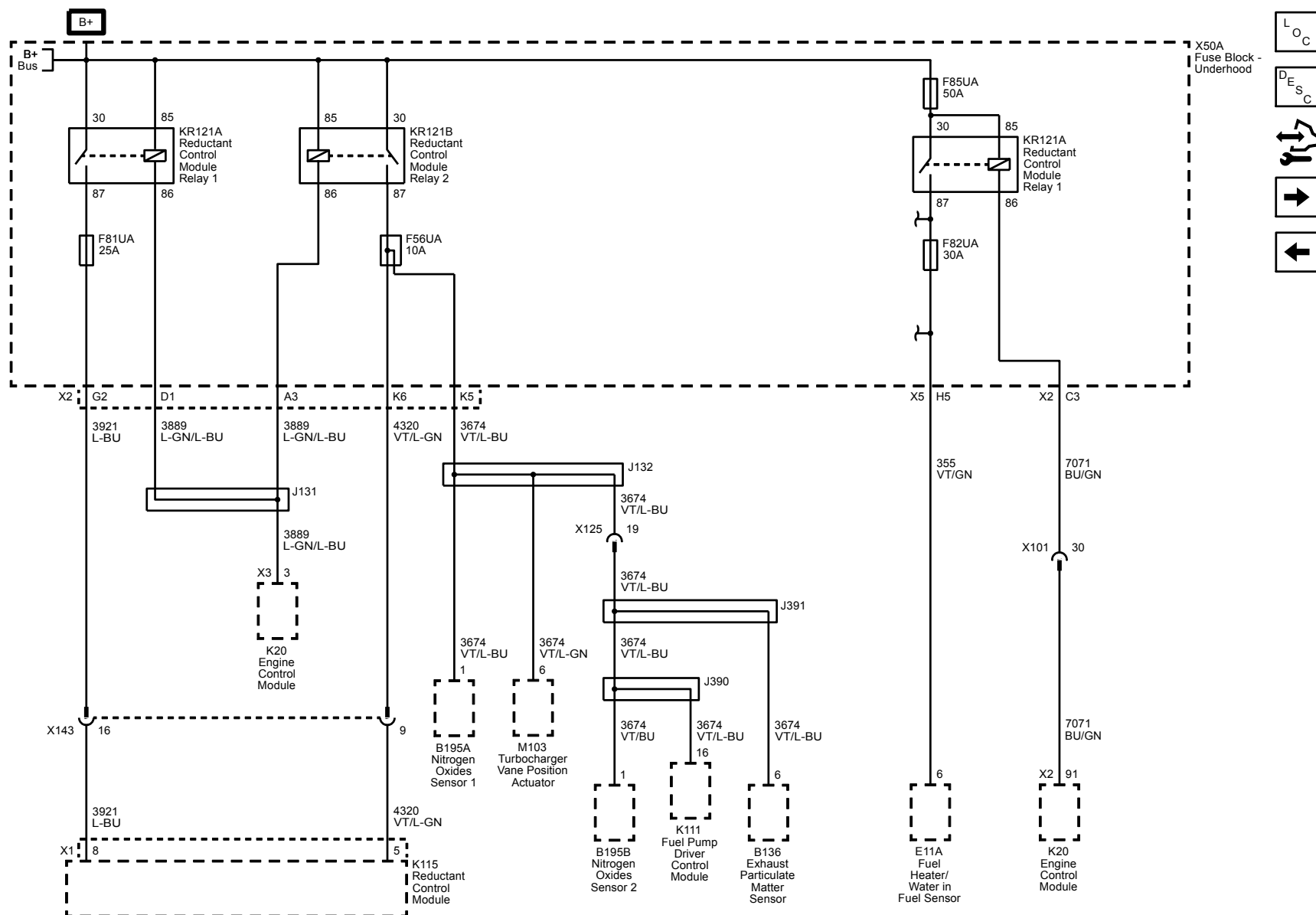




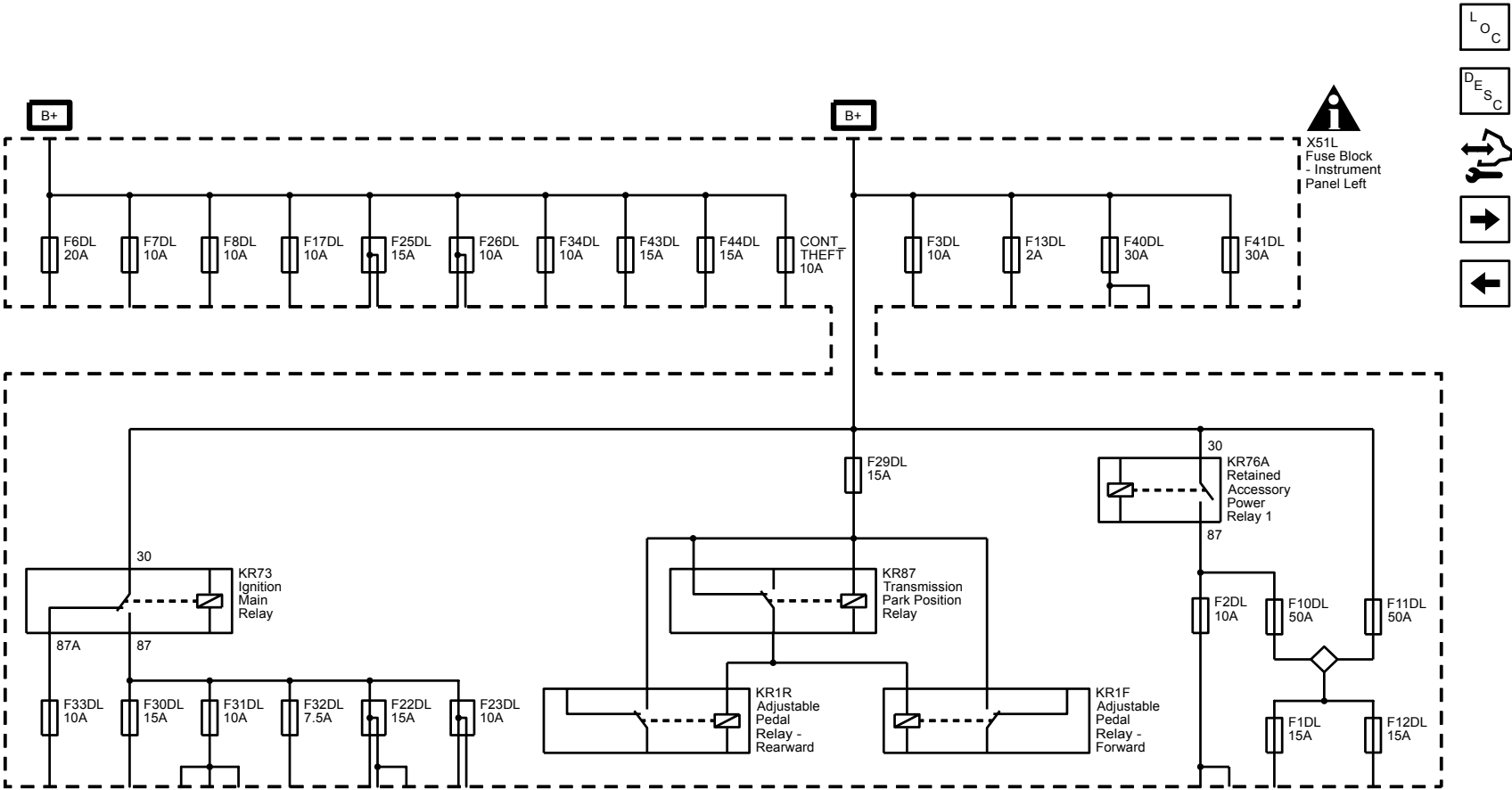
L O C



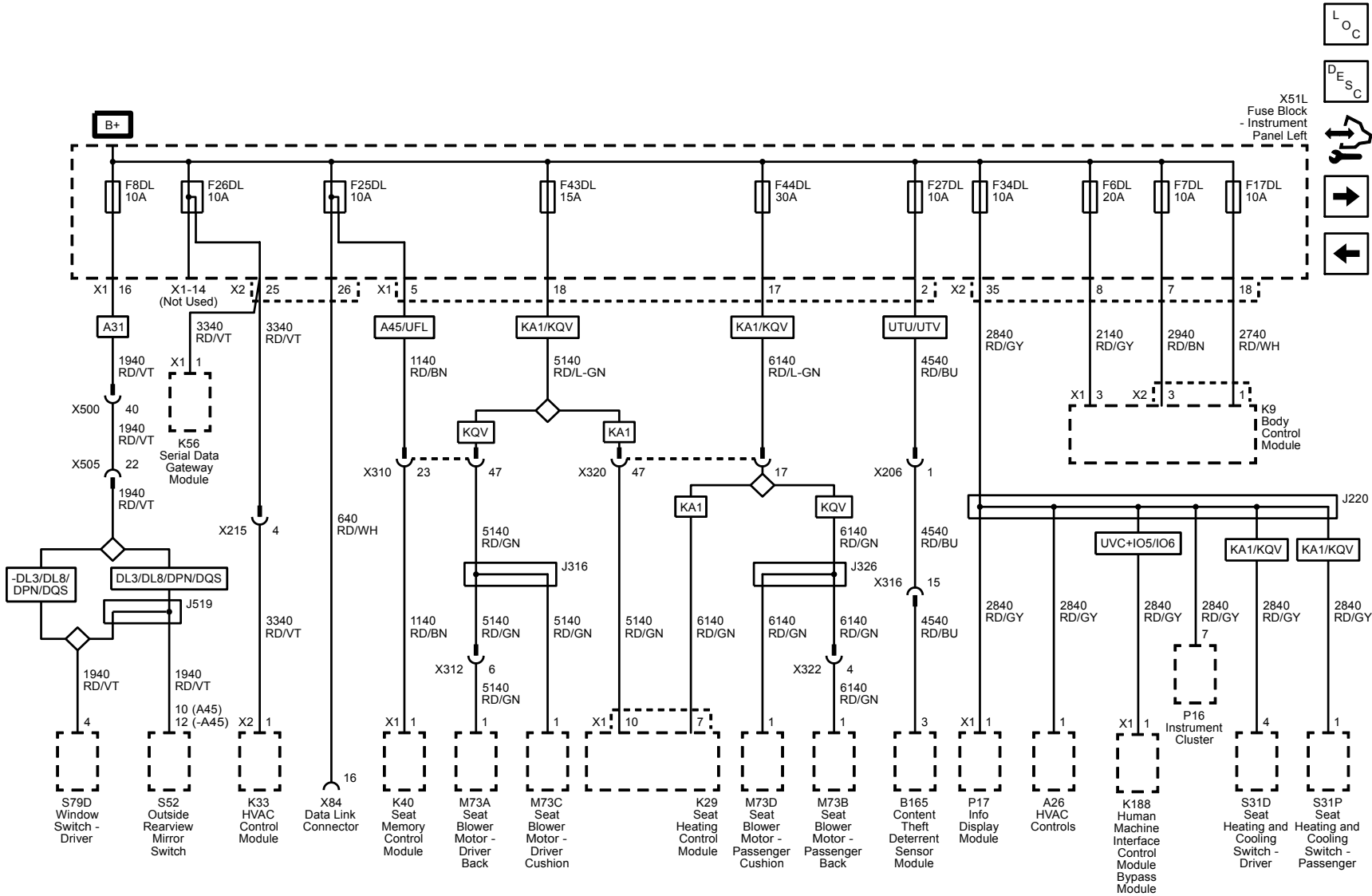
F56UA, F81UA, F82UA, and F85UA Fuses (L5P)



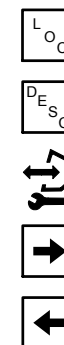
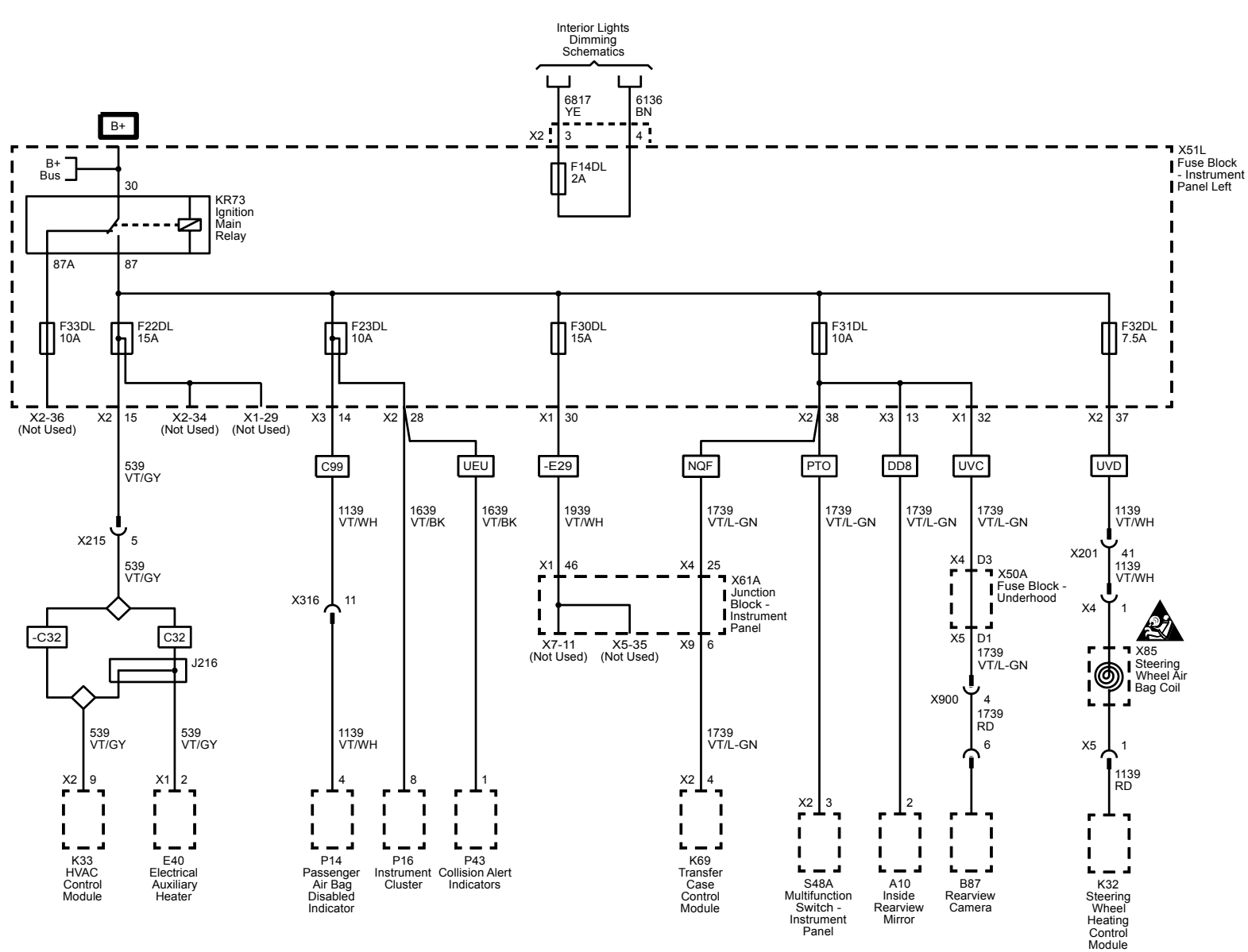
B+ Bus X51L Fuse Block - Instrument Panel Left (2500/3500)



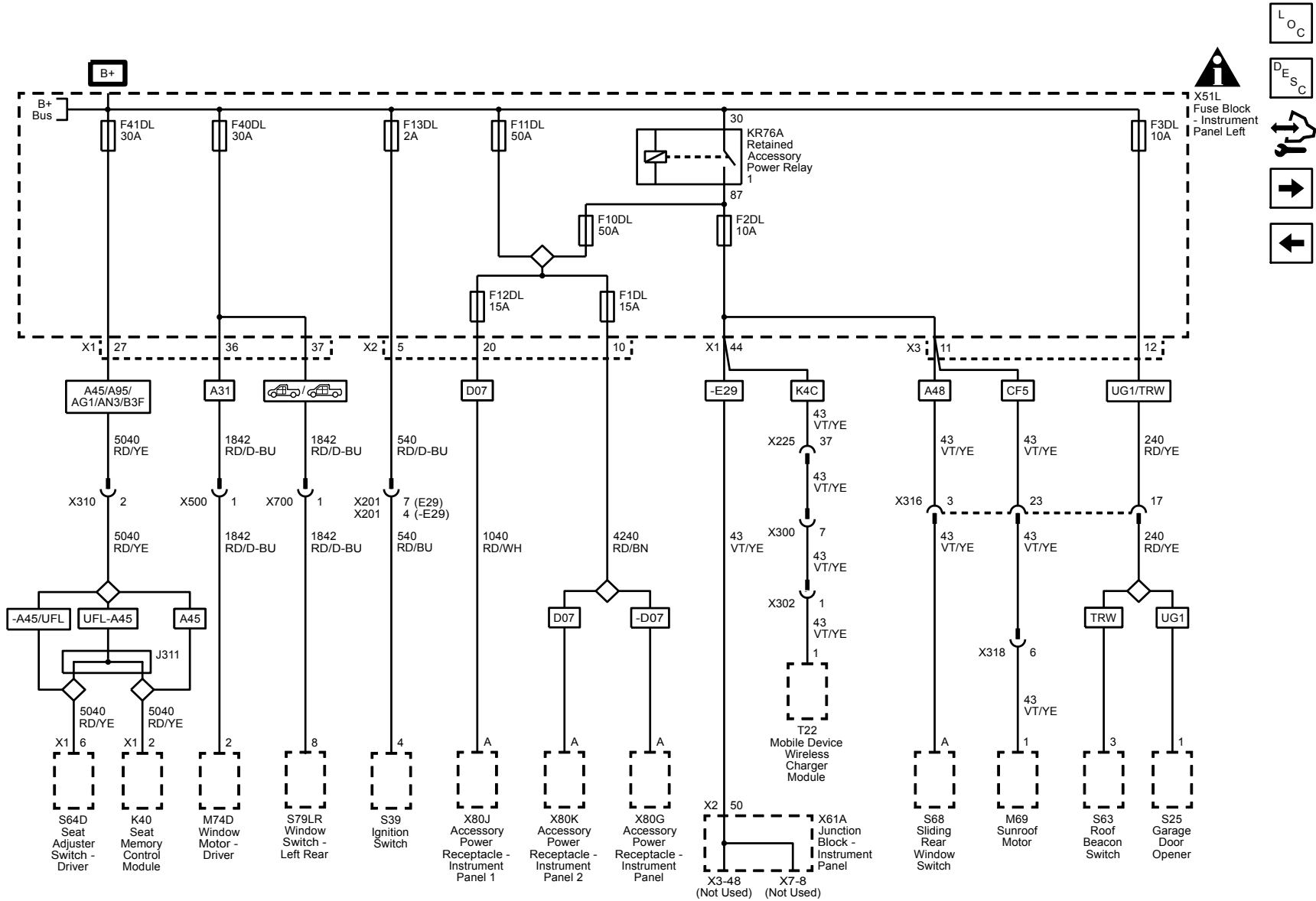
F6DL, F7DL, F8DL, F17DL, F25DL, F26DL, F34DL, F43DL and F44DL Fuses (2500/3500)



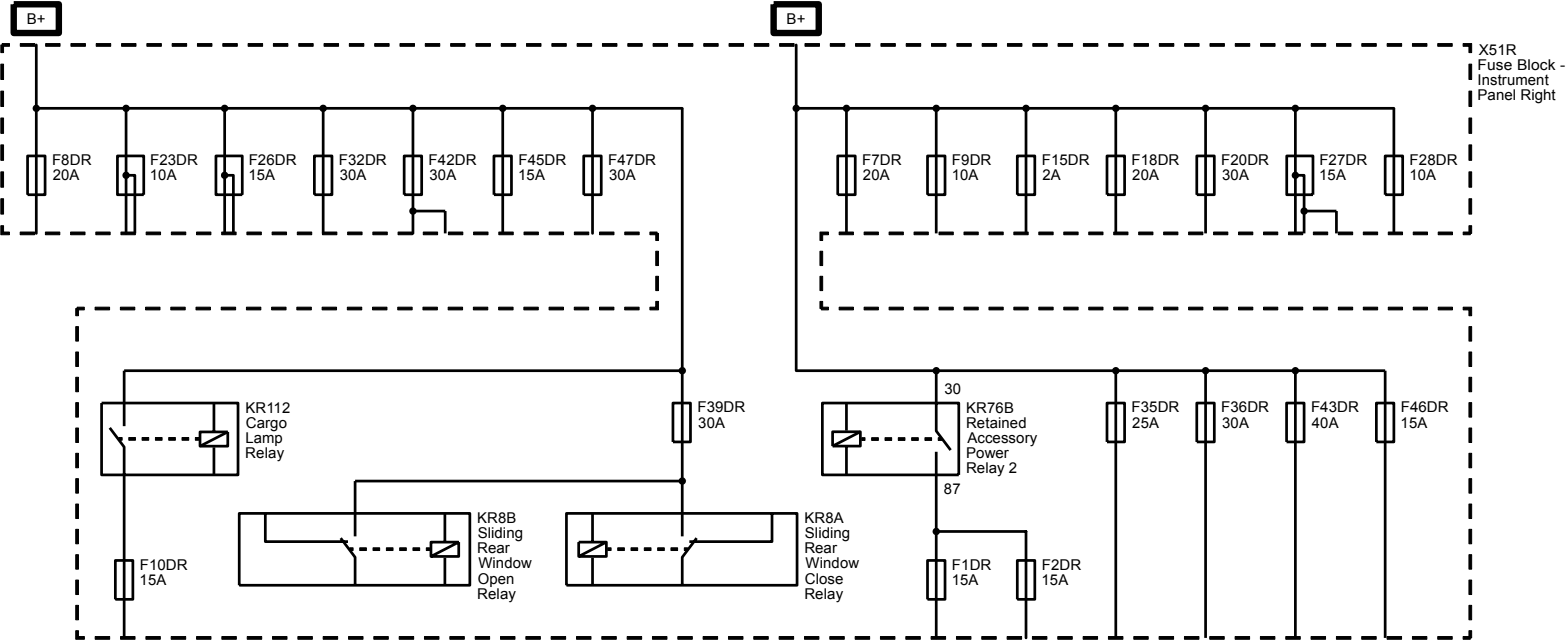
F14DL, F22DL, F23DL, F30DL, F31DL, F32DL and F33DL Fuses (2500/3500)

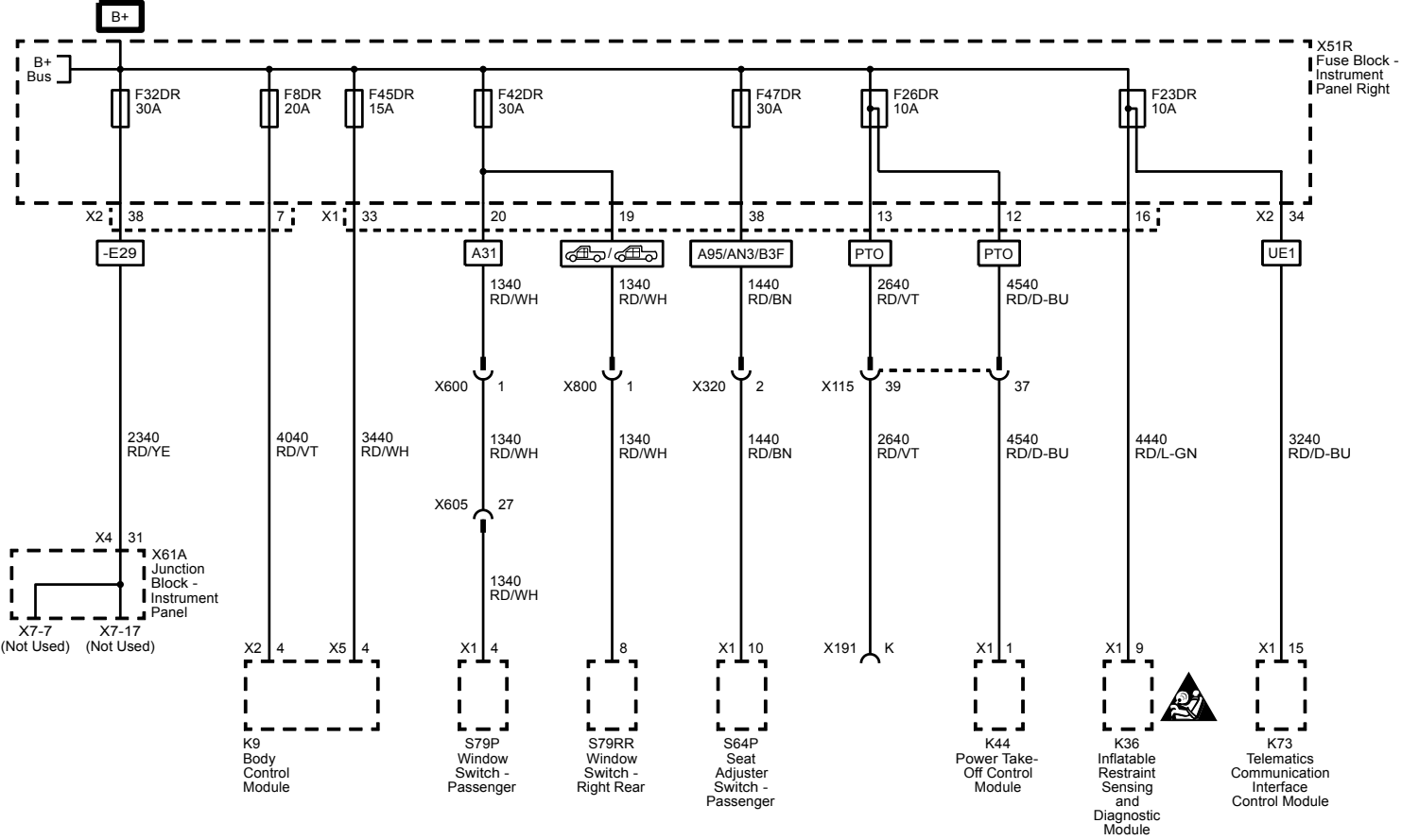


F1DL, F2DL, F3DL, F10DL, F11DL, F12DL, F13DL, F40DL and F41DL Fuses (2500/3500)

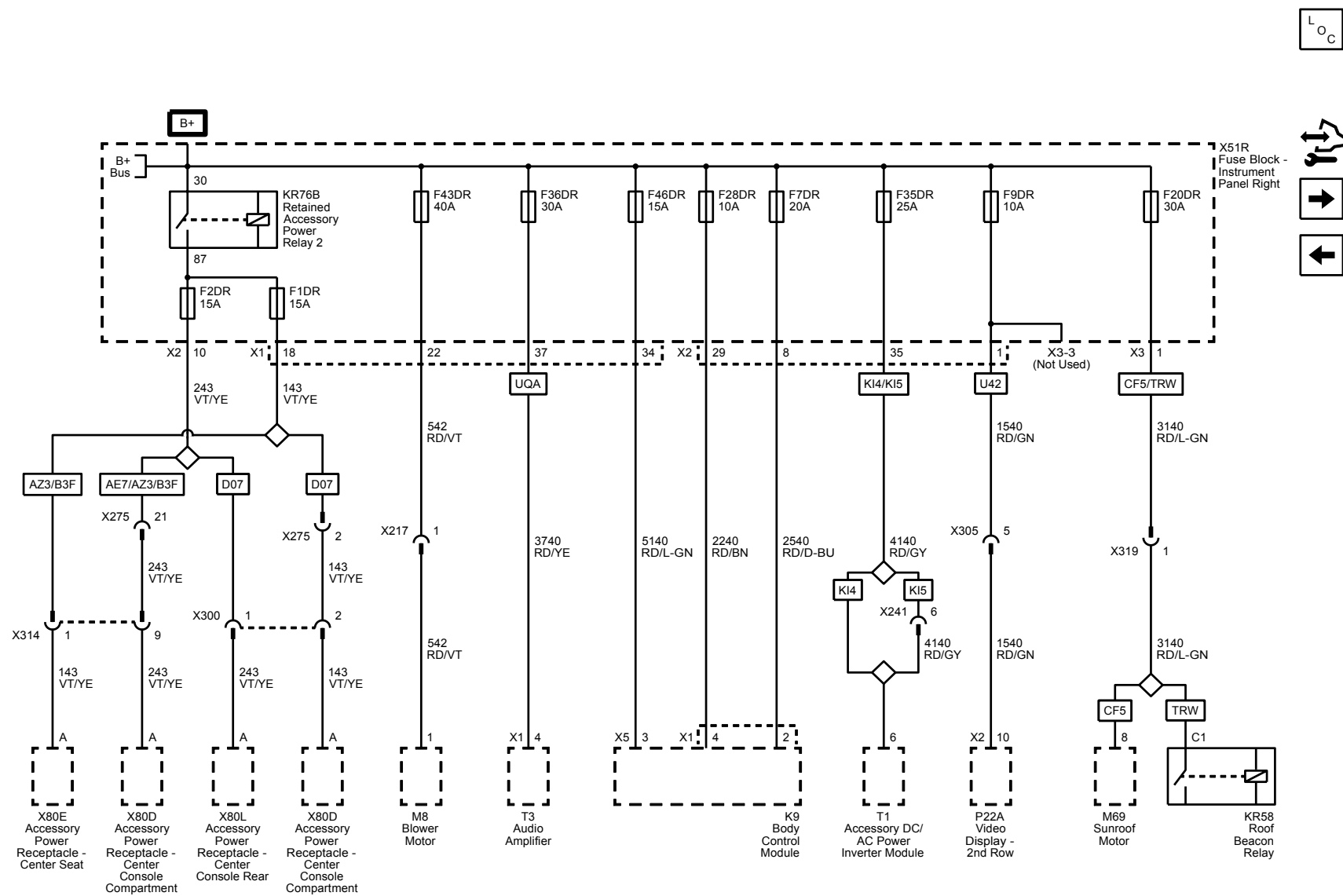


B+ Bus X51R Fuse Block - Instrument Panel Right (2500/3500)

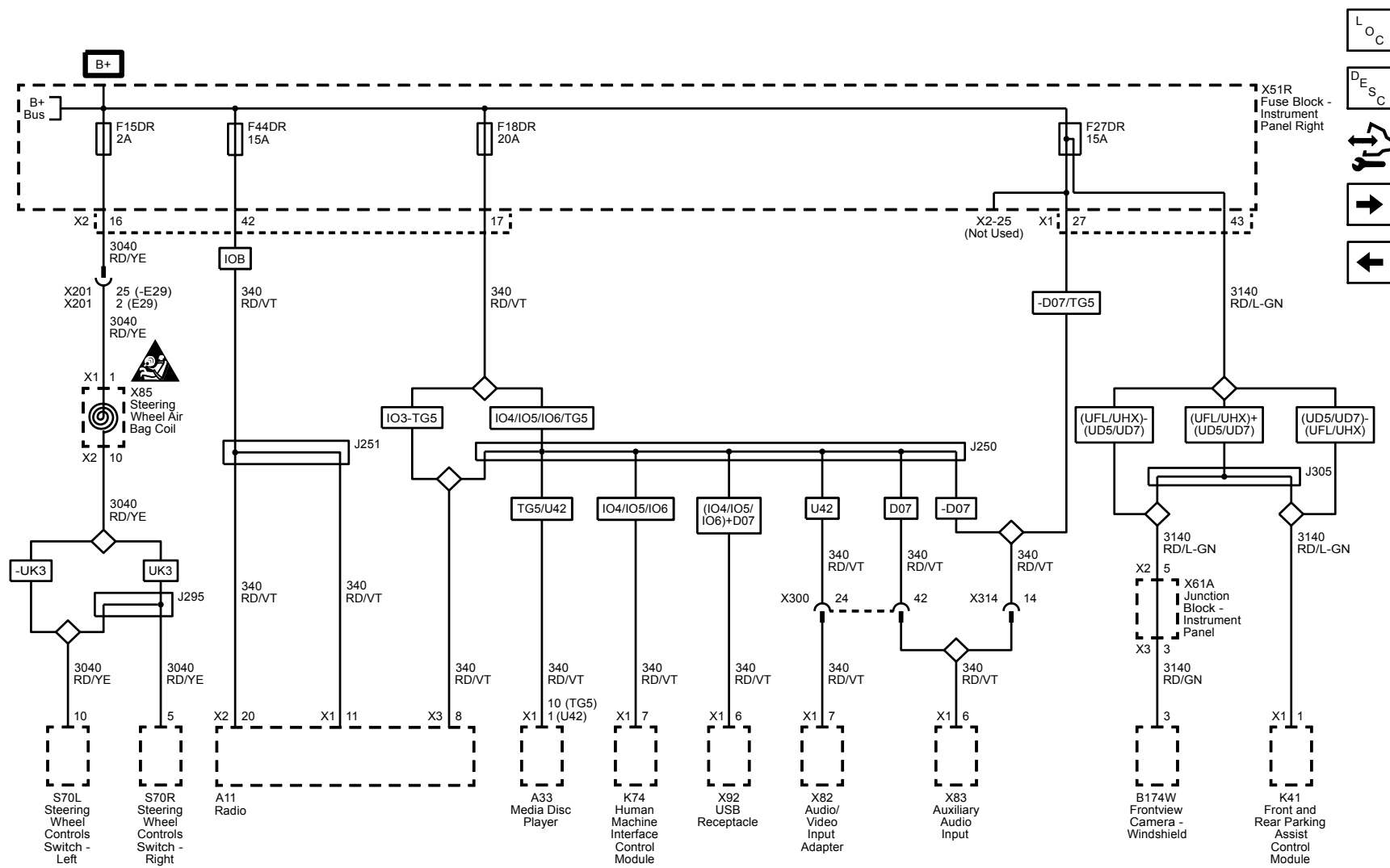




F1DR, F2DR, F7DR, F9DR, F20DR, F28DR, F35DR, F36DR, F43DR and F46DR Fuses (2500/3500)



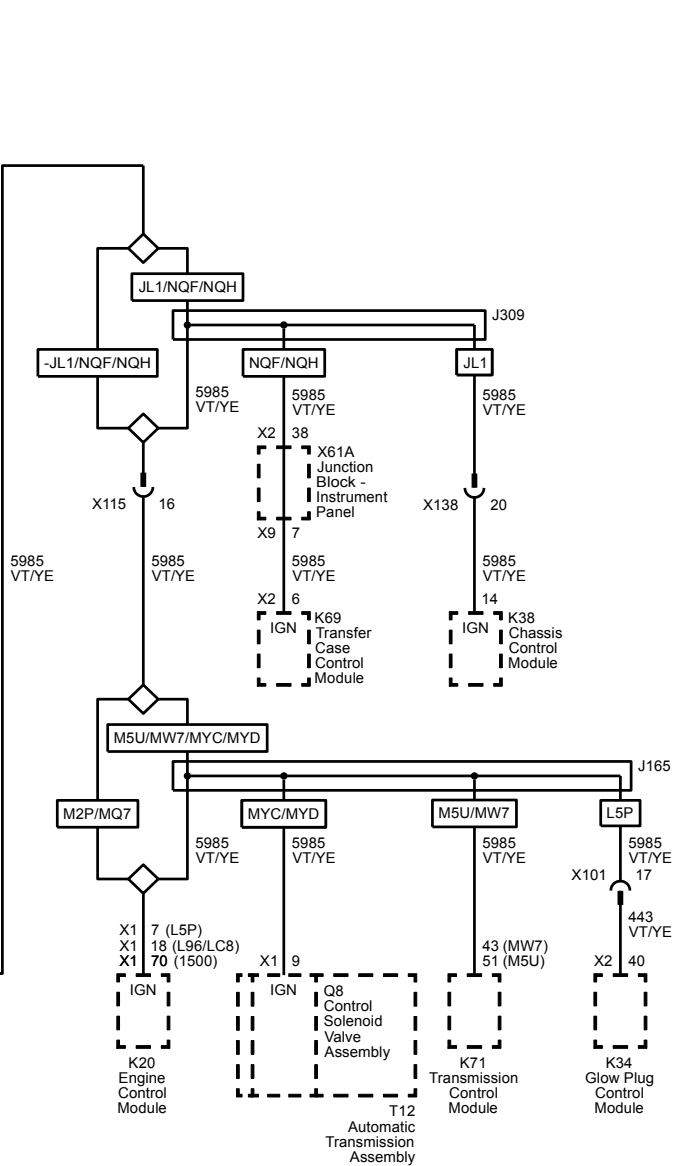
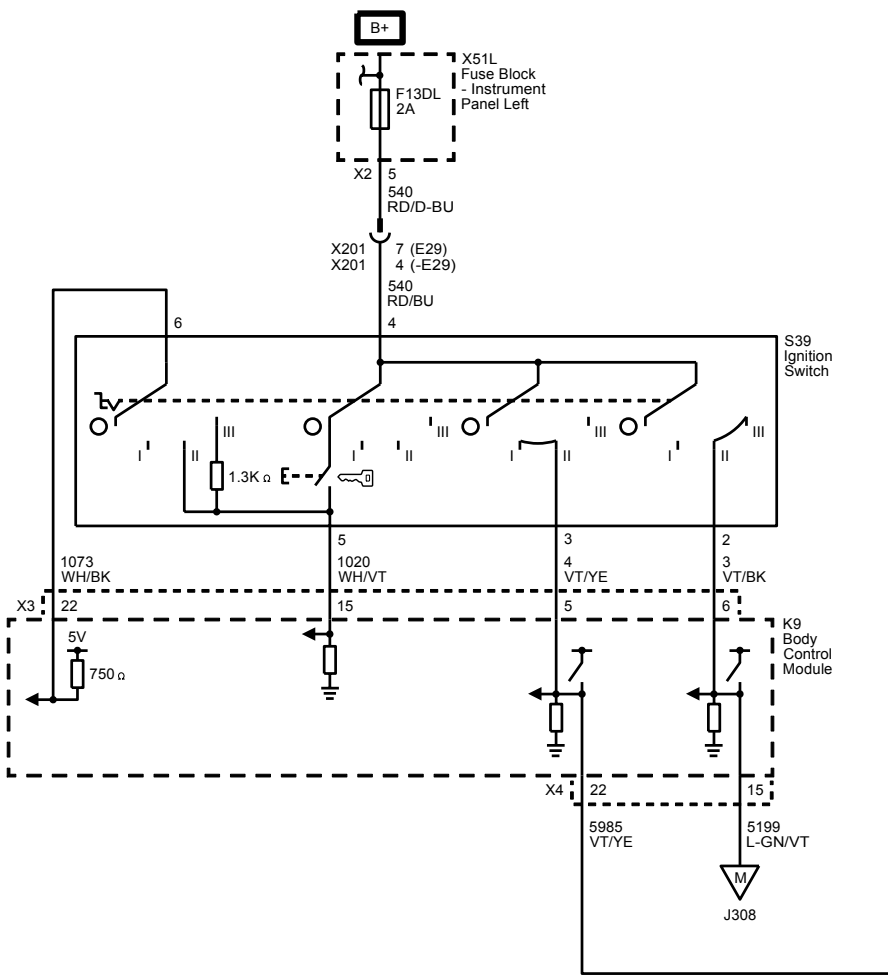
F15DR, F18DR, F27DR and F44DR Fuses (2500/3500)



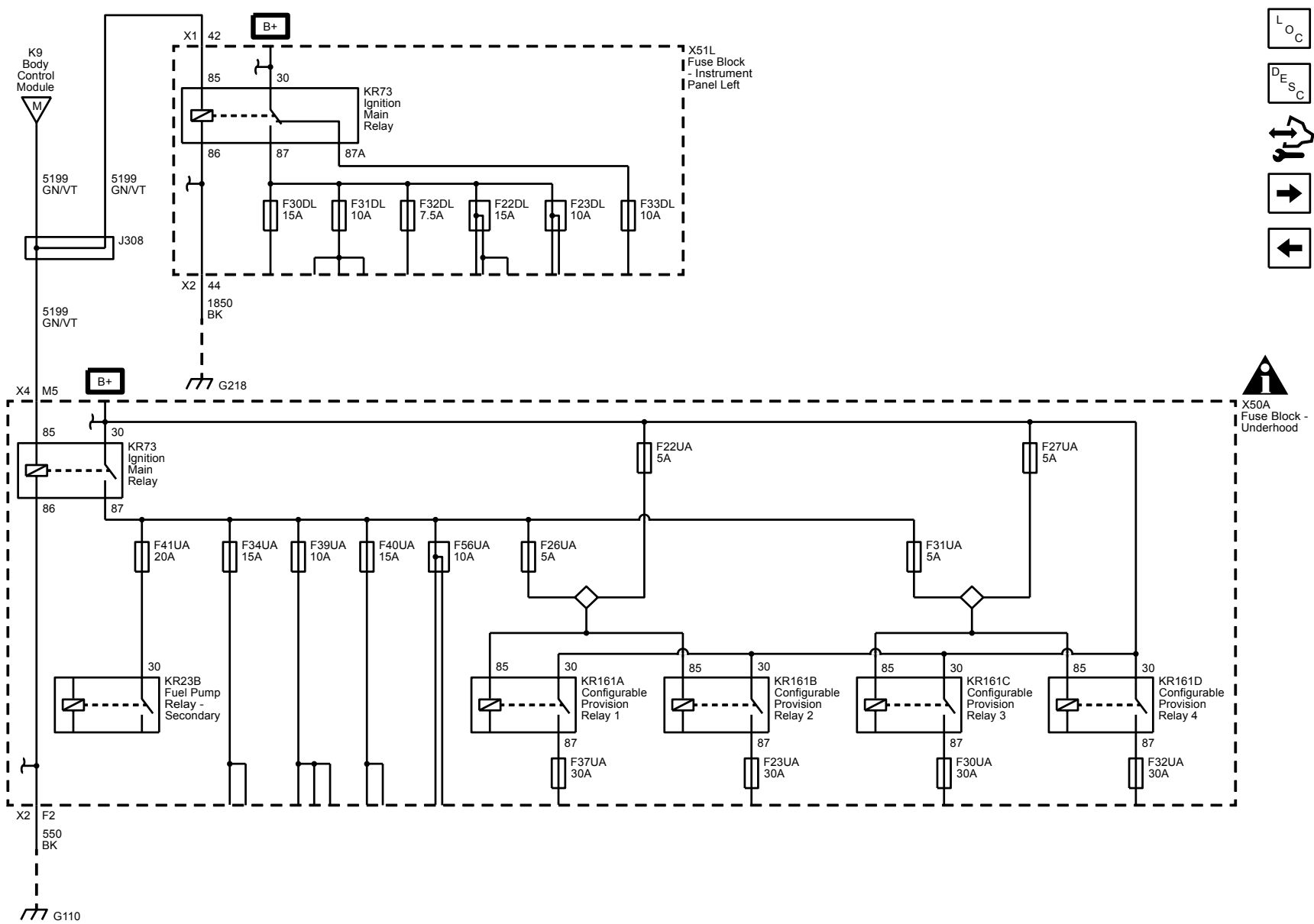
F10DR Fuse (2500/3500)

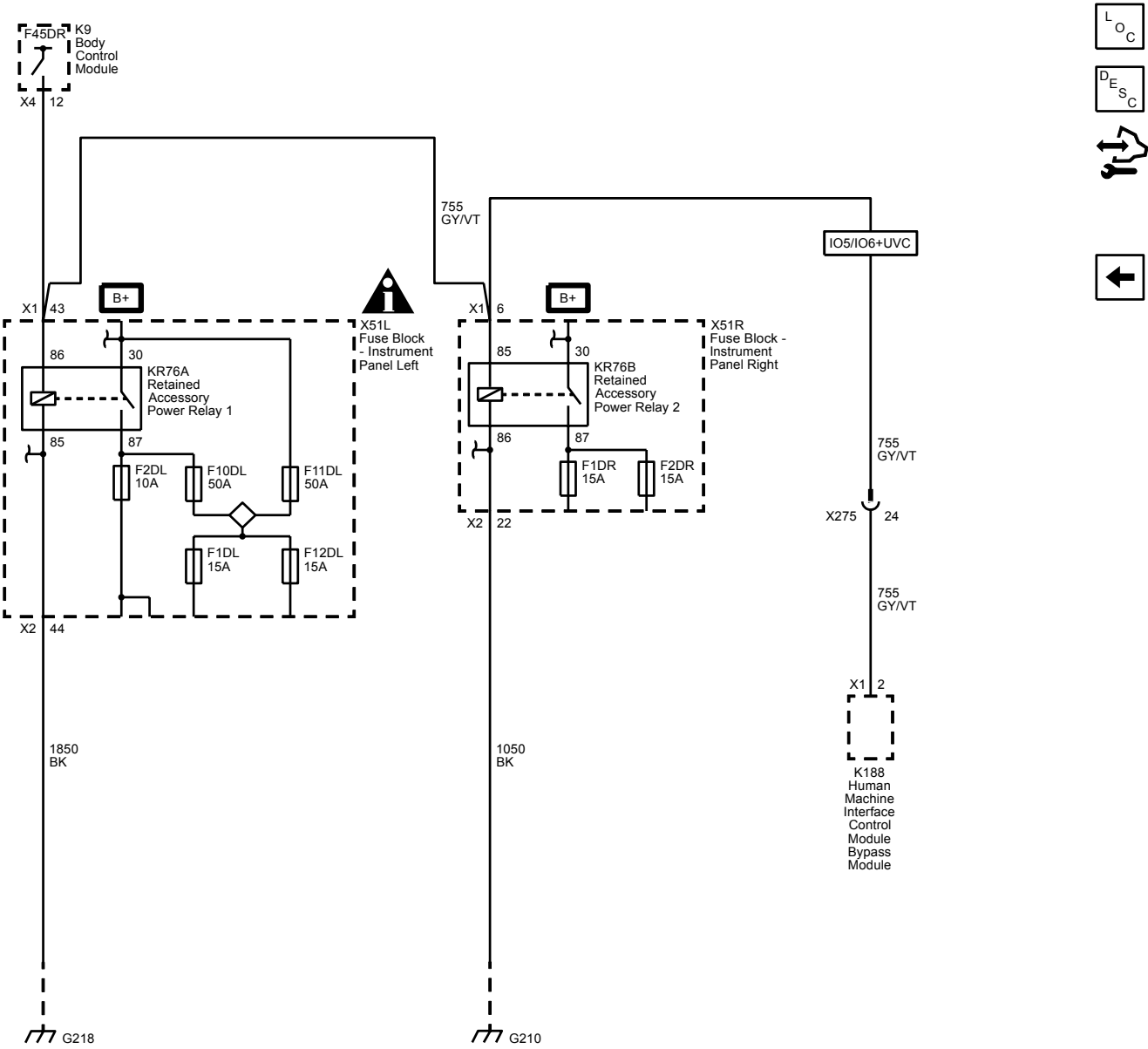


Ignition Switch and Ignition Power

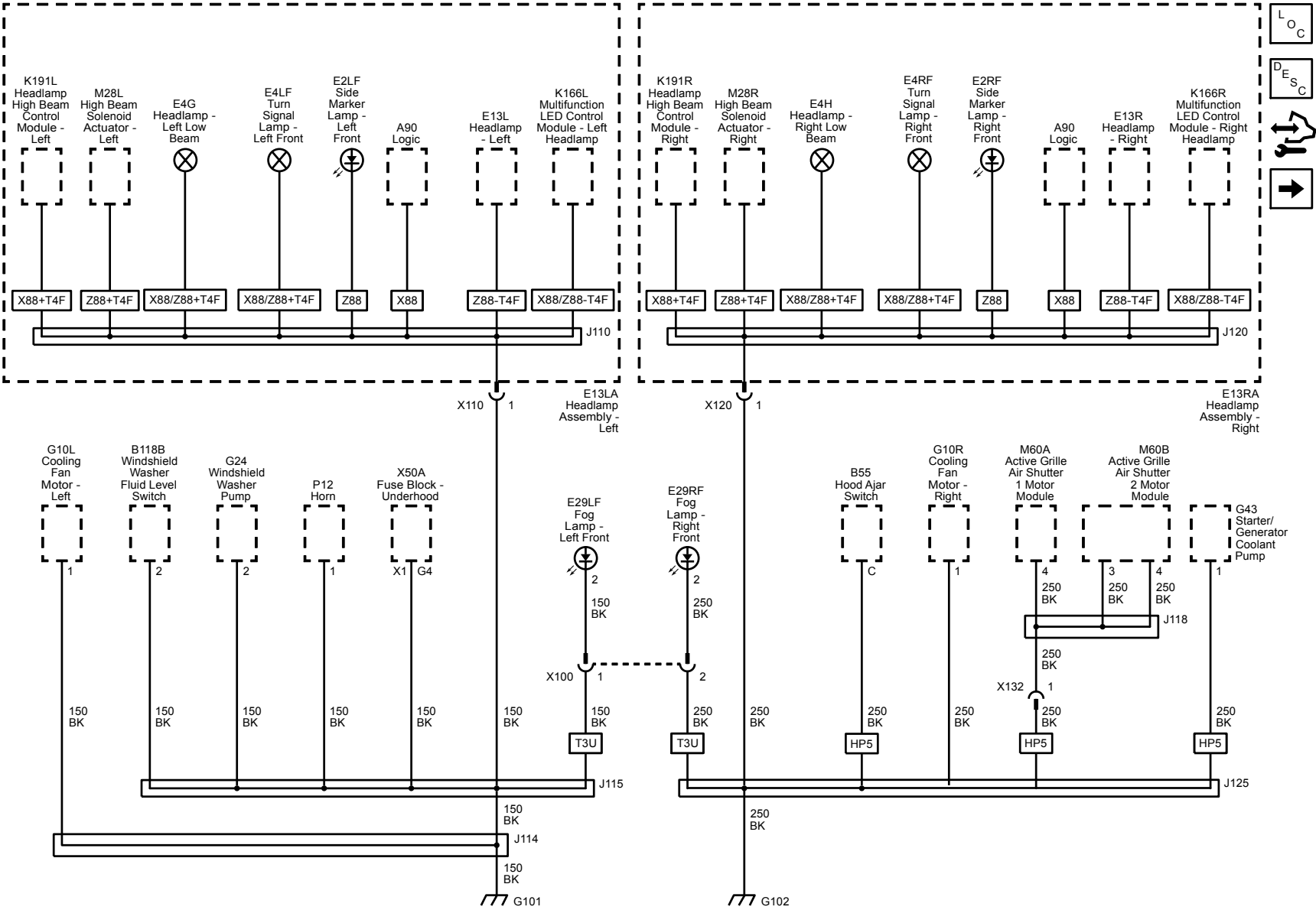


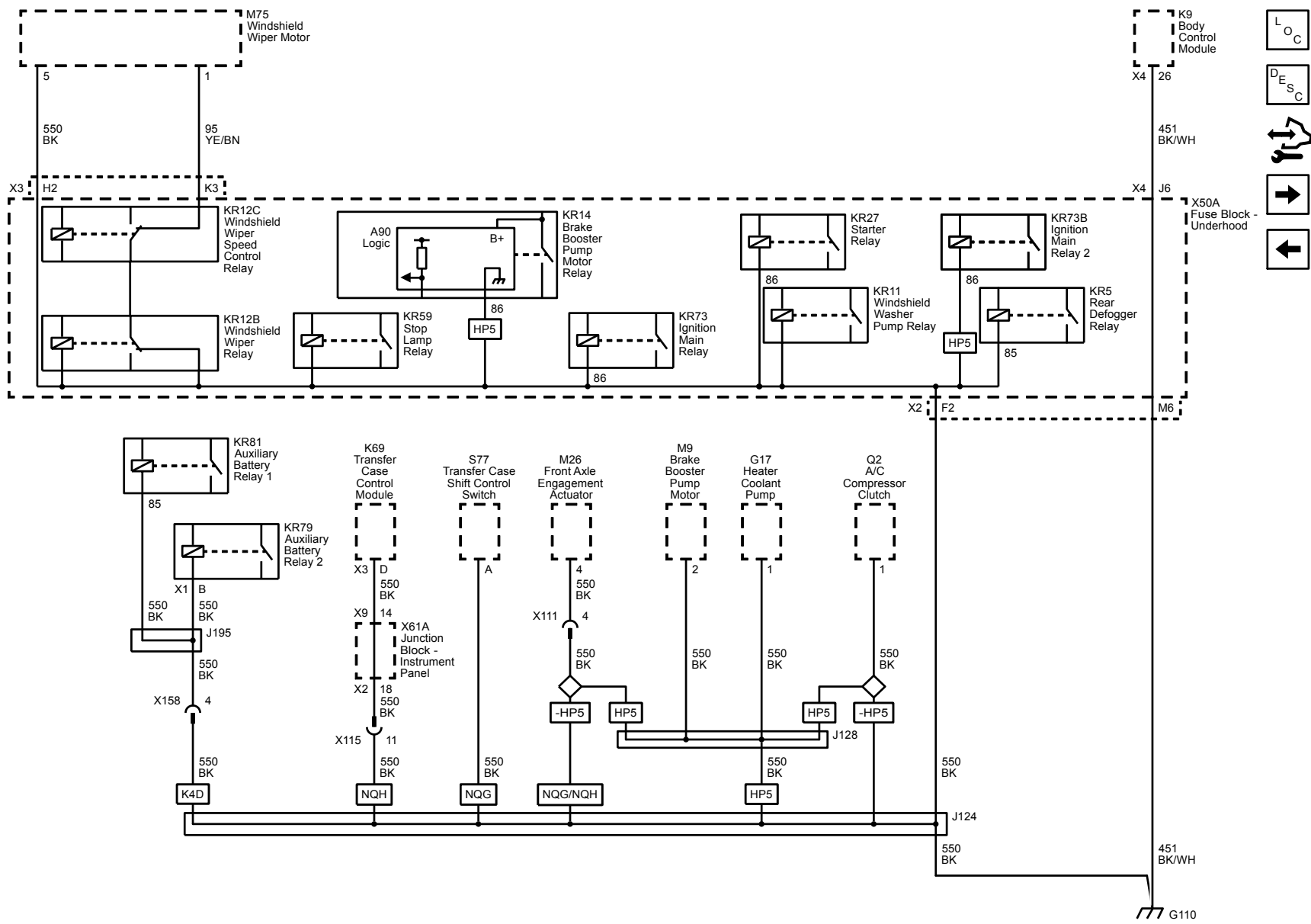
Ignition Main Relays

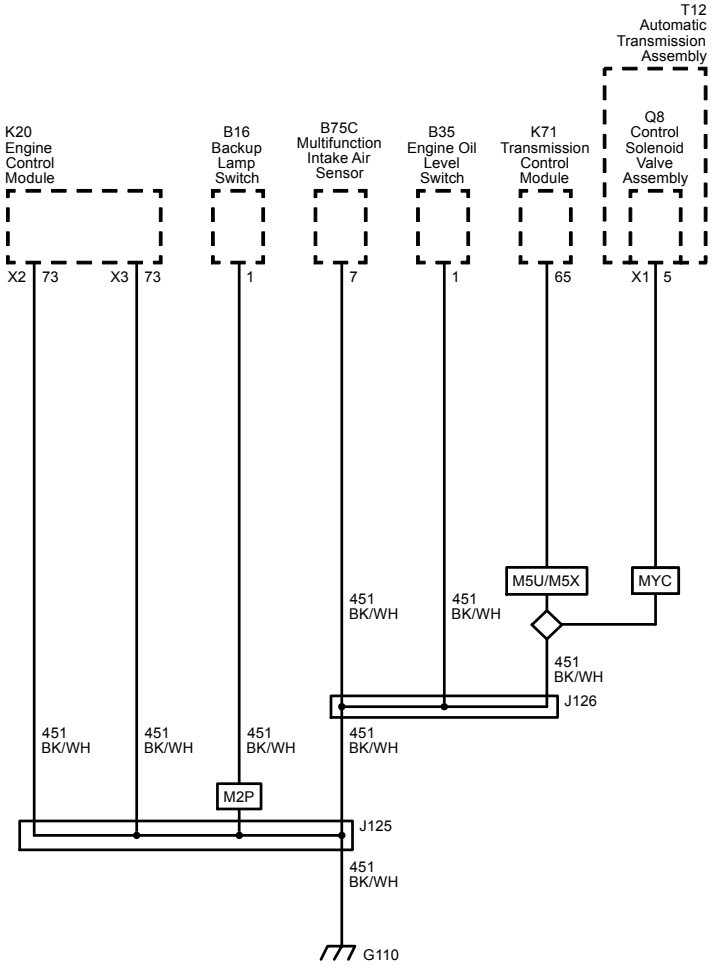


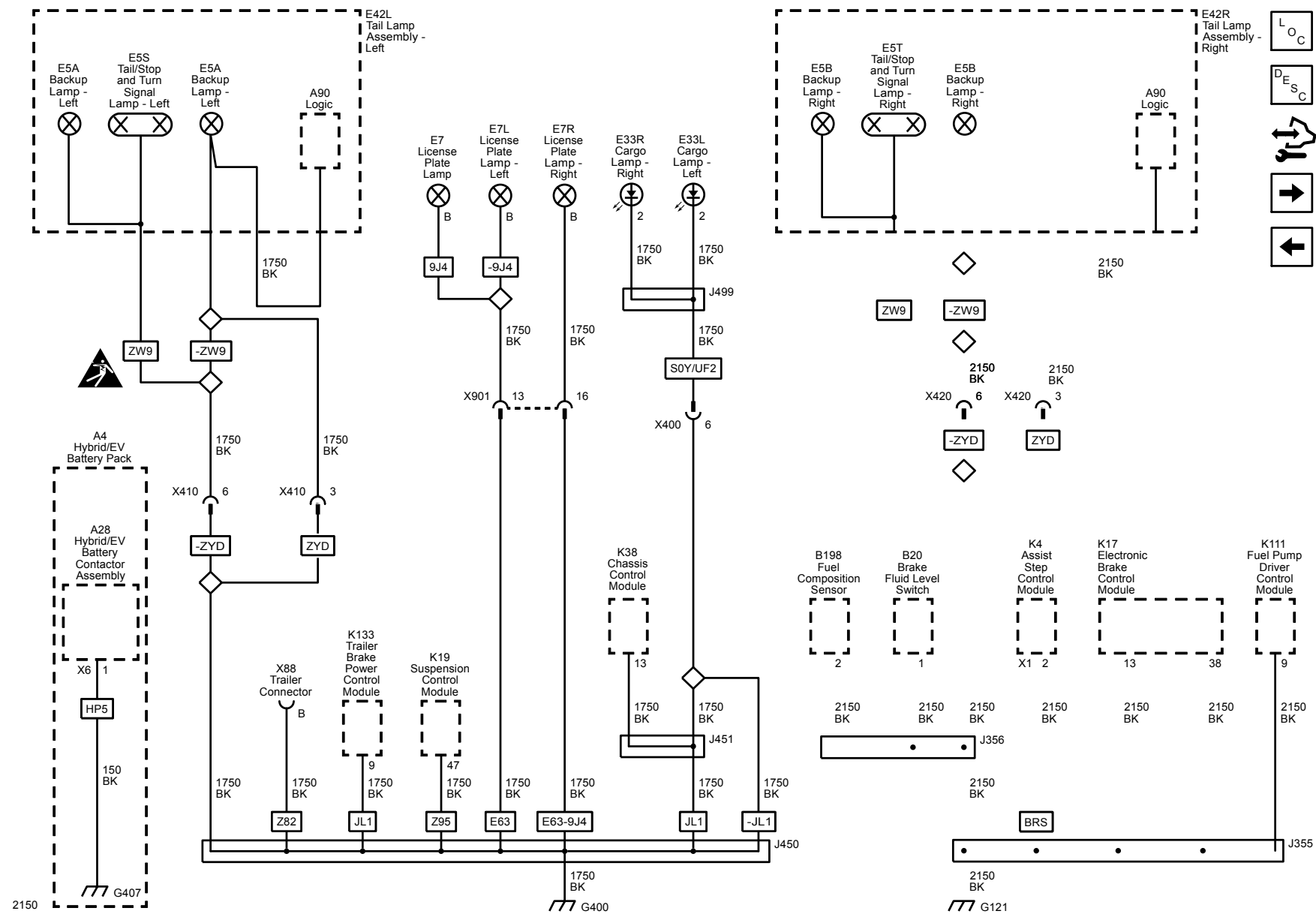


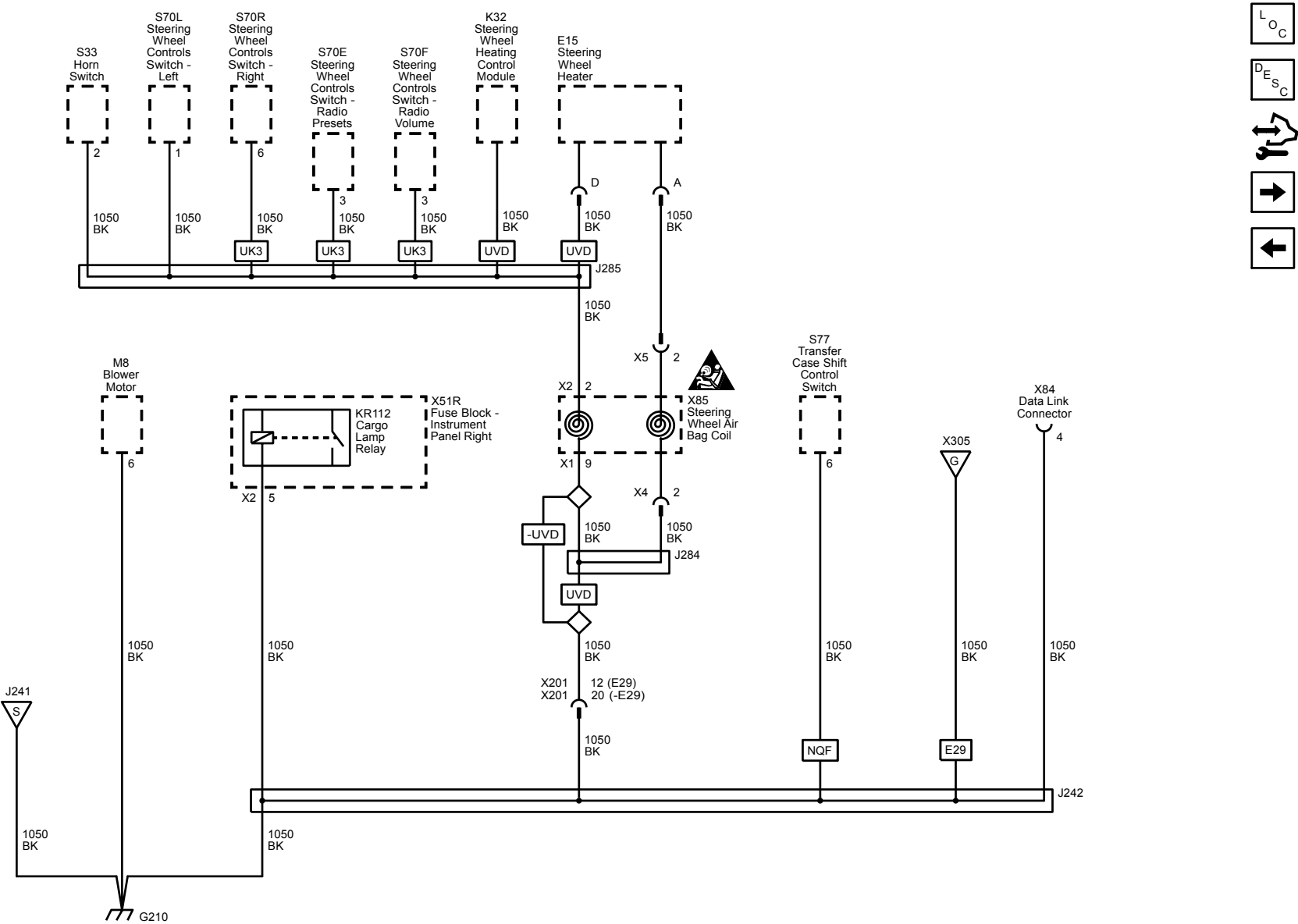
G101 and G102 (1500)

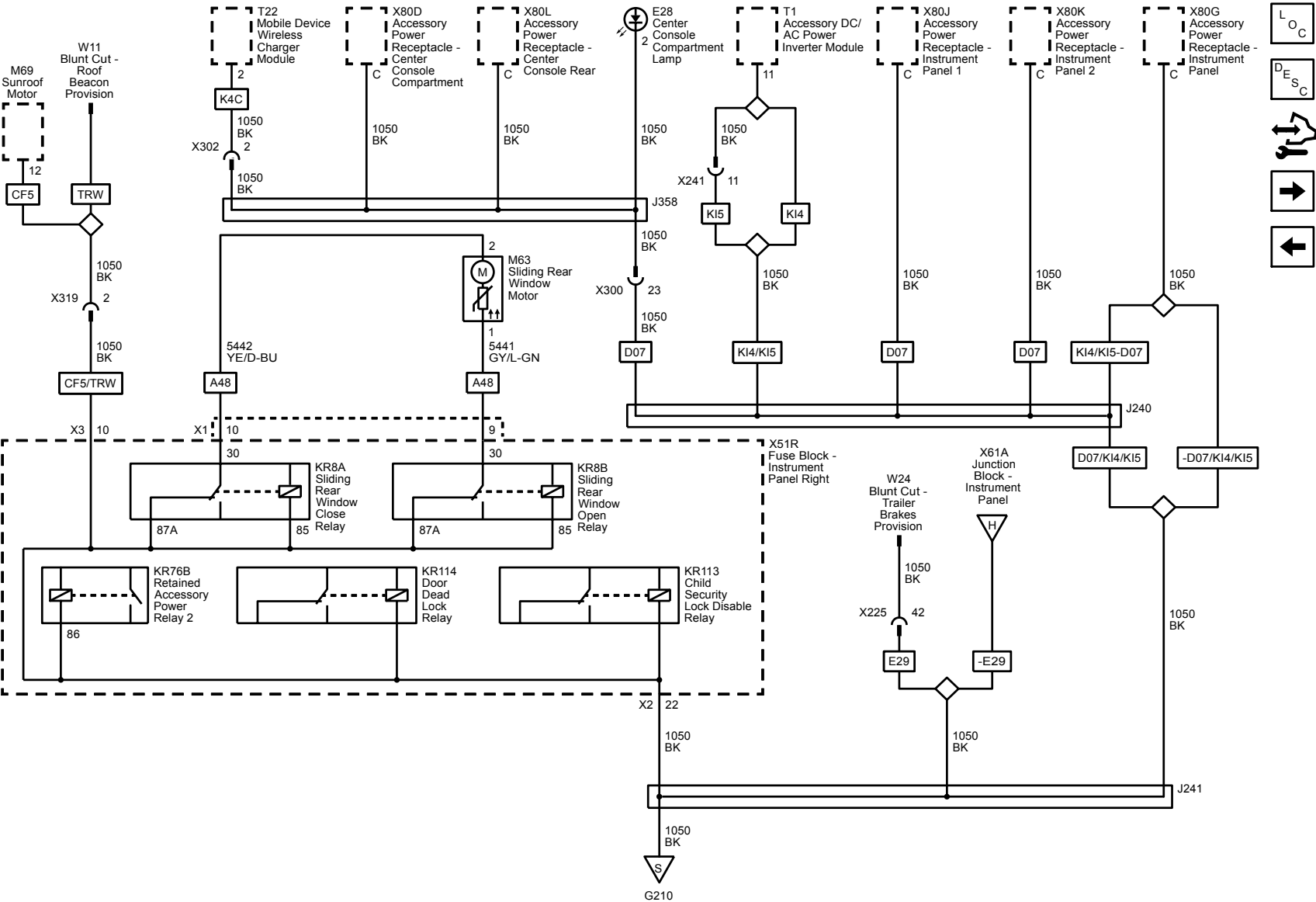


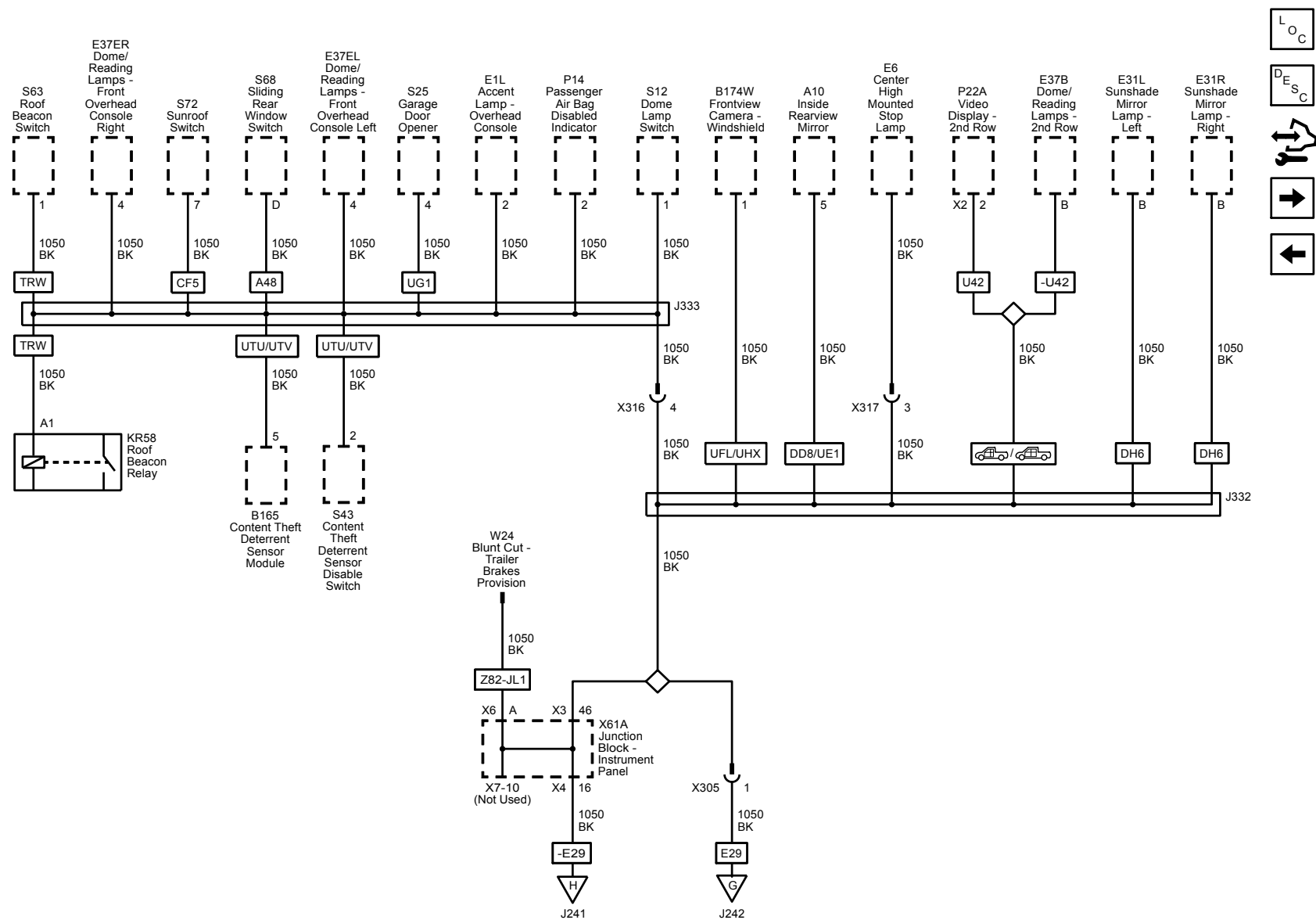


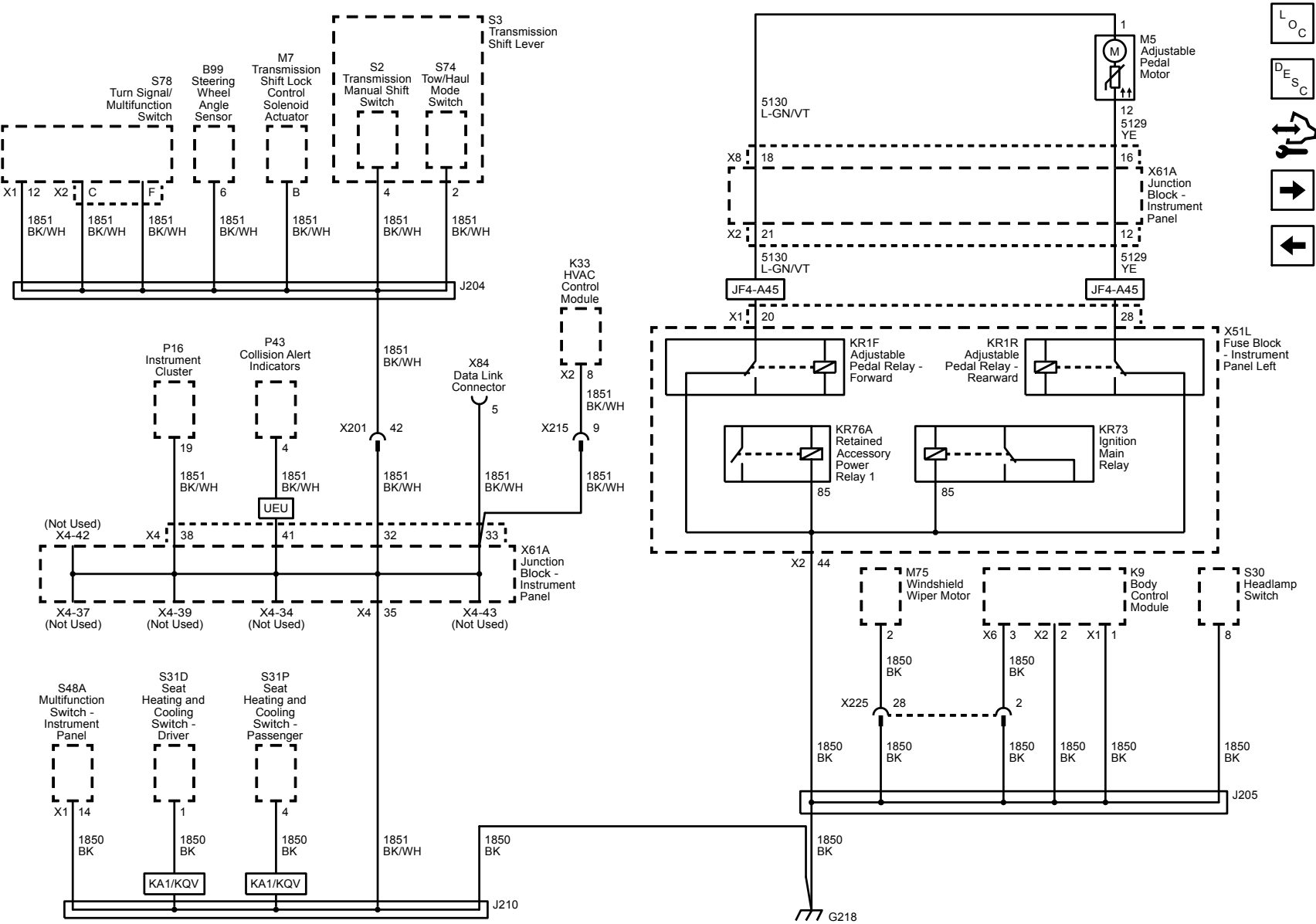


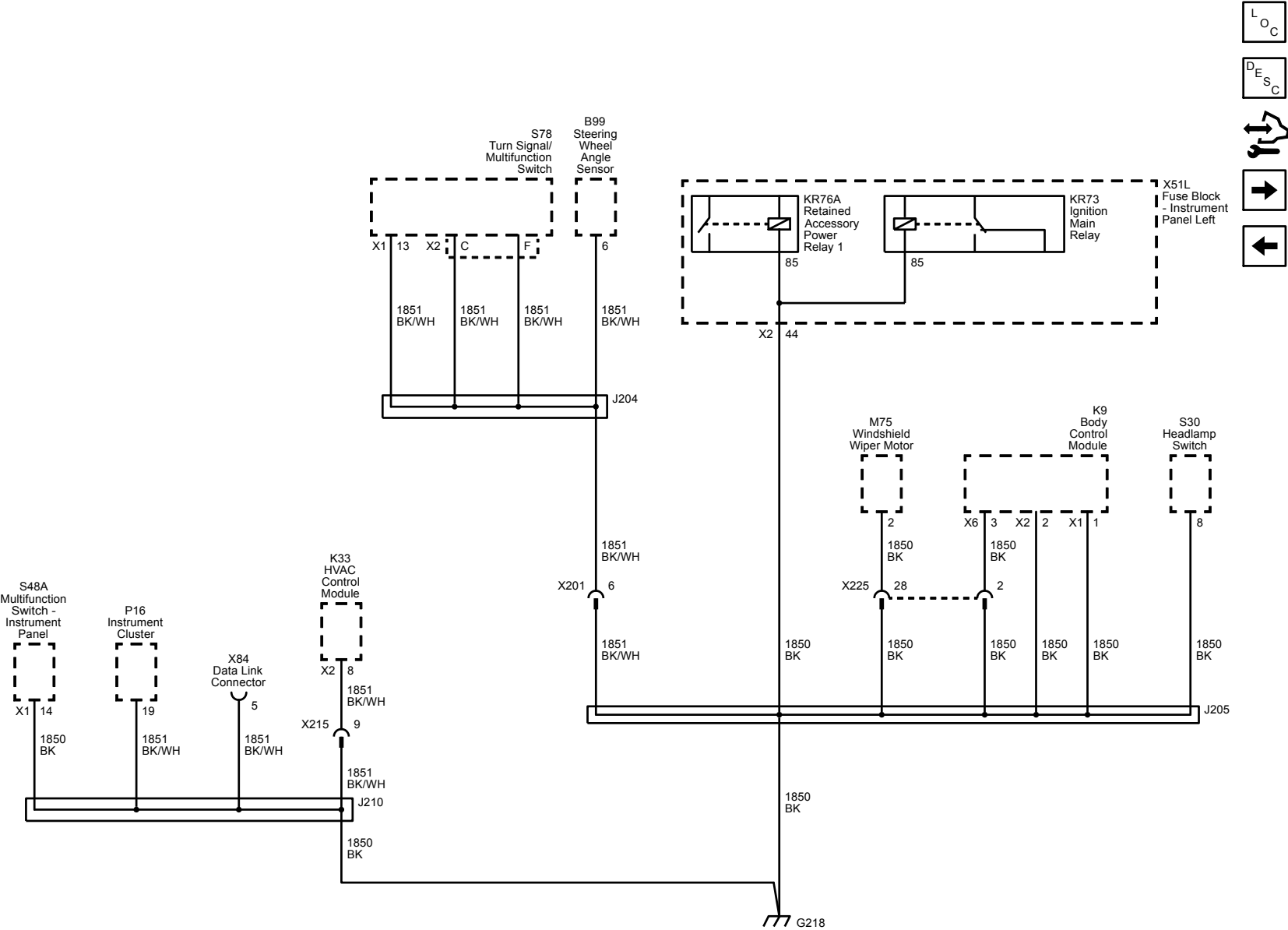


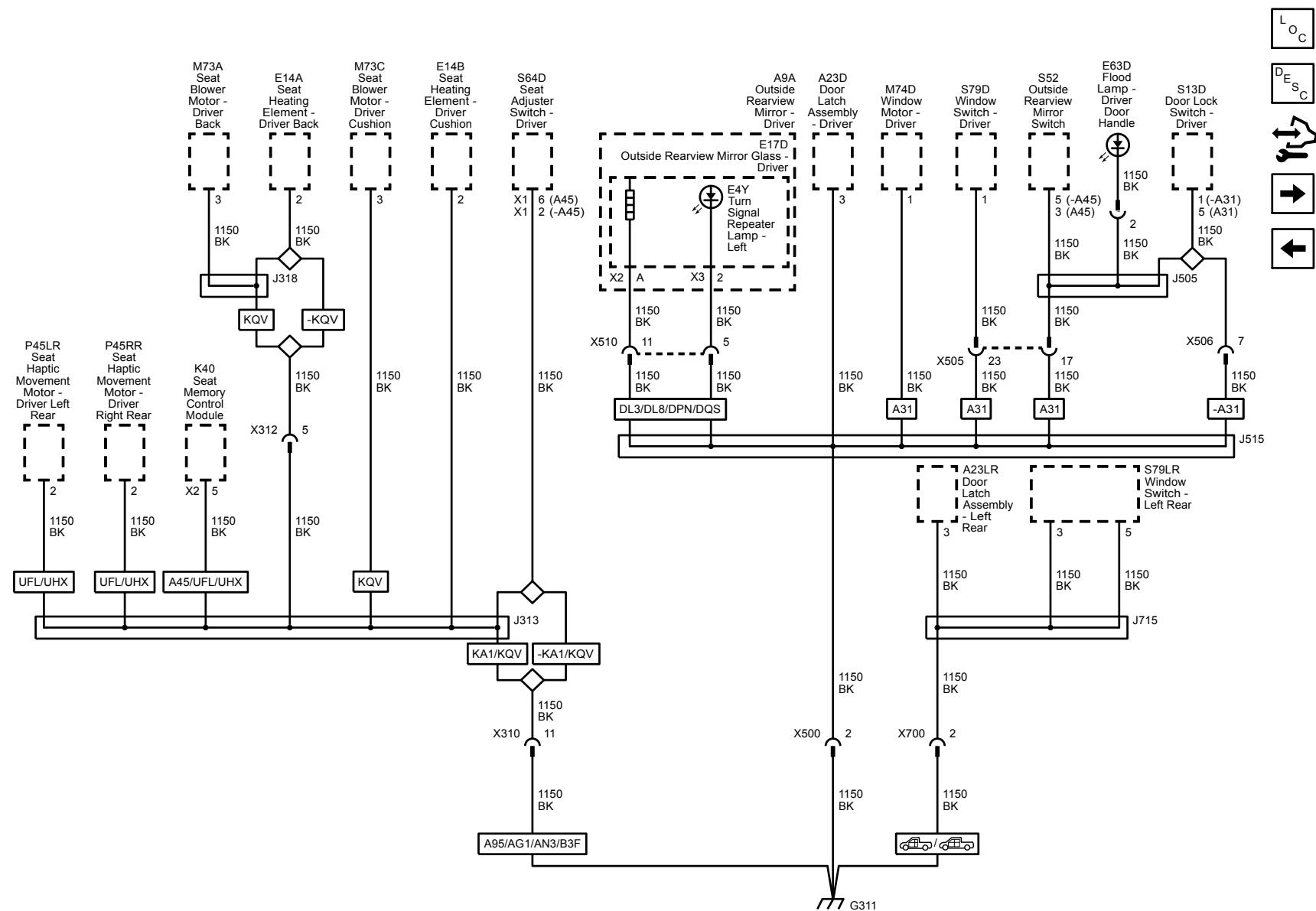


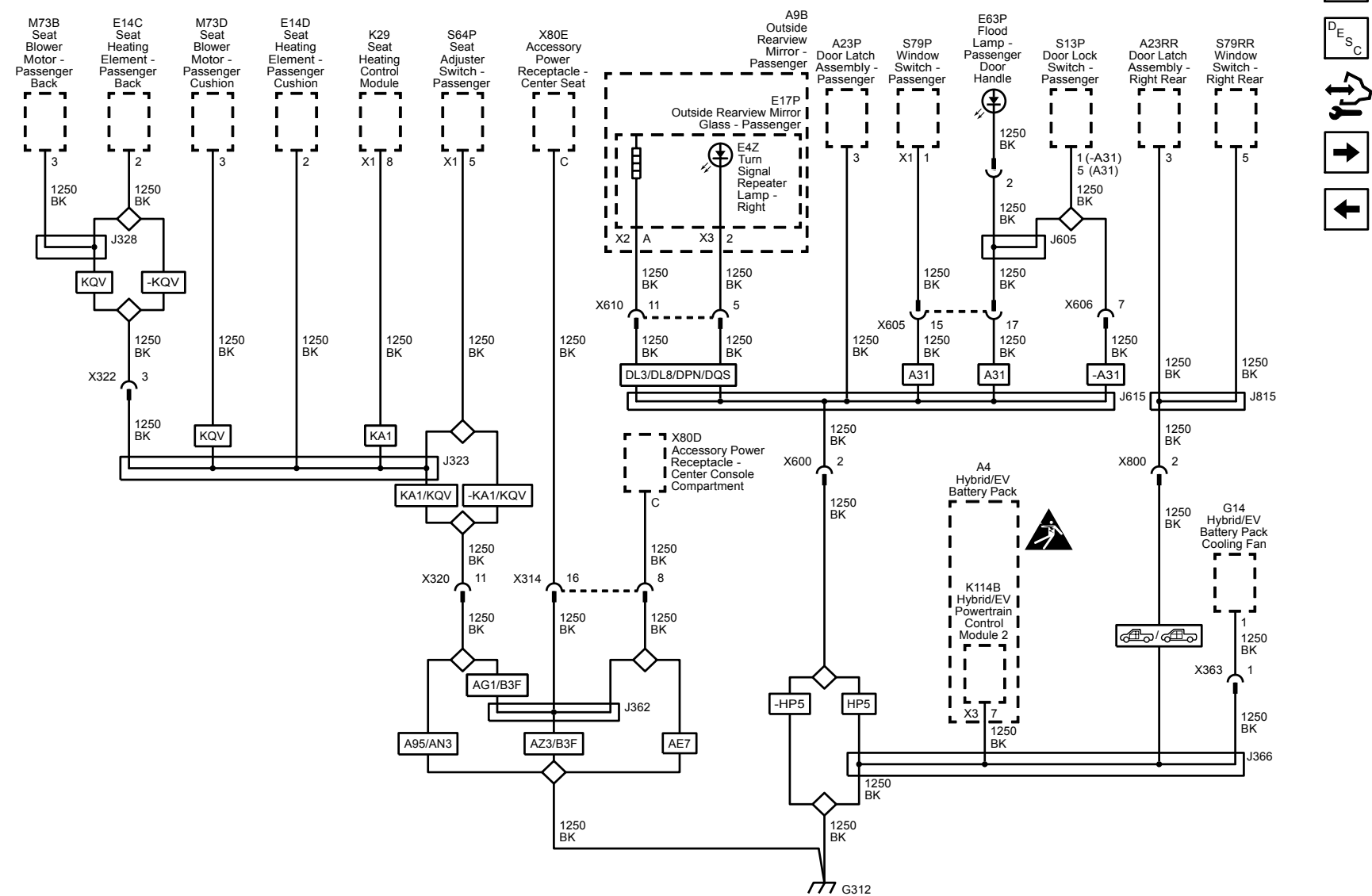


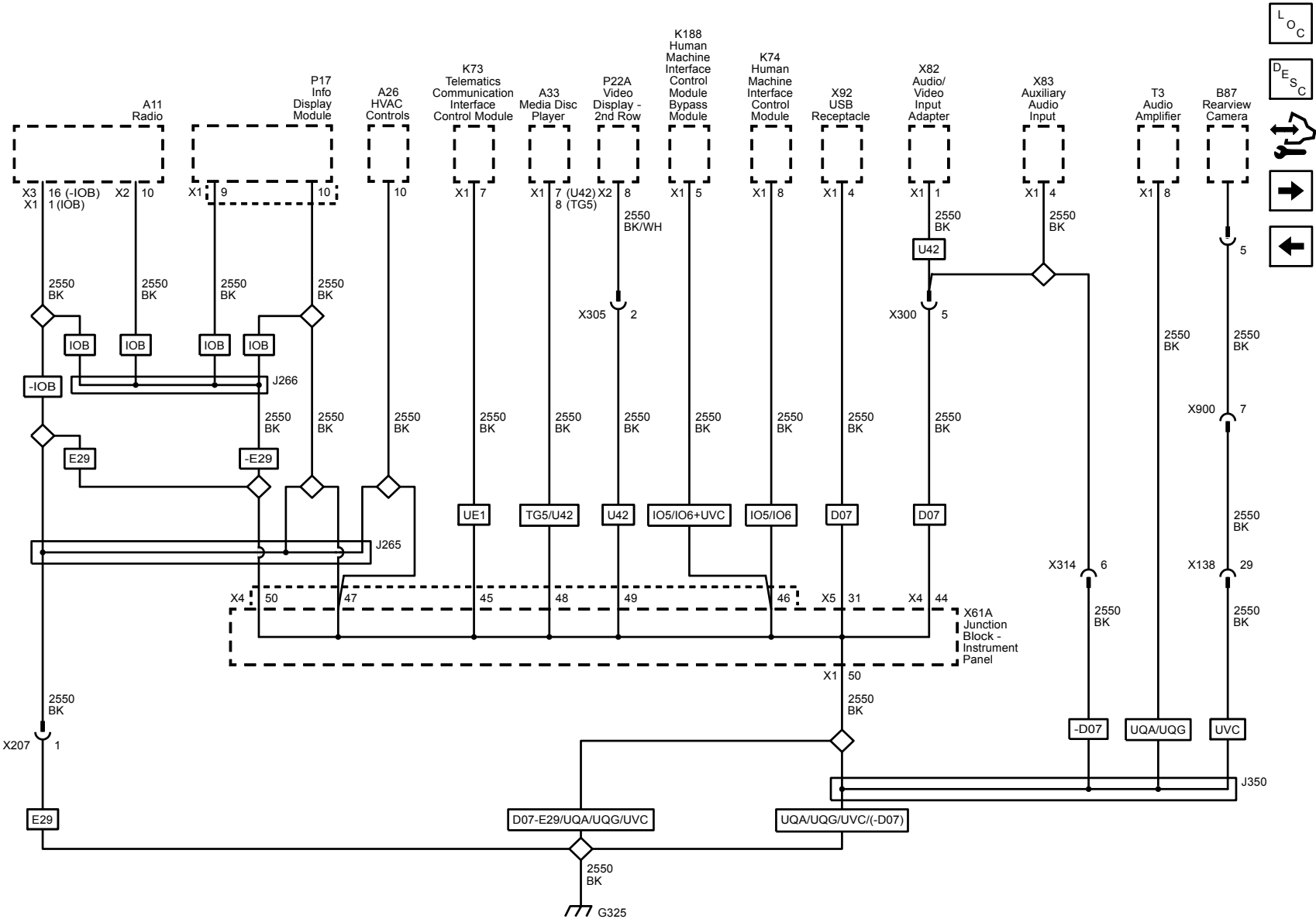


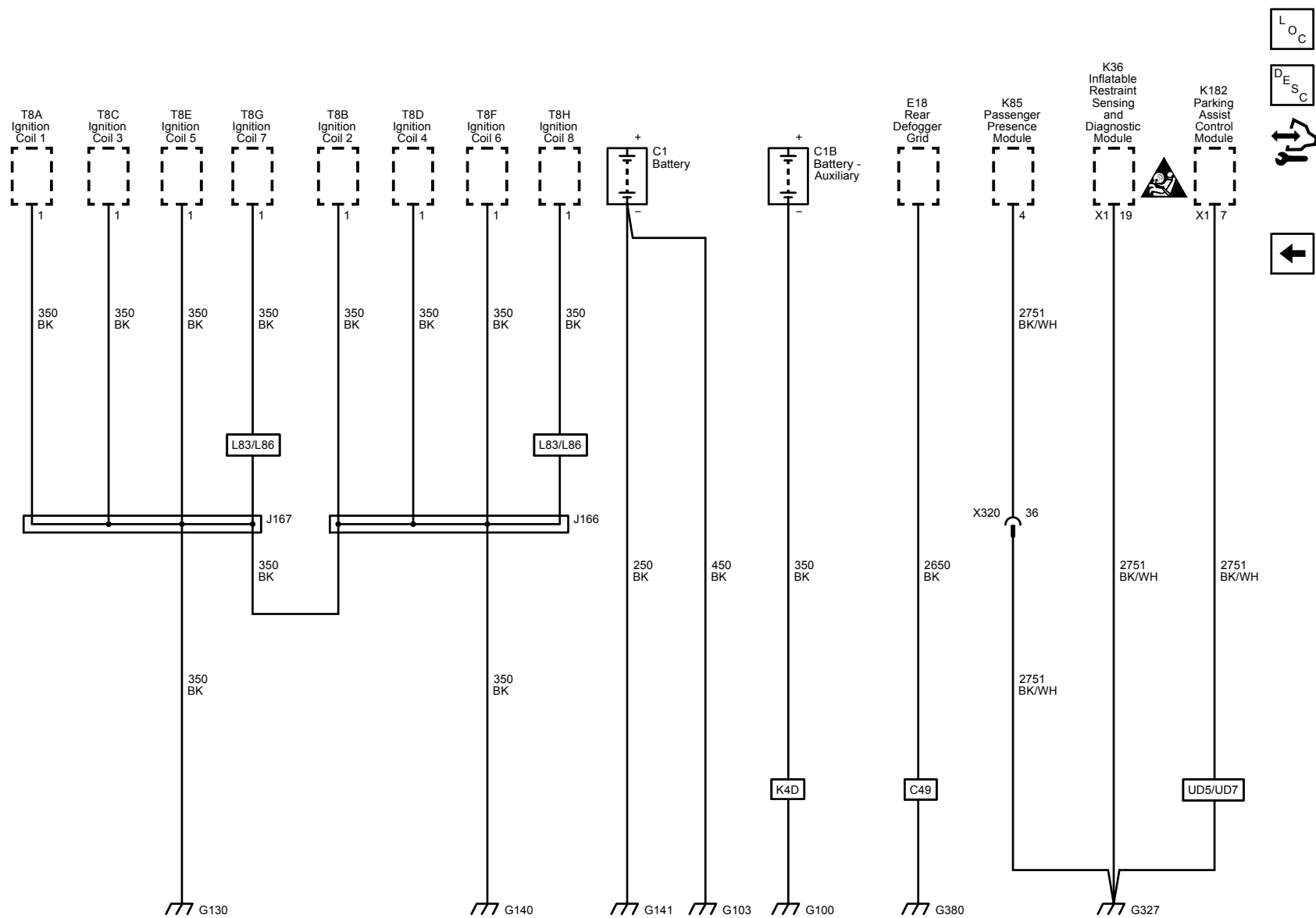






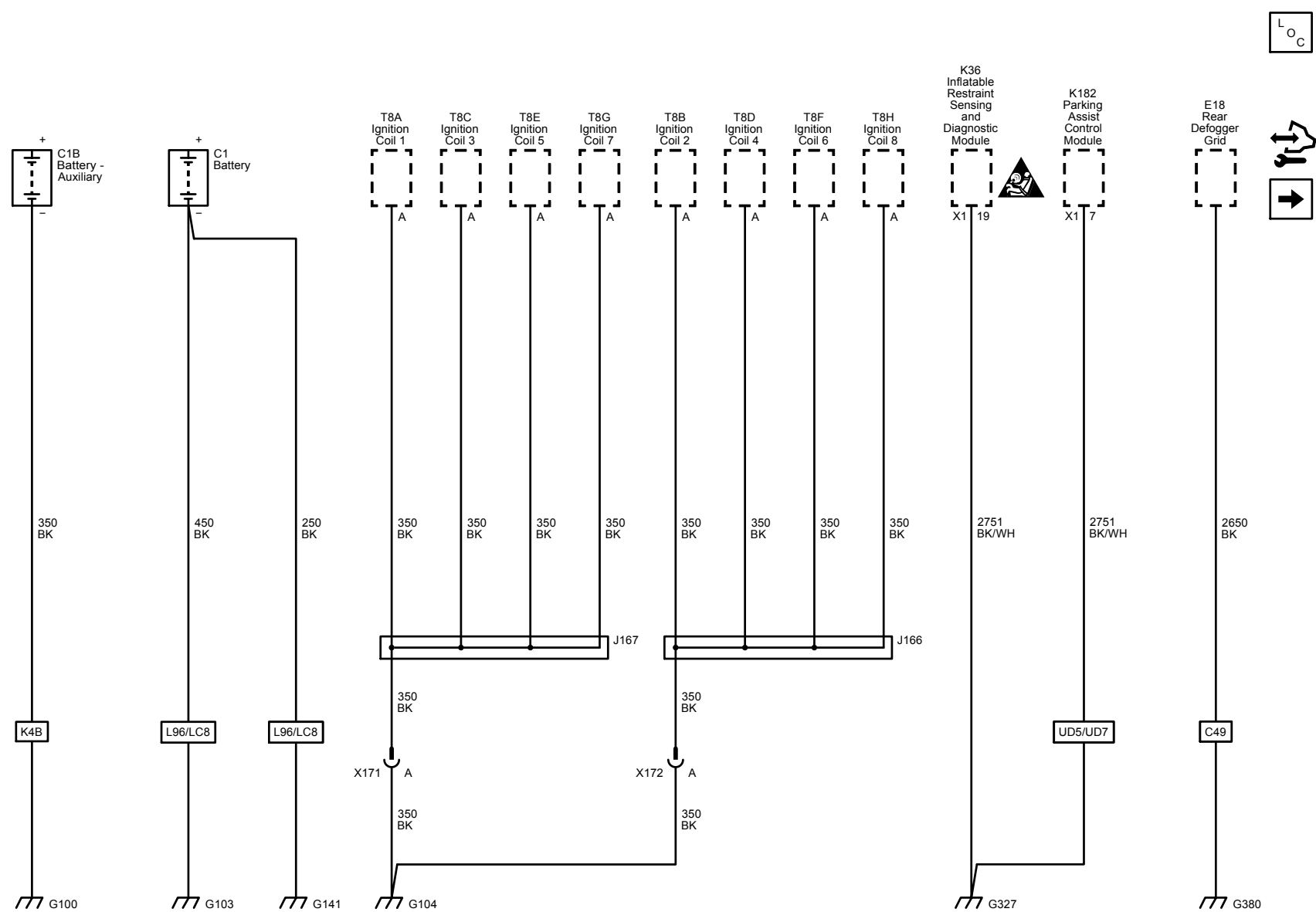






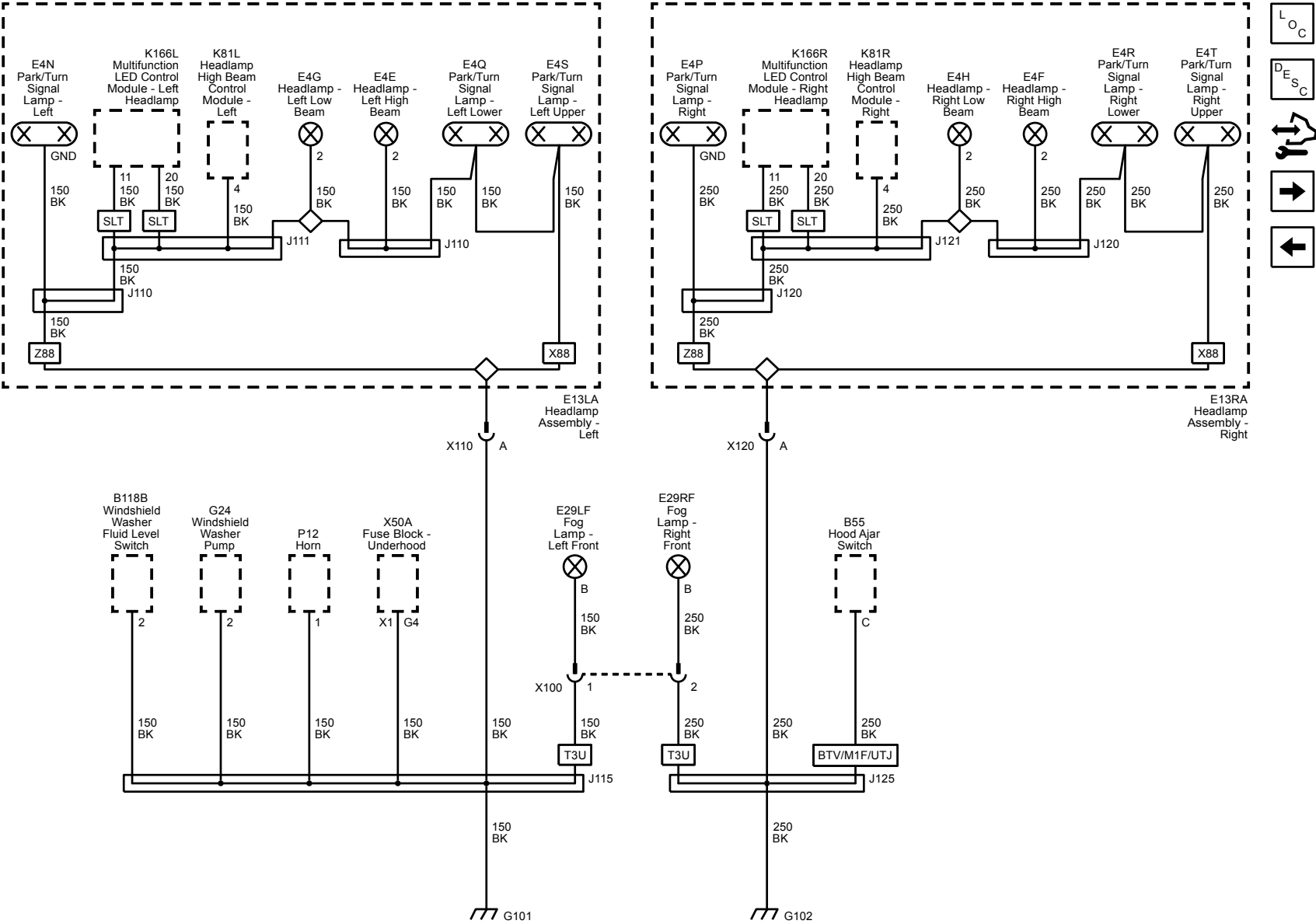
Ground Distribution Schematics ((2500/3500))

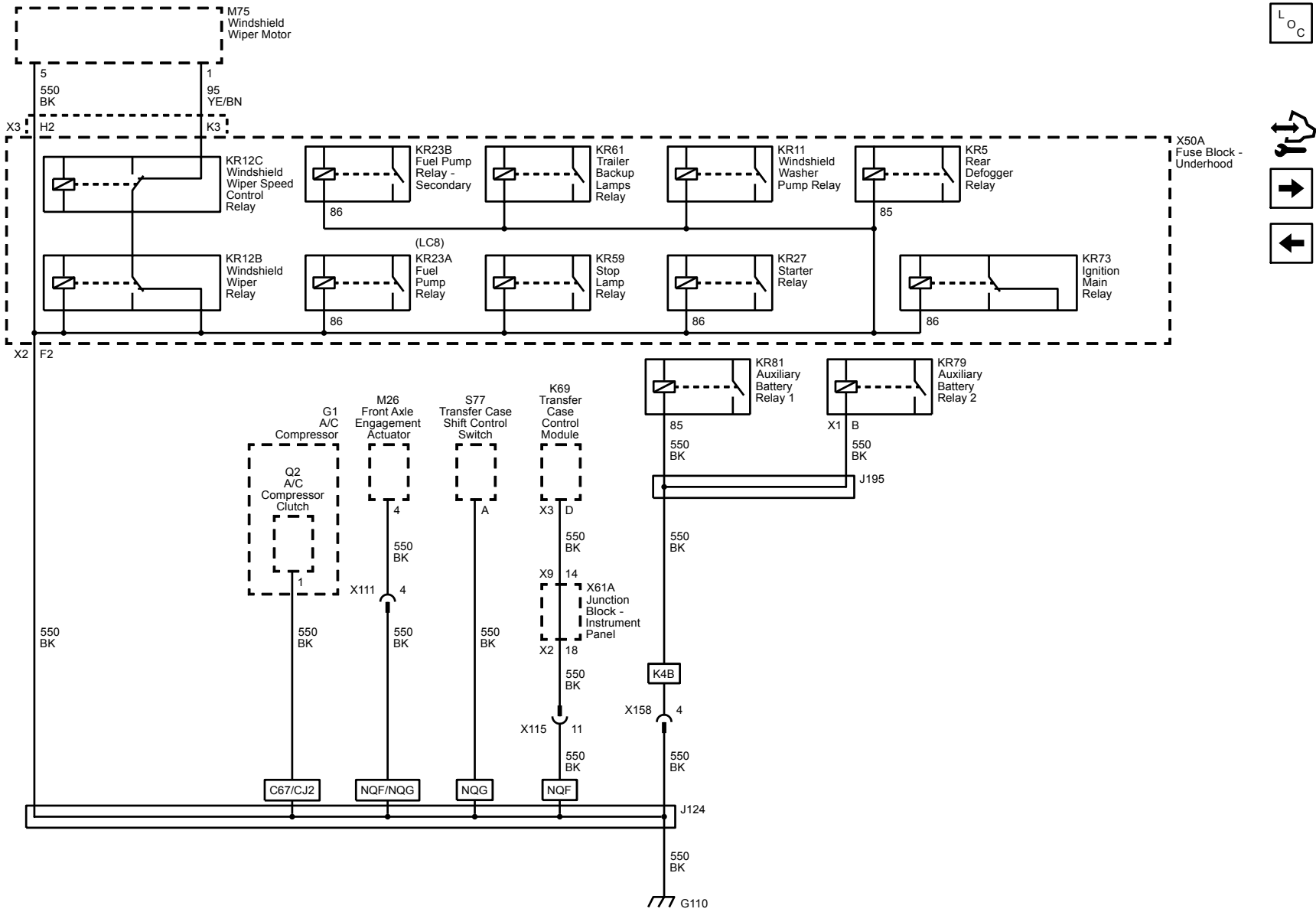
G100, G103, G104, G141, G327, and G380 (2500/3500)

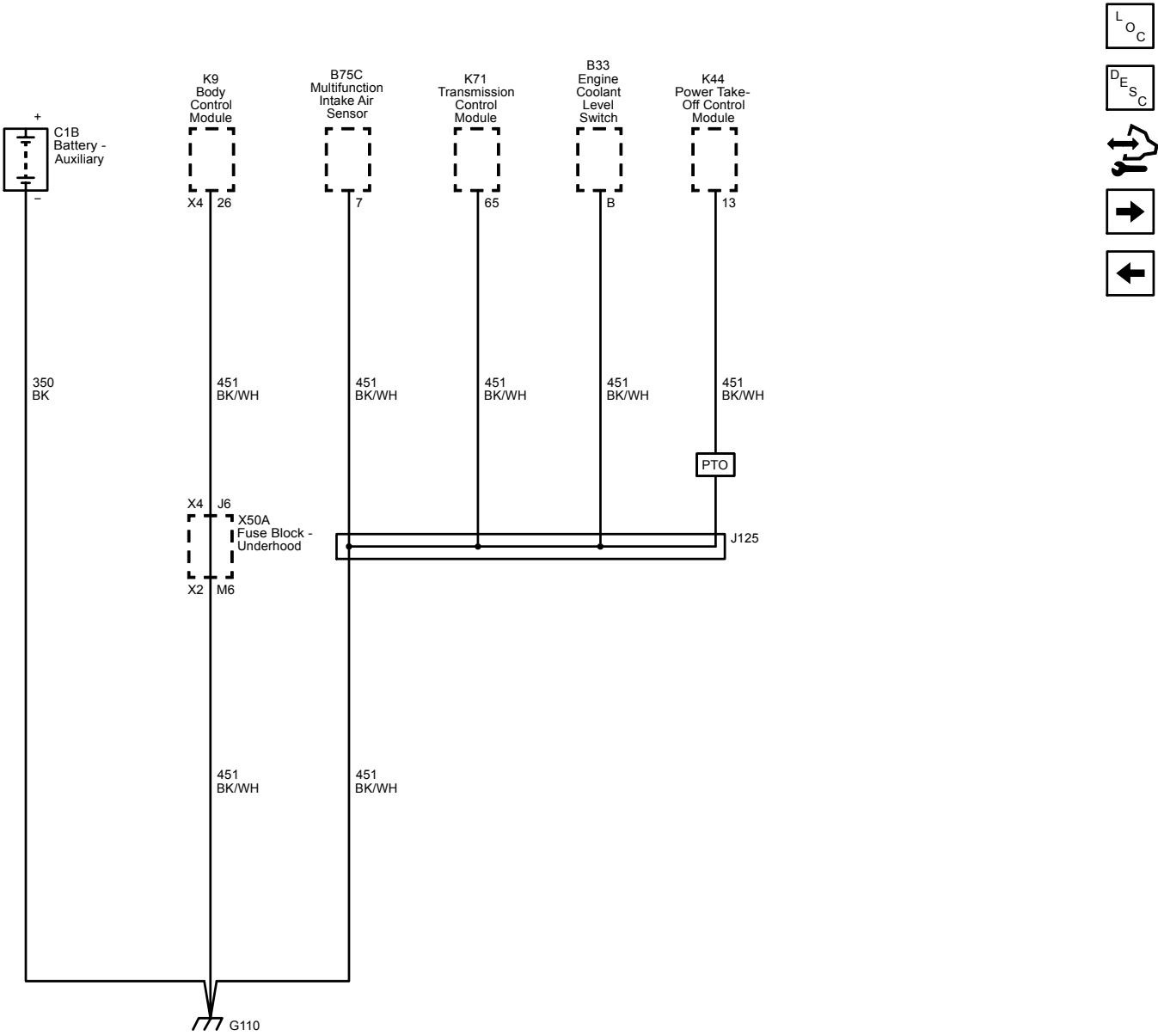


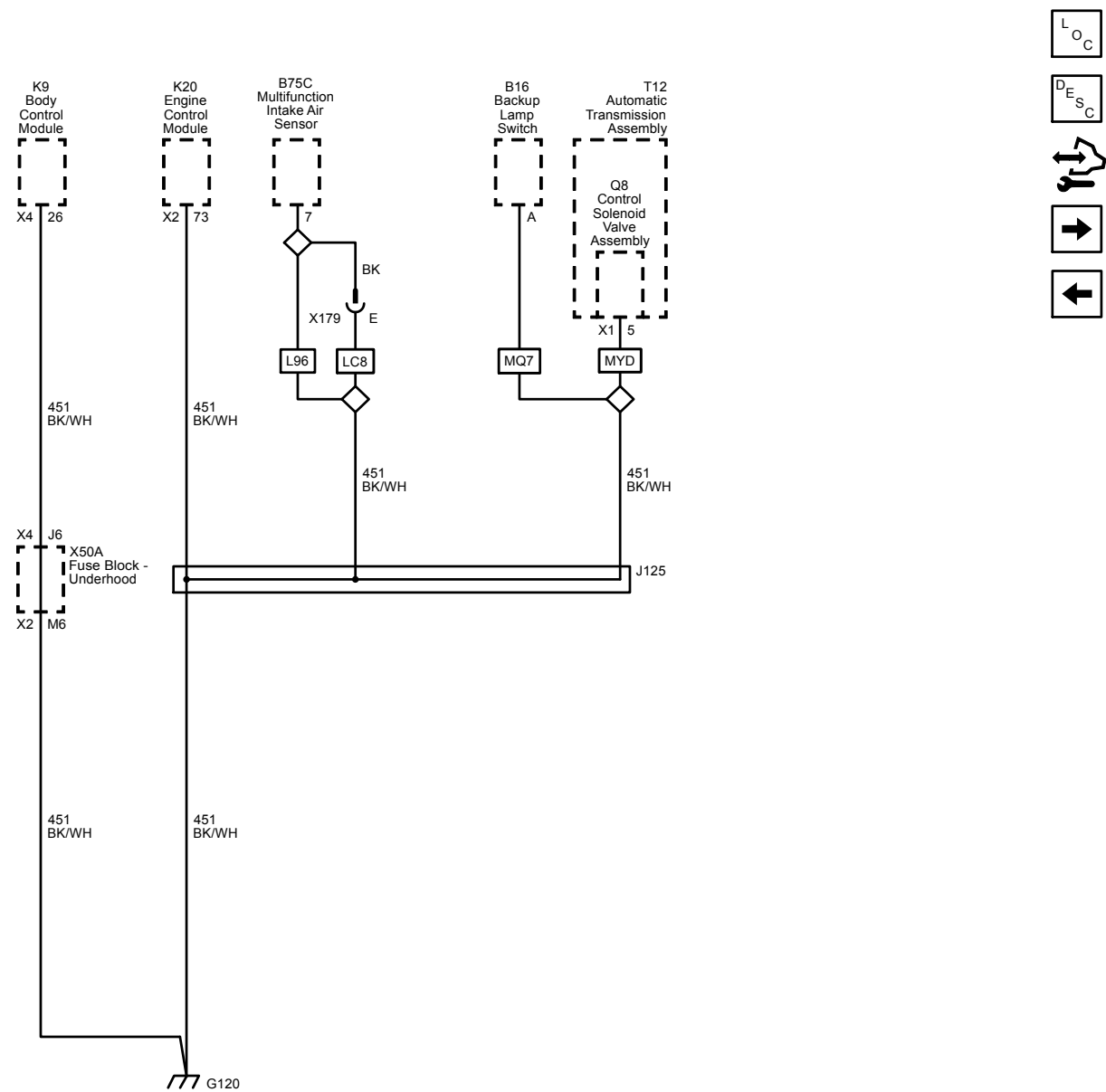
L
O
C

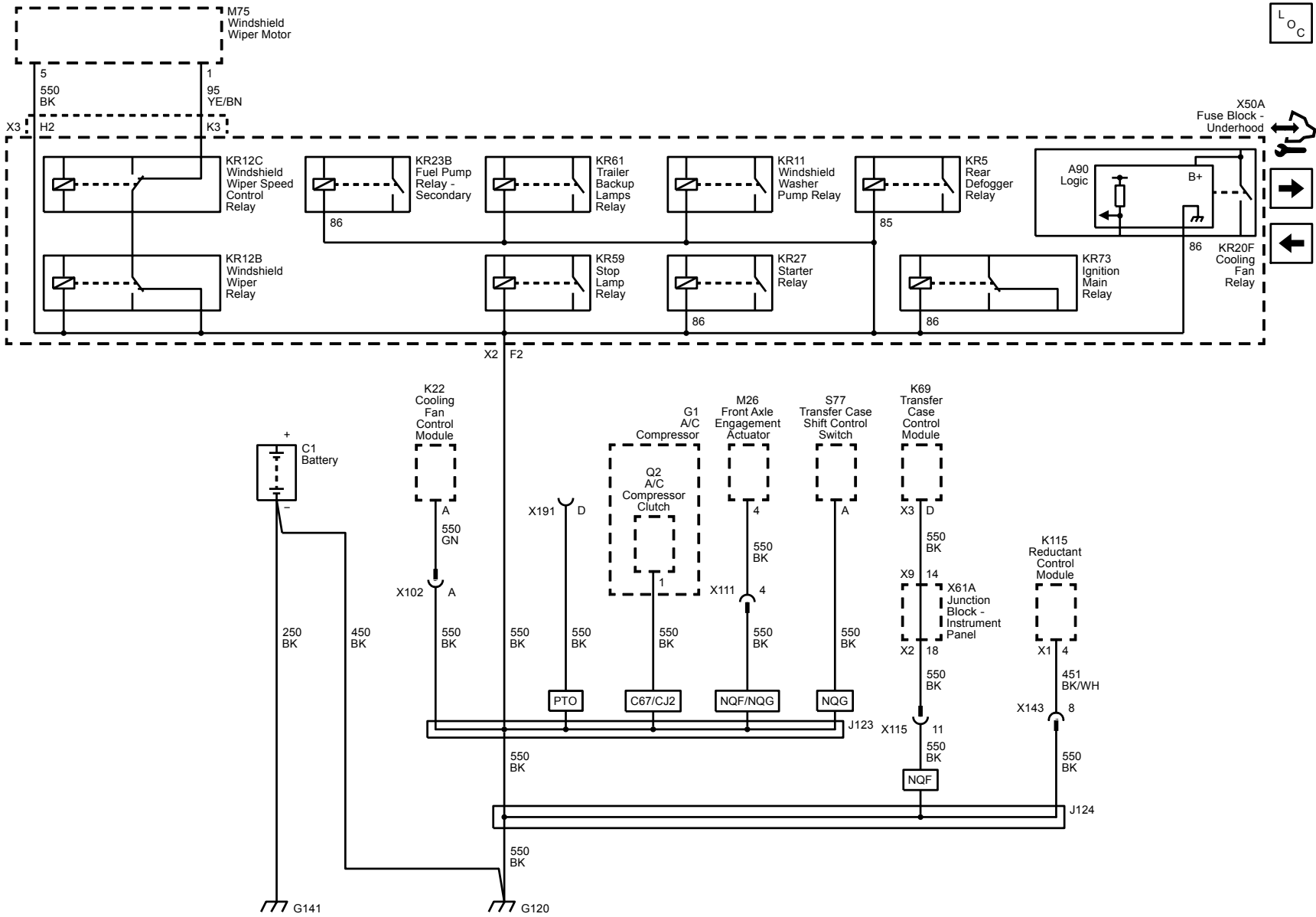


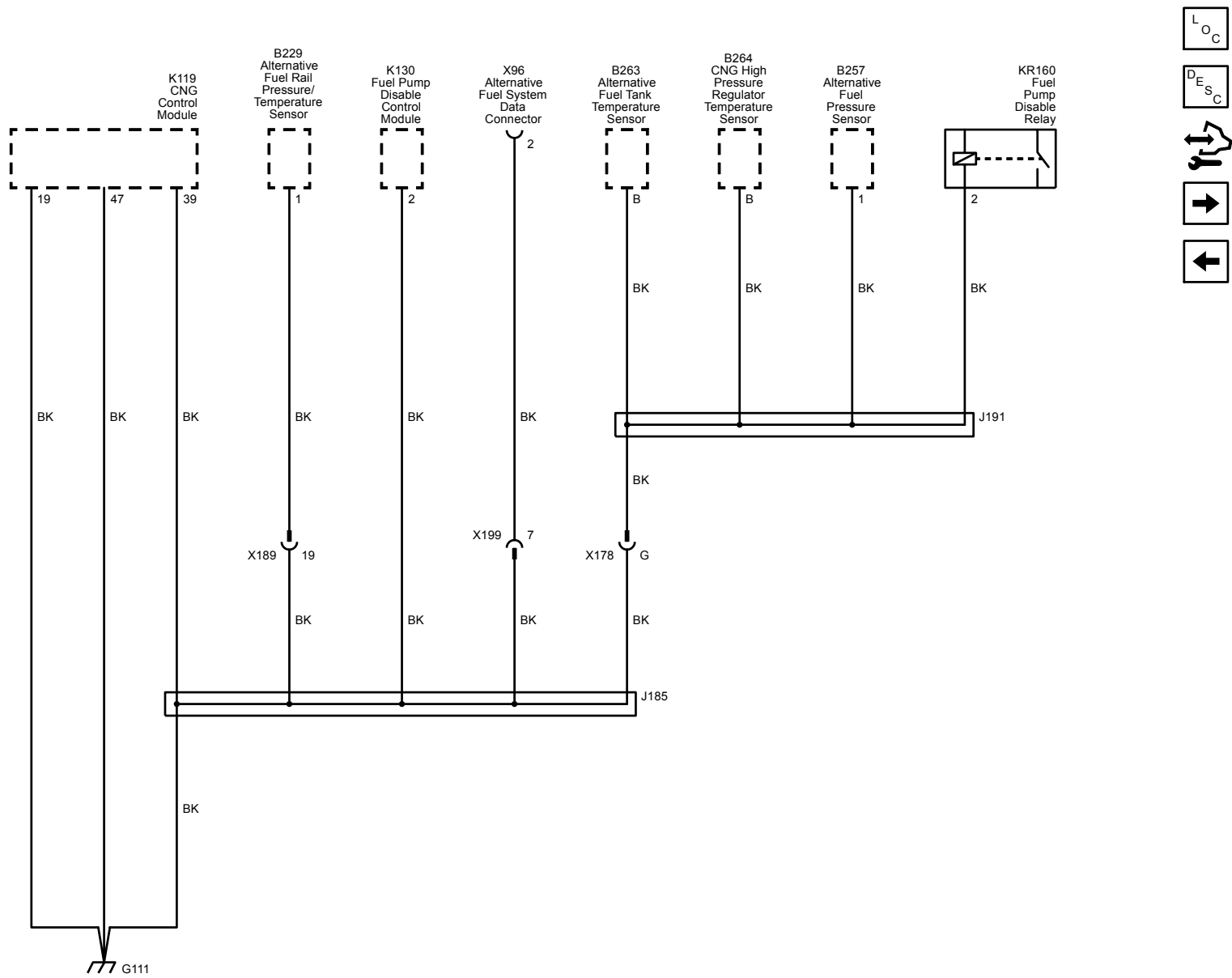


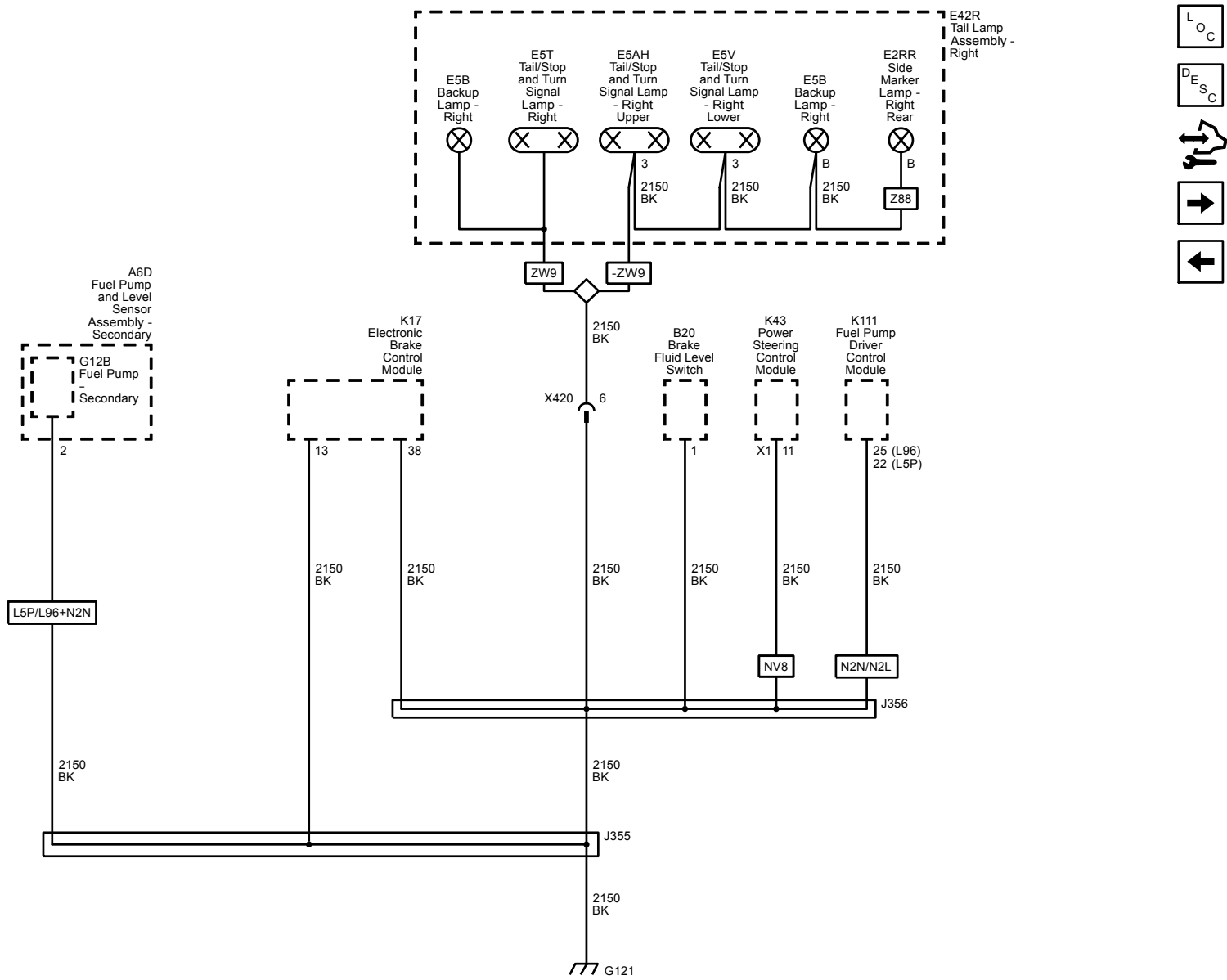


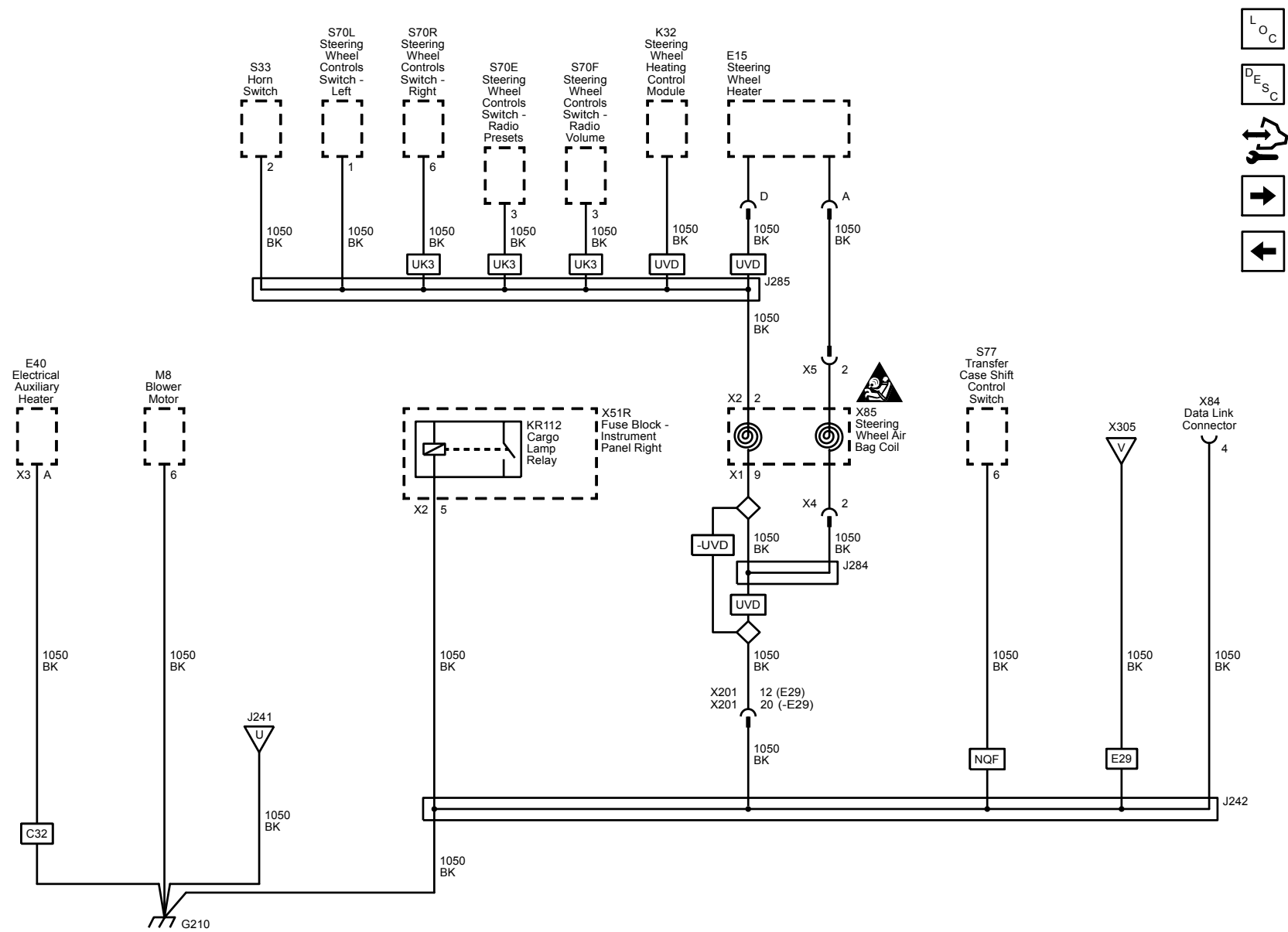


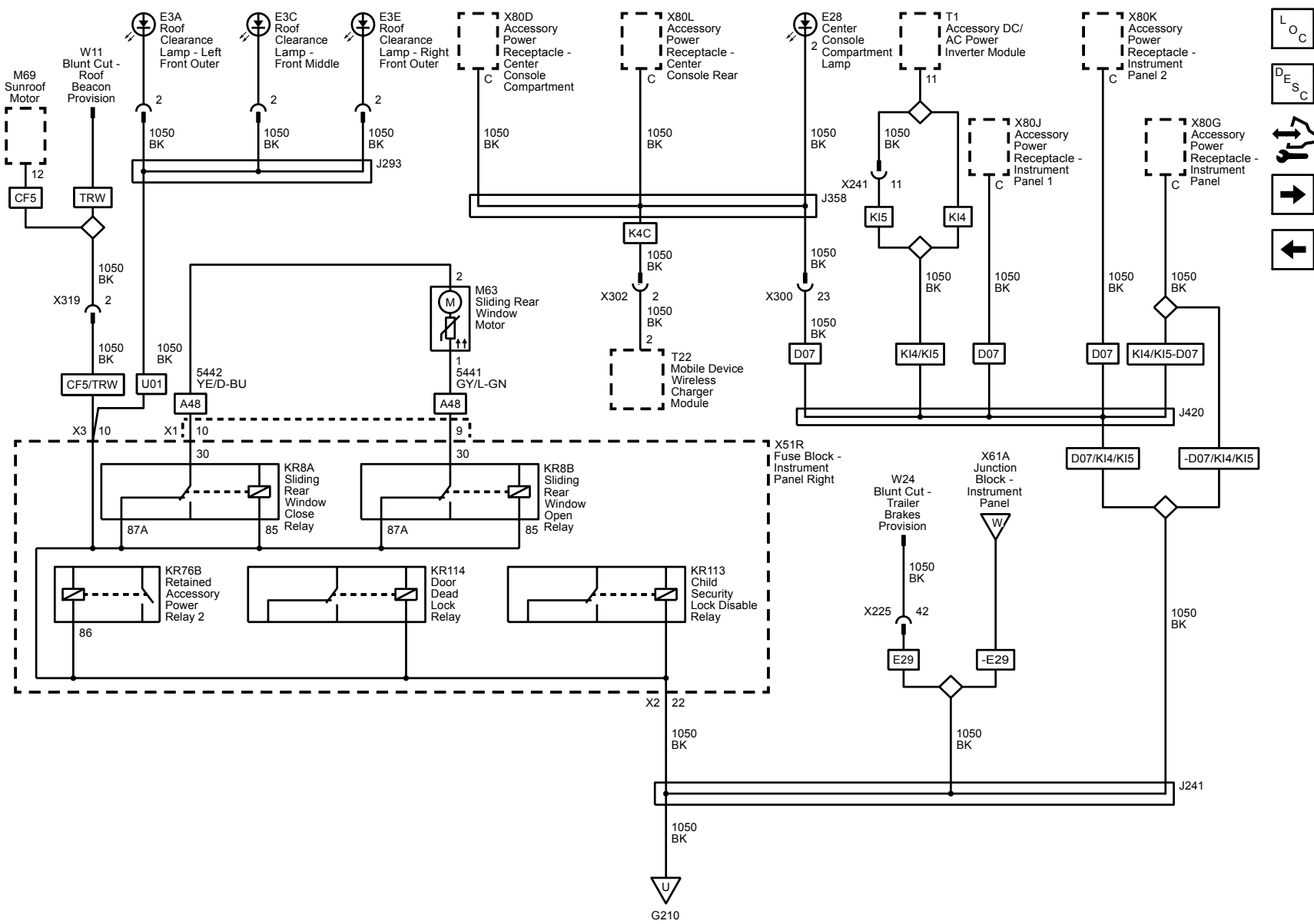


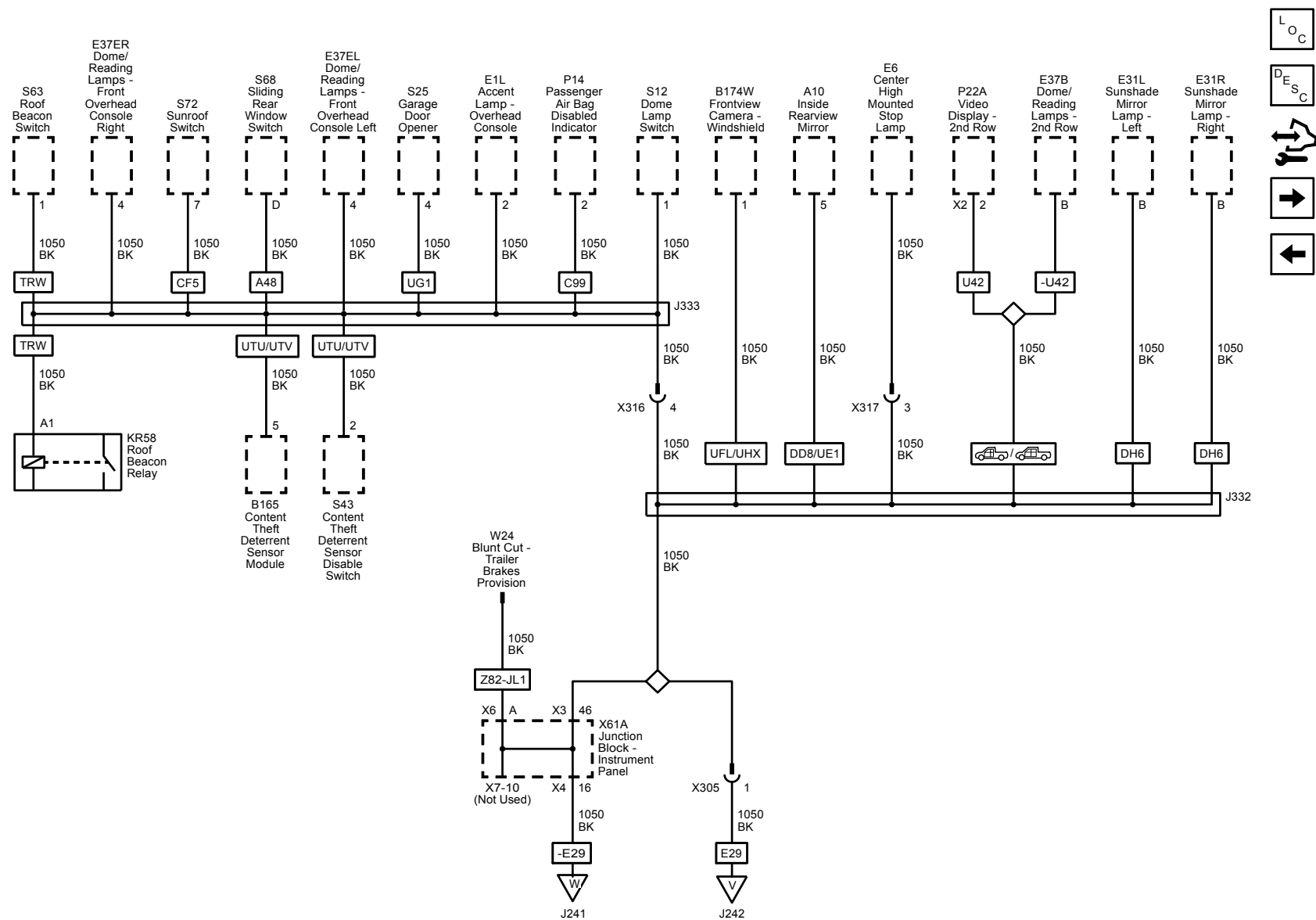


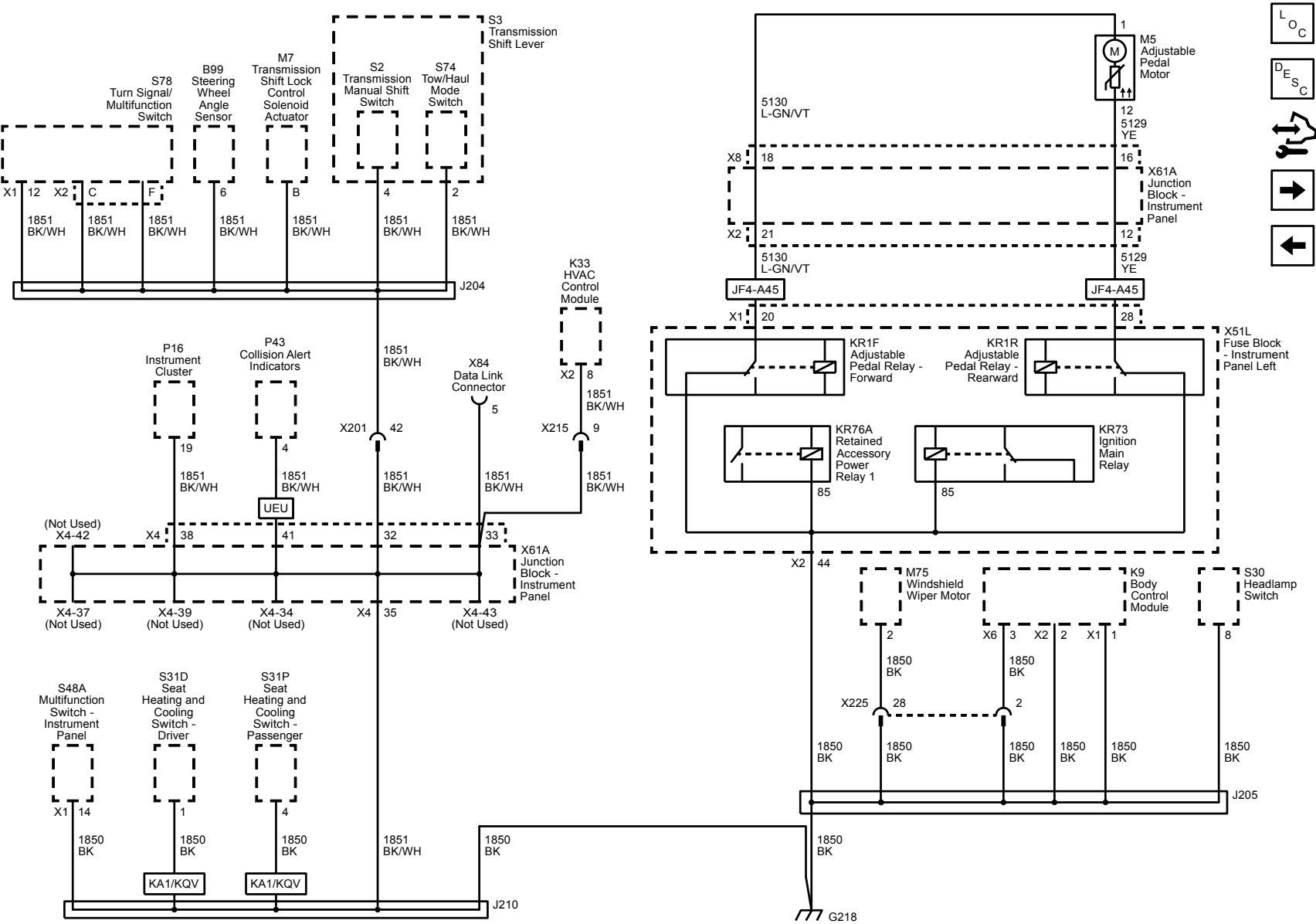


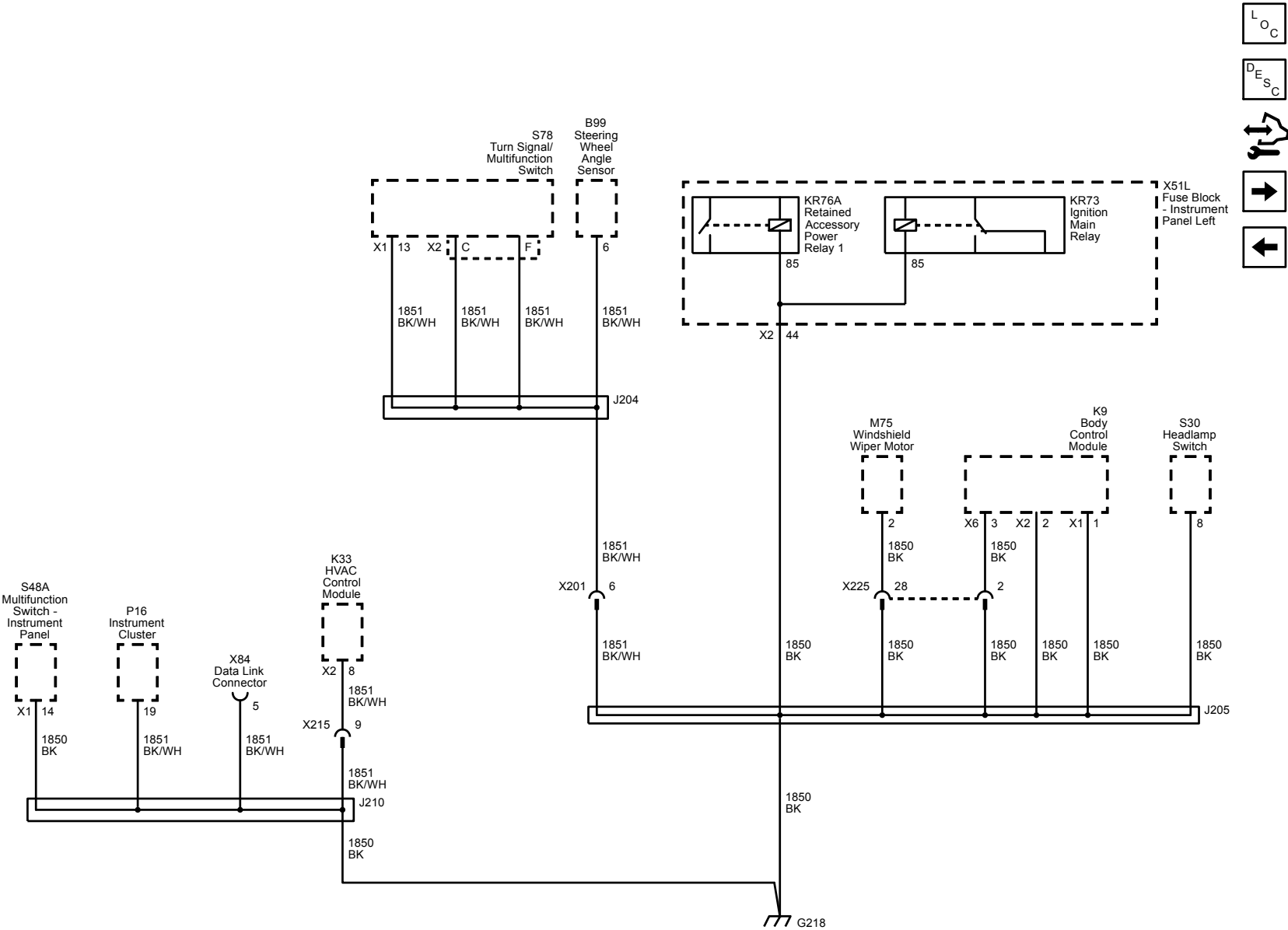


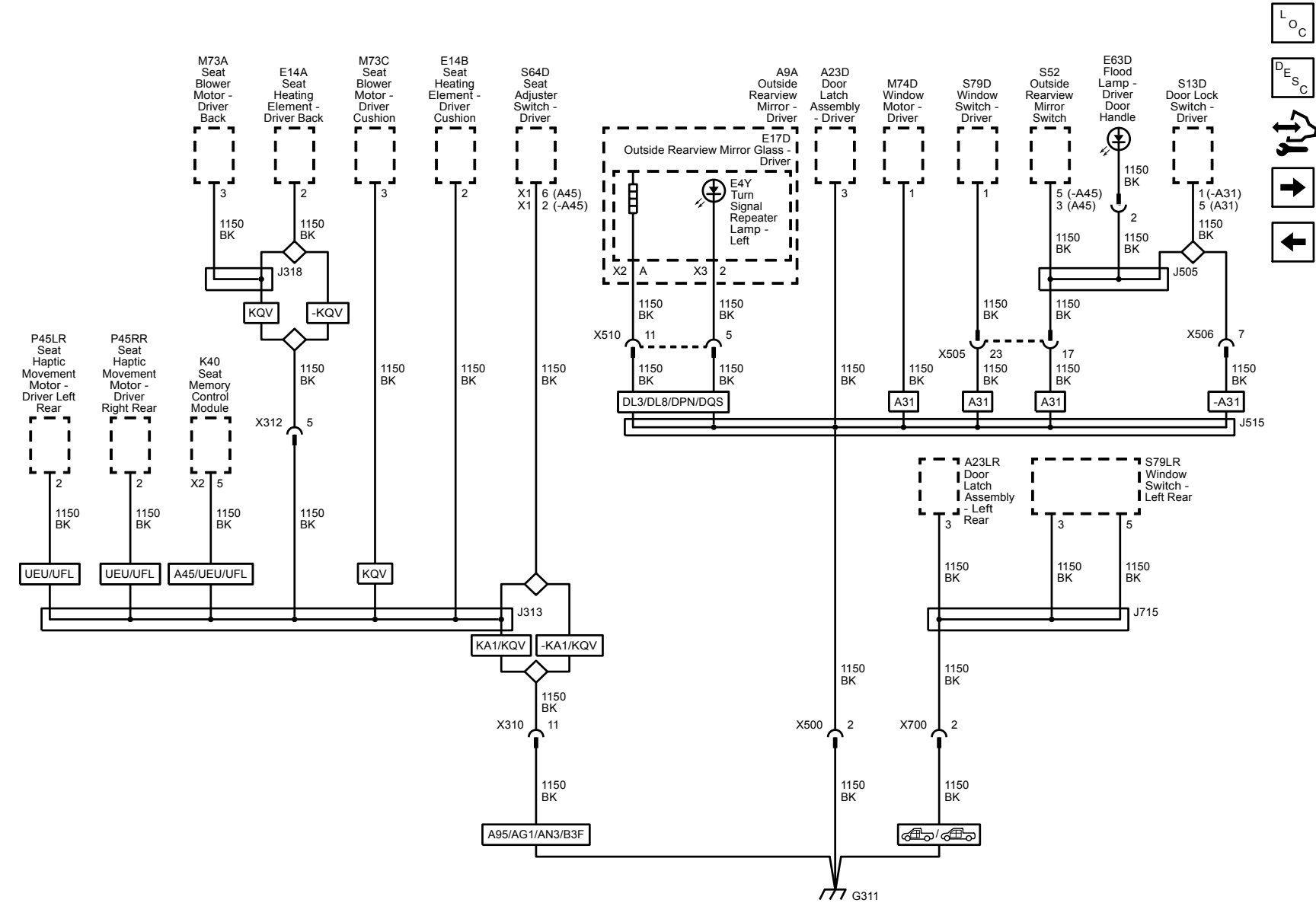


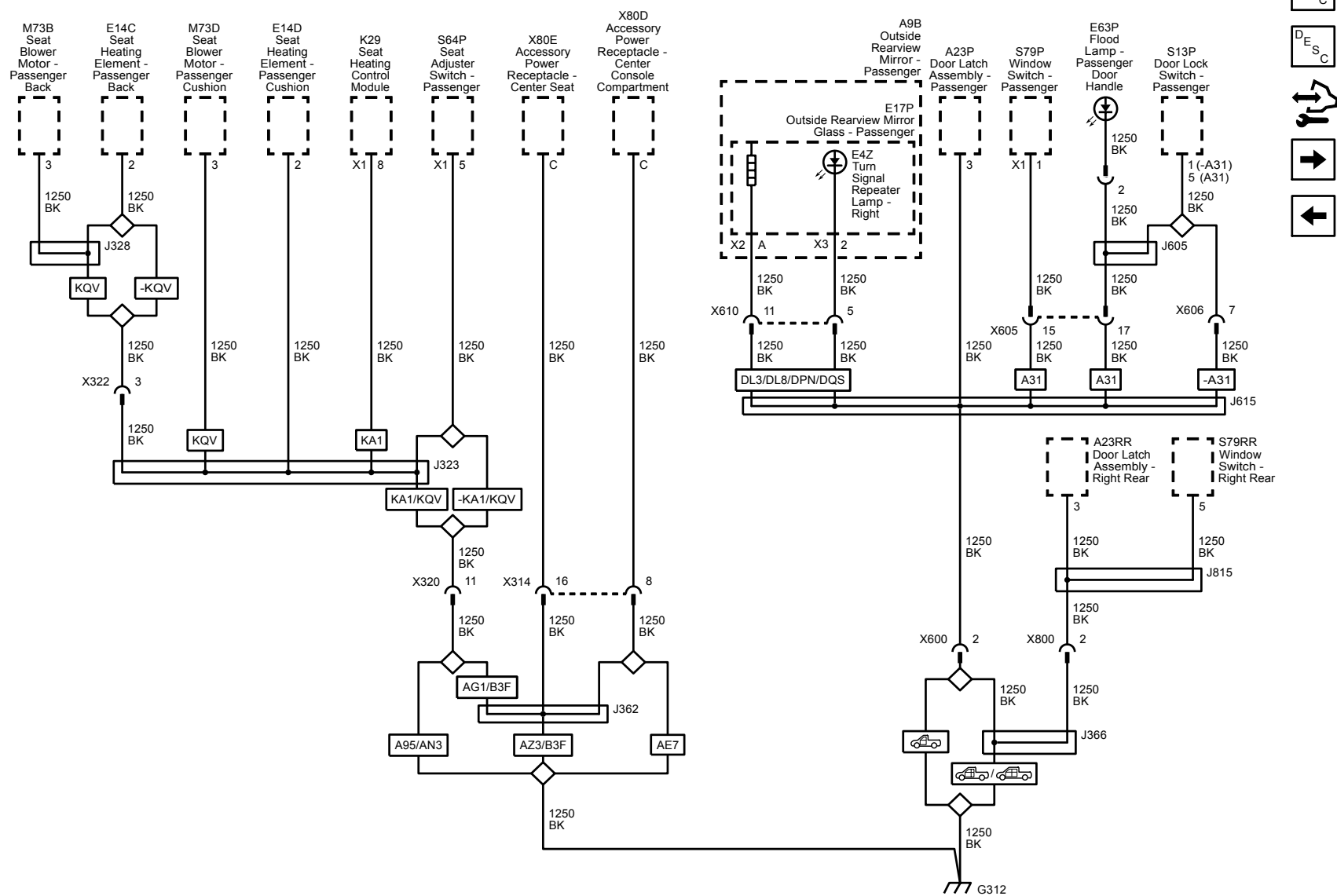


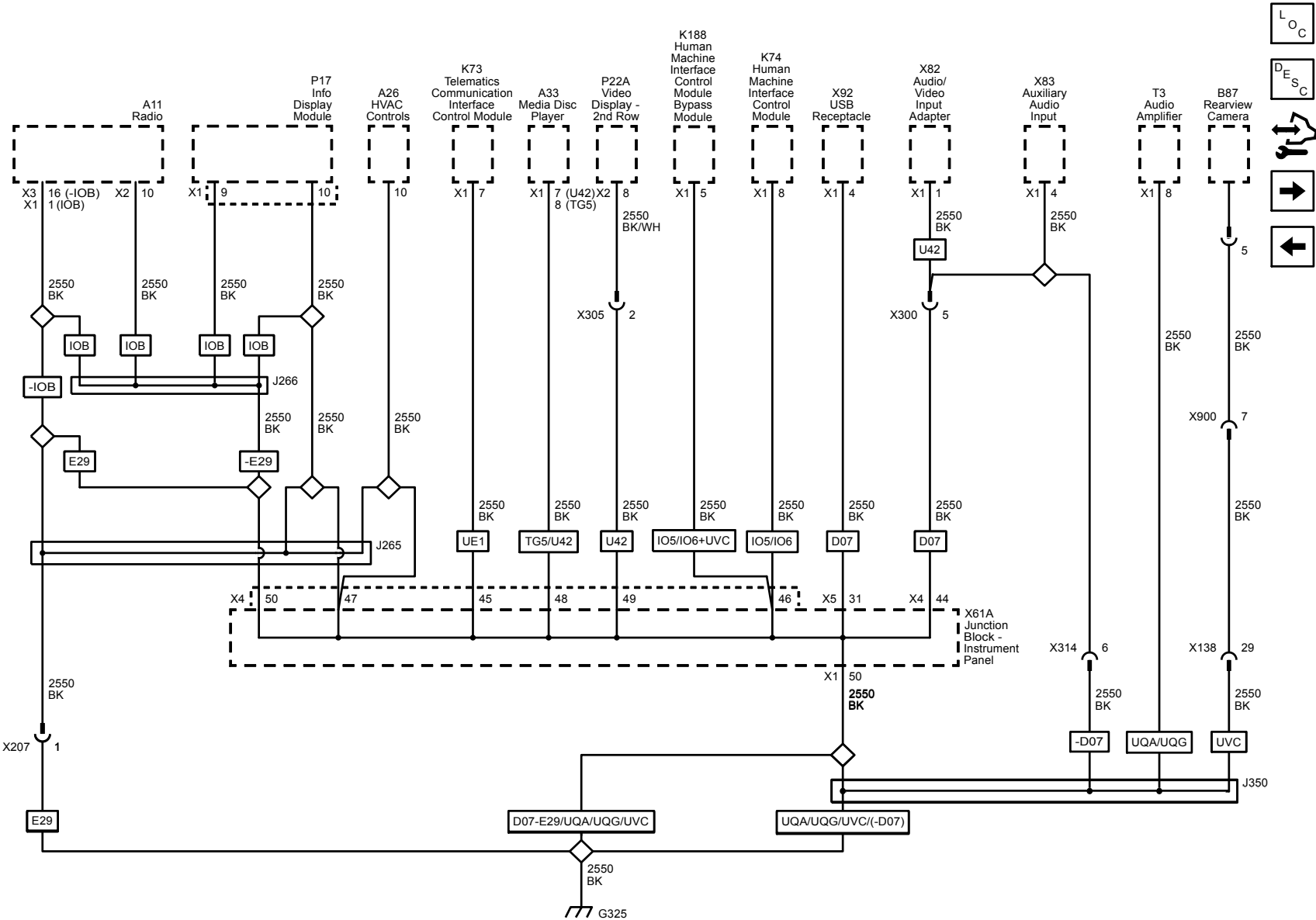


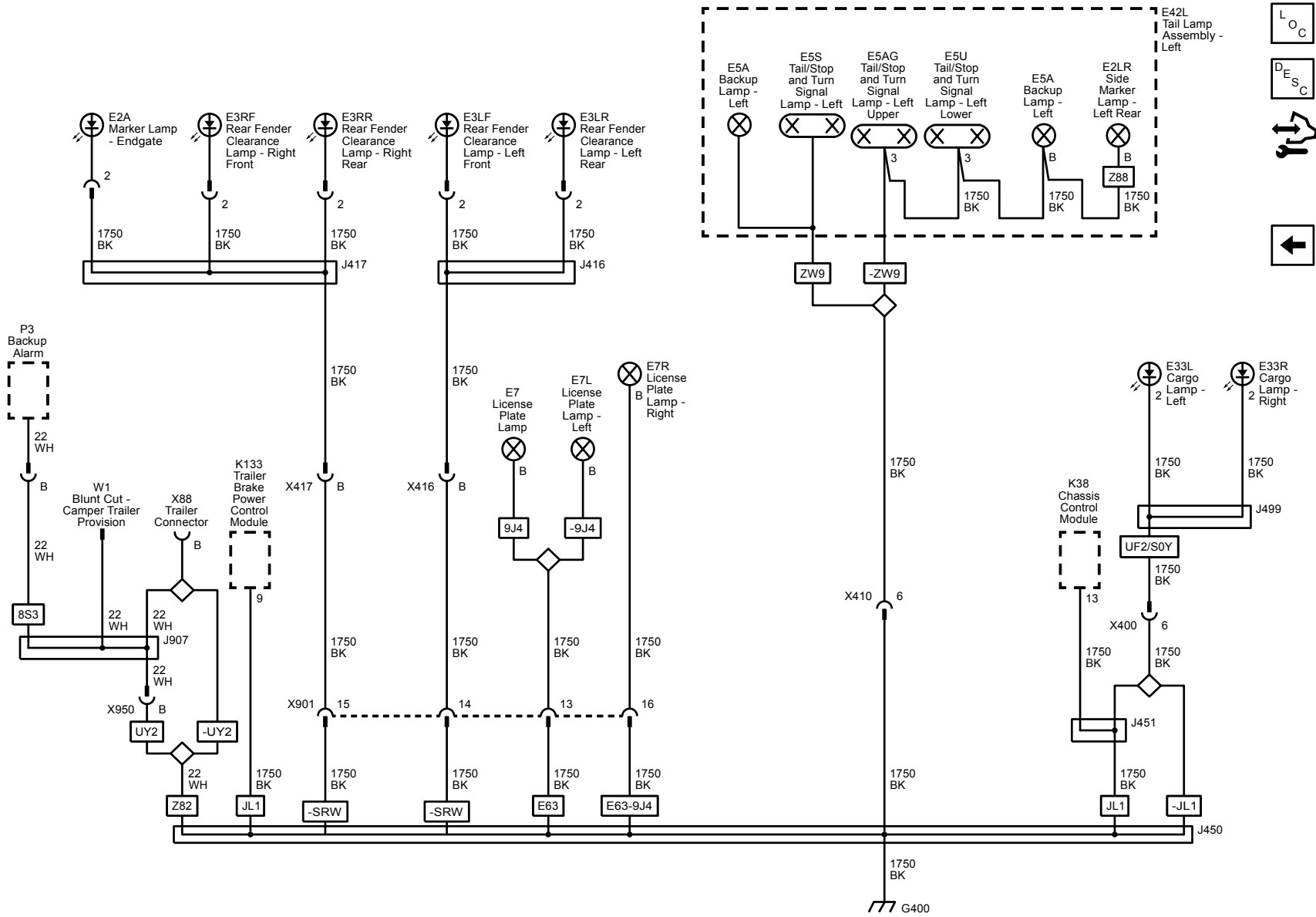




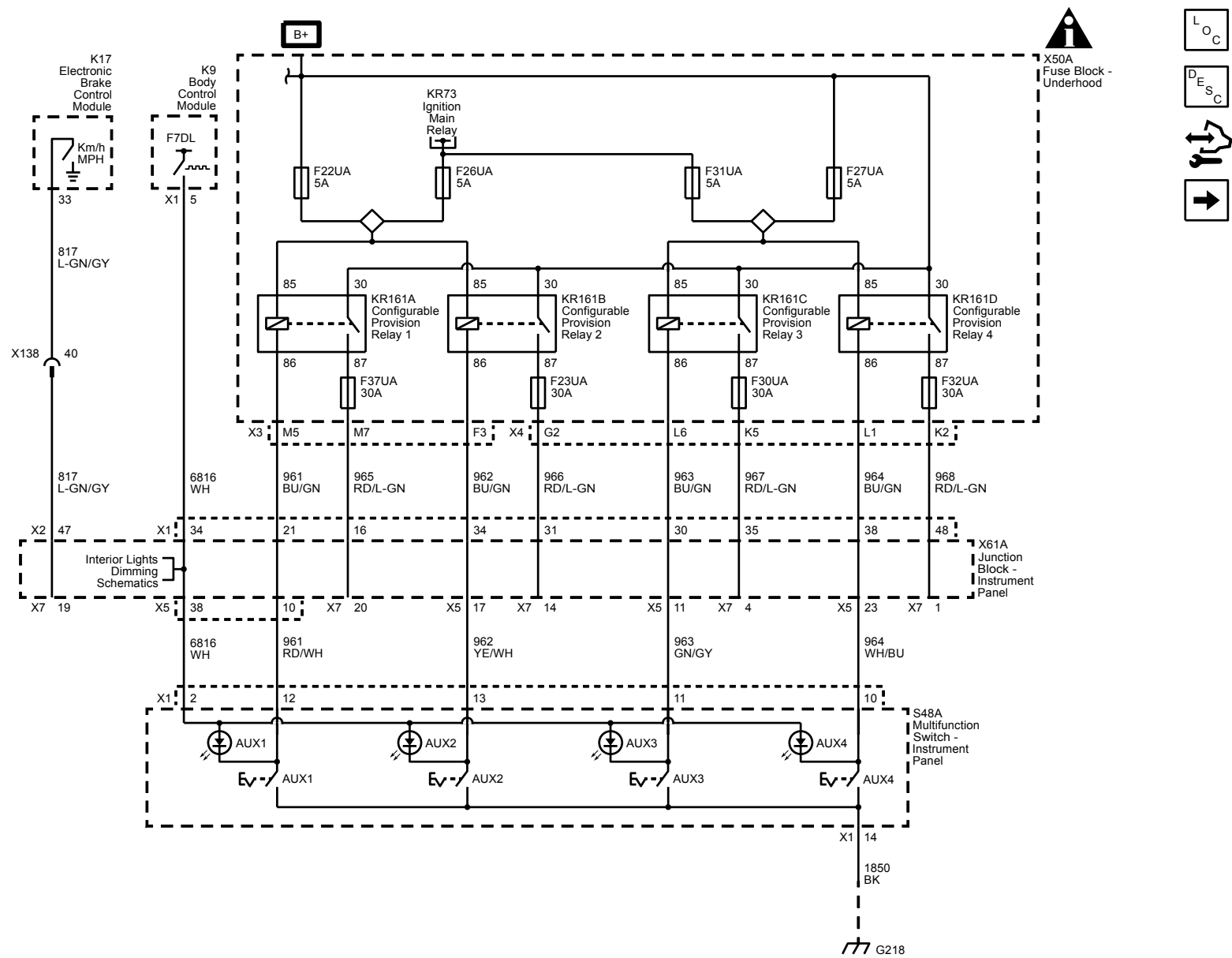


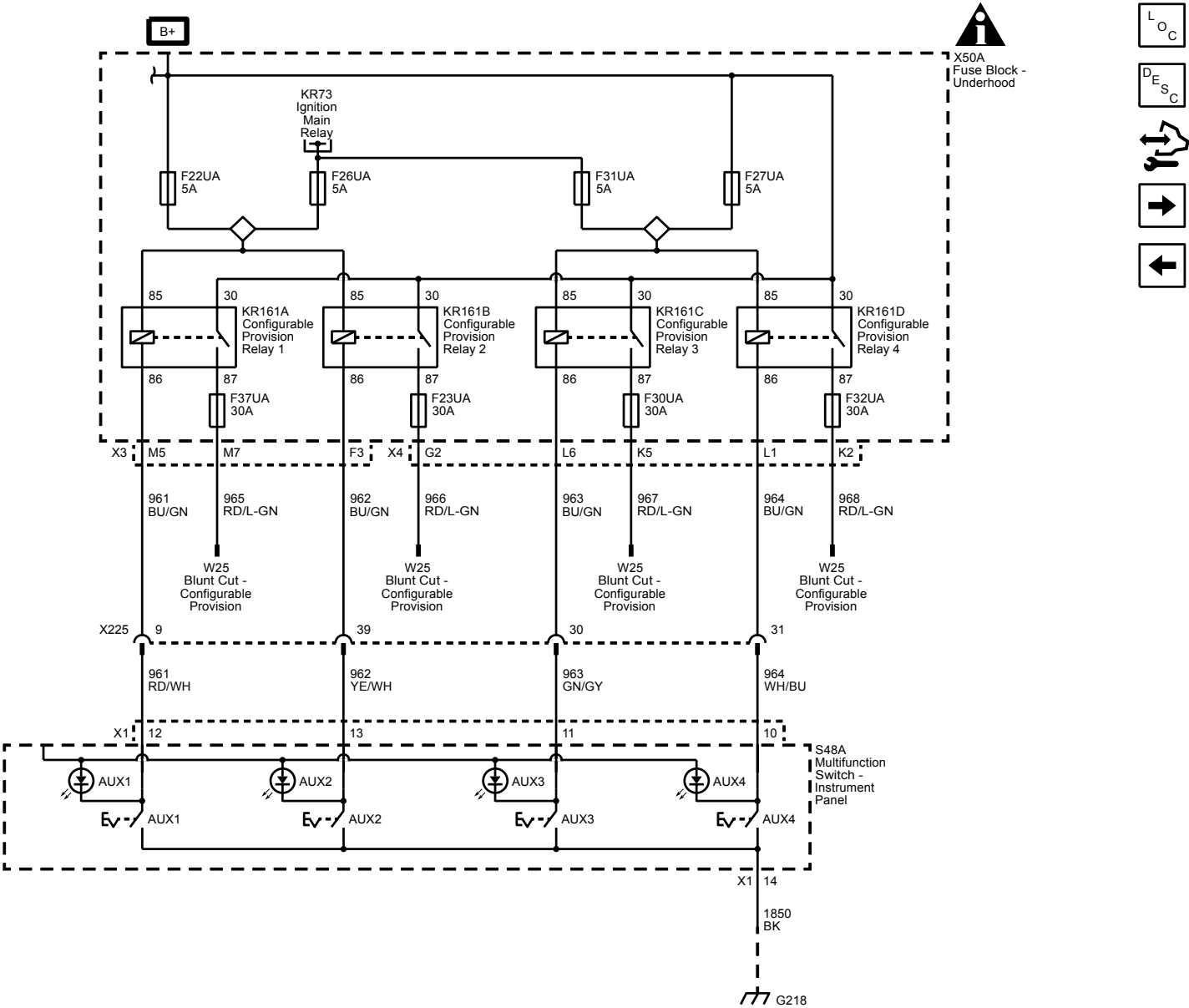


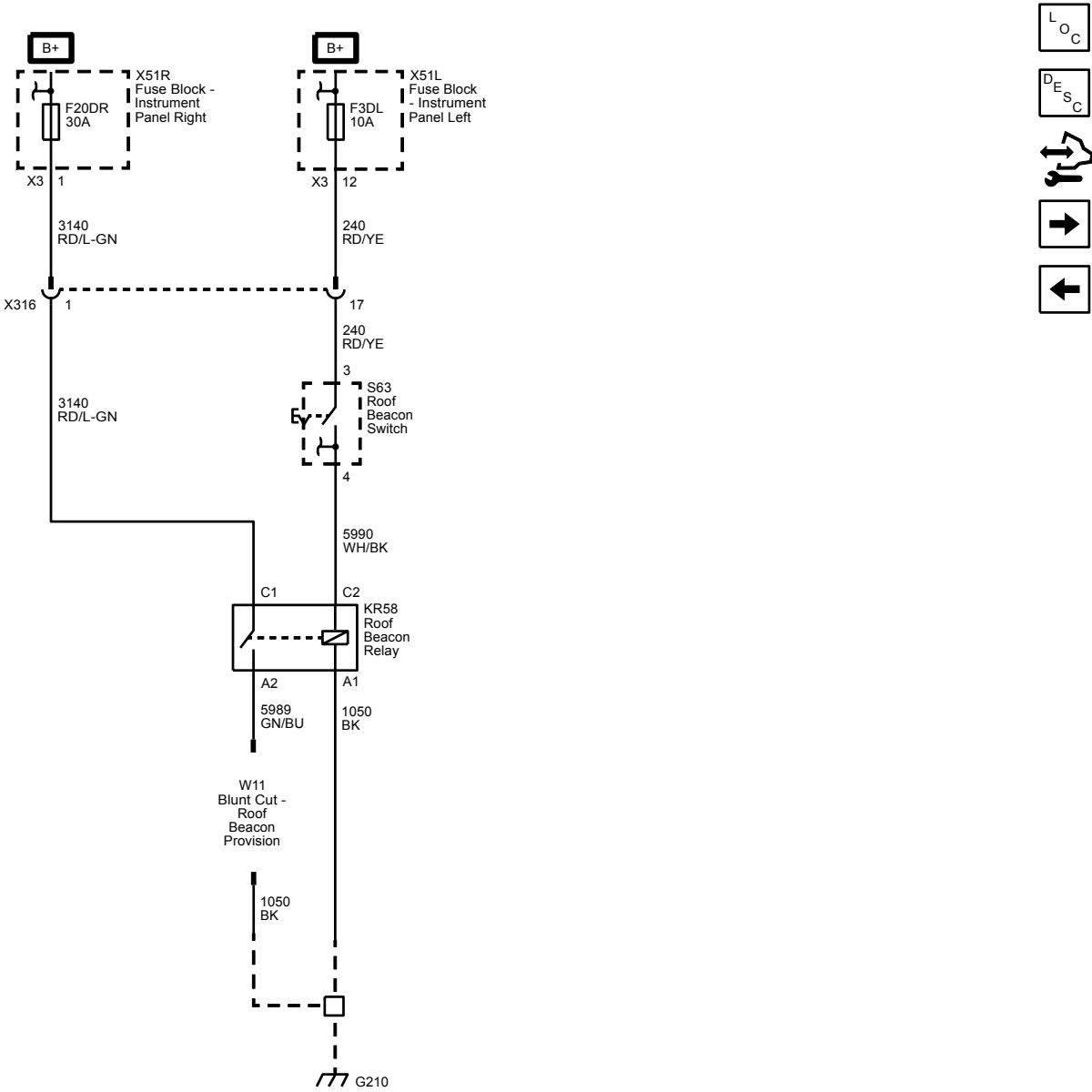


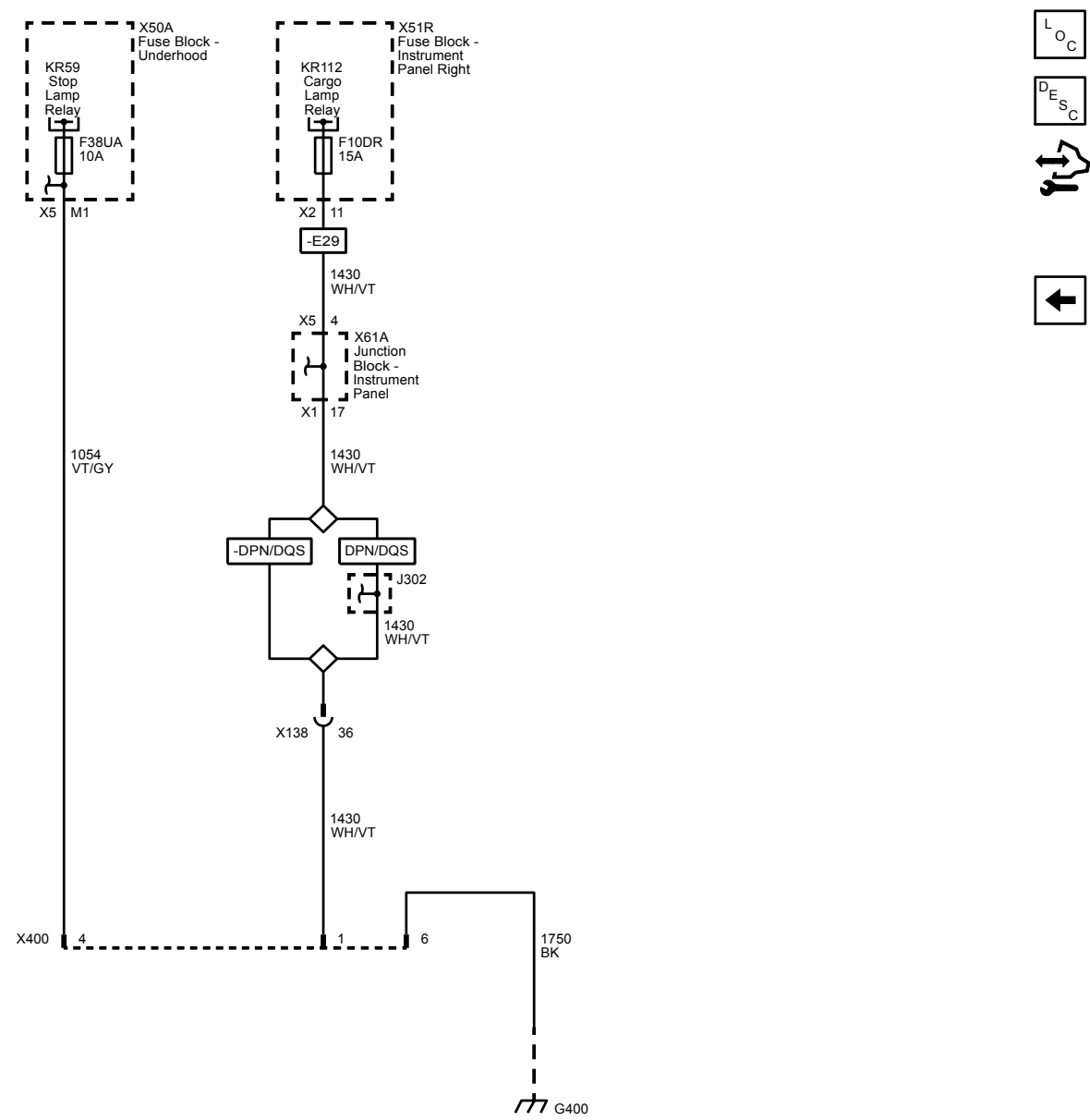


Upfitter Provisions (except E29)

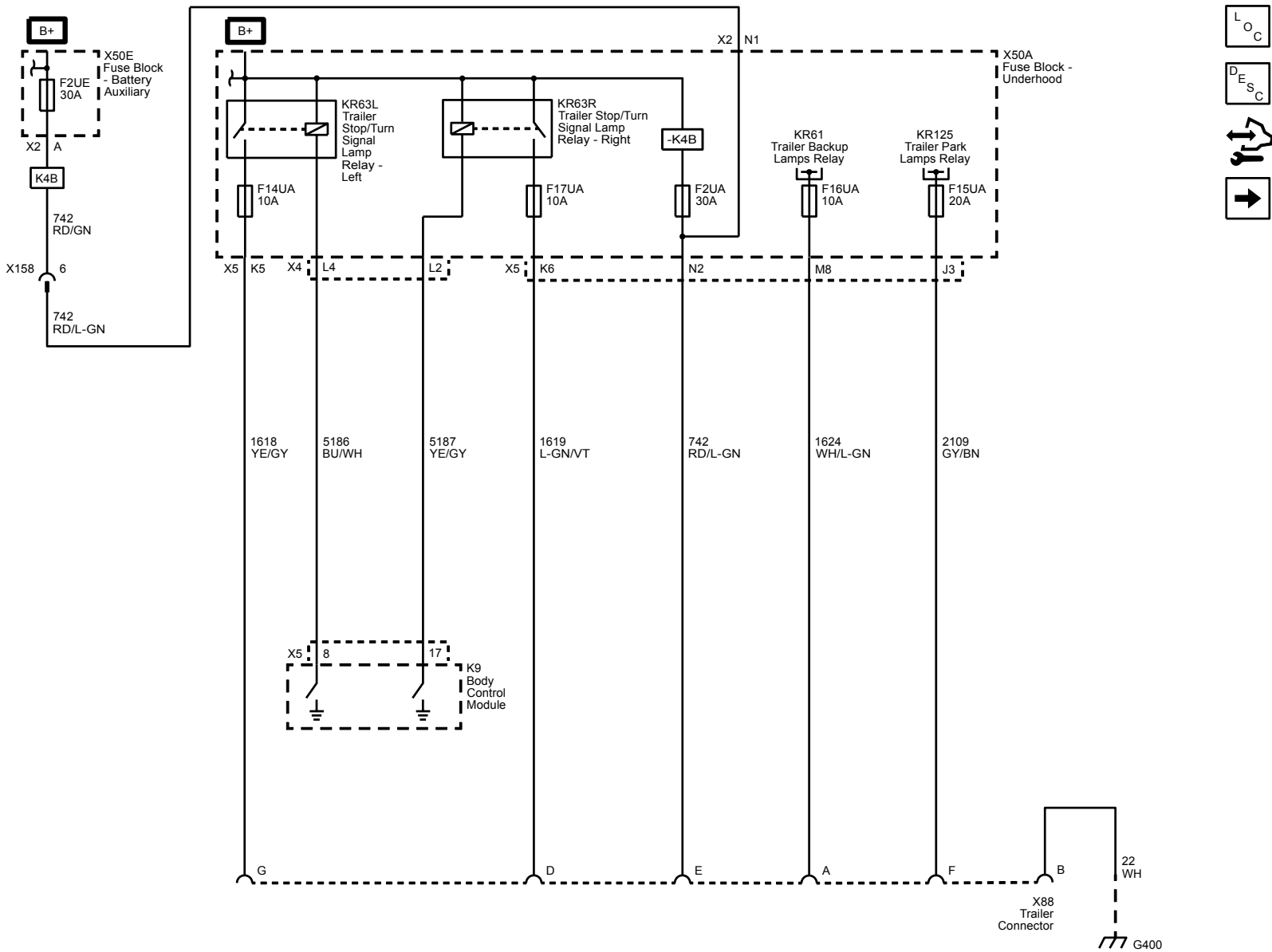




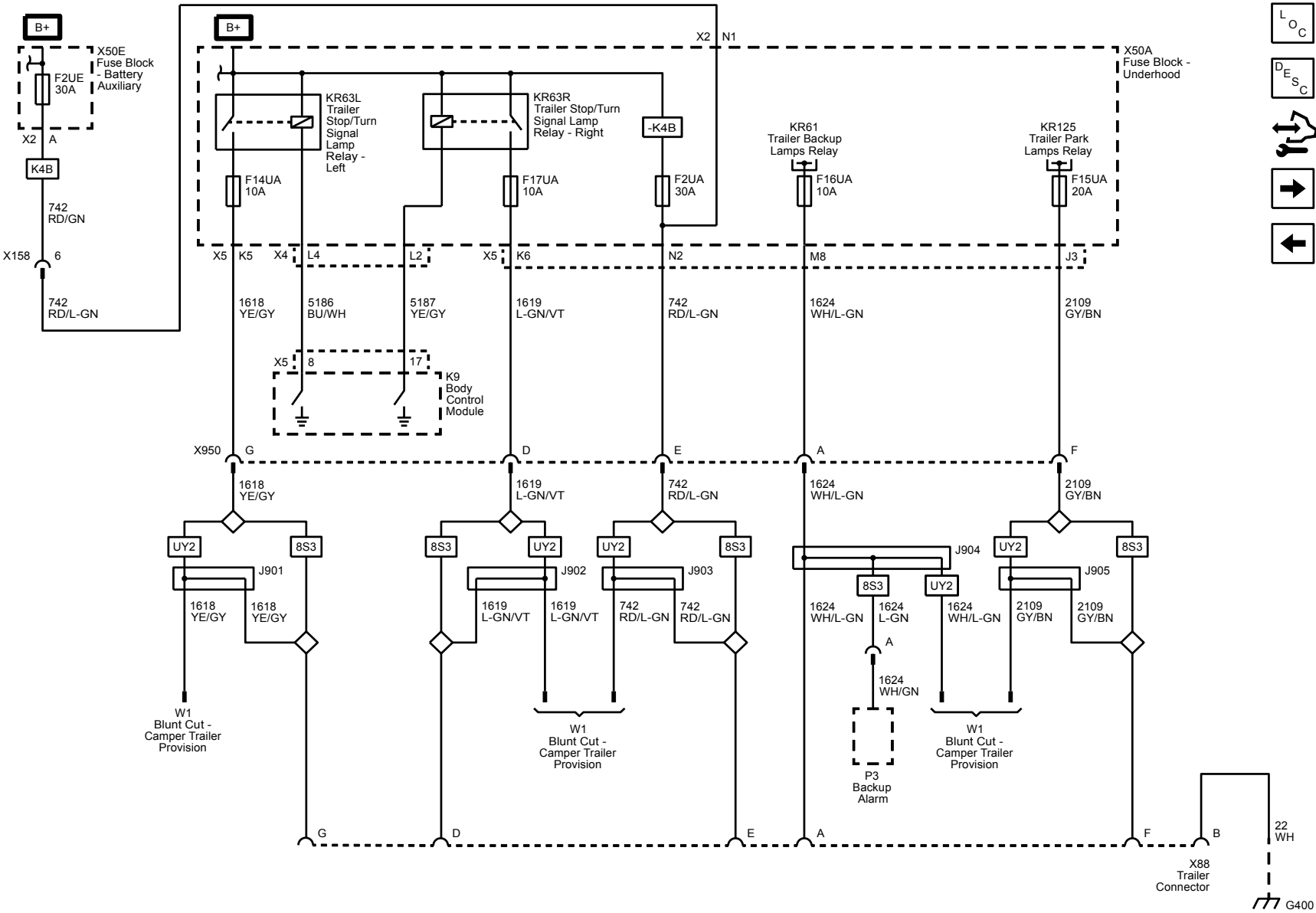




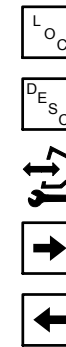
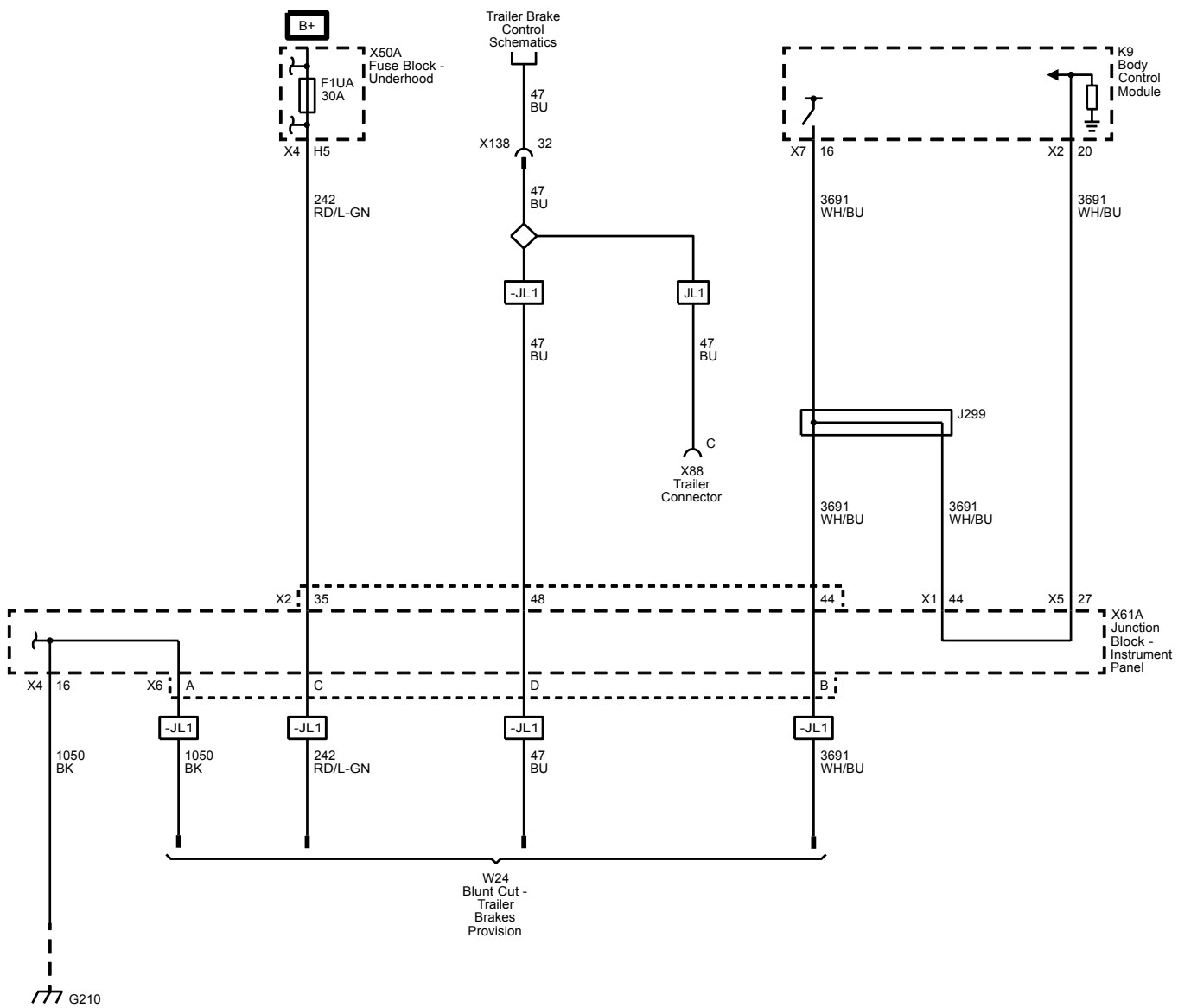
Trailer Connector Pins: A, B, D, E, F, G (Z82 without 8S3 or UY2)



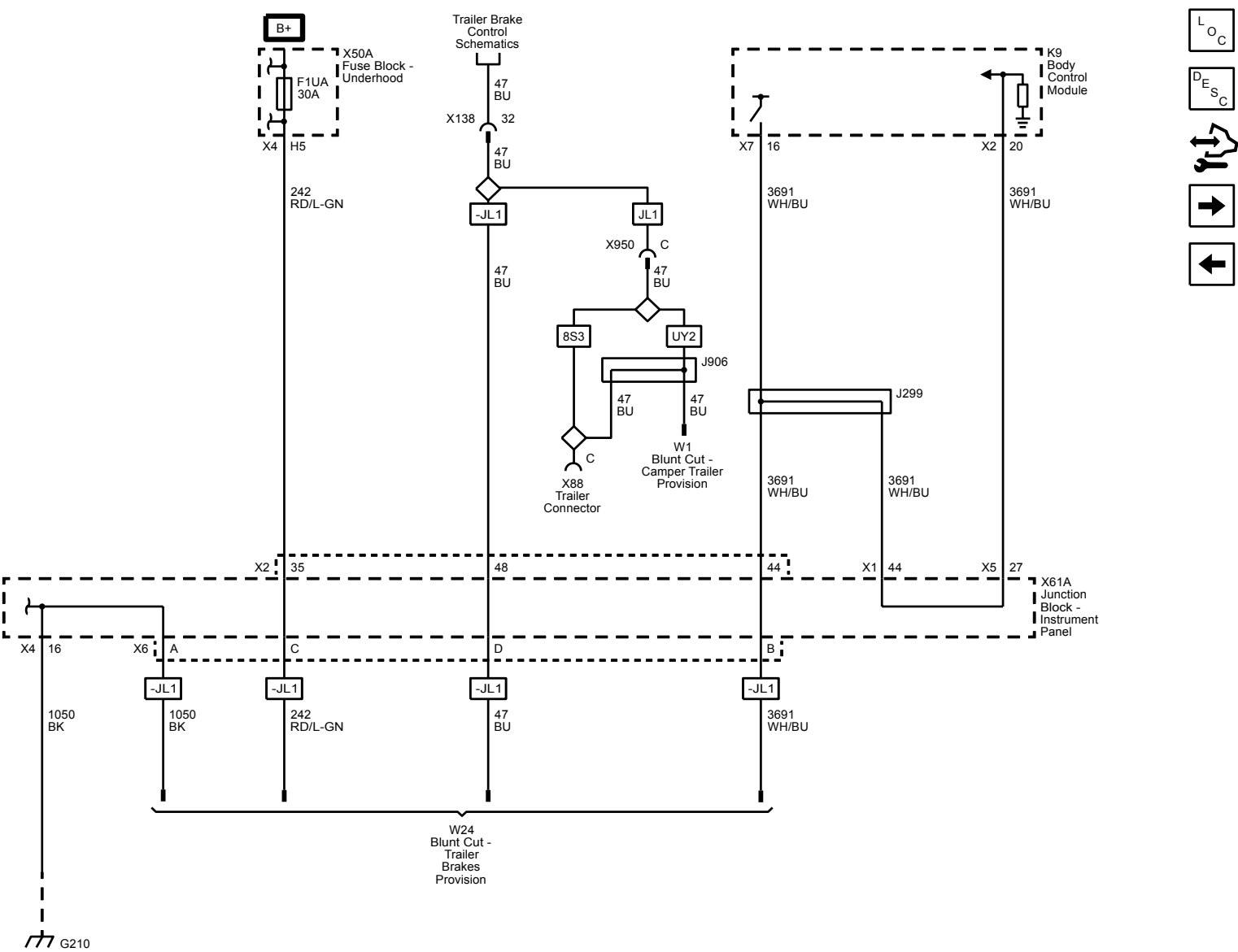
Trailer Connector Pins: A, B, D, E, F, G (Z82 with 8S3 or UY2)



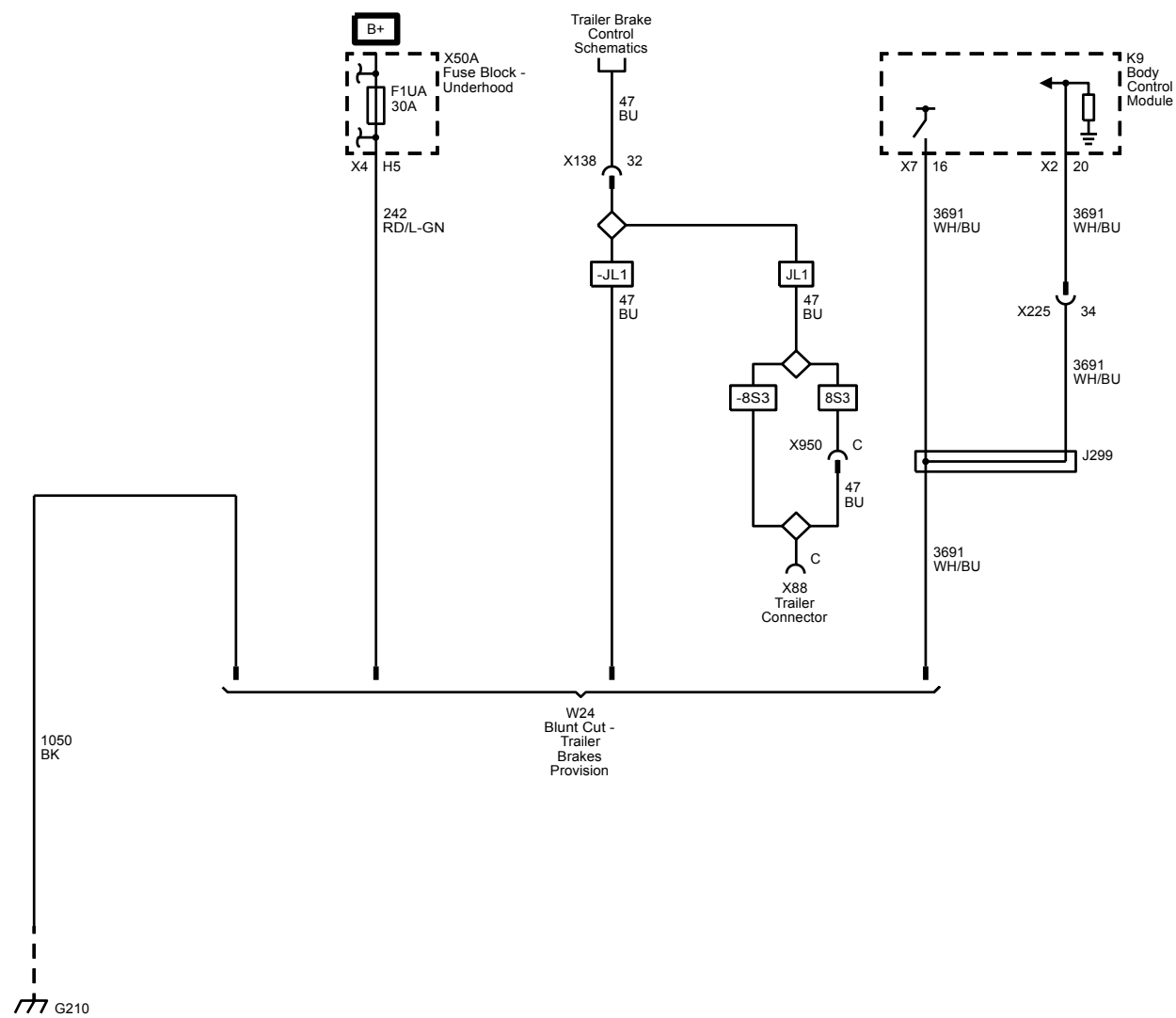
Trailer Connector Pin: C (Z82 without 8S3, E29 or UY2)



Trailer Connector Pin: C (Z82 with 8S3 or UY2 except E29)



Trailer Connector Pin: C (Z82 with E29)



Component Locator

Master Electrical Component List

Master Electrical Component List

Code	Name	Option	Location	Locator View	Connector End View
A3L	Sunshade - Left	DH6	In the passenger compartment, at the front of the headliner	—	—
A3R	Sunshade - Right	DH6	In the passenger compartment, at the front of the headliner	—	—
A4	Hybrid/EV Battery Pack	HP5	Under the center console	<u>Front Center of the Passenger Compartment Components (HP5)</u>	<u>A4 Hybrid/EV Battery Pack</u>
A6C	Fuel Pump and Level Sensor Assembly - Primary	2500 or 3500	Under the vehicle, mounted in the front fuel tank	—	<u>A6C Fuel Pump and Level Sensor Assembly - Primary</u>
A6D	Fuel Pump and Level Sensor Assembly - Secondary	N2N	Under the vehicle, mounted in the rear fuel tank	—	<u>A6D Fuel Pump and Level Sensor Assembly - Secondary</u>
A7	Fuel Pump and Level Sensor Assembly	1500	Under the vehicle, mounted in the fuel tank	<u>Rear Chassis Components (except Chassis Cab or L5P)</u>	<u>A7 Fuel Pump and Level Sensor Assembly</u>
A9A	Outside Rearview Mirror - Driver	—	Outside the vehicle, at the front of the driver door	—	—
A9B	Outside Rearview Mirror - Passenger	—	Outside the vehicle, at the front of the passenger door	—	—
A10	Inside Rearview Mirror	DD8 or UE1	In the passenger compartment, at the top center of the windshield	—	<u>A10 Inside Rearview Mirror</u>
A11	Radio	—	In the passenger compartment, in the center of the Instrument Panel behind the Info Display Module	<u>Rear of Instrument Panel Components</u>	<ul style="list-style-type: none">• <u>A11 Radio X1</u>• <u>A11 Radio X2 (IOB)</u>• <u>A11 Radio X2 (-IOB)</u>• <u>A11 Radio X3</u>
A14D	Seat Lumbar Support Pump - Driver	GAJ or Y91	In the passenger compartment, in the seat back	<u>Back of Driver Seat Components</u>	—
A14P	Seat Lumbar Support Pump - Passenger	GAJ or Y91	In the passenger compartment, in the seat back	<u>Back of Passenger Seat Components</u>	—
A15	Starter/Generator	HP5	In the engine compartment, right of center, mounted to lower front of engine block at right	<u>Right Rear Side of Engine Components (L8B)</u>	—
A16	Transfer Case Motor	NQF or NQH	Under the vehicle, mounted to the rear of the transmission	<ul style="list-style-type: none">• <u>Left Side of Transmission Components (MW7)</u>• <u>Left Side of Transmission Components (M5X)</u>	<ul style="list-style-type: none">• <u>A16 Transfer Case Motor (L5P)</u>• <u>A16 Transfer Case Motor (L96)</u>• <u>A16 Transfer Case Motor (LV3)</u>
A22	Radio Controls	—	In the passenger compartment, at the center of the Instrument Panel, part of the Info Display Module	—	<u>A22 Radio Controls</u>
A23D	Door Latch Assembly - Driver	—	Outside the vehicle, at the rear center of the driver door	<u>Driver Door Components</u>	<u>A23D Door Latch Assembly - Driver</u>
A23E	Door Latch Assembly - Endgate	A91	In the rear of the vehicle, inside the lower middle of the endgate	—	—

A23LR	Door Latch Assembly - Left Rear	Extended Cab or Crew Cab	Outside the vehicle, at the rear center of the left rear door	<u>Left Rear Door Components</u>	<u>A23LR Door Latch Assembly - Left Rear</u>
A23P	Door Latch Assembly - Passenger	—	Outside the vehicle, at the rear center of the passenger door	<u>Passenger Door Components</u>	<u>A23P Door Latch Assembly - Passenger</u>
A23RR	Door Latch Assembly - Right Rear	Extended Cab or Crew Cab	Outside the vehicle, at the rear center of the right rear door	<u>Right Rear Door Components</u>	<u>A23RR Door Latch Assembly - Right Rear</u>
A26	HVAC Controls	—	In the passenger compartment, at the middle of the instrument panel, part of the info display module	—	—
A28	Hybrid/EV Battery Contactor Assembly	HP5	part of the Hybrid/EV battery pack	<u>Hybrid/EV Battery Pack (2 of 3)</u>	<ul style="list-style-type: none"> ● <u>A28 Hybrid/EV Battery Contactor Assembly X1</u> ● <u>A28 Hybrid/EV Battery Contactor Assembly X2</u> ● <u>A28 Hybrid/EV Battery Contactor Assembly X3</u> ● <u>A28 Hybrid/EV Battery Contactor Assembly X4</u> ● <u>A28 Hybrid/EV Battery Contactor Assembly X5</u> ● <u>A28 Hybrid/EV Battery Contactor Assembly X6</u> ● <u>A28 Hybrid/EV Battery Contactor Assembly X7</u> ● <u>A28 Hybrid/EV Battery Contactor Assembly X8</u>
A33	Media Disc Player	TG5/U42/D07	In the passenger compartment, at the center of the Instrument Panel, behind the Info Display Module	<u>Rear of Instrument Panel Components</u>	<ul style="list-style-type: none"> ● <u>A33 Media Disc Player X1 (D07/U42)</u> ● <u>A33 Media Disc Player X1 (TG5)</u> ● <u>A33 Media Disc Player X2 (D07/U42)</u>
A39	Reductant Fluid Reservoir Assembly	L5P	Under the vehicle, mounted to the outboard side of the frame, below the passenger side of the cab	—	—
B1	A/C Refrigerant Pressure Sensor	C67 or CJ2	In the engine compartment, near the left front corner of the engine	<ul style="list-style-type: none"> ● <u>Right Rear of Engine Components (LV3)</u> ● <u>Right Side of Engine Components (L96)</u> 	<ul style="list-style-type: none"> ● <u>B1 A/C Refrigerant Pressure Sensor (L5P)</u> ● <u>B1 A/C Refrigerant Pressure Sensor (L96)</u> ● <u>B1 A/C Refrigerant Pressure Sensor (LV3)</u>
B5LF	Wheel Speed Sensor - Left Front	—	Outside the vehicle, part of the left front wheel hub assembly	<u>Front Chassis Components (1500)</u>	<u>B5LF Wheel Speed Sensor - Left Front</u>
B5LR	Wheel Speed Sensor - Left Rear	—	Outside the vehicle, mounted to the outboard end of the left axle tube	<ul style="list-style-type: none"> ● <u>Chassis Components (2500/3500)</u> ● <u>Rear Chassis Components (except Chassis Cab or L5P)</u> ● <u>Front Axle Components</u> 	<u>B5LR Wheel Speed Sensor - Left Rear</u>
B5RF	Wheel Speed Sensor - Right Front	—	Outside the vehicle, part of the right front wheel hub assembly	<u>Front Chassis Components (1500)</u>	<u>B5RF Wheel Speed Sensor - Right Front</u>

B5RR	Wheel Speed Sensor - Right Rear	—	Outside the vehicle, mounted to the outboard end of the right axle tube	<ul style="list-style-type: none"> • <u>Front Axle Components</u> • <u>Chassis Components (2500/3500)</u> • <u>Rear Chassis Components (except Chassis Cab or L5P)</u> 	<u>B5RR Wheel Speed Sensor - Right Rear</u>
B7D	Air Temperature Sensor - Duct Left Lower	CJ2	In the passenger compartment, behind the instrument panel, on the left side of the HVAC module	<u>Front of HVAC Assembly Components</u>	—
B7E	Air Temperature Sensor - Duct Right Lower	CJ2	In the passenger compartment, behind the instrument panel, on the right side of the HVAC module	<u>Front of HVAC Assembly Components</u>	—
B7H	Air Temperature Sensor - Duct Left Upper	CJ2	In the passenger compartment, behind the instrument panel, on the upper left side of the HVAC module	<u>Back of HVAC Assembly Components</u>	—
B7J	Air Temperature Sensor - Duct Right Upper	CJ2	In the passenger compartment, behind the instrument panel, on the upper right side of the HVAC module	<u>Back of HVAC Assembly Components</u>	—
B9D	Ambient Air Temperature Sensor - Mirror	L5P	Outside the vehicle, at the bottom of the passenger outside rearview mirror	—	<u>B9D Ambient Air Temperature Sensor - Mirror</u>
B9	Ambient Air Temperature Sensor	—	Outside the vehicle, behind the right side of the grill	<ul style="list-style-type: none"> • <u>Front of Vehicle (Chevrolet) Components</u> • <u>Front of Vehicle (GMC) Components</u> 	—
B10B	Ambient Light/Sunload Sensor	—	In the passenger compartment, at the top middle of the instrument panel	—	<u>B10B Ambient Light/Sunload Sensor</u>
B12A	Transmission Fluid Pressure Switch	MW7, MYC or MYD	Under the vehicle, inside the transmission assembly	—	—
B13	Transmission Fluid Temperature Sensor	M5U, MW7, MYC or MYD	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Valve Body Components (M5U)</u>	—
B14A	Transmission Output Shaft Speed Sensor	—	Under the vehicle, mounted in the transmission tailshaft housing	<ul style="list-style-type: none"> • <u>Automatic Transmission Internal Components (MYC or MYD)</u> • <u>Left Side of Transmission Components (MW7)</u> • <u>Automatic Transmission Case Components (M5U)</u> 	<u>B14A Transmission Output Shaft Speed Sensor (LV1+(C67/C42))</u>
B14B	Transmission Turbine Speed Sensor	MW7	Under the vehicle, inside the transmission assembly	<u>Left Side of Transmission Components (MW7)</u>	<u>B14B Transmission Turbine Speed Sensor (L5P)</u>
B14C	Transmission Input Shaft Speed Sensor	M5U, MYC or MYD	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Case Components (M5U)</u>	—
B14D	Transmission Intermediate Shaft Speed Sensor	M5U	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Case Components (M5U)</u>	—
B15	Transmission Internal Mode Switch	M5U, MW7, MYC or MYD	Under the vehicle, inside the transmission assembly	<ul style="list-style-type: none"> • <u>Automatic Transmission Case Components (M5U)</u> • <u>Automatic Transmission Internal Components (MYC or MYD)</u> 	—

B16	Backup Lamp Switch	M2P, MQ7 or MXW	Under the vehicle, mounted to the transmission assembly	<ul style="list-style-type: none"> • <u>Manual Transmission Components (MQ7)</u> • <u>Manual Transmission Components (MXW)</u> 	<ul style="list-style-type: none"> • <u>B16 Backup Lamp Switch (L96+ZW9)</u> • <u>B16 Backup Lamp Switch (LV1+(C42/C67))</u>
B18	Battery Current Sensor	—	In the engine compartment, left rear of battery, on the negative battery cable	<u>Right Rear of Engine Compartment Components (HP5)</u>	<u>B18 Battery Current Sensor</u>
B19B	Brake Booster Vacuum Sensor	—	At the rear of the engine compartment, left of the brake fluid reservoir, on brake booster vacuum check valve	<u>Left Side of Engine Compartment Components (except L5P)</u>	<u>B19B Brake Booster Vacuum Sensor</u>
B20	Brake Fluid Level Switch	—	In the engine compartment, mounted in the brake fluid reservoir	<u>Left Side of Engine Compartment Components (except L5P)</u>	<u>B20 Brake Fluid Level Switch</u>
B22	Brake Pedal Position Sensor	—	In the passenger compartment, in the driver side footwell, under the instrument panel	—	<u>B22 Brake Pedal Position Sensor</u>
B23	Camshaft Position Sensor	—	In the engine compartment, at the front of the engine, mounted the timing chain cover	<u>Right Side of Engine Components (L5P)</u>	<ul style="list-style-type: none"> • <u>B23 Camshaft Position Sensor (L5P)</u> • <u>B23 Camshaft Position Sensor (L83/L86/L8B)</u>
B24	Cellular Phone Microphone	IO5, IO6 or UE1	In the passenger compartment, in the left side of the overhead console	—	<u>B24 Cellular Phone Microphone</u>
B25B	Clutch Pedal Position Sensor	M2P, MQ7 or MXW	In the passenger compartment, in the driver side footwell, under the instrument panel	—	<u>B25B Clutch Pedal Position Sensor</u>
B26	Crankshaft Position Sensor	—	In the engine compartment, mounted in the side of the engine block	<ul style="list-style-type: none"> • <u>Right Side of Engine Components (L96)</u> • <u>Right Rear of Engine Components (LV3)</u> • <u>Right Side of Engine Components (L5P)</u> 	<ul style="list-style-type: none"> • <u>B26 Crankshaft Position Sensor (L5P)</u> • <u>B26 Crankshaft Position Sensor (L96/LC8)</u> • <u>B26 Crankshaft Position Sensor (LV1/LV3)</u>
B30	Hybrid/EV Battery Pack Current Sensor	HP5	part of the Hybrid/EV battery pack	—	—
B33	Engine Coolant Level Switch	L5P	In the engine compartment, in the engine coolant reservoir	—	<u>B33 Engine Coolant Level Switch</u>
B34	Engine Coolant Temperature Sensor	L5P	In the engine compartment, top left front of the engine, right of the water outlet housing	<ul style="list-style-type: none"> • <u>Left Side of Engine Components (L96)</u> • <u>Top of the Engine Components (L5P)</u> • <u>Left Front of Engine Components (LV3)</u> 	<ul style="list-style-type: none"> • <u>B34 Engine Coolant Temperature Sensor (L5P)</u> • <u>B34 Engine Coolant Temperature Sensor (L96/LC8)</u> • <u>B34 Engine Coolant Temperature Sensor (LV1/LV3)</u>
B34	Engine Coolant Temperature Sensor	1500	In the engine compartment, top left front of water pump, left of coolant outlet hose	<ul style="list-style-type: none"> • <u>Left Side of Engine Components (L96)</u> • <u>Top of the Engine Components (L5P)</u> • <u>Left Front of Engine Components (LV3)</u> 	<ul style="list-style-type: none"> • <u>B34 Engine Coolant Temperature Sensor (L5P)</u> • <u>B34 Engine Coolant Temperature Sensor (L96/LC8)</u> • <u>B34 Engine Coolant Temperature Sensor (LV1/LV3)</u>

B34	Engine Coolant Temperature Sensor	L96/LC8	In the engine compartment, left front side of engine cylinder head	<ul style="list-style-type: none"> • <u>Left Side of Engine Components (L96)</u> • <u>Top of the Engine Components (L5P)</u> • <u>Left Front of Engine Components (LV3)</u> 	<ul style="list-style-type: none"> • <u>B34 Engine Coolant Temperature Sensor (L5P)</u> • <u>B34 Engine Coolant Temperature Sensor (L96/LC8)</u> • <u>B34 Engine Coolant Temperature Sensor (LV1/LV3)</u>
B35	Engine Oil Level Switch	1500 or L5P	In the engine compartment, bottom left of the engine oil pan	<ul style="list-style-type: none"> • <u>Left Side of Engine Components (L5P)</u> • <u>Right Rear Side of Engine Components (L8B)</u> • <u>Right Rear of Engine Components (LV3)</u> 	<ul style="list-style-type: none"> • <u>B35 Engine Oil Level Switch (L5P)</u> • <u>B35 Engine Oil Level Switch (LV1/LV3)</u>
B37B	Engine Oil Pressure Sensor	—	In the engine compartment, at the top rear of the engine block, between the cylinder heads	<ul style="list-style-type: none"> • <u>Left Front of Engine Components (LV3)</u> • <u>Left Side of Engine Components (L5P)</u> • <u>Left Side of Engine Components (L96)</u> 	<ul style="list-style-type: none"> • <u>B37B Engine Oil Pressure Sensor (L5P)</u> • <u>B37B Engine Oil Pressure Sensor (L96/LC8)</u> • <u>B37B Engine Oil Pressure Sensor (LV1/LV3)</u>
B39	A/C Evaporator Temperature Sensor	C67 or CJ2	In the passenger compartment, behind the instrument panel, mounted in the HVAC housing	<u>Back of HVAC Assembly Components</u>	—
B46A	Fuel Level Sensor - Primary	2500 or 3500	Under the vehicle, inside the primary fuel tank, part of the fuel pump and level sensor assembly	—	—
B46B	Fuel Level Sensor - Secondary	N2N	Under the vehicle, inside the secondary fuel tank, part of the fuel pump and level sensor assembly	—	—
B46	Fuel Level Sensor	1500	Under the vehicle, inside the fuel tank, part of the fuel pump and level sensor assembly	—	—
B47B	Fuel Rail Pressure Sensor	1500 or L5P	In the engine compartment, at the top of the engine, mounted to the fuel rail	<ul style="list-style-type: none"> • <u>Top of Engine Components (L83/L86/L8B)</u> • <u>Left Side of Engine Components (L5P)</u> 	<u>B47B Fuel Rail Pressure Sensor (L5P)</u>
B47	Fuel Pressure Sensor	1500	On the vehicle underbody, on the fuel line, near the transmission crossmember mount	<u>Front Chassis Components (1500)</u>	<u>B47 Fuel Pressure Sensor</u>
B52C	Heated Oxygen Sensor - Bank 1 Sensor 1	except L5P	Under the vehicle, mounted in the bank 1 exhaust, upstream of the catalytic converter	<u>Exhaust Components (L96)</u>	<ul style="list-style-type: none"> • <u>B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L96)</u> • <u>B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L96/LC8)</u> • <u>B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (LV1)</u> • <u>B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (LV3)</u>
B52D	Heated Oxygen Sensor - Bank 1 Sensor 2	except L5P	Under the vehicle, mounted in the bank 1 exhaust, downstream of the catalytic converter	<ul style="list-style-type: none"> • <u>Exhaust Components (L96)</u> • <u>Front Chassis Components (1500)</u> 	<u>B52D Heated Oxygen Sensor - Bank 1 Sensor 2</u>

B52E	Heated Oxygen Sensor - Bank 2 Sensor 1	except L5P	Under the vehicle, mounted in the bank 2 exhaust, upstream of the catalytic converter	<u>Exhaust Components (L96)</u>	<ul style="list-style-type: none"> ● <u>B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L96/LC8)</u> ● <u>B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (LV1/LV3)</u>
B52F	Heated Oxygen Sensor - Bank 2 Sensor 2	except L5P	Under the vehicle, mounted in the bank 2 exhaust, downstream of the catalytic converter	<ul style="list-style-type: none"> ● <u>Exhaust Components (L96)</u> ● <u>Chassis Components (2500/3500)</u> 	<u>B52F Heated Oxygen Sensor - Bank 2 Sensor 2</u>
B55	Hood Ajar Switch	BTV/PTO/UTJ/HP5	Outside the vehicle, at the front center of the hood, part of the hood latch assembly	<u>Right Side of Engine Compartment Components</u>	<ul style="list-style-type: none"> ● <u>B55 Hood Ajar Switch (L83/L86/LV3)</u> ● <u>B55 Hood Ajar Switch (HP5)</u> ● <u>B55 Hood Ajar Switch (L96/LC8/L5P)</u> ● <u>B55 Hood Ajar Switch (CK200+Z88)</u>
B59L	Front Impact Sensor - Left	1500	In the engine compartment, at the left side of the top of the radiator core support	—	<u>B59L Front Impact Sensor - Left</u>
B59R	Front Impact Sensor - Right	1500	In the engine compartment, at the right side of the top of the radiator core support	—	<u>B59R Front Impact Sensor - Right</u>
B59	Front Impact Sensor	2500/3500	In the engine compartment, at the center of the top of the radiator core support	—	<u>B59 Front Impact Sensor</u>
B61P	Seat Belt Tension Sensor - Passenger	AL0	In the passenger compartment, at the base of the B-pillar, part of the passenger seat belt retractor pretensioner	—	—
B62D	Seat Position Sensor - Driver	1500	In the passenger compartment, mounted to the outboard track of the driver seat	<ul style="list-style-type: none"> ● <u>Front of Driver Seat Components</u> ● <u>Bottom of Driver Seat Components</u> 	<u>B62D Seat Position Sensor - Driver</u>
B62P	Seat Position Sensor - Passenger	1500	In the passenger compartment, mounted to the outboard track of the passenger seat	<ul style="list-style-type: none"> ● <u>Bottom of Passenger Seat Components (without GAJ or Y91)</u> ● <u>Bottom of Passenger Seat Components (GAJ or Y91)</u> 	—
B63LF	Side Impact Sensor - Left Front	AY0	At the left front of the passenger compartment, mounted inside the left front door, at the bottom	<u>Driver Door Components</u>	<u>B63LF Side Impact Sensor - Left Front</u>
B63LR	Side Impact Sensor - Left Rear	4 Door with AY0	At the left rear of the passenger compartment, mounted inside the left rear door, at the bottom	<u>Left Rear Door Components</u>	<u>B63LR Side Impact Sensor - Left Rear</u>
B63RF	Side Impact Sensor - Right Front	4 Door with AY0	At the right front of the passenger compartment, mounted inside the right front door, at the bottom	<u>Passenger Door Components</u>	<u>B63RF Side Impact Sensor - Right Front</u>
B63RR	Side Impact Sensor - Right Rear	AY0	At the right rear of the passenger compartment, mounted inside the right rear door, at the bottom	<u>Right Rear Door Components</u>	<u>B63RR Side Impact Sensor - Right Rear</u>
B67A	Ultrasonic Intrusion Sensor 1	UTU/UTV	In the passenger compartment, at the front of the roof, in the overhead console, part of the Content Theft Deterrent Sensor Module	—	—
B67B	Ultrasonic Intrusion Sensor 2	UTU/UTV	In the passenger compartment, at the front of the roof, in the overhead console, part of the Content Theft Deterrent Sensor Module	—	—
B67C	Ultrasonic Intrusion Sensor 3	UTU/UTV	In the passenger compartment, at the front of the roof, in the overhead console, part of the Content Theft Deterrent Sensor Module	—	—

B68A	Knock Sensor 1	except L5P	In the engine compartment, on the rear side of engine block	<u>Left Front of Engine Components (LV3)</u>	<u>B68A Knock Sensor 1</u>
B68B	Knock Sensor 2	except L5P	In the engine compartment, on the rear side of engine block	<ul style="list-style-type: none"> • <u>Right Side of Engine Components (L96)</u> • <u>Right Rear of Engine Components (LV3)</u> 	<u>B68B Knock Sensor 2</u>
B74	Manifold Absolute Pressure Sensor	except L5P	In the engine compartment, left front of engine at throttle body	<ul style="list-style-type: none"> • <u>Left Side of Engine Components (L5P)</u> • <u>Left Front of Engine Components (LV3)</u> • <u>Left Side of Engine Components (L96)</u> 	<ul style="list-style-type: none"> • <u>B74 Manifold Absolute Pressure Sensor (L96/LC8)</u> • <u>B74 Manifold Absolute Pressure Sensor (LV3+(NQG/NQH))</u>
B74	Manifold Absolute Pressure Sensor	L5P	In the engine compartment, left front top of engine in the intake manifold	<ul style="list-style-type: none"> • <u>Left Side of Engine Components (L5P)</u> • <u>Left Front of Engine Components (LV3)</u> • <u>Left Side of Engine Components (L96)</u> 	<ul style="list-style-type: none"> • <u>B74 Manifold Absolute Pressure Sensor (L96/LC8)</u> • <u>B74 Manifold Absolute Pressure Sensor (LV3+(NQG/NQH))</u>
B75B	Mass Air Flow/Intake Air Temperature Sensor	2500 or 3500	In the engine compartment, in air intake tube, near the air filter housing	<u>Left Side of Engine Components (L96)</u>	—
B75C	Multifunction Intake Air Sensor	—	In the engine compartment left front, in air intake tube, near the air filter housing	<ul style="list-style-type: none"> • <u>Right Rear Side of Engine Components (L8B)</u> • <u>Right Rear of Engine Components (LV3)</u> 	<ul style="list-style-type: none"> • <u>B75C Multifunction Intake Air Sensor (L5P)</u> • <u>B75C Multifunction Intake Air Sensor (L96/LC8)</u> • <u>B75C Multifunction Intake Air Sensor (LV1/LV3)</u>
B77LF	Radio Volume Compensator Interior Noise Microphone - Left Front	NKC	In the passenger compartment, at the left front of the headliner	—	<u>B77LF Radio Volume Compensator Interior Noise Microphone - Left Front</u>
B77R	Radio Volume Compensator Interior Noise Microphone - Rear	NKC	In the passenger compartment, at the rear center of the headliner	—	<u>B77R Radio Volume Compensator Interior Noise Microphone - Rear</u>
B77RF	Radio Volume Compensator Interior Noise Microphone - Right Front	NKC	In the passenger compartment, at the right front of the headliner	—	<u>B77RF Radio Volume Compensator Interior Noise Microphone - Right Front</u>
B78A	Front Object Sensor - Left Outer	UD5	Outside the vehicle, mounted to the left side of the front bumper	<ul style="list-style-type: none"> • <u>Front of Vehicle (Chevrolet) Components</u> • <u>Front of Vehicle (GMC) Components</u> 	—
B78B	Front Object Sensor - Right Outer	UD5	Outside the vehicle, mounted to the right side of the front bumper	<ul style="list-style-type: none"> • <u>Front of Vehicle (Chevrolet) Components</u> • <u>Front of Vehicle (GMC) Components</u> 	—
B78C	Front Object Sensor - Left Middle	UD5	Outside the vehicle, mounted to the left middle of the front bumper	<ul style="list-style-type: none"> • <u>Front of Vehicle (Chevrolet) Components</u> • <u>Front of Vehicle (GMC) Components</u> 	—

B78D	Front Object Sensor - Right Middle	UD5	Outside the vehicle, mounted to the right middle of the front bumper	<ul style="list-style-type: none"> ● <u>Front of Vehicle (Chevrolet) Components</u> ● <u>Front of Vehicle (GMC) Components</u> 	—
B78E	Rear Object Sensor - Left Middle	UD7	Outside the vehicle, mounted to the left middle of the rear bumper	<u>Rear of Vehicle Components</u>	<u>B78E Rear Object Sensor - Left Middle</u>
B78F	Rear Object Sensor - Right Middle	UD7	Outside the vehicle, mounted to the right middle of the rear bumper	<u>Rear of Vehicle Components</u>	<u>B78F Rear Object Sensor - Right Middle</u>
B78G	Rear Object Sensor - Left Outer	UD7	Outside the vehicle, mounted to the left side of the rear bumper	<u>Rear of Vehicle Components</u>	<u>B78G Rear Object Sensor - Left Outer</u>
B78H	Rear Object Sensor - Right Outer	UD7	Outside the vehicle, mounted to the right side of the rear bumper	<u>Rear of Vehicle Components</u>	<u>B78H Rear Object Sensor - Right Outer</u>
B80	Park Brake Switch	—	In the passenger compartment, at the left side of the Driver Footwell	—	<u>B80 Park Brake Switch</u>
B81B	Park Position Switch	M5U, MW7, MYC or MYD	In the passenger compartment, on the steering column near the base of the shifter	—	—
B87	Rearview Camera	UVC	Outside the vehicle, at the top middle of the tailgate, mounted in the tailgate handle	—	—
B88D	Seat Belt Switch - Driver	—	In the passenger compartment, at the inboard side of the driver seat, part of the seat belt buckle	—	<u>B88D Seat Belt Switch - Driver</u>
B88P	Seat Belt Switch - Passenger	1500	In the passenger compartment, at the inboard side of the passenger seat, part of the seat belt buckle	—	<u>B88P Seat Belt Switch - Passenger</u>
B99	Steering Wheel Angle Sensor	—	In the passenger compartment, at the top of the steering column, behind the steering wheel air bag coil	—	—
B107	Accelerator Pedal Position Sensor	—	In the passenger compartment, in the driver side footwell, under the instrument panel	—	<ul style="list-style-type: none"> ● <u>B107 Accelerator Pedal Position Sensor (E29)</u> ● <u>B107 Accelerator Pedal Position Sensor (-E29)</u>
B112	Turbocharger Vane Position Sensor	L5P	In the engine compartment, on the top rear center of the engine	<u>Left Side of Engine Components (L5P)</u>	—
B115	Vehicle Speed Sensor	NQF, NQG or NQH	Under the vehicle , at the rear of the transfer case	<ul style="list-style-type: none"> ● <u>Left Side of Transmission Components (M5X)</u> ● <u>Manual Transmission Components (MQ7)</u> ● <u>Manual Transmission Components (MXW)</u> 	<ul style="list-style-type: none"> ● <u>B115 Vehicle Speed Sensor (L5P+MW7(-NQF/NQG))</u> ● <u>B115 Vehicle Speed Sensor (L5P+NQF+MW7)</u> ● <u>B115 Vehicle Speed Sensor (L5P+NQG+MW7)</u> ● <u>B115 Vehicle Speed Sensor (L96+ZW9)</u> ● <u>B115 Vehicle Speed Sensor (LC8/L96 with NQF)</u> ● <u>B115 Vehicle Speed Sensor (LC8/L96 with NQG)</u> ● <u>B115 Vehicle Speed Sensor (LV3)</u>

B118B	Windshield Washer Fluid Level Switch	—	Outside the vehicle, at the left front corner of the vehicle, below the headlight assembly, in the washer fluid reservoir	<u>Left Side of Engine Compartment Components (except L5P)</u>	<u>B118B Windshield Washer Fluid Level Switch</u>
B130A	Exhaust Gas Recirculation Temperature Sensor 1	L5P	In the engine compartment, on the top right rear of the engine	<u>Right Rear Side of the Engine Components (L5P)</u>	<u>B130A Exhaust Gas Recirculation Temperature Sensor 1</u>
B130B	Exhaust Gas Recirculation Temperature Sensor 2	L5P	In the engine compartment, on the top left middle of the engine	<u>Left Side of Engine Components (L5P)</u>	<u>B130B Exhaust Gas Recirculation Temperature Sensor 2</u>
B131A	Exhaust Temperature Sensor 1	L5P	In the engine compartment, on the right rear of the engine, mounted on top of the exhaust pipe	<u>Right Rear Side of the Engine Components (L5P)</u>	<u>B131A Exhaust Temperature Sensor 1</u>
B131B	Exhaust Temperature Sensor 2	L5P	Under the vehicle, on left side, behind the catalytic converter	—	<u>B131B Exhaust Temperature Sensor 2</u>
B131C	Exhaust Temperature Sensor 3	L5P	Under the vehicle, attached to the exhaust pipe, at the middle of the diesel particulate filter	<u>Chassis Components (2500/3500)</u>	<u>B131C Exhaust Temperature Sensor 3</u>
B131D	Exhaust Temperature Sensor 4	L5P	Under the vehicle, attached to the exhaust pipe, near the rear of the diesel particulate filter	<u>Chassis Components (2500/3500)</u>	<u>B131D Exhaust Temperature Sensor 4</u>
B136	Exhaust Particulate Matter Sensor	L5P	On the underbody, mounted to the inboard side of the right frame rail, forward of the right rear shock	—	<u>B136 Exhaust Particulate Matter Sensor</u>
B137B	Power Steering Shaft Torque/Position Sensor	1500	Under the vehicle, part of the steering gear assembly	—	—
B150	Fuel Tank Pressure Sensor	except Chassis Cab or L5P	Under the vehicle, at the top of the fuel tank	<ul style="list-style-type: none"> • <u>Chassis Components (Chassis Cab)</u> • <u>Chassis Components (2500/3500)</u> • <u>Rear Chassis Components (except Chassis Cab or L5P)</u> 	<u>B150 Fuel Tank Pressure Sensor</u>
B150	Fuel Tank Pressure Sensor	N2L or N2N	Under the vehicle, at the top of the fuel tank	<ul style="list-style-type: none"> • <u>Chassis Components (Chassis Cab)</u> • <u>Chassis Components (2500/3500)</u> • <u>Rear Chassis Components (except Chassis Cab or L5P)</u> 	<u>B150 Fuel Tank Pressure Sensor</u>
B152LF	Suspension Position Sensor - Left Front	Z95	Under the vehicle, at the left front corner of the frame	<u>Front Chassis Components (1500)</u>	<u>B152LF Suspension Position Sensor - Left Front</u>
B152LR	Suspension Position Sensor - Left Rear	Z95	Under the vehicle, at the left rear corner of the frame	<u>Rear Chassis Components (except Chassis Cab or L5P)</u>	<u>B152LR Suspension Position Sensor - Left Rear</u>
B152RF	Suspension Position Sensor - Right Front	Z95	Under the vehicle, at the right front corner of the frame	<u>Front Chassis Components (1500)</u>	<u>B152RF Suspension Position Sensor - Right Front</u>
B152RR	Suspension Position Sensor - Right Rear	Z95	Under the vehicle, at the right rear corner of the frame	<u>Rear Chassis Components (except Chassis Cab or L5P)</u>	<u>B152RR Suspension Position Sensor - Right Rear</u>
B153D	Seat Belt Buckle - Driver	—	In the passenger compartment, at the inboard side of the drive seat	<u>Front of Driver Seat Components</u>	—
B153P	Seat Belt Buckle - Passenger	—	In the passenger compartment, at the inboard side of the passenger seat	<u>Front of Passenger Seat Components</u>	—
B154	Diesel Particulate Filter Exhaust Differential Pressure Sensor	L5P	Under the vehicle, mounted to the frame, near the diesel particulate filter	<u>Chassis Components (2500/3500)</u>	<u>B154 Diesel Particulate Filter Exhaust Differential Pressure Sensor</u>
B155	Adjustable Pedal Position Sensor	JF4	In the passenger compartment, mounted to the accelerator pedal assembly	—	—

B160	Windshield Temperature and Inside Moisture Sensor	HP5	In the passenger compartment, front center, mounted to top of windshield	—	<u>B160 Windshield Temperature and Inside Moisture Sensor</u>
B165	Content Theft Deterrent Sensor Module	UTU/UTV	In the passenger compartment, at the front of the roof, in the overhead console	—	—
B174W	Frontview Camera - Windshield	UFL or UHX	In the passenger compartment, at the top middle of the windshield	—	<ul style="list-style-type: none"> ● <u>B174W Frontview Camera - Windshield (UFL)</u> ● <u>B174W Frontview Camera - Windshield (UHX)</u>
B192	Throttle Inlet Absolute Pressure Sensor	L96 or LC8	Right front of the engine compartment, on the air cleaner box	<u>Left Side of Engine Components (L96)</u>	—
B193A	Charge Air Cooler Inlet Temperature Sensor	L5P	In the engine compartment, mounted in the air inlet tube, near the air cleaner	<u>Left Side of Engine Components (L5P)</u>	<u>B193A Charge Air Cooler Inlet Temperature Sensor</u>
B193B	Charge Air Cooler Outlet Temperature Sensor	L5P	In the engine compartment, mounted in the air inlet tube, near the throttle body	—	<u>B193B Charge Air Cooler Outlet Temperature Sensor</u>
B195A	Nitrogen Oxides Sensor 1	L5P	In the engine compartment, attached to the exhaust pipe, on the top left rear side of the engine	<ul style="list-style-type: none"> ● <u>Left Side of Engine Compartment Components (L5P)</u> ● <u>Chassis Components (Chassis Cab)</u> ● <u>Left Side of Engine Components (L5P)</u> 	<u>B195A Nitrogen Oxides Sensor 1 (L5P)</u>
B195B	Nitrogen Oxides Sensor 2	L5P	Under the vehicle, attached to the exhaust pipe, at the middle of the diesel particulate filter	<u>Chassis Components (2500/3500)</u>	<u>B195B Nitrogen Oxides Sensor 2</u>
B198	Fuel Composition Sensor	—	Under the vehicle, mounted to the left side of the frame	—	<u>B198 Fuel Composition Sensor</u>
B227	Gear Position Sensor	NQH	Under the vehicle, mounted to the transfer case	<u>Left Side of Transmission Components (M5X)</u>	<u>B227 Gear Position Sensor</u>
B229	Alternative Fuel Rail Pressure/Temperature Sensor	LC8	In the engine compartment, on top of the engine, mounted to the left bank alternative fuel rail, facing towards the front of the vehicle.	—	—
B235	Starter/Generator Coolant Temperature Sensor	HP5	In the engine compartment, on the right front side	<u>Cooling Fans (HP5)</u>	<u>B235 Starter/Generator Coolant Temperature Sensor</u>
B257	Alternative Fuel Pressure Sensor	LC8	Under the CNG tank cover, part of the CNG Fuel Tank Assembly	—	—
B263	Alternative Fuel Tank Temperature Sensor	LC8	Under the CNG tank cover, part of the CNG Fuel Tank Assembly	—	—
B264	CNG High Pressure Regulator Temperature Sensor	LC8	Under the CNG tank cover, part of the CNG Fuel Tank Assembly	—	—
B280	Automatic Transmission Accumulator Solenoid Valve	M5X	Under the vehicle, inside the transmission assembly	—	—
B302	Power Steering Pressure Sensor	NV8	In the passenger compartment, on the steering column near the base of the shifter	—	—
C1B	Battery - Auxiliary	K4B, K4D or L5P	In the engine compartment, at the left front corner, forward of the underhood fuse block	<u>Left Side of Engine Compartment Components (except L5P)</u>	—
C1	Battery	—	In the engine compartment, at the right rear corner	<u>Right Side of Engine Compartment Components</u>	—

C4A	Hybrid/EV Battery Section 1	HP5	Under the center console, inside the Hybrid/EV Battery Pack	—	<ul style="list-style-type: none"> ● <u>C4A Hybrid/EV Battery Section 1 (HP5 (NEGATIVE))</u> ● <u>C4A Hybrid/EV Battery Section 1 (HP5 (POSITIVE))</u>
C4B	Hybrid/EV Battery Section 2	HP5	Under the center console, inside the Hybrid/EV Battery Pack	—	<ul style="list-style-type: none"> ● <u>C4B Hybrid/EV Battery Section 2 (HP5 (NEGATIVE))</u> ● <u>C4B Hybrid/EV Battery Section 2 (HP5 (POSITIVE))</u>
C11	Hybrid/EV Battery High Voltage Noise Filter	HP5	Under the center console, inside the Hybrid/EV Battery Pack	—	—
E1L	Accent Lamp - Overhead Console	—	In the passenger compartment, at the front of the headliner, in the overhead console	—	<u>E1L Accent Lamp - Overhead Console</u>
E2A	Marker Lamp - Endgate	Dual Rear Wheel except ZW9	Outside the vehicle, at the bottom middle of the tailgate	—	<u>E2A Marker Lamp - Endgate</u>
E2LF	Side Marker Lamp - Left Front	Z88	Outside the vehicle, at the left front corner, mounted in the left headlight assembly	—	—
E2LM	Side Marker Lamp - Left Middle	DPN or DQS	Outside the vehicle, part of the outside rearview mirror	—	—
E2LR	Side Marker Lamp - Left Rear	Z88	Outside the vehicle, at the left rear corner, mounted in the left tail light assembly	—	—
E2RF	Side Marker Lamp - Right Front	Z88	Outside the vehicle, at the right front corner, mounted in the right headlight assembly	—	—
E2RM	Side Marker Lamp - Right Middle	DPN or DQS	Outside the vehicle, part of the outside rearview mirror	—	—
E2RR	Side Marker Lamp - Right Rear	Z88	Outside the vehicle, at the right rear corner, mounted in the right tail light assembly	—	—
E3A	Roof Clearance Lamp - Left Front Outer	U01	Outside the vehicle, at the front of the roof	—	<u>E3A Roof Clearance Lamp - Left Front Outer</u>
E3C	Roof Clearance Lamp - Front Middle	U01	Outside the vehicle, at the front of the roof	—	<u>E3C Roof Clearance Lamp - Front Middle</u>
E3E	Roof Clearance Lamp - Right Front Outer	U01	Outside the vehicle, at the front of the roof	—	<u>E3E Roof Clearance Lamp - Right Front Outer</u>
E3LF	Rear Fender Clearance Lamp - Left Front	Dual Rear Wheel except ZW9	Outside the vehicle, on the rear wheel fender flare	—	<u>E3LF Rear Fender Clearance Lamp - Left Front</u>
E3LR	Rear Fender Clearance Lamp - Left Rear	Dual Rear Wheel except ZW9	Outside the vehicle, on the rear wheel fender flare	—	<u>E3LR Rear Fender Clearance Lamp - Left Rear</u>
E3RF	Rear Fender Clearance Lamp - Right Front	Dual Rear Wheel except ZW9	Outside the vehicle, on the rear wheel fender flare	—	<u>E3RF Rear Fender Clearance Lamp - Right Front</u>
E3RR	Rear Fender Clearance Lamp - Right Rear	Dual Rear Wheel except ZW9	Outside the vehicle, on the rear wheel fender flare	—	<u>E3RR Rear Fender Clearance Lamp - Right Rear</u>
E4AC	Park/Daytime Running Lamp - Left	Z88 with SLT	At the left front of the vehicle, in the headlamp assembly	<u>Front of Vehicle (GMC) Components</u>	—
E4AD	Park/Daytime Running Lamp - Right	Z88 with SLT	At the right front of the vehicle, in the headlamp assembly	<u>Front of Vehicle (GMC) Components</u>	—

E4E	Headlamp - Left High Beam	X88	Outside the vehicle, at the left front corner, mounted in the left headlight assembly	<u>Front of Vehicle (Chevrolet) Components</u>	—
E4F	Headlamp - Right High Beam	X88	Outside the vehicle, at the right front corner, mounted in the right headlight assembly	<u>Front of Vehicle (Chevrolet) Components</u>	—
E4G	Headlamp - Left Low Beam	—	Outside the vehicle, at the left front corner, mounted in the left headlight assembly	<ul style="list-style-type: none"> ● <u>Front of Vehicle (Chevrolet) Components</u> ● <u>Front of Vehicle (GMC) Components</u> 	—
E4H	Headlamp - Right Low Beam	—	Outside the vehicle, at the right front corner, mounted in the right headlight assembly	<ul style="list-style-type: none"> ● <u>Front of Vehicle (GMC) Components</u> ● <u>Front of Vehicle (Chevrolet) Components</u> 	—
E4J	Park Lamp - Left Front	Z88 with SLT	Outside the vehicle, at the left front corner, mounted in the left headlight assembly	<u>Front of Vehicle (GMC) Components</u>	—
E4K	Park Lamp - Right Front	Z88 with SLT	Outside the vehicle, at the right front corner, mounted in the right headlight assembly	<u>Front of Vehicle (GMC) Components</u>	—
E4LF	Turn Signal Lamp - Left Front	—	At the front of the vehicle, part of the left headlamp assembly	—	—
E4N	Park/Turn Signal Lamp - Left	Z88	Outside the vehicle, at the left front corner, mounted in the left headlight assembly	<u>Front of Vehicle (GMC) Components</u>	—
E4P	Park/Turn Signal Lamp - Right	Z88	Outside the vehicle, at the right front corner, mounted in the right headlight assembly	<u>Front of Vehicle (GMC) Components</u>	—
E4Q	Park/Turn Signal Lamp - Left Lower	X88	Outside the vehicle, at the left front corner, mounted in the left headlight assembly	<u>Front of Vehicle (Chevrolet) Components</u>	—
E4R	Park/Turn Signal Lamp - Right Lower	X88	Outside the vehicle, at the right front corner, mounted in the right headlight assembly	<u>Front of Vehicle (Chevrolet) Components</u>	—
E4RF	Turn Signal Lamp - Right Front	—	At the front of the vehicle, part of the right headlamp assembly	—	—
E4S	Park/Turn Signal Lamp - Left Upper	X88	Outside the vehicle, at the left front corner, mounted in the left headlight assembly	<u>Front of Vehicle (Chevrolet) Components</u>	—
E4T	Park/Turn Signal Lamp - Right Upper	X88	Outside the vehicle, at the right front corner, mounted in the right headlight assembly	<u>Front of Vehicle (Chevrolet) Components</u>	—
E4Y	Turn Signal Repeater Lamp - Left	DL3, DL8, DPN or DQS	Outside the vehicle, at the front of the driver door, on the outside rearview mirror	—	—
E4Z	Turn Signal Repeater Lamp - Right	DL3, DL8, DPN or DQS	Outside the vehicle, at the front of the passenger door, on the outside rearview mirror	—	—
E5A	Backup Lamp - Left	—	Outside the vehicle, at the left rear corner, mounted in the left tail light assembly	<u>Rear of Vehicle Components</u>	—
E5AG	Tail/Stop and Turn Signal Lamp - Left Upper	without ZW9	Outside the vehicle, at the left rear corner, mounted in the left tail light assembly	<u>Rear of Vehicle Components</u>	—
E5AH	Tail/Stop and Turn Signal Lamp - Right Upper	without ZW9	Outside the vehicle, at the right rear corner, mounted in the right tail light assembly	<u>Rear of Vehicle Components</u>	—
E5B	Backup Lamp - Right	—	Outside the vehicle, at the right rear corner, mounted in the right tail light assembly	<u>Rear of Vehicle Components</u>	—

E5S	Tail/Stop and Turn Signal Lamp - Left	ZW9	At the rear of the vehicle, mounted to the rear of the frame	—	—
E5T	Tail/Stop and Turn Signal Lamp - Right	ZW9	At the rear of the vehicle, mounted to the rear of the frame	—	—
E5U	Tail/Stop and Turn Signal Lamp - Left Lower	without ZW9	Outside the vehicle, at the left rear corner, mounted in the left tail light assembly	<u>Rear of Vehicle Components</u>	—
E5V	Tail/Stop and Turn Signal Lamp - Right Lower	without ZW9	Outside the vehicle, at the right rear corner, mounted in the right tail light assembly	<u>Rear of Vehicle Components</u>	—
E6	Center High Mounted Stop Lamp	—	Outside the vehicle, at the top center of the rear window	<u>Rear of Vehicle Components</u>	—
E7L	License Plate Lamp - Left	E63 without 9J4	Outside the vehicle, mounted in the middle of the rear bumper	<u>Rear of Vehicle Components</u>	<u>E7L License Plate Lamp - Left</u>
E7R	License Plate Lamp - Right	E63 without 9J4	Outside the vehicle, mounted in the middle of the rear bumper	<u>Rear of Vehicle Components</u>	<u>E7R License Plate Lamp - Right</u>
E7	License Plate Lamp	E63 with 9J4	At the rear of the vehicle, mounted to the rear of the frame	—	—
E8YD	Outside Rearview Mirror Courtesy Lamp - Driver	DL3	Outside the vehicle, at the front of the driver door, part of the outside rearview mirror	—	—
E8YP	Outside Rearview Mirror Courtesy Lamp - Passenger	DL3	Outside the vehicle, at the front of the passenger door, part of the outside rearview mirror	—	—
E12A	Glow Plug 1	L5P	In the engine compartment, In the cylinder head at cylinder 1	<u>Right Side of Engine Components (L5P)</u>	<u>E12A Glow Plug 1</u>
E12B	Glow Plug 2	L5P	In the engine compartment, In the cylinder head at cylinder 2	<u>Left Side of Engine Components (L5P)</u>	<u>E12B Glow Plug 2</u>
E12C	Glow Plug 3	L5P	In the engine compartment, In the cylinder head at cylinder 3	<u>Right Side of Engine Components (L5P)</u>	<u>E12C Glow Plug 3</u>
E12D	Glow Plug 4	L5P	In the engine compartment, In the cylinder head at cylinder 4	<u>Left Side of Engine Components (L5P)</u>	<u>E12D Glow Plug 4</u>
E12E	Glow Plug 5	L5P	In the engine compartment, In the cylinder head at cylinder 5	<u>Right Rear Side of the Engine Components (L5P)</u>	<u>E12E Glow Plug 5</u>
E12F	Glow Plug 6	L5P	In the engine compartment, In the cylinder head at cylinder 6	<u>Left Side of Engine Components (L5P)</u>	<u>E12F Glow Plug 6</u>
E12G	Glow Plug 7	L5P	In the engine compartment, In the cylinder head at cylinder 7	<u>Right Rear Side of the Engine Components (L5P)</u>	<u>E12G Glow Plug 7</u>
E12H	Glow Plug 8	L5P	In the engine compartment, In the cylinder head at cylinder 8	<u>Left Side of Engine Components (L5P)</u>	<u>E12H Glow Plug 8</u>
E13L	Headlamp - Left	—	At the front of the vehicle, part of the left headlamp assembly	—	—
E13LA	Headlamp Assembly - Left	—	Outside the vehicle, at the left front corner	—	—
E13R	Headlamp - Right	—	At the front of the vehicle, part of the right headlamp assembly	—	—
E13RA	Headlamp Assembly - Right	—	Outside the vehicle, at the right front corner	—	—

E14A	Seat Heating Element - Driver Back	KA1/KB6	In the passenger compartment, in the driver seat back	<u>Front of Driver Seat Components</u>	<u>E14A Seat Heating Element - Driver Back</u>
E14B	Seat Heating Element - Driver Cushion	KA1/KB6	In the passenger compartment, in the driver seat cushion	<u>Front of Driver Seat Components</u>	<u>E14B Seat Heating Element - Driver Cushion</u>
E14C	Seat Heating Element - Passenger Back	KA1/KB6	In the passenger compartment, in the passenger seat back	<u>Back of Passenger Seat Components</u>	<u>E14C Seat Heating Element - Passenger Back</u>
E14D	Seat Heating Element - Passenger Cushion	KA1/KB6	In the passenger compartment, in the passenger seat cushion	<u>Front of Passenger Seat Components</u>	<u>E14D Seat Heating Element - Passenger Cushion</u>
E15	Steering Wheel Heater	UVD	In the passenger compartment, part of the steering wheel	—	—
E17D	Outside Rearview Mirror Glass - Driver	DL3, DL8, DPN or DQS	Outside the vehicle, at the front of the driver door, part of the outside rearview mirror	—	—
E17P	Outside Rearview Mirror Glass - Passenger	DL3, DL8, DPN or DQS	Outside the vehicle, at the front of the passenger door, part of the outside rearview mirror	—	—
E18	Rear Defogger Grid	C49	At the rear of the passenger compartment, part of the rear window glass	<u>Rear of Vehicle Components</u>	<u>E18 Rear Defogger Grid X1</u>
E24	Intake Air Heater	L5P	In the engine compartment, near the throttle body	<u>Right Side of Engine Components (L5P)</u>	—
E28	Center Console Compartment Lamp	D07	In the passenger compartment, between the front seats, inside the center console storage bin	—	<u>E28 Center Console Compartment Lamp</u>
E29LF	Fog Lamp - Left Front	T3U	Outside the vehicle, at the left front corner, in the front bumper, below the headlight assembly	<ul style="list-style-type: none"> • <u>Front of Vehicle (Chevrolet) Components</u> • <u>Front of Vehicle (GMC) Components</u> 	<ul style="list-style-type: none"> • <u>E29LF Fog Lamp - Left Front (UD5)</u> • <u>E29LF Fog Lamp - Left Front (-UD5)</u>
E29RF	Fog Lamp - Right Front	T3U	Outside the vehicle, at the right front corner, in the front bumper, below the headlight assembly	<ul style="list-style-type: none"> • <u>Front of Vehicle (Chevrolet) Components</u> • <u>Front of Vehicle (GMC) Components</u> 	<ul style="list-style-type: none"> • <u>E29RF Fog Lamp - Right Front (UD5)</u> • <u>E29RF Fog Lamp - Right Front (-UD5)</u>
E31L	Sunshade Mirror Lamp - Left	DH6	In the passenger compartment, at the left front of the headliner	—	<u>E31L Sunshade Mirror Lamp - Left</u>
E31R	Sunshade Mirror Lamp - Right	DH6	In the passenger compartment, at the right front of the headliner	—	<u>E31R Sunshade Mirror Lamp - Right</u>
E33L	Cargo Lamp - Left	S0Y or UF2	Outside the vehicle, beneath the top of the left side of the bed	—	—
E33R	Cargo Lamp - Right	S0Y or UF2	Outside the vehicle, beneath the top of the right side of the bed	—	—
E37B	Dome/Reading Lamps - 2nd Row	Extended or Crew Cab without U42	In the passenger compartment, near the center of the headliner	—	<u>E37B Dome/Reading Lamps - 2nd Row</u>
E37EL	Dome/Reading Lamps - Front Overhead Console Left	—	In the passenger compartment, at the left side of the overhead console	—	<u>E37EL Dome/Reading Lamps - Front Overhead Console Left</u>
E37ER	Dome/Reading Lamps - Front Overhead Console Right	—	In the passenger compartment, at the right side of the overhead console	—	<u>E37ER Dome/Reading Lamps - Front Overhead Console Right</u>
E40	Electrical Auxiliary Heater	C32	In the passenger compartment, at the top of the HVAC box	<u>Front of HVAC Assembly Components</u>	—

E42L	Tail Lamp Assembly - Left	—	Outside the vehicle, at the left rear corner of the vehicle	—	—
E42R	Tail Lamp Assembly - Right	—	Outside the vehicle, at the right rear corner of the vehicle	—	—
E63D	Flood Lamp - Driver Door Handle	A31	In the passenger compartment, in the driver door handle trim panel	—	—
E63P	Flood Lamp - Passenger Door Handle	A31	In the passenger compartment, in the passenger door handle trim panel	—	—
E70D	Outside Rearview Mirror Cargo Lamp - Driver	DPN or DQS	Outside the vehicle, in the outside rearview mirror	—	—
E70P	Outside Rearview Mirror Cargo Lamp - Passenger	DPN or DQS	Outside the vehicle, in the outside rearview mirror	—	—
F101	Passenger Instrument Panel Air Bag	—	In the passenger compartment, behind the instrument panel upper glove box	<u>Rear of Instrument Panel Components</u>	<u>F101 Passenger Instrument Panel Air Bag</u>
F102	Hybrid/EV Battery Pack Cable Cover	HP5	part of the starter/generator control module	—	<u>F102 Hybrid/EV Battery Pack Cable Cover</u>
F105L	Roof Rail Air Bag - Left	AY0	In the passenger compartment, along the left side of the headliner	<u>Roof Rail Air Bags</u>	—
F105R	Roof Rail Air Bag - Right	AY0	In the passenger compartment, along the right side of the headliner	<u>Roof Rail Air Bags</u>	—
F106D	Seat Side Air Bag - Driver	AY0	In the passenger compartment, in the outboard side of the driver seat back	<u>Back of Driver Seat Components</u>	<u>F106D Seat Side Air Bag - Driver</u>
F106P	Seat Side Air Bag - Passenger	AY0	In the passenger compartment, in the outboard side of the passenger seat back	<u>Back of Passenger Seat Components</u>	<u>F106P Seat Side Air Bag - Passenger</u>
F107	Steering Wheel Air Bag	—	In the passenger compartment, mounted to the middle of the steering wheel	—	—
F112D	Seat Belt Retractor Pretensioner - Driver	—	In the passenger compartment, at the base of the driver side B-pillar	—	<ul style="list-style-type: none"> ● <u>F112D Seat Belt Retractor Pretensioner - Driver (Crew Cab)</u> ● <u>F112D Seat Belt Retractor Pretensioner - Driver (Extended Cab)</u> ● <u>F112D Seat Belt Retractor Pretensioner - Driver (Regular Cab)</u>
F112P	Seat Belt Retractor Pretensioner - Passenger	—	In the passenger compartment, at the base of the passenger side B-pillar	—	<ul style="list-style-type: none"> ● <u>F112P Seat Belt Retractor Pretensioner - Passenger (Crew Cab)</u> ● <u>F112P Seat Belt Retractor Pretensioner - Passenger (Extended Cab)</u> ● <u>F112P Seat Belt Retractor Pretensioner - Passenger (Regular Cab)</u>
F113D	Seat Belt Anchor Pretensioner - Driver	—	In the passenger compartment, mounted to the outboard driver seat track	<u>Front of Driver Seat Components</u>	<u>F113D Seat Belt Anchor Pretensioner - Driver</u>
F113P	Seat Belt Anchor Pretensioner - Passenger	—	In the passenger compartment, mounted to the outboard passenger seat track	<u>Front of Passenger Seat Components</u>	<u>F113P Seat Belt Anchor Pretensioner - Passenger</u>

G1	A/C Compressor	C67 or CJ2	In the engine compartment, mounted on the lower front of the engine	<u>Left Side of Engine Components (L5P)</u>	—
G10L	Cooling Fan Motor - Left	1500	In the engine compartment, in the radiator shroud	<u>Cooling Fans (HP5)</u>	<u>G10L Cooling Fan Motor - Left</u>
G10R	Cooling Fan Motor - Right	1500	In the engine compartment, in the radiator shroud	<u>Cooling Fans (HP5)</u>	<u>G10R Cooling Fan Motor - Right</u>
G12A	Fuel Pump - Primary	without L5P	Under the vehicle, in the primary fuel tank, part of the fuel pump and level sensor assembly	—	<u>G12A Fuel Pump - Primary</u>
G12B	Fuel Pump - Secondary	L96 with N2N	Under the vehicle, in the secondary fuel tank, part of the fuel pump and level sensor assembly	—	<ul style="list-style-type: none"> ● <u>G12B Fuel Pump - Secondary (L5P)</u> ● <u>G12B Fuel Pump - Secondary (L96)</u>
G13E	Generator - Auxiliary	KH5 or KHB	In the engine compartment, at the top right front of the engine	<u>Right Side of Engine Components (L5P)</u>	<u>G13E Generator - Auxiliary</u>
G13	Generator	—	In the engine compartment, at the top left front of the engine	<ul style="list-style-type: none"> ● <u>Left Side of Engine Components (L96)</u> ● <u>Left Side of Engine Components (L5P)</u> ● <u>Right Rear of Engine Components (LV3)</u> 	<u>G13 Generator X1</u>
G14	Hybrid/EV Battery Pack Cooling Fan	HP5	Under the center console, inside the Hybrid/EV Battery Pack	<u>Hybrid/EV Battery Pack (3 of 3)</u>	<u>G14 Hybrid/EV Battery Pack Cooling Fan</u>
G17	Heater Coolant Pump	HP5	In the engine compartment, lower left rear mounted to engine block	<u>Right Rear Side of Engine Components (L8B)</u>	<u>G17 Heater Coolant Pump (L8B)</u>
G18	High Pressure Fuel Pump	1500	In the engine compartment, at the top rear of the engine, between the cylinder heads	<ul style="list-style-type: none"> ● <u>Top of Engine Components (LV3)</u> ● <u>Top of Engine Components (L83/L86/L8B)</u> 	<u>G18 High Pressure Fuel Pump</u>
G24	Windshield Washer Pump	—	In the engine compartment, attached to the washer fluid reservoir, below the left headlamp assembly	<u>Left Side of Engine Compartment Components (except L5P)</u>	<u>G24 Windshield Washer Pump</u>
G33	Reductant Pump	L5P	Under the vehicle, above the right front reductant tank	—	—
G43	Starter/Generator Coolant Pump	HP5	In the engine compartment, left lower front corner of engine	<u>Cooling Fans (HP5)</u>	<u>G43 Starter/Generator Coolant Pump</u>
K4	Assist Step Control Module	BRS	Underneath the vehicle, along the outside of the left frame rail, near the driver door	—	<ul style="list-style-type: none"> ● <u>K4 Assist Step Control Module X1</u> ● <u>K4 Assist Step Control Module X2</u>
K9	Body Control Module	—	In the passenger compartment, behind the driver side of the instrument panel, outboard of the steering column	<u>Rear of Instrument Panel Components</u>	<ul style="list-style-type: none"> ● <u>K9 Body Control Module X1</u> ● <u>K9 Body Control Module X2</u> ● <u>K9 Body Control Module X4</u> ● <u>K9 Body Control Module X5</u> ● <u>K9 Body Control Module X6</u> ● <u>K9 Body Control Module X7</u>

K17	Electronic Brake Control Module	—	Under the vehicle, mounted to the left side of the frame rail	<ul style="list-style-type: none"> ● <u>Chassis Components (Chassis Cab)</u> ● <u>Chassis Components (2500/3500)</u> 	<ul style="list-style-type: none"> ● <u>K17 Electronic Brake Control Module (Heavy Duty)</u> ● <u>K17 Electronic Brake Control Module (Light Duty)</u>
K19	Suspension Control Module	Z95	Under the vehicle, mounted to the bracket above the spare tire	<u>Rear Chassis Components (except Chassis Cab or L5P)</u>	<u>K19 Suspension Control Module</u>
K20	Engine Control Module	—	In the engine compartment, left front of the engine, near the underhood fuse block	<ul style="list-style-type: none"> ● <u>Left Side of Engine Compartment Components (L5P)</u> ● <u>Left Side of Engine Compartment Components (except L5P)</u> 	<ul style="list-style-type: none"> ● <u>K20 Engine Control Module X1 (L5P)</u> ● <u>K20 Engine Control Module X1 (L96)</u> ● <u>K20 Engine Control Module X1 (LV3/L83/L86/L8B)</u> ● <u>K20 Engine Control Module X2 (L83 with MYC except NQH/NQG)</u> ● <u>K20 Engine Control Module X2 (L5P)</u> ● <u>K20 Engine Control Module X2 (L96)</u> ● <u>K20 Engine Control Module X2 (LV3-(NQG/NQH))</u> ● <u>K20 Engine Control Module X2 (L83/L86/LV3+(NQG/NQH))</u> ● <u>K20 Engine Control Module X3 (L83/L86)</u> ● <u>K20 Engine Control Module X3 (L5P)</u> ● <u>K20 Engine Control Module X3 (L96)</u> ● <u>K20 Engine Control Module X3 (LV3)</u>
K22	Cooling Fan Control Module	L5P	In the engine compartment, mounted in the fan shroud	—	<u>K22 Cooling Fan Control Module</u>
K29	Seat Heating Control Module	KA1 without KB6	In the passenger compartment, under the front of the passenger seat	<ul style="list-style-type: none"> ● <u>Bottom of Passenger Seat Components (without GAJ or Y91)</u> ● <u>Bottom of Passenger Seat Components (GAJ or Y91)</u> 	<ul style="list-style-type: none"> ● <u>K29 Seat Heating Control Module X1</u> ● <u>K29 Seat Heating Control Module X2</u>
K32	Steering Wheel Heating Control Module	UVD	In the passenger compartment, in the steering wheel, behind the driver air bag	—	—
K33	HVAC Control Module	—	In the passenger compartment, behind the passenger side of the instrument panel, at the top of the HVAC box	<u>Front of HVAC Assembly Components</u>	—
K34	Glow Plug Control Module	L5P	In the engine compartment, mounted to the top of the engine	<u>Right Side of Engine Components (L5P)</u>	<u>K34 Glow Plug Control Module X2</u>
K36	Inflatable Restraint Sensing and Diagnostic Module	—	In the passenger compartment, bolted to the floor between the front seats or under console if equipped	—	<ul style="list-style-type: none"> ● <u>K36 Inflatable Restraint Sensing and Diagnostic Module X1</u> ● <u>K36 Inflatable Restraint Sensing and Diagnostic Module X2</u>
K38	Chassis Control Module	—	Under the vehicle, mounted to the bracket above the spare tire	<ul style="list-style-type: none"> ● <u>Chassis Components (2500/3500)</u> ● <u>Rear Chassis Components (except Chassis Cab or L5P)</u> ● <u>Chassis Components (Chassis Cab)</u> 	<ul style="list-style-type: none"> ● <u>K38A Chassis Control Module - Auxiliary (JL1)</u> ● <u>K38 Chassis Control Module (Light Duty)</u>

K40	Seat Memory Control Module	A45	In the passenger compartment, under the driver seat	<u>Bottom of Driver Seat Components</u>	<ul style="list-style-type: none"> ● <u>K40 Seat Memory Control Module X1</u> ● <u>K40 Seat Memory Control Module X2</u> ● <u>K40 Seat Memory Control Module X3</u> ● <u>K40 Seat Memory Control Module X4</u> ● <u>K40 Seat Memory Control Module X5</u> ● <u>K40 Seat Memory Control Module X6</u>
K41	Front and Rear Parking Assist Control Module	UD5 or UD7	In the passenger compartment, bolted to the passenger side of the rear wall, behind the rear seat right side	—	—
K43	Power Steering Control Module	—	Under the vehicle, part of the steering gear assembly	—	<u>K43 Power Steering Control Module</u>
K44	Power Take-Off Control Module	PTO	Under the vehicle, mounted to the passenger side of the frame	<ul style="list-style-type: none"> ● <u>Underbody Components (L5P)</u> ● <u>Chassis Components (2500/3500)</u> 	<ul style="list-style-type: none"> ● <u>K44 Power Take-Off Control Module X1</u> ● <u>K44 Power Take-Off Control Module X2</u>
K59	Starter/Generator Control Module	HP5	Under the center console, inside the Hybrid/EV Battery Pack	<ul style="list-style-type: none"> ● <u>Right Rear of Engine Compartment Components (HP5)</u> ● <u>Front Center of the Passenger Compartment Components (HP5)</u> 	<u>K59 Starter/Generator Control Module X5</u>
K69	Transfer Case Control Module	NQF or NQH	In the passenger compartment, bolted to the bulkhead at the right side of the driver footwell above accelerator pedal	—	<ul style="list-style-type: none"> ● <u>K69 Transfer Case Control Module X1</u> ● <u>K69 Transfer Case Control Module X2</u> ● <u>K69 Transfer Case Control Module X3</u>
K71	Transmission Control Module	MW7	In the engine compartment, mounted to the left side of the engine cooling fan shroud	<ul style="list-style-type: none"> ● <u>Left Side of Engine Compartment Components (except L5P)</u> ● <u>Left Side of Engine Compartment Components (L5P)</u> 	<u>K71 Transmission Control Module</u>
K71	Transmission Control Module	M5U	In the engine compartment, left rear side of bulkhead, near the brake master cylinder brake booster	<ul style="list-style-type: none"> ● <u>Left Side of Engine Compartment Components (except L5P)</u> ● <u>Left Side of Engine Compartment Components (L5P)</u> 	<u>K71 Transmission Control Module</u>
K71	Transmission Control Module	MYC or MYD	In the engine compartment, inside the transmission assembly, part of the control solenoid valve	<ul style="list-style-type: none"> ● <u>Left Side of Engine Compartment Components (except L5P)</u> ● <u>Left Side of Engine Compartment Components (L5P)</u> 	<u>K71 Transmission Control Module</u>
K73	Telematics Communication Interface Control Module	UE1	In the passenger compartment, in the middle of the instrument panel, behind the info display module	<u>Rear of Instrument Panel Components</u>	<ul style="list-style-type: none"> ● <u>K73 Telematics Communication Interface Control Module X1</u> ● <u>K73 Telematics Communication Interface Control Module X2</u>

K74	Human Machine Interface Control Module	IO5 or IO6	In the passenger compartment, behind the passenger side of the instrument panel, above the hush panel	<u>Rear of Instrument Panel Components</u>	<ul style="list-style-type: none"> ● <u>K74 Human Machine Interface Control Module X1</u> ● <u>K74 Human Machine Interface Control Module X2</u>
K77	Remote Control Door Lock Receiver	AU3	In the passenger compartment, at the right rear top of headliner	—	<u>K77 Remote Control Door Lock Receiver</u>
K81L	Headlamp High Beam Control Module - Left	Z88	At the front of the vehicle, part of the left headlamp assembly	—	—
K81R	Headlamp High Beam Control Module - Right	Z88	At the front of the vehicle, part of the right headlamp assembly	—	—
K85	Passenger Presence Module	AL0	In the passenger compartment, in the passenger seat cushion	<u>Bottom of Passenger Seat Components (without GAJ or Y91)</u>	<u>K85 Passenger Presence Module</u>
K89	Immobilizer Control Module	—	In the passenger compartment, on the steering column side, near the ignition cylinder	—	—
K107A	Drive Motor 1 Control Module	HP5	Under the center console, inside the Starter/Generator Control Module	—	—
K111	Fuel Pump Driver Control Module	1500	Under the vehicle, mounted to the bracket above the spare tire	—	<ul style="list-style-type: none"> ● <u>K111 Fuel Pump Driver Control Module (Heavy Duty+L5P)</u> ● <u>K38 Chassis Control Module (L96)</u> ● <u>K111 Fuel Pump Driver Control Module (Light Duty)</u>
K112A	Hybrid/EV Battery Interface Control Module 1	HP5	Under the center console, inside the Hybrid/EV Battery Pack	<u>Hybrid/EV Battery Pack (2 of 3)</u>	<ul style="list-style-type: none"> ● <u>K112A Hybrid/EV Battery Interface Control Module 1 X1</u> ● <u>K112A Hybrid/EV Battery Interface Control Module 1 X2</u>
K112B	Hybrid/EV Battery Interface Control Module 2	HP5	Under the center console, inside the Hybrid/EV Battery Pack	<u>Hybrid/EV Battery Pack (2 of 3)</u>	<ul style="list-style-type: none"> ● <u>K112B Hybrid/EV Battery Interface Control Module 2 X1</u> ● <u>K112B Hybrid/EV Battery Interface Control Module 2 X2</u>
K114B	Hybrid/EV Powertrain Control Module 2	HP5	Under the center console, inside the Hybrid/EV Battery Pack	<u>Hybrid/EV Battery Pack (1 of 3)</u>	<ul style="list-style-type: none"> ● <u>K114B Hybrid/EV Powertrain Control Module 2 X1</u> ● <u>K114B Hybrid/EV Powertrain Control Module 2 X2</u> ● <u>K114B Hybrid/EV Powertrain Control Module 2 X3</u> ● <u>K114B Hybrid/EV Powertrain Control Module 2 X4</u> ● <u>K114B Hybrid/EV Powertrain Control Module 2 X5</u> ● <u>K114B Hybrid/EV Powertrain Control Module 2 X6</u> ● <u>K114B Hybrid/EV Powertrain Control Module 2 X7</u>
K114	Hybrid/EV Powertrain Control Module	HP5	Under the center console, inside the Hybrid/EV Battery Pack	<u>Hybrid/EV Battery Pack (2 of 3)</u>	—

K119	CNG Control Module	LC8	In the engine compartment, mounted to a bracket that is mounted to the bottom of the battery tray, on the left front of the engine compartment	—	—
K130	Fuel Pump Disable Control Module	LC8	In the engine compartment, mounted to a bracket that is mounted to the bottom of the battery tray, on the left front of the engine compartment	—	—
K133	Trailer Brake Power Control Module	JL1	Under the vehicle, mounted to the bracket above the spare tire	<ul style="list-style-type: none"> ● <u>Chassis Components (2500/3500)</u> ● <u>Chassis Components (Chassis Cab)</u> 	<u>K133 Trailer Brake Power Control Module</u>
K166L	Multifunction LED Control Module - Left Headlamp	Z88 with SLT	At the front of the vehicle, part of the left headlamp assembly	—	—
K166R	Multifunction LED Control Module - Right Headlamp	Z88 with SLT	At the front of the vehicle, part of the right headlamp assembly	—	—
KR58	Roof Beacon Relay	TRW	In the passenger compartment, overhead, in the overhead console	—	<u>KR58 Roof Beacon Relay</u>
KR79	Auxiliary Battery Relay 2	K4B or K4D	In the engine compartment, left side, near C1B Auxiliary Battery	—	—
KR81	Auxiliary Battery Relay 1	K4B or K4D	In the engine compartment, left side, near C1B Auxiliary Battery	—	—
KR134A	Hybrid/EV Battery Negative Contactor	HP5	part of the Hybrid/EV battery pack	—	—
KR134B	Hybrid/EV Battery Positive Contactor	HP5	part of the Hybrid/EV battery pack	—	—
KR134	Pre-Charge Contactor	HP5	part of the Hybrid/EV battery pack	—	—
KR145	Alternative Fuel Injector Relay	LC8	Under the vehicle, near the left frame rail, above the spare tire, taped in the chassis harness	—	—
KR160	Fuel Pump Disable Relay	LC8	In the CNG tank box, part of the CNG Fuel Tank Assembly	—	—
M4	Air Inlet Door Actuator	—	In the passenger compartment, behind the instrument panel glove box	<u>Front of HVAC Assembly Components</u>	—
M5	Adjustable Pedal Motor	JF4	In the passenger compartment, part of the accelerator pedal bracket assembly	—	<u>M5 Adjustable Pedal Motor</u>
M6L	Air Temperature Door Actuator - Left	—	In the passenger compartment, part of HVAC module, behind the instrument panel	<u>Front of HVAC Assembly Components</u>	—
M6R	Air Temperature Door Actuator - Right	CJ2	In the passenger compartment, part of HVAC module, behind the instrument panel	<u>Back of HVAC Assembly Components</u>	—
M7	Transmission Shift Lock Control Solenoid Actuator	M5U, MW7, MYC or MYD	In the passenger compartment, right side of the steering wheel, attached to transmission shift lever	—	—
M8	Blower Motor	—	In the passenger compartment, under the righth side of the instrument panel, above the hush panel	<u>Back of HVAC Assembly Components</u>	—
M9	Brake Booster Pump Motor	HP5	In the right front wheelwell, mounted to the frame, forward of the axle shaft	—	—

M26	Front Axle Engagement Actuator	NQF, MQG or MQH	Under the vehicle, mounted to the front axle	<u>Front Axle Components</u>	<u>M26 Front Axle Engagement Actuator</u>
M28L	High Beam Solenoid Actuator - Left	Z88	Outside the vehicle, at the left front corner, part of the headlight assembly	—	—
M28R	High Beam Solenoid Actuator - Right	Z88	Outside the vehicle, at the right front corner, part of the headlight assembly	—	—
M37L	Mode Door Actuator - Left	—	In the passenger compartment, behind the left side of the instrument panel, on the upper left side of the HVAC module	<u>Front of HVAC Assembly Components</u>	—
M38	Power Steering Motor	1500	Under the vehicle, part of the steering gear assembly	—	—
M50D	Seat Front Vertical Motor - Driver	—	In the passenger compartment, under the driver seat	<u>Bottom of Driver Seat Components</u>	<u>M50D Seat Front Vertical Motor - Driver</u>
M50P	Seat Front Vertical Motor - Passenger	—	In the passenger compartment, under the passenger seat	<u>Bottom of Passenger Seat Components (GAJ or Y91)</u>	<u>M50P Seat Front Vertical Motor - Passenger</u>
M51D	Seat Horizontal Motor - Driver	—	In the passenger compartment, under the driver seat	<u>Bottom of Driver Seat Components</u>	<u>M51D Seat Horizontal Motor - Driver</u>
M51P	Seat Horizontal Motor - Passenger	—	In the passenger compartment, under the passenger seat	<ul style="list-style-type: none"> • <u>Bottom of Passenger Seat Components (without GAJ or Y91)</u> • <u>Bottom of Passenger Seat Components (GAJ or Y91)</u> 	<u>M51P Seat Horizontal Motor - Passenger</u>
M52D	Seat Lumbar Support Horizontal Motor - Driver	—	In the passenger compartment, in the driver seat back	<u>Back of Driver Seat Components</u>	<u>M52D Seat Lumbar Support Horizontal Motor - Driver</u>
M52P	Seat Lumbar Support Horizontal Motor - Passenger	—	In the passenger compartment, in the passenger seat back	<u>Back of Passenger Seat Components</u>	<u>M52P Seat Lumbar Support Horizontal Motor - Passenger</u>
M54D	Seat Lumbar Support Vertical Motor - Driver	—	In the passenger compartment, in the driver seat back	—	—
M54P	Seat Lumbar Support Vertical Motor - Passenger	—	In the passenger compartment, in the passenger seat back	—	—
M55D	Seat Rear Vertical Motor - Driver	—	In the passenger compartment, under the driver seat	<u>Bottom of Driver Seat Components</u>	<u>M55D Seat Rear Vertical Motor - Driver</u>
M55P	Seat Rear Vertical Motor - Passenger	—	In the passenger compartment, under the passenger seat	<u>Bottom of Passenger Seat Components (GAJ or Y91)</u>	<u>M55P Seat Rear Vertical Motor - Passenger</u>
M56D	Seat Recline Motor - Driver	—	In the passenger compartment, in the driver seat back	<u>Back of Driver Seat Components</u>	<u>M56D Seat Recline Motor - Driver</u>
M56P	Seat Recline Motor - Passenger	—	In the passenger compartment, in the passenger seat back	<u>Back of Passenger Seat Components</u>	<u>M56P Seat Recline Motor - Passenger</u>
M60A	Active Grille Air Shutter 1 Motor Module	HP5	Outside the vehicle, near the left front corner of the vehicle, behind the fascia	—	—
M63	Sliding Rear Window Motor	A48	In the passenger compartment, mounted the the passenger side of the rear wall, behind the rear seat	—	<u>M63 Sliding Rear Window Motor</u>

M64	Starter Motor	—	In the engine compartment, mounted to the rear of the engine block	<ul style="list-style-type: none"> • <u>Right Rear of Engine Components (LV3)</u> • <u>Right Side of Engine Components (L5P)</u> • <u>Right Side of Engine Components (L96)</u> • <u>Underbody Components (L5P)</u> • <u>Right Rear Side of Engine Components (L8B)</u> 	<ul style="list-style-type: none"> • <u>M64 Starter Motor (L5P)</u> • <u>M64 Starter Motor (L96/LC8)</u> • <u>M64 Starter Motor (LV1/LV3)</u>
M69	Sunroof Motor	CF5	In the passenger compartment, at the front of the roof, above the headliner	—	—
M72	Variable Power Steering Solenoid Valve	NV8	In the passenger compartment, on the steering column near the base of the shifter	—	—
M73A	Seat Blower Motor - Driver Back	KB6	In the passenger compartment, in the driver seat back	<u>Back of Driver Seat Components</u>	<u>M73A Seat Blower Motor - Driver Back</u>
M73B	Seat Blower Motor - Passenger Back	KB6	In the passenger compartment, in the passenger seat cback	<u>Back of Passenger Seat Components</u>	<u>M73B Seat Blower Motor - Passenger Back</u>
M73C	Seat Blower Motor - Driver Cushion	KB6	In the passenger compartment, in the driver seat cushion	<u>Bottom of Driver Seat Components</u>	<u>M73C Seat Blower Motor - Driver Cushion</u>
M73D	Seat Blower Motor - Passenger Cushion	KB6	In the passenger compartment, in the passenger seat cushion	<u>Bottom of Passenger Seat Components (GAJ or Y91)</u>	<u>M73D Seat Blower Motor - Passenger Cushion</u>
M74D	Window Motor - Driver	A31	In the passenger compartment, in the driver door	<u>Driver Door Components</u>	<u>M74D Window Motor - Driver</u>
M74LR	Window Motor - Left Rear	Extended or Crew Cab	In the passenger compartment, in the left rear door	<u>Left Rear Door Components</u>	<u>M74LR Window Motor - Left Rear</u>
M74P	Window Motor - Passenger	A31	In the passenger compartment, in the passenger door	<u>Passenger Door Components</u>	<u>M74P Window Motor - Passenger</u>
M74RR	Window Motor - Right Rear	Extended or Crew Cab	In the passenger compartment, in the right rear door	<u>Right Rear Door Components</u>	<u>M74RR Window Motor - Right Rear</u>
M75	Windshield Wiper Motor	—	Outside the vehicle, at the left rear of the engine compartment, below the left lower corner of the windshield	<u>Left Side of Engine Compartment Components (except L5P)</u>	<u>M75 Windshield Wiper Motor</u>
M77D	Outside Rearview Mirror Motor - Driver	DL3, DL8, DPN or DQS	Outside the vehicle, at the front of the driver door, part of the outside rearview mirror	—	—
M77P	Outside Rearview Mirror Motor - Passenger	DL3, DL8, DPN or DQS	Outside the vehicle, at the front of the passenger door, part of the outside rearview mirror	—	—
M78D	Outside Rearview Mirror Folding Motor - Driver	DL3 or DQS	Outside the vehicle, at the front of the driver door, part of the outside rearview mirror	—	—
M78P	Outside Rearview Mirror Folding Motor - Passenger	DL3 or DQS	Outside the vehicle, at the front of the passenger door, part of the outside rearview mirror	—	—
M95L	Assist Step - Left	BRS	Under the vehicle, along the left frame rail, under the driver door	—	<u>M95L Assist Step - Left</u>
M95R	Assist Step - Right	BRS	Under the vehicle, along the right frame rail, under the passenger door	—	<u>M95R Assist Step - Right</u>

P3	Backup Alarm	8S3	Under the rear of the vehicle, mounted on the right frame rail	—	<u>P3 Backup Alarm (8S3)</u>
P9	Driver Information Center Display	—	In the passenger compartment, part of the instrument cluster	—	—
P12	Horn	—	In the engine compartment, at the left side of the radiator core support	<u>Left Side of Engine Compartment Components (except L5P)</u>	<u>P12 Horn</u>
P14	Passenger Air Bag Disabled Indicator	—	In the passenger compartment, at the front of the roof, in the overhead console	—	<u>P14 Passenger Air Bag Disabled Indicator</u>
P16	Instrument Cluster	—	In the passenger compartment, in the driver side of the instrument panel	—	<ul style="list-style-type: none"> • <u>P16 Instrument Cluster (UHS)</u> • <u>P16 Instrument Cluster (-UHS)</u>
P17	Info Display Module	—	In the passenger compartment, at the center of the instrument panel	—	<ul style="list-style-type: none"> • <u>P17 Info Display Module X1 (IO3)</u> • <u>P17 Info Display Module X1 (IO5/IO6)</u> • <u>P17 Info Display Module X1 (IOB)</u> • <u>P17 Info Display Module X2</u> • <u>P17 Info Display Module X3 (IO3/IO5/IO6)</u>
P19AC	Speaker - Subwoofer	UQA	In the passenger compartment, under the instrument panel, at the front of the center console	—	<u>P19AC Speaker - Subwoofer</u>
P19AG	Speaker - Left Front Door	—	In the passenger compartment, in the driver door	<u>Driver Door Components</u>	<u>P19AG Speaker - Left Front Door</u>
P19AH	Speaker - Right Front Door	—	In the passenger compartment, in the passenger door	<u>Passenger Door Components</u>	<u>P19AH Speaker - Right Front Door</u>
P19AL	Speaker - Left Rear Door	Extended or Crew Cab	In the passenger compartment, in the left rear door	<u>Left Rear Door Components</u>	<u>P19AL Speaker - Left Rear Door</u>
P19AM	Speaker - Right Rear Door	Extended or Crew Cab	In the passenger compartment, in the right rear door	<u>Right Rear Door Components</u>	<u>P19AM Speaker - Right Rear Door</u>
P19AN	Speaker - Left Rear Trim Panel	Regular Cab	In the passenger compartment, at the left rear corner of the cab, near the driver seat headrest	—	<u>P19AN Speaker - Left Rear Trim Panel</u>
P19AP	Speaker - Right Rear Trim Panel	Regular Cab	In the passenger compartment, at the right rear corner of the cab, near the passenger seat headrest	—	<u>P19AP Speaker - Right Rear Trim Panel</u>
P19J	Speaker - Left Instrument Panel	UQ3, UQA or UQG	In the passenger compartment, in the top of the left side of the instrument panel	—	<ul style="list-style-type: none"> • <u>P19J Speaker - Left Instrument Panel (UQ3/UQG)</u> • <u>P19J Speaker - Left Instrument Panel (UQA/UQS/UQH-UQG)</u>
P19W	Speaker - Right Instrument Panel	UQ3, UQA or UQG	In the passenger compartment, in the top of the right side of the instrument panel	—	<ul style="list-style-type: none"> • <u>P19W Speaker - Right Instrument Panel (UQ3/UQG/UQ5)</u> • <u>P19W Speaker - Right Instrument Panel (UQA)</u>
P22A	Video Display - 2nd Row	U42	In the passenger compartment, near the center of the headliner	—	<u>P22A Video Display - 2nd Row</u>

P43	Collision Alert Indicators	UEU	In the passenger compartment, in the top of the instrument panel, near the windshield, in front of the driver	—	<u>P43 Collision Alert Indicators</u>
P45LR	Seat Haptic Movement Motor - Driver Left Rear	UEU or UFL	In the passenger compartment, in the left side of the driver seat cushion	<u>Bottom of Driver Seat Components</u>	<u>P45LR Seat Haptic Movement Motor - Driver Left Rear</u>
P45RR	Seat Haptic Movement Motor - Driver Right Rear	UEU or UFL	In the passenger compartment, in the right side of the driver seat cushion	<u>Bottom of Driver Seat Components</u>	<u>P45RR Seat Haptic Movement Motor - Driver Right Rear</u>
Q2	A/C Compressor Clutch	C67 or CJ2	In the engine compartment, at the front of the A/C compressor	<ul style="list-style-type: none"> • <u>Right Side of Engine Components (L96)</u> • <u>Right Rear of Engine Components (LV3)</u> 	<u>Q2 A/C Compressor Clutch</u>
Q5	Brake Pressure Modulator	—	In the engine compartment, left rear, part of the Brake Control Module	—	—
Q6	Camshaft Position Actuator Solenoid Valve	except L5P	In the engine compartment, at the front right side of the engine	<u>Left Front of Engine Components (LV3)</u>	<u>Q6 Camshaft Position Actuator Solenoid Valve</u>
Q8	Control Solenoid Valve Assembly	MYC or MYD	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Internal Components (MYC or MYD)</u>	<u>Q8 Control Solenoid Valve Assembly X1</u>
Q12	Evaporative Emission Purge Solenoid Valve	except L5P	In the engine compartment, at the top middle rear of the engine	<ul style="list-style-type: none"> • <u>Left Side of Engine Components (L96)</u> • <u>Left Front of Engine Components (LV3)</u> 	<ul style="list-style-type: none"> • <u>Q12 Evaporative Emission Purge Solenoid Valve (L96/LC8)</u> • <u>Q12 Evaporative Emission Purge Solenoid Valve (LV1/LV3)</u>
Q13	Evaporative Emission Vent Solenoid Valve	except L5P	On the underbody, at the top left side of the fuel tank	<ul style="list-style-type: none"> • <u>Chassis Components (Chassis Cab)</u> • <u>Chassis Components (2500/3500)</u> 	<u>Q13 Evaporative Emission Vent Solenoid Valve</u>
Q14	Exhaust Gas Recirculation Valve	L5P	In the engine compartment, on the top left middle of the engine	<u>Left Side of Engine Components (L5P)</u>	<u>Q14 Exhaust Gas Recirculation Valve</u>
Q17A	Fuel Injector 1	—	In the engine compartment, in the cylinder head above cylinder 1	<ul style="list-style-type: none"> • <u>Right Side of Engine Components (L5P)</u> • <u>Top of Engine Components (L83/L86/L8B)</u> • <u>Left Side of Engine Components (L96)</u> 	<ul style="list-style-type: none"> • <u>Q17A Fuel Injector 1 (L5P)</u> • <u>Q17A Fuel Injector 1 (L96/LC8)</u>
Q17B	Fuel Injector 2	—	In the engine compartment, in the cylinder head above cylinder 2	<ul style="list-style-type: none"> • <u>Top of Engine Components (L83/L86/L8B)</u> • <u>Left Side of Engine Components (L5P)</u> • <u>Right Side of Engine Components (L96)</u> 	<ul style="list-style-type: none"> • <u>Q17B Fuel Injector 2 (L5P)</u> • <u>Q17B Fuel Injector 2 (L96/LC8)</u>
Q17C	Fuel Injector 3	—	In the engine compartment, in the cylinder head above cylinder 3	<ul style="list-style-type: none"> • <u>Right Side of Engine Components (L5P)</u> • <u>Top of Engine Components (L83/L86/L8B)</u> • <u>Left Side of Engine Components (L96)</u> 	<ul style="list-style-type: none"> • <u>Q17C Fuel Injector 3 (L5P)</u> • <u>Q17C Fuel Injector 3 (L96/LC8)</u>

Q17D	Fuel Injector 4	—	In the engine compartment, in the cylinder head above cylinder 4	<ul style="list-style-type: none"> ● <u>Right Side of Engine Components (L96)</u> ● <u>Top of Engine Components (L83/L86/L8B)</u> ● <u>Left Side of Engine Components (L5P)</u> 	<ul style="list-style-type: none"> ● <u>Q17D Fuel Injector 4 (L5P)</u> ● <u>Q17D Fuel Injector 4 (L96/LC8)</u>
Q17E	Fuel Injector 5	—	In the engine compartment, in the cylinder head above cylinder 5	<ul style="list-style-type: none"> ● <u>Top of Engine Components (L83/L86/L8B)</u> ● <u>Right Rear Side of the Engine Components (L5P)</u> ● <u>Left Side of Engine Components (L96)</u> 	<ul style="list-style-type: none"> ● <u>Q17E Fuel Injector 5 (L5P)</u> ● <u>Q17E Fuel Injector 5 (L96/LC8)</u>
Q17F	Fuel Injector 6	—	In the engine compartment, in the cylinder head above cylinder 6	<ul style="list-style-type: none"> ● <u>Right Side of Engine Components (L96)</u> ● <u>Top of Engine Components (L83/L86/L8B)</u> ● <u>Left Side of Engine Components (L5P)</u> 	<ul style="list-style-type: none"> ● <u>Q17F Fuel Injector 6 (L5P)</u> ● <u>Q17F Fuel Injector 6 (L96/LC8)</u>
Q17G	Fuel Injector 7	—	In the engine compartment, in the cylinder head above cylinder 7	<ul style="list-style-type: none"> ● <u>Left Side of Engine Components (L96)</u> ● <u>Top of Engine Components (L83/L86/L8B)</u> ● <u>Right Rear Side of the Engine Components (L5P)</u> 	<ul style="list-style-type: none"> ● <u>Q17G Fuel Injector 7 (L5P)</u> ● <u>Q17G Fuel Injector 7 (L96/LC8)</u>
Q17H	Fuel Injector 8	—	In the engine compartment, in the cylinder head above cylinder 8	<ul style="list-style-type: none"> ● <u>Right Side of Engine Components (L96)</u> ● <u>Left Side of Engine Components (L5P)</u> ● <u>Top of Engine Components (L83/L86/L8B)</u> 	<ul style="list-style-type: none"> ● <u>Q17H Fuel Injector 8 (L5P)</u> ● <u>Q17H Fuel Injector 8 (L96/LC8)</u>
Q18A	Fuel Pressure Regulator 1	L5P	In the engine compartment, mounted on top of the fuel injection pump	<u>Top of the Engine Components (L5P)</u>	<u>Q18A Fuel Pressure Regulator 1</u>
Q18B	Fuel Pressure Regulator 2	L5P	In the engine compartment	<u>Top of the Engine Components (L5P)</u>	—
Q23	Line Pressure Control Solenoid Valve	MW7	Under the vehicle, inside the transmission assembly	—	—
Q27A	Pressure Control Solenoid Valve 1	MW7, MYC or MYD	Under the vehicle, inside the transmission assembly	—	—
Q27B	Pressure Control Solenoid Valve 2	MW7, MYC or MYD	Under the vehicle, inside the transmission assembly	—	—
Q27C	Pressure Control Solenoid Valve 3	MYC or MYD	Under the vehicle, inside the transmission assembly	—	—
Q27D	Pressure Control Solenoid Valve 4	MYC or MYD	Under the vehicle, inside the transmission assembly	—	—
Q27E	Pressure Control Solenoid Valve 5	MYC or MYD	Under the vehicle, inside the transmission assembly	—	—

Q32A	Shift Solenoid Valve 1	MW7, MYC or MYD	Under the vehicle, inside the transmission assembly	—	—
Q32B	Shift Solenoid Valve 2	MW7, MYC or MYD	Under the vehicle, inside the transmission assembly	—	—
Q32C	Shift Solenoid Valve 3	MW7	Under the vehicle, inside the transmission assembly	—	—
Q37LF	Shock Absorber Actuator - Left Front	Z95	Under the vehicle, part of the shock absorber	<u>Front Chassis Components (1500)</u>	<u>Q37LF Shock Absorber Actuator - Left Front</u>
Q37LR	Shock Absorber Actuator - Left Rear	Z95	Under the vehicle, part of the shock absorber	<u>Rear Chassis Components (except Chassis Cab or L5P)</u>	<u>Q37LR Shock Absorber Actuator - Left Rear</u>
Q37RF	Shock Absorber Actuator - Right Front	Z95	Under the vehicle, part of the shock absorber	<u>Front Chassis Components (1500)</u>	<u>Q37RF Shock Absorber Actuator - Right Front</u>
Q37RR	Shock Absorber Actuator - Right Rear	Z95	Under the vehicle, part of the shock absorber	<u>Rear Chassis Components (except Chassis Cab or L5P)</u>	<u>Q37RR Shock Absorber Actuator - Right Rear</u>
Q38	Throttle Body	—	In the engine compartment, at the top of the engine, mounted to the intake manifold inlet	<ul style="list-style-type: none"> • <u>Right Rear of Engine Components (LV3)</u> • <u>Right Side of Engine Components (L5P)</u> • <u>Right Side of Engine Components (L96)</u> 	<ul style="list-style-type: none"> • <u>Q38 Throttle Body (L5P)</u> • <u>Q38 Throttle Body (L96/LC8)</u> • <u>Q38 Throttle Body (LV3)</u>
Q39A	Torque Converter Clutch Pressure Control Solenoid Valve	MW7, MYC or MYD	Under the vehicle, inside the transmission assembly	—	—
Q41	Turbocharger Vane Position Control Solenoid Valve	L5P	In the engine compartment, at the top of the engine	<u>Right Rear Side of the Engine Components (L5P)</u>	—
Q43	Valve Lifter Oil Manifold Assembly	1500	In the engine compartment, mounted in the valve lifter valley below the intake manifold	<u>Left Front of Engine Components (LV3)</u>	<u>Q43 Valve Lifter Oil Manifold Assembly (LV3)</u>
Q44	Engine Oil Pressure Control Solenoid Valve	1500	In the engine compartment, at the front of the engine, behind the front cover	—	<u>Q44 Engine Oil Pressure Control Solenoid Valve</u>
Q46	A/C Compressor Solenoid Valve	C67 or CJ2	In the front of the engine compartment, part of the compressor assembly	<ul style="list-style-type: none"> • <u>Right Side of Engine Components (L96)</u> • <u>Right Rear of Engine Components (LV3)</u> 	<u>Q46 A/C Compressor Solenoid Valve</u>
Q47	Exhaust Gas Recirculation Cooler Bypass Solenoid Valve	L5P	In the engine compartment, on the top right rear of the engine	<u>Right Rear Side of the Engine Components (L5P)</u>	<u>Q47 Exhaust Gas Recirculation Cooler Bypass Solenoid Valve</u>
Q61	Reductant Injector	L5P	Under the vehicle, attached to the exhaust pipe, near the rear of the catalytic converter	<u>Underbody Components (L5P)</u>	<u>Q61 Reductant Injector</u>
Q67	Exhaust Aftertreatment Fuel Injector	L5P	In the engine compartment, on the right rear side of the engine, above fuel injector 5	<u>Right Rear Side of the Engine Components (L5P)</u>	<u>Q67 Exhaust Aftertreatment Fuel Injector</u>
Q68A	CNG Cut-Off Solenoid Valve 1	LC8	Under the vehicle, part of the CNG pressure regulator	—	—
Q68B	CNG Cut-Off Solenoid Valve 2	LC8	In the CNG tank cover, part of the CNG Fuel Tank Assembly	—	—
Q70A	Alternative Fuel Injector 1	LC8	In the engine compartment, near the left side engine rocker cover above cylinder number 1	—	—

Q70B	Alternative Fuel Injector 2	LC8	In the engine compartment, near the right side engine rocker cover above cylinder number 2	—	—
Q70C	Alternative Fuel Injector 3	LC8	In the engine compartment, near the left side engine rocker cover above cylinder number 3	—	—
Q70D	Alternative Fuel Injector 4	LC8	In the engine compartment, near the right side engine rocker cover above cylinder number 4	—	—
Q70E	Alternative Fuel Injector 5	LC8	In the engine compartment, near the left side engine rocker cover above cylinder number 5	—	—
Q70F	Alternative Fuel Injector 6	LC8	In the engine compartment, near the right side engine rocker cover above cylinder number 6	—	—
Q70G	Alternative Fuel Injector 7	LC8	In the engine compartment, near the left side engine rocker cover above cylinder number 7	—	—
Q70H	Alternative Fuel Injector 8	LC8	In the engine compartment, near the right side engine rocker cover above cylinder number 8	—	—
Q77A	Transmission Control Solenoid Valve 1	M5U	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Valve Body Components (M5U)</u>	—
Q77B	Transmission Control Solenoid Valve 2	M5U	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Valve Body Components (M5U)</u>	—
Q77C	Transmission Control Solenoid Valve 3	M5U	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Valve Body Components (M5U)</u>	—
Q77D	Transmission Control Solenoid Valve 4	M5U	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Valve Body Components (M5U)</u>	—
Q77E	Transmission Control Solenoid Valve 5	M5U	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Valve Body Components (M5U)</u>	—
Q77F	Transmission Control Solenoid Valve 6	M5U	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Valve Body Components (M5U)</u>	—
Q77G	Transmission Control Solenoid Valve 7	M5U	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Valve Body Components (M5U)</u>	—
Q77H	Transmission Control Solenoid Valve 8	M5U	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Valve Body Components (M5U)</u>	—
Q77J	Transmission Control Solenoid Valve 9	M5U	Under the vehicle, inside the transmission assembly	<u>Automatic Transmission Valve Body Components (M5U)</u>	—
R6A	Terminating Resistor - High Speed Bus	—	Under the vehicle, near the left frame rail, above the spare tire, taped in the chassis harness	<u>Chassis Components (Chassis Cab)</u>	<u>R6A Terminating Resistor - High Speed Bus</u>
R12	Power Take-Off Switch Diode	PTO	In the passenger compartment, behind the middle of the instrument panel	—	—
R25	Hybrid/EV Battery Pre-Charge Resistor	HP5	part of the Hybrid/EV battery pack	—	—
S2	Transmission Manual Shift Switch	M5U, MW7, MYC or MYD	In the passenger compartment, part of the transmission shift lever	—	—
S3	Transmission Shift Lever	M5U, MW7, MYC or MYD	In the passenger compartment, mounted to the steering column	—	—

S5	Center Console Compartment Lamp Switch	D07	In the passenger compartment, under the center console compartment lid	—	<u>S5 Center Console Compartment Lamp Switch</u>
S12	Dome Lamp Switch	—	In the passenger compartment, near the center of the headliner, part of the dome lamp	—	<u>S12 Dome Lamp Switch</u>
S13D	Door Lock Switch - Driver	—	In the passenger compartment, in the driver door handle trim panel	<u>Driver Door Components</u>	<ul style="list-style-type: none"> ● <u>S13D Door Lock Switch - Driver (A31)</u> ● <u>S13D Door Lock Switch - Driver (-A31)</u>
S13P	Door Lock Switch - Passenger	—	In the passenger compartment, in the passenger door handle trim panel	<u>Passenger Door Components</u>	<ul style="list-style-type: none"> ● <u>S13P Door Lock Switch - Passenger (A31)</u> ● <u>S13P Door Lock Switch - Passenger (-A31)</u>
S15	Manual Service Disconnect	HP5	part of the Hybrid/EV battery pack	—	—
S16	Driver Information Center Switch	—	In the passenger compartment, in the center of the I/P, between the instrument cluster and the air vents	—	—
S25	Garage Door Opener	UG1	In the passenger compartment, in the overhead console	—	<u>S25 Garage Door Opener</u>
S30	Headlamp Switch	—	In the passenger compartment, left of the steering column	—	<u>S30 Headlamp Switch</u>
S31D	Seat Heating and Cooling Switch - Driver	KA1 or KB6	In the passenger compartment, on driver side of the HVAC controls	—	<u>S31D Seat Heating and Cooling Switch - Driver</u>
S31P	Seat Heating and Cooling Switch - Passenger	KA1 or KB6	In the passenger compartment, on passenger side of the HVAC controls	—	<u>S31P Seat Heating and Cooling Switch - Passenger</u>
S33	Horn Switch	—	In the passenger compartment, in the center of the steering wheel, behind the driver side air bag	—	—
S39	Ignition Switch	—	In the passenger compartment, behind the steering wheel, on the right side of the steering column	—	—
S40	Passenger Air Bag Disable Switch	C99	In the passenger compartment, in the right instrument panel closeout	—	<u>S40 Passenger Air Bag Disable Switch</u>
S43	Content Theft Deterrent Sensor Disable Switch	UTU/UTV	In the passenger compartment, overhead, in the overhead console	—	—
S47D	Seat Memory Switch - Driver	A45	In the passenger compartment, on the driver door panel above the driver door switch assembly	—	<u>S47D Seat Memory Switch - Driver</u>
S48A	Multifunction Switch - Instrument Panel	—	In the passenger compartment, near the center of the instrument panel	—	<ul style="list-style-type: none"> ● <u>S48A Multifunction Switch - Instrument Panel X1</u> ● <u>S48A Multifunction Switch - Instrument Panel X2</u>
S51	Telematics Button Assembly	UE1	In the passenger compartment, part of the inside rearview mirror	—	—

S52	Outside Rearview Mirror Switch	DL3, DL8, DPN or DQS	In the passenger compartment, on the driver door trim panel	<u>Driver Door Components</u>	<ul style="list-style-type: none"> ● <u>S52 Outside Rearview Mirror Switch (A45)</u> ● <u>S52 Outside Rearview Mirror Switch (-A45)</u>
S63	Roof Beacon Switch	TRW	In the passenger compartment, behind the overhead console, near the top	—	<u>S63 Roof Beacon Switch</u>
S64D	Seat Adjuster Switch - Driver	—	In the passenger compartment, mounted to the outboard side of the driver seat cushion	<u>Back of Driver Seat Components</u>	<ul style="list-style-type: none"> ● <u>S64D Seat Adjuster Switch - Driver X1</u> ● <u>S64D Seat Adjuster Switch - Driver X2</u>
S64P	Seat Adjuster Switch - Passenger	—	In the passenger compartment, mounted to the outboard side of the passenger seat cushion	<u>Front of Passenger Seat Components</u>	<ul style="list-style-type: none"> ● <u>S64P Seat Adjuster Switch - Passenger X1</u> ● <u>S64P Seat Adjuster Switch - Passenger X2</u>
S68	Sliding Rear Window Switch	A48	In the passenger compartment, in the overhead console	—	<u>S68 Sliding Rear Window Switch</u>
S70E	Steering Wheel Controls Switch - Radio Presets	UK3	In the passenger compartment, on the left rear side of the steering wheel	—	—
S70F	Steering Wheel Controls Switch - Radio Volume	UK3	In the passenger compartment, on the right rear side of the steering wheel	—	—
S70L	Steering Wheel Controls Switch - Left	—	In the passenger compartment, on the left side of the steering wheel	—	—
S70R	Steering Wheel Controls Switch - Right	UK3	In the passenger compartment, on the right side of the steering wheel	—	—
S72	Sunroof Switch	CF5	In the passenger compartment, at the front of the headliner, in the overhead console	—	<u>S72 Sunroof Switch</u>
S74	Tow/Haul Mode Switch	M5U, MW7, MYC or MYD	In the passenger compartment, part of the automatic transmission shift lever	—	—
S76	Trailer Brake Control Switch	JL1	In the passenger compartment, lower left side of the instrument panel	—	<u>S76 Trailer Brake Control Switch</u>
S77	Transfer Case Shift Control Switch	NQF or NQH	In the passenger compartment, left side of the instrument panel	—	<ul style="list-style-type: none"> ● <u>S77 Transfer Case Shift Control Switch (NQG)</u> ● <u>S77 Transfer Case Shift Control Switch (NQH/NQF)</u>
S77	Transfer Case Shift Control Switch	NQG	Under the vehicle, on the top of the transfer case	—	<ul style="list-style-type: none"> ● <u>S77 Transfer Case Shift Control Switch (NQG)</u> ● <u>S77 Transfer Case Shift Control Switch (NQH/NQF)</u>
S78	Turn Signal/Multifunction Switch	—	In the passenger compartment, on the left side of the steering column	—	—
S79D	Window Switch - Driver	A31	In the passenger compartment, behind the driver door trim panel, center of the door	<u>Driver Door Components</u>	<u>S79D Window Switch - Driver</u>
S79LR	Window Switch - Left Rear	Extended or Crew Cab	In the passenger compartment, at the center of the left rear door, on the door trim panel	<u>Left Rear Door Components</u>	<u>S79LR Window Switch - Left Rear</u>

S79P	Window Switch - Passenger	A31	In the passenger compartment, on the passenger door trim panel, center of the door	<u>Passenger Door Components</u>	<ul style="list-style-type: none"> ● <u>S79P Window Switch - Passenger X1</u> ● <u>S79P Window Switch - Passenger X2</u>
S79RR	Window Switch - Right Rear	Extended or Crew Cab	In the passenger compartment, on the right rear door trim panel, center of the door	<u>Right Rear Door Components</u>	<u>S79RR Window Switch - Right Rear</u>
S135	Rollover Protection Disable Switch	C9I	In the passenger compartment, in the left side of the lower glove box	<u>Rear of Instrument Panel Components</u>	<u>S135 Rollover Protection Disable Switch</u>
S148L	Assist Step Kick Switch - Left	BRS	Under the vehicle, along the left frame rail, under the driver door part of the power assist step	—	—
S148R	Assist Step Kick Switch - Right	BRS	Under the vehicle, along the right frame rail, under the passenger door part of the power assist step	—	—
T1	Accessory DC/AC Power Inverter Module	KI4 or KI5	In the instrument panel, right side of the steering column	<u>Rear of Instrument Panel Components</u>	<u>T1 Accessory DC/AC Power Inverter Module (KI5)</u>
T3	Audio Amplifier	UQA or UQG	In the rear passenger compartment, mounted behind the rear seat, below the rear window	—	<ul style="list-style-type: none"> ● <u>T3 Audio Amplifier X1 (UQA/UQG+D07)</u> ● <u>T3 Audio Amplifier X1 (UQA/UQG-D07)</u> ● <u>T3 Audio Amplifier X2</u> ● <u>T3 Audio Amplifier X3</u> ● <u>T3 Audio Amplifier X4</u>
T4G	Cellular Phone, Navigation, and Digital Radio Antenna	—	Outside the vehicle, at the front left of the roof	<ul style="list-style-type: none"> ● <u>Front of Vehicle (Chevrolet) Components</u> ● <u>Front of Vehicle (GMC) Components</u> 	—
T4H	Digital Radio Antenna	IOB	Outside the vehicle, at the right rear of the hood	—	—
T4M	Radio Antenna	—	Outside the vehicle, at the right rear of the hood	<ul style="list-style-type: none"> ● <u>Front of Vehicle (Chevrolet) Components</u> ● <u>Front of Vehicle (GMC) Components</u> 	—
T4S	Wireless Communication Antenna - Bluetooth	—	Outside the vehicle, at the rear of the right front fender	—	—
T8A	Ignition Coil 1	except L5P	In the engine compartment, at the top of the engine	<ul style="list-style-type: none"> ● <u>Top of Engine Components (LV3)</u> ● <u>Left Side of Engine Components (L96)</u> ● <u>Top of Engine Components (L83/L86/L8B)</u> 	<ul style="list-style-type: none"> ● <u>T8A Ignition Coil 1 (L96/LC8)</u> ● <u>T8A Ignition Coil 1 (LV3)</u>
T8B	Ignition Coil 2	except L5P	In the engine compartment, at the top of the engine	<ul style="list-style-type: none"> ● <u>Top of Engine Components (LV3)</u> ● <u>Top of Engine Components (L83/L86/L8B)</u> ● <u>Right Side of Engine Components (L96)</u> 	<u>T8B Ignition Coil 2 (LV3)</u>

T8C	Ignition Coil 3	except L5P	In the engine compartment, at the top of the engine	<ul style="list-style-type: none"> • <u>Left Side of Engine Components (L96)</u> • <u>Top of Engine Components (L83/L86/L8B)</u> • <u>Top of Engine Components (LV3)</u> 	<ul style="list-style-type: none"> • <u>T8C Ignition Coil 3 (L96/LC8)</u> • <u>T8C Ignition Coil 3 (LV3)</u>
T8D	Ignition Coil 4	except L5P	In the engine compartment, at the top of the engine	<ul style="list-style-type: none"> • <u>Top of Engine Components (LV3)</u> • <u>Top of Engine Components (L83/L86/L8B)</u> • <u>Right Side of Engine Components (L96)</u> 	<u>T8D Ignition Coil 4 (LV3)</u>
T8E	Ignition Coil 5	except L5P	In the engine compartment, at the top of the engine	<ul style="list-style-type: none"> • <u>Left Side of Engine Components (L96)</u> • <u>Top of Engine Components (L83/L86/L8B)</u> • <u>Top of Engine Components (LV3)</u> 	<ul style="list-style-type: none"> • <u>T8E Ignition Coil 5 (L96/LC8)</u> • <u>T8E Ignition Coil 5 (LV3)</u>
T8F	Ignition Coil 6	except L5P	In the engine compartment, at the top of the engine	<ul style="list-style-type: none"> • <u>Top of Engine Components (LV3)</u> • <u>Top of Engine Components (L83/L86/L8B)</u> • <u>Right Side of Engine Components (L96)</u> 	<u>T8F Ignition Coil 6 (LV3)</u>
T8G	Ignition Coil 7	L83, L86, L96 or LC8	In the engine compartment, at the top of the engine	<ul style="list-style-type: none"> • <u>Left Side of Engine Components (L96)</u> • <u>Top of Engine Components (L83/L86/L8B)</u> 	<u>T8G Ignition Coil 7 (L96/LC8)</u>
T8H	Ignition Coil 8	L83, L86, L96 or LC8	In the engine compartment, at the top of the engine	<ul style="list-style-type: none"> • <u>Right Side of Engine Components (L96)</u> • <u>Top of Engine Components (L83/L86/L8B)</u> 	—
T12	Automatic Transmission Assembly	M5U, MW7, MYC or MYD	Under the vehicle, mounted to the rear of the engine	—	—
T15	Navigation Antenna Signal Splitter	IO6 with UE1	In the passenger compartment, behind the instrument panel	—	—
T22	Mobile Device Wireless Charger Module	K4C	In the passenger compartment, forward of center, in the floor console bin lid.	—	—
W1	Blunt Cut - Camper Trailer Provision	UY2	Under the rear of the vehicle	—	—
W11	Blunt Cut - Roof Beacon Provision	TRW	In the passenger compartment, above the headliner	—	—
W24	Blunt Cut - Trailer Brakes Provision	Z82 with E29 or Z82 without JL1	In the passenger compartment, under left side of the instrument panel	—	—
X21	Manual Service Disconnect Receptacle	HP5	part of the Hybrid/EV battery pack	<u>Hybrid/EV Battery Pack (1 of 3)</u>	—

X50A	Fuse Block - Underhood	—	In the engine compartment, top left near the inner fender	<ul style="list-style-type: none"> • <u>Left Side of Engine Compartment Components (except L5P)</u> • <u>Left Side of Engine Compartment Components (L5P)</u> • <u>Engine Compartment Left Harness Routing</u> • <u>Chassis Harness Routing</u> 	Electrical Center Identification Views
X50D	Fuse Block - Battery	—	In the engine compartment, on top of the battery	—	Electrical Center Identification Views
X50E	Fuse Block - Battery Auxiliary	K4B, K4D or L5P	In the engine compartment, on top of the auxiliary battery	—	Electrical Center Identification Views
X51L	Fuse Block - Instrument Panel Left	—	In the passenger compartment, left side of the instrument panel, behind side trim panel	<u>Passenger Compartment Left Harness Routing</u>	Electrical Center Identification Views
X51R	Fuse Block - Instrument Panel Right	—	In the passenger compartment, right side of the instrument panel, behind side trim panel	<ul style="list-style-type: none"> • <u>Passenger Compartment Left Harness Routing</u> • <u>Passenger Compartment Right Harness Routing</u> 	Electrical Center Identification Views
X55J	Fuse Holder - Generator	KHB or KW5	In the engine compartment, at the left front of the engine	—	Electrical Center Identification Views
X55VA	Fuse Holder 1 - Alternative Fuel	LC8	In the engine compartment, at the left front, mounted to the CGM module bracket	—	Electrical Center Identification Views
X55VB	Fuse Holder 2 - Alternative Fuel	LC8	In the engine compartment, at the left front, mounted to the CGM module bracket	—	Electrical Center Identification Views
X61A	Junction Block - Instrument Panel	except E29	In the passenger compartment, under the instrument panel, left of the brake pedal	<u>Passenger Compartment Left Harness Routing</u>	Electrical Center Identification Views
X80D	Accessory Power Receptacle - Center Console Compartment	—	In the passenger compartment, between the driver and passenger seat, in the center console	—	<ul style="list-style-type: none"> • <u>X80D Accessory Power Receptacle - Center Console Compartment (- (AE7/AZ3/B3F))</u> • <u>X80D Accessory Power Receptacle - Center Console Compartment (AE7/AZ3/B3F)</u>
X80E	Accessory Power Receptacle - Center Seat	except D07	In the passenger compartment, at the rear of the center console	—	<u>X80E Accessory Power Receptacle - Center Seat</u>
X80G	Accessory Power Receptacle - Instrument Panel	except D07	In the passenger compartment, on top of the floor console, below the info display on the center stack	—	<u>X80G Accessory Power Receptacle - Instrument Panel</u>
X80J	Accessory Power Receptacle - Instrument Panel 1	D07	In the passenger compartment, at the left center of the instrument panel	<u>Rear of Instrument Panel Components</u>	<u>X80J Accessory Power Receptacle - Instrument Panel 1</u>
X80K	Accessory Power Receptacle - Instrument Panel 2	D07	In the passenger compartment, at the right center of the instrument panel	—	<u>X80K Accessory Power Receptacle - Instrument Panel 2</u>
X80L	Accessory Power Receptacle - Center Console Rear	D07	In the passenger compartment, at the rear of the floor center console	—	<u>X80L Accessory Power Receptacle - Center Console Rear</u>
X81B	Accessory Power Receptacle - 220V AC	KI5	In the passenger compartment, right front of the center console storage bin	—	<ul style="list-style-type: none"> • <u>X81B Accessory Power Receptacle - 220V AC X1</u> • <u>X81B Accessory Power Receptacle - 220V AC X2</u>

X81	Accessory Power Receptacle - 110V AC	K14	In the passenger compartment, right front of the center console storage bin	<u>Rear of Instrument Panel Components</u>	<ul style="list-style-type: none"> ● <u>X81 Accessory Power Receptacle - 110V AC X1</u> ● <u>X81 Accessory Power Receptacle - 110V AC X2</u>
X82	Audio/Video Input Adapter	U42	In the passenger compartment, at rear of the center console	—	<u>X82 Audio/Video Input Adapter</u>
X83	Auxiliary Audio Input	—	In the passenger compartment, in the center console storage compartment	—	<ul style="list-style-type: none"> ● <u>X83 Auxiliary Audio Input (A31)</u> ● <u>X83 Auxiliary Audio Input (AZ3/AE7)</u> ● <u>X83 Auxiliary Audio Input (D07)</u>
X84	Data Link Connector	—	In the passenger compartment, at the bottom of the driver side of the instrument panel	—	<u>X84 Data Link Connector</u>
X85	Steering Wheel Air Bag Coil	—	In the passenger compartment, behind the steering wheel	—	<u>X85 Steering Wheel Air Bag Coil</u>
X88	Trailer Connector	Z82	On the vehicle exterior, at the rear of the vehicle, left of the license plate	<u>Rear of Vehicle Components</u>	<ul style="list-style-type: none"> ● <u>X88 Trailer Connector (8S3)</u> ● <u>X88 Trailer Connector (UY2)</u> ● <u>X88 Trailer Connector (-UY2-8S3)</u>
X92	USB Receptacle	—	In the passenger compartment, left front of the center console storage bin	—	<u>X92 USB Receptacle</u>
X96	Alternative Fuel System Data Connector	LC8	In the passenger compartment, at the bottom of the driver side of the instrument panel, clipped to the Data Link Connector mount	—	—
X100	Front Bumper Harness To Forward Lamp Harness (16 Cavities)	T3U or UD5	In the engine compartment, near the center of the lower radiator support	<ul style="list-style-type: none"> ● <u>Front Bumper Harness Routing</u> ● <u>Engine Compartment Right Harness Routing</u> 	<ul style="list-style-type: none"> ● <u>X100 Forward Lamp Harness to Front Bumper Harness (X88+UD5)</u> ● <u>X100 Forward Lamp Harness to Front Bumper Harness (X88-UD5)</u> ● <u>X100 Forward Lamp Harness to Front Bumper Harness (Z88+UD5)</u> ● <u>X100 Forward Lamp Harness to Front Bumper Harness (Z88-UD5)</u>
X101	Engine Chassis Harness to Engine Harness (30 Cavities)	L5P	In the engine compartment, at the top of the engine	<ul style="list-style-type: none"> ● <u>Left Side of Engine Harness Routing (L5P)</u> ● <u>Engine Compartment Left Harness Routing</u> 	<u>X101 Engine Harness to Engine Chassis Harness (L5P)</u>
X102	Engine Harness To Engine Cooling Fan Jumper Harness (5 Cavities)	L5P	In the engine compartment, at the lower left of the cooling fan housing	<ul style="list-style-type: none"> ● <u>Left Side of Engine Harness Routing (L5P)</u> ● <u>Engine Compartment Left Harness Routing</u> 	—
X105	Engine Harness To Forward Lamp Harness (6 Cavities)	1500	In the engine compartment, near lower left of the engine block, rear of the battery carrier	<ul style="list-style-type: none"> ● <u>Forward Lamp Harness Routing - Left Engine Compartment (HP5)</u> ● <u>Engine Harness Routing - Left Front (L8B)</u> 	<ul style="list-style-type: none"> ● <u>X105 Engine Harness to Forward Lamp Harness (L8B)</u> ● <u>X105 Engine Harness to Forward Lamp Harness (LV3/LV1)</u>

X110	Forward Lamp Harness to Headlamp - Left Harness (8 Cavities)	—	In the engine compartment, at the rear of the left headlamp assembly	<u>Forward Lamp Harness Routing - Right Engine Compartment (HP5)</u>	<ul style="list-style-type: none"> ● <u>X110 Forward Lamp Harness to Front Bumper Harness (Heavy Duty)</u> ● <u>X110 Forward Lamp Harness to Front Bumper Harness (Light Duty)</u>
X111	Engine Harness To Front Axle Harness (4 Cavities)	NQF, NQG or NQH	Under the vehicle, near the front axle	<ul style="list-style-type: none"> ● <u>Engine Compartment Left Harness Routing</u> ● <u>Left Side of Engine Harness Routing (L5P)</u> ● <u>Engine Harness Routing - Left Front (L8B)</u> 	<u>X111 Front Axle Harness to Engine Harness</u>
X113	Engine Jumper Harness to Engine Harness (12 Cavities)	L5P	In the engine compartment, at the top of the engine	—	<u>X113 Engine Chassis Harness to Engine Jumper Harness (L5P)</u>
X115	Engine Harness to Body Harness (48 Cavities)	—	In the front of the engine compartment, near the upper left of the radiator support	<ul style="list-style-type: none"> ● <u>Left Side of Engine Harness Routing (L5P)</u> ● <u>Engine Compartment Left Harness Routing</u> ● <u>Engine Harness Routing - Left Front (L8B)</u> 	<u>X115 Engine Harness to Body Harness</u>
X116	Engine Harness to Body Harness	HP5	In the front of the engine compartment, near the upper left of the radiator support	<u>Engine Harness Routing - Left Front (L8B)</u>	<u>X116 Engine Harness to Body Harness</u>
X120	Forward Lamp Harness to Headlamp - Right Harness (8 Cavities)	—	In the engine compartment, at the rear of the right headlamp assembly	—	<ul style="list-style-type: none"> ● <u>X120 Forward Lamp Harness to Front Bumper Harness (Heavy Duty)</u> ● <u>X120 Forward Lamp Harness to Front Bumper Harness (Light Duty)</u>
X125	Engine Harness To Chassis Harness (20 Cavities)	—	Under the vehicle, on the top left of the frame rail, near the left front body mount	<ul style="list-style-type: none"> ● <u>Engine Compartment Left Harness Routing</u> ● <u>Left Side of Engine Harness Routing (L5P)</u> ● <u>Chassis Cab Harness Routing</u> ● <u>Chassis Harness Routing</u> 	<ul style="list-style-type: none"> ● <u>X125 Engine Harness to Chassis Harness (L5P)</u> ● <u>X125 Engine Harness to Chassis Harness (L96/LC8/LV3/LV1)</u>
X132	Aero Shutter Jumper Harness to Forward Lamp Harness	HP5	At the front of the vehicle, at center, behind upper grille at hood latch	<u>Forward Lamp Harness Routing - Right Engine Compartment (HP5)</u>	<u>X132 Aero Shutter Jumper Harness to Forward Lamp Harness</u>
X133	Battery Harness to Power Steering Jumper Harness (2 Cavities)	1500	Under the vehicle, clipped to the steering gear	—	—
X134	Chassis Harness to Power Steering Jumper Harness (12 Cavities)	1500	Under the vehicle, clipped to the steering gear	<u>Chassis Harness Routing</u>	<u>X134 Chassis Harness to Ignition Coil Harness</u>
X135	Fuel Pressure Sensor Jumper Harness to Engine Harness (3 Cavities)	L5P	In the engine compartment, at the top rear of the engine	—	—
X138	Chassis Harness To Body Harness (40 Cavities)	—	In the rear of the engine compartment, near the rear of the under hood fuse block	<ul style="list-style-type: none"> ● <u>Chassis Cab Harness Routing</u> ● <u>Chassis Harness Routing</u> 	<u>X138 Chassis Harness to Body Harness</u>

X150	Body Harness To Forward Lamp Harness (23 Cavities)	—	In the engine compartment, above the right front wheel well	<ul style="list-style-type: none"> ● <u>Engine Compartment Right Harness Routing</u> ● <u>Forward Lamp Harness Routing - Right Engine Compartment (HP5)</u> 	<u>X150 Body Harness to Forward Lamp Harness (Extended Cab)</u>
X154	Engine Harness to Camshaft Position Sensor Jumper Harness (8 Cavities)	1500	In the engine compartment, near the fuel rail	<u>Engine Harness Routing - Left Front (L8B)</u>	<u>X154 Engine Harness to Camshaft Position Sensor Jumper Harness</u>
X158	Auxiliary Battery to Engine Harness (6 Cavities)	K4B or K4D	At the left front of the engine compartment	—	<u>X158 Auxilary Battery Harness to Engine Harness</u>
X159	Engine Harness to Camshaft Position Sensor Jumper Harness (5 Cavities)	L96 or LC8	In the engine compartment, near the fuel rail	—	<u>X159 Engine Harness to Camshaft Position Sensor Jumper Harness</u>
X160	Engine Harness to Odd Fuel Injector Harness (12 Cavities)	1500	In the engine compartment, rear of the engine near the top center	<u>Engine Harness Routing - Right Rear (L8B)</u>	<u>X160 Engine Harness to Odd Fuel Injector Harness</u>
X161	Engine Harness to Even Fuel Injector Harness (12 Cavities)	1500	In the engine compartment, rear of the engine near the top right	<u>Engine Harness Routing - Right Rear (L8B)</u>	<u>X161 Engine Harness to Even Fuel Injector Harness</u>
X170	Engine Harness to Ignition Coil (Odd) Harness (8 Cavities)	L96 or LC8	On the engine, near the odd ignition coils	—	<u>X170 Engine Harness to Ignition Coil Odd Jumper Harness (L96 (ODD BANK))</u>
X171	Engine Harness to Ignition Coil (Even) Harness (8 Cavities)	L96 or LC8	On the engine, near the even ignition coils	—	<u>X171 Engine Harness to Ignition Coil Even Jumper Harness (L96 (EVEN BANK))</u>
X173	Camshaft Jumper to Oil Pressure Control Valve (2 Cavities)	1500	In the engine compartment, at the front of the engine	—	—
X175	Engine Harness to Transmission Harness (36 Cavities)	M5U/M5X	Under the vehicle, at the rear of the transmission assembly	<u>Engine Harness Routing - Right Rear (L8B)</u>	<u>X175 Engine Harness to Transmission Harness (MW7)</u>
X175	Engine Harness to Transmission Harness (23 Cavities)	L5P	Under the vehicle, at the rear of the transmission assembly	<u>Engine Harness Routing - Right Rear (L8B)</u>	<u>X175 Engine Harness to Transmission Harness (MW7)</u>
X176	Transmission Harness to Valve Body Harness (22 Cavities)	M5U	Under the vehicle, inside the transmission assembly	—	—
X177	Transmission Harness to Speed Sensor Harness (22 Cavities)	M5U	In the engine compartment, at the right front of the engine compartment, near the mass airflow sensor	—	—
X178	CNG Rear Harness to CNG Front Harness (16 Cavities)	LC8	In the engine compartment, to the left of the engine, below the fuse block, attached to the power steering hoses	—	—
X179	Engine Harness to CNG Front Harness (5 Cavities)	LC8	In the engine compartment, at the right front of the engine compartment, near the mass airflow sensor	—	—
X181	Engine Harness to CNG Injector Harness (2 Cavities)	LC8	In the engine compartment, near cylinder 1 fuel injector	—	—
X182	Engine Harness to CNG Injector Harness (2 Cavities)	LC8	In the engine compartment, near cylinder 2 fuel injector	—	—
X183	Engine Harness to CNG Injector Harness (2 Cavities)	LC8	In the engine compartment, near cylinder 3 fuel injector	—	—

X184	Engine Harness to CNG Injector Harness (2 Cavities)	LC8	In the engine compartment, near cylinder 4 fuel injector	—	—
X185	Engine Harness to CNG Injector Harness (2 Cavities)	LC8	In the engine compartment, near cylinder 5 fuel injector	—	—
X186	Engine Harness to CNG Injector Harness (2 Cavities)	LC8	In the engine compartment, near cylinder 6 fuel injector	—	—
X187	Engine Harness to CNG Injector Harness (2 Cavities)	LC8	In the engine compartment, near cylinder 7 fuel injector	—	—
X188	Engine Harness to CNG Injector Harness (2 Cavities)	LC8	In the engine compartment, near cylinder 8 fuel injector	—	—
X189	CNG Injector Harness to CNG Front Harness (20 Cavities)	LC8	In the engine compartment, to the left of the engine	—	—
X190	CNG Front Harness to CNG Injector Harness (20 Cavities)	LC8	In the engine compartment, to the left of the engine	—	—
X191	Engine Harness to Power Take-Off Jumper Harness (16 Cavities)	PTO	At the right rear of the engine compartment, near the frame	—	<u>X191 Engine Harness to Power Take-Off Jumper Harness (L5P+PTO)</u>
X199	CNG Front Harness to CNG Instrument Panel Harness (12 Cavities)	LC8	In the engine compartment, to the left of the engine	—	—
X201	Steering Column Harness to Instrument Panel Harness (42 Cavities)	except E29	In the passenger compartment, behind the left side of the instrument panel, near the steering column	—	<ul style="list-style-type: none"> ● <u>X201 Steering Column Harness to Instrument Panel Harness (E29)</u> ● <u>X201 Steering Column Harness to Instrument Panel Harness (-E29)</u>
X201	Steering Column Harness to Instrument Panel Harness (12 Cavities)	E29	In the passenger compartment, behind the left side of the instrument panel, near the steering column	—	<ul style="list-style-type: none"> ● <u>X201 Steering Column Harness to Instrument Panel Harness (E29)</u> ● <u>X201 Steering Column Harness to Instrument Panel Harness (-E29)</u>
X205	Instrument Panel Harness to Passenger Air Bag Jumper Harness (4 Cavities)	—	In the passenger compartment, behind the right side of the instrument panel near the center	—	<u>X205 Instrument Panel Harness to Instrument Panel Extension Harness</u>
X206	Body Harness To Brake Clutch Jumper Harness (16 Cavities)	except E29	In the passenger compartment, left side of the instrument panel	<u>Passenger Compartment Left Harness Routing</u>	<u>X206 Headliner Harness to Body Harness</u>
X206	Brake Clutch Jumper Harness to Body Harness (16 Cavities)	E29	In the passenger compartment, left side of the instrument panel	<u>Passenger Compartment Left Harness Routing</u>	<u>X206 Headliner Harness to Body Harness</u>
X210	Instrument Panel Harness COAX to Antenna Jumper Harness COAX (1 Cavity)	U2K or U2M	In the passenger compartment, between the instrument panel harness and the A-pillar	—	—
X211	Instrument Panel Harness COAX to Antenna Jumper Harness COAX (1 Cavity)	IO6 without UE1	In the passenger compartment, at the top right of the instrument panel, under the defroster duct trim	—	—
X212	Antenna Jumper Harness COAX to Instrument Panel Harness COAX (1 Cavity)	UE1 with CV3	In the passenger compartment, at the top right of the instrument panel, under the defroster duct trim	—	—
X215	HVAC Harness to Instrument Panel Harness (14 Cavities)	—	In the passenger compartment, behind the upper right side of the instrument panel	<u>HVAC Assembly Harness Routing</u>	<u>X215 POA HVAC Harness to Instrument Panel Harness</u>

X216	Body Harness To HVAC Harness (10 Cavities)	—	In the passenger compartment, behind the lower right side of the instrument panel	<ul style="list-style-type: none"> ● <u>Passenger Compartment Right Harness Routing</u> ● <u>HVAC Assembly Harness Routing</u> 	<u>X216 Body Harness to HVAC Harness</u>
X217	Body Harness To HVAC Harness (2 Cavities)	—	In the passenger compartment, behind the lower right side of the instrument panel	<ul style="list-style-type: none"> ● <u>Passenger Compartment Right Harness Routing</u> ● <u>HVAC Assembly Harness Routing</u> 	<u>X217 Body Harness to HVAC Harness</u>
X222	Instrument Panel Harness COAX to Antenna Jumper Harness COAX (1 Cavity)	(IO6) with (VV4) or (UE1 with CV3)	In the passenger compartment, between the instrument panel harness and the A-pillar	—	—
X222	Instrument Panel Harness COAX to Antenna Jumper Harness COAX (2 Cavities)	(IO3 or IO5) with (VV4) or (UE1 with CV3)	In the passenger compartment, between the instrument panel harness and the A-pillar	—	—
X225	Body Harness To Instrument Panel Harness (42 Cavities)	—	In the passenger compartment, behind the lower left side of the instrument panel	<u>Passenger Compartment Left Harness Routing</u>	<ul style="list-style-type: none"> ● <u>X225 Body Harness to Instrument Panel Harness (Extended Cab/Crew Cab)</u> ● <u>X225 Body Harness to Instrument Panel Harness (Regular Cab)</u>
X238	Center Console Harness USB to Instrument Panel Harness USB	U42	2-Way USB connector, in the passenger compartment, at the front of the center console	—	—
X241	Instrument Panel Harness to Power Inverter Module Jumper (12 Cavities)	KI5	In the passenger compartment, behind the middle of the instrument panel	—	<u>X241 Instrument Panel Harness to Instrument Panel Extension Harness</u>
X245	Antenna Jumper Harness COAX to Antenna Jumper Harness COAX (1 Cavity)	—	In the passenger compartment, at the top right of the instrument panel, under the defroster duct trim	—	—
X275	Instrument Panel Harness to Body Harness (42 Cavities)	—	In the passenger compartment, behind the lower right side of the instrument panel	<u>Passenger Compartment Right Harness Routing</u>	<u>X275 Instrument Panel Harness to Body Harness</u>
X300	Instrument Panel Harness to Center Console Harness (42 Cavities)	D07	In the passenger compartment, behind the lower center of the instrument panel	<u>Floor Console Harness Routing</u>	<u>X300 Instrument Panel Harness to Floor Console Harness</u>
X301	Body Harness USB to Instrumental Panel Harness USB	except D07	In the passenger compartment, at the base of the right A-pillar behind the trim panel	—	—
X302	Power Mat Jumper Harness to Floor Console Harness (3 Cavities)	K4C	In the passenger compartment, forward of center, in the floor console	—	<u>X302 Power Mat Jumper Harness to Floor Console Harness</u>
X305	Instrument Panel Harness to Headliner Harness (12 Cavities)	—	In the passenger compartment, behind the upper left side of the instrument panel, near the instrument cluster	—	<ul style="list-style-type: none"> ● <u>X305 Instrument Panel Harness to Headliner Harness (LUX+Console)</u> ● <u>X305 Instrument Panel Harness to Headliner Harness (LUX-Console)</u>
X309	Center Console Harness USB to Instrument Panel Harness USB	D07 without U42	Between the instrument panel harness and the front console	—	—

X310	Driver Seat Cushion Harness to Body Harness (48 Cavities)	—	In the passenger compartment, under the passenger seat	<ul style="list-style-type: none"> • <u>Passenger Compartment Right Harness Routing</u> • <u>Passenger Compartment Left Harness Routing</u> • <u>Bottom of Driver Seat Harness Routing</u> 	<ul style="list-style-type: none"> • <u>X310 Driver Seat Cushion Harness to Body Harness (AG1)</u> • <u>X310 Driver Seat Cushion Harness to Body Harness (-AG1)</u>
X311	Driver Seat Back Harness to Driver Seat Cushion Harness (6 Cavities)	—	In the passenger compartment, part of the driver seat assembly	<ul style="list-style-type: none"> • <u>Back of Driver Seat Harness Routing</u> • <u>Bottom of Driver Seat Harness Routing</u> 	<u>X311 Driver Seat Back Harness to Driver Seat Cushion Harness</u>
X312	Driver Seat Back Harness to Driver Seat Cushion Harness (16 Cavities)	—	In the passenger compartment, part of the driver seat assembly	<ul style="list-style-type: none"> • <u>Back of Driver Seat Harness Routing</u> • <u>Bottom of Driver Seat Harness Routing</u> 	<ul style="list-style-type: none"> • <u>X312 Driver Seat Back Harness to Driver Seat Cushion Harness (AG1)</u> • <u>X312 Driver Seat Back Harness to Driver Seat Cushion Harness (-AG1)</u>
X313	Body Harness USB to Center Seat Harness USB	—	In the passenger compartment, under the inboard side of the passenger seat, USB cable	—	—
X314	Center Seat Harness to Body Harness (23 Cavities)	except D07	In the passenger compartment, under the driver seat	<ul style="list-style-type: none"> • <u>Passenger Compartment Right Harness Routing</u> • <u>Passenger Compartment Left Harness Routing</u> 	<u>X314 Center Seat Harness to Body Harness</u>
X315	Headliner Harness to Body Harness (16 Cavities)	—	In the passenger compartment, near the middle of the left A-pillar	<u>Passenger Compartment Left Harness Routing</u>	<ul style="list-style-type: none"> • <u>X315 Body Harness to Brake Clutch Harness (E29)</u> • <u>X315 Body Harness to Brake Clutch Harness (-E29)</u>
X316	Headliner Harness to Overhead Console Harness (26 Cavities)	—	In the passenger compartment, in the headliner, near the over head console	—	<u>X316 Headliner Harness to Overhead Console Harness</u>
X318	Overhead Console Harness to Headliner Harness (10 Cavities)	CF5 or TRW	In the passenger compartment, in the headliner, between near the A-pillar	—	<u>X318 Sunroof Jumper Harness to Overhead Console Harness</u>
X319	Overhead Console Harness to Headliner Harness (2 Cavities)	CF5 or TRW	In the passenger compartment, in the headliner, between near the A-pillar	—	<u>X319 Overhead Console Harness to RH A Pillar Harness</u>
X320	Passenger Seat Cushion Harness to Body Harness (48 Cavities)	—	In the passenger compartment, under the passenger seat	<ul style="list-style-type: none"> • <u>Bottom of Passenger Seat Harness Routing</u> • <u>Passenger Compartment Left Harness Routing</u> 	<ul style="list-style-type: none"> • <u>X320 Passenger Seat Cushion Harness to Body Harness (Extended Cab/Crew Cab)</u> • <u>X320 Passenger Seat Cushion Harness to Body Harness (Regular Cab)</u>
X321	Passenger Seat Back Harness to Passenger Seat Cushion Harness (6 Cavities)	—	In the passenger compartment, part of the passenger seat assembly	<ul style="list-style-type: none"> • <u>Back of Passenger Seat Harness Routing</u> • <u>Bottom of Passenger Seat Harness Routing</u> 	<u>X321 Passenger Seat Back Harness to Passenger Seat Cushion Harness</u>
X322	Passenger Seat Back Harness to Passenger Seat Cushion Harness (6 Cavities)	—	In the passenger compartment, part of the passenger seat assembly	<ul style="list-style-type: none"> • <u>Back of Passenger Seat Harness Routing</u> • <u>Bottom of Passenger Seat Harness Routing</u> 	<u>X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness</u>

X345	Engine Harness to Reductant Tank Harness (24 Cavities)	L5P	At the right rear of the engine compartment, near the frame	—	—
X350	Chassis Harness to CNG Rear Harness (4 Cavities)	LC8	Under the vehicle, at the top of the fuel tank, near the fuel pump and level sensor assembly	<u>Chassis Cab Harness Routing</u>	—
X351	Instrument Panel Harness LVDS to Headliner Harness LVDS (1 Cavities)	U42	In the passenger compartment, behind the left Instrument Panel end cap, near the Instrument Panel Fuse Block	<u>Chassis Cab Harness Routing</u>	—
X363	High Voltage Battery Monitoring Harness to Body Harness	HP5	At the front of the vehicle, at center, behind upper grille at hood latch	<u>High Voltage Battery Monitoring Harness Routing (HP5)</u>	<u>X363 High Voltage Battery Monitoring Harness to Body Harness</u>
X380	Body Harness to Roof Rail Air Bag Jumper Harness (2 Cavities)	—	In the passenger compartment, behind the left C-pillar, near the headliner	—	<u>X380 Body Harness to Roof Rail Air Bag Jumper Harness</u>
X390	Body Harness to Roof Rail Air Bag Jumper Harness (2 Cavities)	—	In the passenger compartment, behind the right C-pillar, near the headliner	<u>Passenger Compartment Right Harness Routing</u>	<u>X390 Body Harness to Roof Rail Air Bag Jumper Harness</u>
X400	Accessory Cargo Kit Harness to Chassis Harness	—	At the rear of the vehicle, left corner, underneath, on left frame rail	—	<u>X400 Accessory Cargo Kit Harness to Chassis Harness</u>
X416	Rear Bumper Harness to Rear Clearance Lamps (Left) Jumper Harness (2 Cavities)	DRW except ZW9	At the rear of the vehicle, behind the left side of the rear fascia	<u>Rear Bumper Harness Routing</u>	<u>X416 Rear Bumper Harness to Rear Clearance Lamps Harness</u>
X416	License Lamp Jumper Harness to Rear Clearance Lamps (Left) Jumper Harness (2 Cavities)	DRW with ZW9	At the rear of the vehicle, behind the left side of the rear fascia	<u>Rear Bumper Harness Routing</u>	<u>X416 Rear Bumper Harness to Rear Clearance Lamps Harness</u>
X417	Rear Bumper Harness to Rear Clearance Lamps (Right) Jumper Harness (2 Cavities)	DRW except ZW9	At the rear of the vehicle, behind the left side of the rear fascia	<u>Rear Bumper Harness Routing</u>	<u>X417 Rear Bumper Harness to Rear Clearance Lamps Harness</u>
X417	License Lamp Jumper Harness to Rear Clearance Lamps (Right) Jumper Harness (2 Cavities)	DRW with ZW9	At the rear of the vehicle, behind the left side of the rear fascia	<u>Rear Bumper Harness Routing</u>	<u>X417 Rear Bumper Harness to Rear Clearance Lamps Harness</u>
X451	Chassis Harness to CNG Rear Harness (2 Cavities)	LC8	Under the rear of the vehicle, above the spare tire	—	—
X500	Driver Door Harness to Body Harness (41 Cavities)	—	In the passenger compartment, behind the left side of the instrument panel	<ul style="list-style-type: none"> • <u>Driver Door Harness Routing</u> • <u>Doors (Regular Cab with Manual Windows) Harness Routing</u> 	<u>X500 Driver Door Harness to Body Harness</u>
X505	Driver Door Harness To Driver Door Trim Harness (48 Cavities)	A31	In the driver door, behind the driver door panel	<u>Driver Door Harness Routing</u>	<u>X505 Driver Door Harness to Driver Door Trim Harness</u>
X506	Driver Door Trim Harness to Driver Door Harness (8 Cavities)	without A31	In the driver door, behind the driver door panel	<u>Doors (Regular Cab with Manual Windows) Harness Routing</u>	<u>X506 Driver Door Trim Harness to Driver Door Harness</u>
X510	Outside Rearview Mirror to Driver Door Harness (8 Cavities)	DL3, DL8, DPN or DQS	In the driver door, behind the driver door panel, near the A-pillar	<u>Driver Door Harness Routing</u>	<u>X510 Driver Door Trim Harness to Driver Door Harness</u>
X600	Passenger Door Harness to Body Harness (41 Cavities)	—	In the passenger compartment, behind the right side of the instrument panel	<ul style="list-style-type: none"> • <u>Passenger Door Harness Routing</u> • <u>Passenger Compartment Right Harness Routing</u> • <u>Passenger Compartment Left Harness Routing</u> • <u>Doors (Regular Cab with Manual Windows) Harness Routing</u> 	<u>X600 Passenger Door Harness to Body Harness</u>

X605	Passenger Door Harness to Passenger Door Trim Harness (48 Cavities)	A31	In the passenger door, behind the passenger door panel	<u>Passenger Door Harness Routing</u>	<u>X605 Passenger Door Harness to Passenger Door Trim Harness</u>
X606	Passenger Door Trim Harness to Passenger Door Harness (8 Cavities)	without A31	In the passenger door, behind the passenger door panel	<u>Doors (Regular Cab with Manual Windows) Harness Routing</u>	<u>X606 Passenger Door Trim Harness to Passenger Door Harness</u>
X610	Outside Rearview Mirror to Passenger Door Harness (18 Cavities)	DL3, DL8, DPN or DQS	In the passenger door, behind the passenger door panel, near the A-pillar	<u>Passenger Door Harness Routing</u>	<u>X610 Passenger Door Trim Harness to Passenger Door Harness</u>
X611	Outside Rearview Mirror to Passenger Door Harness (2 Cavities)	L5P with DE2 or DF2	In the passenger door, behind the passenger door panel, near the A-pillar	—	<u>X611 Outside Rear View Mirror Harness to Passenger Door Harness</u>
X700	Left Rear Door Harness to Body Harness (20 Cavities)	Extended or Crew Cab	In the passenger compartment, behind the left B-pillar, near the middle	<ul style="list-style-type: none"> • <u>Rear Doors Harness Routing</u> • <u>Passenger Compartment Left Harness Routing</u> 	<u>X700 Left Rear Door Harness to Body Harness</u>
X800	Right Rear Door Harness to Body Harness (20 Cavities)	Extended or Crew Cab	In the passenger compartment, behind the right B-pillar, near the middle	<ul style="list-style-type: none"> • <u>Passenger Compartment Right Harness Routing</u> • <u>Rear Doors Harness Routing</u> 	<u>X800 Right Rear Door Harness to Body Harness</u>
X900	Tailgate Harness to Chassis Harness (8 Cavities)	—	On the vehicle underbody, behind rear bumper, near the left frame rail	—	<u>X900 Tailgate Harness to Chassis Harness</u>
X901	Rear Object Alarm Sensor Harness to Chassis Harness (16 Cavities)	—	On the vehicle underbody, behind rear bumper, near the left frame rail	—	<u>X901 Rear Bumper Harness to Chassis Harness</u>
X950	Chassis Harness to Backup Alarm Jumper (7 Cavities)	8S3 or UY2	Under the rear of the vehicle, above the spare tire	<u>Chassis Jumper Harness Routing (UY2)</u>	<ul style="list-style-type: none"> • <u>X950 Chassis Harness to Backup Alarm Harness (8S3)</u> • <u>X950 Chassis Harness to Camper Harness (UY2)</u>
G100	Auxiliary Battery Cable	K4B or K4D	In the engine compartment, at left front of engine	<u>G100, G110 and G120 (L96 or LC8)</u>	—
G101	Forward Lamp Harness	—	Under the vehicle, mounted to the left frame rail, in front of the lower left radiator support	<u>G101</u>	—
G102	Forward Lamp Harness	—	Under the vehicle, mounted to the right frame rail, in front of the lower right radiator support	<u>G102</u>	—
G103	Battery Cable	LV1, LV3, L96 or LC8	In the engine compartment, at right rear of engine	<ul style="list-style-type: none"> • <u>G103 (L96 or LC8)</u> • <u>G103 and G125 (L83/L86/L8B)</u> • <u>G103, G130 and G140 (LV3)</u> 	—
G103	Battery Cable	L83 or L86	In the engine compartment, at right side of engine	<ul style="list-style-type: none"> • <u>G103 (L96 or LC8)</u> • <u>G103 and G125 (L83/L86/L8B)</u> • <u>G103, G130 and G140 (LV3)</u> 	—
G109	Engine Jumper Harness	L5P	In the engine compartment, at left front of engine, rear of G110, near oil pan	<u>G109 and G110 (L5P)</u>	—

G110	Engine Harness	1500	In the engine compartment, on left front middle of the engine block	<ul style="list-style-type: none"> ● <u>G110 (1500)</u> ● <u>G109 and G110 (L5P)</u> ● <u>G100, G110 and G120 (L96 or LC8)</u> 	—
G110	Engine Harness	L96 or LC8	In the engine compartment, on left front rear of power steering pump	<ul style="list-style-type: none"> ● <u>G110 (1500)</u> ● <u>G109 and G110 (L5P)</u> ● <u>G100, G110 and G120 (L96 or LC8)</u> 	—
G110	Auxiliary Battery and Engine Harnesses	L5P	In the engine compartment, at left front of engine, forward of G109, near oil pan	<ul style="list-style-type: none"> ● <u>G110 (1500)</u> ● <u>G109 and G110 (L5P)</u> ● <u>G100, G110 and G120 (L96 or LC8)</u> 	—
G111	CNG Main Harness	LC8	In the engine compartment, at the left rear, bolted to the left side of the bulkhead	—	—
G120	Engine Harness	L96 or LC8	In the engine compartment, at the right front of engine	<ul style="list-style-type: none"> ● <u>G100, G110 and G120 (L96 or LC8)</u> ● <u>G120 and G122 (L5P)</u> 	—
G120	Battery and Engine Chassis Harnesses	L5P	In the engine compartment, on right front of engine, near oil pan, below G122	<ul style="list-style-type: none"> ● <u>G100, G110 and G120 (L96 or LC8)</u> ● <u>G120 and G122 (L5P)</u> 	—
G121	Chassis Harness	—	Under the vehicle at driver door on body mount frame post	<u>G121</u>	—
G122	Engine Harness	L5P	In the engine compartment, on right front of engine, near oil pan, above G120	<u>G120 and G122 (L5P)</u>	—
G123	Steering Wheel Jumper Harness	NV8	In the passenger compartment, on the steering column near the base of the shifter	—	—
G125	Power Steering Jumper	1500	In the engine compartment, on the right side front of the engine, below the generator	<ul style="list-style-type: none"> ● <u>G125 (LV3)</u> ● <u>G103 and G125 (L83/L86/L8B)</u> 	—
G130	Engine Harness	1500	In the engine compartment, on the left rear corner of the engine	<ul style="list-style-type: none"> ● <u>G130 and G140 (L83/L86/L8B)</u> ● <u>G103, G130 and G140 (LV3)</u> 	—
G140	Engine Harness	1500	In the engine compartment, on the top right rear of the engine	<ul style="list-style-type: none"> ● <u>G130 and G140 (L83/L86/L8B)</u> ● <u>G103, G130 and G140 (LV3)</u> 	—
G141	Battery Cable	—	Under the vehicle, at right front cab mounting ear of the frame	<u>G141</u>	—
G201	Steering Column Harness	—	In the passenger compartment, on the steering column assembly	—	—
G210	Instrument Panel Harness	—	In the passenger compartment, under the right front instrument panel defroster deflector, near the right A-pillar	<u>G210 and G218</u>	—
G218	Instrument Panel Harness	—	In the passenger compartment, under the left front instrument panel defroster deflector, near the left A-pillar	<u>G210 and G218</u>	—

G311	Body Harness	—	In the passenger compartment, on the left side B-pillar behind the trim panel	<u>G311 and G325</u>	—
G312	Body Harness	—	In the passenger compartment, on the right side B-pillar behind the trim panel	<u>G312 and G327</u>	—
G325	Body Harness	—	In the passenger compartment, under the left side of the front passenger seat	<u>G311 and G325</u>	—
G327	Body Harness	—	In the passenger compartment, under the right side of the front passenger seat	<u>G312 and G327</u>	—
G380	Rear Defogger Grid	—	In the passenger compartment, below the driver side of the rear window, mounted to the rear wall of the cab, behind the trim	—	—
G400	Chassis Harness	—	Under the vehicle, mounted to the right Rear of chassis	<u>G400</u>	—
G407	High Voltage Battery Monitoring	HP5	Under the center console, inside the Hybrid/EV Battery Pack	<u>G407 (HP5)</u>	—
J100	Engine Harness	HP5	In the engine compartment, at the top of the engine assembly	<u>Engine Harness Routing - Left Front (L8B)</u>	—
J101	Forward Lamp Harness	—	At the front of the vehicle, behind the front bumper	<u>Front Bumper Harness Routing</u>	—
J102	Engine Harness	—	In the engine compartment, in the engine harness	—	—
J103	Engine Harness	—	In the engine compartment, in the engine harness	—	—
J104	Front Bumper Harness	—	At the front of the vehicle, behind the front bumper	—	—
J105	Front Bumper Harness	—	At the front of the vehicle, behind the front bumper	<u>Front Bumper Harness Routing</u>	—
J106	Ignition Coil (Even) Harness	—	In the engine compartment, at the top of the engine assembly	—	—
J107	Ignition Coil (Odd) Harness	—	In the engine compartment, at the top of the engine assembly	<u>Front Bumper Harness Routing</u>	—
J109	Ignition Coil (Odd) Harness	—	In the engine compartment, at the top of the engine assembly	—	—
J110	Headlamp Harness	—	At the front of the vehicle, inside the headlamp assembly	—	—
J111	Headlamp Harness	—	At the front of the vehicle, inside the headlamp assembly	—	—
J112	Ignition Coil (Even) Harness	—	In the engine compartment, at the top of the engine assembly	—	—
J113	Engine Harness	L5P	In the engine compartment, in the engine harness	<u>Engine Compartment Left Harness Routing</u>	—
J114	Forward Lamp Harness	—	In the engine compartment, near the lower left side of the lower radiator support	<u>Forward Lamp Harness Routing - Left Engine Compartment (HP5)</u>	—
J115	Forward Lamp Harness	—	In the engine compartment, near the lower left side of the lower radiator support	<u>Forward Lamp Harness Routing - Left Engine Compartment (HP5)</u>	—

J119	Forward Lamp Harness	—	In the engine compartment, near the lower left side of the lower radiator support	<u>Forward Lamp Harness Routing - Left Engine Compartment (HP5)</u>	—
J120	Headlamp Harness	—	At the front of the vehicle, inside the headlamp assembly	—	—
J121	Headlamp Harness	—	At the front of the vehicle, inside the headlamp assembly	—	—
J122	Headlamp Harness	—	At the front of the vehicle, inside the headlamp assembly	—	—
J123	Engine Harness	—	On the engine, rear of the intake manifold, near the left center	—	—
J124	Engine Harness	—	In the engine compartment, in the engine harness	<ul style="list-style-type: none"> • <u>Engine Harness Routing - Left Front (L8B)</u> • <u>Engine Compartment Left Harness Routing</u> 	—
J125	Engine Harness	—	In the engine compartment, near the lower right side of the lower radiator support	<ul style="list-style-type: none"> • <u>Engine Compartment Right Harness Routing</u> • <u>Forward Lamp Harness Routing - Right Engine Compartment (HP5)</u> • <u>Engine Harness Routing - Left Front (L8B)</u> 	—
J126	Engine Harness	—	In the engine compartment, in the engine harness	<ul style="list-style-type: none"> • <u>Engine Harness Routing - Left Front (L8B)</u> • <u>Engine Compartment Left Harness Routing</u> 	—
J128	Engine Harness	HP5	In the engine compartment, in the engine harness	<u>Engine Harness Routing - Left Front (L8B)</u>	—
J130	Aero Shutter Jumper Harness	—	In the engine compartment, near the center of the lower radiator support	<u>Forward Lamp Harness Routing - Left Engine Compartment (HP5)</u>	—
J133	Chassis Harness	—	In the engine compartment, near the underhood fuse block	—	—
J142	Transmission Harness	MW7	Under the vehicle, inside the transmission assembly	—	—
J143	Transmission Harness	MW7	Under the vehicle, inside the transmission assembly	—	—
J144	Transmission Harness	MW7	Under the vehicle, inside the transmission assembly	—	—
J148	Engine Harness	—	In the engine compartment, in the engine harness	—	—
J149	Engine Harness	—	In the engine compartment, in the engine harness	—	—
J161	Engine Harness	—	In the engine compartment, in the engine harness	<u>Engine Harness Routing - Left Front (L8B)</u>	—
J162	Engine Harness	—	In the engine compartment, in the engine harness	<u>Engine Harness Routing - Right Rear (L8B)</u>	—

J163	Engine Harness	—	In the engine compartment, in the engine harness	<u>Engine Harness Routing - Left Front (L8B)</u>	—
J165	Engine Harness	—	On the engine, rear of the intake manifold, near the left center	<ul style="list-style-type: none"> • <u>Engine Harness Routing - Left Front (L8B)</u> • <u>Engine Compartment Left Harness Routing</u> 	—
J166	Engine Harness	—	In the engine compartment, near the breakout for the even fuel injectors	<u>Engine Harness Routing - Right Rear (L8B)</u>	—
J167	Engine Harness	—	In the engine compartment, near the breakout for the odd fuel injectors	<u>Engine Harness Routing - Right Rear (L8B)</u>	—
J168	Chassis Harness	L5P	In the engine compartment, near the breakout for the left front wheel speed sensor	—	—
J169	Chassis Harness	L5P	In the engine compartment, near the breakout for the left front wheel speed sensor	—	—
J175	Transmission Harness	M5U	Under the vehicle, inside the transmission assembly	—	—
J176	Transmission Harness	M5U	Under the vehicle, inside the transmission assembly	—	—
J177	Transmission Harness	M5U	Under the vehicle, inside the transmission assembly	—	—
J178	Engine Harness	M5U/M5X	In the engine compartment, in the engine harness	<u>Engine Harness Routing - Right Rear (L8B)</u>	—
J179	Engine Harness	—	In the engine compartment, in the engine harness	<u>Engine Harness Routing - Right Rear (L8B)</u>	—
J183	CNG Rear Harness	LC8	In the engine compartment, in the CNG harness	—	—
J184	CNG Rear Harness	LC8	In the engine compartment, in the CNG harness	—	—
J186	CNG Main Harness	LC8	In the engine compartment, in the CNG harness	—	—
J189	CNG Main Harness	LC8	In the engine compartment, in the CNG harness	—	—
J191	Chassis Harness	—	In the engine compartment, near the breakout for the left front wheel speed sensor	<u>Chassis Harness Routing</u>	—
J192	CNG Main Harness	LC8	In the engine compartment, in the CNG harness	—	—
J193	CNG Main Harness	LC8	In the engine compartment, in the CNG harness	—	—
J194	Engine Jumper Harness	L5P	In the engine compartment, in the engine jumper harness, near X113	—	—
J195	Auxiliary Battery Harness	K4B or K4D	In the engine compartment, in the auxiliary battery harness	—	—
J195	Engine Harness	L5P	In the engine compartment, in the engine harness, between Throttle body and X101	—	—
J196	Engine Harness	L5P	In the engine compartment, in the engine harness, on branch to ECM	—	—

J197	Engine Harness	L5P	In the engine compartment, in the engine harness, on branch to ECM	—	—
J198	Engine Harness	L5P	In the engine compartment, in the engine harness, between GPCM and G122	—	—
J200	Instrument Panel Harness	—	In the passenger compartment, behind the left side of the instrument panel	—	—
J201	Instrument Panel Harness	—	In the passenger compartment, behind the left side of the instrument panel	<u>Passenger Compartment Left Harness Routing</u>	—
J202	Instrument Panel Harness	—	In the passenger compartment, left side of the instrument panel	<u>Passenger Compartment Left Harness Routing</u>	—
J203	Instrument Panel Harness	—	In the passenger compartment, behind the instrument panel	—	—
J204	Steering Column Harness	—	In the passenger compartment, on the steering column assembly	—	—
J205	Instrument Panel Harness	—	In the passenger compartment, behind the left side of the instrument panel	—	—
J208	Instrument Panel Harness	—	In the passenger compartment, behind the instrument panel	—	—
J209	Instrument Panel Harness	—	In the passenger compartment, behind the instrument panel	—	—
J210	Instrument Panel Harness	—	In the passenger compartment, behind the left side of the instrument panel	—	—
J211	Instrument Panel Harness	—	In the passenger compartment, behind the left side of the instrument panel	—	—
J212	Instrument Panel Harness	—	In the passenger compartment, behind the left side of the instrument panel	—	—
J213	Instrument Panel Harness	—	In the passenger compartment, behind the instrument panel	—	—
J215	Instrument Panel Harness	—	In the passenger compartment, behind the instrument panel	—	—
J216	HVAC Harness	—	In the passenger compartment, behind the glove box, in the HVAC harness	<u>HVAC Assembly Harness Routing</u>	—
J220	Instrument Panel Harness	—	In the passenger compartment, behind the center of the instrument panel, below the radio	—	—
J240	Instrument Panel Harness	—	In the passenger compartment, behind the left side of the instrument panel	—	—
J241	Instrument Panel Harness	—	In the passenger compartment, behind the right side of the instrument panel	—	—
J242	Instrument Panel Harness	—	In the passenger compartment, behind the right side of the instrument panel	—	—
J245	Instrument Panel Harness	—	In the passenger compartment, behind the center of the instrument panel, to the left of the radio	—	—

J249	Instrument Panel Harness	—	In the passenger compartment, behind the center of the instrument panel, below the radio	—	—
J250	Instrument Panel Harness	—	In the passenger compartment, behind the center of the instrument panel, to the right of the radio	—	—
J255	HVAC Harness	—	In the passenger compartment, behind the glove box, in the HVAC harness	<u>HVAC Assembly Harness Routing</u>	—
J257	HVAC Harness	—	In the passenger compartment, behind the glove box, in the HVAC harness	<u>HVAC Assembly Harness Routing</u>	—
J258	HVAC Harness	—	In the passenger compartment, behind the glove box, in the HVAC harness	<u>HVAC Assembly Harness Routing</u>	—
J260	Instrument Panel Harness	—	In the passenger compartment, under the right front sill plate	<u>Passenger Compartment Right Harness Routing</u>	—
J265	Instrument Panel Harness	E29	In the passenger compartment, behind the left side of the instrument panel	—	—
J266	Instrument Panel Harness	IOB	In the passenger compartment, behind the left side of the instrument panel	—	—
J284	Steering Column Harness	—	In the passenger compartment, on the steering column assembly	—	—
J285	Steering Wheel Harness	—	In the passenger compartment, behind the driver air bag	—	—
J292	Headliner Harness	—	In the passenger compartment, above the headliner	—	—
J295	Steering Wheel Harness	—	In the passenger compartment, behind the driver air bag	—	—
J298	Instrument Panel Harness	—	In the passenger compartment, right side of the instrument panel	<u>Passenger Compartment Right Harness Routing</u>	—
J299	Instrument Panel Harness	—	In the passenger compartment, behind the instrument panel, behind the center of the instrument cluster	<u>Passenger Compartment Right Harness Routing</u>	—
J300	Chassis Harness	—	Underneath the vehicle, along the outside of the left frame rail, near the driver door	—	—
J302	Body Harness	—	In the passenger compartment, under the left side of the instrument panel	—	—
J303	Overhead Console Harness	—	In the passenger compartment, above the headliner	—	—
J305	Instrument Panel Harness	—	In the passenger compartment, under the left front sill plate	<u>Passenger Compartment Left Harness Routing</u>	—
J306	Body Harness	—	In the passenger compartment, under the left front sill plate	<u>Passenger Compartment Left Harness Routing</u>	—
J307	Body Harness	—	In the passenger compartment, under the left front sill plate	<u>Passenger Compartment Left Harness Routing</u>	—
J308	Body Harness	—	In the passenger compartment, under the left front sill plate	<u>Passenger Compartment Left Harness Routing</u>	—

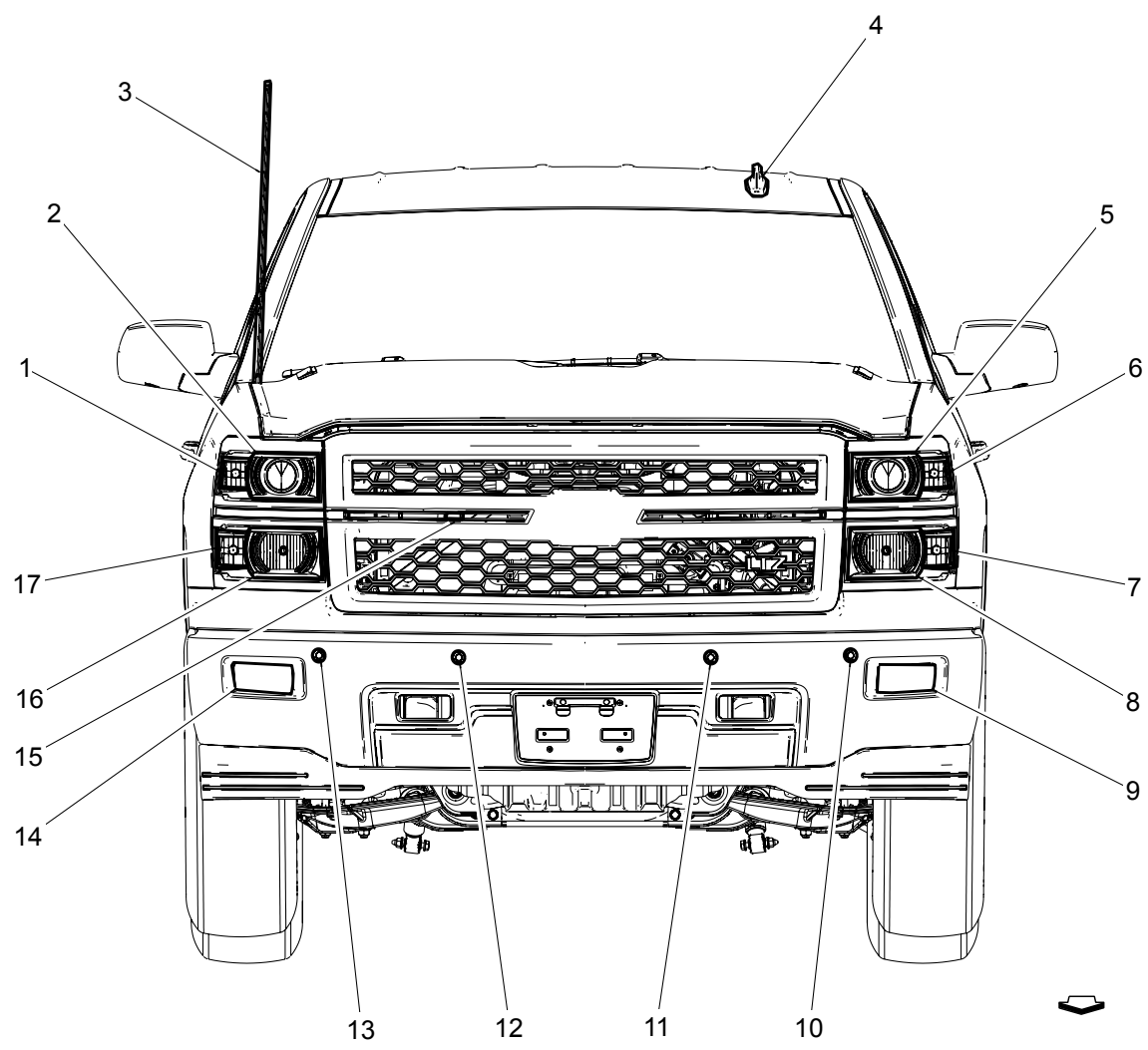
J309	Body Harness	—	In the passenger compartment, under the left front sill plate	<u>Passenger Compartment Left Harness Routing</u>	—
J310	Headliner Harness	Extended or Crew Cab or Standard Cab with DH6	In the passenger compartment, in the headliner, near the left B-pillar	—	—
J311	Driver Seat Cushion Harness	—	In the passenger compartment, under the driver seat	—	—
J312	Headliner Harness	Extended or Crew Cab	In the passenger compartment, in the headliner, near the left B-pillar	—	—
J313	Driver Seat Cushion Harness	—	In the passenger compartment, in the headliner, near the C-pillar	<ul style="list-style-type: none"> • <u>Back of Driver Seat Harness Routing</u> • <u>Bottom of Driver Seat Harness Routing</u> 	—
J314	Driver Seat Cushion Harness	—	In the passenger compartment, under the driver seat	<u>Bottom of Driver Seat Harness Routing</u>	—
J315	Driver Seat Cushion Harness	—	In the passenger compartment, under the driver seat	<u>Bottom of Driver Seat Harness Routing</u>	—
J316	Driver Seat Cushion Harness	—	In the passenger compartment, under the driver seat	<u>Bottom of Driver Seat Harness Routing</u>	—
J317	Headliner Harness	—	In the passenger compartment, above the headliner	<u>Bottom of Driver Seat Harness Routing</u>	—
J318	Driver Seat Cushion Harness	—	In the passenger compartment, under the driver seat	—	—
J323	Passenger Seat Cushion Harness	—	In the passenger compartment, under the passenger seat cushion	<u>Bottom of Passenger Seat Harness Routing</u>	—
J324	Passenger Seat Cushion Harness	—	In the passenger compartment, under the passenger seat cushion	<u>Bottom of Passenger Seat Harness Routing</u>	—
J326	Passenger Seat Cushion Harness	—	In the passenger compartment, under the passenger seat cushion	<u>Bottom of Passenger Seat Harness Routing</u>	—
J327	Passenger Seat Cushion Harness	—	In the passenger compartment, under the passenger seat cushion	<u>Bottom of Passenger Seat Harness Routing</u>	—
J328	Passenger Seat Back Harness	—	In the passenger compartment, in the passenger seat back	—	—
J331	Body Harness	—	In the passenger compartment, under the left rear of the left front seat	<u>Passenger Compartment Left Harness Routing</u>	—
J332	Headliner Harness	—	In the passenger compartment, in the headliner, near the driver sunshade	—	—
J333	Overhead Console Harness	—	In the passenger compartment, above the headliner	—	—
J350	Body Harness	—	In the passenger compartment, under the driver seat	<u>Passenger Compartment Right Harness Routing</u>	—
J355	Chassis Harness	—	Under the vehicle, along driver side of the frame, under the driver door	<ul style="list-style-type: none"> • <u>Chassis Harness Routing</u> • <u>Chassis Cab Harness Routing</u> 	—

J356	Chassis Harness	—	Under the vehicle, along driver side of the frame, under the driver door	<ul style="list-style-type: none"> ● <u>Chassis Harness Routing</u> ● <u>Chassis Cab Harness Routing</u> 	—
J358	Floor Console	—	In the passenger compartment, behind the lower center of the instrument panel	<u>Floor Console Harness Routing</u>	—
J360	Body Harness	—	In the passenger compartment, behind the left front kick panel, at the base of the A-pillar	<u>Passenger Compartment Right Harness Routing</u>	—
J361	Body Harness	—	In the passenger compartment, under the left rear of the center console	<u>Passenger Compartment Left Harness Routing</u>	—
J362	Body Harness	—	In the passenger compartment, below the passenger door sill plate	<u>Passenger Compartment Right Harness Routing</u>	—
J365	Body Harness	—	In the passenger compartment, under the right front sill plate	<u>Passenger Compartment Right Harness Routing</u>	—
J367	Body Harness	—	In the passenger compartment, under the right front sil plate	<ul style="list-style-type: none"> ● <u>Passenger Compartment Right Harness Routing</u> ● <u>Passenger Compartment Right Harness Routing</u> 	—
J370	Body Harness	—	In the passenger compartment, near the base of the left B-pillar	—	—
J372	Body Harness	—	In the passenger compartment, under the passenger seat	<u>Passenger Compartment Right Harness Routing</u>	—
J375	Chassis Harness	—	Under the vehicle, on the rear of the left frame rail	<ul style="list-style-type: none"> ● <u>Chassis Harness Routing</u> ● <u>Chassis Cab Harness Routing</u> 	—
J379	Body Harness	—	In the passenger compartment, under the rear of the center console	<u>Passenger Compartment Left Harness Routing</u>	—
J380	Body Harness	—	In the passenger compartment, under the rear of the center console	<u>Passenger Compartment Left Harness Routing</u>	—
J382	Body Harness	—	In the passenger compartment, under the left rear of the center console	<u>Passenger Compartment Left Harness Routing</u>	—
J383	Body Harness	—	In the passenger compartment, behind the left front kick panel, at the base of the A-pillar	<u>Passenger Compartment Left Harness Routing</u>	—
J384	Body Harness	—	In the passenger compartment, under the left rear of the center console	<u>Passenger Compartment Left Harness Routing</u>	—
J395	Headliner Harness	—	In the passenger compartment, above the headliner	—	—
J411	Clearance Lamp Jumper	—	At the rear of the vehicle, under the bed	—	—
J421	Clearance Lamp Jumper	—	At the rear of the vehicle, under the bed	—	—
J449	Chassis Harness	JL1 or Z85	Underside of the vehicle, left frame rail, at rear of vehicle, forward of break-out for the left rear speed sensor	—	—
J450	Chassis Harness	—	Under the rear of the vehicle, between the frame rails, above the spare tire	<ul style="list-style-type: none"> ● <u>Chassis Harness Routing</u> ● <u>Chassis Cab Harness Routing</u> 	—

J451	Chassis Harness	—	Under the rear of the vehicle, at the inside of the frame rail near the spare tire	<ul style="list-style-type: none"> • <u>Chassis Cab Harness Routing</u> • <u>Chassis Harness Routing</u> 	—
J490	Rear Bumper Harness	—	In the rear bumper, near the upper left center of the bumper	<u>Rear Bumper Harness Routing</u>	—
J491	Cargo Lamp Jumper	—	At the rear of the vehicle, under the bed	—	—
J495	Rear Bumper Harness	—	In the rear bumper, near the upper left center of the bumper	<u>Rear Bumper Harness Routing</u>	—
J505	Driver Door Trim Harness	—	Behind the driver door trim panel	—	—
J515	Driver Door Harness	—	In the driver door, behind the trim panel, near the front window track	<ul style="list-style-type: none"> • <u>Doors (Regular Cab with Manual Windows) Harness Routing</u> • <u>Driver Door Harness Routing</u> 	—
J519	Driver Door Harness	—	In the driver door, near X505 connector	<u>Driver Door Harness Routing</u>	—
J550	Driver Door Harness	—	In the driver door, near the front window track	<u>Driver Door Harness Routing</u>	—
J615	Passenger Door Harness	—	In the passenger door, behind the trim panel, near the front window track	<ul style="list-style-type: none"> • <u>Passenger Door Harness Routing</u> • <u>Doors (Regular Cab with Manual Windows) Harness Routing</u> 	—
J715	Left Rear Door Harness	—	In the left rear door, behind the trim panel, near the front window track	<u>Rear Doors Harness Routing</u>	—
J815	Right Rear Door Harness	—	In the right rear door, behind the trim panel, near the front window track	<u>Rear Doors Harness Routing</u>	—
J901	Camper Jumper	—	Under the vehicle, above the spare tire	<u>Chassis Jumper Harness Routing (UY2)</u>	—
J902	Camper Jumper	—	Under the vehicle, above the spare tire	<u>Chassis Jumper Harness Routing (UY2)</u>	—
J903	Camper Jumper	—	Under the vehicle, above the spare tire	<u>Chassis Jumper Harness Routing (UY2)</u>	—
J904	Camper Jumper	—	Under the vehicle, above the spare tire	<u>Chassis Jumper Harness Routing (UY2)</u>	—
J905	Camper Jumper	—	Under the vehicle, above the spare tire	<u>Chassis Jumper Harness Routing (UY2)</u>	—
J906	Camper Jumper	—	Under the vehicle, above the spare tire	<u>Chassis Jumper Harness Routing (UY2)</u>	—
J907	Camper Jumper	—	Under the vehicle, above the spare tire	<u>Chassis Jumper Harness Routing (UY2)</u>	—
JX101	CNG Front Harness	LC8	In the engine compartment, mounted to a bracket that is mounted to the bottom of the battery tray, on the left front of the engine compartment	—	—
JX102	CNG Front Harness	LC8	In the engine compartment, mounted to a bracket that is mounted to the bottom of the battery tray, on the left front of the engine compartment	—	—

JX200	Instrument Panel Harness	—	In the passenger compartment, at the base of the left A-pillar behind the trim panel	—	<u>JX200 Splice Pack</u>
JX300	Body Harness	—	In the passenger compartment, at the base of the right A-pillar behind the trim panel	<u>Passenger Compartment Right Harness Routing</u>	<u>JX300 Splice Pack</u>

Front of Vehicle (Chevrolet) Components

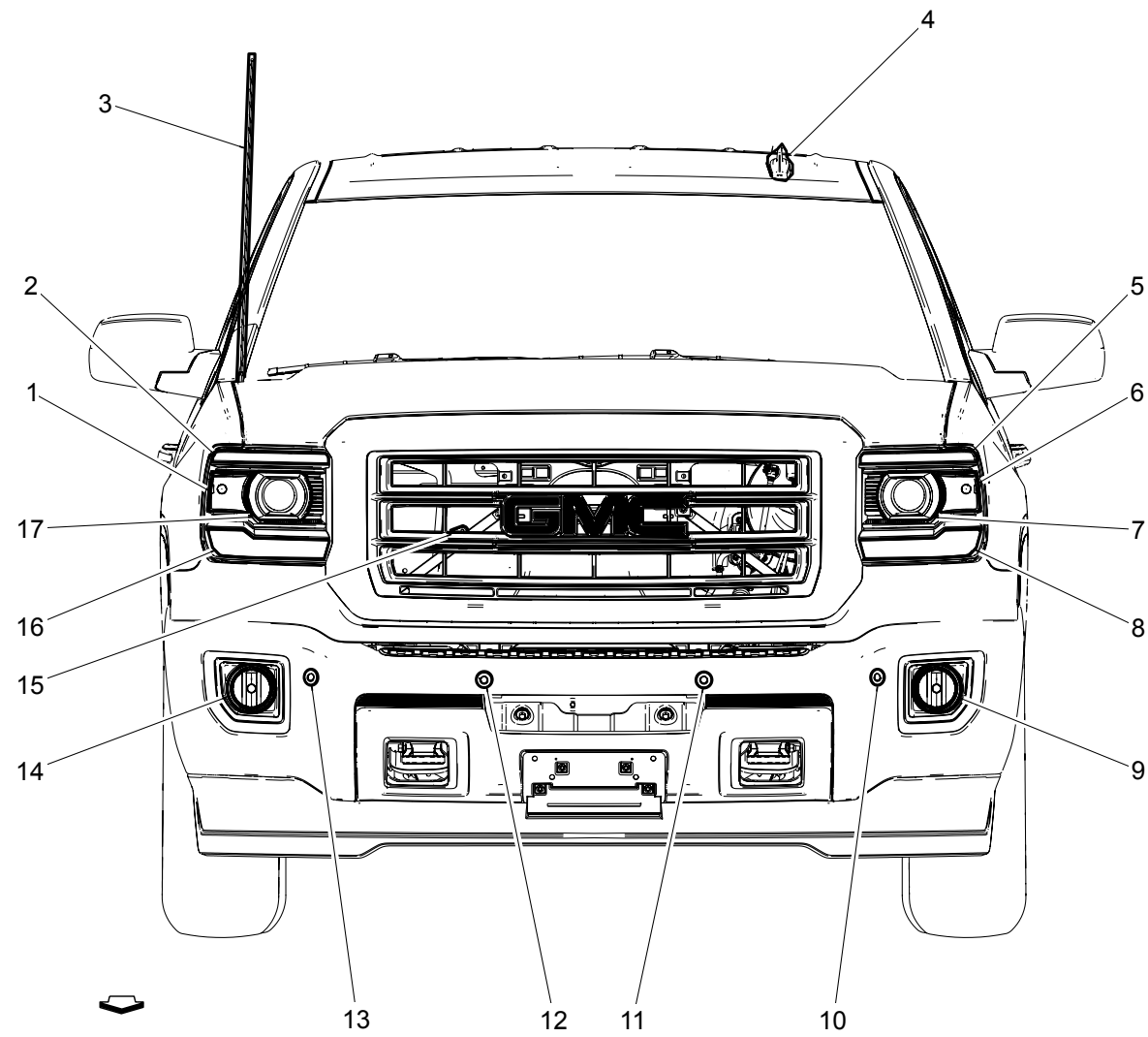


Items

- 1. E4T Park/Turn Signal Lamp - Right Upper (X88)
- 2. E4H Headlamp - Right Low Beam
- 3. T4M Radio Antenna
- 4. T4G Cellular Phone, Navigation, and Digital Radio Antenna
- 5. E4G Headlamp - Left Low Beam
- 6. E4S Park/Turn Signal Lamp - Left Upper (X88)
- 7. E4Q Park/Turn Signal Lamp - Left Lower (X88)
- 8. E4E Headlamp - Left High Beam (X88)
- 9. E29LF Fog Lamp - Left Front (T3U)
- 10. B78A Front Object Sensor - Left Outer (UD5)
- 11. B78C Front Object Sensor - Left Middle (UD5)

- 11. B78C Front Object Sensor - Left Middle (UD5)
- 12. B78D Front Object Sensor - Right Middle (UD5)
- 13. B78B Front Object Sensor - Right Outer (UD5)
- 14. E29RF Fog Lamp - Right Front (T3U)
- 15. B9 Ambient Air Temperature Sensor
- 16. E4F Headlamp - Right High Beam (X88)
- 17. E4R Park/Turn Signal Lamp - Right Lower (X88)

Front of Vehicle (GMC) Components

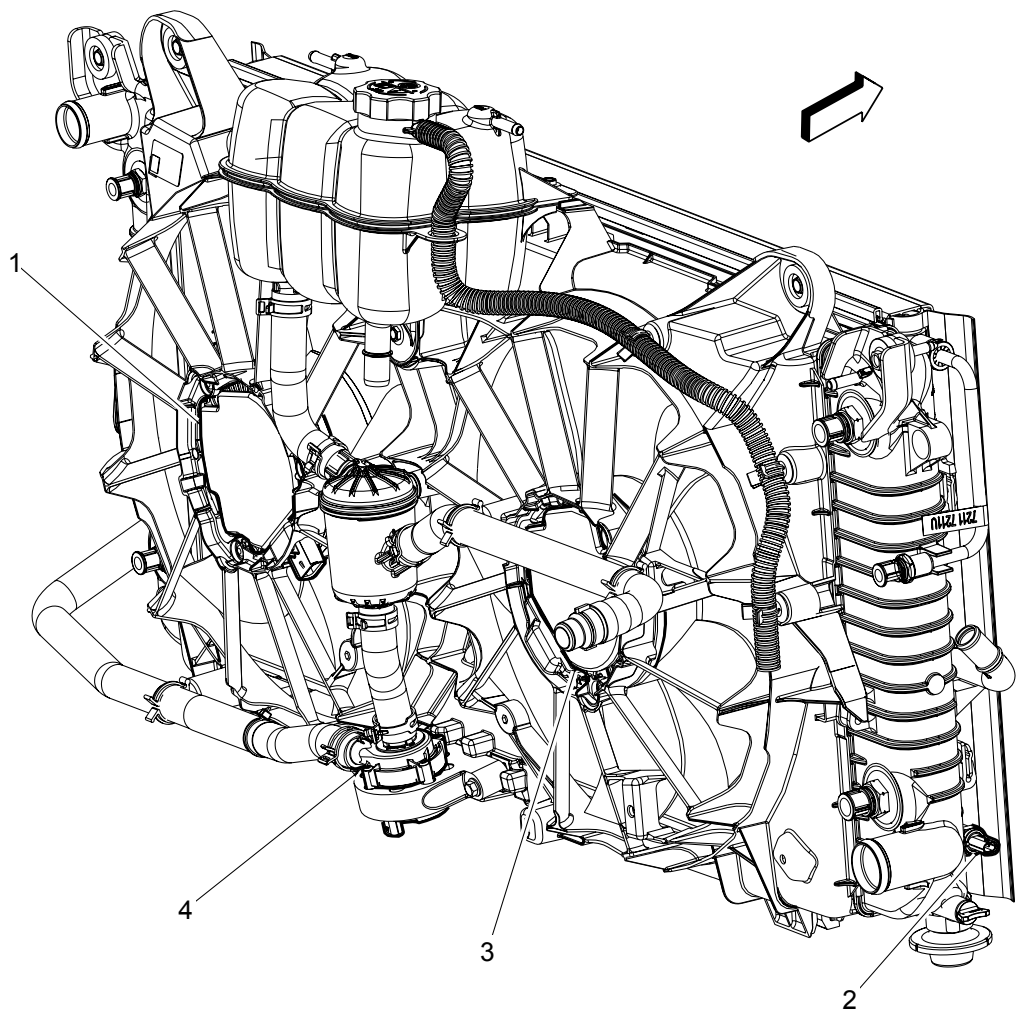


Items

- 1. E4P Park/Turn Signal Lamp - Right (Z88)
- 2. E4J Park Lamp - Left Front (Z88 with SLT)
- 3. T4M Radio Antenna
- 4. T4G Cellular Phone, Navigation, and Digital Radio Antenna
- 5. E4K Park Lamp - Right Front (Z88 with SLT)
- 6. E4G Headlamp - Left Low Beam
- 7. E4N Park/Turn Signal Lamp - Left (Z88)
- 8. E4AD Park/Daytime Running Lamp - Right (Z88 with SLT)
- 9. E29LF Fog Lamp - Left Front (T3U)
- 10. B78A Front Object Sensor - Left Outer (UD5)
- 11. B78C Front Object Sensor - Left Middle (UD5)

- 11. B78C Front Object Sensor - Left Middle (UD5)
- 12. B78D Front Object Sensor - Right Middle (UD5)
- 13. B78B Front Object Sensor - Right Outer (UD5)
- 14. E29RF Fog Lamp - Right Front (T3U)
- 15. B9 Ambient Air Temperature Sensor
- 16. E4AC Park/Daytime Running Lamp - Left (Z88 with SLT)
- 17. E4H Headlamp - Right Low Beam

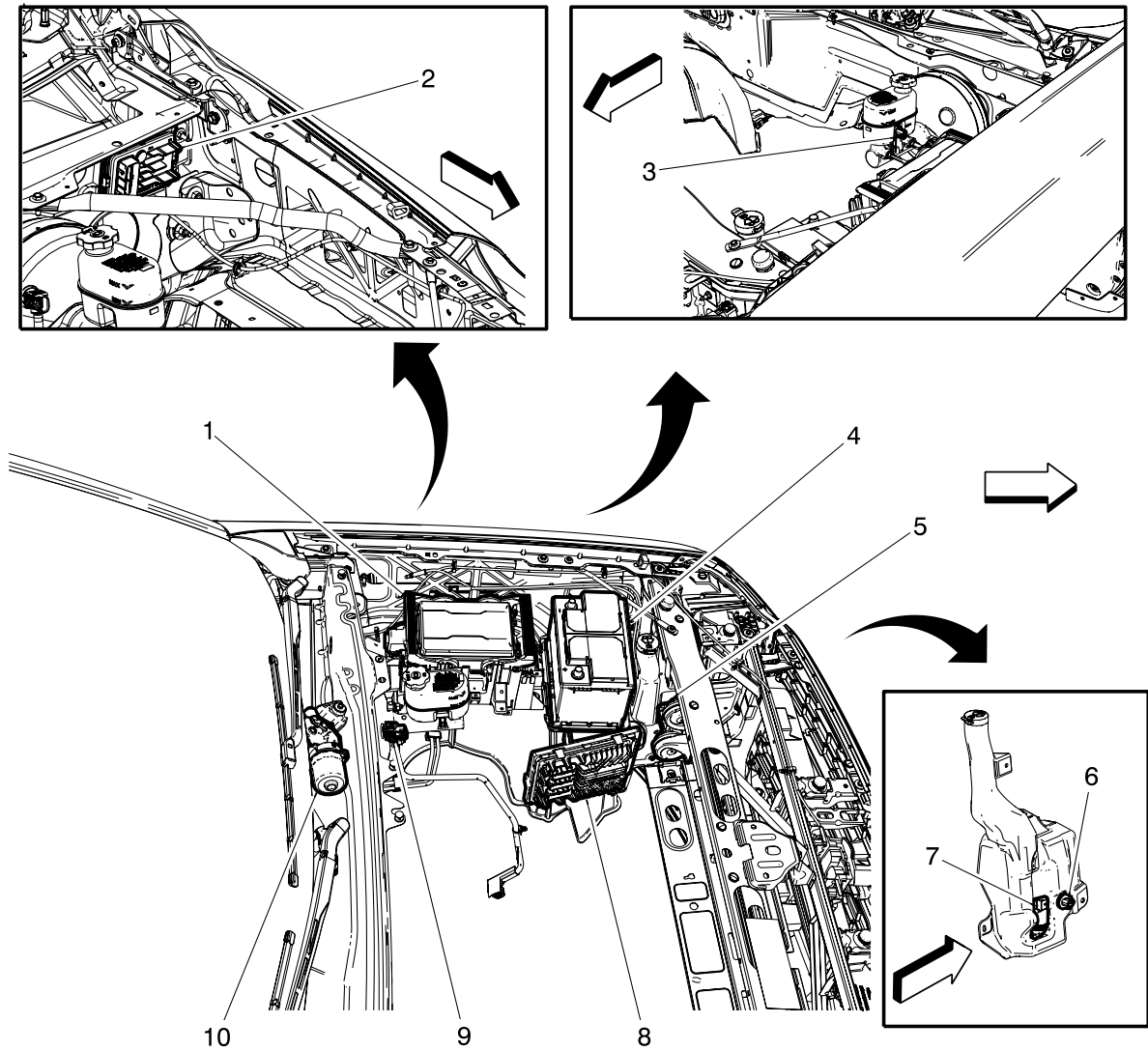
Cooling Fans (HP5)



Items

- 1. G10L Cooling Fan Motor - Left (1500)
- 2. B235 Starter/Generator Coolant Temperature Sensor (HP5)
- 3. G10R Cooling Fan Motor - Right (1500)
- 4. G43 Starter/Generator Coolant Pump (HP5)

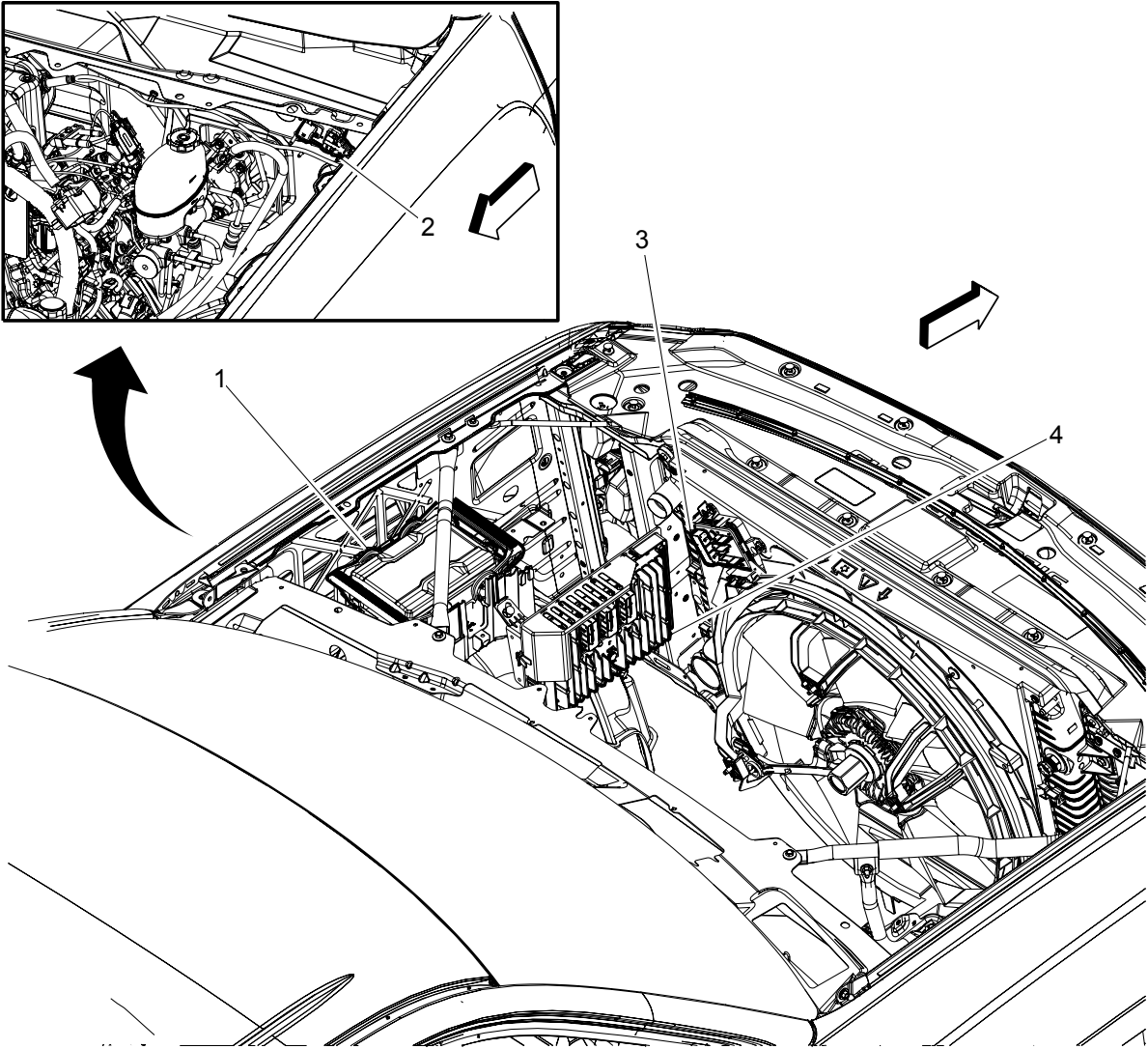
Left Side of Engine Compartment Components (except L5P)



Items

- 1. X50A Fuse Block - Underhood
- 2. K71 Transmission Control Module
- 3. B20 Brake Fluid Level Switch
- 4. C1B Battery - Auxiliary (K4B, K4D or L5P)
- 5. P12 Horn
- 6. B118B Windshield Washer Fluid Level Switch
- 7. G24 Windshield Washer Pump
- 8. K20 Engine Control Module
- 9. B19B Brake Booster Vacuum Sensor
- 10. M75 Windshield Wiper Motor

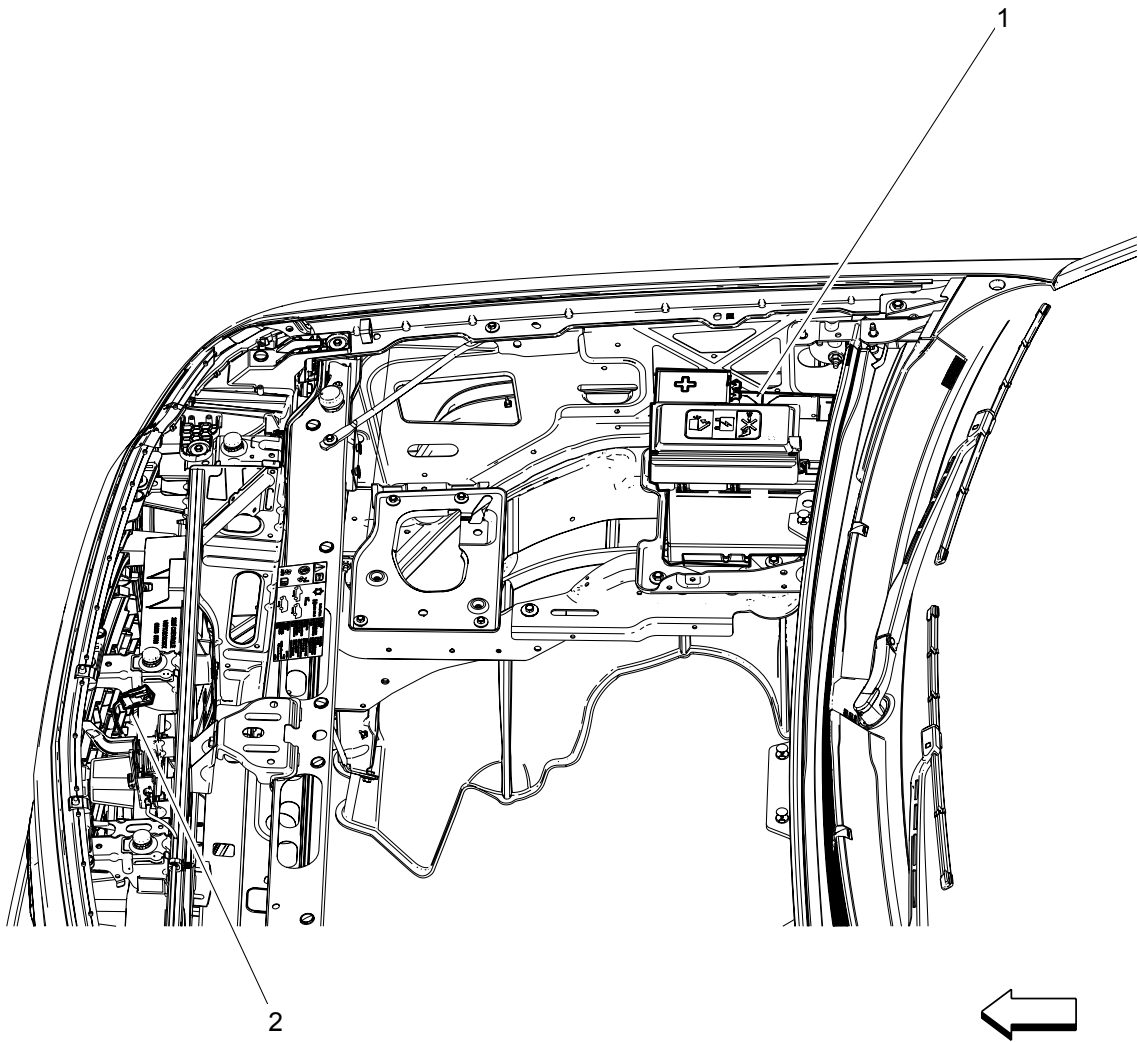
Left Side of Engine Compartment Components (L5P)



Items

- 1. X50A Fuse Block - Underhood
- 2. B195A Nitrogen Oxides Sensor 1 (L5P)
- 3. K71 Transmission Control Module
- 4. K20 Engine Control Module

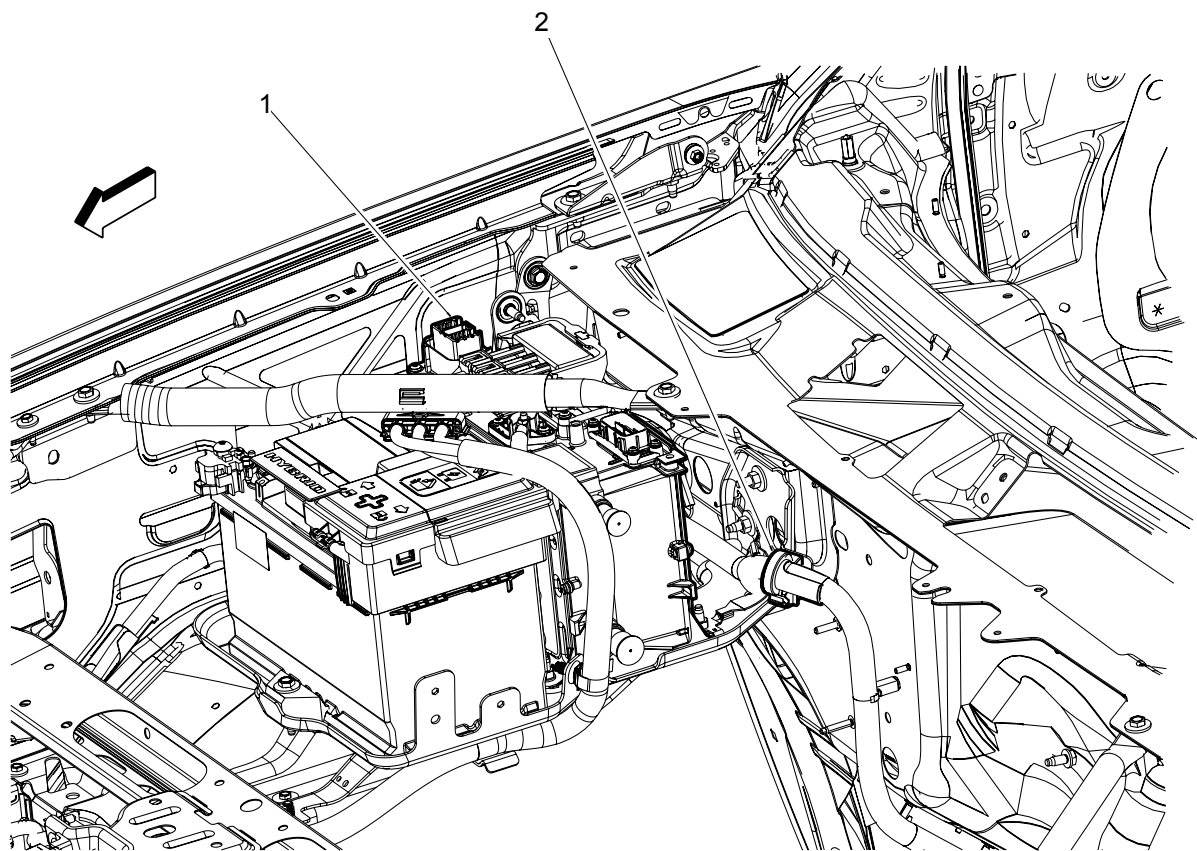
Right Side of Engine Compartment Components



Items

- 1. C1 Battery
- 2. B55 Hood Ajar Switch (BTV/PTO/UTJ/HP5)

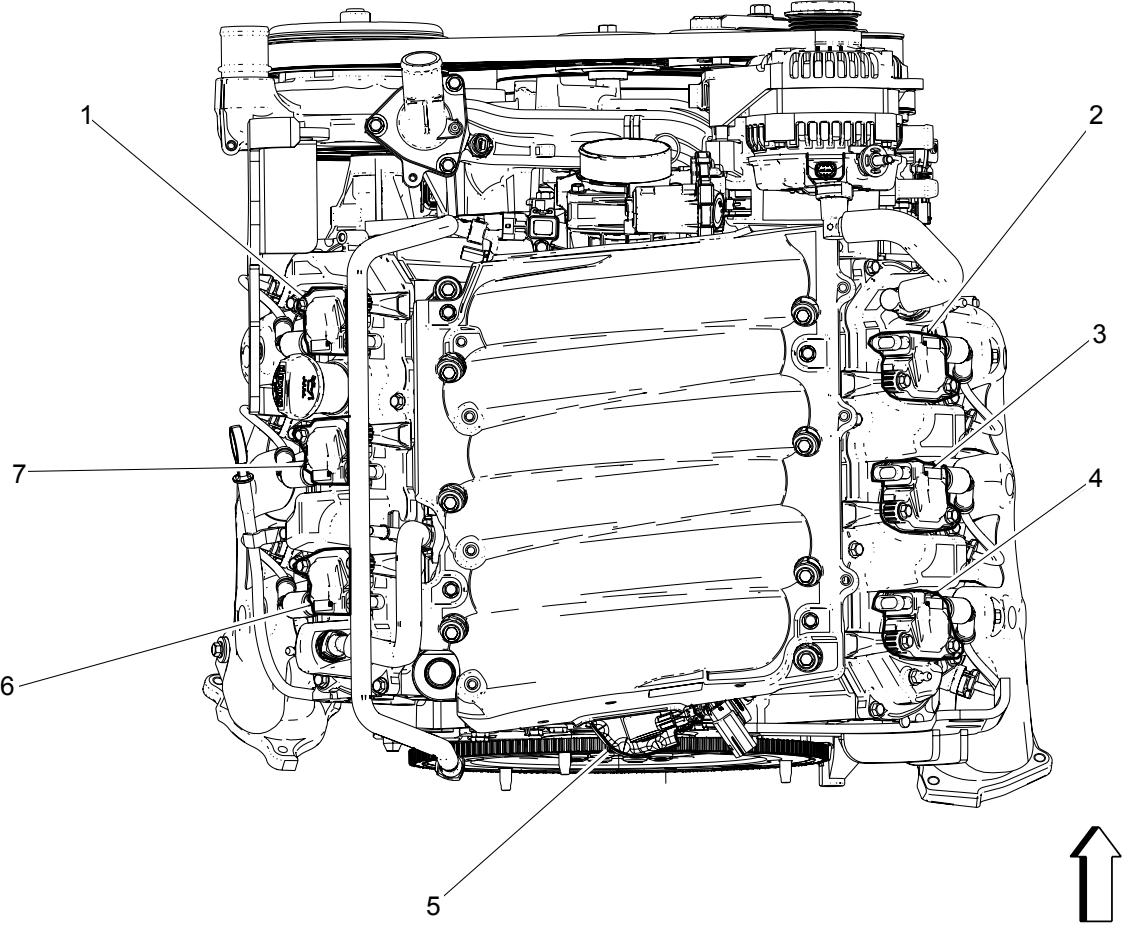
Right Rear of Engine Compartment Components (HP5)



Items

- 1. K59 Starter/Generator Control Module (HP5)
- 2. B18 Battery Current Sensor

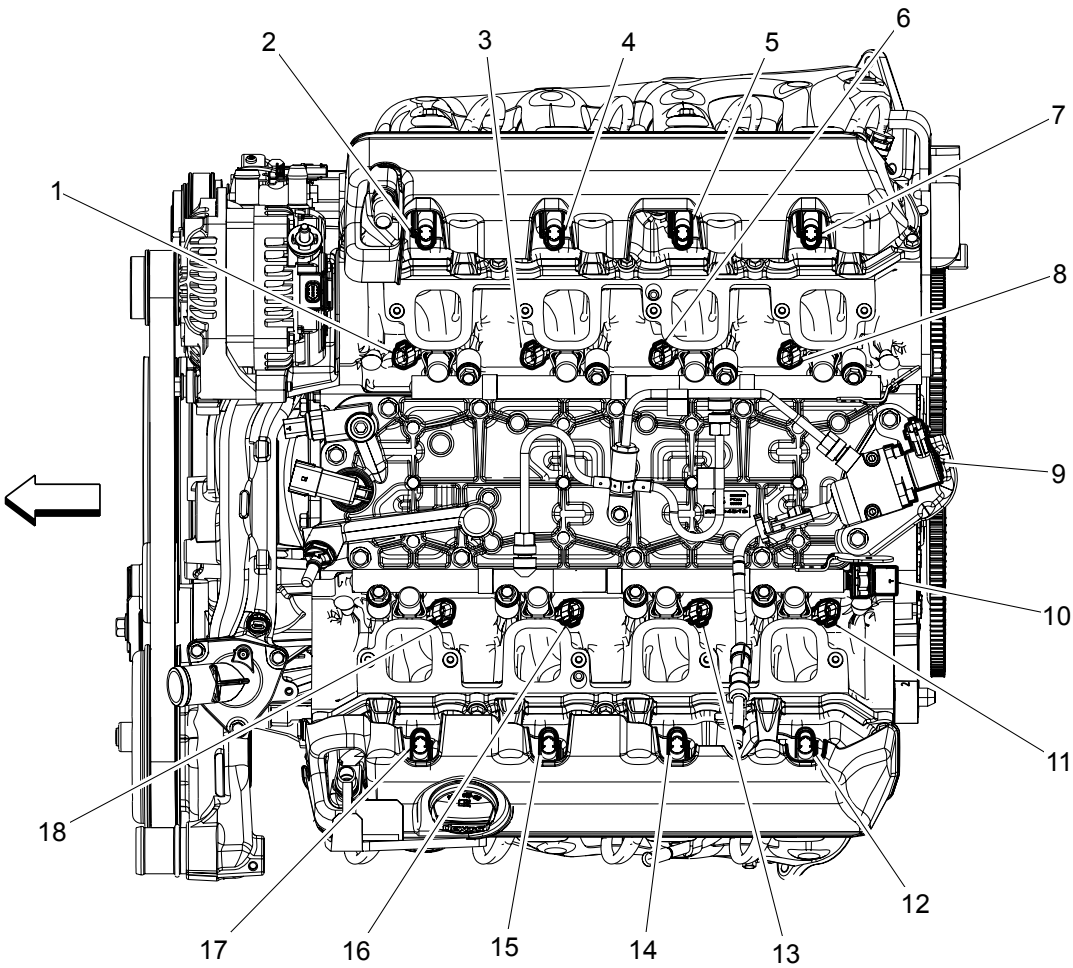
Top of Engine Components (LV3)



Items

- 1. T8A Ignition Coil 1 (except L5P)
- 2. T8B Ignition Coil 2 (except L5P)
- 3. T8D Ignition Coil 4 (except L5P)
- 4. T8F Ignition Coil 6 (except L5P)
- 5. G18 High Pressure Fuel Pump (1500)
- 6. T8E Ignition Coil 5 (except L5P)
- 7. T8C Ignition Coil 3 (except L5P)

Top of Engine Components (L83/L86/L8B)

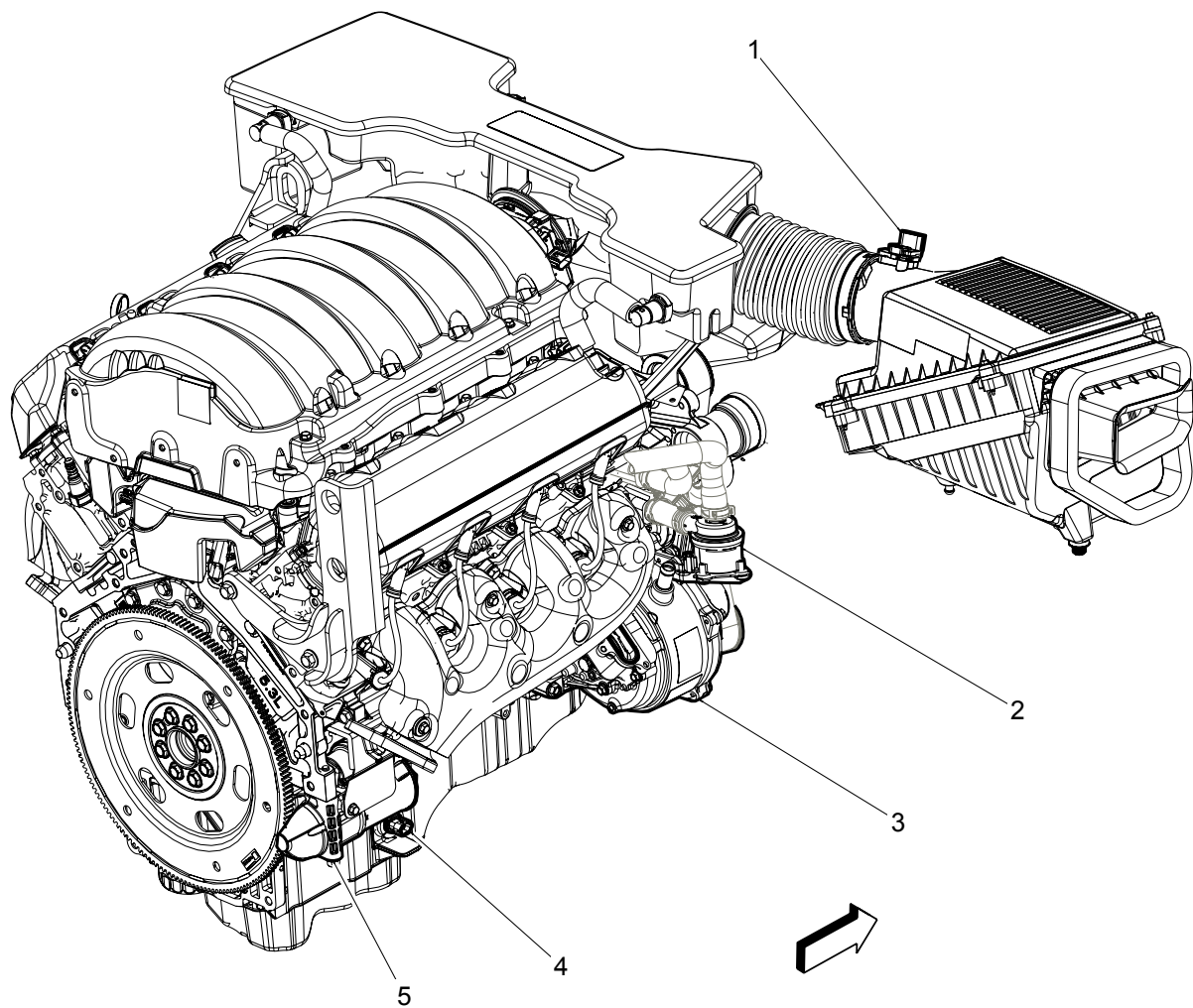


Items

- 1. Q17B Fuel Injector 2
- 2. T8B Ignition Coil 2 (except L5P)
- 3. Q17D Fuel Injector 4
- 4. T8D Ignition Coil 4 (except L5P)
- 5. T8F Ignition Coil 6 (except L5P)
- 6. Q17F Fuel Injector 6
- 7. T8H Ignition Coil 8 (L83, L86, L96 or LC8)
- 8. Q17H Fuel Injector 8
- 9. G18 High Pressure Fuel Pump (1500)
- 10. B47B Fuel Rail Pressure Sensor (1500 or L5P)
- 11. Q17G Fuel Injector 7

- 11. Q17G Fuel Injector 7
- 12. T8G Ignition Coil 7 (L83, L86, L96 or LC8)
- 13. Q17E Fuel Injector 5
- 14. T8E Ignition Coil 5 (except L5P)
- 15. T8C Ignition Coil 3 (except L5P)
- 16. Q17C Fuel Injector 3
- 17. T8A Ignition Coil 1 (except L5P)
- 18. Q17A Fuel Injector 1

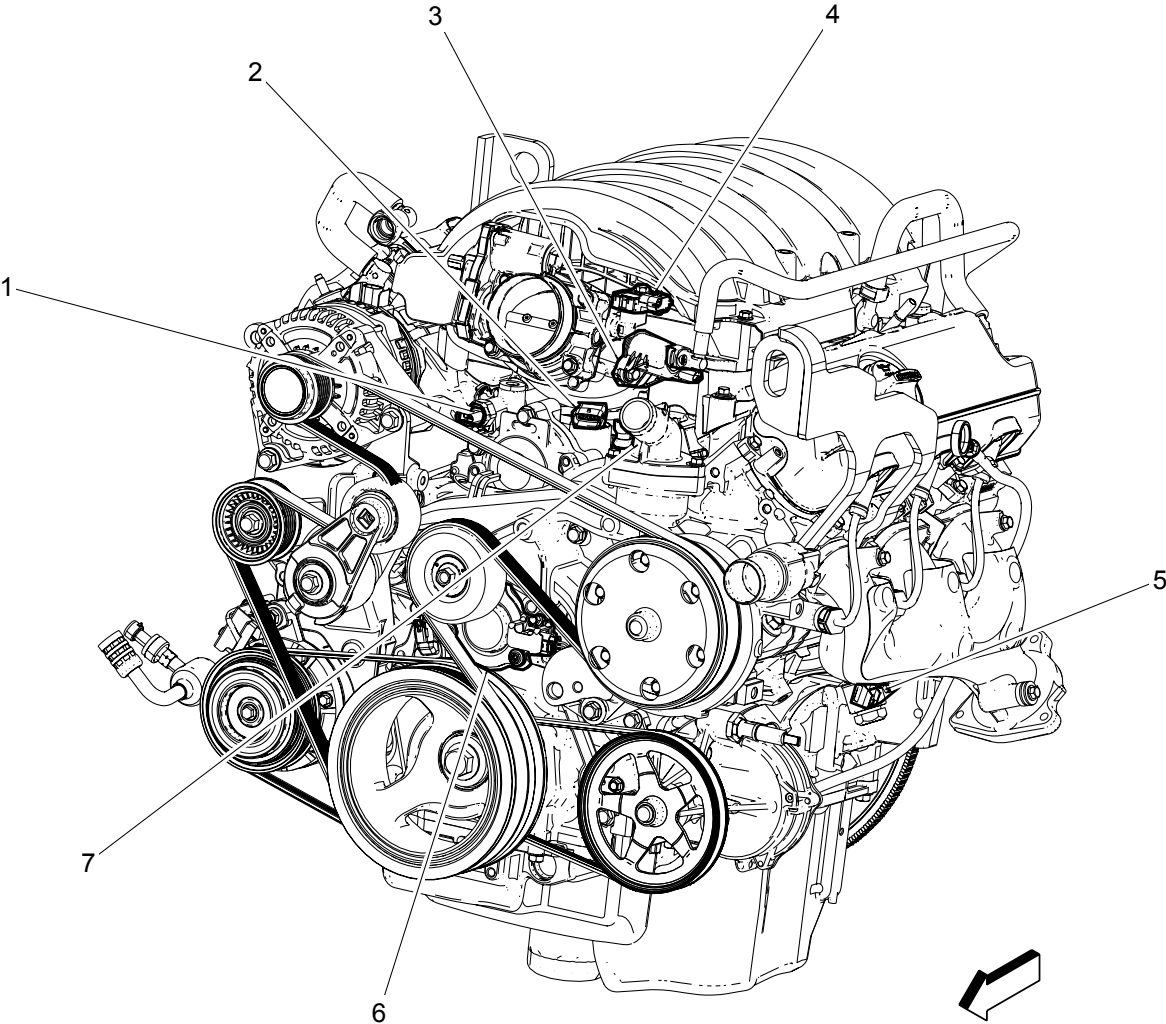
Right Rear Side of Engine Components (L8B)



Items

- 1. B75C Multifunction Intake Air Sensor
- 2. G17 Heater Coolant Pump (HP5)
- 3. A15 Starter/Generator (HP5)
- 4. B35 Engine Oil Level Switch (1500 or L5P)
- 5. M64 Starter Motor

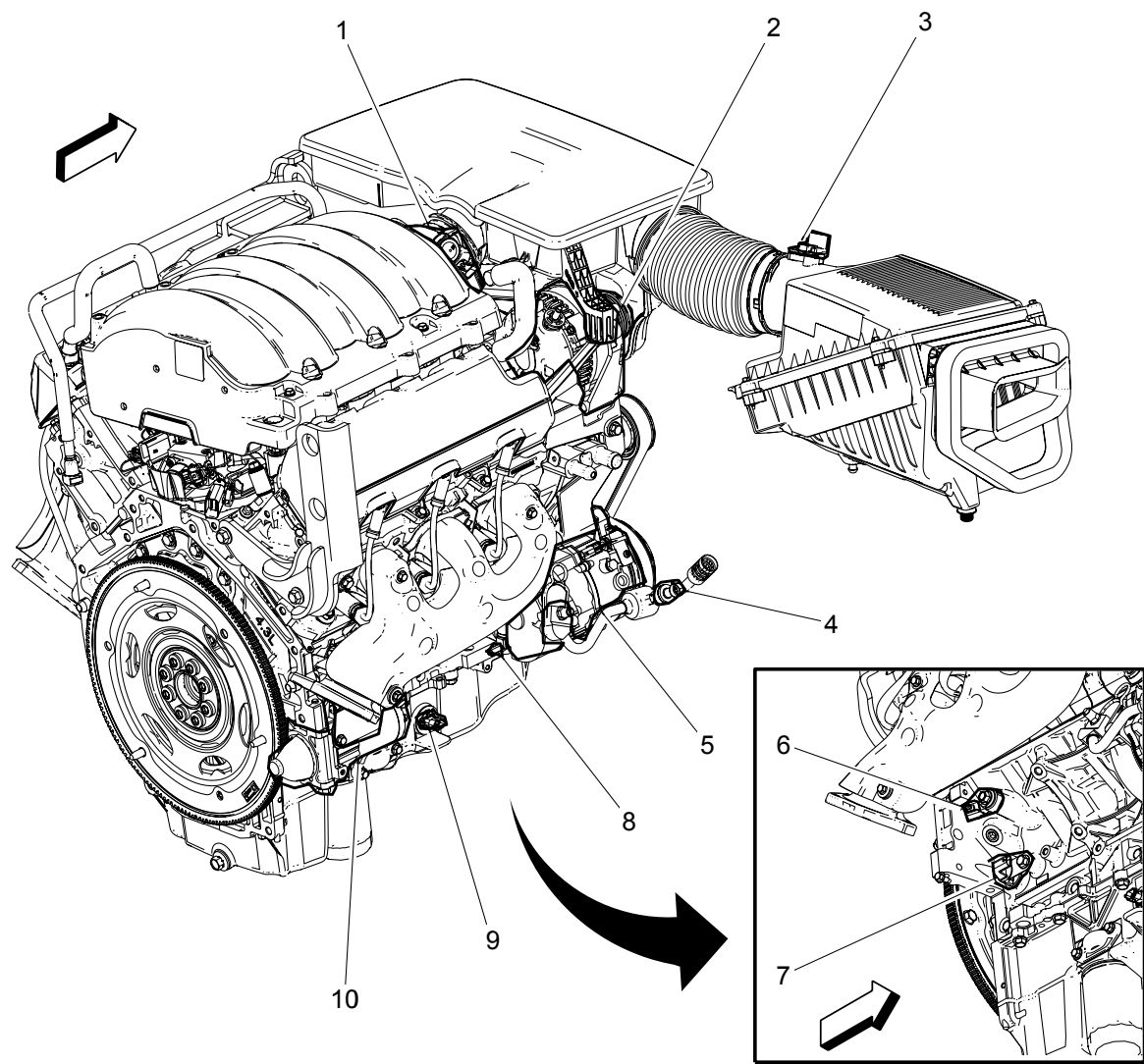
Left Front of Engine Components (LV3)



Items

- 1. B37B Engine Oil Pressure Sensor
- 2. Q43 Valve Lifter Oil Manifold Assembly (1500)
- 3. Q12 Evaporative Emission Purge Solenoid Valve (except L5P)
- 4. B74 Manifold Absolute Pressure Sensor
- 5. B68A Knock Sensor 1 (except L5P)
- 6. Q6 Camshaft Position Actuator Solenoid Valve (except L5P)
- 7. B34 Engine Coolant Temperature Sensor

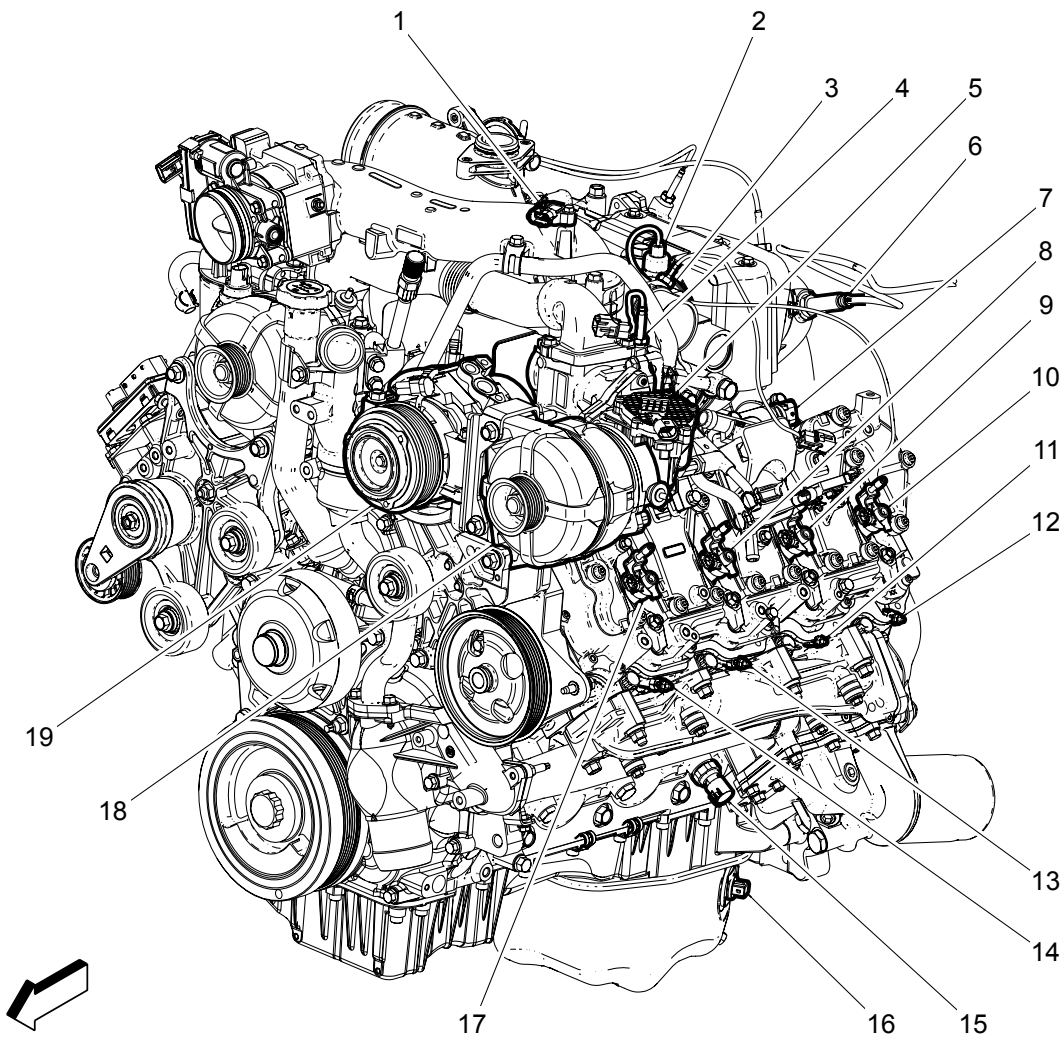
Right Rear of Engine Components (LV3)



Items

- 1. Q38 Throttle Body
- 2. G13 Generator
- 3. B75C Multifunction Intake Air Sensor
- 4. B1 A/C Refrigerant Pressure Sensor (C67 or CJ2)
- 5. Q2 A/C Compressor Clutch (C67 or CJ2)
- 6. B68B Knock Sensor 2 (except L5P)
- 7. B26 Crankshaft Position Sensor
- 8. Q46 A/C Compressor Solenoid Valve (C67 or CJ2)
- 9. B35 Engine Oil Level Switch (1500 or L5P)
- 10. M64 Starter Motor

Left Side of Engine Components (L5P)

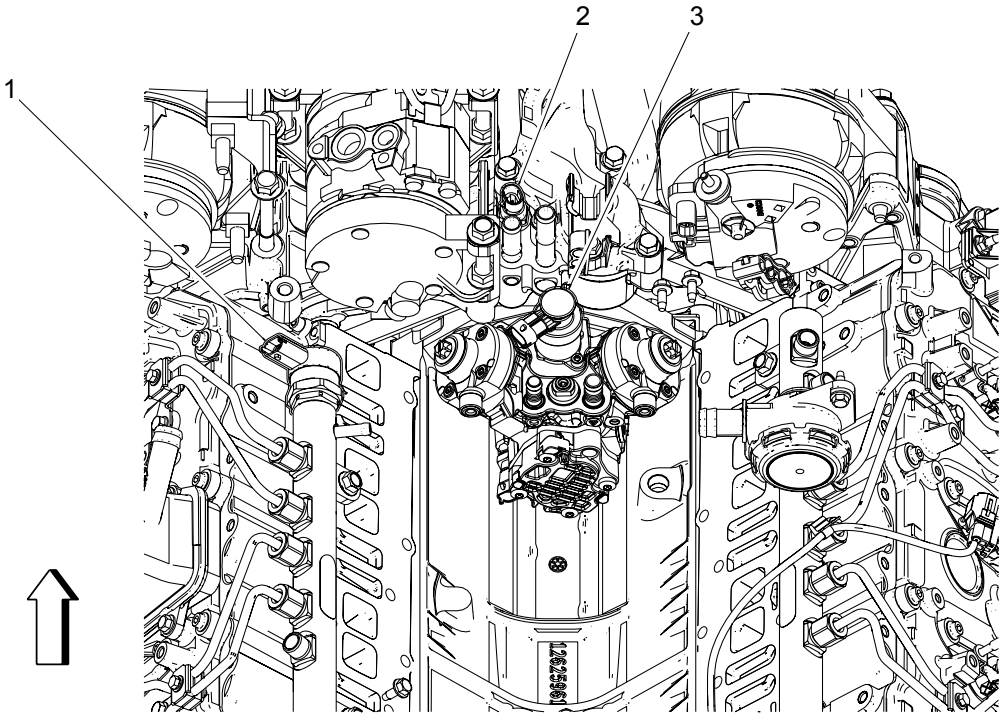


Items

- 1. B74 Manifold Absolute Pressure Sensor
- 2. B112 Turbocharger Vane Position Sensor (L5P)
- 3. B193A Charge Air Cooler Inlet Temperature Sensor (L5P)
- 4. B130B Exhaust Gas Recirculation Temperature Sensor 2 (L5P)
- 5. Q14 Exhaust Gas Recirculation Valve (L5P)
- 6. B195A Nitrogen Oxides Sensor 1 (L5P)
- 7. B47B Fuel Rail Pressure Sensor (1500 or L5P)
- 8. Q17D Fuel Injector 4
- 9. Q17F Fuel Injector 6
- 10. Q17H Fuel Injector 8
- 11. E12F Glow Plug 6 (L5P)

- 11. E12F Glow Plug 6 (L5P)
- 12. E12H Glow Plug 8 (L5P)
- 13. E12D Glow Plug 4 (L5P)
- 14. E12B Glow Plug 2 (L5P)
- 15. B37B Engine Oil Pressure Sensor
- 16. B35 Engine Oil Level Switch (1500 or L5P)
- 17. Q17B Fuel Injector 2
- 18. G13 Generator
- 19. G1 A/C Compressor (C67 or CJ2)

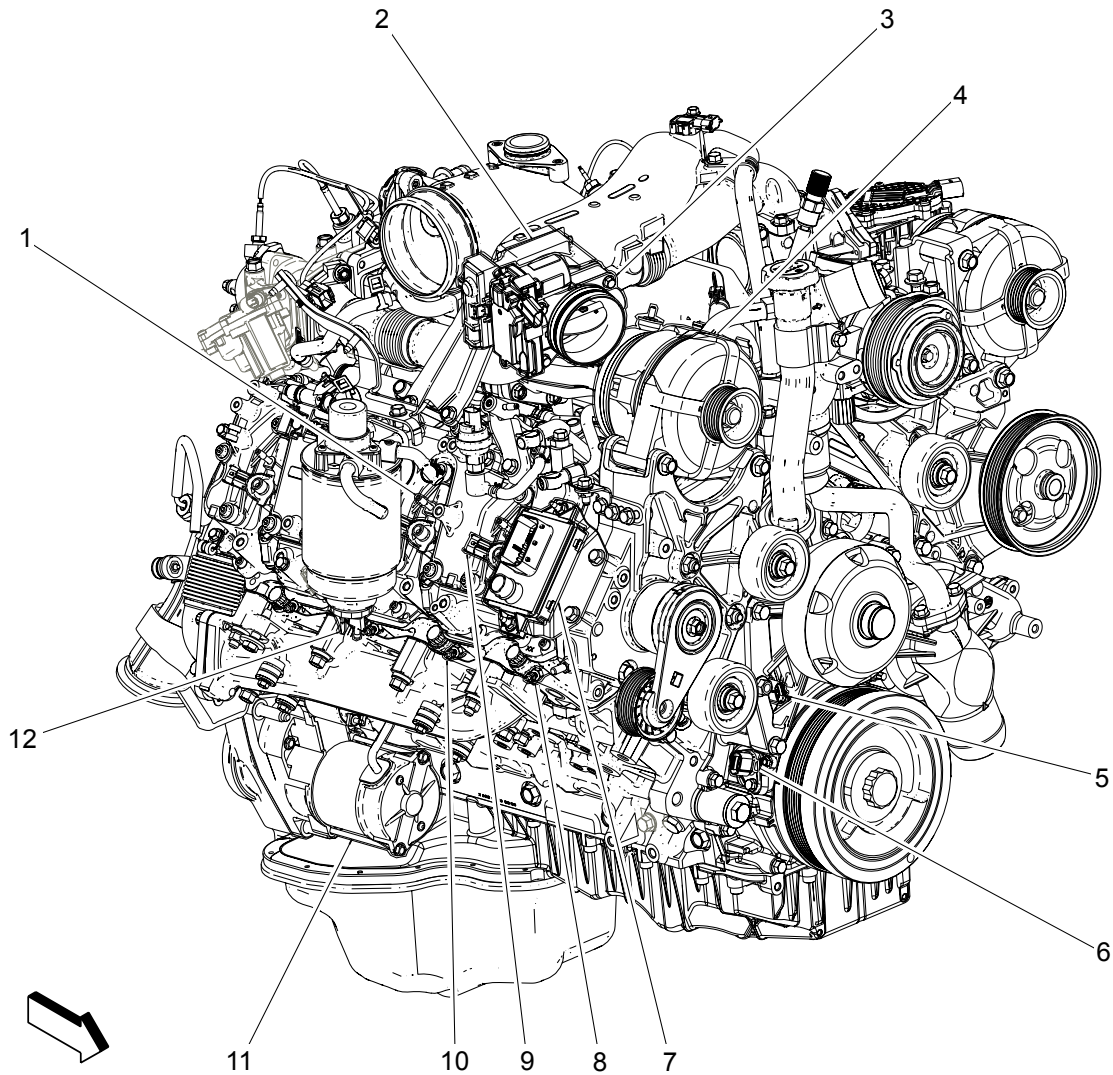
Top of the Engine Components (L5P)



Items

- 1. Q18B Fuel Pressure Regulator 2 (L5P)
- 2. B34 Engine Coolant Temperature Sensor
- 3. Q18A Fuel Pressure Regulator 1 (L5P)
- 4. B48 Fuel Temperature Sensor

Right Side of Engine Components (L5P)



Items

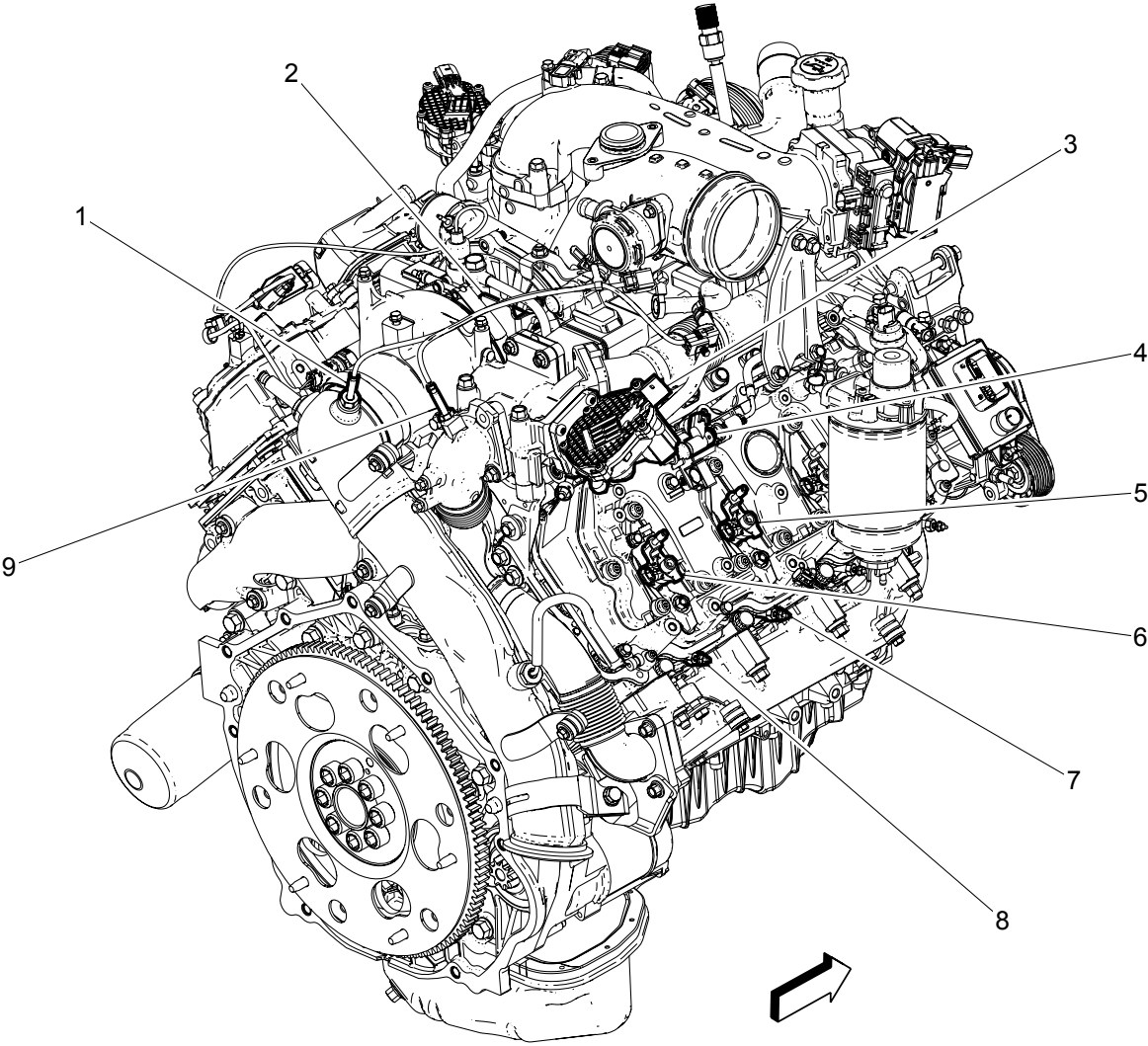
- 1. Q17C Fuel Injector 3
- 2. B215 Fuel Filter Pressure Switch
- 3. E24 Intake Air Heater (L5P)
- 4. Q38 Throttle Body
- 5. G13E Generator - Auxiliary (KH5 or KHB)
- 6. B23 Camshaft Position Sensor
- 7. B26 Crankshaft Position Sensor
- 8. K34 Glow Plug Control Module (L5P)
- 9. E12A Glow Plug 1 (L5P)
- 10. Q17A Fuel Injector 1
- 11. E12C Glow Plug 3 (L5P)

11. E12C Glow Plug 3 (L5P)

12. M64 Starter Motor

13. B116 Water in Fuel Sensor

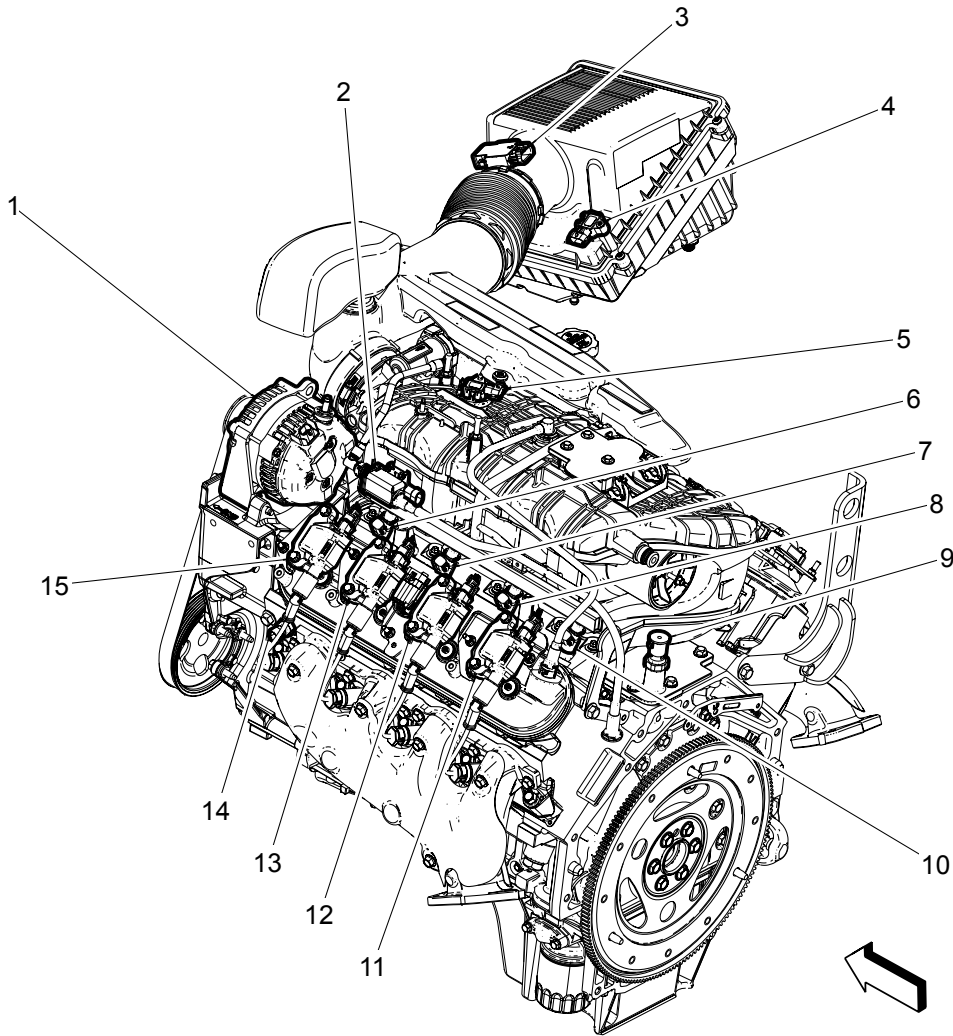
Right Rear Side of the Engine Components (L5P)



Items

- 1. B131A Exhaust Temperature Sensor 1 (L5P)
- 2. Q41 Turbocharger Vane Position Control Solenoid Valve (L5P)
- 3. Q47 Exhaust Gas Recirculation Cooler Bypass Solenoid Valve (L5P)
- 4. Q67 Exhaust Aftertreatment Fuel Injector (L5P)
- 5. Q17E Fuel Injector 5
- 6. Q17G Fuel Injector 7
- 7. E12E Glow Plug 5 (L5P)
- 8. E12G Glow Plug 7 (L5P)
- 9. B130A Exhaust Gas Recirculation Temperature Sensor 1 (L5P)

Left Side of Engine Components (L96)

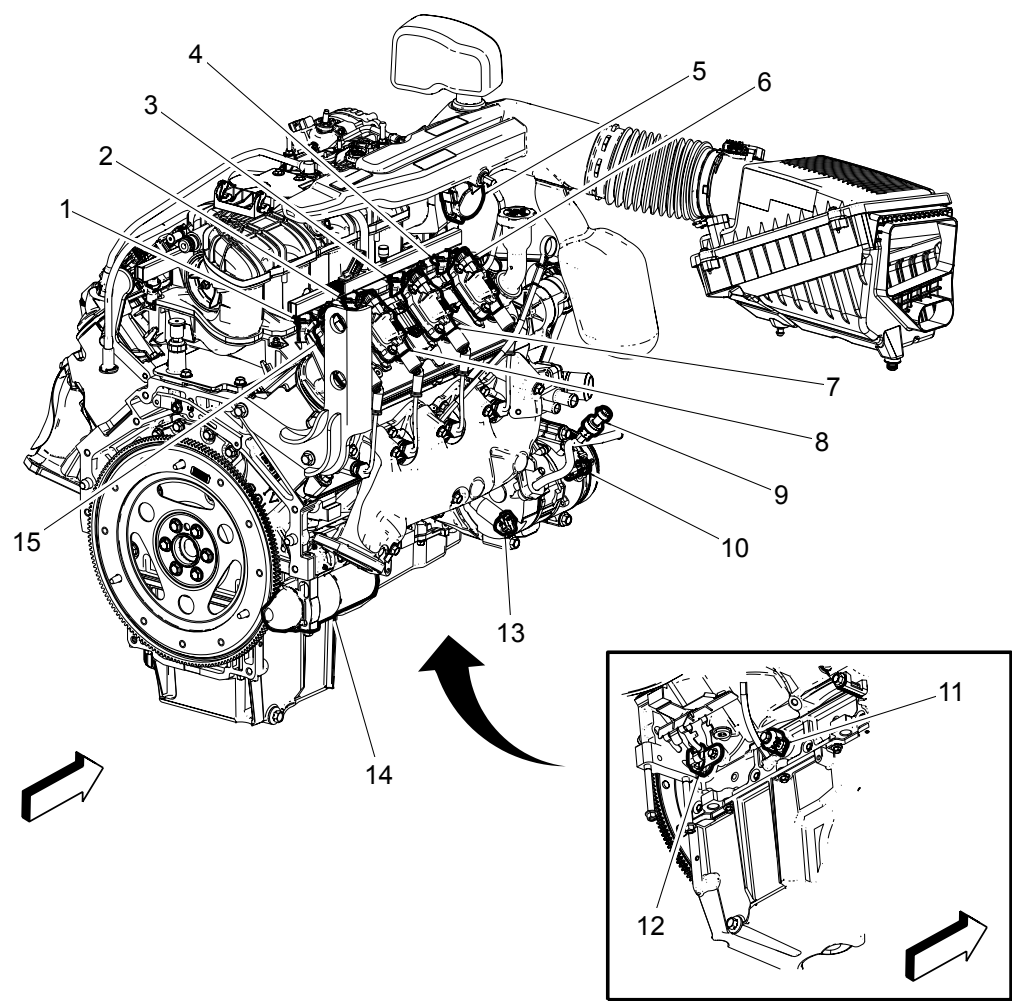


Items

- 1. G13 Generator
- 2. Q12 Evaporative Emission Purge Solenoid Valve (except L5P)
- 3. B75C Multifunction Intake Air Sensor
- 4. B192 Throttle Inlet Absolute Pressure Sensor (L96 or LC8)
- 5. B74 Manifold Absolute Pressure Sensor
- 6. Q17A Fuel Injector 1
- 7. Q17C Fuel Injector 3
- 8. Q17E Fuel Injector 5
- 9. B37B Engine Oil Pressure Sensor
- 10. Q17G Fuel Injector 7
- 11. T8G Ignition Coil 7 (L83, L86, L96 or LC8)

- 11. T8G Ignition Coil 7 (L83, L86, L96 or LC8)
- 12. T8E Ignition Coil 5 (except L5P)
- 13. T8C Ignition Coil 3 (except L5P)
- 14. B34 Engine Coolant Temperature Sensor
- 15. T8A Ignition Coil 1 (except L5P)

Right Side of Engine Components (L96)

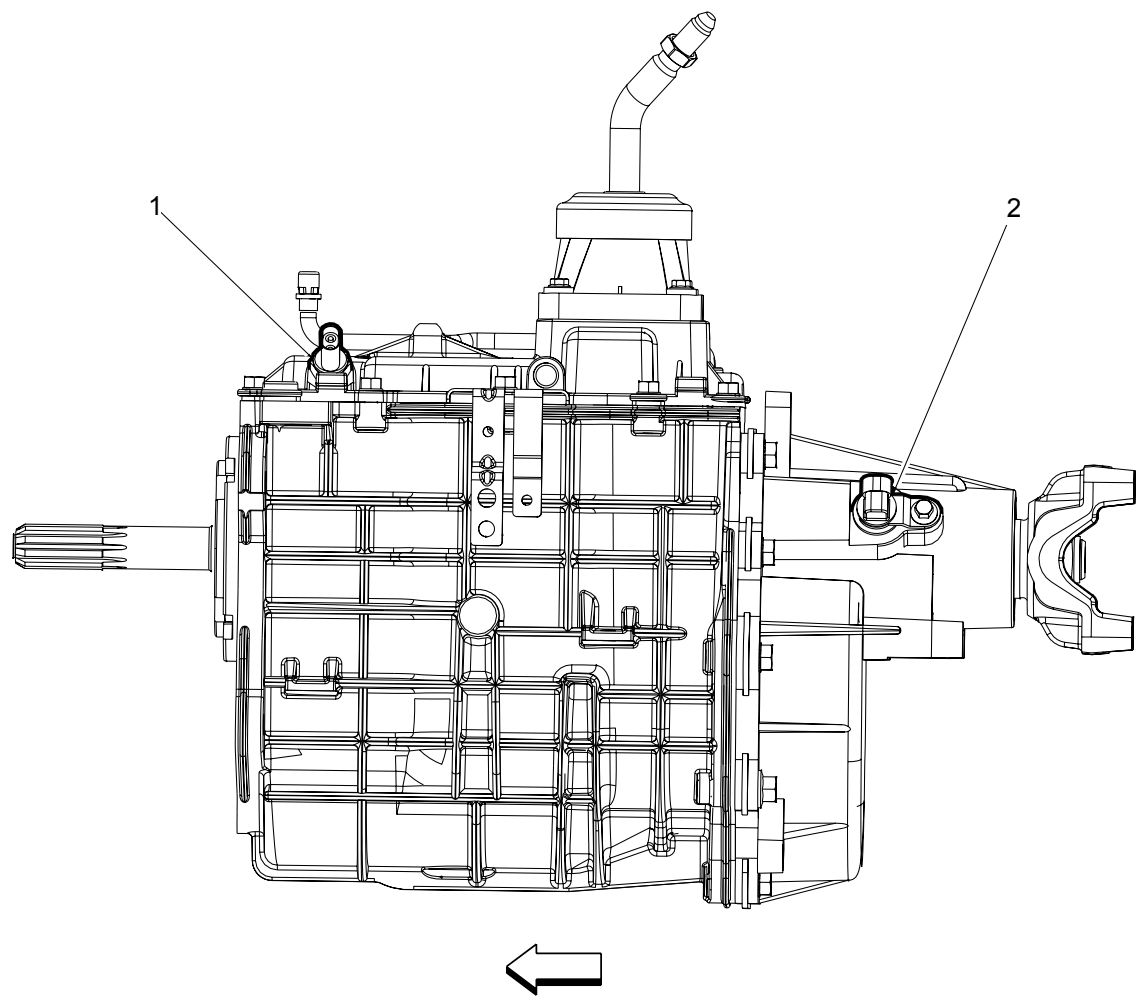


Items

- 1. Q17H Fuel Injector 8
- 2. Q17F Fuel Injector 6
- 3. Q17D Fuel Injector 4
- 4. Q17B Fuel Injector 2
- 5. Q38 Throttle Body
- 6. T8B Ignition Coil 2 (except L5P)
- 7. T8D Ignition Coil 4 (except L5P)
- 8. T8F Ignition Coil 6 (except L5P)
- 9. B1 A/C Refrigerant Pressure Sensor (C67 or CJ2)
- 10. Q2 A/C Compressor Clutch (C67 or CJ2)
- 11. B68B Knock Sensor 2 (except L5P)

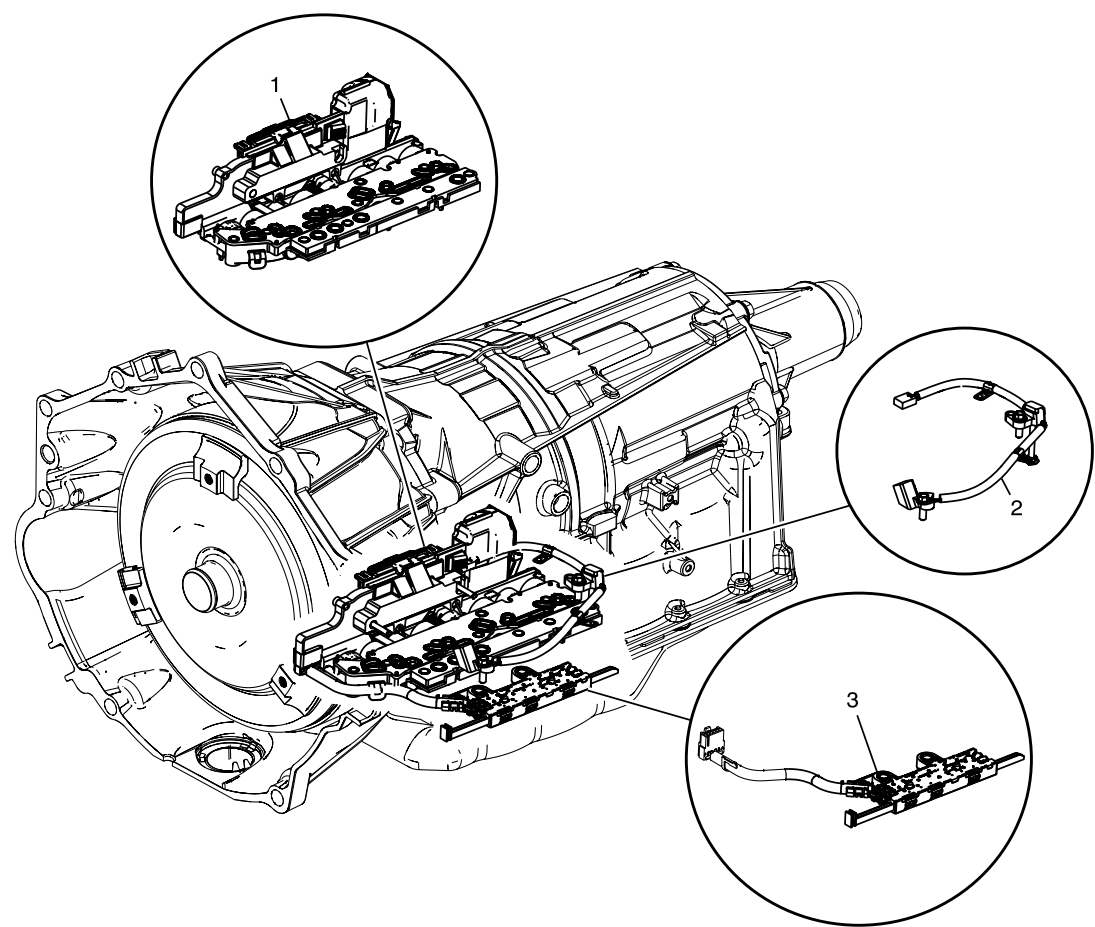
- 11. B68B Knock Sensor 2 (except L5P)
- 12. B26 Crankshaft Position Sensor
- 13. Q46 A/C Compressor Solenoid Valve (C67 or CJ2)
- 14. M64 Starter Motor
- 15. T8H Ignition Coil 8 (L83, L86, L96 or LC8)

Manual Transmission Components (MQ7)



Items

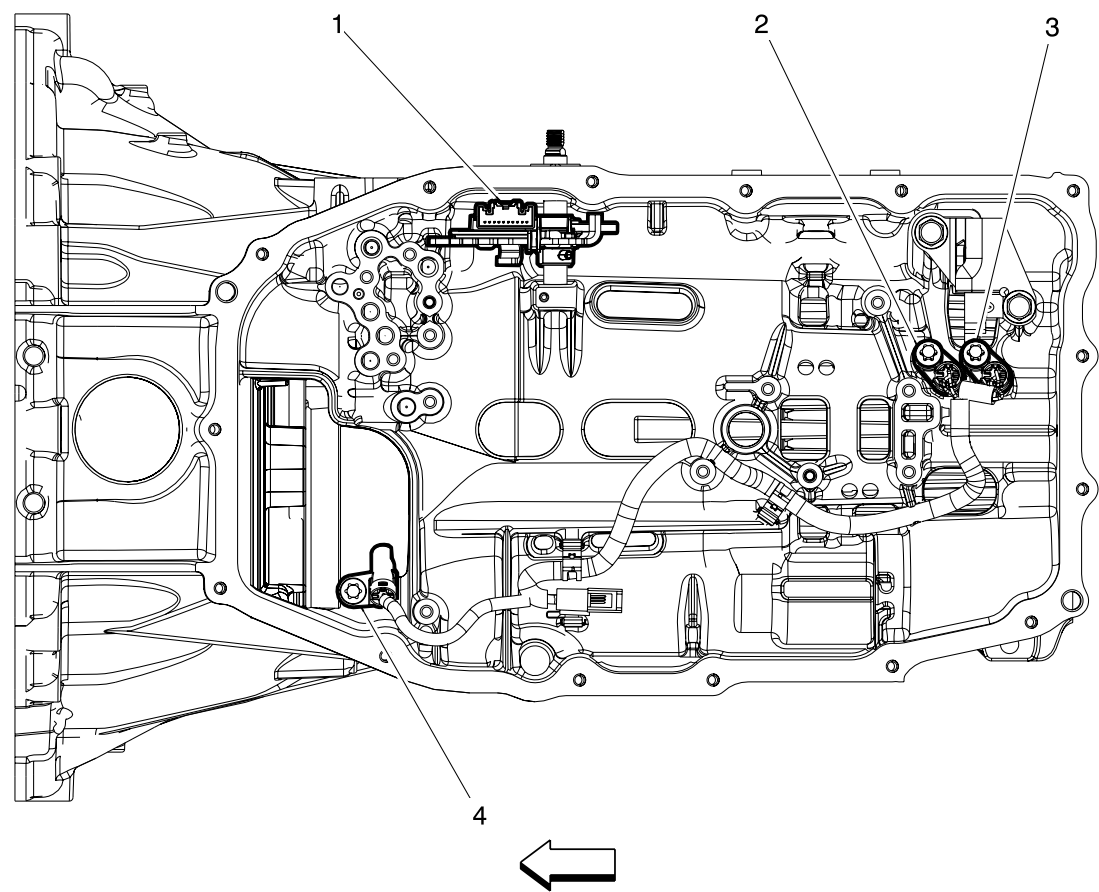
- 1. B16 Backup Lamp Switch (M2P, MQ7 or MXW)
- 2. B115 Vehicle Speed Sensor (NQF, NQG or NQH)



Items

- 1. Q8 Control Solenoid Valve Assembly (MYC or MYD)
- 2. B14A Transmission Output Shaft Speed Sensor
- 3. B15 Transmission Internal Mode Switch (M5U, MW7, MYC or MYD)

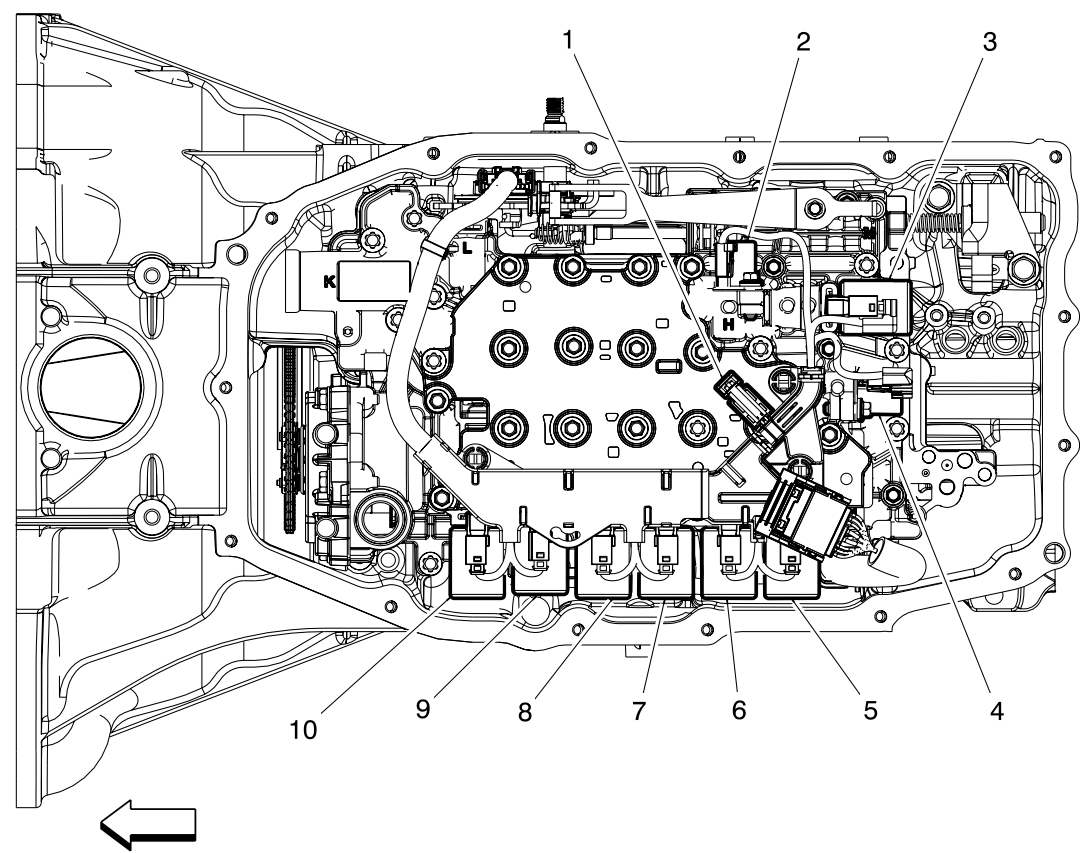
Automatic Transmission Case Components (M5U)



Items

- 1. B15 Transmission Internal Mode Switch (M5U, MW7, MYC or MYD)
- 2. B14D Transmission Intermediate Shaft Speed Sensor (M5U)
- 3. B14A Transmission Output Shaft Speed Sensor
- 4. B14C Transmission Input Shaft Speed Sensor (M5U, MYC or MYD)

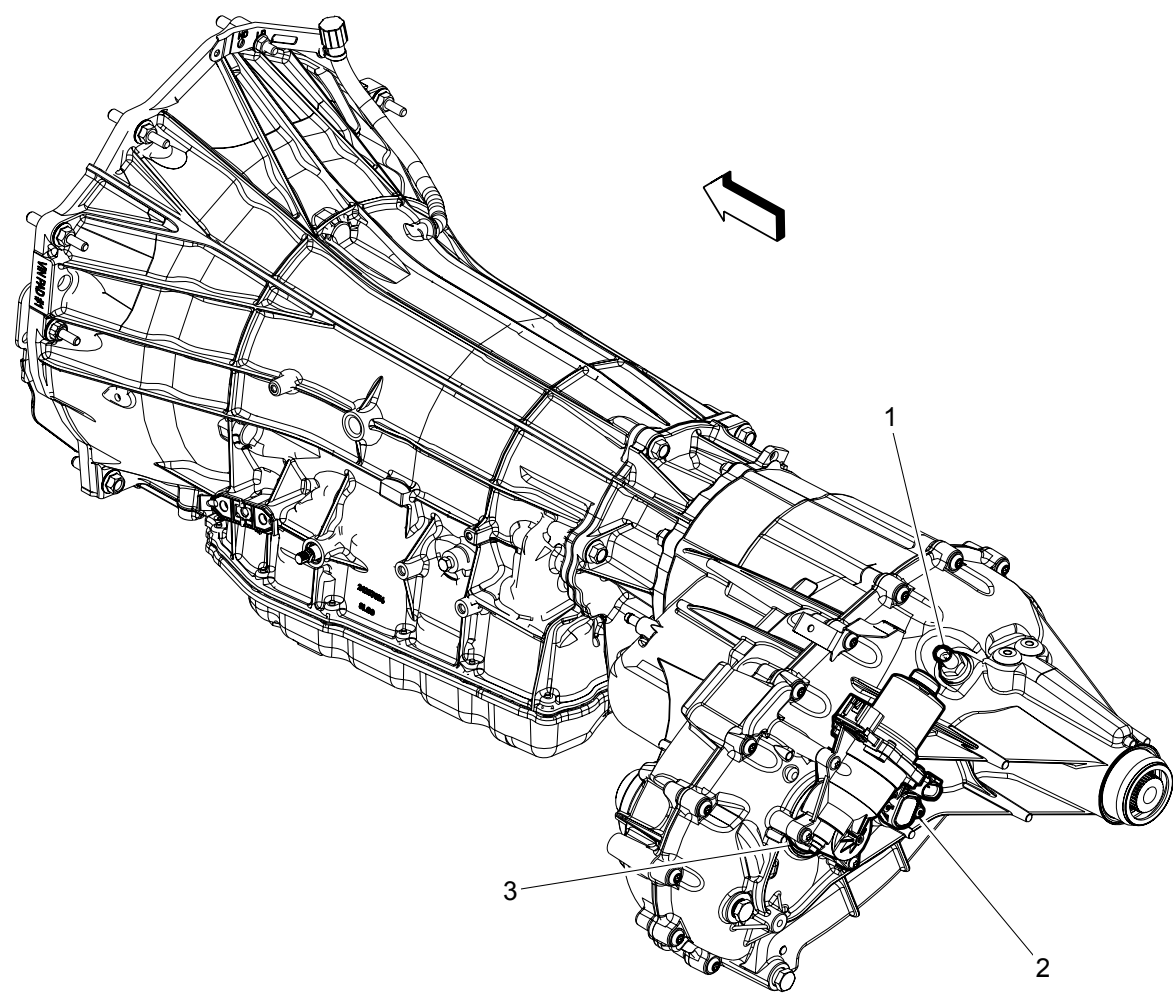
Automatic Transmission Valve Body Components (M5U)



Items

- 1. B13 Transmission Fluid Temperature Sensor (M5U, MW7, MYC or MYD)
- 2. Q77H Transmission Control Solenoid Valve 8 (M5U)
- 3. Q77F Transmission Control Solenoid Valve 6 (M5U)
- 4. Q77J Transmission Control Solenoid Valve 9 (M5U)
- 5. Q77B Transmission Control Solenoid Valve 2 (M5U)
- 6. Q77A Transmission Control Solenoid Valve 1 (M5U)
- 7. Q77E Transmission Control Solenoid Valve 5 (M5U)
- 8. Q77C Transmission Control Solenoid Valve 3 (M5U)
- 9. Q77D Transmission Control Solenoid Valve 4 (M5U)
- 10. Q77G Transmission Control Solenoid Valve 7 (M5U)

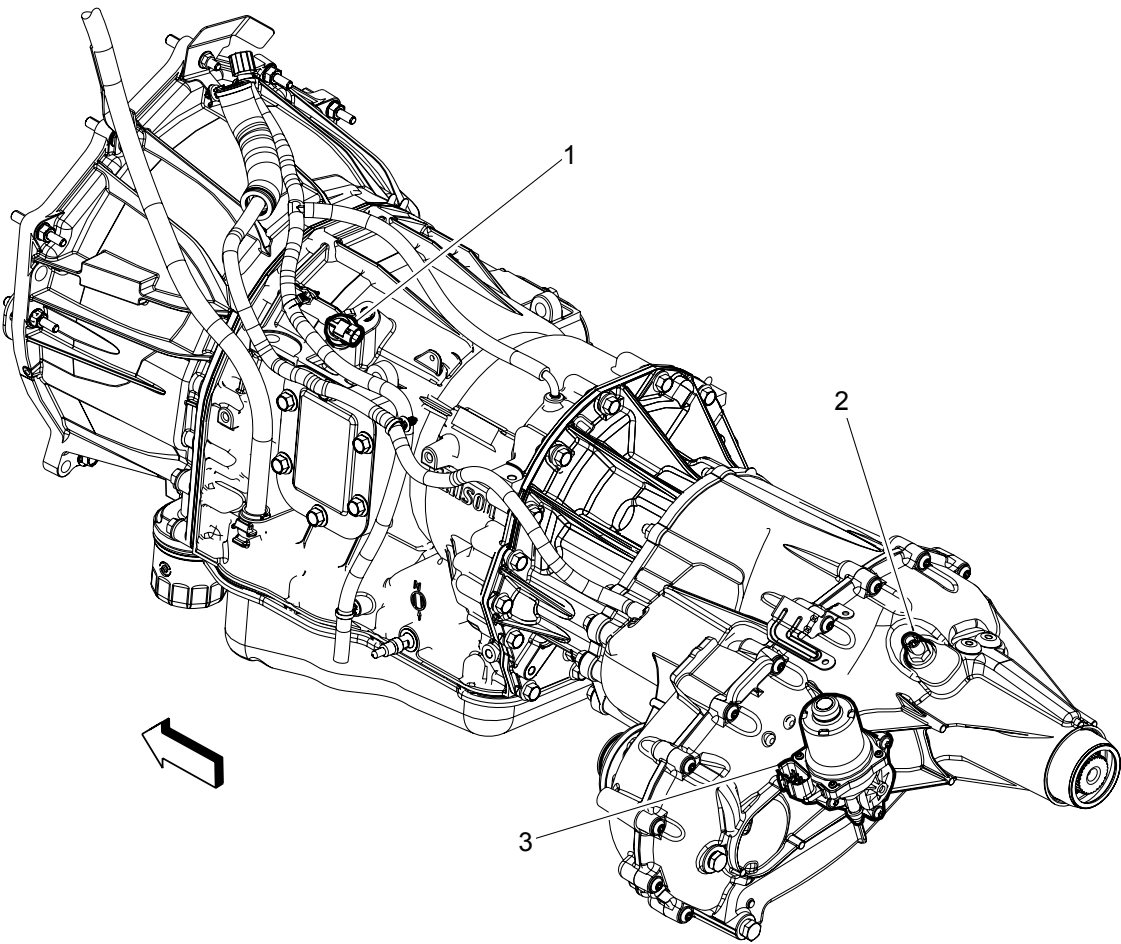
Left Side of Transmission Components (M5X)



Items

- 1. B115 Vehicle Speed Sensor (NQF, NQG or NQH)
- 2. B227 Gear Position Sensor (NQH)
- 3. A16 Transfer Case Motor (NQF or NQH)

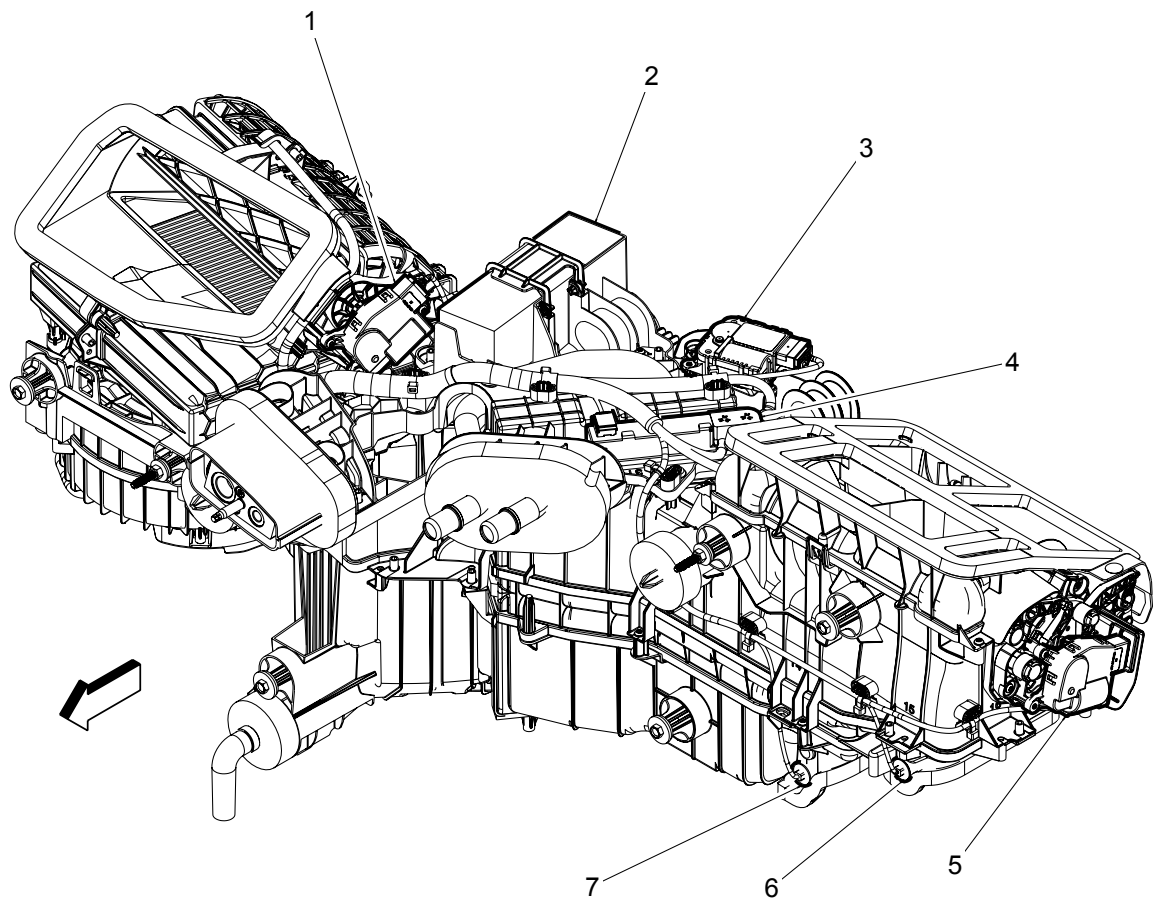
Left Side of Transmission Components (MW7)



Items

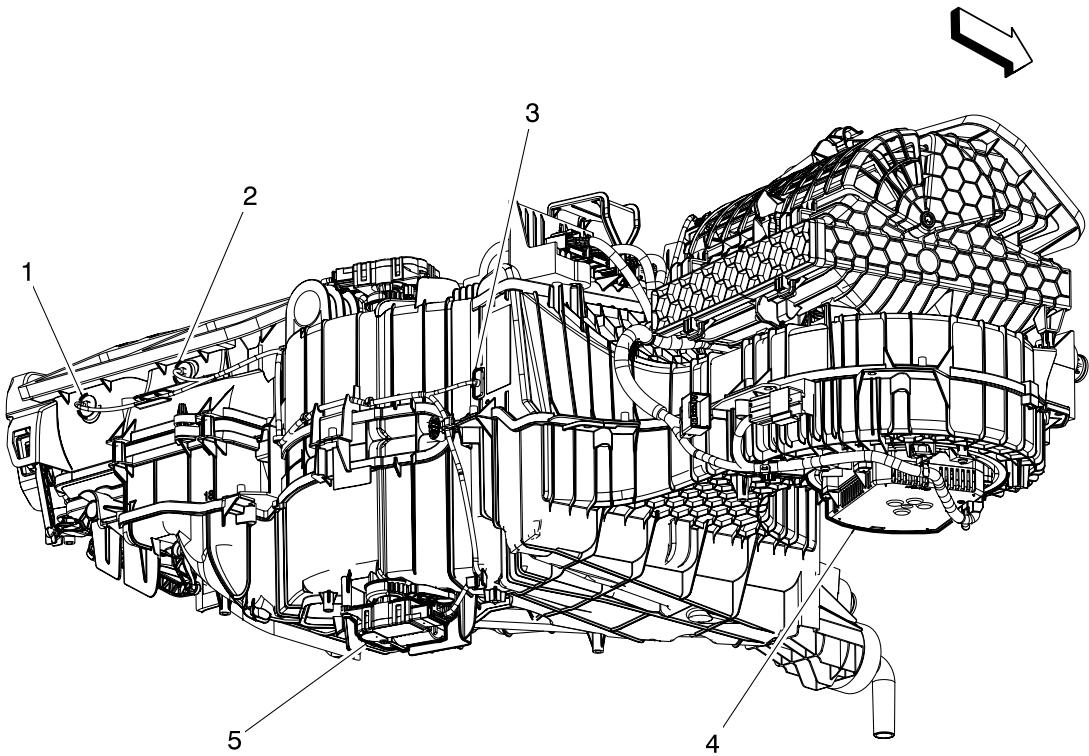
- 1. B14B Transmission Turbine Speed Sensor (MW7)
- 2. B14A Transmission Output Shaft Speed Sensor
- 3. A16 Transfer Case Motor (NQF or NQH)

Front of HVAC Assembly Components



Items

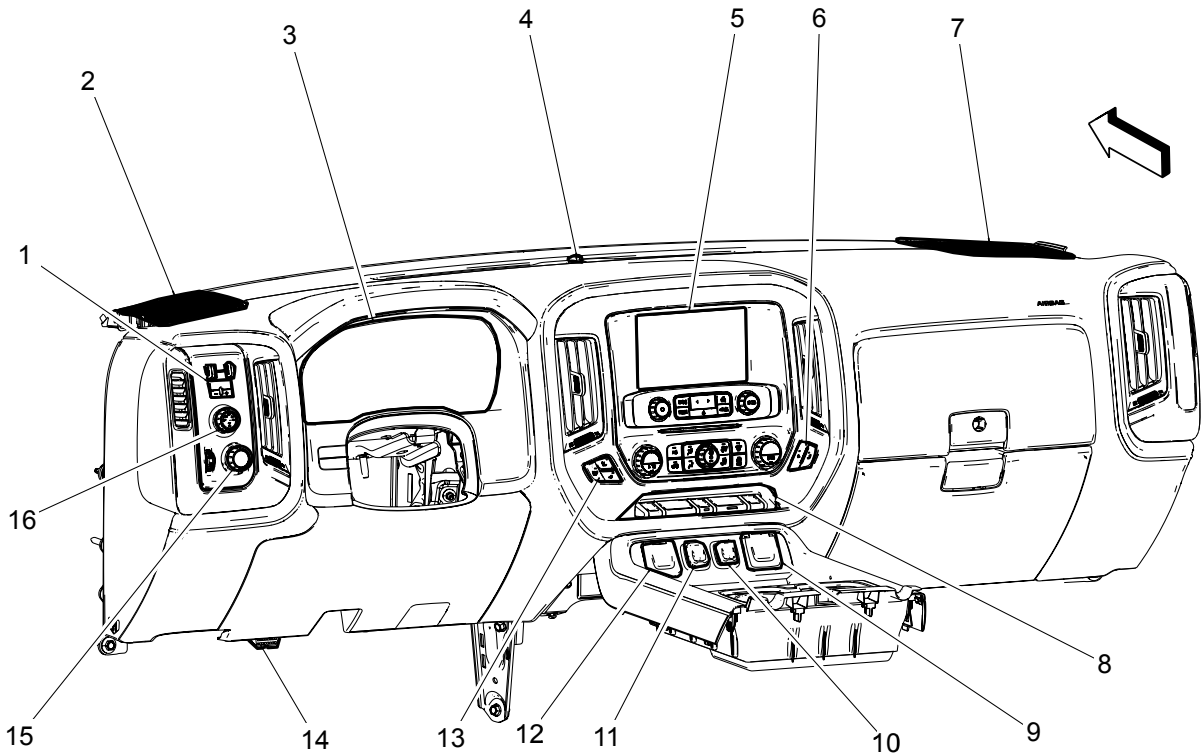
- 1. M4 Air Inlet Door Actuator
- 2. K33 HVAC Control Module
- 3. M6L Air Temperature Door Actuator - Left
- 4. E40 Electrical Auxiliary Heater (C32)
- 5. M37L Mode Door Actuator - Left
- 6. B7D Air Temperature Sensor - Duct Left Lower (CJ2)
- 7. B7E Air Temperature Sensor - Duct Right Lower (CJ2)



Items

- 1. B7H Air Temperature Sensor - Duct Left Upper (CJ2)
- 2. B7J Air Temperature Sensor - Duct Right Upper (CJ2)
- 3. B39 A/C Evaporator Temperature Sensor (C67 or CJ2)
- 4. M8 Blower Motor
- 5. M6R Air Temperature Door Actuator - Right (CJ2)

Front of Instrument Panel Components



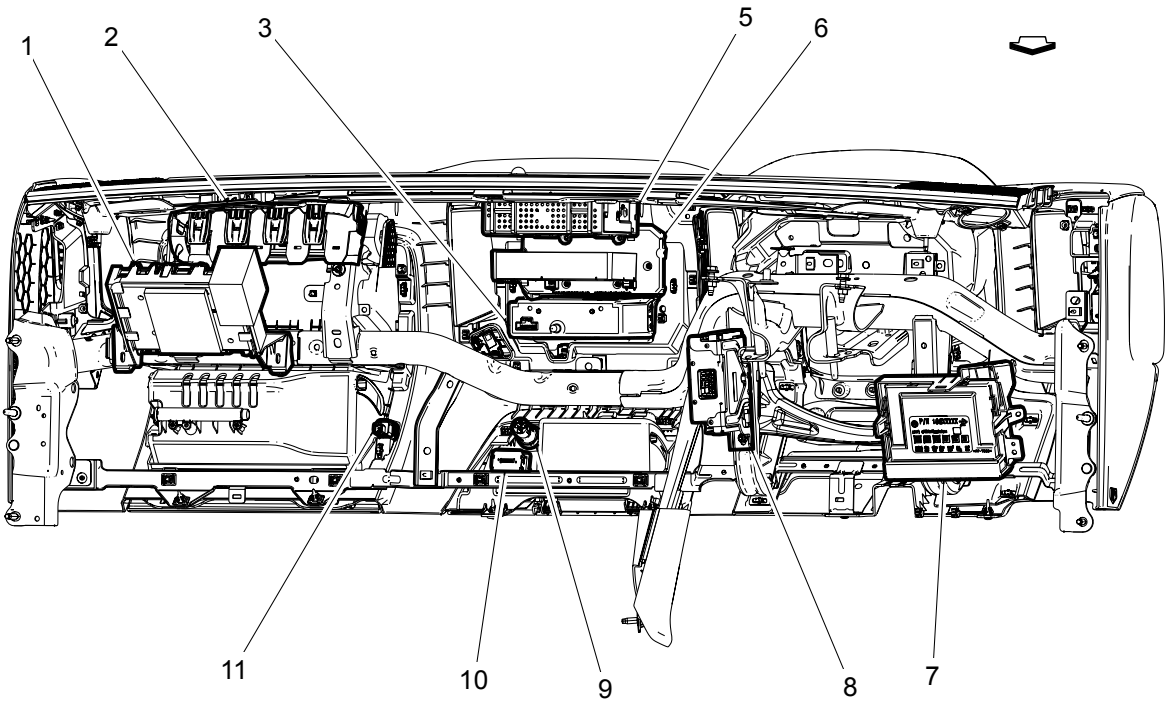
Items

- 1. S76 Trailer Brake Control Switch (JL1)
- 2. P19J Speaker - Left Instrument Panel (UQ3, UQA or UQG)
- 3. P16 Instrument Cluster
- 4. B10B Ambient Light/Sunload Sensor
- 5. P17 Info Display Module
- 6. S31P Seat Heating and Cooling Switch - Passenger (KA1 or KQV)
- 7. P19W Speaker - Right Instrument Panel (UQ3, UQA or UQG)
- 8. S48A Multifunction Switch - Instrument Panel
- 9. X81 Accessory Power Receptacle - 110V AC (K14)
- 10. X80K Accessory Power Receptacle - Instrument Panel 2 (D07)
- 11. X80J Accessory Power Receptacle - Instrument Panel 1 (D07)
- 12. X92 USB Receptacle
- 13. S31D Seat Heating and Cooling Switch - Driver (KA1 or KQV)
- 14. X84 Data Link Connector
- 15. S30 Headlamp Switch

15. S66 Headlamp Switch

16. S77 Transfer Case Shift Control Switch

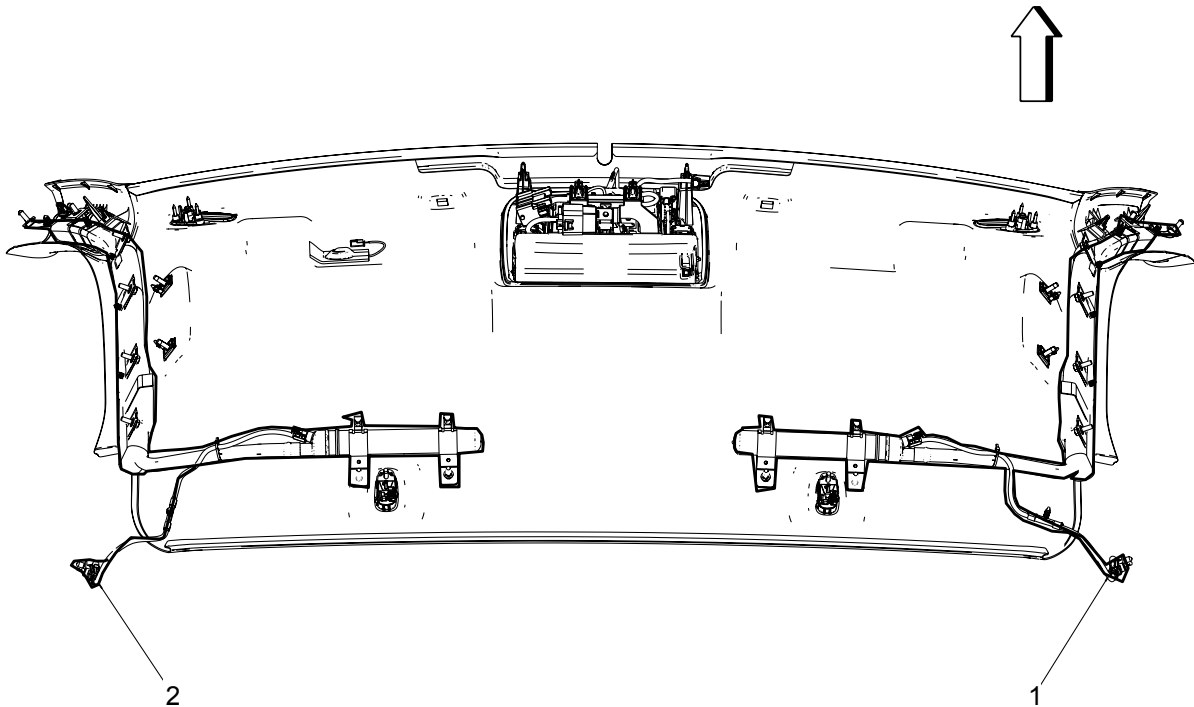
Rear of Instrument Panel Components



Items

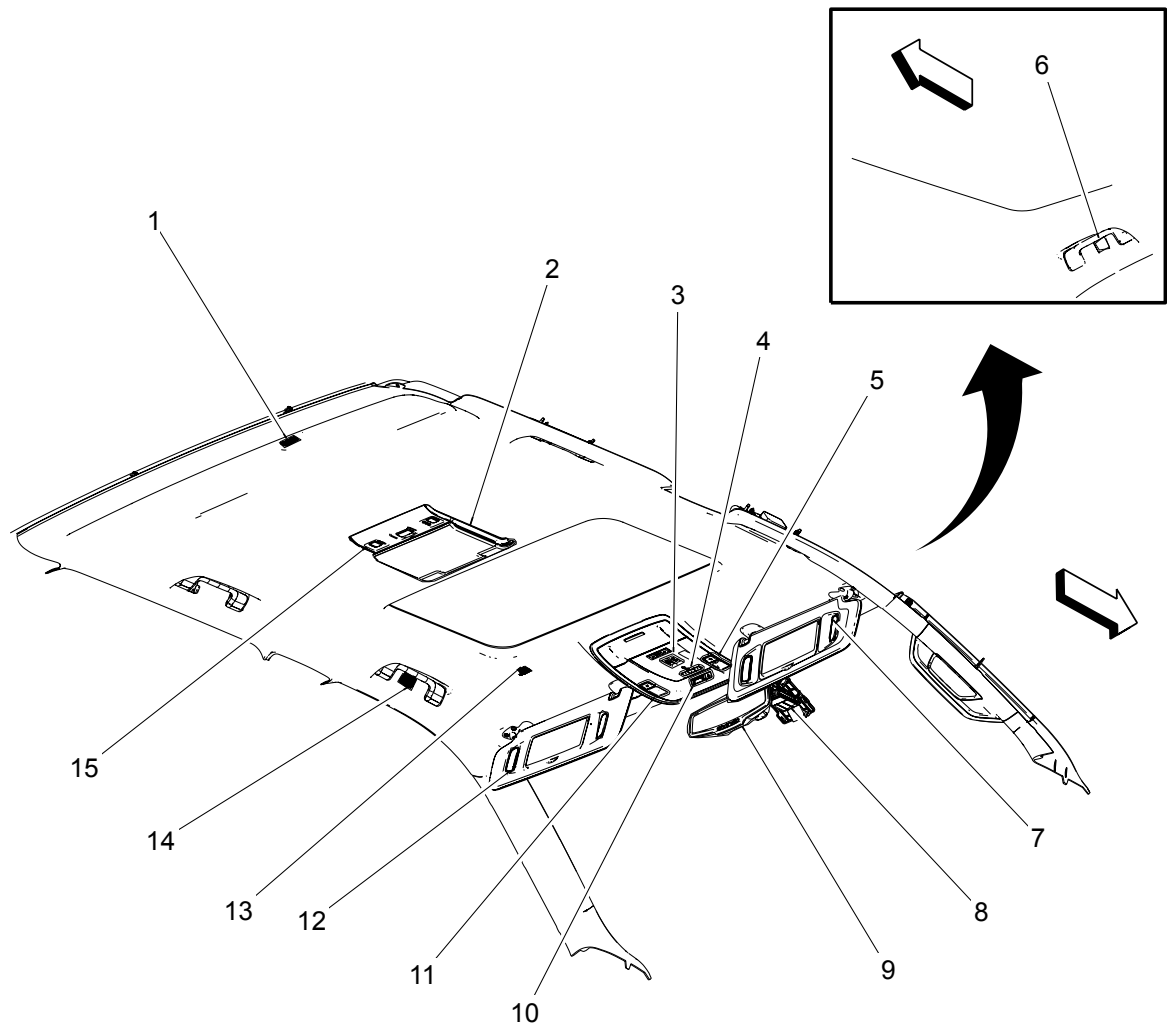
- 1. K74 Human Machine Interface Control Module (IO5 or IO6)
- 2. F101 Passenger Instrument Panel Air Bag
- 3. A33 Media Disc Player (TG5/U42/D07)
- 5. A11 Radio
- 6. K73 Telematics Communication Interface Control Module (UE1)
- 7. K9 Body Control Module
- 8. T1 Accessory DC/AC Power Inverter Module (KI4 or KI5)
- 9. X80J Accessory Power Receptacle - Instrument Panel 1 (D07)
- 10. X81 Accessory Power Receptacle - 110V AC (KI4)
- 11. S135 Rollover Protection Disable Switch (C9I)

Roof Rail Air Bags



Items

- 1. F105R Roof Rail Air Bag - Right (AY0)
- 2. F105L Roof Rail Air Bag - Left (AY0)

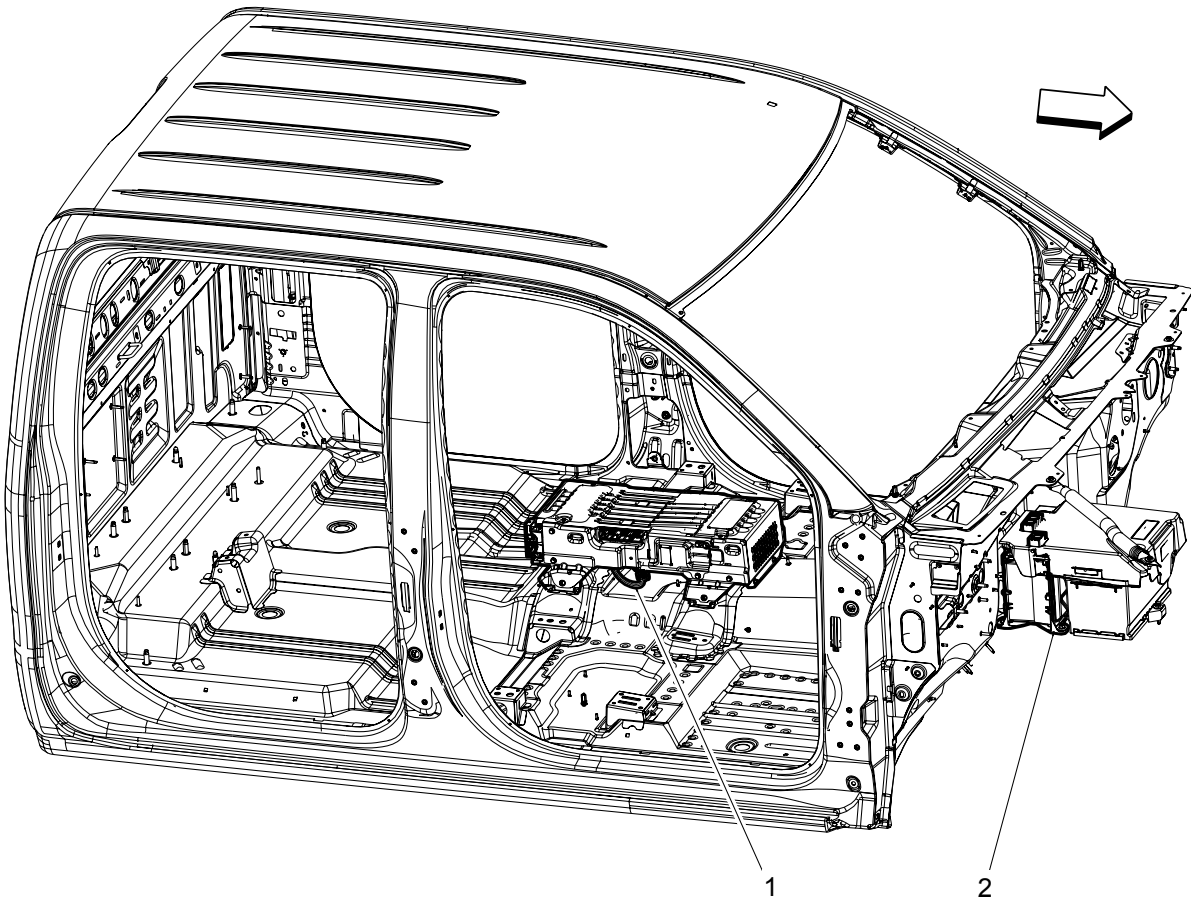


Items

- 1. B77R Radio Volume Compensator Interior Noise Microphone - Rear (NKC)
- 2. P22A Video Display - 2nd Row (U42)
- 3. S72 Sunroof Switch (CF5)
- 4. S25 Garage Door Opener (UG1)
- 5. E37ER Dome/Reading Lamps - Front Overhead Console Right
- 6. B77RF Radio Volume Compensator Interior Noise Microphone - Right Front (NKC)
- 7. E31R Sunshade Mirror Lamp - Right (DH6)
- 8. K109 Frontview Camera Module
- 9. A10 Inside Rearview Mirror (DD8 or UE1)
- 10. P14 Passenger Air Bag Disabled Indicator
- 11. E37EL Dome/Reading Lamps - Front Overhead Console Left

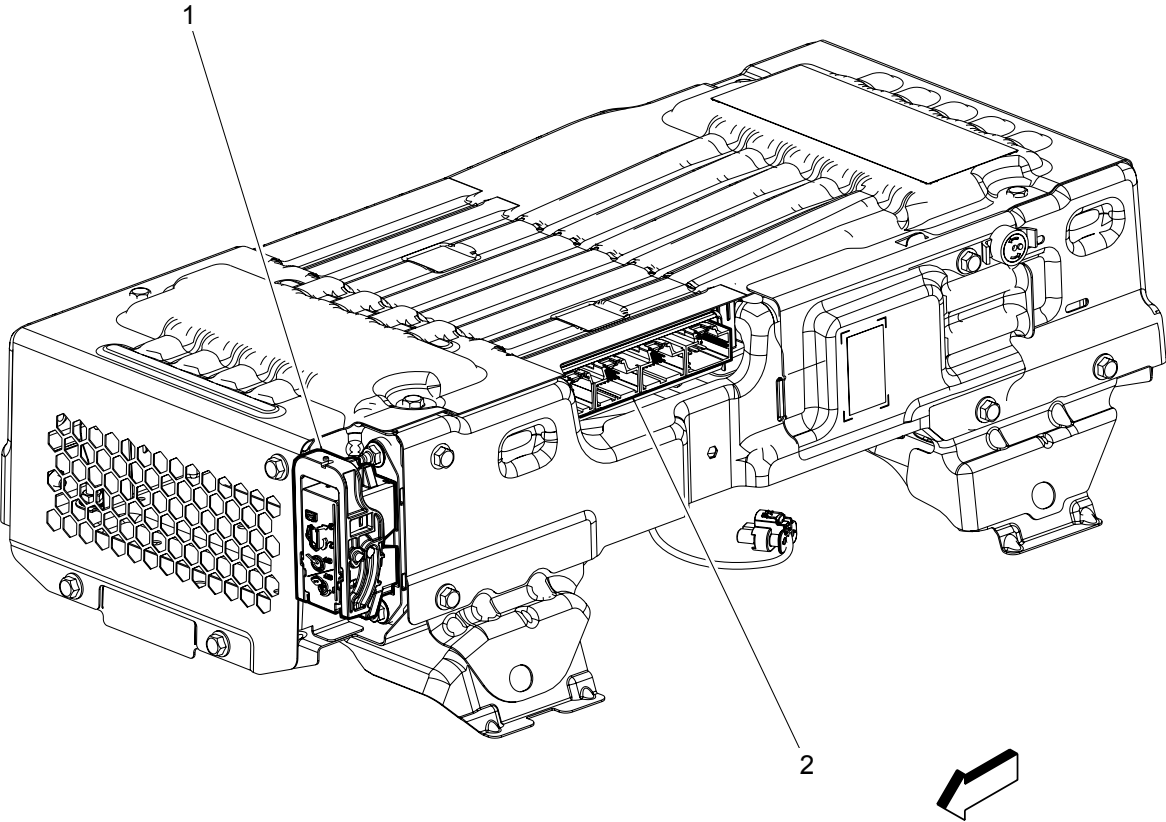
- 11. E37EL Dome/Reading Lamps - Front Overhead Console Left
- 12. E31L Sunshade Mirror Lamp - Left (DH6)
- 13. B24 Cellular Phone Microphone (IO5, IO6 or UE1)
- 14. B77LF Radio Volume Compensator Interior Noise Microphone - Left Front (NKC)
- 15. E37B Dome/Reading Lamps - 2nd Row (Extended or Crew Cab without U42)

Front Center of the Passenger Compartment Components (HP5)



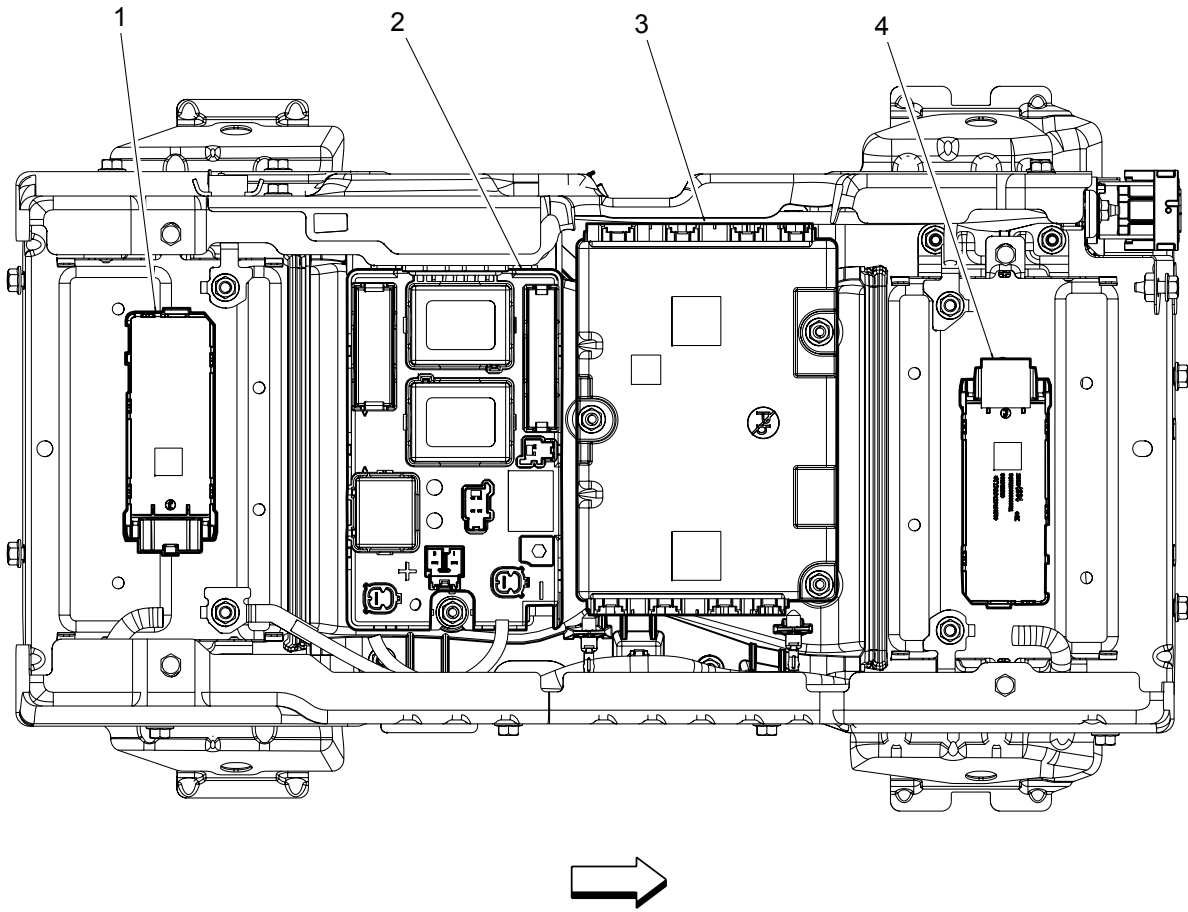
Items

- 1. A4 Hybrid/EV Battery Pack (HP5)
- 2. K59 Starter/Generator Control Module (HP5)



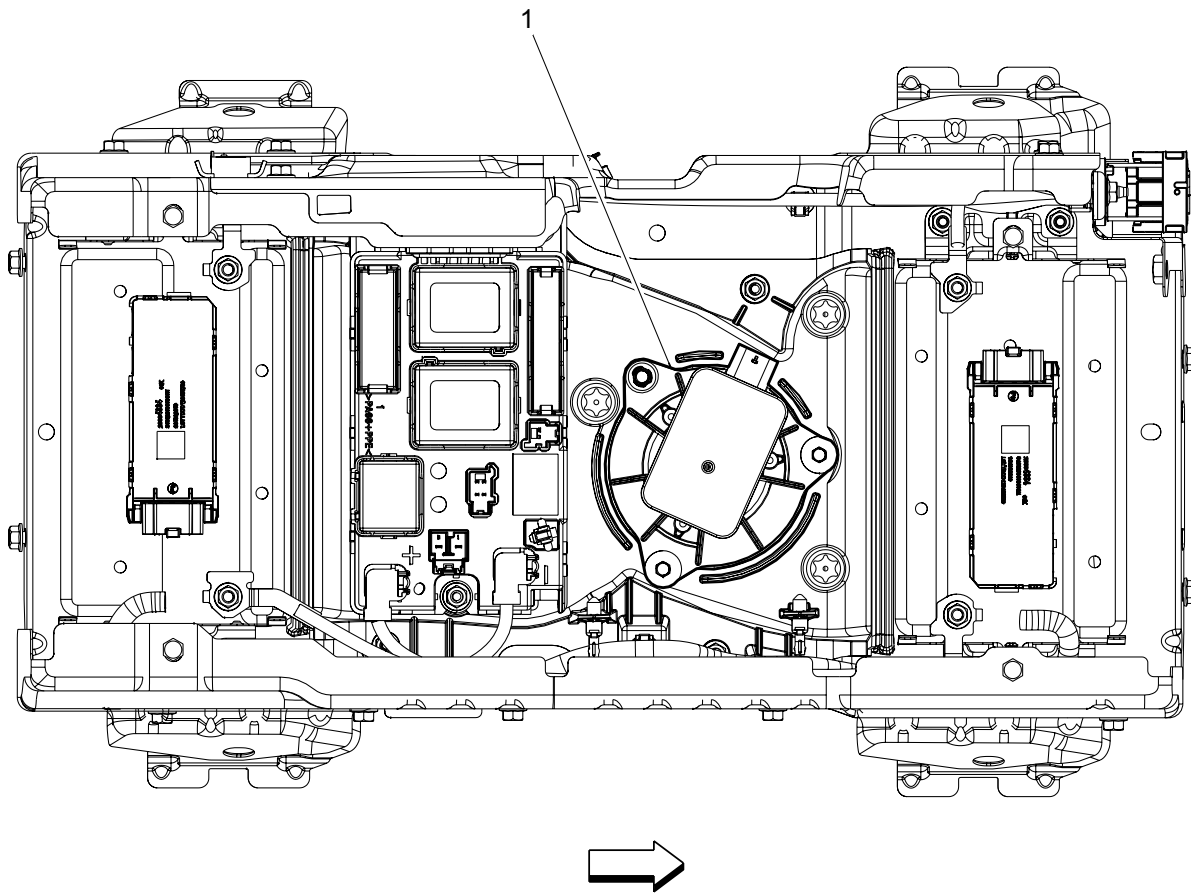
Items

- 1. X21 Manual Service Disconnect Receptacle (HP5)
- 2. K114B Hybrid/EV Powertrain Control Module 2 (HP5)



Items

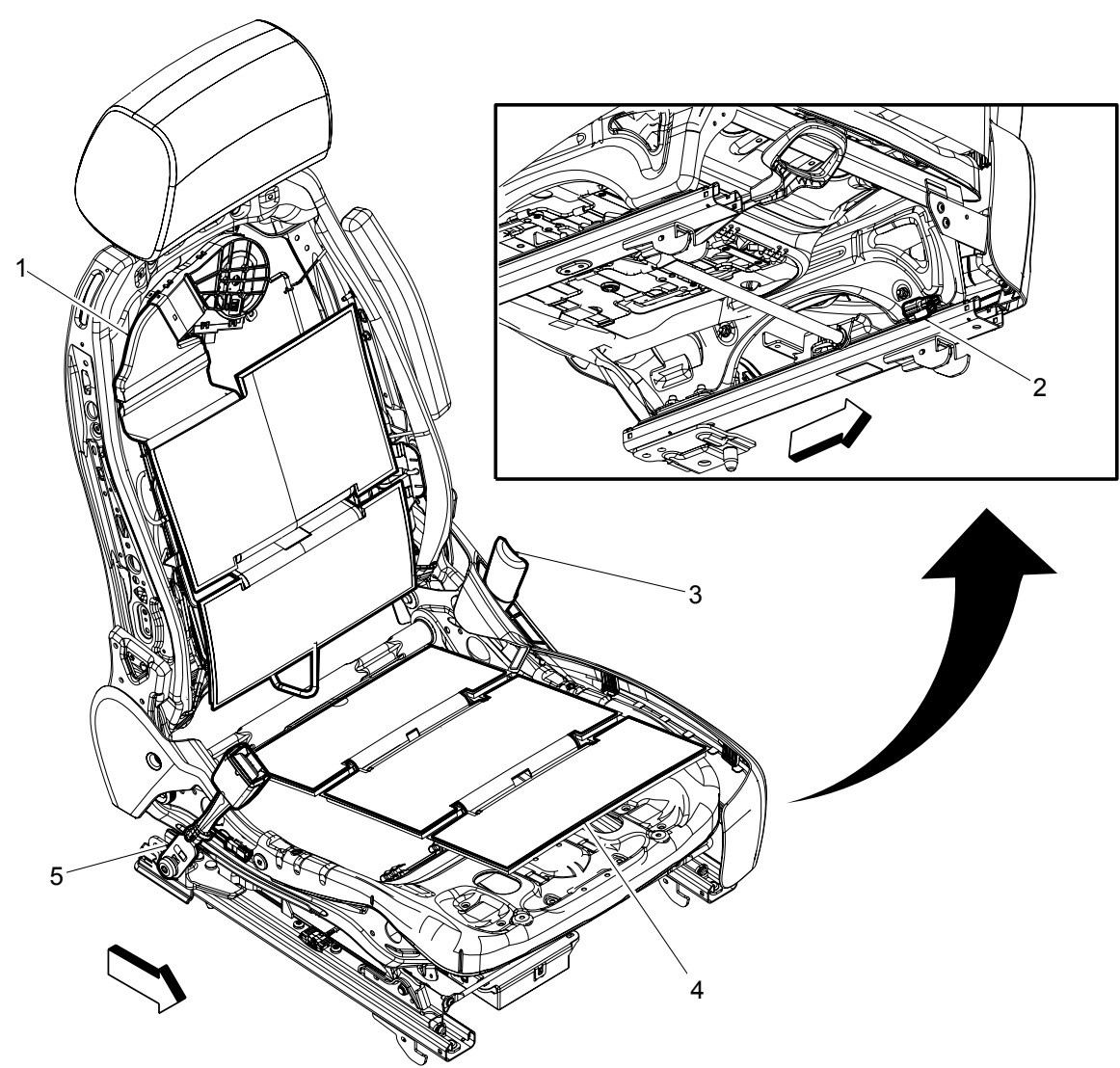
- 1. K112A Hybrid/EV Battery Interface Control Module 1 (HP5)
- 2. A28 Hybrid/EV Battery Contactor Assembly (HP5)
- 3. K114 Hybrid/EV Powertrain Control Module (HP5)
- 4. K112B Hybrid/EV Battery Interface Control Module 2 (HP5)



Items

- 1. G14 Hybrid/EV Battery Pack Cooling Fan (HP5)

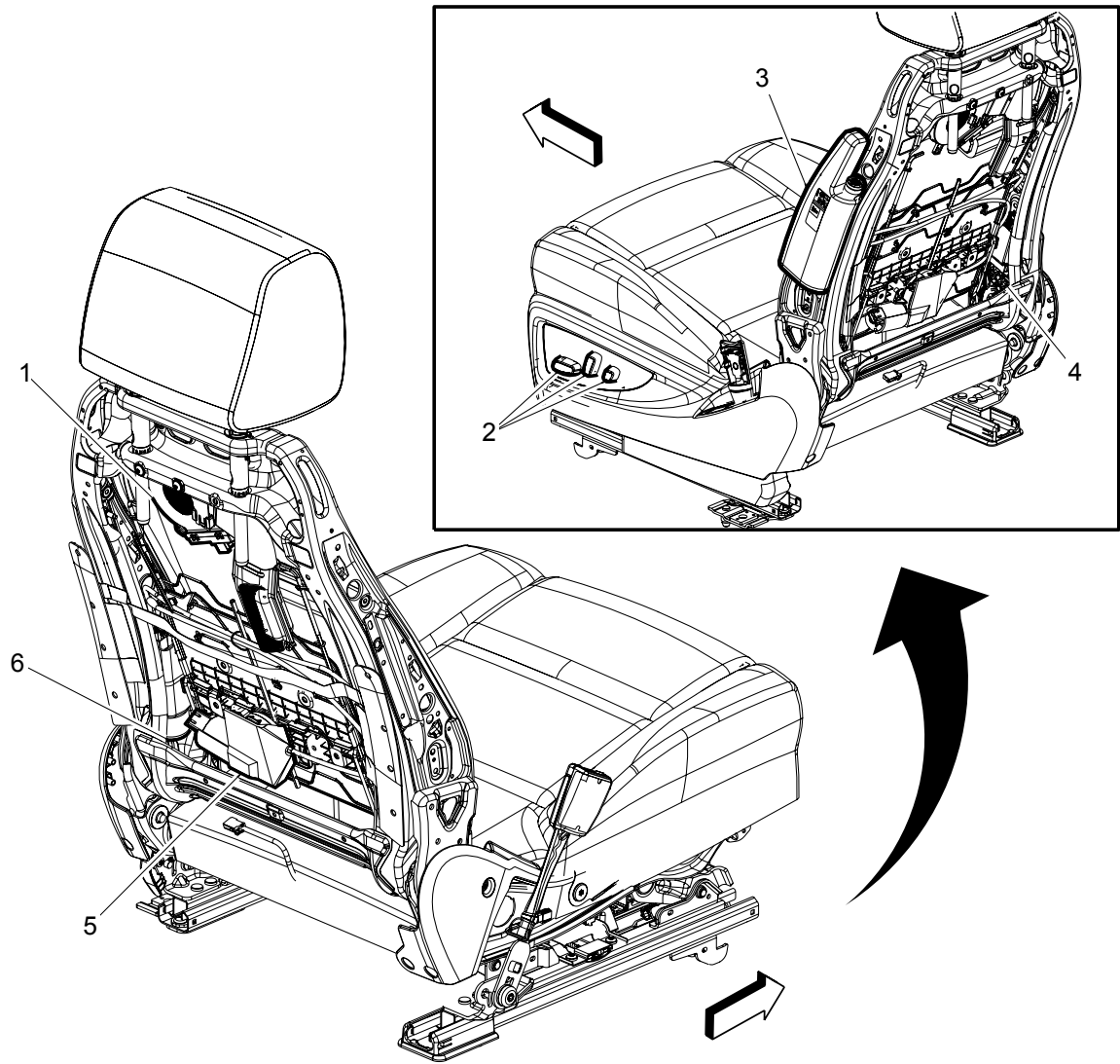
Front of Driver Seat Components



Items

- 1. E14A Seat Heating Element - Driver Back (KA1/KQV)
- 2. B62D Seat Position Sensor - Driver (1500)
- 3. F113D Seat Belt Anchor Pretensioner - Driver
- 4. E14B Seat Heating Element - Driver Cushion (KA1/KQV)
- 5. B153D Seat Belt Buckle - Driver

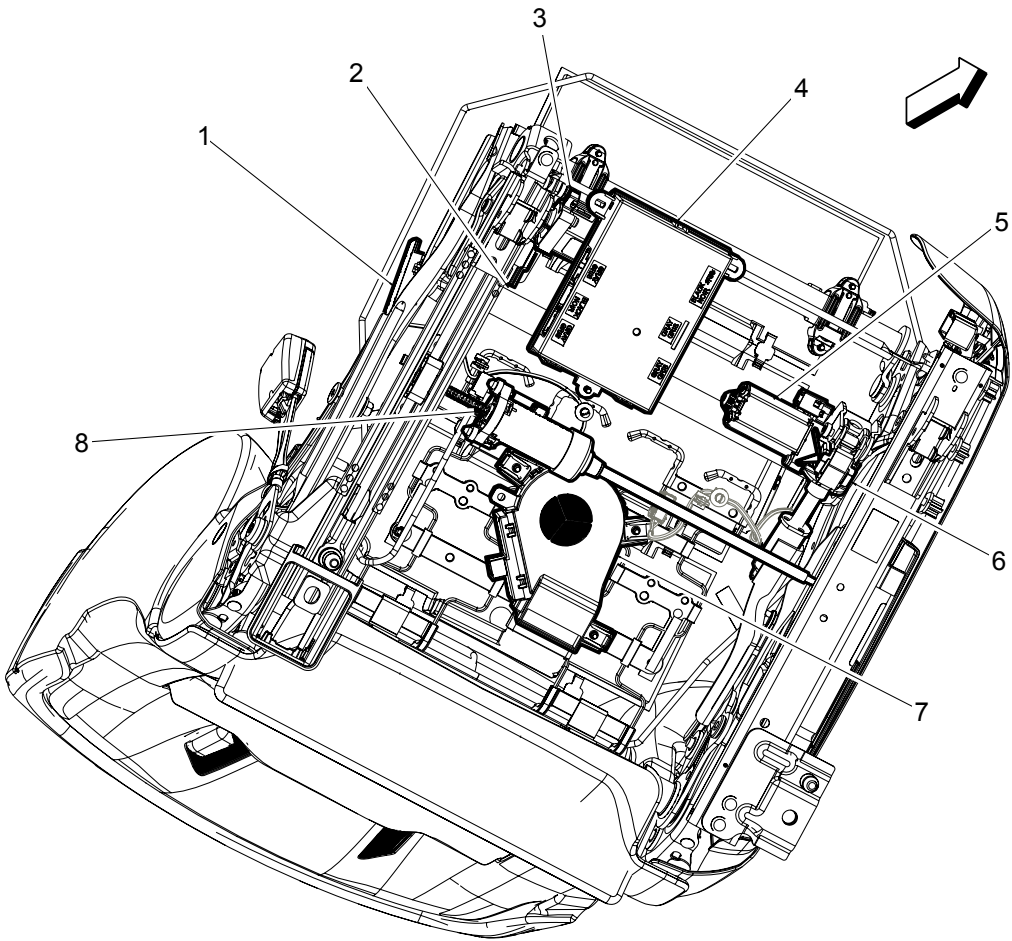
Back of Driver Seat Components



Items

- 1. M73A Seat Blower Motor - Driver Back (KQV)
- 2. S64D Seat Adjuster Switch - Driver
- 3. F106D Seat Side Air Bag - Driver (AY0)
- 4. M56D Seat Recline Motor - Driver
- 5. M52D Seat Lumbar Support Horizontal Motor - Driver
- 6. A14D Seat Lumbar Support Pump - Driver (GAJ or Y91)

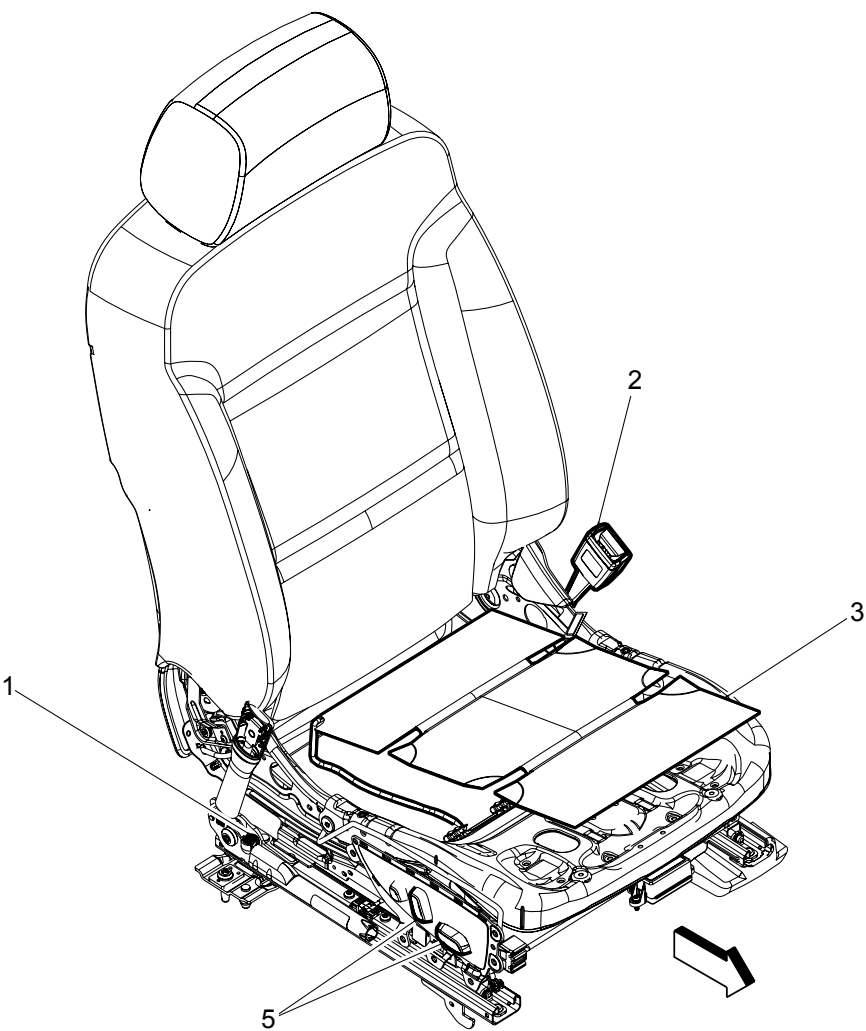
Bottom of Driver Seat Components



Items

- 1. P45LR Seat Haptic Movement Motor - Driver Left Rear (UEU or UFL)
- 2. B62D Seat Position Sensor - Driver (1500)
- 3. M51D Seat Horizontal Motor - Driver
- 4. K40 Seat Memory Control Module (A45)
- 5. M50D Seat Front Vertical Motor - Driver
- 6. P45RR Seat Haptic Movement Motor - Driver Right Rear (UEU or UFL)
- 7. M73C Seat Blower Motor - Driver Cushion (KQV)
- 8. M55D Seat Rear Vertical Motor - Driver

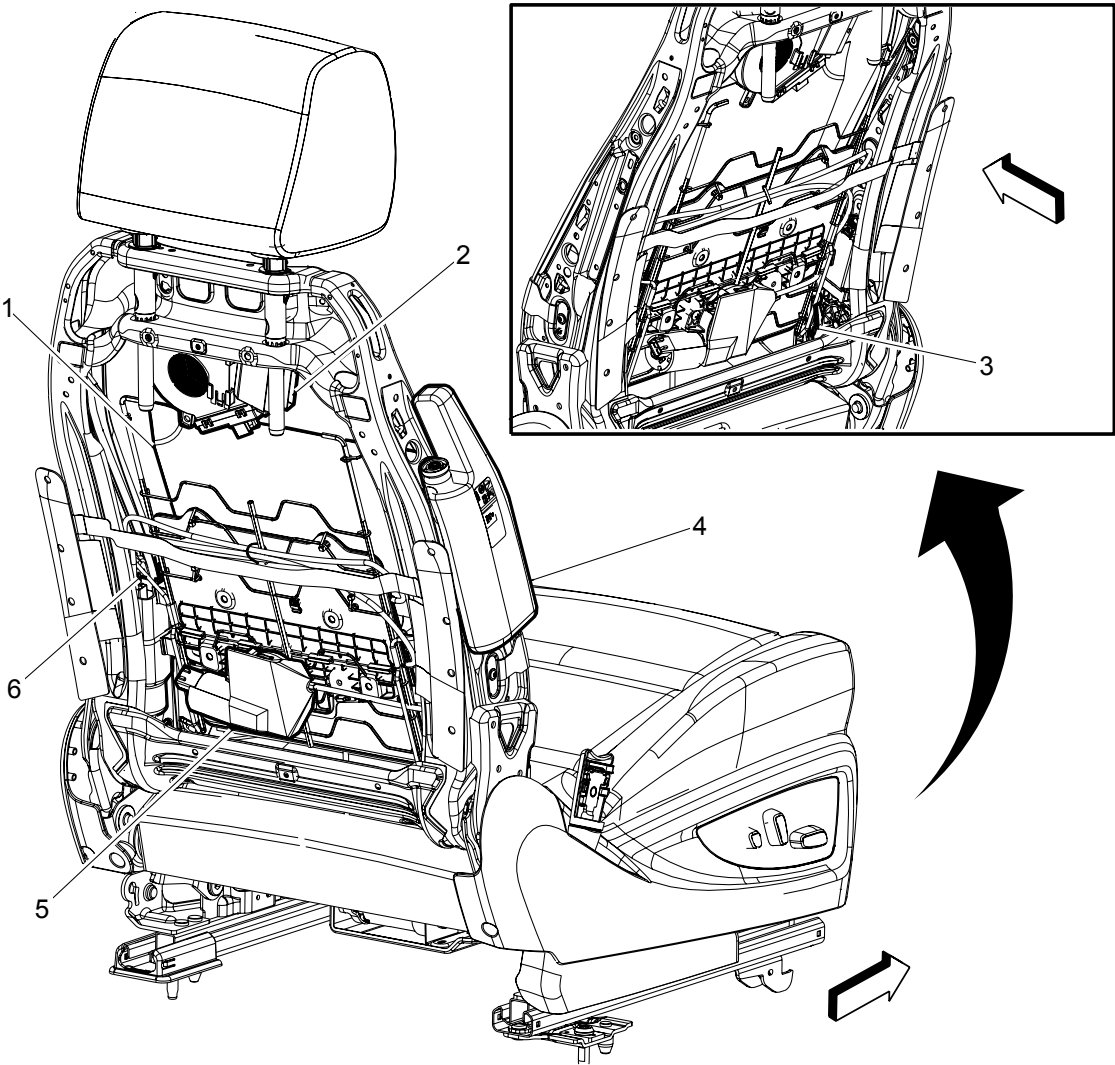
Front of Passenger Seat Components



Items

- 1. F113P Seat Belt Anchor Pretensioner - Passenger
- 2. B153P Seat Belt Buckle - Passenger
- 3. E14D Seat Heating Element - Passenger Cushion (KA1/KQV)
- 4. S64P Seat Adjuster Switch - Passenger
- 5. S64P Seat Adjuster Switch - Passenger

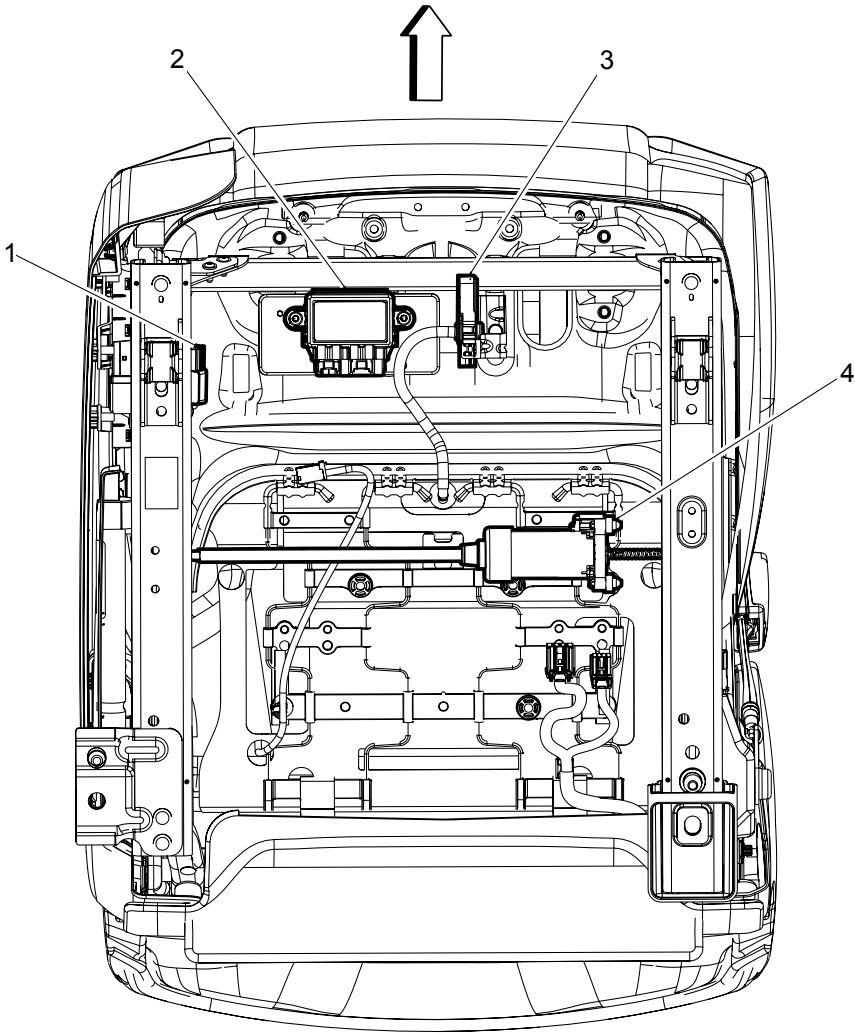
Back of Passenger Seat Components



Items

- 1. E14C Seat Heating Element - Passenger Back (KA1/KQV)
- 2. M73B Seat Blower Motor - Passenger Back (KQV)
- 3. M56P Seat Recline Motor - Passenger
- 4. F106P Seat Side Air Bag - Passenger (AY0)
- 5. M52P Seat Lumbar Support Horizontal Motor - Passenger
- 6. A14P Seat Lumbar Support Pump - Passenger (GAJ or Y91)

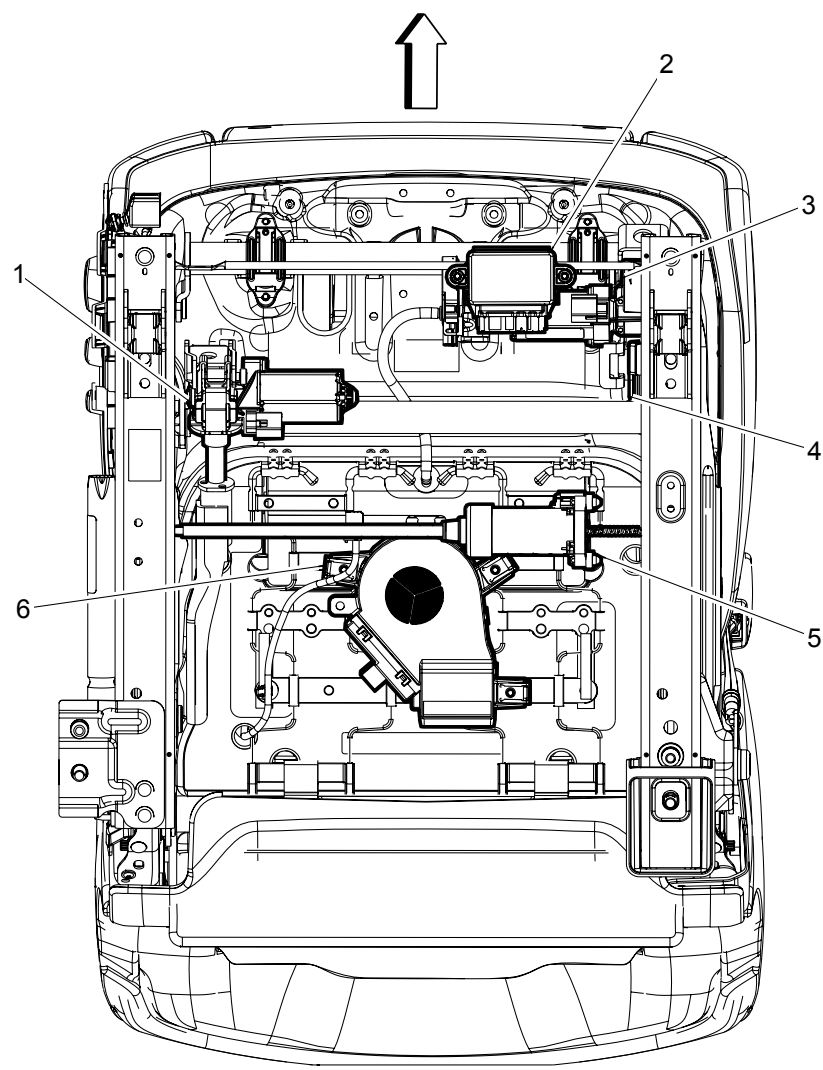
Bottom of Passenger Seat Components (without GAJ or Y91)



Items

- 1. B62P Seat Position Sensor - Passenger (1500)
- 2. K29 Seat Heating Control Module (KA1 without KQV)
- 3. K85 Passenger Presence Module (AL0)
- 4. M51P Seat Horizontal Motor - Passenger

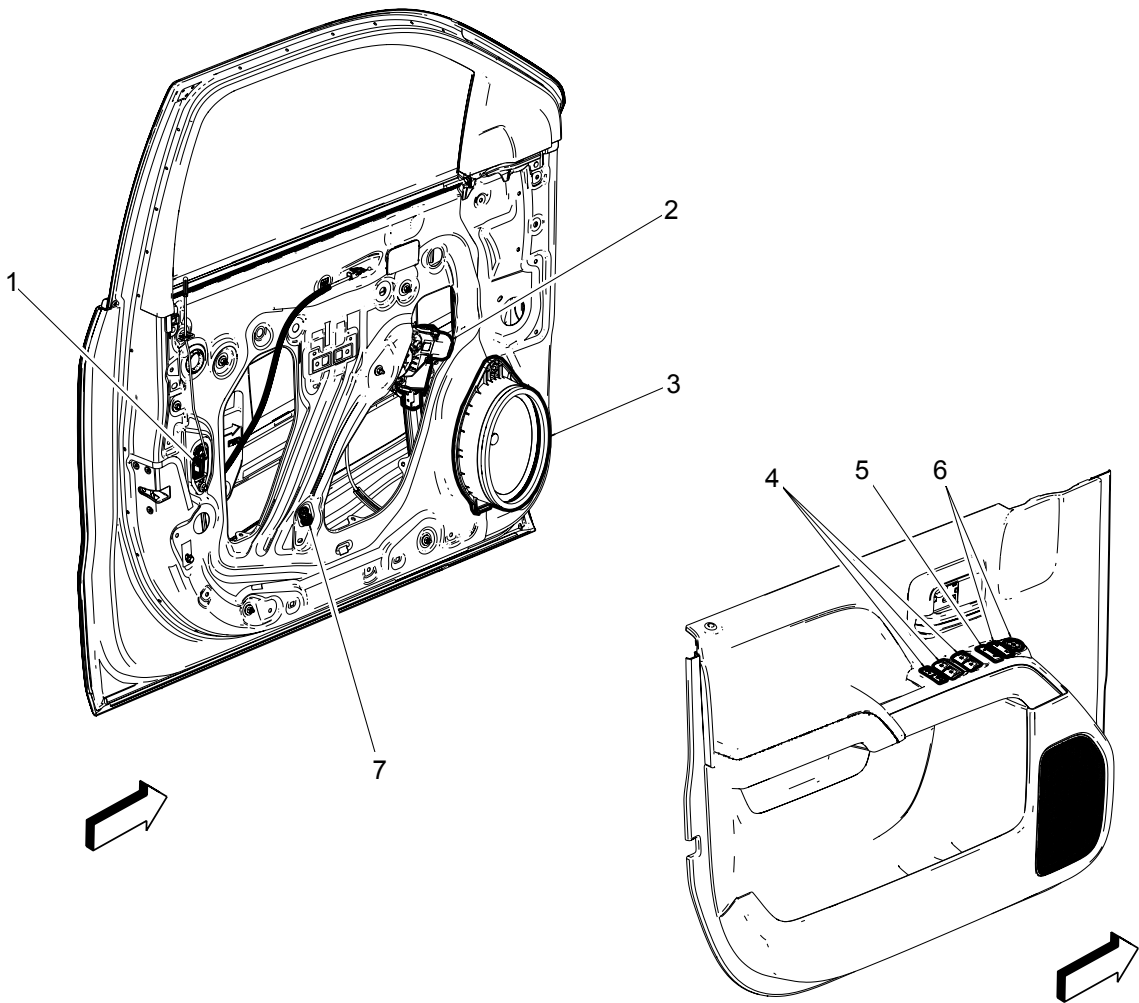
Bottom of Passenger Seat Components (GAJ or Y91)



Items

- 1. M55P Seat Rear Vertical Motor - Passenger
- 2. K29 Seat Heating Control Module (KA1 without KQV)
- 3. M50P Seat Front Vertical Motor - Passenger
- 4. B62P Seat Position Sensor - Passenger (1500)
- 5. M51P Seat Horizontal Motor - Passenger
- 6. M73D Seat Blower Motor - Passenger Cushion (KQV)

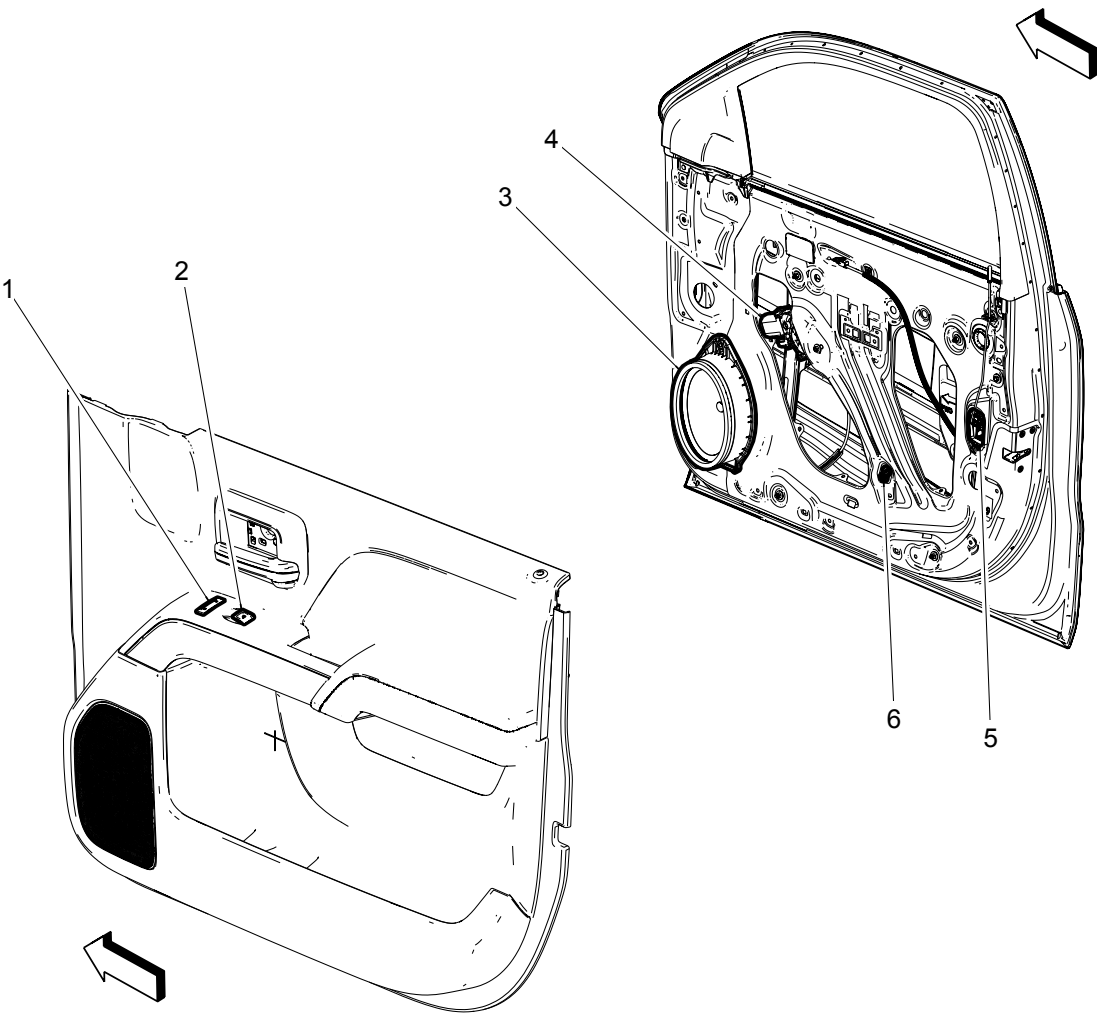
Driver Door Components



Items

- 1. A23D Door Latch Assembly - Driver
- 2. M74D Window Motor - Driver (A31)
- 3. P19AG Speaker - Left Front Door
- 4. S79D Window Switch - Driver (A31)
- 5. S13D Door Lock Switch - Driver
- 6. S52 Outside Rearview Mirror Switch (DL3, DL8, DPN or DQS)
- 7. B63LF Side Impact Sensor - Left Front (AY0)

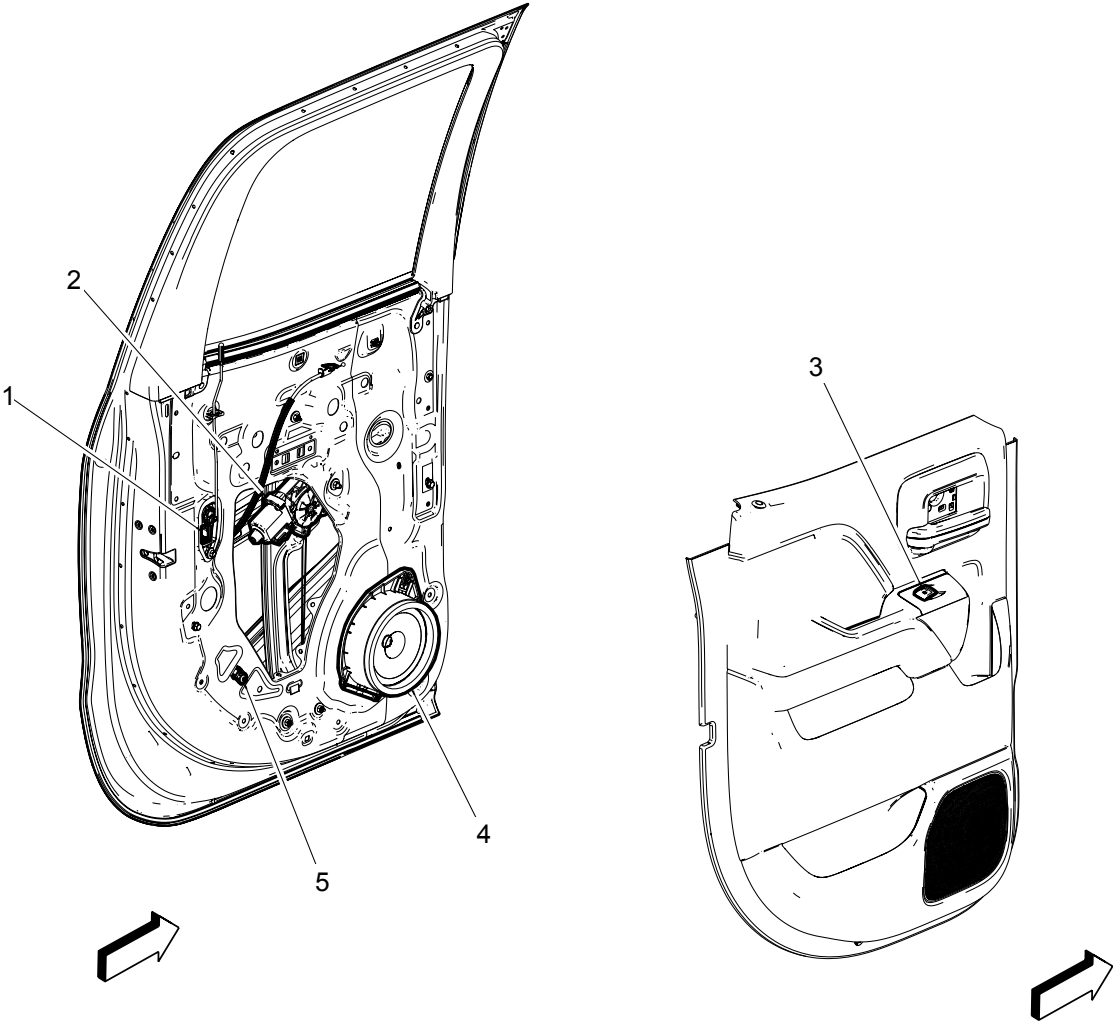
Passenger Door Components



Items

- 1. S13P Door Lock Switch - Passenger
- 2. S79P Window Switch - Passenger (A31)
- 3. P19AH Speaker - Right Front Door
- 4. M74P Window Motor - Passenger (A31)
- 5. A23P Door Latch Assembly - Passenger
- 6. B63RF Side Impact Sensor - Right Front (4 Door with AY0)

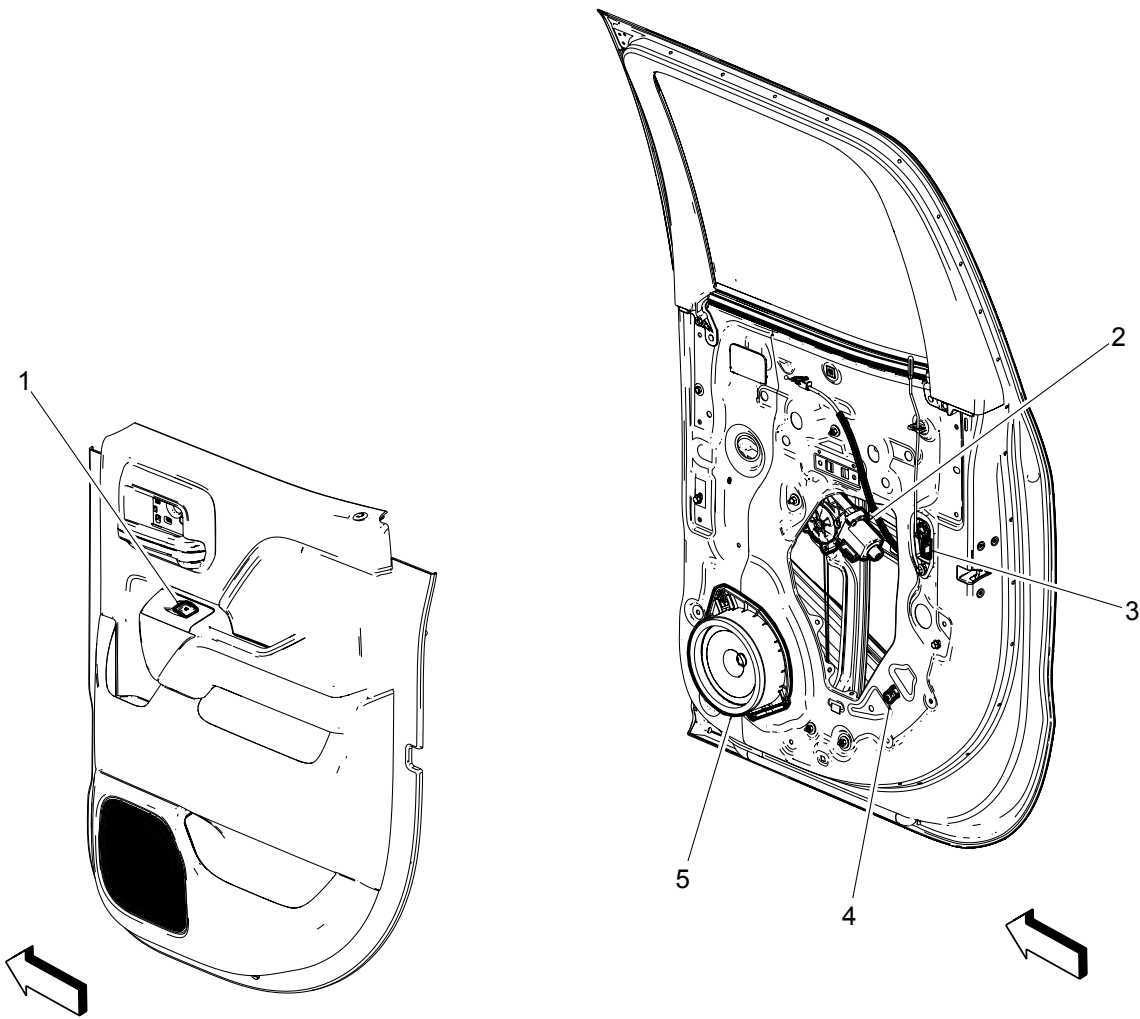
Left Rear Door Components



Items

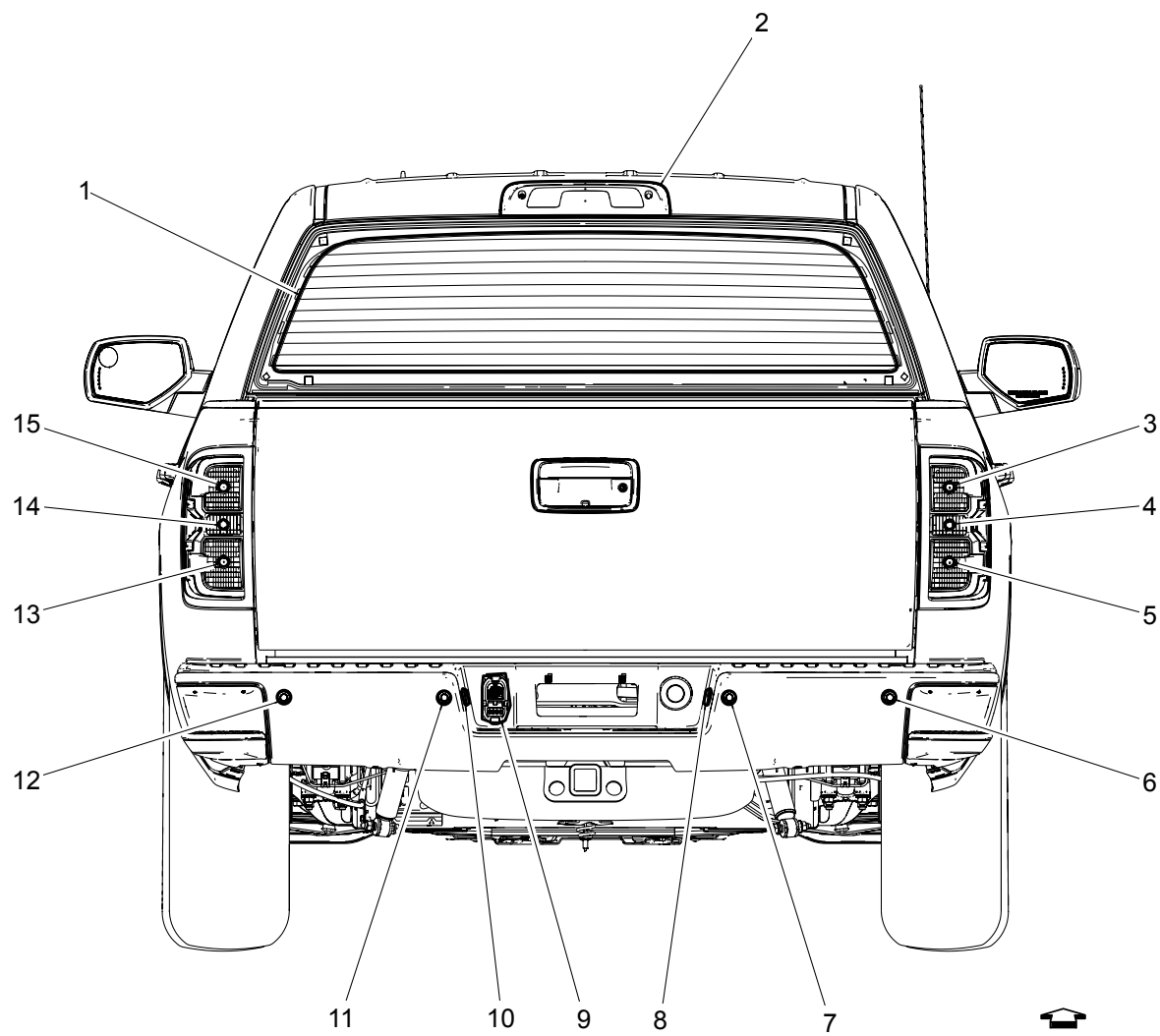
- 1. A23LR Door Latch Assembly - Left Rear (Extended Cab or Crew Cab)
- 2. M74LR Window Motor - Left Rear (Extended or Crew Cab)
- 3. S79LR Window Switch - Left Rear (Extended or Crew Cab)
- 4. P19AL Speaker - Left Rear Door (Extended or Crew Cab)
- 5. B63LR Side Impact Sensor - Left Rear (4 Door with AY0)

Right Rear Door Components



Items

- 1. S79RR Window Switch - Right Rear (Extended or Crew Cab)
- 2. M74RR Window Motor - Right Rear (Extended or Crew Cab)
- 3. A23RR Door Latch Assembly - Right Rear (Extended Cab or Crew Cab)
- 4. B63RR Side Impact Sensor - Right Rear (AY0)
- 5. P19AM Speaker - Right Rear Door (Extended or Crew Cab)

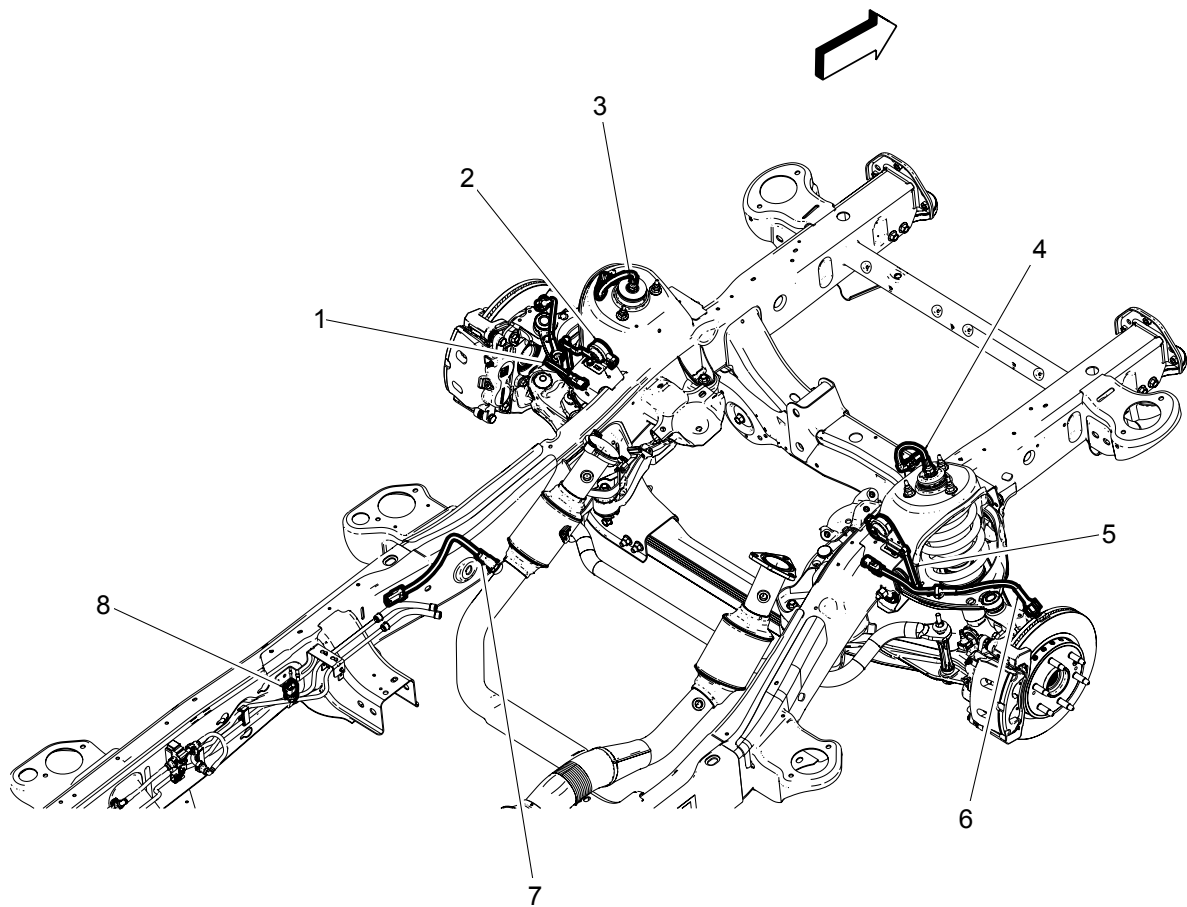


Items

- 1. E18 Rear Defogger Grid (C49)
- 2. E6 Center High Mounted Stop Lamp
- 3. E5AH Tail/Stop and Turn Signal Lamp - Right Upper (without ZW9)
- 4. E5B Backup Lamp - Right
- 5. E5V Tail/Stop and Turn Signal Lamp - Right Lower (without ZW9)
- 6. B78H Rear Object Sensor - Right Outer (UD7)
- 7. B78F Rear Object Sensor - Right Middle (UD7)
- 8. E7R License Plate Lamp - Right (E63 without 9J4)
- 9. X88 Trailer Connector (Z82)
- 10. E7L License Plate Lamp - Left (E63 without 9J4)
- 11. B78E Rear Object Sensor - Left Middle (UD7)

- 11. B78E Rear Object Sensor - Left Middle (UD7)
- 12. B78G Rear Object Sensor - Left Outer (UD7)
- 13. E5U Tail/Stop and Turn Signal Lamp - Left Lower (without ZW9)
- 14. E5A Backup Lamp - Left
- 15. E5AG Tail/Stop and Turn Signal Lamp - Left Upper (without ZW9)

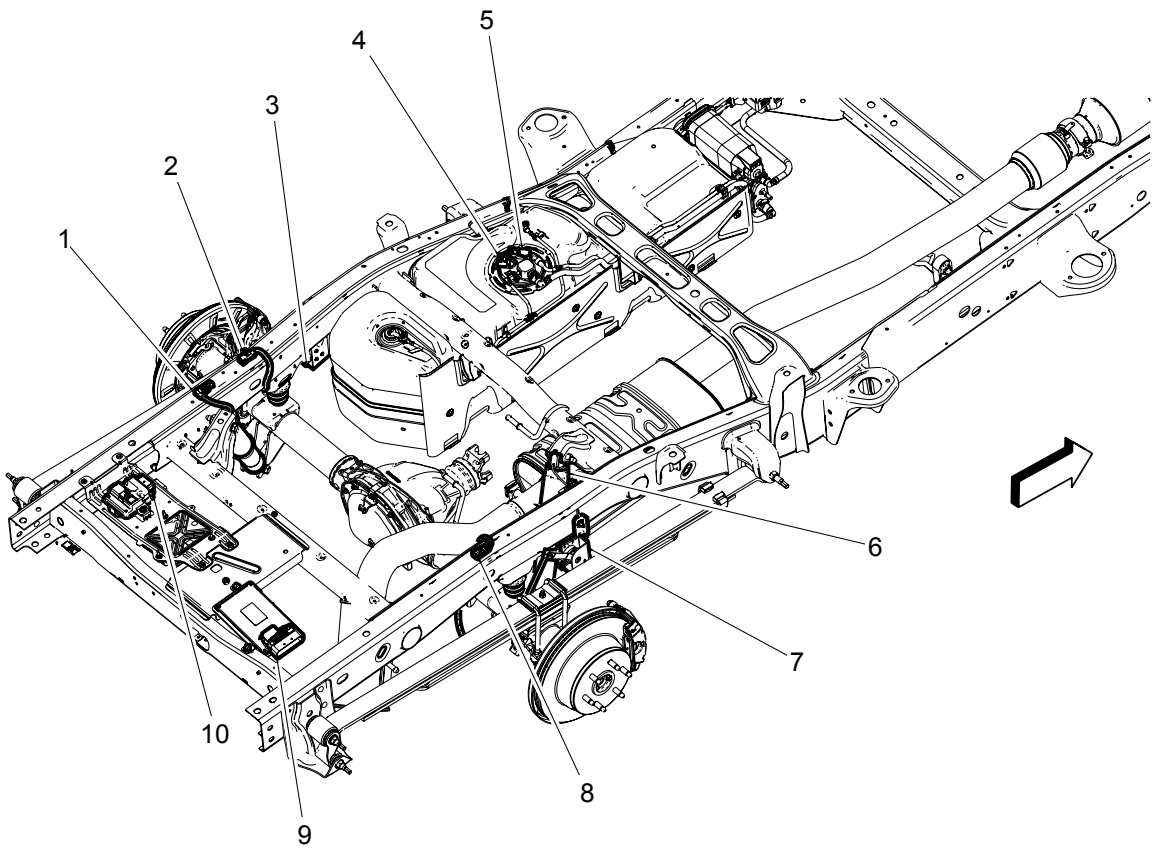
Front Chassis Components (1500)



Items

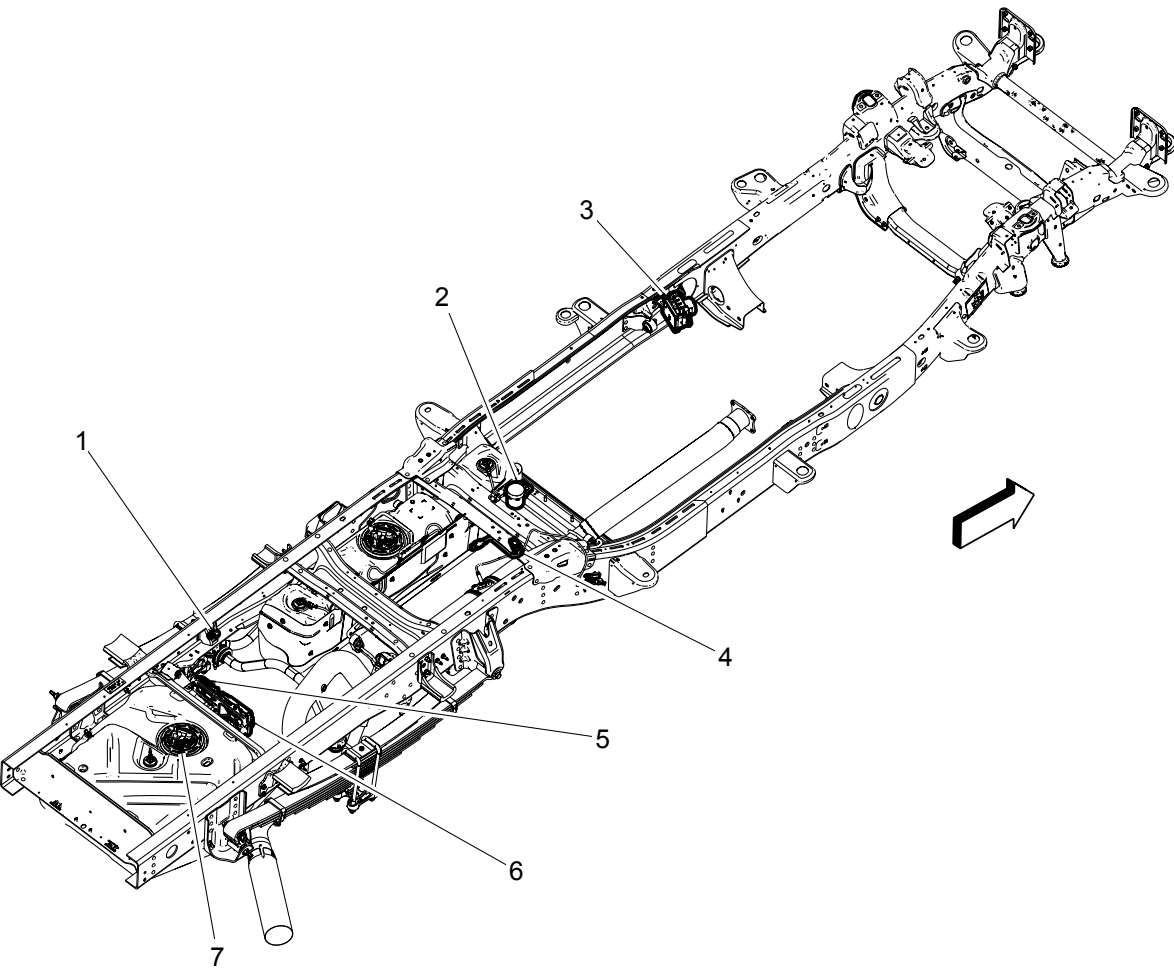
- 1. B5LF Wheel Speed Sensor - Left Front
- 2. B152LF Suspension Position Sensor - Left Front (Z95)
- 3. Q37LF Shock Absorber Actuator - Left Front (Z95)
- 4. Q37RF Shock Absorber Actuator - Right Front (Z95)
- 5. B152RF Suspension Position Sensor - Right Front (Z95)
- 6. B5RF Wheel Speed Sensor - Right Front
- 7. B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (except L5P)
- 8. B47 Fuel Pressure Sensor (1500)

Rear Chassis Components (except Chassis Cab or L5P)



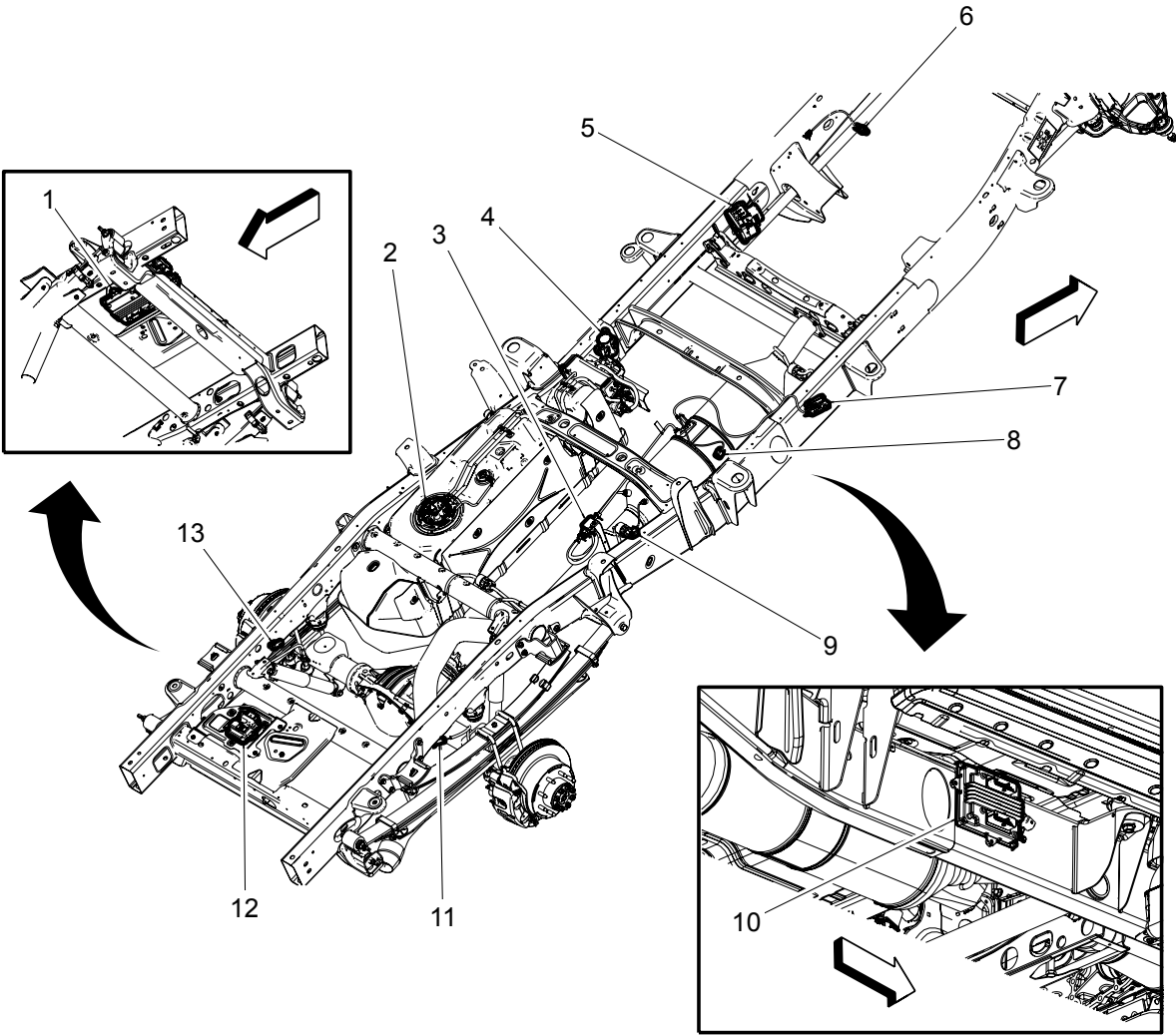
Items

- 1. Q37LR Shock Absorber Actuator - Left Rear (Z95)
- 2. B5LR Wheel Speed Sensor - Left Rear
- 3. B152LR Suspension Position Sensor - Left Rear (Z95)
- 4. A7 Fuel Pump and Level Sensor Assembly (1500)
- 5. B150 Fuel Tank Pressure Sensor
- 6. Q37RR Shock Absorber Actuator - Right Rear (Z95)
- 7. B152RR Suspension Position Sensor - Right Rear (Z95)
- 8. B5RR Wheel Speed Sensor - Right Rear
- 9. K19 Suspension Control Module (Z95)
- 10. K38A Chassis Control Module - Auxiliary (JL1)



Items

- 1. R6A Terminating Resistor - High Speed Bus
- 2. B150 Fuel Tank Pressure Sensor
- 3. Q13 Evaporative Emission Vent Solenoid Valve (except L5P)
- 4. K17 Electronic Brake Control Module
- 5. B195A Nitrogen Oxides Sensor 1 (L5P)
- 6. K133 Trailer Brake Power Control Module (JL1)
- 7. K38A Chassis Control Module - Auxiliary (JL1)

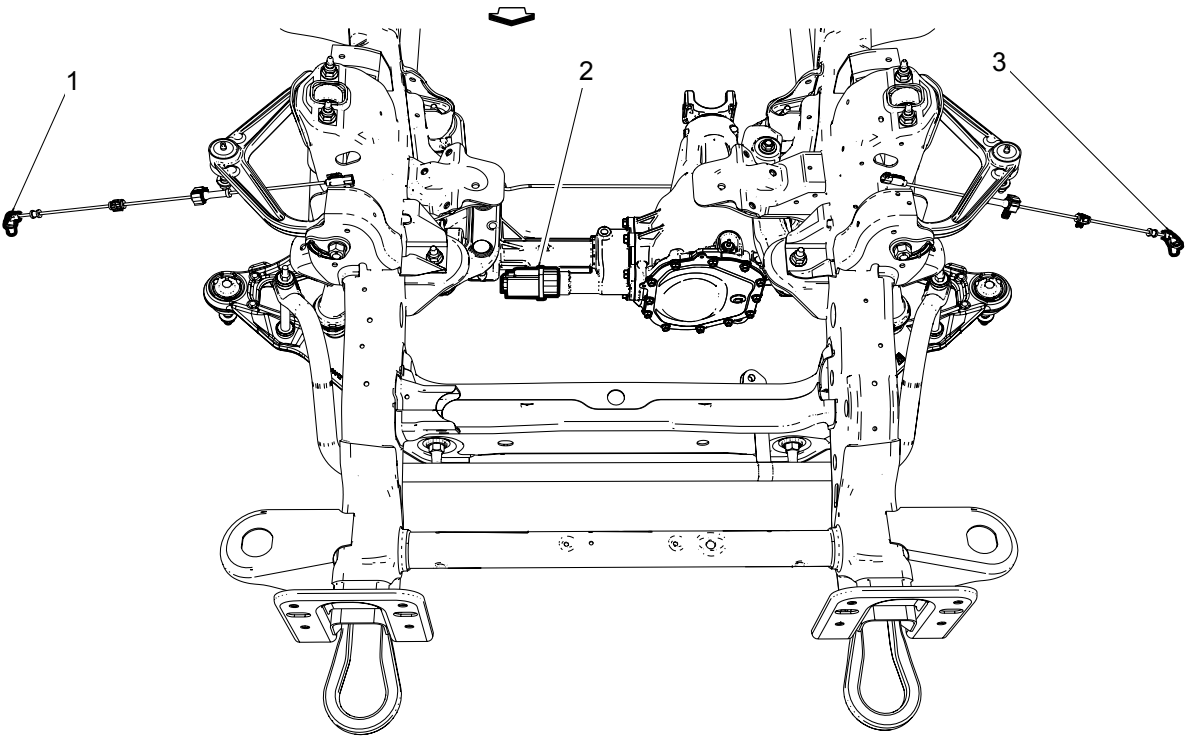


Items

- 1. K38A Chassis Control Module - Auxiliary (JL1)
- 2. B150 Fuel Tank Pressure Sensor
- 3. B154 Diesel Particulate Filter Exhaust Differential Pressure Sensor (L5P)
- 4. Q13 Evaporative Emission Vent Solenoid Valve (except L5P)
- 5. K17 Electronic Brake Control Module
- 6. B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (except L5P)
- 7. B195B Nitrogen Oxides Sensor 2 (L5P)
- 8. B131C Exhaust Temperature Sensor 3 (L5P)
- 9. B131D Exhaust Temperature Sensor 4 (L5P)
- 10. K44 Power Take-Off Control Module (PTO)
- 11. B5LR Wheel Speed Sensor - Left Rear

- 11. B5LR Wheel Speed Sensor - Left Rear
- 12. K133 Trailer Brake Power Control Module (JL1)
- 13. B5RR Wheel Speed Sensor - Right Rear

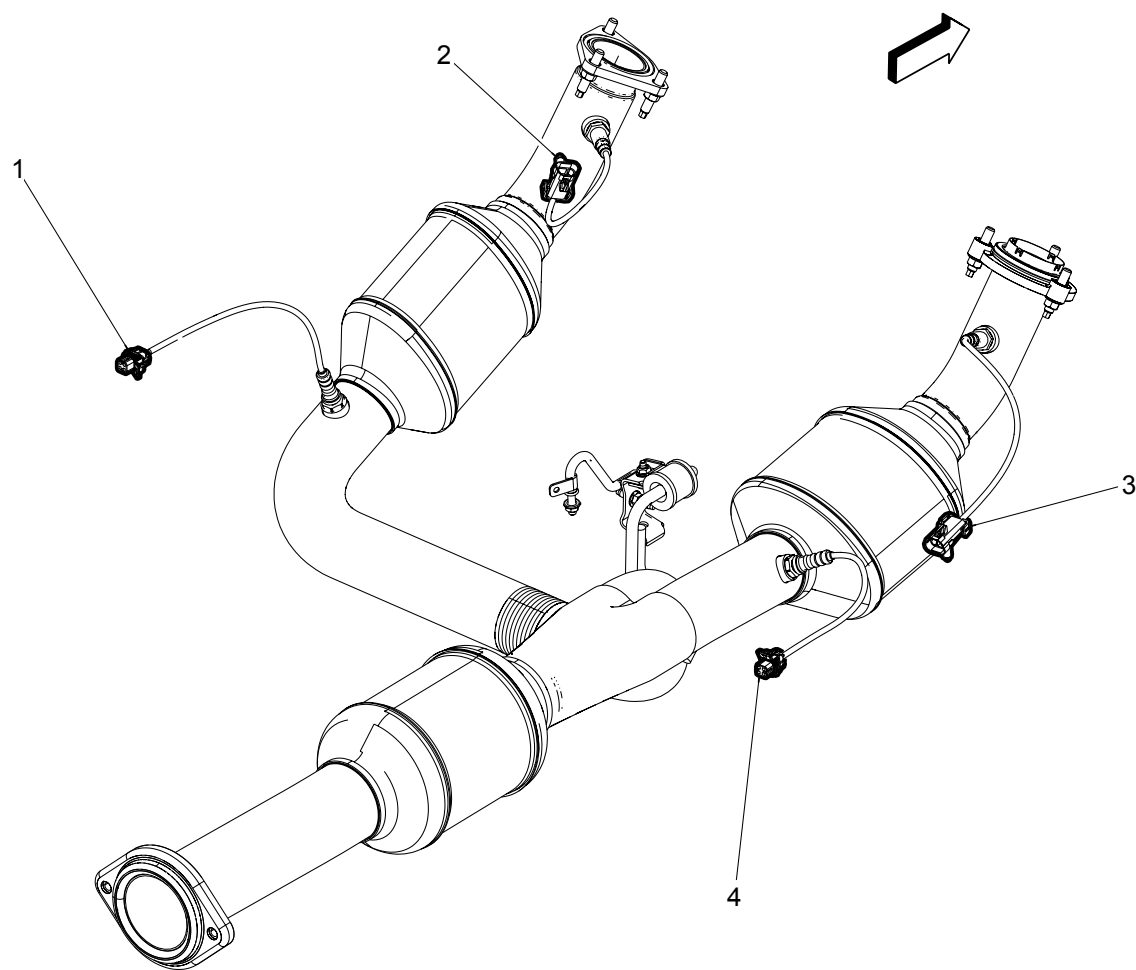
Front Axle Components



Items

- 1. B5RR Wheel Speed Sensor - Right Rear
- 2. M26 Front Axle Engagement Actuator (NQF, MQG or MQH)
- 3. B5LR Wheel Speed Sensor - Left Rear

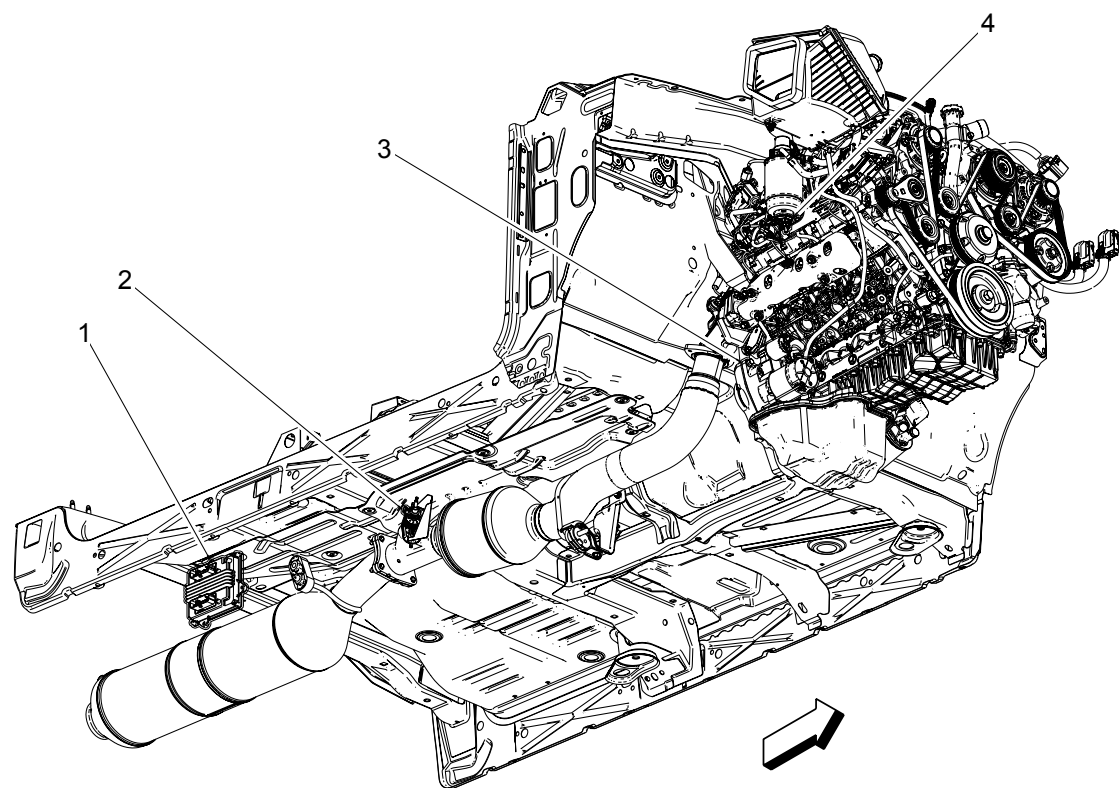
Exhaust Components (L96)



Items

- 1. B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (except L5P)
- 2. B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (except L5P)
- 3. B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (except L5P)
- 4. B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (except L5P)

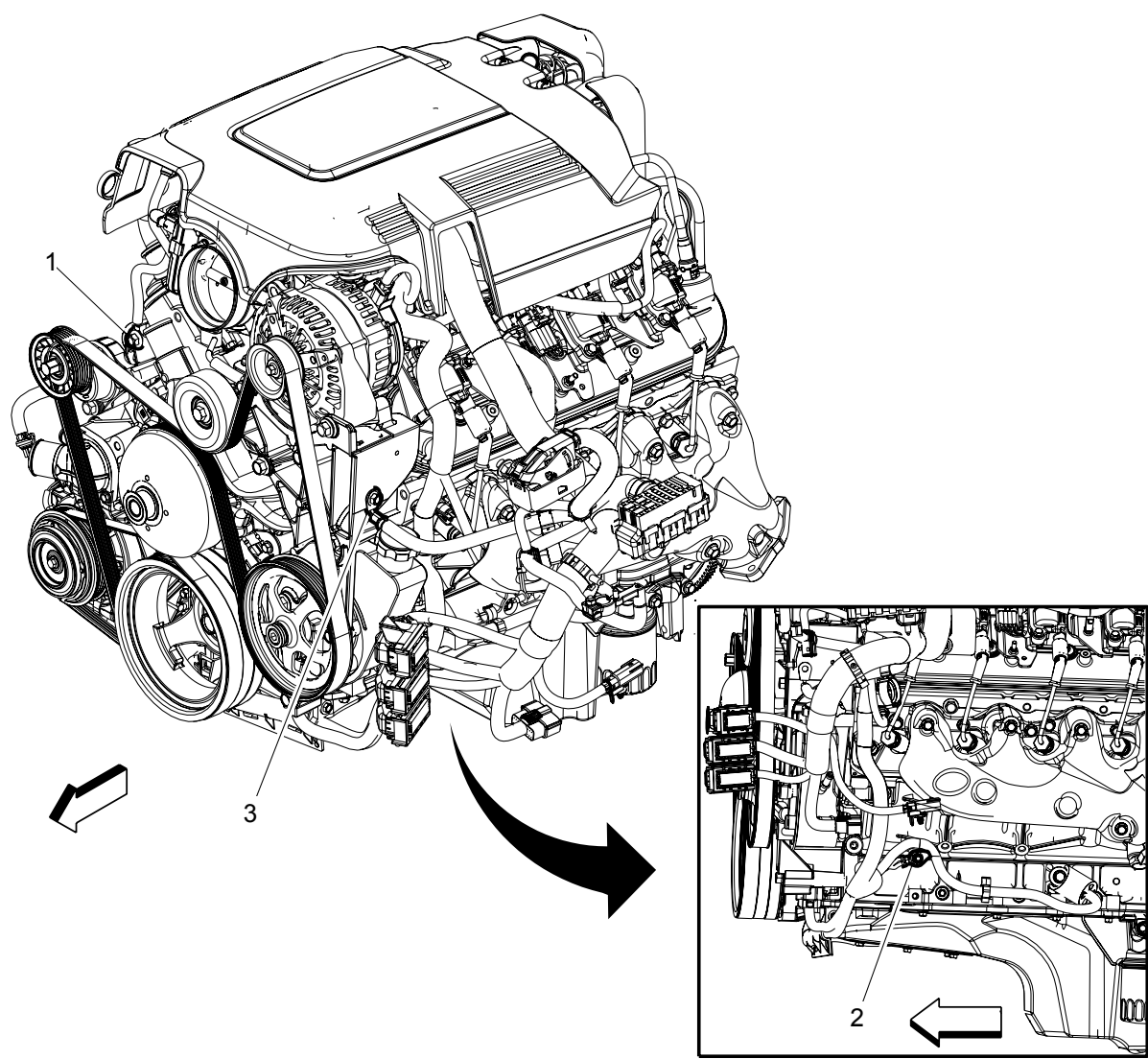
Underbody Components (L5P)



Items

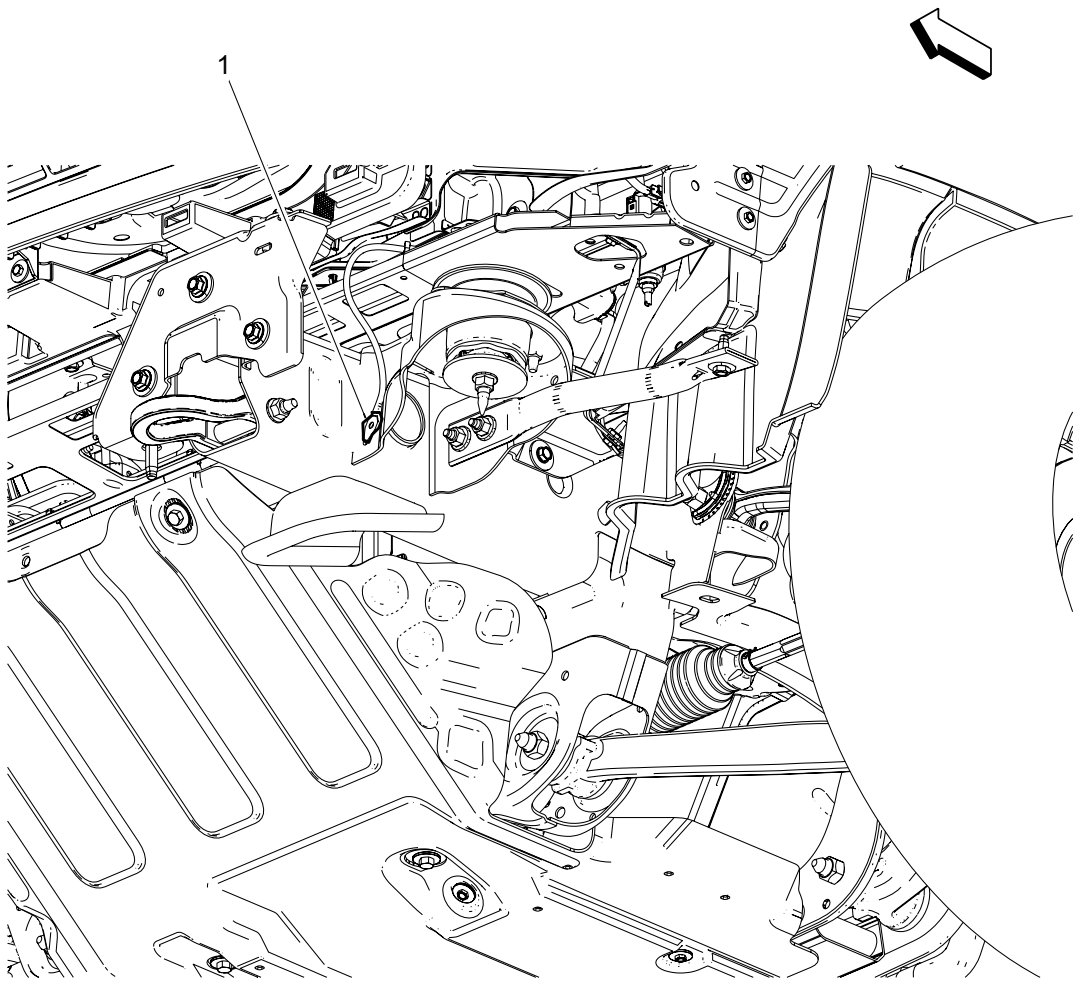
- 1. K44 Power Take-Off Control Module (PTO)
- 2. Q61 Reductant Injector (L5P)
- 3. M64 Starter Motor
- 4. B116 Water in Fuel Sensor

G100, G110 and G120 (L96 or LC8)



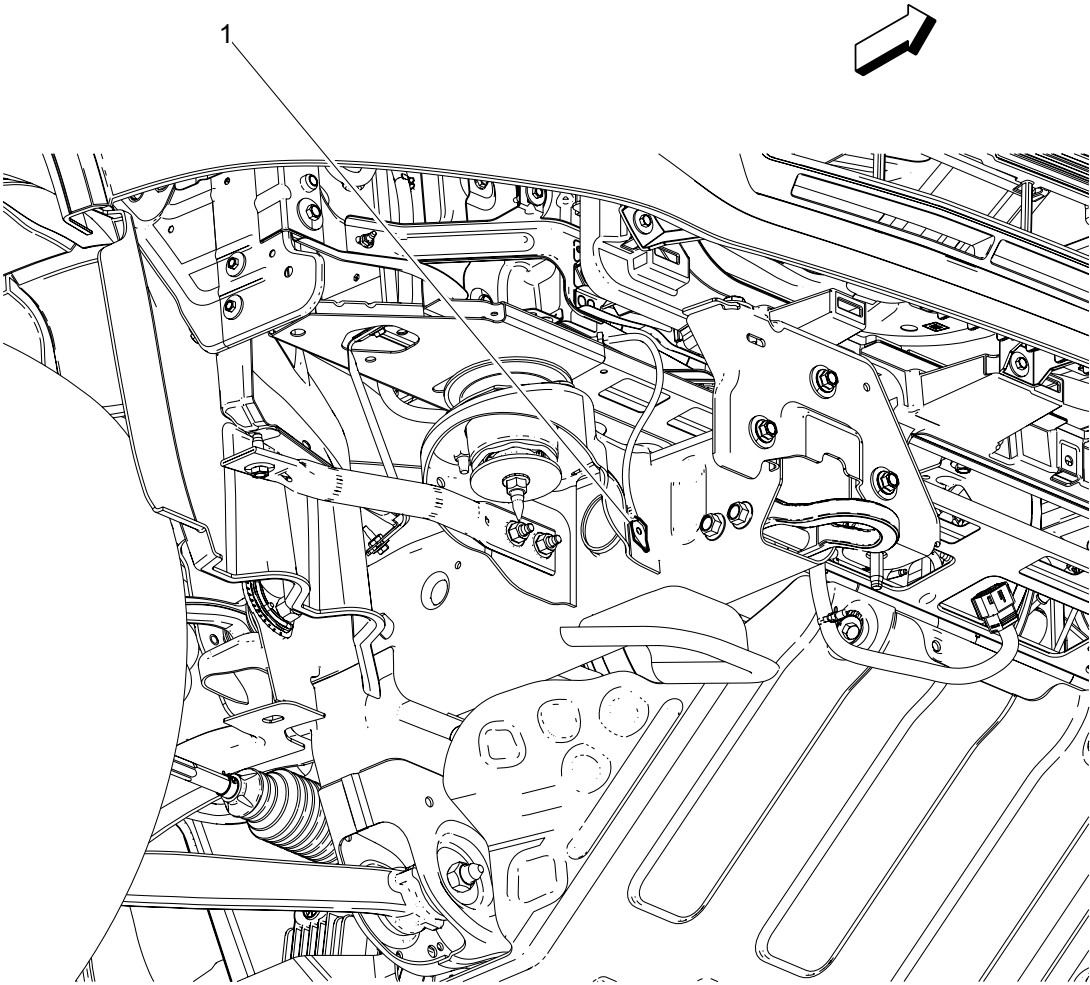
Items

- 1. G120
- 2. G110
- 3. G100 (K4B or K4D)



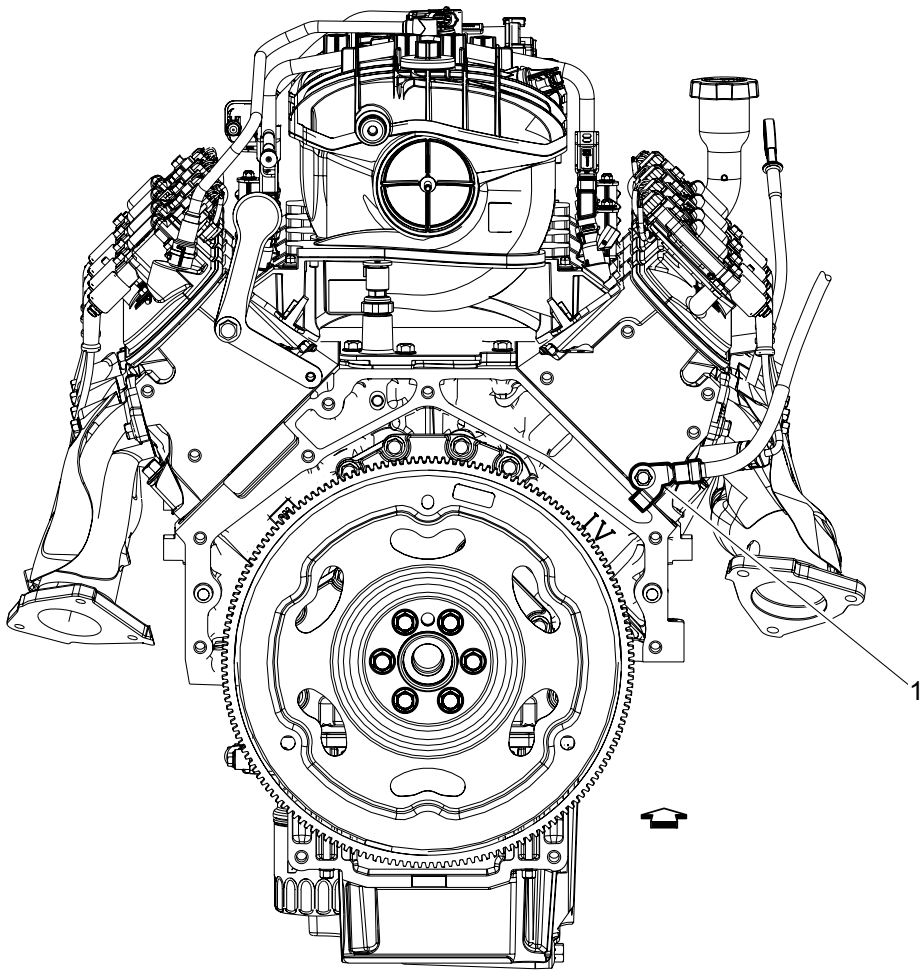
Items

1. G101



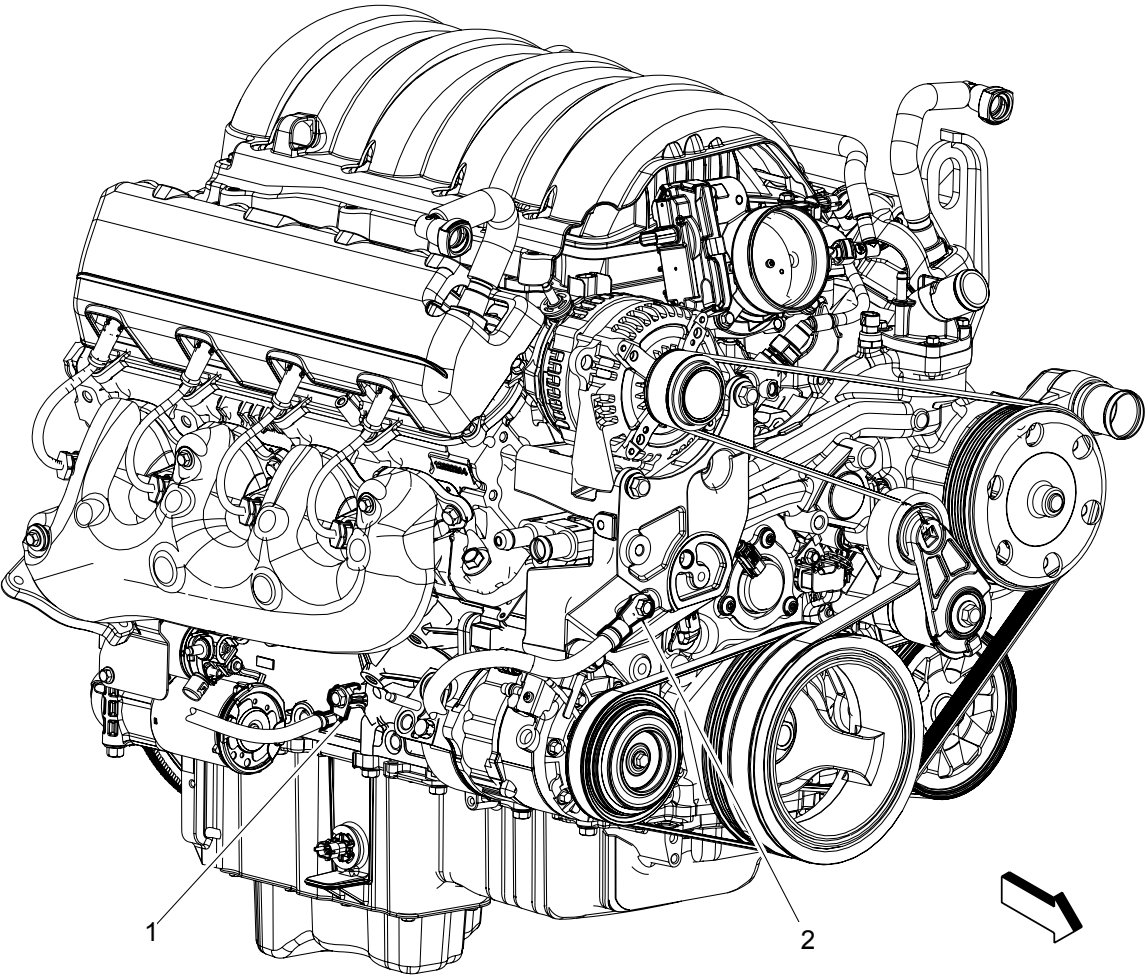
Items

1. G102



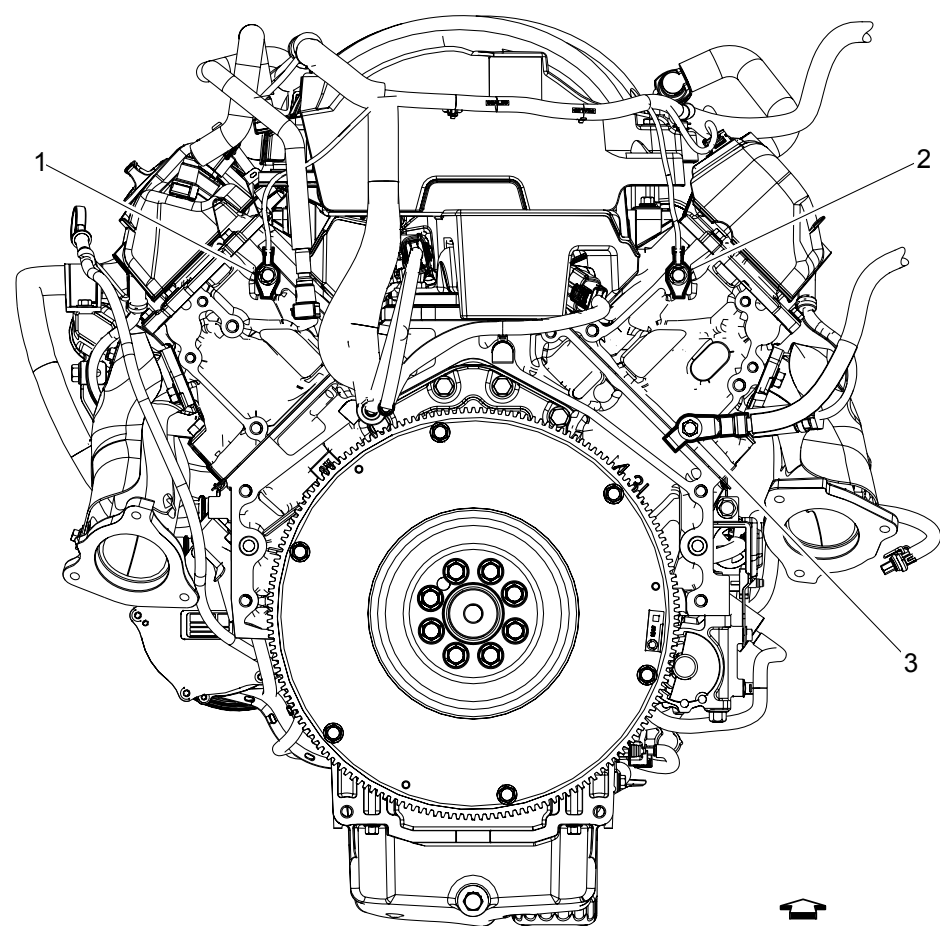
Items

- 1. G103



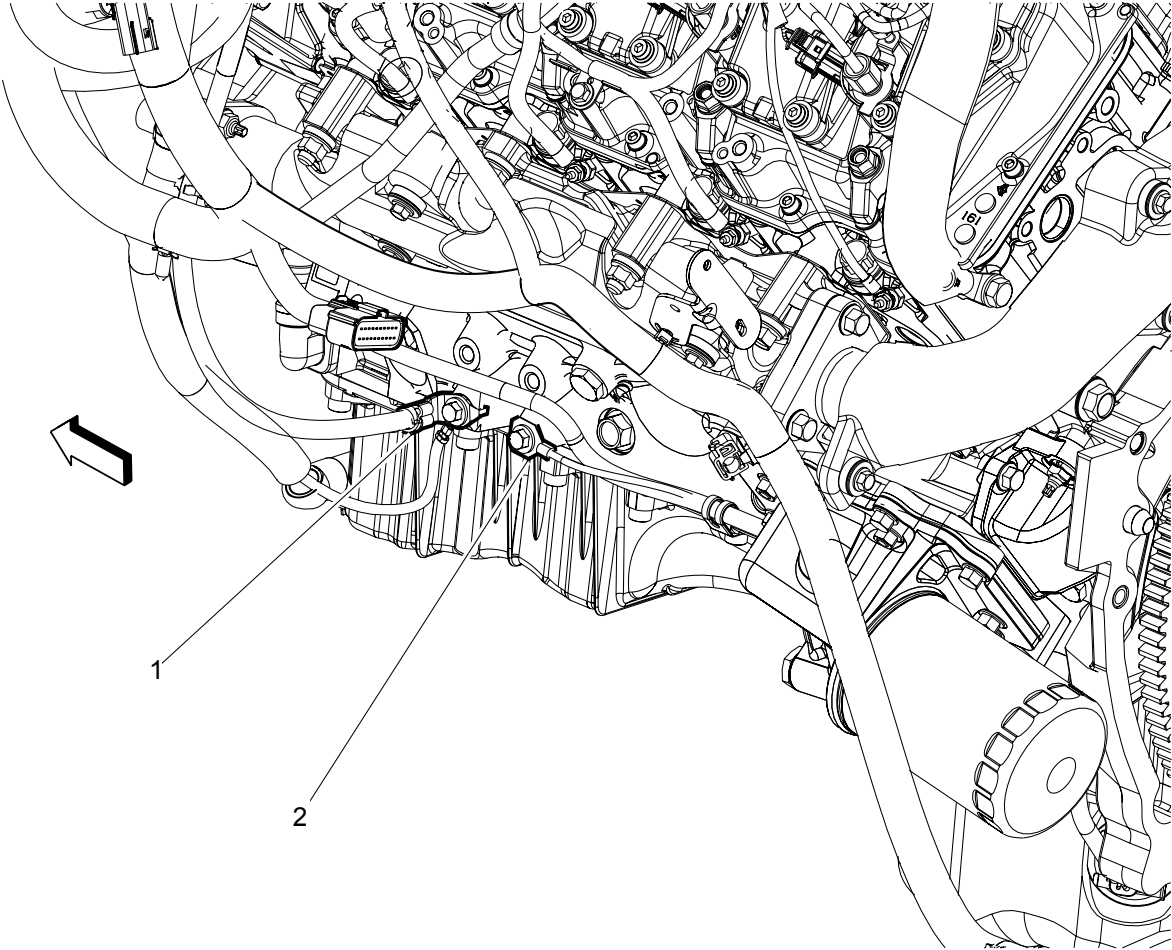
Items

- 1. G103
- 2. G125 (1500)



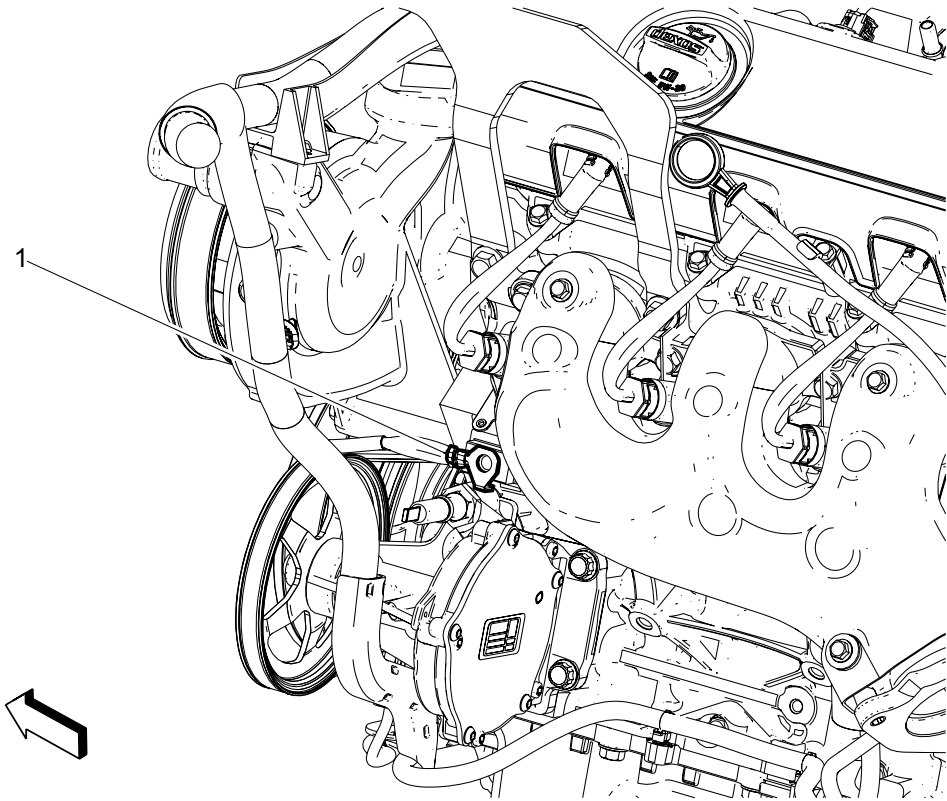
Items

- 1. G130 (1500)
- 2. G140 (1500)
- 3. G103



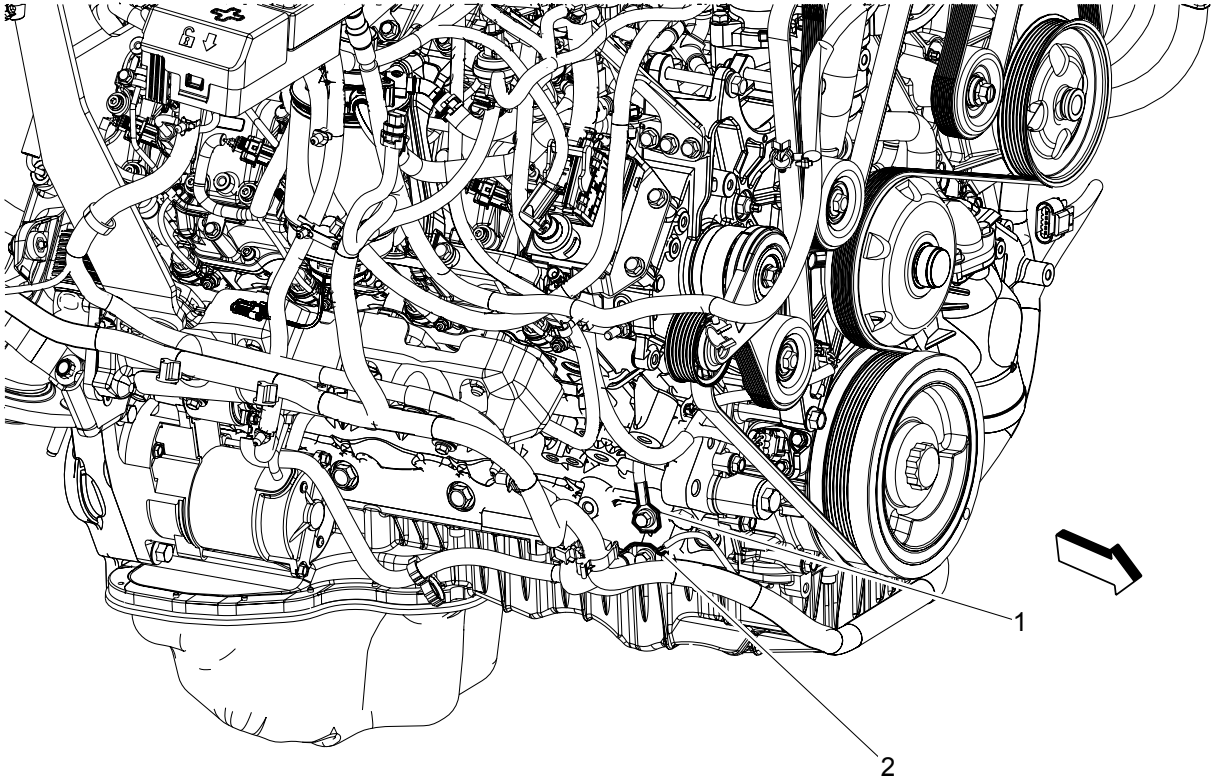
Items

- 1. G110
- 2. G109 (L5P)



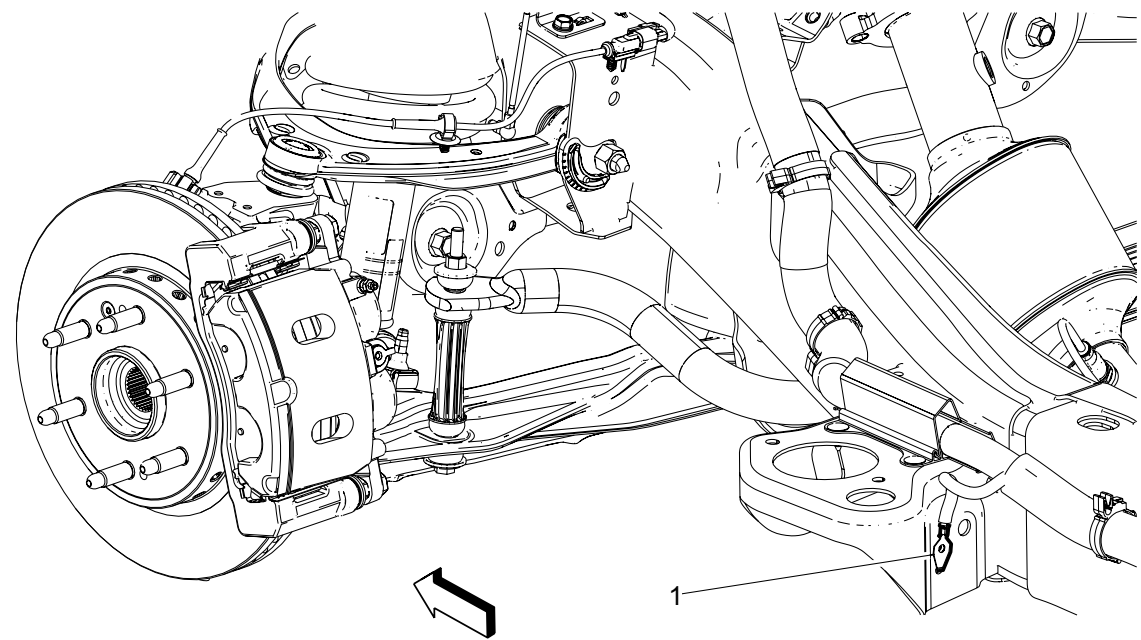
Items

- 1. G110



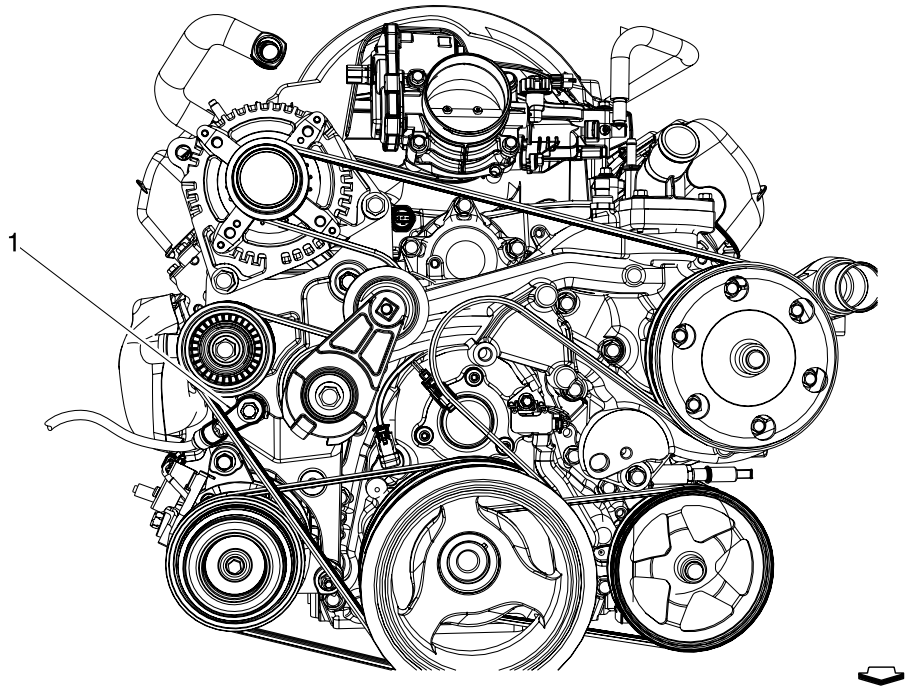
Items

- 1. G122 (L5P)
- 2. G120



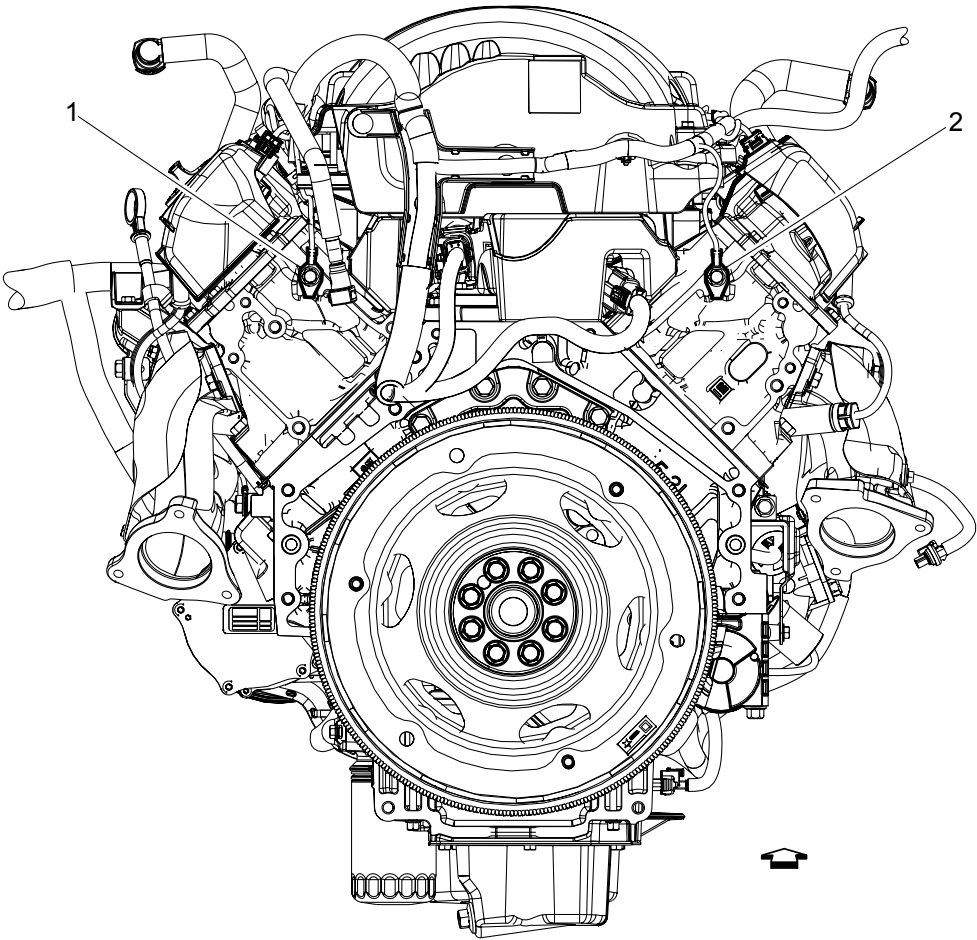
Items

- 1. G121



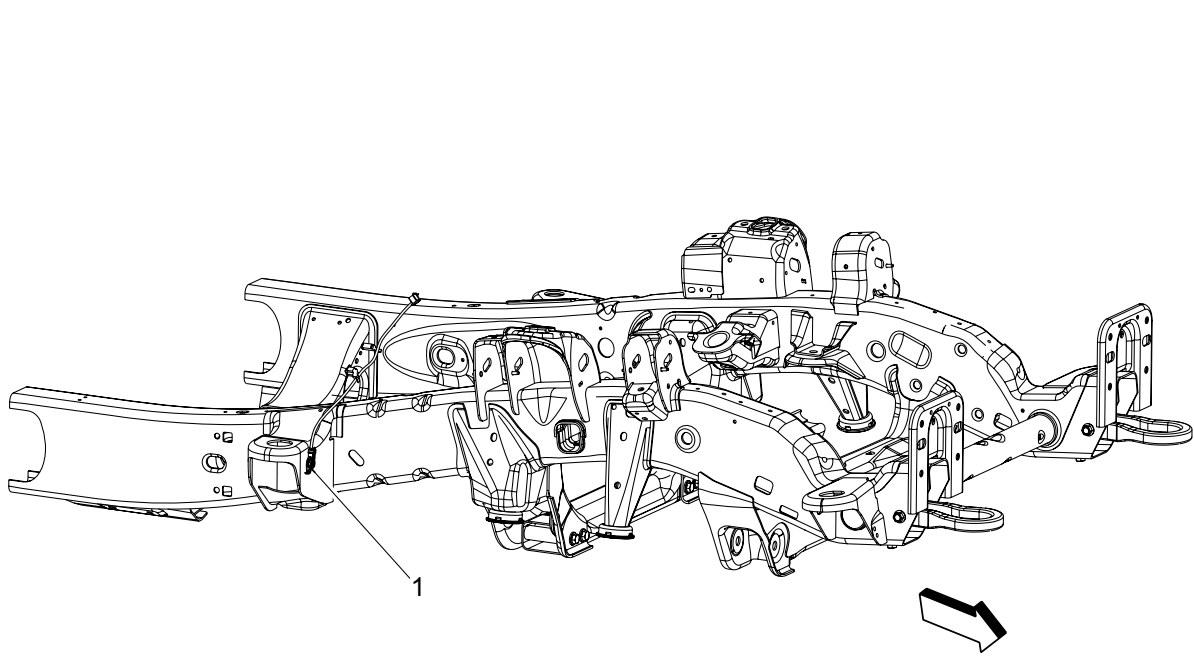
Items

- 1. G125 (1500)



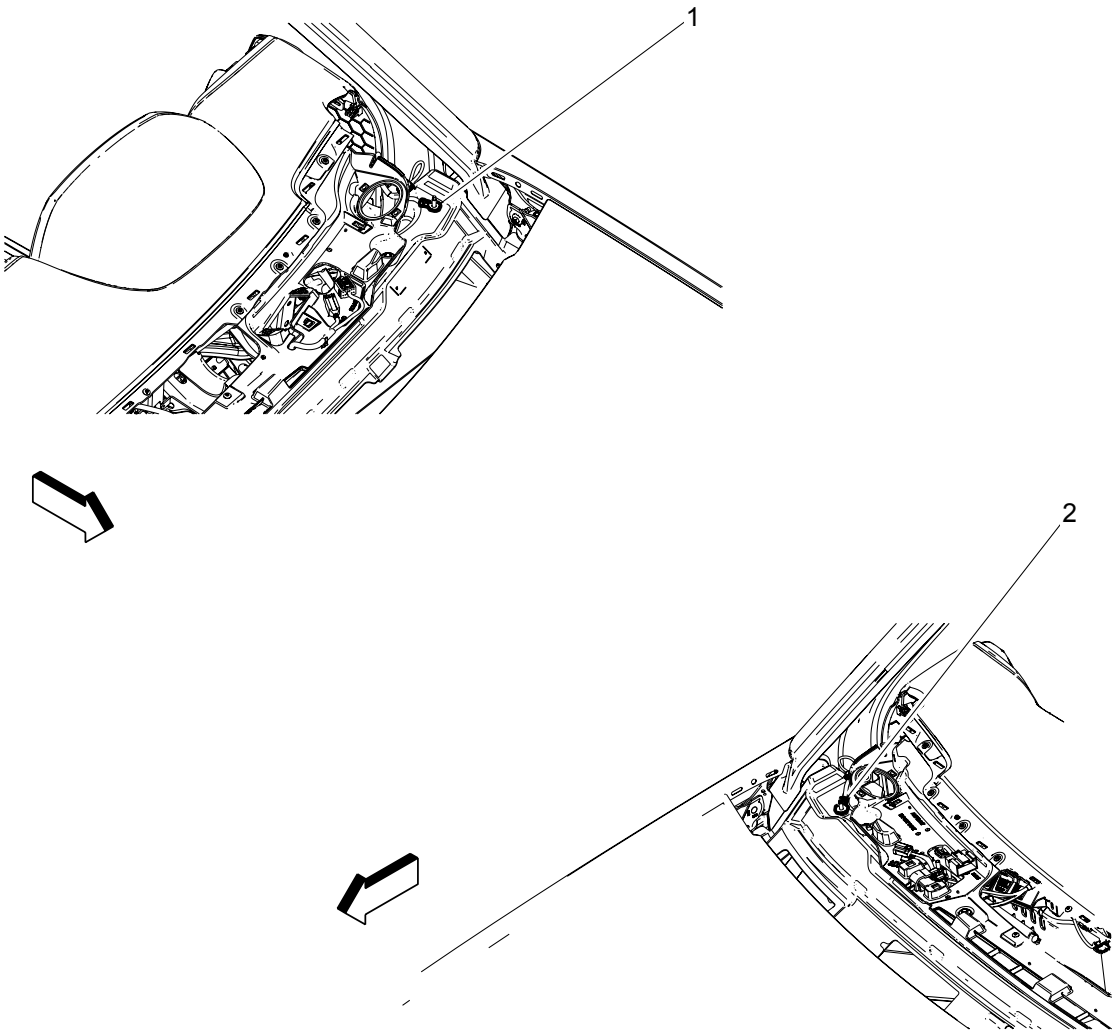
Items

- 1. G130 (1500)
- 2. G140 (1500)



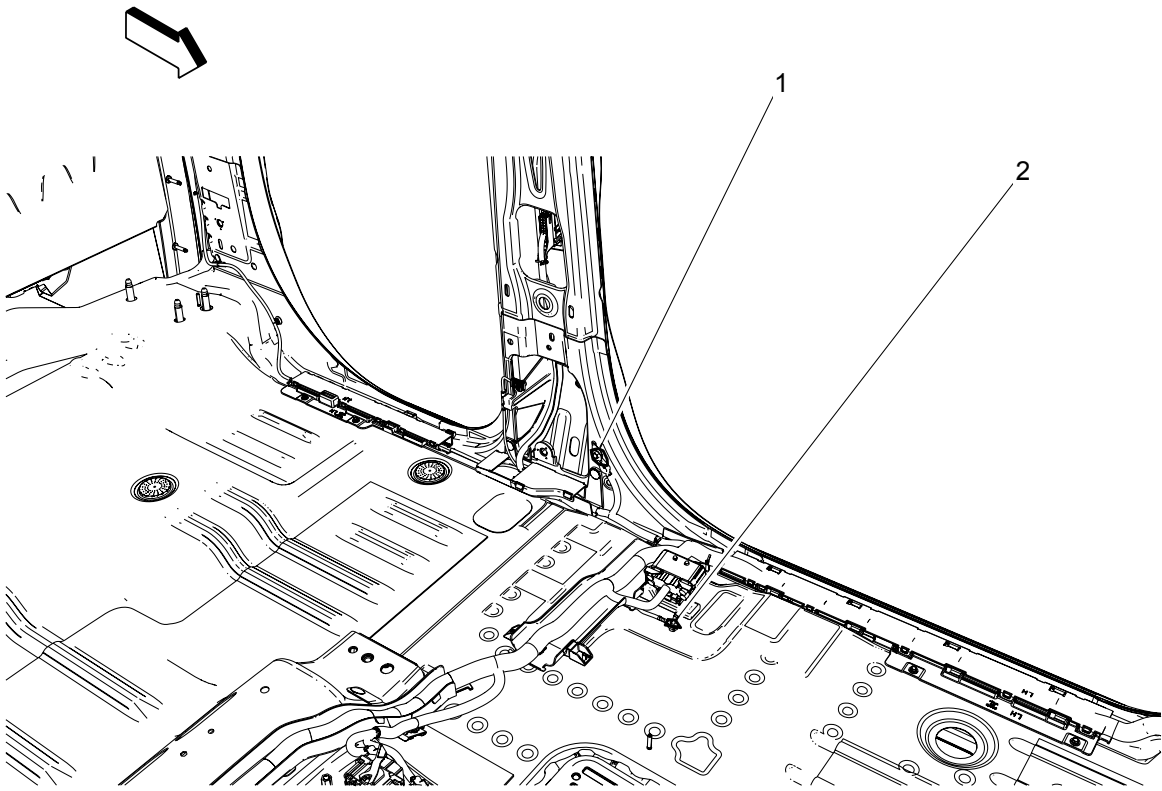
Items

- 1. G141



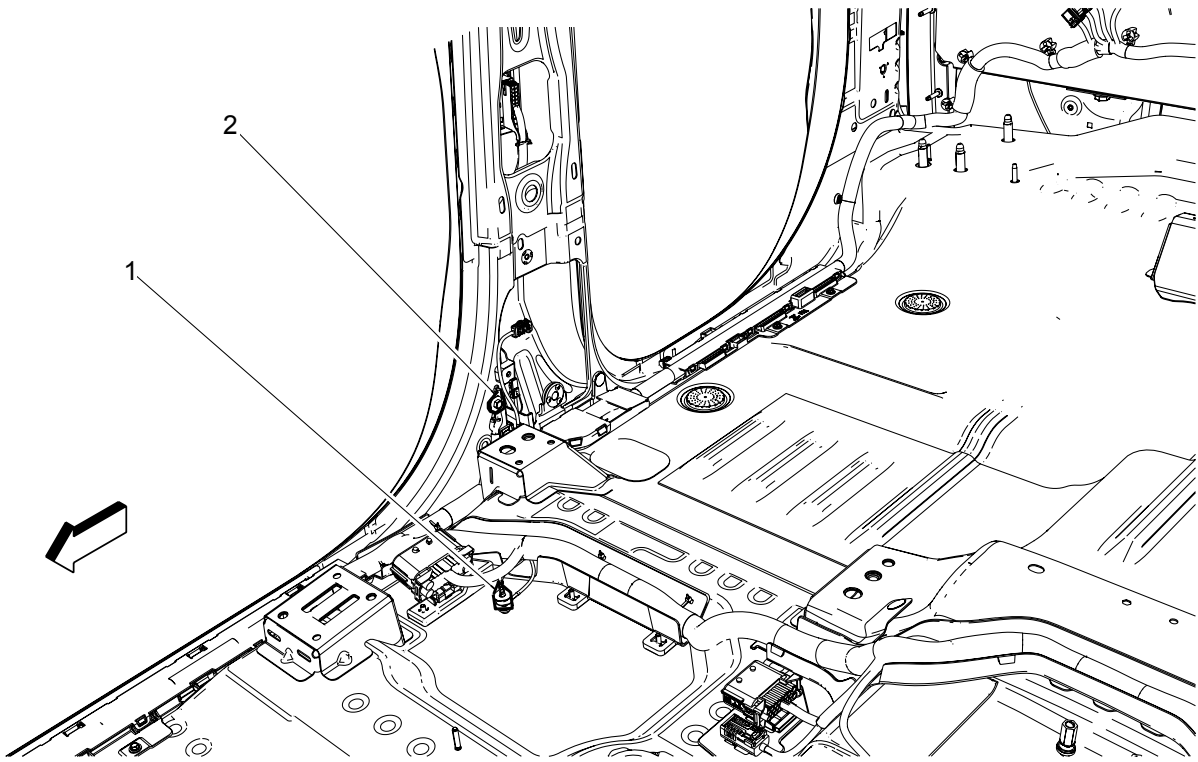
Items

- 1. G218
- 2. G210



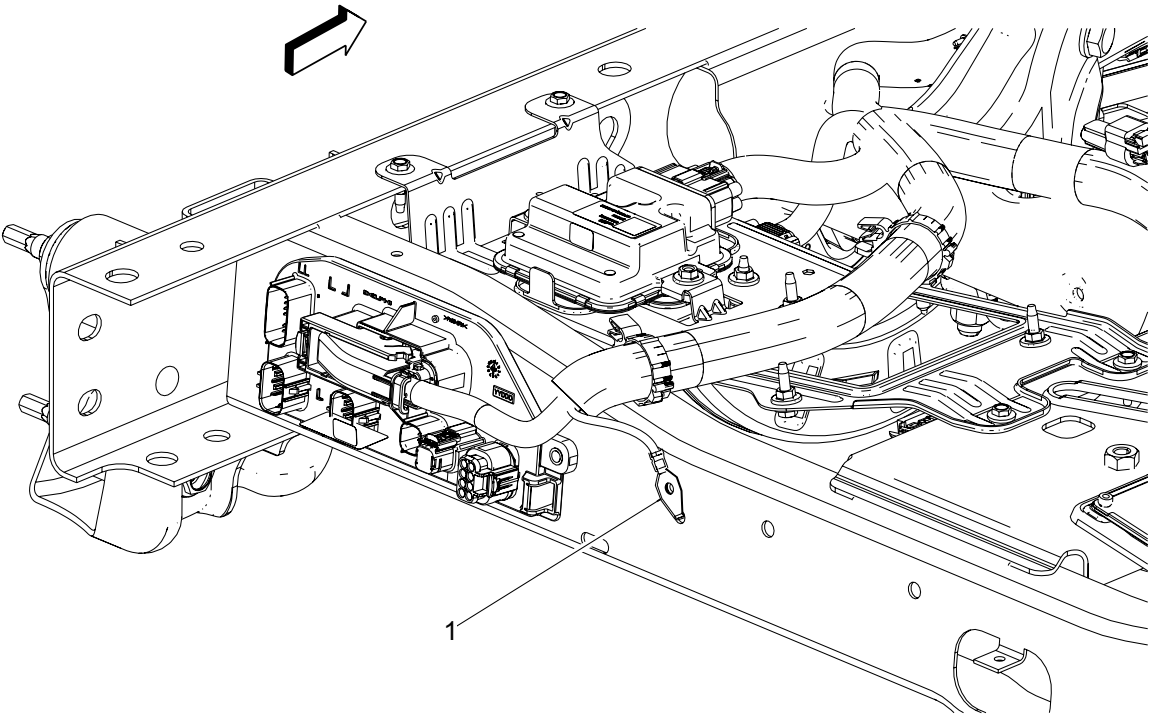
Items

- 1. G311
- 2. G325



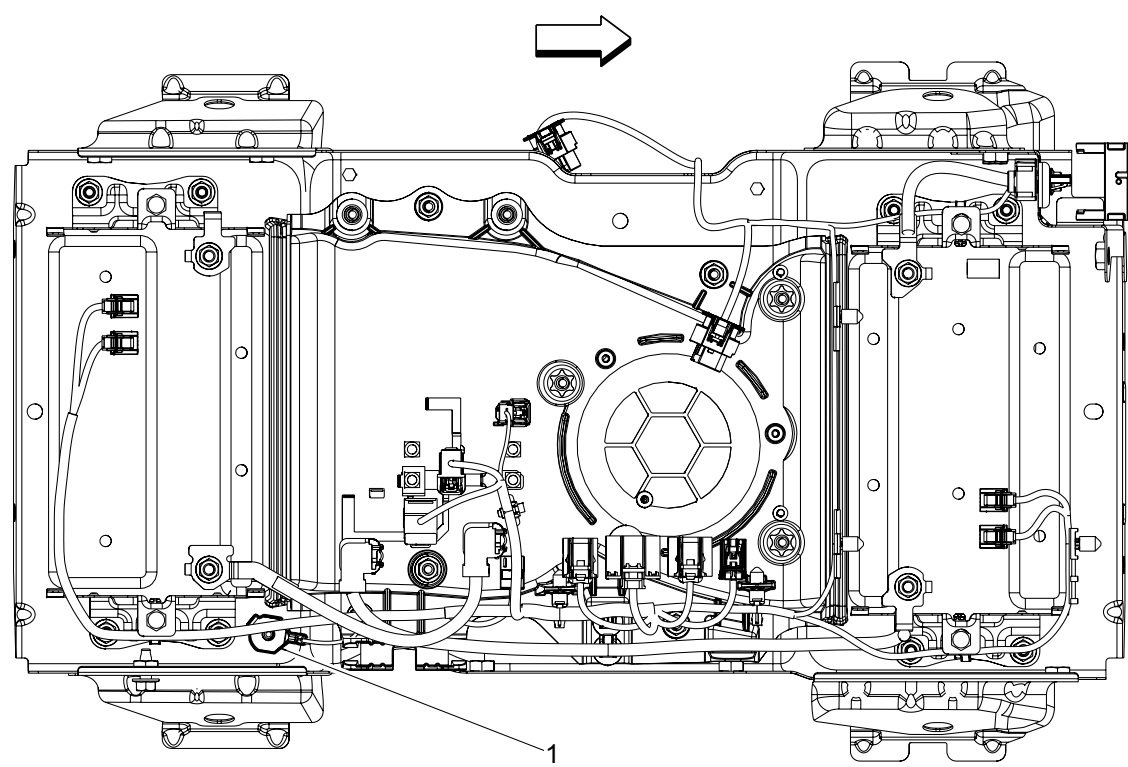
Items

- 1. G327
- 2. G312



Items

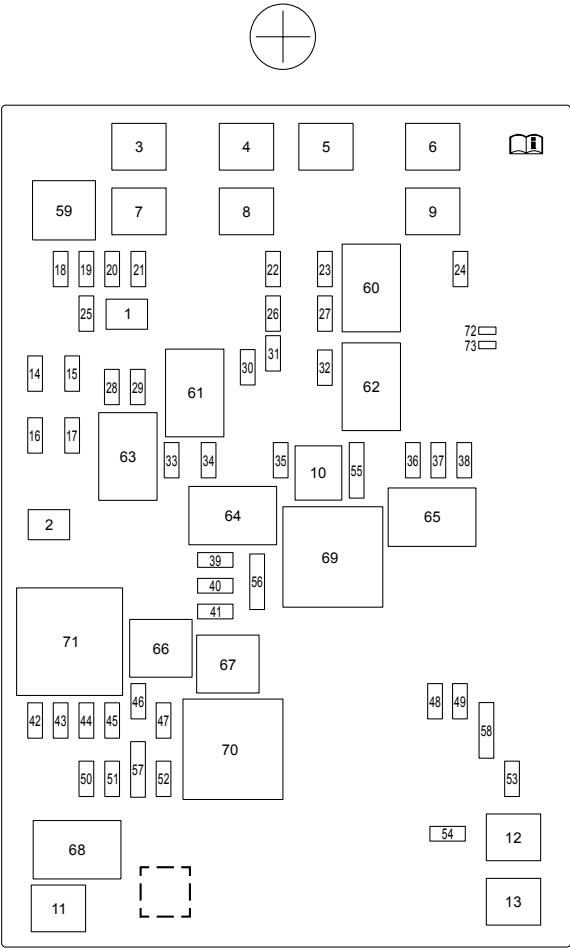
- 1. G400



Items

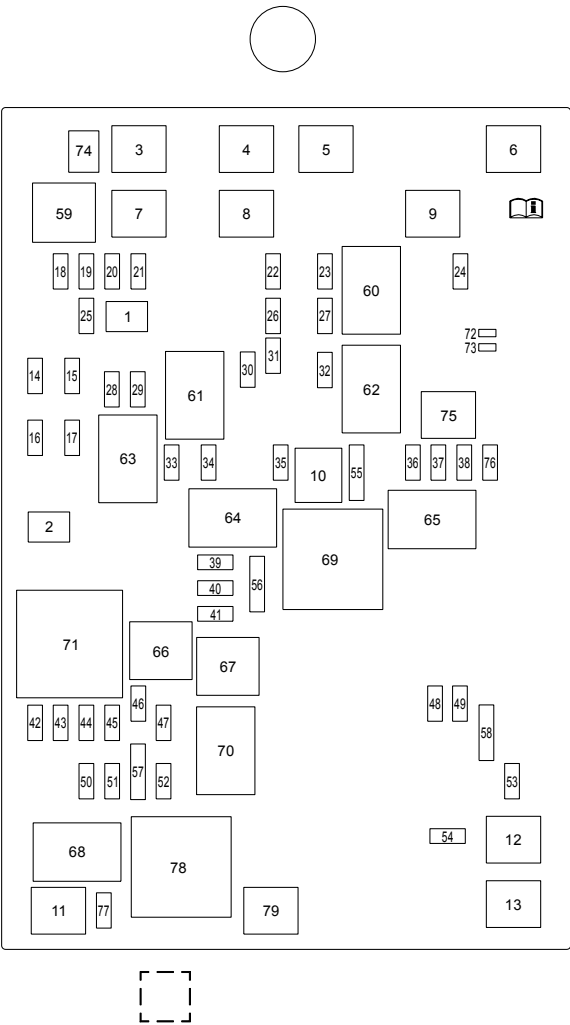
- 1. G407 (HP5)

X50A Fuse Block - Underhood Label (except HP5)



- MICRO J-CASE FUSES
- 1. TRLR BRK (30A)
 - 2. TRLR BATT (30A)
- J-CASE FUSES
- 3. ABS PUMP (60A)
 - 4. I/P BEC 1 (60A)
 - 5. MSB PASS (40A)
 - 6. 4WD TREC (30A)
 - 7. ELEC PRK BRK (40A)
 - 8. I/P BEC 2 (60A)
 - 9. MSB DRVR (40A)
 - 10. REAR DEFOG (30A)
 - 11. STRTR (40A)
 - 12. COOL FAN 1 (40A)
 - 13. COOL FAN 2 (40A)
- MINI FUSES 2 PIN
- 14. TRLR STOP TRN LT (10A)
 - 15. TRLR PRK LAMP (20A)
 - 16. REV LAMP (10A)
 - 17. TRLR STOP TRN RT (10A)
- MICRO FUSES 2 PIN
- 18. FUEL PUMP (20A)
 - 19. ICCM (10A)
 - 20. ESC ELC EXH (30A)
 - 21. FPPM (30A)
 - 22. UPFTR SW1 (5A)
 - 23. UPFTR 2 (30A)
 - 24. FRT WPR (25A)
 - 25. ABS VLV (25A)
 - 26. UPFTR SW2 (5A)
 - 27. UPFTR SW3 (5A)
 - 28. PRK LAMP RT (15A)
 - 29. PRK LAMP LT (15A)
 - 30. UPFTR 3 (30A)
 - 31. UPFTR SW4 (5A)
 - 32. UPFTR 4 (30A)
 - 33. BCK UP LAMP (10A)
 - 34. ECM IGN (15A)
 - 35. A/C CLTCH (10A)
 - 36. HTO MIR (15A)
 - 37. UPFTR 1 (30A)
 - 38. CHMSL (10A)
 - 39. MISC IGN (15A)
 - 40. TRANS IGN (15A)
 - 41. FUEL PUMP 2 (20A)
 - 42. COOL FAN CLTCH (10A)
 - 43. ENG (15A)
 - 44. INJ A ODD (20A)
 - 45. INJ B EVEN (20A)
 - 46. O2 SNSR B (15A)
 - 47. THROT CONT (15A)
 - 48. HORN (15A)
 - 49. FOG LAMP (15A)
 - 50. O2 SNSR A (15A)
 - 51. ECM (30A)
 - 52. INT HTR (10A)
 - 53. ACCY PWR MDL/TPIM PUMP (10A)
 - 54. FRT WASH (15A)
- MICRO FUSES 3 PIN
- 55. A/C CMPRSR MDL/BATT RVC (5A/5A)
 - 56. A/C CMPRSR MDL/BATT PCK (10A/10A)
 - 57. TCM / ECM (15A/15A)
 - 58. HDLP RT / LT (10A/10A)
- MICRO RELAYS
- 59. FUEL PUMP
 - 60. UPFTR 2
 - 61. UPFTR 2
 - 62. UPFTR 2
 - 63. TRLR PRK LAMPS
 - 64. RUN/CRNK
 - 65. UPFTR 1
 - 66. FUEL PUMP 2
 - 67. A/C CNTRL
 - 68. STRTR
- MINI RELAYS
- 69. REAR DEFOG
 - 70. ECM
- SOLID STATE RELAY
- 71. COOL FAN CLTCH
- TEST POINTS
- 72. CKT 95
 - 73. CKT 92

X50A Fuse Block - Underhood Label (HP5)



MICRO J-CASE FUSES

- 1. TRLR BRK (30A)
- 2. TRLR BATT (30A)
- 74. ELC RNG BDS (30A)

J-CASE FUSES

- 3. ABS PUMP (60A)
- 4. I/P BEC 1 (60A)
- 5. MSB PASS (40A)
- 6. 4WD TREC (30A)
- 7. ELEC PRK BRK (40A)
- 8. I/P BEC 2 (60A)
- 9. MSB DRVR (40A)
- 10. REAR DEFOG (30A)
- 11. STRTR (40A)
- 12. COOL FAN 1 (40A)
- 13. COOL FAN 2 (40A)
- 79. VACUUM PUMP (30A)

MINI FUSES 2 PIN

- 14. TRLR STOP TRN LT (10A)
- 15. TRLR PRK LAMP (20A)
- 16. REV LAMP (10A)
- 17. TRLR STOP TRN RT (10A)

MICRO FUSES 2 PIN

- 18. FUEL PUMP (20A)
- 19. ICM (10A)
- 20. ESC ELC EXH (30A)
- 21. FPPM (30A)
- 22. UPFTR SW1 (5A)
- 23. UPFTR 2 (30A)
- 24. FRT WPR (25A)
- 25. ABS VLV (25A)
- 26. UPFTR SW2 (5A)
- 27. UPFTR SW3 (5A)
- 28. PRK LAMP RT (15A)
- 29. PRK LAMP LT (15A)
- 30. UPFTR 3 (30A)
- 31. UPFTR SW4 (5A)
- 32. UPFTR 4 (30A)
- 33. BCK UP LAMP (10A)
- 34. ECM IGN (15A)
- 35. A/C CLTCH (10A)
- 36. HTD MIR (15A)
- 37. UPFTR 1 (30A)
- 38. CHMSL (10A)
- 39. MISC IGN (15A)
- 40. TRANS IGN (15A)
- 41. FUEL PUMP 2 (20A)
- 42. COOL FAN CLTCH (10A)
- 43. ENG (15A)
- 44. INJ A ODD (20A)
- 45. INJ B EVEN (20A)
- 46. O2 SNSR B (15A)
- 47. THROT CONT (15A)
- 48. HORN (15A)
- 49. FOG LAMP (15A)
- 50. O2 SNSR A (15A)
- 51. ECM (30A)
- 52. INT HTR (10A)
- 53. ACCY PWR MDL/TPIM PUMP (10A)
- 54. FRT WASH (15A)
- 76. MGU CLNT MTR (10A)
- 77. CABIN PMP MTR (10A)

MICRO FUSES 3 PIN

- 55. AH/HAH RVC (5A/5A)
- 56. A/C CMPSR MDL/BATT PCK (10A/10A)
- 57. TCM / ECM (15A/15A)
- 58. HDLP RT / LT (10A/10A)

MICRO RELAYS

- 59. FUEL PUMP
- 60. UPFTR 2
- 61. UPFTR 3
- 62. UPFTR 4
- 63. TRLR PRK LAMPS
- 64. RUN/CRNK
- 65. UPFTR 1
- 66. FUEL PUMP 2
- 67. A/C CNTRL
- 68. STRTR
- 70. ECM
- 75. MGU CLNT MTR

MINI RELAYS

- 69. REAR DEFOG
- 78. VACUUM PUMP SW

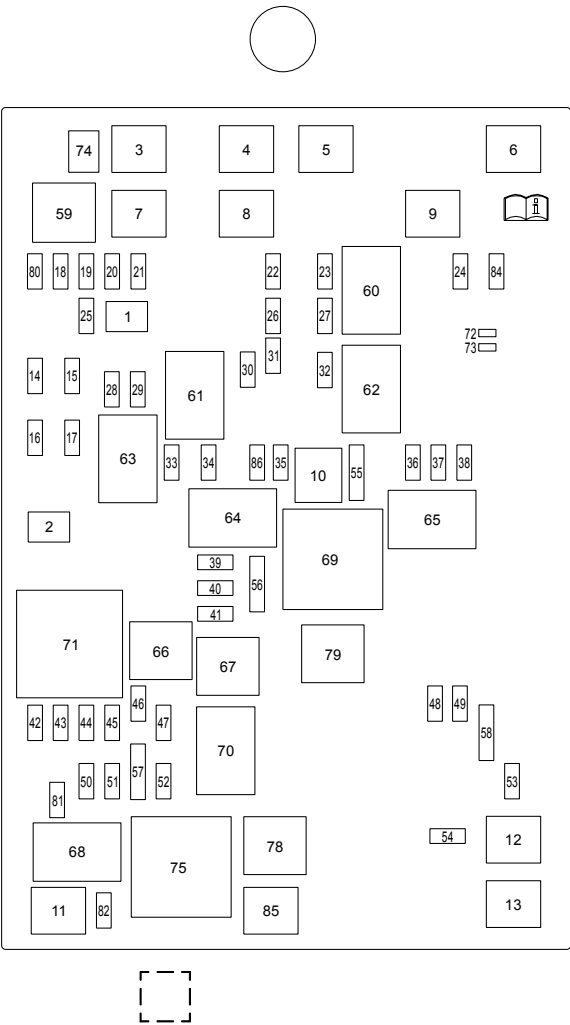
SOLID STATE RELAY

- 71. VACUUM PUMP

TEST POINTS

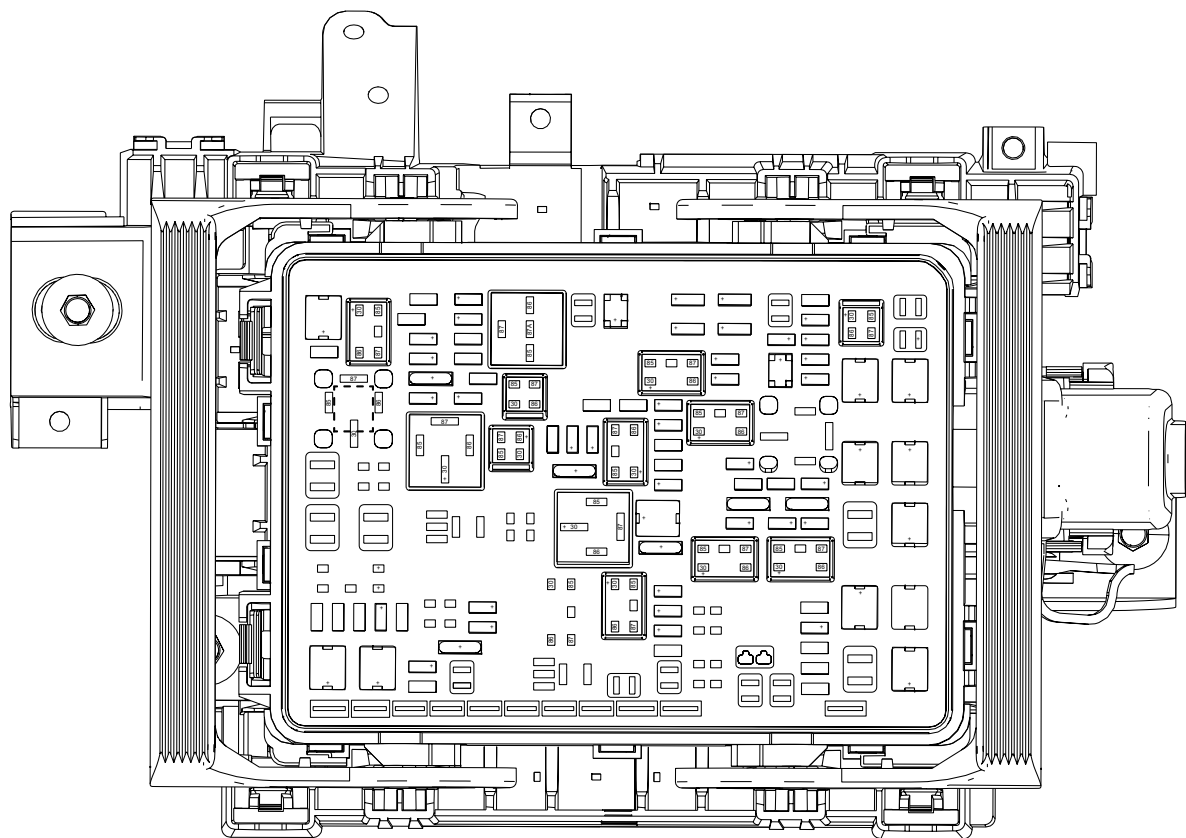
- 72. CKT 95
- 73. CKT 92

X50A Fuse Block - Underhood Label (L5P)



- MICRO J-CASE FUSES**
1. TRLR BRK (30A)
 2. TRLR BATT (30A)
 74. ELC RNO BOS (30A)
- J-CASE FUSES**
3. ABS PUMP (60A)
 4. IP BEC 1 (60A)
 5. MSB PASS (40A)
 6. 4WD TREC (30A)
 7. ELEC PRK BRK (40A)
 8. IP BEC 2 (60A)
 9. MSB DRV (40A)
 10. REAR DEFOG (30A)
 11. STRTR (40A)
 12. COOL FAN 1 (40A)
 13. COOL FAN 2 (40A)
 85. FUEL HEATER (50A)
- MINI FUSES 2 PIN**
14. TRLR STOP TRN LT (10A)
 15. TRLR PRK LAMP (20A)
 16. REV LAMP (10A)
 17. TRLR STOP TRN RT (10A)
- MICRO FUSES 2 PIN**
18. FUEL PUMP (20A)
 19. ICM (10A)
 20. ESC ELC EXH (30A)
 21. FPM (30A)
 22. UPFTR SW1 (5A)
 23. UPFTR 2 (30A)
 24. FRTNPR (25A)
 25. ABS VLV (25A)
 26. UPFTR SW2 (5A)
 27. UPFTR SW3 (5A)
 28. PRK LAMP RT (15A)
 29. PRK LAMP LT (15A)
 30. UPFTR 3 (30A)
 31. UPFTR SW4 (5A)
 32. UPFTR 4 (30A)
 33. BCK UP LAMP (10A)
 34. ECM IGN (15A)
 35. A/C CLTCH (10A)
 36. HTD MIR (15A)
 37. UPFTR 1 (30A)
 38. CHMSL (10A)
 39. MISC IGN (15A)
 40. TRANS IGN (15A)
 41. FUEL PUMP 2 (20A)
 42. COOL FAN CLTCH (10A)
 43. ENG (15A)
 44. INJ A ODD (20A)
 45. INJ B EVEN (20A)
 46. AFTERBOLL (10A)
 47. THROT CONT (15A)
 48. HORN (15A)
 49. FOG LAMP (15A)
 50. O2 SNSR A (15A)
 51. ECM (30A)
 52. INT HTR (10A)
 53. POLICE UPFTR (10A)
 54. FRT WASH (15A)
 80. LVL EXH SOL (15A)
 81. DEF HEATER (25A)
 82. FUEL HEATER (50)
 84. TIM (25A)
 86. EURO TRLR R/C (10A)
- MICRO FUSES 3 PIN**
55. A/C CMPSR MDL / BATT RVC (5A/5A)
 56. SCRPM / SEN ENB (10A/10A)
 57. TCM / ECM (15A/15A)
 58. HBLP RT / LT (10A/10A)
- MICRO RELAYS**
59. FUEL PUMP
 60. UPFTR 2
 61. UPFTR 3
 62. UPFTR 4
 63. TRLR PRK LAMPS
 64. RUN/CRNK
 65. UPFTR 1
 66. FUEL PUMP 2
 67. A/C CNTRL
 68. STRTR
 78. DEF HEATER
 79. PT SENSOR
- MINI RELAYS**
69. REAR DEFOG
 70. ECM
- SOLID STATE RELAY**
71. COOL FAN CLTCH
- ISO HC RELAY**
75. FUEL HEATER
- TEST POINTS**
72. CKT 95
 73. CKT 92

X50A Fuse Block - Underhood Top View (except HP5)



X50A Fuse Block – Underhood Label Usage

No.	Device Label Name	Device Assigned Name	Rating	Description
Micro J-Case Fuses				
1	TRLR BRK	F1UA	30A	•
				•
				•
2	TRLR BATT	F2UA	30A	•
74	ELC RNG BDS	F74UA	30A	•
J-Case Fuses				
3	ABS PUMP	F3UA	60A	•
4	I/P BEC 1	F4UA	60A	•
5	MSB PASS	F5UA	40A	•
10/25/2016 - VERSION 1.0			2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION	

5	MSB PASS	F5UA	40A	<div><div></div></div>
6	4WD TREC	F6UA	30A	<div><div></div><div></div></div>
7	ELEC PRK BRK	F7UA	40A	<div><div></div></div>
8	I/P BEC 2	F8UA	60A	<div><div></div></div>
9	MSB DRVR	F9UA	40A	<div><div></div></div>
10	REAR DEFOG	F10UA	30A	<div><div></div></div>
11	STRTR	F11UA	40A	<div><div></div></div>
12	COOL FAN 1	F12UA	40A	<div><div></div></div>
13	COOL FAN 2	F13UA	40A	<div><div></div></div>
85	FUEL HEATER	F85UA	50A	<div><div></div></div>
14	TRLR STOP TRN LT	F14UA	10A	<div><div></div></div>
15	TRLR PRK LAMP	F15UA	20A	<div><div></div></div>
16	REV LAMP	F16UA	10A	<div><div></div></div>
17	TRLR STOP TRN RT	F17UA	10A	<div><div></div></div>
18	FUEL PUMP	F18UA	20A	<div><div></div></div>
19	ICCM	F19UA	10A	<div><div></div></div>
20	ESC ELC EXH	F20UA	30A	<div><div></div></div>
21	FPPM	F21UA	30A	<div><div></div><div></div></div>
22	UPFTR SW1	F22UA	5A	<div><div></div><div></div></div>
23	UPFTR 2	F23UA	30A	<div><div></div><div></div></div>
24	FRT/WPR	F24UA	25A	<div><div></div><div></div></div>
25	ABS VLV	F25UA	25A	<div><div></div></div>

26	UPFTR SW2	F26UA	5A	<div><div></div><div></div></div>
27	UPFTR SW3	F27UA	5A	<div><div></div><div></div></div>
28	PRK LAMP RT	F28UA	15A	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>
29	PRK LAMP LT	F29UA	15A	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>
30	UPFTR 3	F30UA	30A	<div><div></div><div></div></div>
31	UPFTR SW4	F31UA	5A	<div><div></div><div></div></div>
32	UPFTR 4	F32UA	30A	<div><div></div><div></div></div>
33	BCK UP LAMP	F33UA	10A	<div><div></div><div></div></div>

				<div><div></div><div></div><div></div></div>
34	ECM IGN	F34UA	15A	<div><div></div><div></div><div></div></div>
35	A/C CLTCH	F35UA	10A	<div><div></div></div>
36	HTD MIR	F36UA	15A	<div><div></div><div></div></div>
37	UPFTR 1	F37UA	30A	<div><div></div><div></div></div>
38	CHMSL	F38UA	10A	<div><div></div></div>
39	MISC IGN	F39UA	10A	<div><div></div></div>
40	TRANS IGN	F40UA	15A	<div><div></div><div></div><div></div></div>
41	FUEL PUMP 2	F41UA	20A	<div><div></div></div>
42	COOL FAN CLTCH	F42UA	10A	<div><div></div></div>
43	ENG	F43UA	15A	<div><div></div><div></div><div></div></div>
44	INJ A ODD	F44UA	20A	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>
45	INJ B EVEN	F45UA	20A	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>
46	O2 SNSR B	F46UA	15A	<div><div></div><div></div></div>

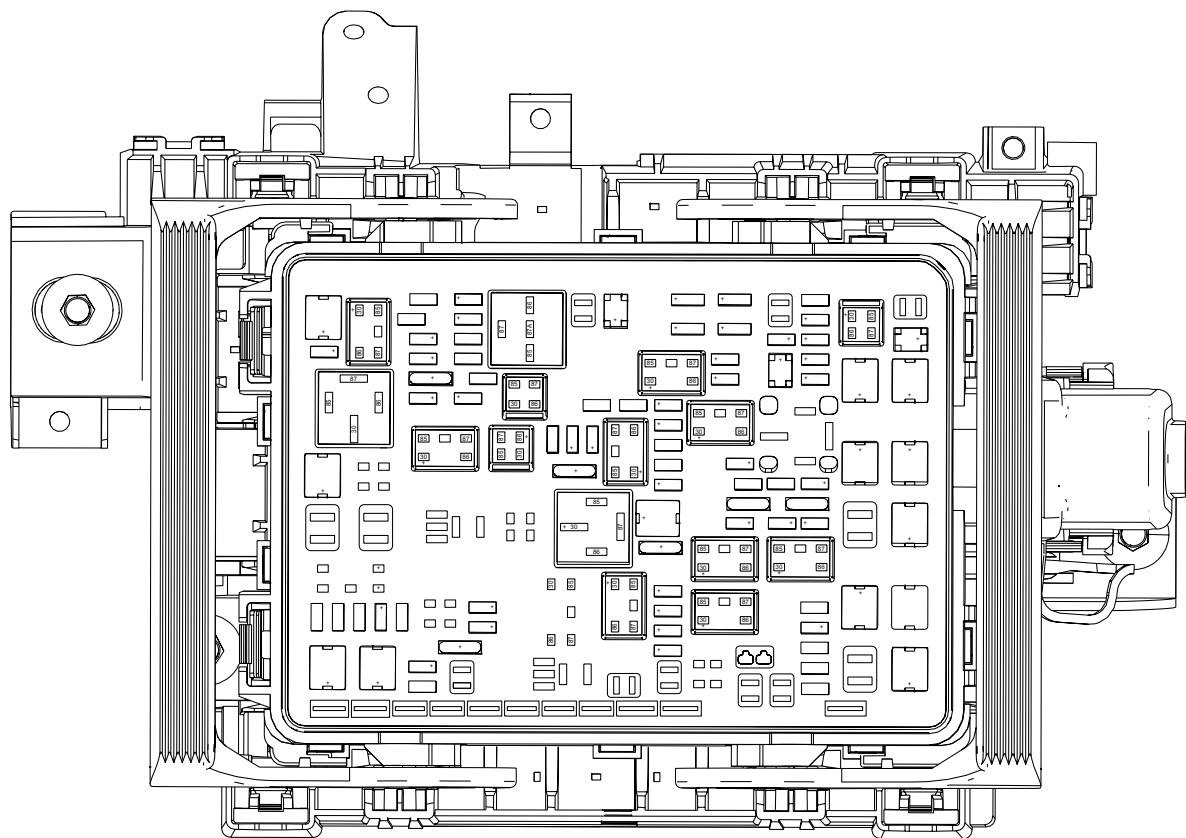
				<div><div></div></div>
47	THROT CONT	F47UA	15A	<div><div></div></div>
48	HORN	F48UA	15A	<div><div></div></div>
49	FOG LAMP	F49UA	15A	<div><div></div><div></div></div>
50	O2 SNSR A	F50UA	15A	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>
51	ECM	F51UA	30A	<div><div></div></div>
52	INT HTR	F52UA	10A	<div><div></div></div>
53	ACCY PWR MDL/TPIM PUMP	F53UA	10A	<div><div></div></div>
54	FRT WASH	F54UA	15A	<div><div></div></div>
80	LVL EXH SOL	F80UA	15A	<div><div></div></div>
81	DEF HEATER	F81UA	25A	<div><div></div></div>
82	FUEL HEATER	F82UA	30A	<div><div></div></div>
84	TIM	F84UA	25A	<div><div></div></div>
86	EURO TRLR R/C	F86UA	10A	<div><div></div></div>
55	A/C CMPRSR MDL/BATT RVC	F55UA	5A	<div><div></div><div></div></div>
56	SCRPM/SEN ENB	F56UA	10A	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>
57	TCM / ECM	F57UA	15A	<div><div></div><div></div><div></div></div>

				•
58	HDLP RT / LT	F58UA	10A	• • • •
59	FUEL PUMP	KR23A Fuel Pump Relay	—	• •
60	UPFTR 2	KR161B Configurable Provision Relay 2	—	•
61	UPFTR 3	KR161C Configurable Provision Relay 3	—	•
62	UPFTR 4	KR161D Configurable Provision Relay 4	—	•
63	TRLR PRK LAMPS	KR125 Trailer Park Lamps Relay	—	• • • •
64	RUN/CRNK	KR73 Ignition Main relay	—	• • • • • • •
65	UPFTR 1	KR161A Configurable Provision Relay 1	—	•
66	FUEL PUMP 2	KR23B Fuel Pump Relay – Secondary	—	•
67	A/C CNTRL	KR29 A/C Compressor Clutch Relay	—	• •
68	STRTR	KR27 Starter Relay	—	•
78	DEF HEATER	KR121A Reductant Control Module Relay 1	—	• •
79	PT SENSOR	KR121B Reductant Control Module Relay 2	—	• •

69	REAR DEFOG	KR5 Rear Defogger Relay	—	<ul style="list-style-type: none"> • •
70	ECM	KR75 Engine Controls Ignition Relay	—	<ul style="list-style-type: none"> • • • • • • • •
71	COOL FAN CLTCH	KR20F Cooling Fan Relay	—	<ul style="list-style-type: none"> •
75	FUEL HEATER	KR22 Fuel Heater Relay	—	<ul style="list-style-type: none"> • •
72	CKT 95	72	—	<ul style="list-style-type: none"> •
73	CKT 92	73	—	<ul style="list-style-type: none"> •
—	—	KR3 Horn Relay	—	<ul style="list-style-type: none"> • F48UA
—	—	KR11 Windshield Washer Pump Relay	—	<ul style="list-style-type: none"> • F54UA
—	—	KR12B Windshield Wiper Relay	—	<ul style="list-style-type: none"> • KR12C Windshield Wiper Speed Control Relay
—	—	KR12C Windshield Wiper Speed Control Relay	—	<ul style="list-style-type: none"> • M75 Windshield Wiper Motor
—	—	KR46 Front Fog Lamp Relay	—	<ul style="list-style-type: none"> • F49UA (T3U)
—	—	KR48 Headlamp High Beam Relay	—	<ul style="list-style-type: none"> • F58UA
—	—	KR59 Stop Lamp Relay	—	<ul style="list-style-type: none"> • F38UA
—	—	KR61 Trailer Backup Lamp Relay	—	<ul style="list-style-type: none"> • F16UA • F33UA

—	—	KR63L Trailer Stop/Turn Signal Lamp Relay-Left	—	● F14UA
—	—	KR63R Trailer Stop/Turn Signal Lamp Relay-Right	—	● F17UA

X50A Fuse Block - Underhood Top View (HP5)



X50A Fuse Block – Underhood Label Usage (HP5)

No.	Device Label Name	Device Assigned Name	Rating	Description
Micro J-Case Fuses				
1	TRLR BRK	F1UA	30A	<div><div></div><div></div><div></div></div>
2	TRLR BATT	F2UA	30A	<div><div></div></div>
74	ELC RNG BDS	F74UA	30A	<div><div></div></div>
J-Case Fuses				
3	ABS PUMP	F3UA	60A	<div><div></div></div>
4	I/P BEC 1	F4UA	60A	<div><div></div></div>
5	MSB PASS	F5UA	40A	<div><div></div></div>
10/25/2016 - VERSION 1.0			2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION	

5	MSB PASS	F5UA	40A	<div><div></div></div>
6	4WD TREC	F6UA	30A	<div><div></div><div></div></div>
7	ELEC PRK BRK	F7UA	40A	<div><div></div></div>
8	I/P BEC 2	F8UA	60A	<div><div></div></div>
9	MSB DRVR	F9UA	40A	<div><div></div></div>
10	REAR DEFOG	F10UA	30A	<div><div></div></div>
11	STRTR	F11UA	40A	<div><div></div></div>
12	COOL FAN 1	F12UA	40A	<div><div></div></div>
13	COOL FAN 2	F13UA	40A	<div><div></div></div>
79	VACUUM PUMP	F79UA	30A	<div><div></div></div>
14	TRLR STOP TRN LT	F14UA	10A	<div><div></div></div>
15	TRLR PRK LAMP	F15UA	20A	<div><div></div></div>
16	REV LAMP	F16UA	10A	<div><div></div></div>
17	TRLR STOP TRN RT	F17UA	10A	<div><div></div></div>
18	FUEL PUMP	F18UA	20A	<div><div></div></div>
19	ICCM	F19UA	10A	<div><div></div></div>
20	ESC ELC EXH	F20UA	30A	<div><div></div></div>
21	FPPM	F21UA	30A	<div><div></div><div></div></div>
22	UPFTR SW1	F22UA	5A	<div><div></div><div></div></div>
23	UPFTR 2	F23UA	30A	<div><div></div><div></div></div>
24	FRT/WPR	F24UA	25A	<div><div></div><div></div></div>
25	ABS VLV	F25UA	25A	<div><div></div></div>

26	UPFTR SW2	F26UA	5A	<div><div></div><div></div></div>
27	UPFTR SW3	F27UA	5A	<div><div></div><div></div></div>
28	PRK LAMP RT	F28UA	15A	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>
29	PRK LAMP LT	F29UA	15A	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>
30	UPFTR 3	F30UA	30A	<div><div></div><div></div></div>
31	UPFTR SW4	F31UA	5A	<div><div></div><div></div></div>
32	UPFTR 4	F32UA	30A	<div><div></div><div></div></div>
33	BCK UP LAMP	F33UA	10A	<div><div></div><div></div><div></div></div>

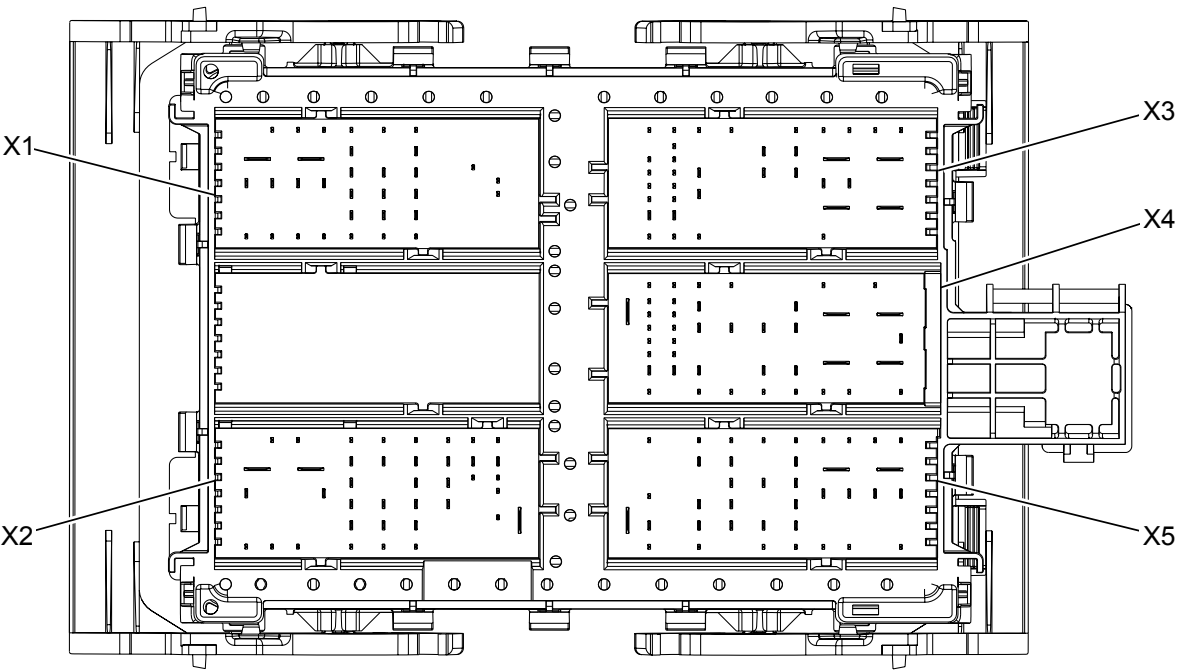
				<div><div></div><div></div></div>
34	ECM IGN	F34UA	15A	<div><div></div><div></div><div></div></div>
35	A/C CLTCH	F35UA	10A	<div><div></div></div>
36	HTD MIR	F36UA	15A	<div><div></div><div></div></div>
37	UPFTR 1	F37UA	30A	<div><div></div><div></div></div>
38	CHMSL	F38UA	10A	<div><div></div></div>
39	MISC IGN	F39UA	10A	<div><div></div></div>
40	TRANS IGN	F40UA	15A	<div><div></div><div></div><div></div></div>
41	FUEL PUMP 2	F41UA	20A	<div><div></div></div>
42	COOL FAN CLTCH	F42UA	10A	<div><div></div></div>
43	ENG	F43UA	15A	<div><div></div><div></div><div></div></div>
44	INJ A ODD	F44UA	20A	<div><div></div><div></div><div></div><div></div><div></div></div>
45	INJ B EVEN	F45UA	20A	<div><div></div><div></div><div></div><div></div><div></div></div>
46	O2 SNSR B	F46UA	15A	<div><div></div><div></div></div>
47	THROT CONT	F47UA	15A	<div><div></div><div></div></div>

48	HORN	F48UA	15A	•
49	FOG LAMP	F49UA	15A	• •
50	O2 SNSR A	F50UA	15A	• • • • •
51	ECM	F51UA	30A	•
52	INT HTR	F52UA	10A	•
53	ACCY PWR MDL/TPIM PUMP	F53UA	10A	•
54	FRT WASH	F54UA	15A	•
76	MGU CLNT MTR	F76UA	10A	•
77	CABIN PMP MTR	F77UA	10A	•
55	AHA/AHA RVC	F55UA	5A	•
56	A/C CMPRSR MDL/BATT PCK	F56UA	10A	•
57	TCM / ECM	F57UA	15A	• • •
58	HDLP RT / LT	F58UA	10A	• • • •
59	FUEL PUMP	KR23A Fuel Pump Relay	—	•
60	UPFTR 2	KR161B Configurable Provision Relay 2	—	•
61	UPFTR 3	KR161C Configurable Provision Relay 3	—	•
62	UPFTR 4	KR161D Configurable Provision Relay 4	—	•

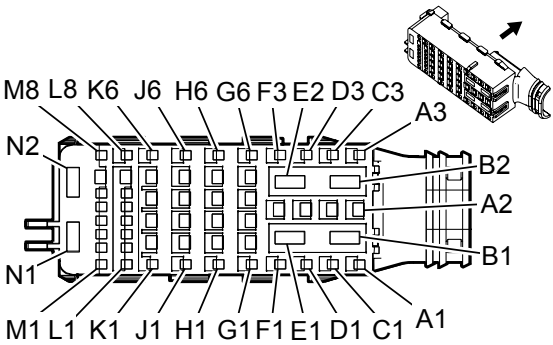
		Provision Relay 1		
63	TRLR PRK LAMPS	KR125 Trailer Park Lamps Relay	—	<div><div></div><div></div><div></div><div></div></div>
64	RUN/CRNK	KR73 Ignition Main relay	—	<div><div></div><div></div><div></div><div></div><div></div><div></div></div>
65	UPFTR 1	KR161A Configurable Provision Relay 1	—	<div><div></div></div>
66	FUEL PUMP 2	KR23B Fuel Pump Relay – Secondary	—	<div><div></div></div>
67	A/C CNTRL	KR29 A/C Compressor Clutch Relay	—	<div><div></div><div></div></div>
68	STRTR	KR27 Starter Relay	—	<div><div></div></div>
70	ECM	KR75 Engine Controls Ignition Relay	—	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>
75	MGU CLNT MTR	KR133	—	<div><div></div></div>
69	REAR DEFOG	KR5 Rear Defogger Relay	—	<div><div></div><div></div></div>
78	VACUUM PUMP SW	KR73B Ignition Main Relay 2	—	<div><div></div></div>
71	VACUUM PUMP	KR14 Brake Booster Pump Motor Relay	—	<div><div></div></div>

72	CKT 95	72	—	<ul style="list-style-type: none">
73	CKT 92	73	—	<ul style="list-style-type: none">
—	—	KR3 Horn Relay	—	<ul style="list-style-type: none"> F48UA
—	—	KR11 Windshield Washer Pump Relay	—	<ul style="list-style-type: none"> F54UA
—	—	KR12B Windshield Wiper Relay	—	<ul style="list-style-type: none"> KR12C Windshield Wiper Speed Control Relay
—	—	KR12C Windshield Wiper Speed Control Relay	—	<ul style="list-style-type: none"> M75 Windshield Wiper Motor
—	—	KR33 Auxiliary Heater Coolant Pump Relay	—	<ul style="list-style-type: none"> F77UA
—	—	KR46 Front Fog Lamp Relay	—	<ul style="list-style-type: none"> F49UA (T3U)
—	—	KR48 Headlamp High Beam Relay	—	<ul style="list-style-type: none"> F58UA
—	—	KR59 Stop Lamp Relay	—	<ul style="list-style-type: none"> F38UA
—	—	KR61 Trailer Backup Lamp Relay	—	<ul style="list-style-type: none"> F16UA F33UA
—	—	KR63L Trailer Stop/Turn Signal Lamp Relay-Left	—	<ul style="list-style-type: none"> F14UA
—	—	KR63R Trailer Stop/Turn Signal Lamp Relay-Right	—	<ul style="list-style-type: none"> F17UA

X50A Fuse Block - Underhood Bottom View



X50A Fuse Block - Underhood X1



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 33116190
Service Connector: 19329923
Description: 58-Way F 1.5, 2.8, 800 Metri-Pack 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	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
II	19301761	J-35616-35 (VT)	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

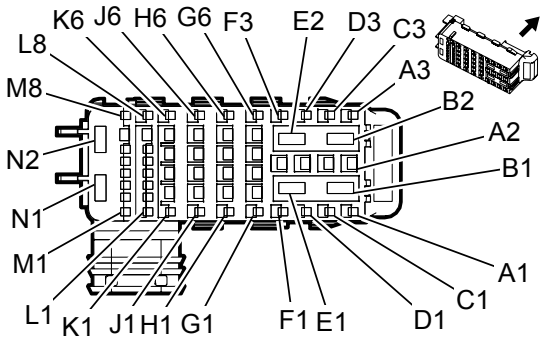
X50A Fuse Block - Underhood X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1 - B1	—	—	—	Not Occupied	—	—
B2	4	RD/GY	642	Battery Positive Voltage	I	—
C1 - C3	—	—	—	Not Occupied	—	—
D1	0.75	YE	712	Left Headlamp Low Beam Control	III	—
D2	—	—	—	Not Occupied	—	—
D3	0.75	L-GN/VT	1315	Right Front Turn Signal Lamp Control	III	—
E1	—	—	—	Not Occupied	—	—
E2	4	RD/WH	342	Battery Positive Voltage	I	—
F1	0.5	GY/BN	309	Right Park Lamp Control	III	—
10/25/2016 - VERSION 1.0						
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

F2	0.75	GY/VT	228	Windshield Washer Pump Control	II	—
F3	0.75	D-BU/WH	1314	Left Front Turn Signal Lamp Control	III	—
G1	0.5	VT/GY	709	Left Park Lamp Control	III	—
G2	—	—	—	Not Occupied	—	—
G3	0.5	VT/GY	3139	Run/Crank Ignition 1 Voltage	II	—
G4	0.5	BK	150	Ground	II	—
G5 - H1	—	—	—	Not Occupied	—	—
H2	0.75	GY/D-BU	7538	Left Front DRL Control	II	—
H3	—	—	—	Not Occupied	—	—
H4	0.5	WH	311	Right Headlamp High Beam Control	II	—
H5	—	—	—	Not Occupied	—	—
H6	0.75	D-BU/BN	7539	Right Front DRL Control	III	—
J1	—	—	—	Not Occupied	—	—
J2	0.75	BN/GY	29	Horn Control	II	—
J3	0.5	BN/VT	2234	Front Fog Lamp Control	II	—
J4	0.5	WH	711	Left Headlamp High Beam Control	II	—
J5	0.75	YE	312	Right Headlamp Low Beam Control	II	—
J6 - L5	—	—	—	Not Occupied	—	—
L6	0.5	GY/D-BU	3769	MGU Coolant Pump Control	III	—

L7 - M3	—	—	—	Not Occupied	—	—
M4	0.5	WH/D-BU	3203	Right Headlamp Bulb Outage Signal	III	—
M5	0.5	D-BU/VT	3204	Left Headlamp Bulb Outage Signal	III	—
M6 - N2	—	—	—	Not Occupied	—	—

X50A Fuse Block - Underhood X2



Connector Part Information

Harness Type: Engine
OEM Connector: 33116191
Service Connector: 19332891
Description: 58-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	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
II	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-557	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

X50A Fuse Block - Underhood X2

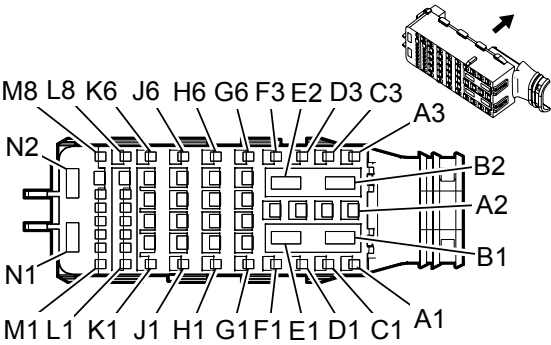
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	0.5	WH/GY	459	A/C Compressor Clutch Relay Control	IV	—
A2	—	—	—	Not Occupied	—	—
A3	0.5	L-GN/D-BU	3889	DEF Power Module Relay Control	IV	L5P
	0.5	VT/L-GN	439	Run/Crank Ignition 1 Voltage	IV	L8B
B1 - B2	—	—	—	Not Occupied	—	—
C1	0.75	BN/L-GN	59	A/C Compressor Clutch Control	IV	—
C2	—	—	—	Not Occupied	—	—
C3	0.5	D-BU/L-GN	7071	Heater Fuel Control	IV	—

D1	0.5	L-GN/D-BU	3889	DEF Power Module Relay Control	IV	—
D2	—	—	—	Not Occupied	—	—
D3	0.5	YE/BK	625	Starter Enable Relay Control	IV	—
E1	—	—	—	Not Occupied	—	—
E2	3	YE/VT	6	Starter Solenoid Crank Ignition Voltage	I	L5P
	4	YE	6	Starter Solenoid Crank Ignition Voltage	I	L96/LV1/LV3/L83/L86/L8B
F1	—	—	—	Not Occupied	—	—
F2	2.5	BK	550	Ground	II	L96
	2.5	BK	550	Ground	III	-L96
F3	0.5	WH/BN	1089	Coolant Pump Motor Relay Control	IV	L5P
	0.5	GY/BN	2410	—	IV	L83/L86/LV1/LV3
G1	0.5	WH	2368	Cooling Fan Control Signal	IV	—
G2	2.5	D-BU	3921	DEF Heater Supply 1	III	—
G3	0.5	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	II	L83/L86/L8B/LV1/LV3
	0.75	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	III	L96
G4	2.5	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	III	—
G5	0.75	RD/L-GN	1840	Battery Positive Voltage	II	L83/L86/L8B/LV1/LV3
	1.5	RD/L-GN	1840	Battery Positive Voltage	III	L96

G6	0.75	RD/WH	3440	Battery Positive Voltage	IV	L5P
	0.5	RD/WH	3440	Battery Positive Voltage	IV	L96/L83/L86
H1	—	—	—	Not Occupied	—	—
H2	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	II	L83/L86/L8B/LV1/LV3
	1.5	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	II	L96
H3	0.75	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	II	—
H4	—	—	—	Not Occupied	—	—
H5	0.5	RD/BN	440	Battery Positive Voltage	II	—
H6	0.5	YE	5991	Powertrain Relay Coil Control	IV	—
J1	—	—	—	Not Occupied	—	—
J2	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	II	—
J3	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	III	—
J4	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	III	L83/L86/L8B/LV1/LV3
	1.5	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	II	L96
J5	0.5	YE/D-BU	5126	After Boil Heater Pump Control	II	L5P
	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	II	-L5P
J6	0.75	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	IV	—
K1 - K2	—	—	—	Not Occupied	—	—
K3	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	II	—

K4	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	II	—
K5	2.5	VT/D-BU	3674	NOx Sensor 1 Control	III	L5P
	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	II	-L5P
K6	0.5	VT/L-GN	4320	Selective Catalytic Reduction Power Module Wake-Up Signal	IV	—
L1 - L5	—	—	—	Not Occupied	—	—
L6	0.5	RD/WH	2740	Battery Positive Voltage	IV	—
L7	0.5	VT/BK	2139	Run/Crank Ignition 1 Voltage	II	—
L8	—	—	—	Not Occupied	—	—
M1	0.5	YE/D-BU	1465	Secondary Fuel Pump Relay Control	IV	—
M2	—	—	—	Not Occupied	—	—
M3	0.5	WH/BK	2366	Cooling Fan Control Relay Speed Signal	IV	—
M4	—	—	—	Not Occupied	—	—
M5	0.5	GY	5660	Fuel Pump Controller Data Out Signal	IV	L83/L86/L8B/LV1/LV3
	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	IV	L96/L5P
M6	0.75	BK/WH	451	Signal Ground	IV	—
M7	—	—	—	Not Occupied	—	—
M8	0.5	VT/WH	239	Run/Crank Ignition 1 Voltage	IV	—
N1	2.5	RD/L-GN	742	Battery Positive Voltage	I	—
N2	—	—	—	Not Occupied	—	—

X50A Fuse Block - Underhood X3



Connector Part Information

Harness Type: Body
OEM Connector: 33116188
Service Connector: 19332892
Description: 58-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	13575718	J-35616-44 (YE)	J-38125-558	12092445	Delphi 18	G	G
II	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
III	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-557	Not Available	Not Available	Not Available	Not Available
V	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

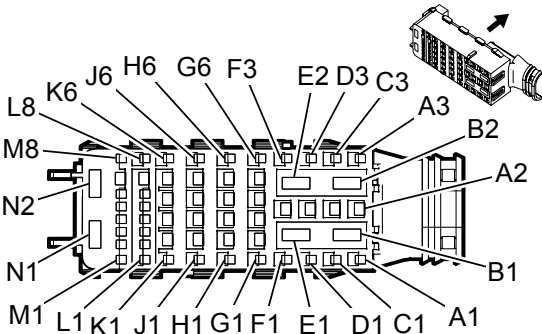
X50A Fuse Block - Underhood X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	0.5	YE/D-BU	18	Left Rear Stop/Turn Lamp Control	V	—
A2 - A3	—	—	—	Not Occupied	—	—
B1	4	RD/GY	1342	Battery Positive Voltage	I	—
B2	2.5	RD/D-BU	1842	Battery Positive Voltage	II	—
C1	0.5	BN/L-GN	19	Right Rear Stop/Turn Lamp Control	V	—
C2 - C3	—	—	—	Not Occupied	—	—
D1	0.75	L-GN/VT	1315	Right Front Turn Signal Lamp Control	V	—

D2	0.35	D-BU/VT	1124	Door Lock Key Switch Unlock Signal	III	—
D3 - E2	—	—	—	Not Occupied	—	—
F1	0.75	D-BU/WH	1314	Left Front Turn Signal Lamp Control	V	—
F2	0.35	WH/VT	3270	Driver Door Lock Motor Status Signal	III	—
F3	0.5	YE/WH	962	—	V	—
G1	0.75	D-BU/BN	7539	Right Front DRL Control	V	—
G2 - H1	—	—	—	Not Occupied	—	—
H2	1	BK	550	Ground	III	—
H3 - H6	—	—	—	Not Occupied	—	—
J1	0.35	WH/VT	860	Front Windshield Wiper Switch High Signal	V	—
J2 - J6	—	—	—	Not Occupied	—	—
K1	0.5	VT/WH	5065	Stop Lamp Relay Coil Control	V	—
K2	—	—	—	Not Occupied	—	—
K3	1	YE/BN	95	Windshield Wiper Motor Low Speed Control	III	—
K4	1	WH	92	Windshield Wiper Motor High Speed Control	III	—
K5	—	—	—	Not Occupied	—	—
K6	0.35	BN/GY	2268	Windshield Washer Relay Control	V	—
L1	—	—	—	Not Occupied	—	—
L2	0.35	BN/VT	1969	Headlamp High Beam Relay Control	V	—
L3	—	—	—	Not Occupied	—	—

L3	—	—	—	Not Occupied	—	—
L4	0.35	GY	91	Windshield Wiper Motor Relay Coil Control	V	—
L5	0.5	BN	1317	Fog Lamp Relay Control	V	—
L6	0.35	BN/WH	28	Horn Relay Control	V	—
L7	0.5	BN/YE	2267	Mirror Heating Element Control	III	—
L8	—	—	—	Not Occupied	—	—
M1	0.75	YE	312	Right Headlamp Low Beam Control	V	—
M2 - M4	—	—	—	Not Occupied	—	—
M5	0.5	RD/WH	961	—	V	—
M6	0.5	VT/GY	1054	Stop Lamp Control	V	—
M7	2.5	D-BU	965	—	IV	—
M8 - N2	—	—	—	Not Occupied	—	—

X50A Fuse Block - Underhood X4



Connector Part Information

Harness Type: Body
OEM Connector: 33116186
Service Connector: 19332893
Description: 58-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	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
II	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-557	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

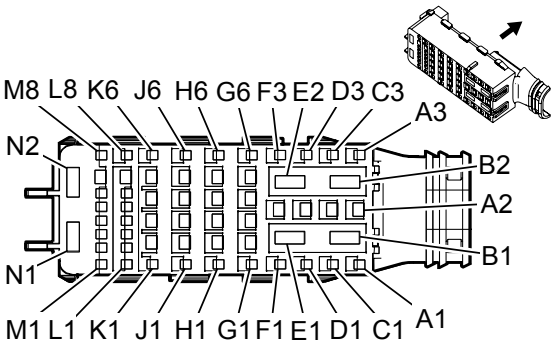
X50A Fuse Block - Underhood X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1 - A2	—	—	—	Not Occupied	—	—
A3	0.5	L-GN/WH	24	Backup Lamp Control	IV	—
B1	—	—	—	Not Occupied	—	—
B2	5	RD/VT	842	Battery Positive Voltage	I	—
C1 - D2	—	—	—	Not Occupied	—	—
D3	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	IV	—
E1	—	—	—	Not Occupied	—	—
E2	5	RD/D-BU	42	Battery Positive Voltage	I	—
F1 - F2	—	—	—	Not Occupied	—	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

F1 - F2	—	—	—	Not Occupied	—	—
F3	0.35	L-GN/WH	24	Backup Lamp Control	IV	—
G1	—	—	—	Not Occupied	—	—
G2	2.5	GY/BK	966	—	III	—
G3 - G5	—	—	—	Not Occupied	—	—
G6	0.5	YE/BK	5356	Left Tail Lamp Outage Detection Signal	IV	—
H1 - H4	—	—	—	Not Occupied	—	—
H5	2.5	RD/L-GN	242	Battery Positive Voltage	III	—
H6	0.5	VT/YE	5357	Right Tail Lamp Outage Detection Signal	IV	—
J1	0.75	GY/D-BU	7538	Left Front DRL Control	IV	—
J2 - J5	—	—	—	Not Occupied	—	—
J6	0.75	BK/WH	451	Signal Ground	IV	—
K1	0.75	YE	712	Left Headlamp Low Beam Control	IV	—
K2	2.5	RD/L-GN	968	—	III	—
K3 - K4	—	—	—	Not Occupied	—	—
K5	2.5	YE/BN	967	—	III	—
K6	0.5	VT/GY	709	Left Park Lamp Control	IV	—
L1	0.5	WH/D-BU	964	—	IV	—
L2	0.35	YE/GY	5187	Right Trailer Turn Signal Lamp Control	IV	—

L3	0.35	D-BU/BN	38	Backup Lamp Relay Control	IV	—
L4	0.35	D-BU/WH	5186	Left Trailer Turn Signal Lamp Control	IV	—
L5	0.35	D-BU	45	Park Lamp Relay Control	IV	—
L6	0.5	L-GN/GY	963	—	IV	—
L7	0.5	VT/BK	2139	Run/Crank Ignition 1 Voltage	II	—
L8	—	—	—	Not Occupied	—	—
M1	0.75	RD/YE	2340	Battery Positive Voltage	IV	—
M2	0.35	BN/VT	193	Rear Defog Relay Control	IV	—
M3 - M4	—	—	—	Not Occupied	—	—
M5	0.35	L-GN/VT	5199	Run/Crank Relay Coil Control	IV	—
M6 - M8	—	—	—	Not Occupied	—	—
N1	2.5	BN/VT	293	Rear Defog Element Control	I	—
N2	—	—	—	Not Occupied	—	—

X50A Fuse Block - Underhood X5



Connector Part Information

Harness Type: Chassis
OEM Connector: 33116189
Service Connector: 19332894
Description: 58-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	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
II	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
III	13575832	J-35616-35 (VT)	J-38125-11A	7116-4112-02	Yazaki 9	C	D
IV	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
V	19301761	J-35616-35 (VT)	J-38125-557	Not Available	Not Available	Not Available	Not Available
VI	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X50A Fuse Block - Underhood X5

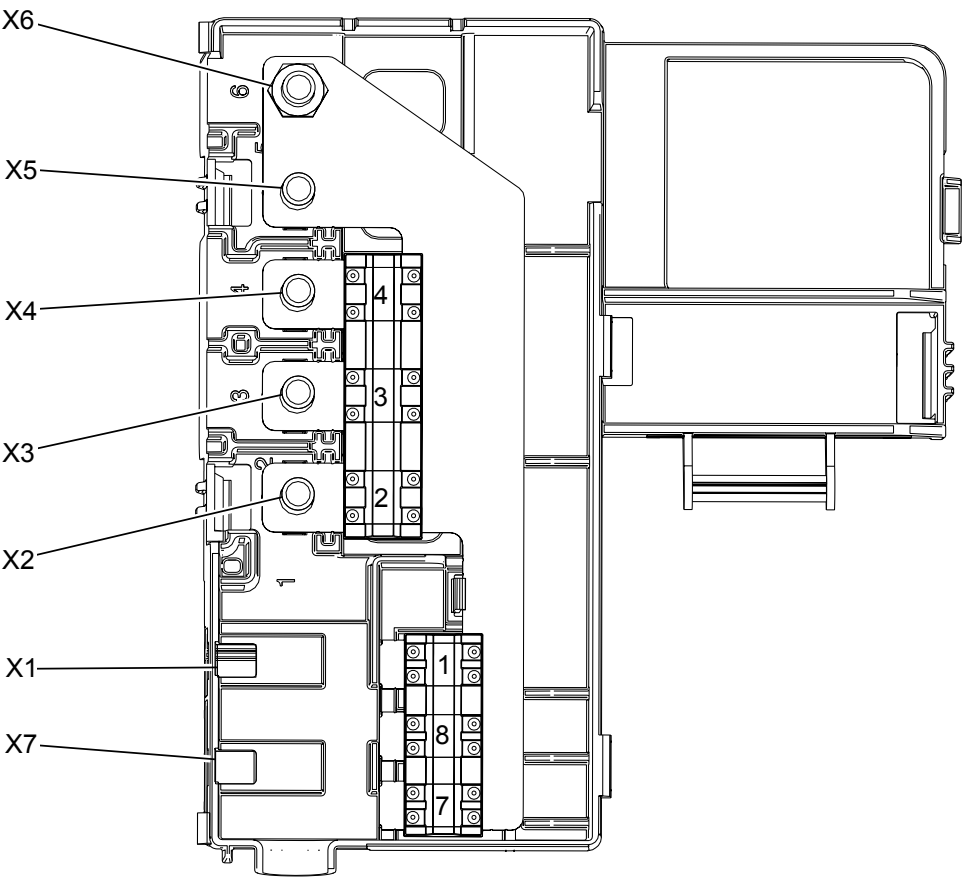
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	—	—	—	Not Occupied	—	—
A2	0.75	YE/D-BU	18	Left Rear Stop/Turn Lamp Control	IV	—
A3	0.75	BN/L-GN	19	Right Rear Stop/Turn Lamp Control	VI	—
B1	5	RD/YE	442	Battery Positive Voltage	I	—
B2	—	—	—	Not Occupied	—	—
C1	0.75	L-GN/WH	24	Backup Lamp Control	VI	—

C2	2.5	RD/YE	1142	Battery Positive Voltage	V	—
C3	—	—	—	Not Occupied	—	—
D1	0.5	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	VI	—
D2 - E2	—	—	—	Not Occupied	—	—
F1	0.5	L-GN	24	Backup Lamp Control	VI	—
F2 - F3	—	—	—	Not Occupied	—	—
G1	0.5	YE/BK	5356	Left Tail Lamp Outage Detection Signal	VI	—
G2	2.5	RD/VT	1940	Battery Positive Voltage	V	—
G3	3	RD/L-GN	2440	Battery Positive Voltage	III	—
G4	0.75	RD/WH	2040	Battery Positive Voltage	IV	—
G5 - G6	—	—	—	Not Occupied	—	—
H1	0.5	VT/YE	5357	Right Tail Lamp Outage Detection Signal	VI	—
H2	—	—	—	Not Occupied	—	—
H3	0.5	RD/L-GN	1840	Battery Positive Voltage	IV	—
H4	—	—	—	Not Occupied	—	—
H5	2.5	VT/L-GN	355	Fuel Filter Heater Voltage	V	—
H6 - J1	—	—	—	Not Occupied	—	—
J2	2.5	RD/L-GN	242	Battery Positive Voltage	V	—
J3	1.5	GY/BN	2109	Trailer Park Lamp Control	V	—
J4	2.5	RD/VT	1640	Battery Positive Voltage	V	—

J5	0.75	VT/L-GN	439	Run/Crank Ignition 1 Voltage	IV	JL1
	0.75	VT/L-GN	439	Run/Crank Ignition 1 Voltage	IV	L96/L5P
	0.5	VT/L-GN	439	Run/Crank Ignition 1 Voltage	IV	LV1/ LV3/L83/ L86/ L8B
J6 - K1	—	—	—	Not Occupied	—	—
K2	0.75	VT/GY	709	Left Park Lamp Control	IV	—
K3	—	—	—	Not Occupied	—	—
K4	0.5	GY/BN	309	Right Park Lamp Control	IV	—
K5	0.75	YE/GY	1618	Left Rear Trailer Stop/Turn Lamp Control	IV	—
K6	0.75	L-GN/VT	1619	Right Rear Trailer Stop/Turn Lamp Control	VI	—
L1 - L4	—	—	—	Not Occupied	—	—
L5	0.5	BN	6305	Brake Vacuum Switch Signal	VI	—
L6	—	—	—	Not Occupied	—	—
L7	2.5	GY	120	Fuel Pump Control	V	—
L8	—	—	—	Not Occupied	—	—
M1	0.5	VT/GY	1054	Stop Lamp Control	VI	—
M2 - M4	—	—	—	Not Occupied	—	—
M5	0.5	GY	5660	Fuel Pump Controller Data Out Signal	II	FPPM
	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	VI	L5P/L96
M6	—	—	—	Not Occupied	—	—
M7	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	IV	—

M8	0.75	WH/L-GN	1624	Trailer Backup Lamp Control	VI	—
N1	—	—	—	Not Occupied	—	—
N2	4	RD/L-GN	742	Battery Positive Voltage	I	—

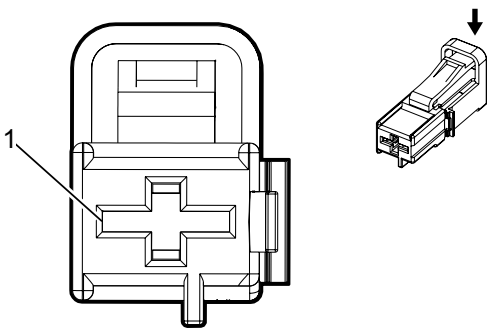
X50D Fuse Block - Battery Top View



X50D Fuse Block – Battery Usage

No.	Device Label Name	Device Assigned Name	Rating	Description
1	—	F1UD	100A	•
2	—	F2UD	175A	• •
3	—	F3UD	—	•
4	—	F4UD	175A	•
5	—	F7UD	60A	•
6	—	F8UD	60A	•

X50D Fuse Block - Battery X1



Connector Part Information

Harness Type: Body
OEM Connector: 13629098
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 8.0 Series (BU)

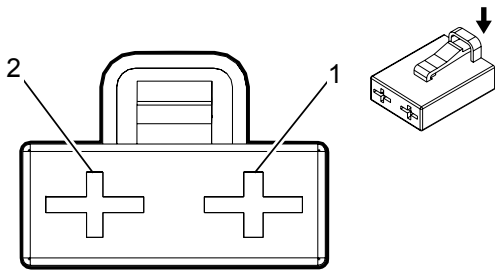
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-21 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X50D Fuse Block - Battery X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	10	RD/GY	642	Battery Positive Voltage	I	—

X50D Fuse Block - Battery X7



Connector Part Information

Harness Type: Body
OEM Connector: 13627842
Service Connector: 19329484
Description: 2-Way F 8.0 Series (BU)

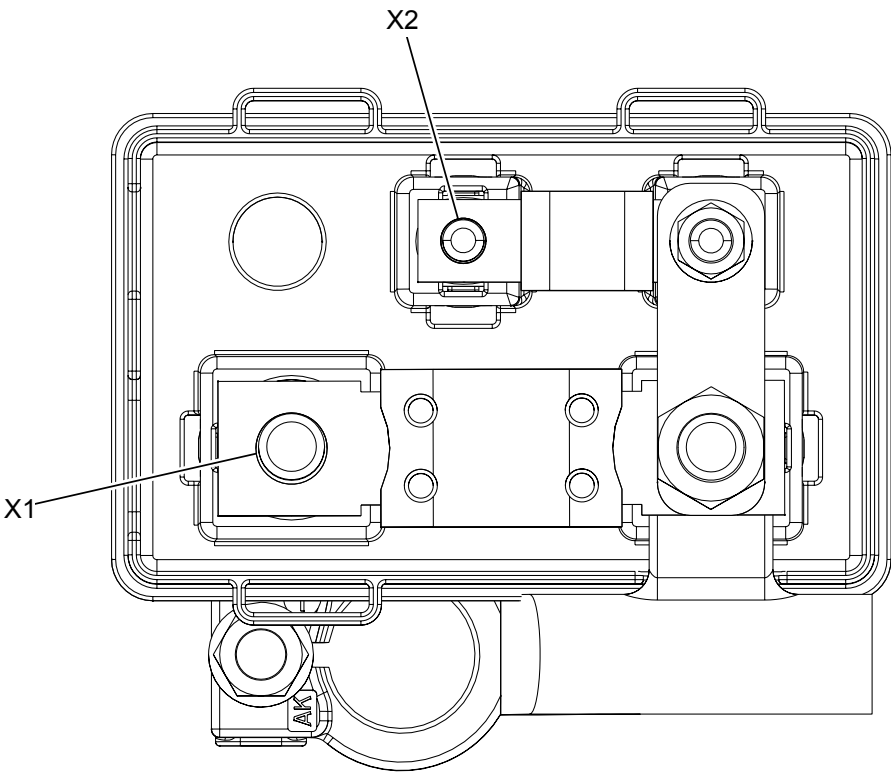
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-21 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X50D Fuse Block - Battery X7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	6	RD/GY	142	Battery Positive Voltage	I	—
2	6	RD/L-GN	242	Battery Positive Voltage	I	—

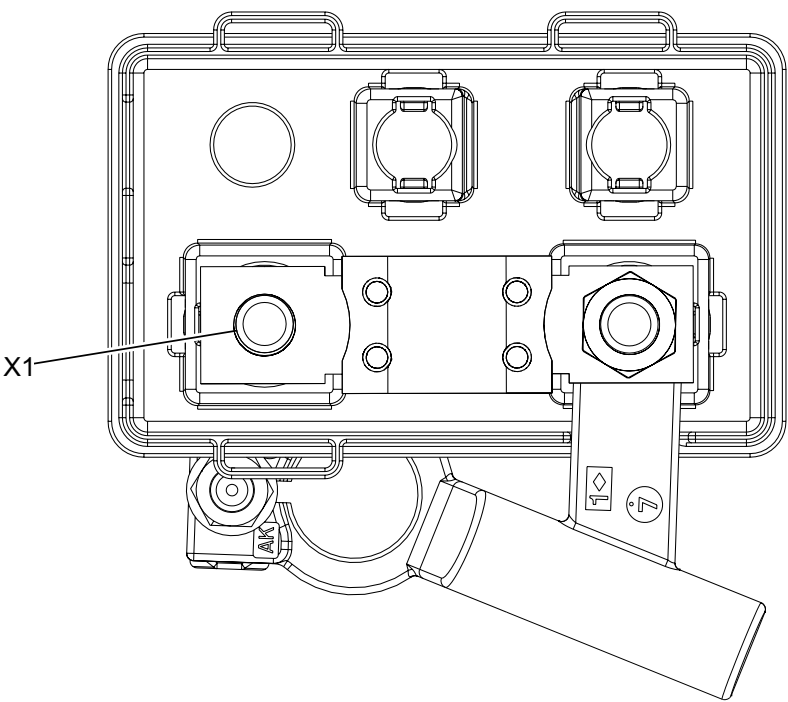
X50E Fuse Block - Auxiliary Battery Top View (K4B or K4D)



X50E Fuse Block – Auxiliary Battery Usage (K4B or K4D)

No.	Device Label Name	Device Assigned Name	Rating	Description
Enter Type of Device Name Here and Insert this Type of Row before Every Different Type of Device within the Block				
1	—	F1UE	125A	•
2	—	F2UE	30A	• •

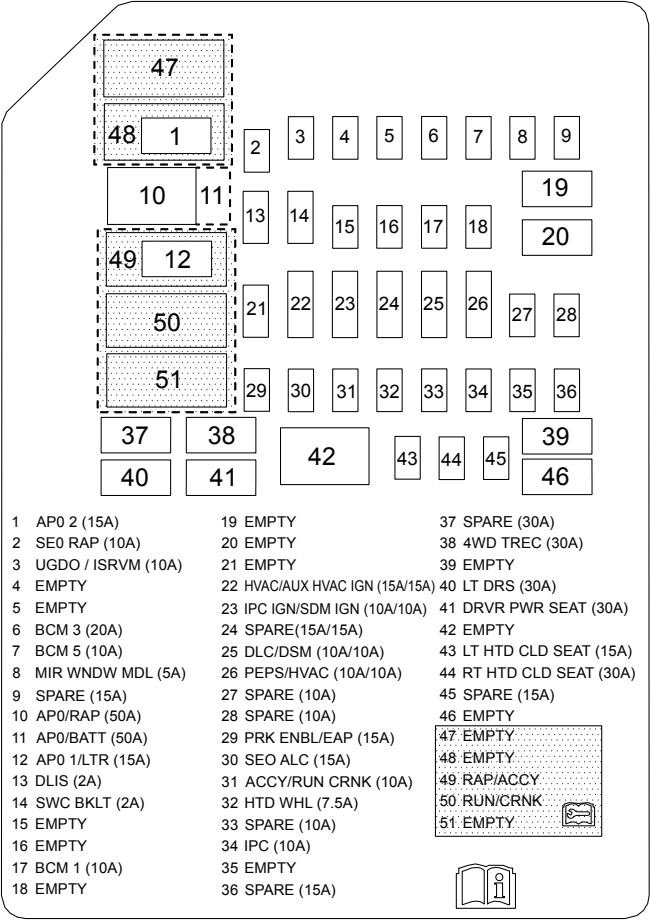
X50E Fuse Block - Auxiliary Battery Top View (L5P)



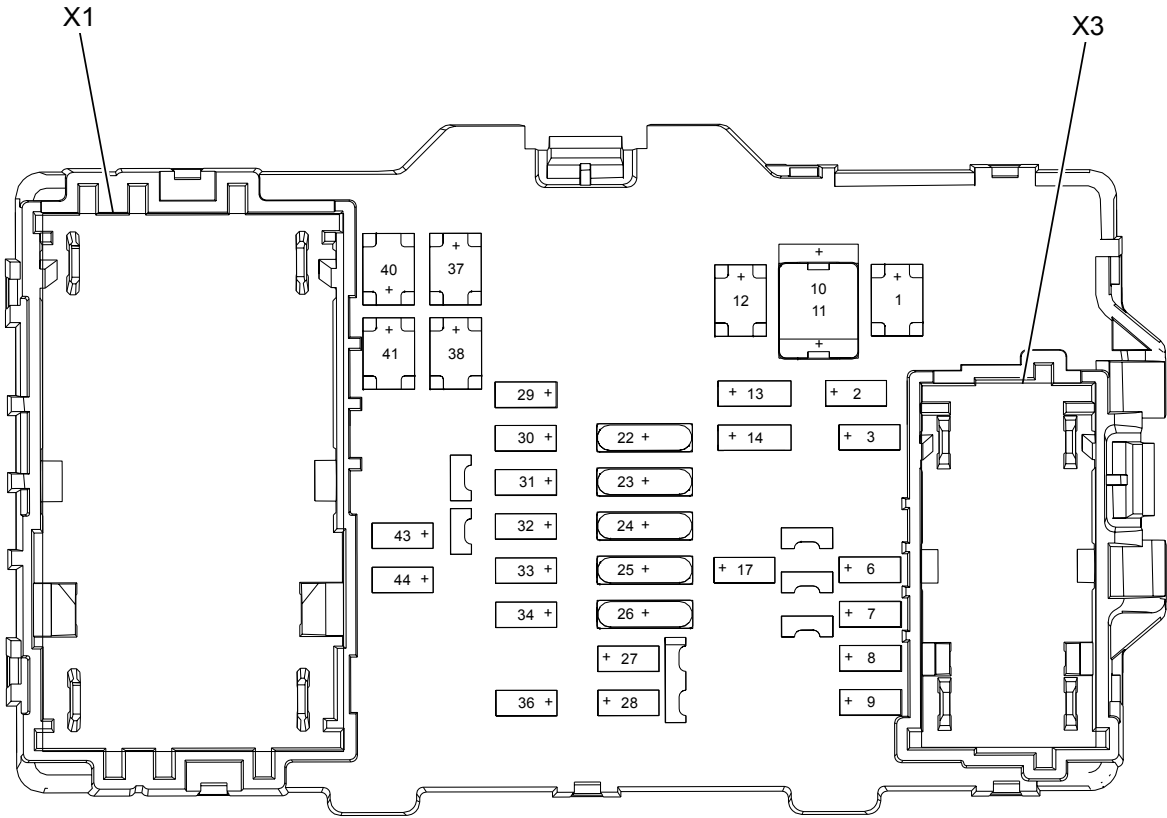
X50E Fuse Block – Auxiliary Battery Usage (LML)

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
1	—	F1UE	175A	•

X51L Fuse Block - Instrument Panel Left Label



X51L Fuse Block - Instrument Panel Left Top View



X51L Fuse Block – Instrument Panel Left Label Usage (Fuses)

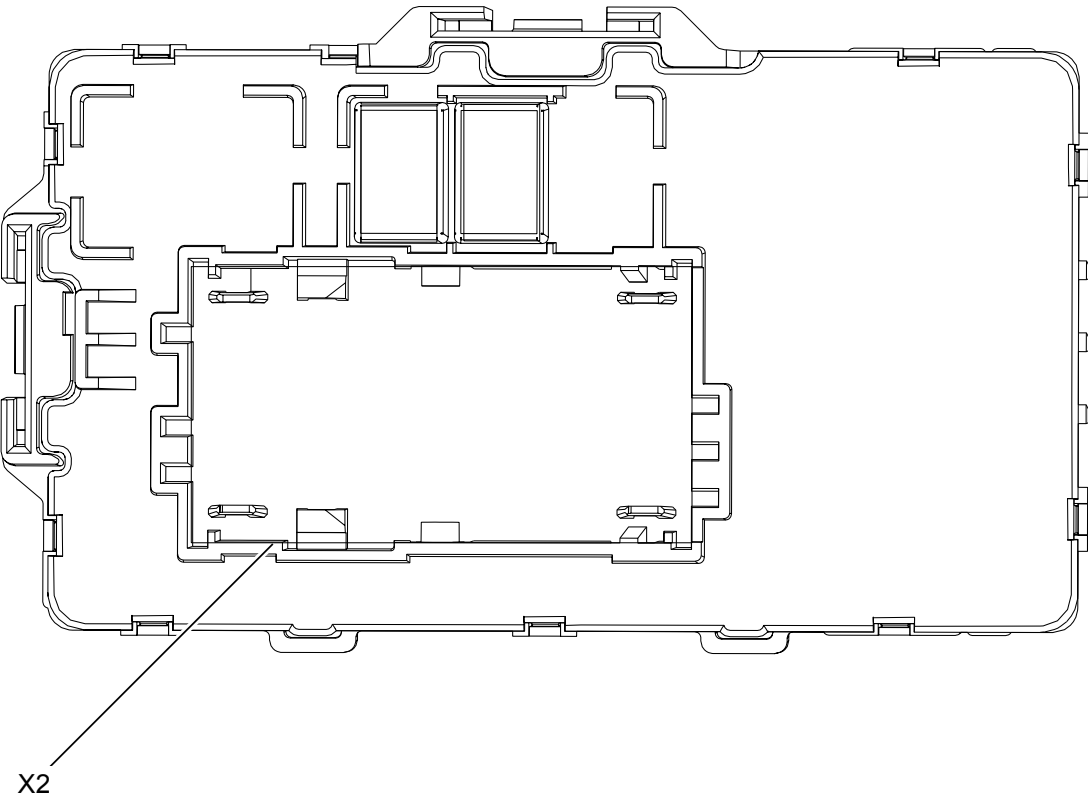
No.	Device Label Name	Device Assigned Name	Rating	Description
1	APO 2	F1DL	15A	•
2	SEO RAP	F2DL	10A	•
3	UGDO/ISRV	F3DL	10A	•
4	EMPTY	F4DL	—	•
5	EMPTY	F5DL	—	•
6	BCM 3	F6DL	20A	•
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION

7	BCM 5	F7DL	10A	•
8	MIR WNDW MDL	F8DL	5A	• •
9	SPARE	F9DL	15A	•
10	APO/RAP	F10DL	50A	• •
11	APO/BATT	F11DL	50A	• •
12	APO 1/LTR	F12DL	15A	•
13	DLIS	F13DL	2A	•
14	SWC BKLT	F14DL	2A	•
15	EMPTY	F15DL	—	•
16	EMPTY	F16DL	—	•
17	BCM 1	F17DL	10A	• • • • • • • • • • •
18	EMPTY	F18DL	—	•
19	EMPTY	F19DL	—	•
20	EMPTY	F20DL	—	•
21	EMPTY	F21DL	—	•
22	HVAC/AUX HVAC IGN	F22DL	15A	• •
23	IPC IGN/SDM IGN	F23DL	10A	• • •

				•
24	SPARE	F24DL	15A	•
25	DLC/DSM	F25DL	10A	• •
26	PEPS/HVAC	F26DL	10A	•
27	SPARE	F27DL	10A	•
28	SPARE	F28DL	10A	•
29	PRK ENBL/EAP	F29DL	15A	• • •
30	SEO ALC	F30DL	15A	•
31	ACCY/RUN CRNK	F31DL	10A	• • • •
32	HTD WHL	F32DL	7.5A	•
33	SPARE	F33DL	10A	•
34	IPC	F34DL	10A	• • • •
35	EMPTY	F35DL	—	•
36	SPARE	F36DL	15A	•
37	SPARE	F37DL	30A	•
38	4WD TREC	F38DL	30A	•
39	EMPTY	F39DL	—	•
40	LT DRS	F40DL	30A	• •
41	DRVR PWR SEAT	F41DL	30A	• •
42	EMPTY	F42DL	—	•

43	LT HTD CLD SEAT	F43DL	15A	<div><div></div><div></div><div></div></div>
44	RH FRT HTD CLD SEAT	F44DL	15A	<div><div></div><div></div><div></div></div>
45	SPARE	F45DL	15A	<div><div></div></div>
46	EMPTY	F46DL	—	<div><div></div></div>

X51L Fuse Block - Instrument Panel Left Bottom View

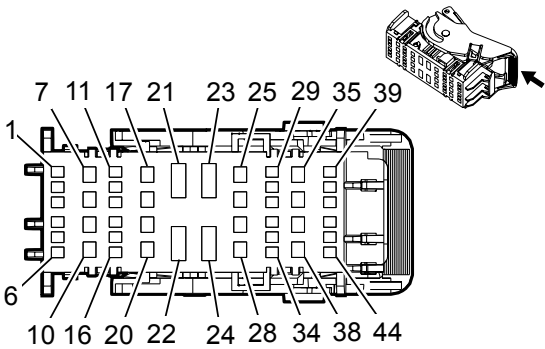


X51L Fuse Block – Instrument Panel Left Label Usage (Relays)

No.	Device Label Name	Device Assigned Name	Rating	Description
47	EMPTY	—	—	•
48	EMPTY	—	—	•
49	RAP/ACCY	KR76A Retained Accessory Power Relay 1	—	• • • •
50	RUN/CRNK	KR73 Ignition Main Relay	—	• • • • •

				<ul style="list-style-type: none">•
51	EMPTY	—	—	<ul style="list-style-type: none">•
—	—	KR1F Adjustable Pedal Relay – Forward	—	<ul style="list-style-type: none">• M5 Adjustable Pedal Motor
—	—	KR1R Adjustable Pedal Relay – Rearward	—	<ul style="list-style-type: none">• M5 Adjustable Pedal Motor
—	—	KR87 Transmission Park Relay	—	<ul style="list-style-type: none">• KR1F Adjustable Pedal Relay – Forward• KR1R Adjustable Pedal Relay – Rearward

X51L Fuse Block - Instrument Panel Left X1



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	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
II	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-557	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

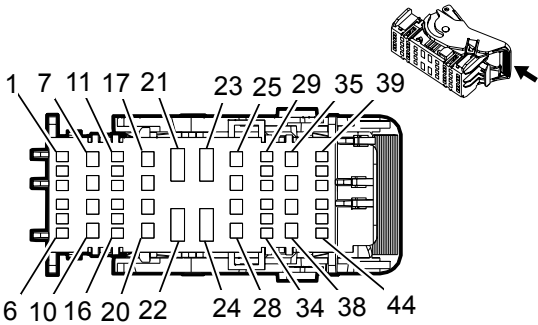
X51L Fuse Block - Instrument Panel Left X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 4	—	—	—	Not Occupied	—	—
5	0.5	RD/BN	1140	Battery Positive Voltage	IV	—
6 - 14	—	—	—	Not Occupied	—	—
15	0.35	L-GN/GY	5286	Adjustable Pedal Switch Forward Signal	IV	—
16	0.5	RD/VT	1940	Battery Positive Voltage	IV	—
17	0.75	RD/L-GN	6140	Battery Positive Voltage	II	—
18	0.75	RD/L-GN	5140	Battery Positive Voltage	III	—
	0.75	RD/L-GN	5140	Battery Positive Voltage	II	—

	0.75	RD/L-GN	5140	Battery Positive Voltage	II	—
19	—	—	—	Not Occupied	—	—
20	0.75	L-GN/VT	5130	Adjustable Pedal Actuator Forward Control	II	—
21	5	RD/VT	842	Battery Positive Voltage	I	—
22	—	—	—	Not Occupied	—	—
23	5	RD/D-BU	42	Battery Positive Voltage	I	—
24 - 26	—	—	—	Not Occupied	—	—
27	2.5	RD/YE	5040	Battery Positive Voltage	III	—
28	0.75	YE	5129	Adjustable Pedal Actuator Rearward Control	II	—
29	0.5	VT/BK	739	Run/Crank Ignition 1 Voltage	IV	—
30	0.5	VT/WH	1939	Run/Crank Ignition 1 Voltage	IV	—
31	—	—	—	Not Occupied	—	—
32	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	IV	—
33	0.35	WH/GY	5285	Adjustable Pedal Switch Rearward Signal	IV	—
34 - 35	—	—	—	Not Occupied	—	—
36	2.5	RD/D-BU	1842	Battery Positive Voltage	III	—
37	2.5	RD/D-BU	1842	Battery Positive Voltage	III	—
38 - 41	—	—	—	Not Occupied	—	—
42	0.35	L-GN/VT	5199	Run/Crank Relay Coil Control	IV	—

43	0.35	GY/VT	755	RAP Relay Coil Control	IV	—
44	0.35	VT/YE	43	Accessory Ignition Voltage	IV	—

X51L Fuse Block - Instrument Panel Left X2



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	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301761	J-35616-35 (VT)	J-38125-557	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

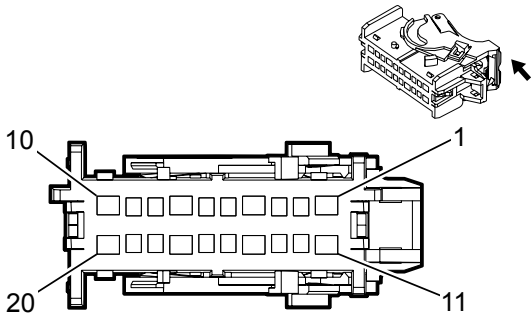
X51L Fuse Block - Instrument Panel Left X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	YE	6817	LED Backlight Dimming Control	III	—
4	0.35	BN	6136	Control	III	—
5	0.35	RD/D-BU	540	Battery Positive Voltage	III	—
6	—	—	—	Not Occupied	—	—
7	0.5	RD/BN	2940	Battery Positive Voltage	I	—
8	1	RD/GY	2140	Battery Positive Voltage	I	—
9	—	—	—	Not Occupied	—	—

10	1.5	RD/BN	4240	Battery Positive Voltage	II	—
11 - 14	—	—	—	Not Occupied	—	—
15	0.5	VT/GY	539	Run/Crank Ignition 1 Voltage	III	—
16 - 17	—	—	—	Not Occupied	—	—
18	0.5	RD/WH	2740	Battery Positive Voltage	I	—
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	I	—
	0.5	RD/VT	3340	Battery Positive Voltage		—
26	0.35	RD/WH	640	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	—	—	—	Not Occupied	—	—
37	0.5	VT/WH	1139	Run/Crank Ignition 1 Voltage	I	—
38	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	I	—
39 - 42	—	—	—	Not Occupied	—	—
43	0.35	YE	6812	Out of Park Signal	III	—

44	0.75	BK	1850	Ground	III	—
----	------	----	------	--------	-----	---

X51L Fuse Block - Instrument Panel Left X3



Connector Part Information

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

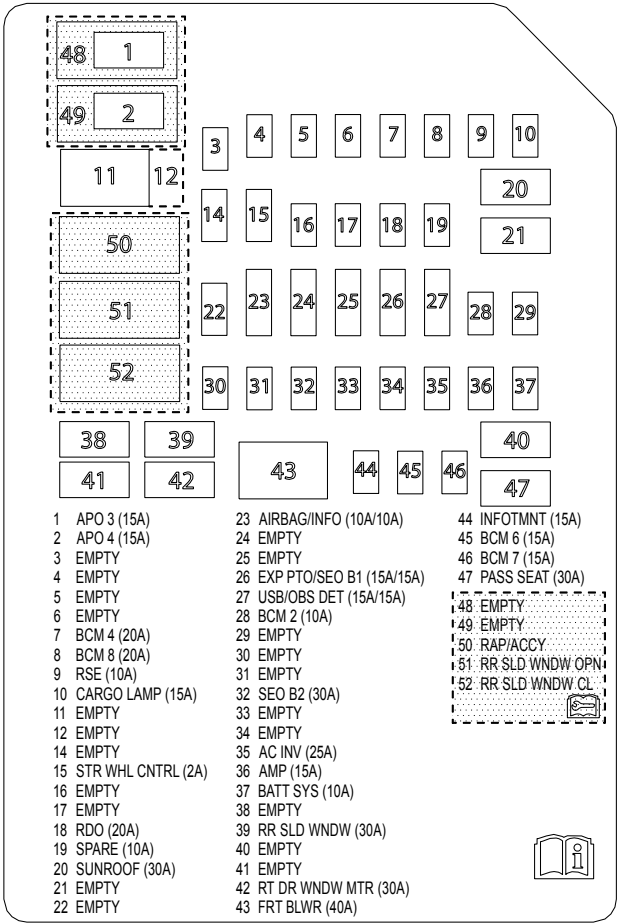
Terminal Part Information

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-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

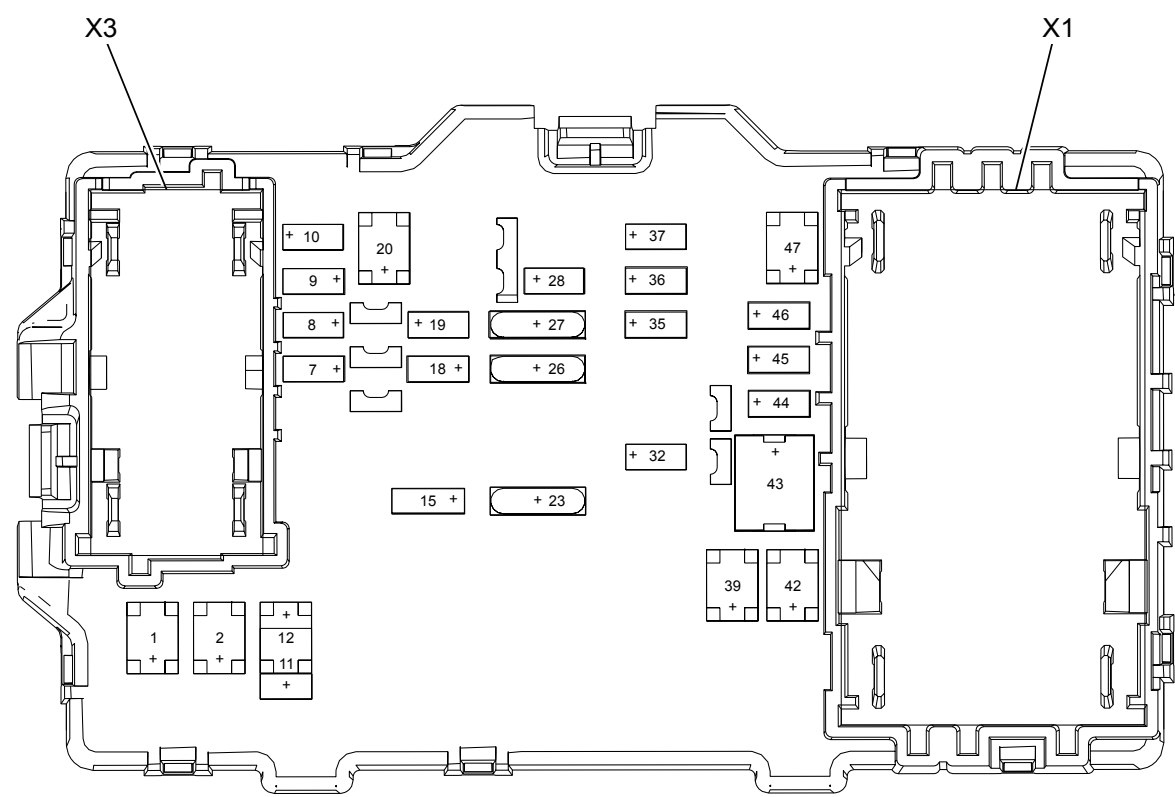
X51L Fuse Block - Instrument Panel Left X3

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



X51R Fuse Block - Instrument Panel Right Top View



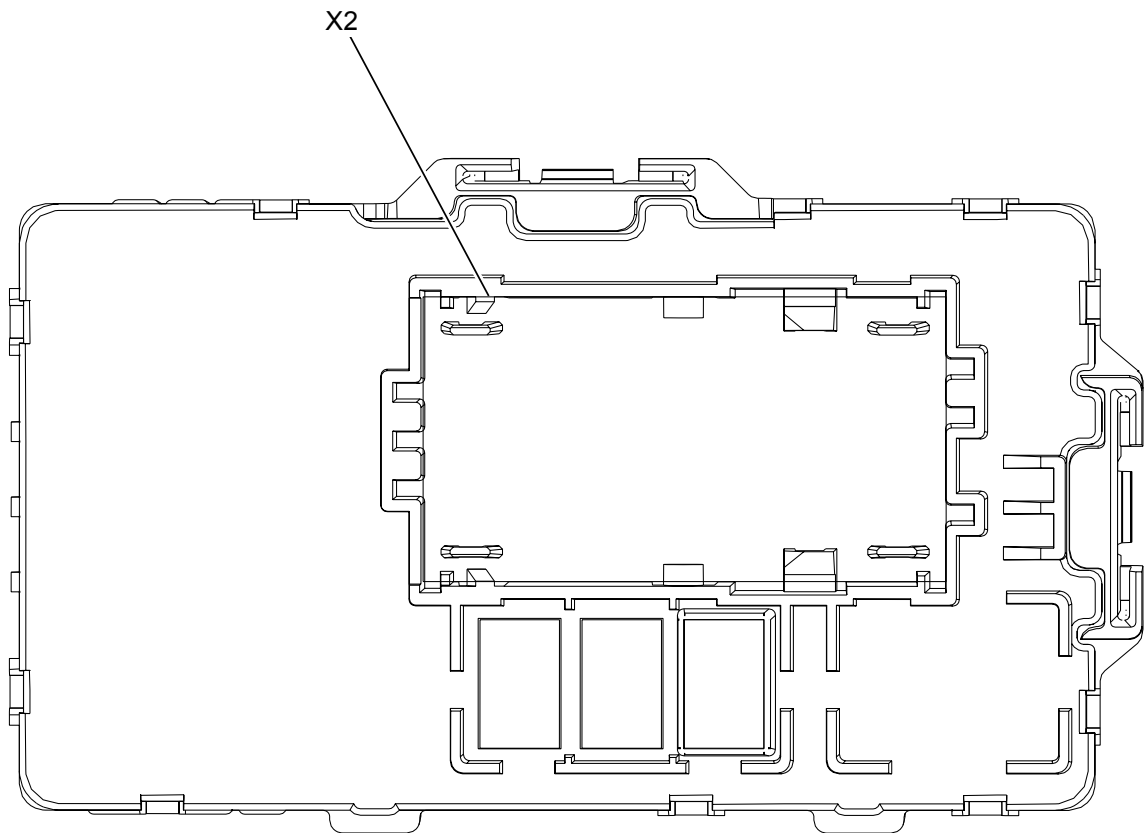
X51R Fuse Block – Instrument Panel Right Label Usage (Fuses)

No.	Device Label Name	Device Assigned Name	Rating	Description
1	APO 3	F1DR	15A	•
2	APO 4	F2DR	15A	•
3	EMPTY	—	—	•
4	EMPTY	—	—	•
5	EMPTY	—	—	•
6	EMPTY	—	—	•
7	BCM 4	F7DR	20A	•

8	BCM 8	F8DR	20A	•
9	RSE	F9DR	10A	•
10	CARGO LAMP	F10DR	15A	• • • • •
11	EMPTY	F11DR	—	•
12	EMPTY	F12DR	—	•
14	EMPTY	F14DR	—	•
15	STR WHL CNTRL	F15DR	2A	• •
16	EMPTY	F16DR	—	•
17	EMPTY	F17DR	—	•
18	RDO	F18DR	20A	• • • • •
19	SPARE	F19DR	10A	•
20	SUNROOF	F20DR	30A	• •
21	EMPTY	F21DR	—	•
22	EMPTY	F22DR	—	•
23	AIRBAG/INFO	F23DR	10A	• • •
24	EMPTY	F24DR	—	•
25	EMPTY	F25DR	—	•
26	EXP PTO/SEO B1	F26DR	15A	• •

27	USB/OBS DET	F27DR	15A	<div><div></div><div></div><div></div></div>
28	BCM 2	F28DR	10A	<div><div></div></div>
29	EMPTY	F29DR	—	<div><div></div></div>
30	EMPTY	F30DR	—	<div><div></div></div>
31	EMPTY	F31DR	—	<div><div></div></div>
32	SEO B2	F32DR	30A	<div><div></div></div>
33	EMPTY	F33DR	—	<div><div></div></div>
34	EMPTY	F34DR	—	<div><div></div></div>
35	AC INV	F35DR	25A	<div><div></div></div>
36	AMP	F36DR	30A	<div><div></div></div>
37	SPARE	F37DR	10A	<div><div></div></div>
38	EMPTY	F38DR	—	<div><div></div></div>
39	RR SLD WNDW	F39DR	30A	<div><div></div><div></div></div>
40	EMPTY	F40DR	—	<div><div></div></div>
41	EMPTY	F41DR	—	<div><div></div></div>
42	RT DR WNDW MTR	F42DR	30A	<div><div></div><div></div></div>
43	FRT BLWR	F43DR	40A	<div><div></div></div>
44	SEO	F44DR	15A	<div><div></div></div>
45	BCM 6	F45DR	15A	<div><div></div></div>
46	BCM 7	F46DR	15A	<div><div></div></div>
47	PASS SEAT	F47DR	30A	<div><div></div></div>

X51R Fuse Block - Instrument Panel Right Bottom View

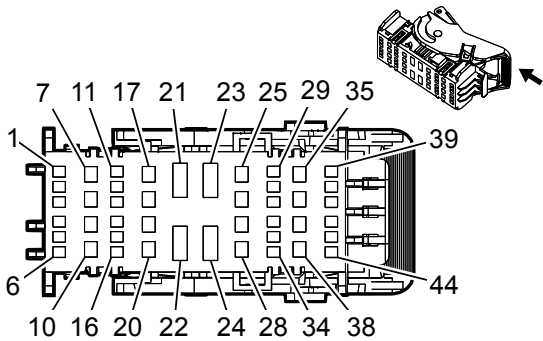


X51R Fuse Block – Instrument Panel Right Label Usage (Relays)

No.	Device Label Name	Device Assigned Name	Rating	Description
48	EMPTY	—	—	•
49	EMPTY	—	—	•
50	RAP/ACCY	KR76B Retained Accessory Power Relay 2	—	• •
51	RR SLD WNDW OPN	KR8B Sliding Rear Window Open Relay	—	•
52	RR SLD WNDW CL	KR8A Sliding Rear Window Close Relay	—	•
Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block.				
—	—	KR112 Cargo Lamp Relay	—	• F9DR

—	—	KR113 Child Security Lock Disable Relay	—	<ul style="list-style-type: none">● A23LR Door Latch Assembly-Left Rear● A23RR Door Latch Assembly-Right Rear
—	—	KR114 Door Dead Lock Relay	—	<ul style="list-style-type: none">● A23D Door Latch Assembly-Driver● A23 LR Door Latch Assembly-Left Rear● A23P Door Latch Assembly-Passenger● A23RR Door Latch Assembly-Right Rear

X51R Fuse Block - Instrument Panel Right X1



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	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
II	13575718	J-35616-44 (YE)	J-38125-558	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-557	Not Available	Not Available	Not Available	Not Available
V	19301767	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	1.5	GY	295	Door Lock Actuator Lock Control	V	EXTENDED CAB/CREW CAB
	0.75	GY	295	Door Lock Actuator Lock Control	V	REGULAR CAB
2	1.5	WH/D-BU	3266	Child Security Lock Motor Lock Control	V	—
3	0.35	VT/YE	3267	Child Security Lock Relay Control	V	—
4	1.5	GY/L-GN	3271	Door Lock Control 2	V	—
5	—	—	—	Not Occupied	—	—
6	0.35	GY/VT	755	RAP Relay Coil Control	V	—

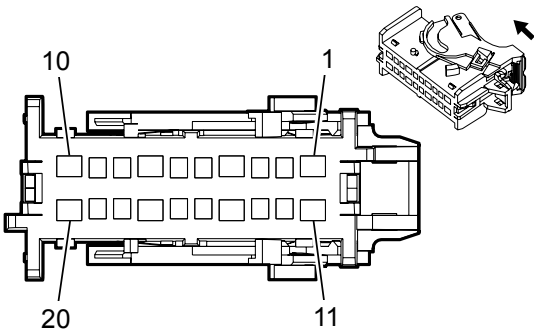
6	0.35	GY/VT	755	RAP Relay Coil Control	V	—
7 - 8	—	—	—	Not Occupied	—	—
9	2.5	GY/L-GN	5441	Endgate Window Regulator Down Signal	IV	—
10	2.5	YE/D-BU	5442	Endgate Window Regulator Up Signal	IV	—
11	—	—	—	Not Occupied	—	—
12	0.75	RD/D-BU	4540	Battery Positive Voltage	V	—
13	0.75	RD/VT	2640	Battery Positive Voltage	V	—
14	—	—	—	Not Occupied	—	—
15	0.5	VT/GY	709	Left Park Lamp Control	V	—
16	0.35	RD/L-GN	4440	Battery Positive Voltage	V	AL0
	0.5	RD/L-GN	4440	Battery Positive Voltage	V	-AL0
17	—	—	—	Not Occupied	—	—
18	1.5	VT/YE	143	Accessory Ignition Voltage	IV	—
19	2.5	RD/WH	1340	Battery Positive Voltage	IV	—
20	2.5	RD/WH	1340	Battery Positive Voltage	IV	—
21	6	RD/L-GN	242	Battery Positive Voltage	II	—
22	4	RD/VT	542	Battery Positive Voltage	I	—
23	—	—	—	Not Occupied	—	—
24	6	RD/GY	142	Battery Positive Voltage	II	—

25 - 26	—	—	—	Not Occupied	—	—
27	0.75	RD/VT	340	Battery Positive Voltage	III	—
28	—	—	—	Not Occupied	—	—
29	1.5	D-BU/WH	195	Door Lock Control	V	—
30 - 32	—	—	—	Not Occupied	—	—
33	0.75	RD/WH	3440	Battery Positive Voltage	V	—
34	0.75	RD/L-GN	5140	Battery Positive Voltage	V	—
35 - 36	—	—	—	Not Occupied	—	—
37	2.5	RD/YE	3740	Battery Positive Voltage	III	—
38	2.5	RD/BN	1440	Battery Positive Voltage	IV	—
39	—	—	—	Not Occupied	—	—
40	0.75	GY	5911	Door Lock Actuator Lock Control 2	V	—
41 - 42	—	—	—	Not Occupied	—	—
43	0.75	RD/L-GN	3140	Battery Positive Voltage	V	—
44	0.5	RD/BN	2940	Battery Positive Voltage	V	—

9	—	—	—	Not Occupied	—	—
10	1.5	VT/YE	243	Accessory Ignition Voltage	III	—
11	0.75	WH/VT	1430	Exterior Courtesy Lamp Control	IV	—
12 - 15	—	—	—	Not Occupied	—	—
16	0.35	RD/YE	3040	Battery Positive Voltage	IV	—
17	1	RD/VT	340	Battery Positive Voltage	II	(IO4/IO5/IO6)/(IO3&TG5)
	0.75	RD/VT	340	Battery Positive Voltage	II	O3-TG5
18 - 21	—	—	—	Not Occupied	—	—
22	2.5	BK	1050	Ground	I	—
23 - 28	—	—	—	Not Occupied	—	—
29	0.5	RD/BN	2240	Battery Positive Voltage	IV	—
30 - 31	—	—	—	Not Occupied	—	—
32	0.35	YE/VT	6191	Power Sliding Window Switch Open Signal	IV	—
33	0.35	WH	6192	Power Sliding Window Switch Close Signal	IV	—
34	0.35	RD/D-BU	3240	Battery Positive Voltage	IV	—
35	2.5	RD/GY	4140	Battery Positive Voltage	III	—
36 - 37	—	—	—	Not Occupied	—	—
38	1.5	RD/YE	2340	Battery Positive Voltage	III	—
39 - 41	—	—	—	Not Occupied	—	—
42	0.75	RD/VT	340	Battery Positive Voltage	IV	—

43 - 44	—	—	—	Not Occupied	—	—
---------	---	---	---	--------------	---	---

X51R Fuse Block - Instrument Panel Right X3



Connector Part Information

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

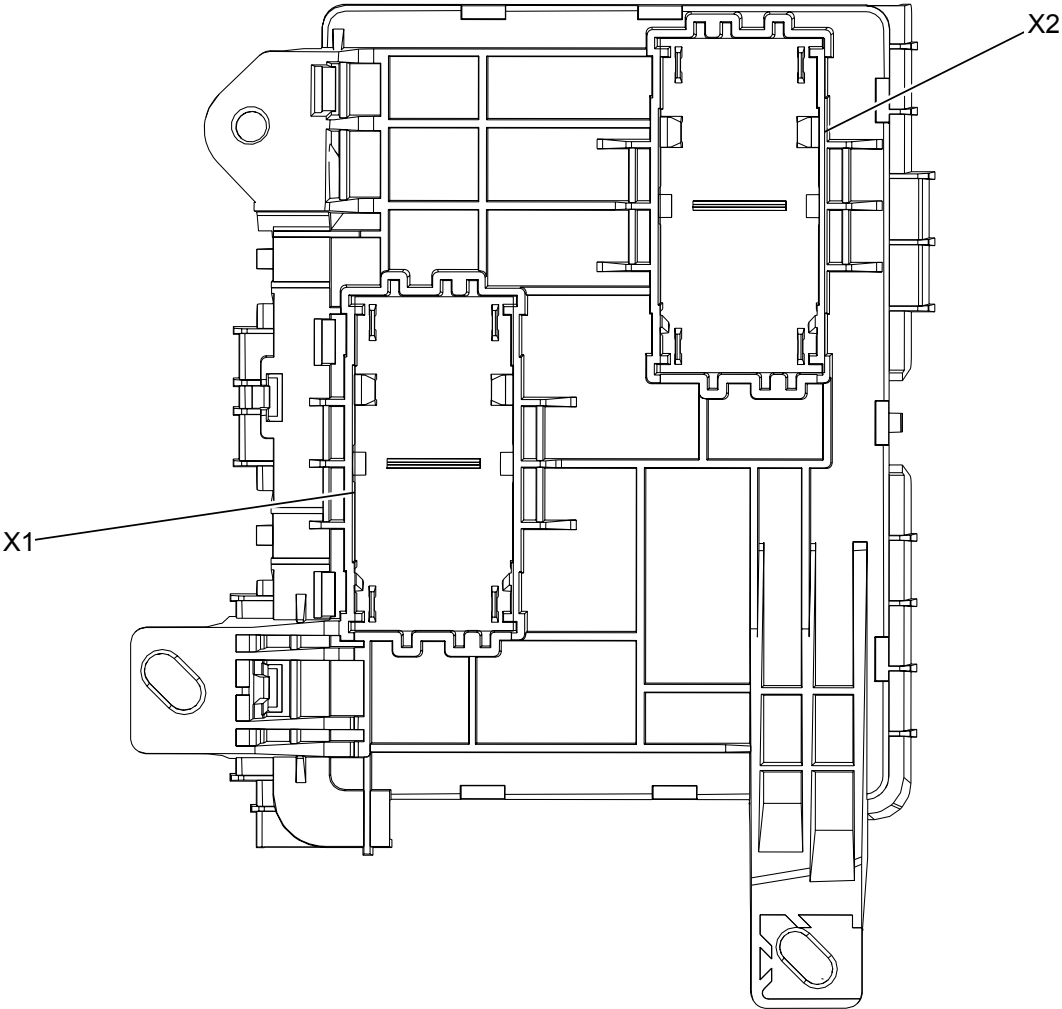
Terminal Part Information

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-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

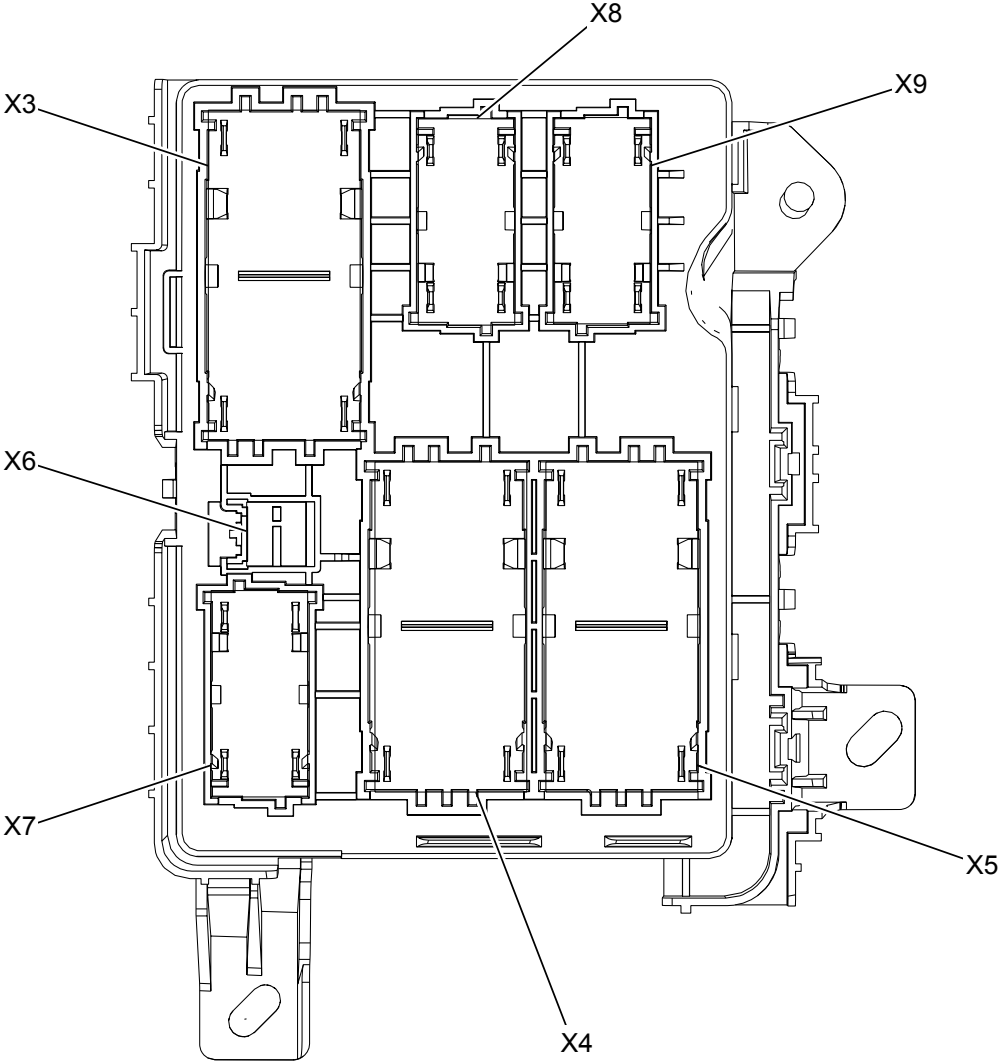
X51R Fuse Block - Instrument Panel Right X3

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	2.5	BK	1050	Ground	II	CF5/TRW
	0.5	BK	1050	Ground	II	U01-UE1-IO6
11 - 20	—	—	—	Not Occupied	—	—

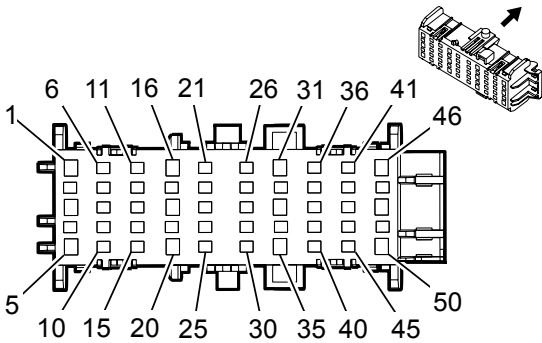
X61A Junction Block - Instrument Panel Top View



X61A Junction Block - Instrument Panel Bottom View



X61A Junction Block - Instrument Panel X1



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	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301761	J-35616-35 (VT)	J-38125-557	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 X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	GY/BK	1570	Front Axle Actuator Control	III	—
3 - 10	—	—	—	Not Occupied	—	—
11	0.35	GY/L-GN	2555	Rear Park Assist Disable Signal	III	—
12 - 15	—	—	—	Not Occupied	—	—
16	2.5	D-BU	965	—	II	—
17	0.75	WH/VT	1430	Exterior Courtesy Lamp Control	III	—
18	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—

2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION

19	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	III	—
20	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
21	0.5	RD/WH	961	—	III	—
22	0.35	VT	185	Low Washer Fluid Indicator Control	III	—
23	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	III	—
24	0.5	BN	7634	Integrated Trailer Brake Controller Redundant Manual Apply Signal	III	—
25	0.35	GY	5697	Child Lockout Indicator Control	III	—
26	0.5	D-BU/RD	7632	Integrated Trailer Brake Controller Switch 5V Reference	III	—
27	0.5	BK/BN	7631	Integrated Trailer Brake Controller Switch Low Reference	III	—
28	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	III	—
29	0.5	YE	7635	Integrated Trailer Brake Controller Manual Apply Signal	III	—
30	0.5	L-GN/GY	963	—	III	—
31	2.5	GY/BK	966	—	II	—
32	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	III	—
33	0.35	VT/BN	300	Run Ignition 3 Voltage	I	—
34	0.5	YE/WH	962	—	III	—

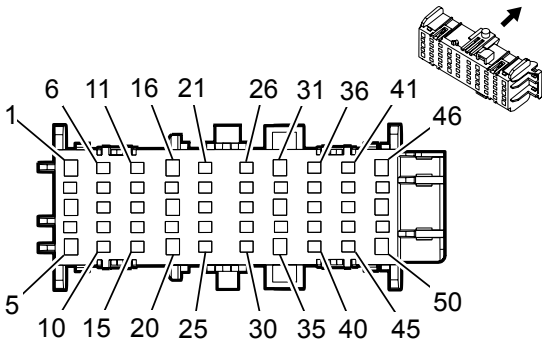
35	2.5	YE/BN	967	—	II	—
36	0.35	WH/GY	5285	Adjustable Pedal Switch Rearward Signal	III	—
37	—	—	—	Not Occupied	—	—
38	0.5	WH/D-BU	964	—	III	—
39	1	D-BU/VT	1134	Park Brake Switch Signal	III	—
40	0.5	L-GN	5060	Low Speed GMLAN Serial Data	III	—
41	0.5	L-GN/BK	7633	Integrated Trailer Brake Controller User Gain Signal	III	—
42	0.35	L-GN/GY	5286	Adjustable Pedal Switch Forward Signal	III	—
43	—	—	—	Not Occupied	—	—
44	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	III	—
45	0.35	L-GN/BN	5852	Rear Park Assist LED Disable Signal	III	—
46	0.5	VT/WH	1939	Run/Crank Ignition 1 Voltage	I	—
47	0.5	WH	6816	Indicator Dimming Control	III	—
48	2.5	RD/L-GN	968	—	II	—
49	0.35	YE/WH	816	Brake Transmission Shift Interlock Solenoid Control	III	—
50	2.5	BK	2550	Ground	II	—

9	0.35	BK/YE	1691	Automatic Day/Night Mirror Low Reference	IV	—
10	0.35	YE/WH	1690	Automatic Day/Night Mirror Signal	IV	—
11	0.35	D-BU	5952	Adjustable Pedal Position Sensor Brake Signal	IV	—
12	1.5	YE	5129	Adjustable Pedal Actuator Rearward Control	IV	A45
	0.75	YE	5129	Adjustable Pedal Actuator Rearward Control	IV	-A45
13 - 14	—	—	—	Not Occupied	—	—
15	0.35	L-GN/WH	24	Backup Lamp Control	IV	—
16	2.5	YE/BN	1569	Transfer Case Lock Solenoid Control	III	—
17	—	—	—	Not Occupied	—	—
18	4	BK	550	Ground	I	—
19	0.35	VT/WH	5234	Passenger Seat Belt Indicator Control	IV	—
20	—	—	—	Not Occupied	—	—
21	1.5	L-GN/VT	5130	Adjustable Pedal Actuator Forward Control	IV	A45
	0.75	L-GN/VT	5130	Adjustable Pedal Actuator Forward Control	IV	-A45
22	0.35	BK/GY	6206	Memory Sensor Low Reference	IV	—
23	0.5	WH/BN	6815	Inadvertent Power Control	IV	—
24	0.35	L-GN	2308	Passenger Air Bag Off Indicator Control	IV	—
25	—	—	—	Not Occupied	—	—

26	0.35	D-BU/GY	7473	Incremental Encoder Impulse Signal	IV	—
27	0.35	VT	7476	Incremental Encoder Sensor Low Reference	IV	—
28	—	—	—	Not Occupied	—	—
29	0.5	GY	157	Interior Lamp Control	IV	—
30	0.35	GY	156	Courtesy Lamp Switch Signal	IV	—
31	4	YE/VT	1553	Transfer Case Motor Counter Clockwise Control	I	—
32	0.35	YE	7474	Incremental Encoder Direction Signal	IV	—
33	0.5	VT/GY	1054	Stop Lamp Control	II	—
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	IV	—
37	0.5	YE/WH	1695	Four Wheel Drive Wheel Lock Indicator Control	IV	—
38	0.35	VT/YE	5985	Accessory Wakeup Serial Data	IV	—
39 - 43	—	—	—	Not Occupied	—	—
44	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	IV	—
45	—	—	—	Not Occupied	—	—
46	4	YE/GY	1552	Transfer Case Motor Clockwise Control	I	—
47	0.5	L-GN/GY	817	Vehicle Speed Signal	IV	—

48	2.5	D-BU	47	Trailer Auxiliary Control	III	—
49	—	—	—	Not Occupied	—	—
50	0.35	VT/YE	43	Accessory Ignition Voltage	II	—

X61A Junction Block - Instrument Panel X3



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	13578891	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-557	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

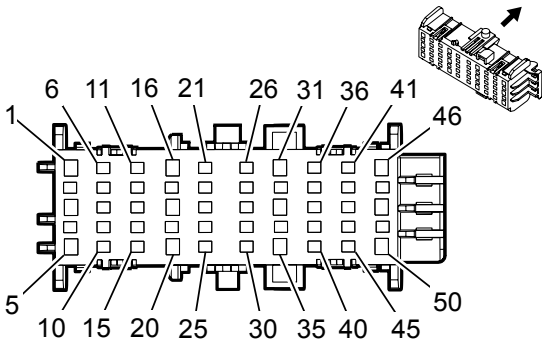
X61A Junction Block - Instrument Panel X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	RD/L-GN	3140	Battery Positive Voltage	II	UFL
	0.35	RD/L-GN	3140	Battery Positive Voltage	II	UHX
4	0.35	D-BU	2307	Passenger Air Bag On Indicator Control	I	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.75	WH/VT	1430	Exterior Courtesy Lamp Control	IV	—
8	0.35	YE/WH	1690	Automatic Day/Night Mirror Signal	IV	—
9	0.35	BK/YE	1691	Automatic Day/Night Mirror Low Reference	IV	—

9	0.35	BK/YE	1691	Automatic Day/Night Mirror Low Reference	IV	—
10 - 12	—	—	—	Not Occupied	—	—
13	0.35	L-GN/RD	24	Backup Lamp Control	IV	—
14 - 16	—	—	—	Not Occupied	—	—
17	0.35	L-GN/BK	2515	Keypad Control	IV	—
18	—	—	—	Not Occupied	—	—
19	0.35	VT/WH	5234	Passenger Seat Belt Indicator Control	I	—
20	—	—	—	Not Occupied	—	—
21	0.35	L-GN/D-BU	2514	Keypad Signal	IV	—
22	0.35	YE/BN	2516	Keypad Green LED Control	IV	—
23	—	—	—	Not Occupied	—	—
24	0.35	L-GN/RD	2308	Passenger Air Bag Off Indicator Control	I	—
25	0.5	WH/BN	6815	Inadvertent Power Control	IV	EXTENDED CAB/CREW CAB
	0.5	WH/BN	6815	Inadvertent Power Control	I	REGULAR CAB
26	0.35	WH	6192	Power Sliding Window Switch Close Signal	I	—
27	0.5	YE	6817	LED Backlight Dimming Control	I	EXTENDED CAB/CREW CAB
	0.5	YE	6817	LED Backlight Dimming Control	IV	REGULAR CAB
28	0.35	GY/D-BU	156	Courtesy Lamp Switch Signal	I	—
29	0.5	GY	157	Interior Lamp Control	I	EXTENDED CAB/CREW CAB
	0.5	GY	157	Interior Lamp Control	IV	REGULAR CAB

	0.5	GY	157	Interior Lamp Control	IV	REGULAR CAB
30 - 31	—	—	—	Not Occupied	—	—
32	0.35	YE/VT	6191	Power Sliding Window Switch Open Signal	I	—
33 - 34	—	—	—	Not Occupied	—	—
35	0.5	VT/GY	1054	Stop Lamp Control	II	—
36	0.35	BN/WH	2517	Keypad Red LED Control	IV	—
37 - 40	—	—	—	Not Occupied	—	—
41	0.35	GY/L-GN	328	Interior Lamp Defeat Switch Signal	I	—
42	0.35	VT/L-GN	7558	LED Ambient Lighting Control 2	I	EXTENDED CAB/CREW CAB
	0.35	VT/L-GN	7558	LED Ambient Lighting Control 2	IV	REGULAR CAB
43 - 44	—	—	—	Not Occupied	—	—
45	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	IV	—
46	2.5	BK	1050	Ground	III	—
47	0.35	L-GN	5060	Low Speed GMLAN Serial Data	IV	—
48	—	—	—	Not Occupied	—	—
49	0.35	WH	3152	Lane Departure Warning Indicator Control	IV	—
50	—	—	—	Not Occupied	—	—

X61A Junction Block - Instrument Panel X4



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	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

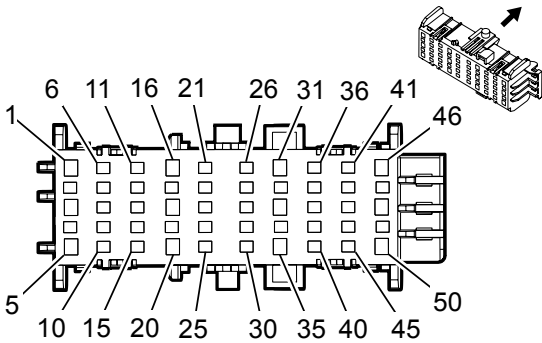
X61A Junction Block - Instrument Panel X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
2	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	II	—
3	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
4	0.75	WH/VT	1430	Exterior Courtesy Lamp Control	II	—
5	—	—	—	Not Occupied	—	—
6	0.35	GY	5697	Child Lockout Indicator Control	II	—
7	0.5	BN	7634	Integrated Trailer Brake Controller Redundant Manual Apply Signal	II	—
8	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	II	—

9	0.35	VT	185	Low Washer Fluid Indicator Control	II	—
10	0.5	RD/WH	961	—	II	—
11	0.5	L-GN/GY	963	—	II	—
12	0.5	YE	7635	Integrated Trailer Brake Controller Manual Apply Signal	II	—
13	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	II	—
14	0.5	BK/BN	7631	Integrated Trailer Brake Controller Switch Low Reference	II	—
15	0.5	D-BU/RD	7632	Integrated Trailer Brake Controller Switch 5V Reference	II	—
16	—	—	—	Not Occupied	—	—
17	0.5	YE/WH	962	—	II	—
18	0.35	VT/BN	300	Run Ignition 3 Voltage	I	—
19	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—
20 - 21	—	—	—	Not Occupied	—	—
22	0.5	D-BU/VT	1134	Park Brake Switch Signal	II	—
23	0.5	WH/D-BU	964	—	II	—
24	—	—	—	Not Occupied	—	—
25	0.35	WH/GY	5285	Adjustable Pedal Switch Rearward Signal	II	—
26	0.35	L-GN/BN	5852	Rear Park Assist LED Disable Signal	II	—

27	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	II	—
28	—	—	—	Not Occupied	—	—
29	0.35	L-GN/GY	5286	Adjustable Pedal Switch Forward Signal	II	—
30	0.5	L-GN/BK	7633	Integrated Trailer Brake Controller User Gain Signal	II	—
31	0.35	BK	2550	Ground	I	—
32	0.35	YE/WH	816	Brake Transmission Shift Interlock Solenoid Control	II	—
33	—	—	—	Not Occupied	—	—
34	0.5	WH	6816	Indicator Dimming Control	II	—
35 - 36	—	—	—	Not Occupied	—	—
37	0.35	WH	6816	Indicator Dimming Control	II	—
38	0.35	WH	6816	Indicator Dimming Control	II	—
39 - 44	—	—	—	Not Occupied	—	—
45	0.35	GY/L-GN	2555	Rear Park Assist Disable Signal	II	—
46 - 50	—	—	—	Not Occupied	—	—

X61A Junction Block - Instrument Panel X5



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	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301761	J-35616-35 (VT)	J-38125-557	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

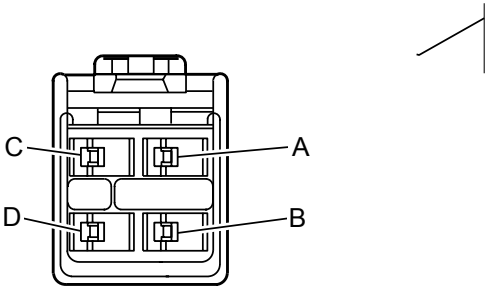
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.35	YE/VT	2516	Keypad Green LED Control	III	—
3	0.35	BK/L-GN	552	Sensor Low Reference	I	—
4	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	III	—
5	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
6	0.5	YE	6817	LED Backlight Dimming Control	III	—
7	0.35	L-GN/WH	2514	Keypad Signal	III	—

8	0.35	GY/RD	598	5V Reference	III	—
9	0.35	WH/L-GN	526	Stop Lamp Switch Signal	III	—
10	0.35	D-BU/YE	1693	Four Wheel Drive Switch Signal	III	—
11	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	III	—
12	0.35	YE/VT	6191	Power Sliding Window Switch Open Signal	III	—
13	0.35	WH	6192	Power Sliding Window Switch Close Signal	III	—
14	0.35	BN	1560	Neutral Indicator Control	III	—
15	0.35	GY/RD	6029	Four Wheel Drive Mode Switch 5V Reference	III	—
16	2.5	BK	1050	Ground	II	—
17 - 18	—	—	—	Not Occupied	—	—
19	0.35	L-GN/BK	2515	Keypad Control	III	—
20	—	—	—	Not Occupied	—	—
21	0.5	VT/L-GN	7558	LED Ambient Lighting Control 2	III	—
22	0.35	BN/WH	2517	Keypad Red LED Control	III	—
23	0.35	BN/BK	1566	4 HI Indicator Control	III	—
24	0.35	VT/WH	1565	4 LO Indicator Control	III	—
25	0.35	VT/L-GN	1739	Run/Crank Ignition 1 Voltage	III	—

26	0.35	WH	3152	Lane Departure Warning Indicator Control	III	—
27	0.35	GY/L-GN	328	Interior Lamp Defeat Switch Signal	III	—
28 - 29	—	—	—	Not Occupied	—	—
30	0.35	GY/L-GN	1561	AWD Indicator Control	III	—
31	1.5	RD/YE	2340	Battery Positive Voltage	II	—
32	0.5	BK/WH	1851	Signal Ground	III	—
33	0.75	BK/WH	1851	Signal Ground	I	E29
	0.35	BK/WH	1851	Signal Ground	I	-E29
34	—	—	—	Not Occupied	—	—
35	2.5	BK/WH	1851	Signal Ground	II	—
36 - 37	—	—	—	Not Occupied	—	—
38	0.5	BK/WH	1851	Signal Ground	III	—
39	0.35	BK/WH	1851	Signal Ground	III	—
40	0.35	L-GN/BK	1563	2 HI Indicator Control	III	—
41	0.35	BK/WH	1851	Signal Ground	III	—
42 - 43	—	—	—	Not Occupied	—	—
44	0.35	BK	2550	Ground	III	—
45	0.35	BK	2550	Ground	III	—

46	0.75	BK	2550	Ground	I	IO4/IO5/IO6
	0.35	BK	2550	Ground	I	IO5/IO6
47	0.35	BK	2550	Ground	III	—
48	0.75	BK	2550	Ground	I	TG5
	0.5	BK	2550	Ground	I	U42
49	0.35	BK	2550	Ground	III	—
50	0.75	BK	2550	Ground	I	—

X61A Junction Block - Instrument Panel X6



Connector Part Information

Harness Type: Trailer Jumper
OEM Connector: 12194033
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 280 Metri-Pack Flexlock Series (CR)

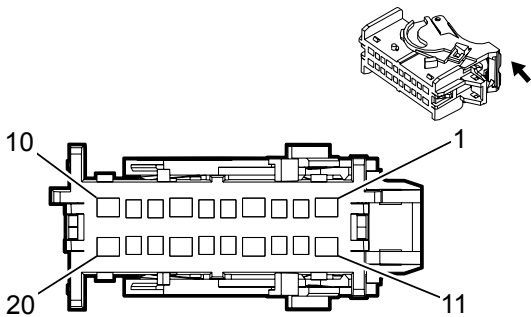
Terminal Part Information

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

X61A Junction Block - Instrument Panel X6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BK	1050	Ground	I	—
B	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	I	—
C	2.5	RD/L-GN	242	Battery Positive Voltage	I	—
D	2.5	D-BU	47	Trailer Auxiliary Control	I	—

X61A Junction Block - Instrument Panel X8



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

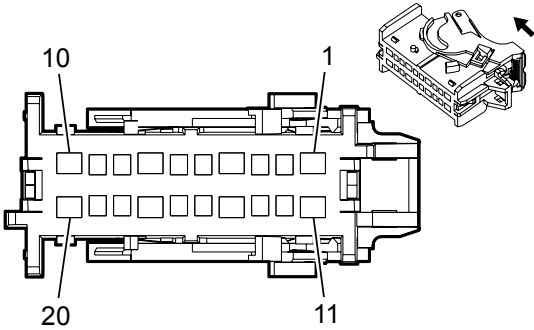
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

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



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

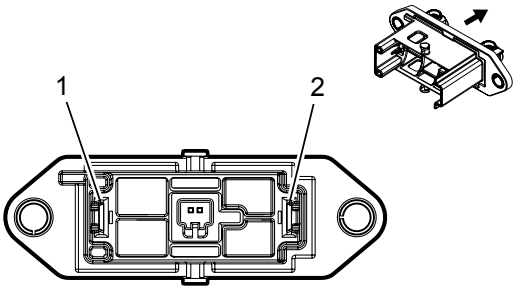
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

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	—

A4 Hybrid/EV Battery Pack



Connector Part Information

Harness Type: High Voltage Battery Manual Service Disconnect
OEM Connector: 33213213
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F MSD 125 Receptacle (BK)

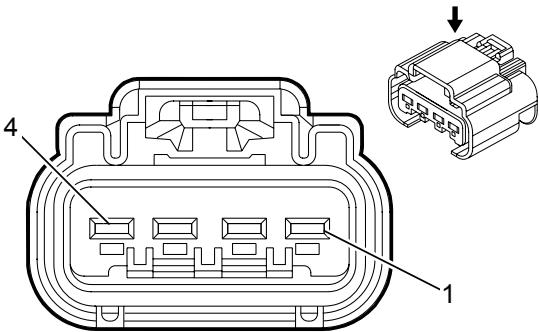
Terminal Part Information

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

A4 Hybrid/EV Battery Pack

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	12	OG	3970	High Voltage Battery 4 (+)	I	—
2	12	OG	3970	High Voltage Battery 4 (+)	I	—

A6C Fuel Pump and Level Sensor Assembly - Primary



Connector Part Information

Harness Type: Chassis
OEM Connector: 13527865
Service Connector: 13587174
Description: 4-Way F 280 GT Series, Sealed (NA)

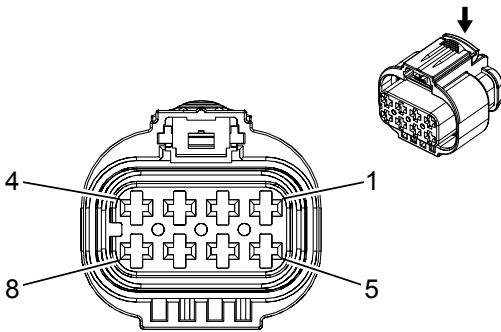
Terminal Part Information

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

A6C Fuel Pump and Level Sensor Assembly - Primary

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	GY	120	Fuel Pump Control	I	—
2	2.5	BK/L-GN	1580	Fuel Pump Low Reference	I	—
3	0.5	BK/L-GN	6281	Fuel Level Sensor Low Reference	I	—
4	0.5	D-BU/VT	1589	Primary Fuel Level Sensor Signal	I	—

A6D Fuel Pump and Level Sensor Assembly - Secondary



Connector Part Information

Harness Type: Chassis
OEM Connector: 33180742
Service Connector: 19354078
Description: 8-Way F 2.8 Series, Sealed (L-GY)

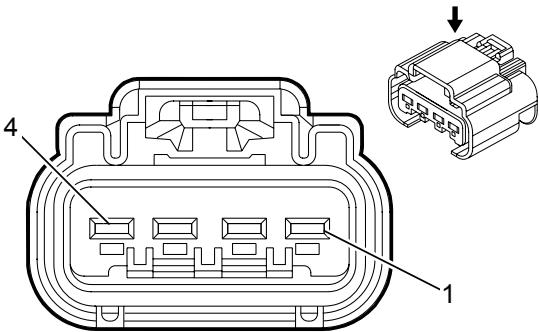
Terminal Part Information

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

A6D Fuel Pump and Level Sensor Assembly - Secondary

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	GY	120	Fuel Pump Control	I	—
2	2.5	BK	2150	Ground	I	—
3 - 4	—	—	—	Not Occupied	—	—
5	0.5	D-BU/WH	1937	Secondary Fuel Level Sensor Signal	I	—
6	0.5	BK/L-GN	6281	Fuel Level Sensor Low Reference	I	—
7 - 8	—	—	—	Not Occupied	—	—

A7 Fuel Pump and Level Sensor Assembly



Connector Part Information

Harness Type: Chassis
OEM Connector: 13527865
Service Connector: 13587174
Description: 4-Way F 280 GT Series, Sealed (NA)

Terminal Part Information

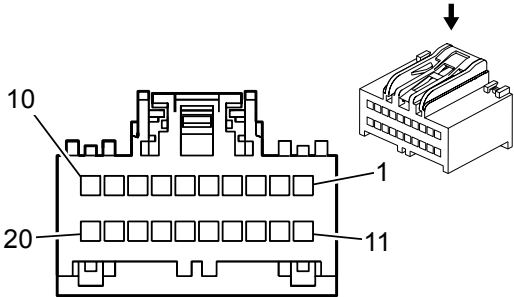
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A7 Fuel Pump and Level Sensor Assembly

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	GY	120	Fuel Pump Control	I	—
2	2.5	BK/L-GN	1580	Fuel Pump Low Reference	I	—
3	0.5	BK/L-GN	6281	Fuel Level Sensor Low Reference	I	—
4	0.5	D-BU/VT	1589	Primary Fuel Level Sensor Signal	I	—

9	0.35	YE/WH	1690	Automatic Day/Night Mirror Signal	I	—
10	—	—	—	Not Occupied	—	—

A11 Radio X1



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15491304
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	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	19300440	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

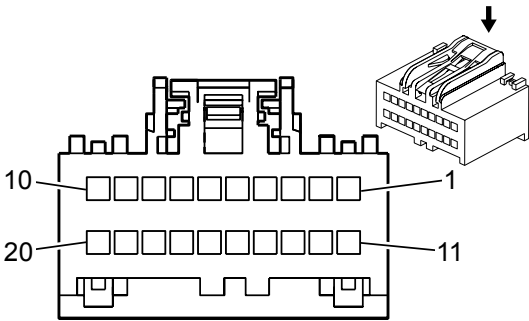
A11 Radio X1

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	0.35	WH/D-BU	6973	Camera Signal 2	II	IO3
	0.5	GY/L-GN	1102	Low Speed GMLAN Serial Data #2	II	IOB
5	0.35	GY/YE	6972	Camera Signal 2 +	II	—
6	0.5	BARE	5842	Auxiliary Audio Screen 2	II	IO3
	0.35	BK/GY	5152	Voice Recognition Audio Low Reference	II	IOB+UE1

	0.35	BK/BN	654	Cellular Telephone Microphone Low Reference	II	IOB-UE1
7	0.35	D-BU	2060	Auxiliary Detection Signal	II	IO3
	0.35	GY/YE	5149	Voice Recognition Audio Signal	II	IOB+UE1
	0.35	D-BU	655	Cellular Telephone Microphone Signal	II	IOB-UE1
8	0.35	VT	5843	Auxiliary Audio Common Signal	II	IO3
	0.35	BN/L-GN	3983	Display Radio Bank Switch Signal 2	II	IOB
9	0.35	GY	5839	Left Auxiliary Audio Signal 2	II	IO3
	0.35	BK/YE	659	Cellular Telephone Voice Low Reference	II	IOB
10	0.35	L-GN	5841	Right Auxiliary Audio Signal 2	II	IO3
	0.35	YE	658	Cellular Telephone Voice Signal	II	IOB
11	0.75	RD/VT	340	Battery Positive Voltage	I	—
12	—	—	—	Not Occupied	—	—
13	0.5	L-GN/D-BU	7532	Local Interconnect Network Serial Data Bus 10	II	—
14	0.35	WH/D-BU	6973	Camera Signal 2	II	IOB
	0.5	GY/L-GN	1102	Low Speed GMLAN Serial Data #2	II	-IOB
15	0.35	GY/YE	6972	Camera Signal 2 +	II	—
16	0.5	BARE	5842	Auxiliary Audio Screen 2	II	—
17	0.35	D-BU	2060	Auxiliary Detection Signal	II	—

17	0.35	VT	5843	Auxiliary Audio Common Signal	II	—
18	0.35	VT	5843	Auxiliary Audio Common Signal	II	—
19	0.35	GY	5839	Left Auxiliary Audio Signal 2	II	IOB
	0.35	BK/YE	659	Cellular Telephone Voice Low Reference	II	-IOB
20	0.35	L-GN	5841	Right Auxiliary Audio Signal 2	II	IOB
	0.35	YE	658	Cellular Telephone Voice Signal	II	-IOB

A11 Radio X2 (IOB)



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15491305
Service Connector: 15126709
Description: 20-Way F USCAR 64 Series (BN)

Terminal Part Information

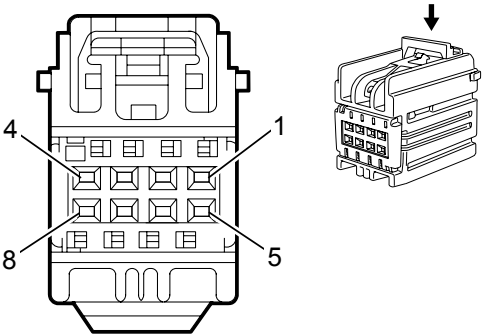
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	19300440	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

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 (+)	II	—
12	0.5	D-BU/BK	115	Right Rear Speaker Signal (-)	II	—
13	0.5	L-GN	199	Left Rear Speaker Control (+)	II	—
14	0.5	L-GN/BK	116	Left Rear Speaker Signal (-)	II	—
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 X2 (-IOB)



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13551679
Service Connector: 19115653
Description: 8-Way F YESC Kaizen Series (L-GY)

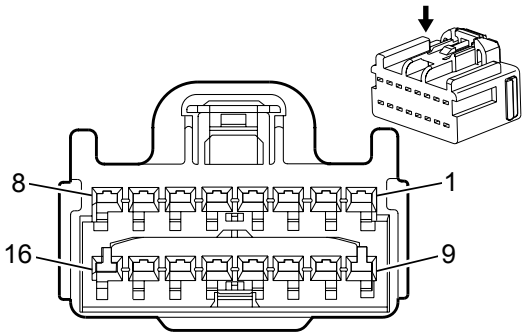
Terminal Part Information

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

A11 Radio X2 (-IOB)

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 X3



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 10847013
Service Connector: 89047090
Description: 16-Way F 1.5 Kaizen Series (GN)

Terminal Part Information

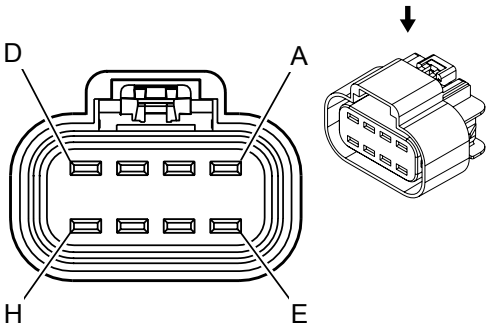
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	13578891	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

A11 Radio X3

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 (+)	II	—
4	0.5	WH	46	Right Rear Speaker Control (+)	II	—
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 (-)	II	—
12	0.5	D-BU/BK	115	Right Rear Speaker Signal (-)	II	—
13 - 15	—	—	—	Not Occupied	—	—
16	0.75	BK	2550	Ground	I	—

A16 Transfer Case Motor (L5P)



Connector Part Information

Harness Type: Engine
OEM Connector: 13669205
Service Connector: 19300464
Description: 8-Way F 280 GT Series, Sealed (BK)

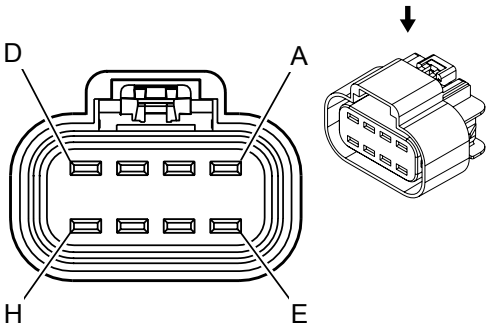
Terminal Part Information

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

A16 Transfer Case Motor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	3	OG	1552	Transfer Case Motor Clockwise Control	I	—
B - C	—	—	—	Not Occupied	—	—
D	3	YE/VT	1553	Transfer Case Motor Counter Clockwise Control	I	—
E	0.5	D-BU/GY	7473	Incremental Encoder Impulse Signal	I	—
F	0.5	YE	7474	Incremental Encoder Direction Signal	I	—
G	0.5	WH/L-GN	7475	Incremental Encoder Sensor 8V Reference	I	—
H	0.5	VT	7476	Incremental Encoder Sensor Low Reference	I	—

A16 Transfer Case Motor (L96)



Connector Part Information

Harness Type: Engine
OEM Connector: 13669205
Service Connector: 19300464
Description: 8-Way F 280 GT Series, Sealed (BK)

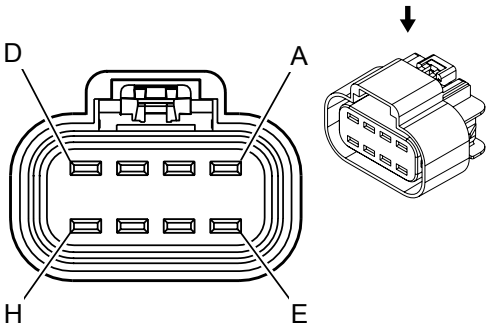
Terminal Part Information

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

A16 Transfer Case Motor (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	3	OG	1552	Transfer Case Motor Clockwise Control	I	—
B - C	—	—	—	Not Occupied	—	—
D	3	YE/VT	1553	Transfer Case Motor Counter Clockwise Control	I	—
E	0.5	D-BU/GY	7473	Incremental Encoder Impulse Signal	I	—
F	0.5	YE	7474	Incremental Encoder Direction Signal	I	—
G	0.5	WH/L-GN	7475	Incremental Encoder Sensor 8V Reference	I	—
H	0.5	VT	7476	Incremental Encoder Sensor Low Reference	I	—

A16 Transfer Case Motor (LV3)



Connector Part Information

Harness Type: Engine
OEM Connector: 13669205
Service Connector: 19300464
Description: 8-Way F 280 GT Series, Sealed (BK)

Terminal Part Information

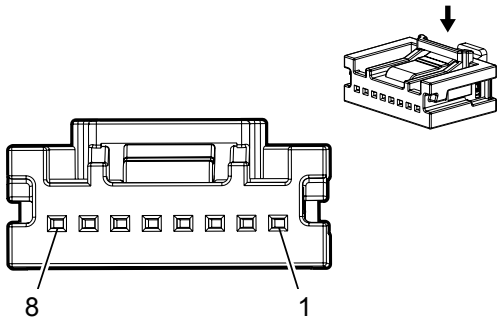
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A16 Transfer Case Motor (LV3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	3	OG	1552	Transfer Case Motor Clockwise Control	I	—
B	3	RD/GY	1342	Battery Positive Voltage	I	—
C	2.5	YE/BN	1569	Transfer Case Lock Solenoid Control	I	—
D	3	YE/VT	1553	Transfer Case Motor Counter Clockwise Control	I	—
E	0.5	D-BU/GY	7473	Incremental Encoder Impulse Signal	I	—
F	0.5	YE	7474	Incremental Encoder Direction Signal	I	—
G	0.5	WH/L-GN	7475	Incremental Encoder Sensor 8V Reference	I	—
H	0.5	VT	7476	Incremental Encoder Sensor Low Reference	I	—

--	--	--	--	--	--	--	--

A22 Radio Controls



Connector Part Information

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

Terminal Part Information

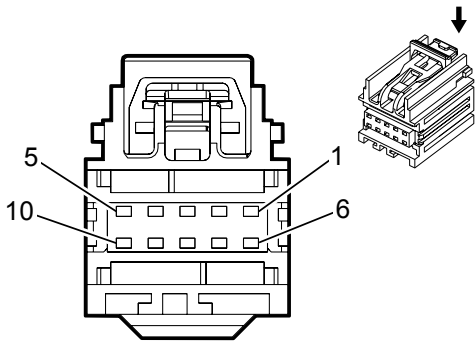
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A22 Radio Controls

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



Connector Part Information

Harness Type: Driver Door
OEM Connector: 33110655
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 YESC Kaizen Series (GN)

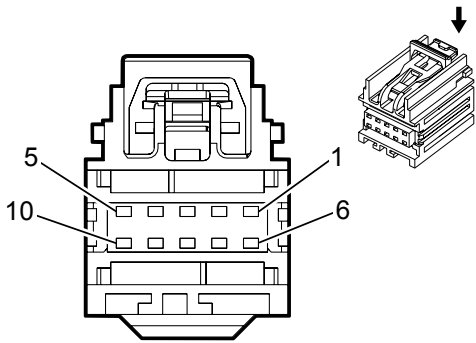
Terminal Part Information

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



Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 33110655
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 YESC Kaizen Series (GN)

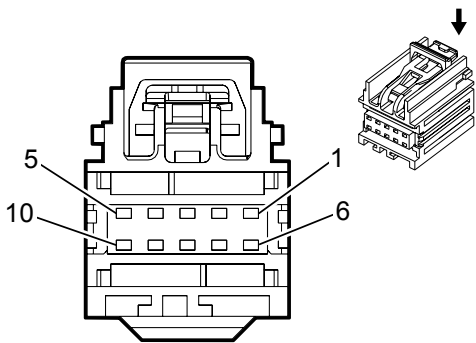
Terminal Part Information

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

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



Connector Part Information

Harness Type: Passenger Door
OEM Connector: 33110655
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 YESC Kaizen Series (GN)

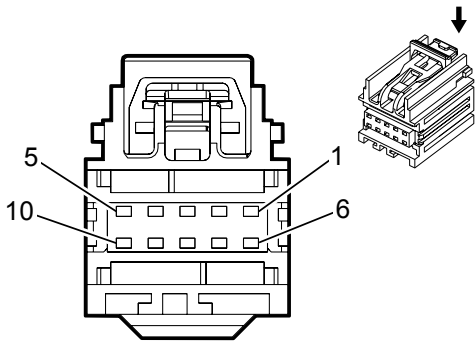
Terminal Part Information

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



Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 33110655
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 YESC Kaizen Series (GN)

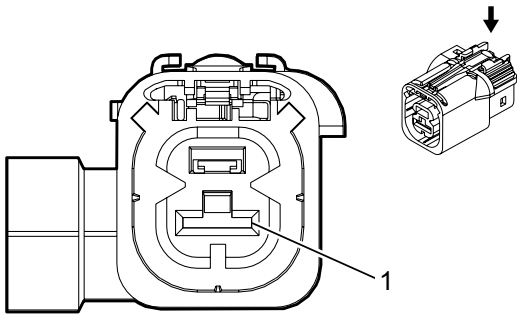
Terminal Part Information

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

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	—	—

A28 Hybrid/EV Battery Contactor Assembly X1



Connector Part Information

Harness Type: High Voltage Battery Negative
OEM Connector: 33119077
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 6.3 Series (OG)

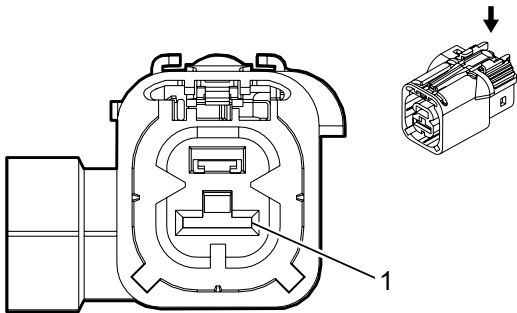
Terminal Part Information

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

A28 Hybrid/EV Battery Contactor Assembly X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	12	OG	5084	High Voltage Battery (+)	I	—

A28 Hybrid/EV Battery Contactor Assembly X2



Connector Part Information

Harness Type: High Voltage Battery Positive
OEM Connector: 33119078
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 6.3 Series (OG)

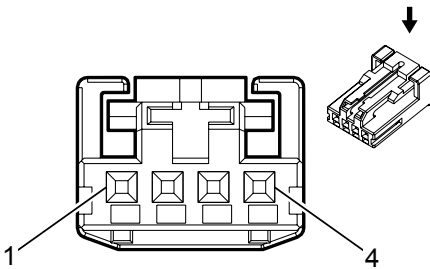
Terminal Part Information

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

A28 Hybrid/EV Battery Contactor Assembly X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	12	OG	5084	High Voltage Battery (+)	I	—

A28 Hybrid/EV Battery Contactor Assembly X3



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 13969166
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

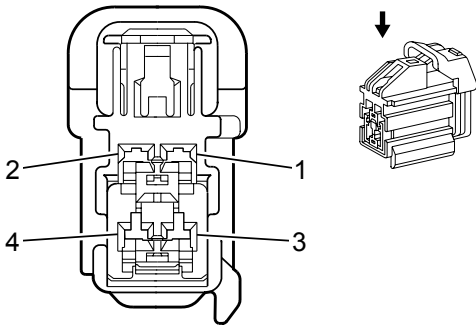
Terminal Part Information

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

A28 Hybrid/EV Battery Contactor Assembly X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.35	VT/RD	2965	High Voltage Battery Current Sensor Voltage Reference	I	—
3	0.35	BK/GY	2963	High Voltage Battery Current Sensor Low Reference	I	—
4	0.35	D-BU/YE	2962	High Voltage Battery Current Sensor Course Signal	I	—

A28 Hybrid/EV Battery Contactor Assembly X4



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 10846820
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F YESC Kaizen Series (L-GY)

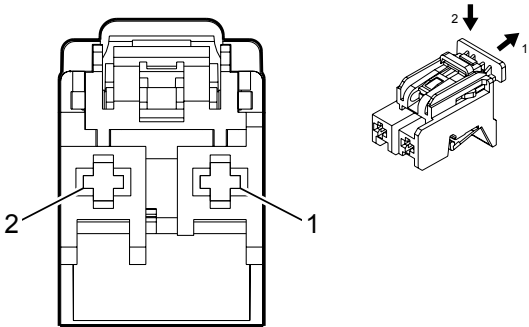
Terminal Part Information

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

A28 Hybrid/EV Battery Contactor Assembly X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	5138	Precharge Relay	I	—
2	0.35	BK	150	Ground	I	—
3	0.35	VT/GY	3961	High Voltage Battery (-) Relay Control	I	—
4	0.35	BN/L-GN	3959	High Voltage Battery 1 (+) Relay Control	I	—

A28 Hybrid/EV Battery Contactor Assembly X5



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 13848288
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 MCP Series (OG)

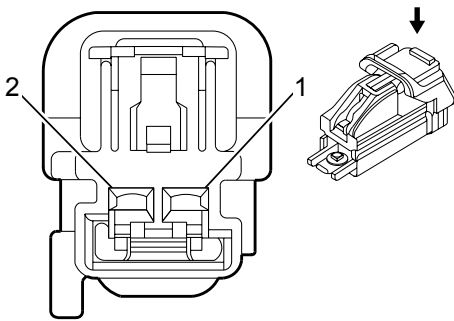
Terminal Part Information

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

A28 Hybrid/EV Battery Contactor Assembly X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT	3546	High Voltage Battery Positive Monitor Signal	I	—
2	0.5	GY/VT	3548	High Voltage Battery Negative Monitor Signal	I	—

A28 Hybrid/EV Battery Contactor Assembly X6



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 10846794
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.5 YESC Series (L-GY)

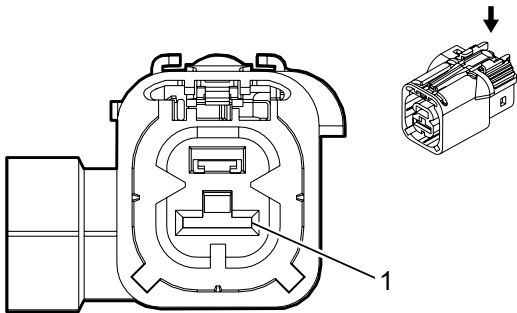
Terminal Part Information

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

A28 Hybrid/EV Battery Contactor Assembly X6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	150	Ground	I	—
2	—	—	—	Not Occupied	—	—

A28 Hybrid/EV Battery Contactor Assembly X7



Connector Part Information

Harness Type: High Voltage Body
OEM Connector: 33119078
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 6.3 Series (OG)

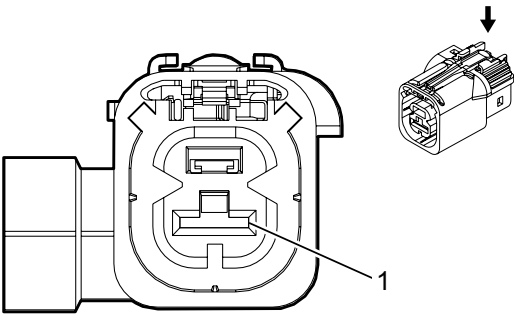
Terminal Part Information

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

A28 Hybrid/EV Battery Contactor Assembly X7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	12	OG	5084	High Voltage Battery (+)	I	—

A28 Hybrid/EV Battery Contactor Assembly X8



Connector Part Information

Harness Type: High Voltage Body
OEM Connector: 33119077
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 6.3 Series (OG)

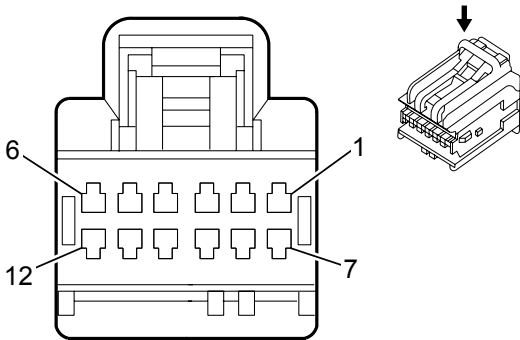
Terminal Part Information

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

A28 Hybrid/EV Battery Contactor Assembly X8

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	12	OG	5083	High Voltage Battery (-)	I	—

A33 Media Disc Player X1 (D07/U42)



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13784026
Service Connector: 13578574
Description: 12-Way F 0.64 Series (BK)

Terminal Part Information

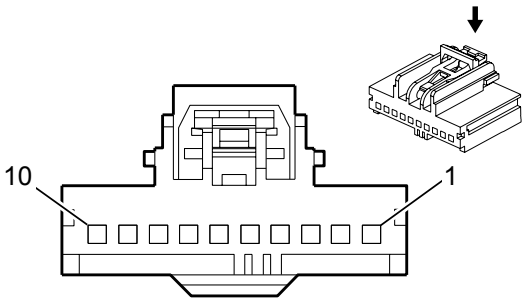
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575549	J-35616-16 (LT GN)	J-38125-559	15445905	Delphi 23	J	J
II	13582250	J-35616-16 (LT GN)	J-38125-559	15445905	Delphi 23	K	K

A33 Media Disc Player X1 (D07/U42)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/VT	340	Battery Positive Voltage	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	0.5	BK	2550	Ground	I	—
8	0.35	L-GN/YE	7066	Entertainment Remote Enable Signal	I	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

9	—	—	—	Not Occupied	—	—
10	0.35	WH/VT	3999	MOST Control	I	—
11	0.5	GY/L-GN	1102	Low Speed GMLAN Serial Data #2	I	—
12	—	—	—	Not Occupied	—	—

A33 Media Disc Player X1 (TG5)



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

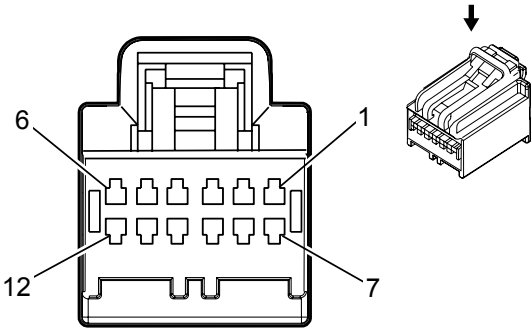
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	19300440	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

A33 Media Disc Player X1 (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 (-)	II	—
4	0.5	GY/VT	3998	MOST Serial Data (+)	II	—
5	0.5	WH/L-GN	3997	MOST Serial Data (-)	II	—
6	0.5	GY/VT	3998	MOST Serial Data (+)	II	—
7	—	—	—	Not Occupied	—	—
8	0.75	BK	2550	Ground	I	—
9	—	—	—	Not Occupied	—	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

	—	—	—	Not Occupied	—	—
10	0.75	RD/VT	340	Battery Positive Voltage	I	—

A33 Media Disc Player X2 (D07/U42)



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13587624
Service Connector: 19151154
Description: 12-Way F 64 Series, Sealed (GY)

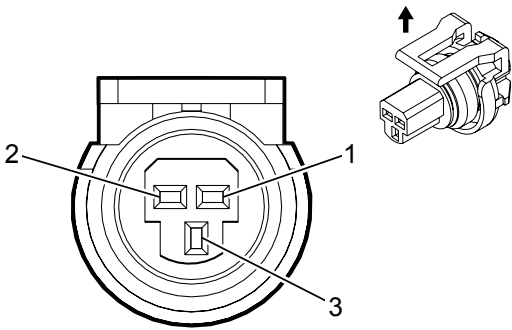
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300440	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

A33 Media Disc Player X2 (D07/U42)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	L-GN/WH	3355	Left Rear Seat Audio Headphone Signal	I	—
2	0.35	BN/GY	3357	Right Rear Seat Audio Headphone Signal	I	—
3	0.35	D-BU/VT	3356	Rear Seat Audio Headphone Common Signal	I	—
4	0.5	BARE	3354	Rear Seat Audio Headphone Low Reference	I	—
5 - 12	—	—	—	Not Occupied	—	—

B1 A/C Refrigerant Pressure Sensor (L5P)



Connector Part Information

Harness Type: Engine
OEM Connector: 13846842
Service Connector: 19301715
Description: 3-Way F 150 GT Series, Sealed (BK)

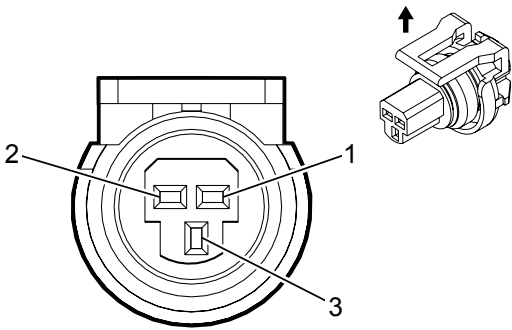
Terminal Part Information

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 (L5P)

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	—

B1 A/C Refrigerant Pressure Sensor (L96)



Connector Part Information

Harness Type: Engine
OEM Connector: 13846842
Service Connector: 19301715
Description: 3-Way F 150 GT Series, Sealed (BK)

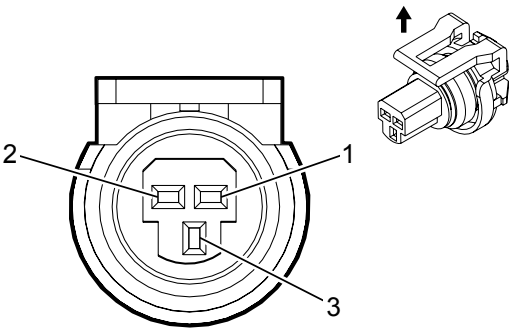
Terminal Part Information

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 (L96)

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	—

B1 A/C Refrigerant Pressure Sensor (LV3)



Connector Part Information

Harness Type: Engine
OEM Connector: 13846842
Service Connector: 19301715
Description: 3-Way F 150 GT Series, Sealed (BK)

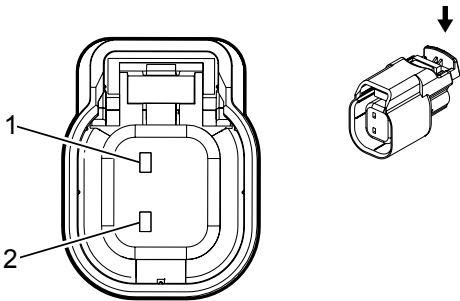
Terminal Part Information

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 (LV3)

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



Connector Part Information

Harness Type: Chassis
OEM Connector: 13828712
Service Connector: 19300543
Description: 2-Way F 1.5 Series, Sealed (BK)

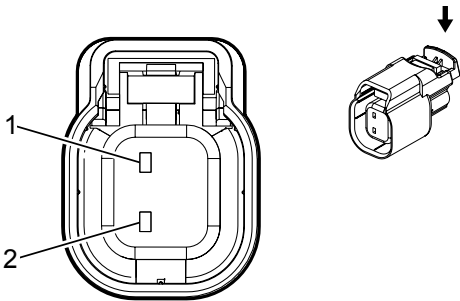
Terminal Part Information

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

B5LF Wheel Speed Sensor - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/WH	7064	Wheel Speed Sensor Control Left Front	I	—
2	0.5	GY	830	Wheel Speed Sensor Signal Left Front	I	—

B5LR Wheel Speed Sensor - Left Rear



Connector Part Information

Harness Type: Chassis
OEM Connector: 13828712
Service Connector: 19300543
Description: 2-Way F 1.5 Series, Sealed (BK)

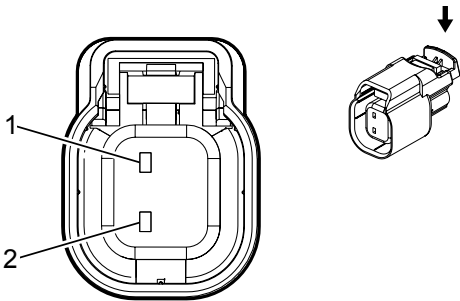
Terminal Part Information

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

B5LR Wheel Speed Sensor - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/BK	7127	Wheel Speed Sensor Control Left Rear	I	—
2	0.5	D-BU	884	Wheel Speed Sensor Signal Left Rear	I	—

B5RF Wheel Speed Sensor - Right Front



Connector Part Information

Harness Type: Chassis
OEM Connector: 13828712
Service Connector: 19300543
Description: 2-Way F 1.5 Series, Sealed (BK)

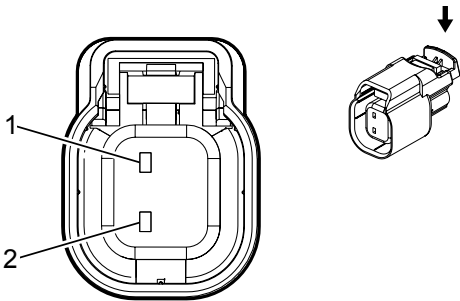
Terminal Part Information

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

B5RF Wheel Speed Sensor - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/BN	7065	Wheel Speed Sensor Control Right Front	I	—
2	0.5	YE	872	Wheel Speed Sensor Signal Right Front	I	—

B5RR Wheel Speed Sensor - Right Rear



Connector Part Information

Harness Type: Chassis
OEM Connector: 13828712
Service Connector: 19300543
Description: 2-Way F 1.5 Series, Sealed (BK)

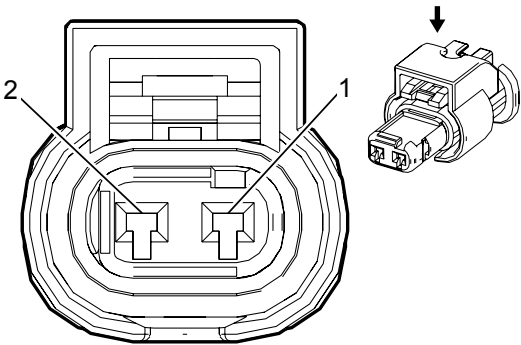
Terminal Part Information

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

B5RR Wheel Speed Sensor - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/YE	7128	Wheel Speed Sensor Control Right Rear	I	—
2	0.5	VT	882	Wheel Speed Sensor Signal Right Rear	I	—

B9D Ambient Air Temperature Sensor - Mirror



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13927761
Service Connector: 19300402
Description: 2-Way F 1.2 MCP Series, Sealed (BK)

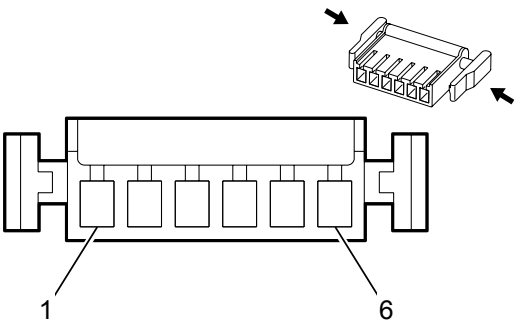
Terminal Part Information

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

B9D Ambient Air Temperature Sensor - Mirror

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU/GY	636	Outside Ambient Air Temperature Sensor Signal	I	—
2	0.5	BK/D-BU	61	Outside Ambient Temperature Sensor Low Reference	I	—

B10B Ambient Light/Sunload Sensor



Connector Part Information

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

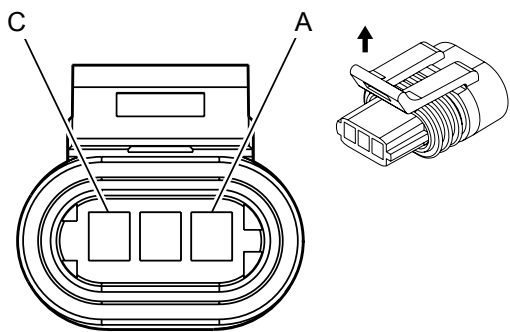
Terminal Part Information

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	0.35	GY	590	Solar Sensor Driver Signal	I	—
3	0.35	D-BU/WH	734	Inside Air Temperature Sensor Signal	I	—
4	0.35	YE/VT	1783	Twilight Sentinel Delay Signal	I	—
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 (LV1+(C67/C42))



Connector Part Information

Harness Type: Engine
OEM Connector: 12162280
Service Connector: 12085538
Description: 3-Way F 150.2 Metri-Pack Series, Sealed (GY)

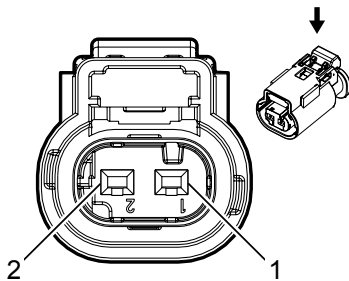
Terminal Part Information

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

B14A Transmission Output Shaft Speed Sensor (LV1+(C67/C42))

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	GY/BK	3096	Output Speed (Digital) Sensor 5V Reference	I	—
B	0.5	L-GN	3098	Output Speed (Digital) Signal	I	—
C	0.5	WH/BK	3097	Output Speed (Digital) Sensor Low Reference	I	—

B14B Transmission Turbine Speed Sensor (L5P)



Connector Part Information

Harness Type: Engine
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

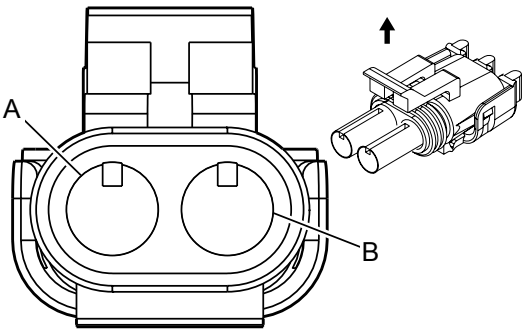
Terminal Part Information

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

B14B Transmission Turbine Speed Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	L-GN/YE	6353	Input Speed Signal	I	—
2	0.75	YE/D-BU	4171	Transmission Position Sensor A 9V Reference	I	—

B16 Backup Lamp Switch (L96+ZW9)



Connector Part Information

Harness Type: Engine
OEM Connector: 12103584
Service Connector: 12085485
Description: 2-Way M Weather Pack Series (BK)

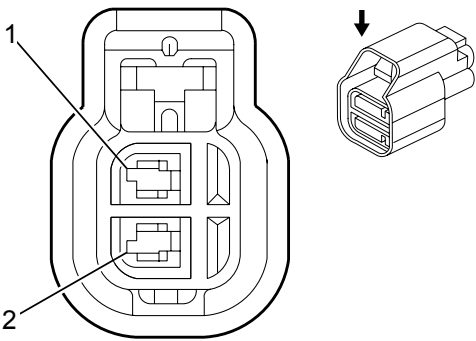
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-9 (OG)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B16 Backup Lamp Switch (L96+ZW9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	BK/WH	451	Signal Ground	I	—
B	0.5	L-GN/WH	5007	Reverse Switch Signal	I	—

B16 Backup Lamp Switch (LV1+(C42/C67))



Connector Part Information

Harness Type: Engine
OEM Connector: 15383325
Service Connector: 89046838
Description: 2-Way F 1.5 Series (BK)

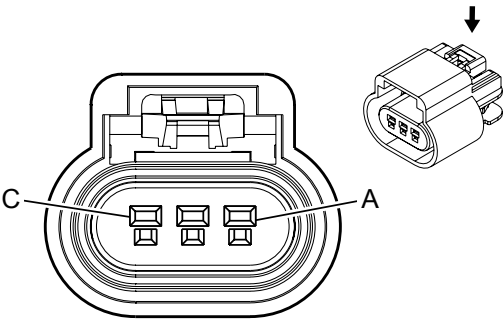
Terminal Part Information

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

B16 Backup Lamp Switch (LV1+(C42/C67))

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK/WH	451	Signal Ground	I	—
2	0.5	L-GN/WH	5007	Reverse Switch Signal	I	—

B18 Battery Current Sensor



Connector Part Information

Harness Type: Engine
OEM Connector: 13519047
Service Connector: 13580871
Description: 3-Way F 150 GT Series, Sealed (BK)

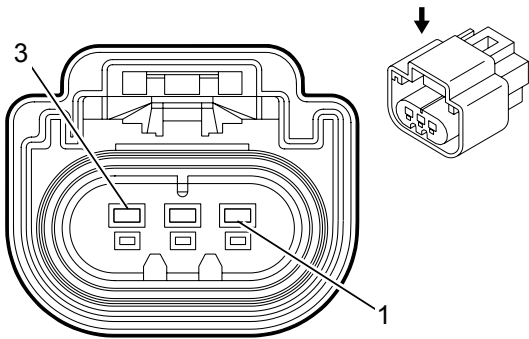
Terminal Part Information

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

B18 Battery Current Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	D-BU/VT	5076	Current Sensor Control	I	—
B	0.5	BK/VT	5077	Current Sensor Low Reference	I	—
C	0.5	WH/YE	5075	Current Sensor Signal	I	—

B19B Brake Booster Vacuum Sensor



Connector Part Information

Harness Type: Chassis
OEM Connector: 13511996
Service Connector: 13580873
Description: 3-Way F 150 GT Series, Sealed (GY)

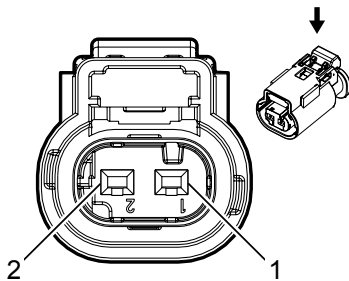
Terminal Part Information

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

B19B Brake Booster Vacuum Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/VT	6030	Brake Vacuum Sensor Signal	I	—
2	0.5	BK/YE	6032	Brake Vacuum Sensor Low Reference	I	—
3	0.5	YE/RD	6031	Brake Vacuum Sensor 5V Reference	I	—

B20 Brake Fluid Level Switch



Connector Part Information

Harness Type: Chassis
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

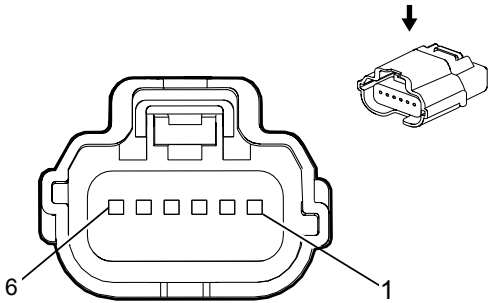
Terminal Part Information

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

B20 Brake Fluid Level Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	2150	Ground	I	1500
	0.75	BK	2150	Ground	I	2500/3500
2	0.5	L-GN/GY	333	Brake Fluid Level Sensor Signal	I	—

B22 Brake Pedal Position Sensor



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)

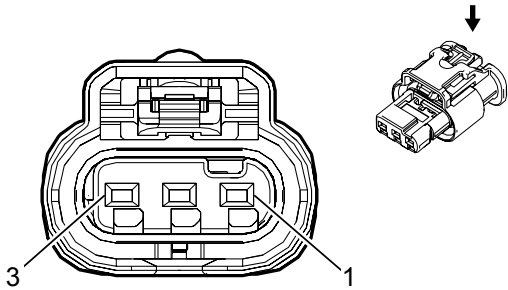
Terminal Part Information

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

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 (L5P)



Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 2098541-5
Service Connector: 19329387
Description: 3-Way F 1.2 MCP Series, Sealed (BN)

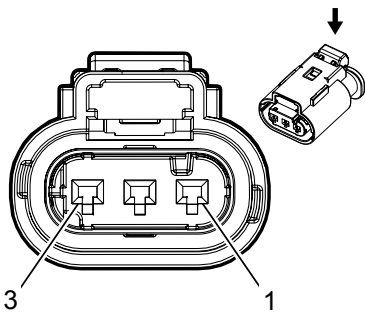
Terminal Part Information

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 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/BU	5300	Camshaft Position Intake Sensor Control 1	I	L5P
2	0.5	BK/GN	5301	Camshaft Position Intake Sensor Low Reference 1	I	L5P
3	0.5	YE/VT	5275	Camshaft Position Intake Sensor 1	I	L5P

B23 Camshaft Position Sensor (L83/L86/L8B)



Connector Part Information

Harness Type: Camshaft Position Sensor Jumper
OEM Connector: 10010341
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

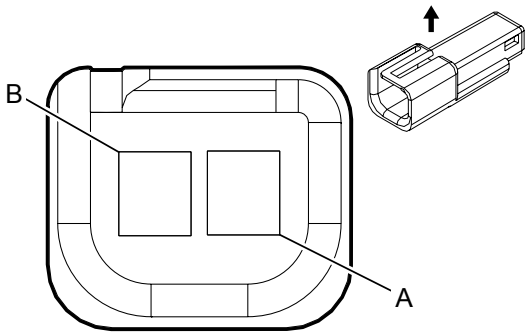
Terminal Part Information

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

B23 Camshaft Position Sensor (L83/L86/L8B)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/D-BU	5300	Camshaft Position Intake Sensor Control 1	I	—
2	0.5	BK/L-GN	5301	Camshaft Position Intake Sensor Low Reference 1	I	—
3	0.5	YE/VT	5275	Camshaft Position Intake Sensor 1	I	—

B24 Cellular Phone Microphone



Connector Part Information

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

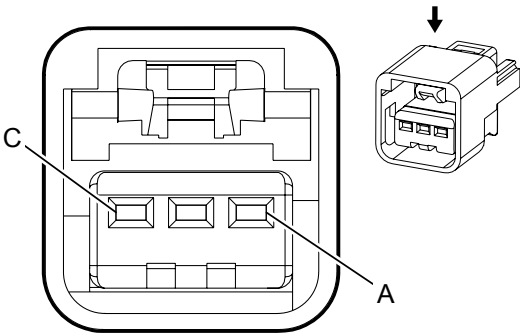
Terminal Part Information

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 Cellular Phone Microphone

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	—

B25B Clutch Pedal Position Sensor



Connector Part Information

Harness Type: Brake Clutch
OEM Connector: 15332132
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 150 GT Series (BK)

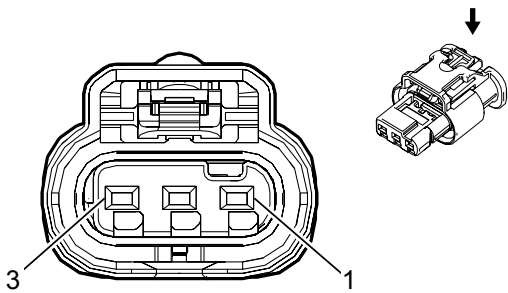
Terminal Part Information

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

B25B Clutch Pedal Position Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	GY/RD	6109	Clutch Apply Sensor 5V Reference	I	—
B	0.5	YE	6111	Clutch Apply Sensor Signal	I	—
C	0.5	BK/GY	6110	Clutch Apply Sensor Low Reference	I	—

B26 Crankshaft Position Sensor (L5P)



Connector Part Information

Harness Type: Engine
OEM Connector: 2098541-5
Service Connector: 19329387
Description: 3-Way F 1.2 MCP Series, Sealed (BN)

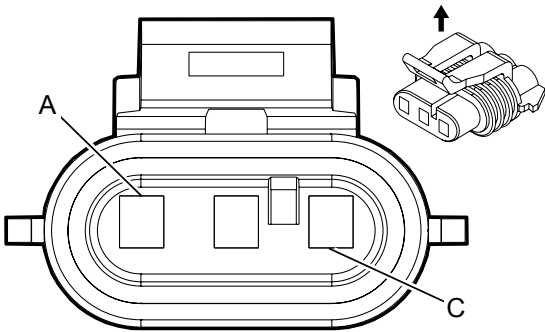
Terminal Part Information

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 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/BU	6270	Crankshaft 60X Sensor 5V Reference	I	L5P
2	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	I	L5P
3	0.5	GN	6271	Crankshaft 60X Sensor Signal	I	L5P

B26 Crankshaft Position Sensor (L96/LC8)



Connector Part Information

Harness Type: Engine
OEM Connector: 13838337
Service Connector: 19329936
Description: 3-Way F 150 Metri-Pack Series, Sealed (GY)

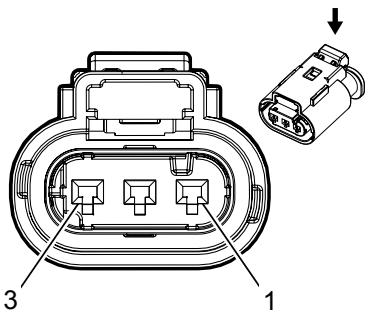
Terminal Part Information

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

B26 Crankshaft Position Sensor (L96/LC8)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-GN	6271	Crankshaft 60X Sensor Signal	I	—
B	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	I	—
C	0.5	VT/D-BU	6270	Crankshaft 60X Sensor 5V Reference	I	—

B26 Crankshaft Position Sensor (LV1/LV3)



Connector Part Information

Harness Type: Engine
OEM Connector: 13763990
Service Connector: 19299690
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

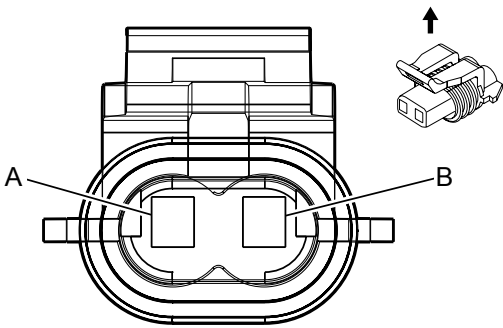
Terminal Part Information

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

B26 Crankshaft Position Sensor (LV1/LV3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN	6271	Crankshaft 60X Sensor Signal	I	—
2	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	I	—
3	0.5	VT/D-BU	6270	Crankshaft 60X Sensor 5V Reference	I	—

B33 Engine Coolant Level Switch



Connector Part Information

Harness Type: Engine
OEM Connector: 15324243
Service Connector: 15306302
Description: 2-Way F 150 Metri-Pack Series, Sealed (GY)

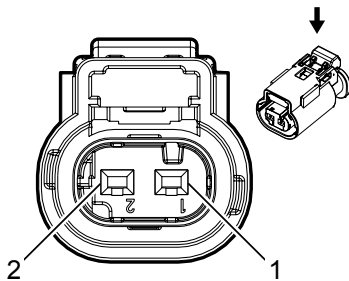
Terminal Part Information

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	451	Signal Ground	I	—

B34 Engine Coolant Temperature Sensor (L5P)



Connector Part Information

Harness Type: Engine
OEM Connector: 10010337
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

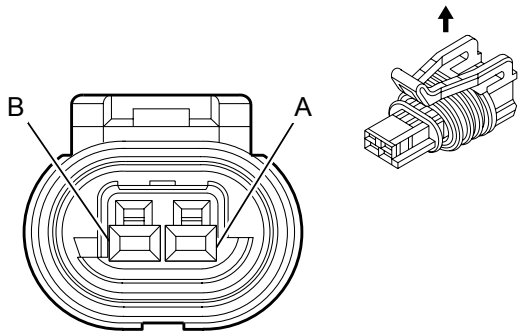
Terminal Part Information

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

B34 Engine Coolant Temperature Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	I	L5P
2	0.5	BU	410	Engine Coolant Temperature Sensor Signal	I	L5P

B34 Engine Coolant Temperature Sensor (L96/LC8)



Connector Part Information

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

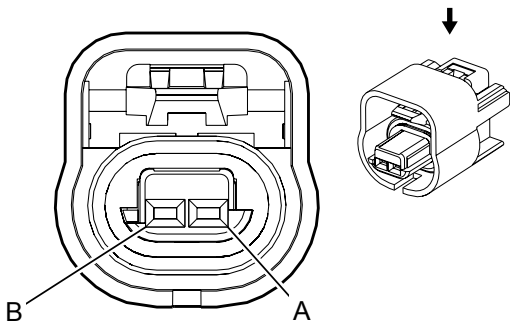
Terminal Part Information

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

B34 Engine Coolant Temperature Sensor (L96/LC8)

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

B34 Engine Coolant Temperature Sensor (LV1/LV3)



Connector Part Information

Harness Type: Engine
OEM Connector: 15355317
Service Connector: 19178093
Description: 2-Way F 150 GT Series, Sealed (BK)

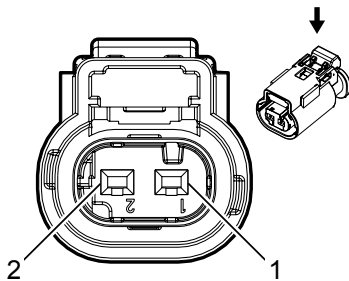
Terminal Part Information

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

B34 Engine Coolant Temperature Sensor (LV1/LV3)

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

B35 Engine Oil Level Switch (L5P)



Connector Part Information

Harness Type: Engine
OEM Connector: 10010337
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

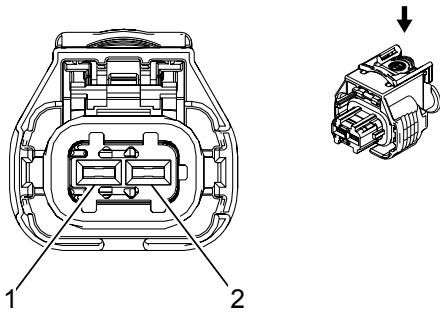
Terminal Part Information

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

B35 Engine Oil Level Switch (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/WH	251	Signal Ground	I	L5P
2	0.5	BN/GN	1174	Oil Level Switch Signal	I	L5P

B35 Engine Oil Level Switch (LV1/LV3)



Connector Part Information

Harness Type: Engine
OEM Connector: 13930085
Service Connector: 13384371
Description: 2-Way F 2.8 Series, Sealed (BK)

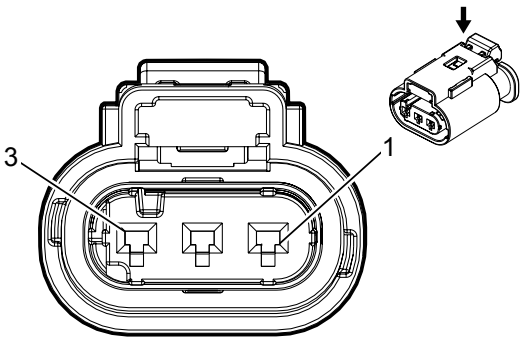
Terminal Part Information

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

B35 Engine Oil Level Switch (LV1/LV3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/WH	451	Signal Ground	I	—
2	0.5	BN/L-GN	1174	Oil Level Switch Signal	I	—

B37B Engine Oil Pressure Sensor (L5P)



Connector Part Information

Harness Type: Engine
OEM Connector: 10010344
Service Connector: 19301717
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

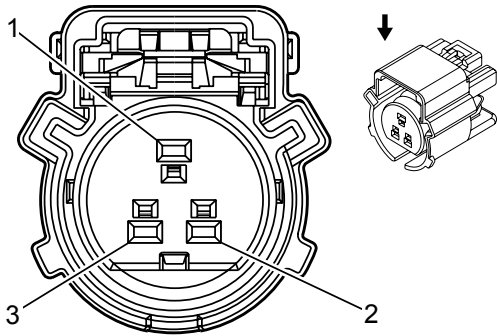
Terminal Part Information

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

B37B Engine Oil Pressure Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BN	331	Oil Pressure Sensor Signal	I	L5P
2	0.5	BK/VT	2755	Oil Pressure Sensor Low Reference	I	L5P
3	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	I	L5P

B37B Engine Oil Pressure Sensor (L96/LC8)



Connector Part Information

Harness Type: Engine
OEM Connector: 13589761
Service Connector: 13501882
Description: 3-Way F 150 GT Series, Sealed (BK)

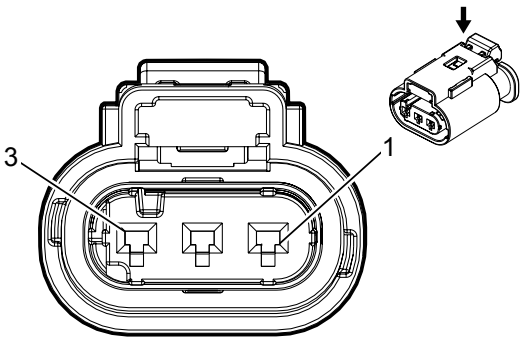
Terminal Part Information

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

B37B Engine Oil Pressure Sensor (L96/LC8)

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

B37B Engine Oil Pressure Sensor (LV1/LV3)



Connector Part Information

Harness Type: Engine
OEM Connector: 13889776
Service Connector: 19301717
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

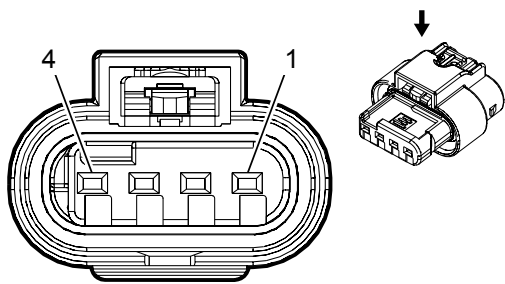
Terminal Part Information

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

B37B Engine Oil Pressure Sensor (LV1/LV3)

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

B47B Fuel Rail Pressure Sensor (L5P)



Connector Part Information

Harness Type: Engine
OEM Connector: 1-1456426-5
Service Connector: 19300397
Description: 4-Way F 1.2 MCP Series, Sealed (BK)

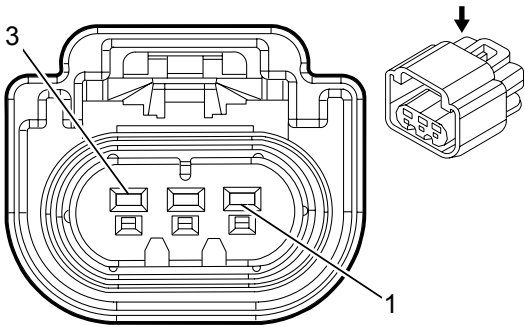
Terminal Part Information

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 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/RD	2917	Fuel Rail Pressure Sensor 5V Reference	I	L5P
2	0.5	BN/YE	2161	Fuel Rail Pressure Sensor 2 Signal	I	L5P
3	0.5	BK/GN	2919	Fuel Rail Pressure Sensor Low Reference	I	L5P
4	0.5	BU/WH	2918	Fuel Rail Pressure Sensor Signal	I	L5P

B47 Fuel Pressure Sensor



Connector Part Information

Harness Type: Chassis
OEM Connector: 13511131
Service Connector: 19168035
Description: 3-Way F 150 GT Series, Sealed (BK)

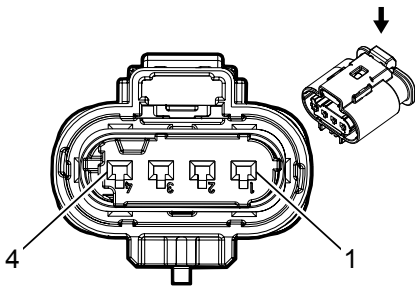
Terminal Part Information

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

B47 Fuel Pressure Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU/WH	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	—

B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L96)



Connector Part Information

Harness Type: Engine
OEM Connector: 13815341
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

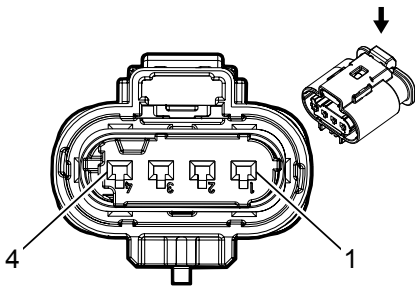
Terminal Part Information

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

B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1	I	—
2	0.75	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
3	0.5	WH/BK	3111	Heated Oxygen Sensor Low Signal Bank 1 Sensor 1	I	—
4	0.5	VT/GY	3110	Heated Oxygen Sensor High Signal Bank 1 Sensor 1	I	—

B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L96/LC8)



Connector Part Information

Harness Type: Engine
OEM Connector: 13815341
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

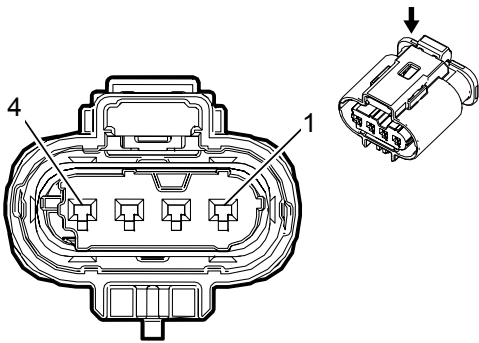
Terminal Part Information

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

B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L96/LC8)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1	I	—
2	0.75	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
3	0.5	WH/BK	3111	Heated Oxygen Sensor Low Signal Bank 1 Sensor 1	I	—
4	0.5	VT/GY	3110	Heated Oxygen Sensor High Signal Bank 1 Sensor 1	I	—

B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (LV1)



Connector Part Information

Harness Type: Engine
OEM Connector: 13869004
Service Connector: 19301716
Description: 4-Way F 1.2 Multilock Series, Sealed (D-GY)

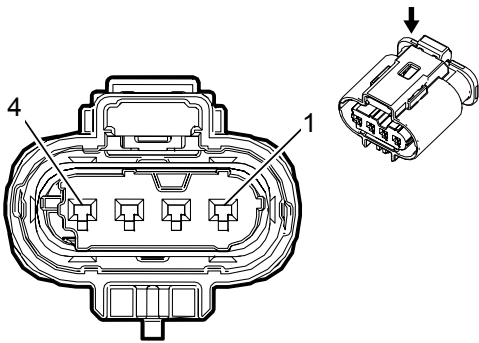
Terminal Part Information

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

B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (LV1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1	I	—
2	0.5	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
3	0.5	WH/BK	3111	Heated Oxygen Sensor Low Signal Bank 1 Sensor 1	I	—
4	0.5	VT/GY	3110	Heated Oxygen Sensor High Signal Bank 1 Sensor 1	I	—

B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (LV3)



Connector Part Information

Harness Type: Engine
OEM Connector: 13869004
Service Connector: 19301716
Description: 4-Way F 1.2 Multilock Series, Sealed (D-GY)

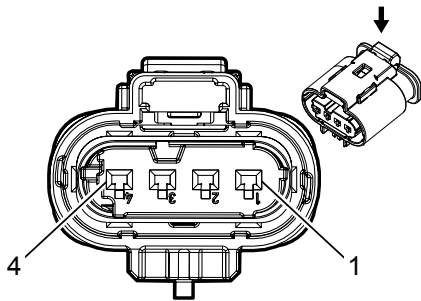
Terminal Part Information

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

B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (LV3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1	I	—
2	0.5	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
3	0.5	WH/BK	3111	Heated Oxygen Sensor Low Signal Bank 1 Sensor 1	I	—
4	0.5	VT/GY	3110	Heated Oxygen Sensor High Signal Bank 1 Sensor 1	I	—

B52D Heated Oxygen Sensor - Bank 1 Sensor 2



Connector Part Information

Harness Type: Chassis
OEM Connector: 13815348
Service Connector: 13587298
Description: 4-Way F 1.2 Multilock Series, Sealed (L-GY)

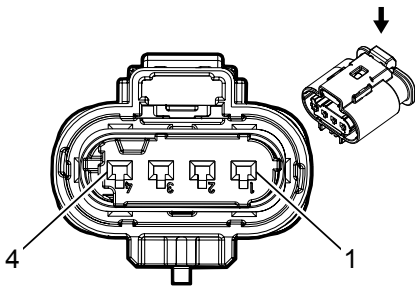
Terminal Part Information

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

B52D Heated Oxygen Sensor - Bank 1 Sensor 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/WH	3122	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2	I	—
2	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	I	—
3	0.5	WH/YE	3121	Heated Oxygen Sensor Low Signal Bank 1 Sensor 2	I	—
4	0.5	VT/BU	3120	Heated Oxygen Sensor High Signal Bank 1 Sensor 2	I	—

B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L96/LC8)



Connector Part Information

Harness Type: Engine
OEM Connector: 13815341
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

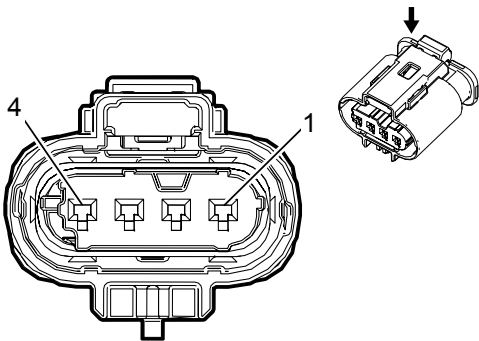
Terminal Part Information

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

B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L96/LC8)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/YE	3212	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1	I	—
2	0.75	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
3	0.5	YE/WH	3211	Heated Oxygen Sensor Low Signal Bank 2 Sensor 1	I	—
4	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	I	—

B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (LV1/LV3)



Connector Part Information

Harness Type: Engine
OEM Connector: 13869004
Service Connector: 19301716
Description: 4-Way F 1.2 Multilock Series, Sealed (D-GY)

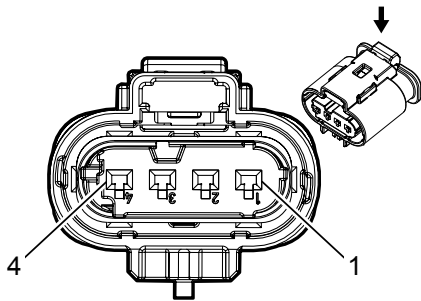
Terminal Part Information

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

B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (LV1/LV3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/YE	3212	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1	I	—
2	0.5	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
3	0.5	YE/WH	3211	Heated Oxygen Sensor Low Signal Bank 2 Sensor 1	I	—
4	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	I	—

B52F Heated Oxygen Sensor - Bank 2 Sensor 2



Connector Part Information

Harness Type: Engine
OEM Connector: 13815348
Service Connector: 13587298
Description: 4-Way F 1.2 Multilock Series, Sealed (L-GY)

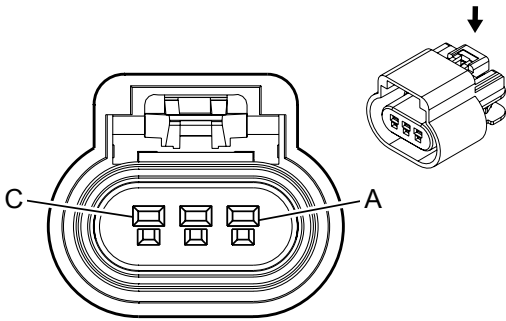
Terminal Part Information

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

B52F Heated Oxygen Sensor - Bank 2 Sensor 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/BN	3223	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2	I	—
2	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	I	—
3	0.5	YE/D-BU	3221	Heated Oxygen Sensor Low Signal Bank 2 Sensor 2	I	—
4	0.5	VT/L-GN	3220	Heated Oxygen Sensor High Signal Bank 2 Sensor 2	I	—

B55 Hood Ajar Switch (L83/L86/LV3)



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13519047
Service Connector: 13580871
Description: 3-Way F 150 GT Series, Sealed (BK)

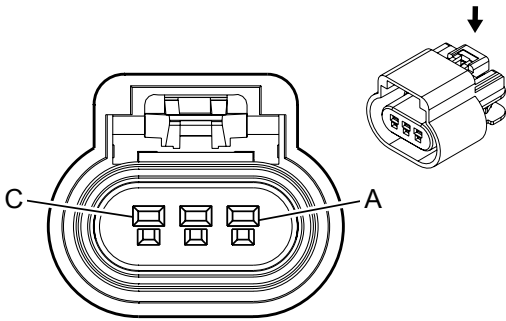
Terminal Part Information

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

B55 Hood Ajar Switch (L83/L86/LV3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	YE	5530	Hood Open Switch Signal	I	—
B	0.5	BN/L-GN	109	Hood Ajar Switch Signal	I	—
C	1	BK	250	Ground	I	—

B55 Hood Ajar Switch (HP5)



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13519047
Service Connector: 13580871
Description: 3-Way F 150 GT Series, Sealed (BK)

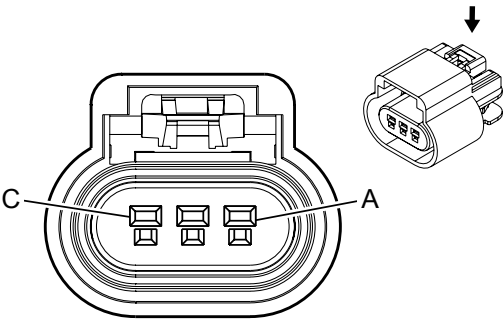
Terminal Part Information

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

B55 Hood Ajar Switch (HP5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	YE	5530	Hood Open Switch Signal	I	—
B	0.5	BN/L-GN	109	Hood Ajar Switch Signal	I	—
C	1	BK/YE	4082	Low Reference	I	—

B55 Hood Ajar Switch (L96/LC8/L5P)



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13519047
Service Connector: 13580871
Description: 3-Way F 150 GT Series, Sealed (BK)

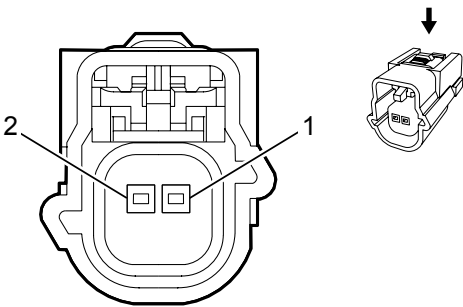
Terminal Part Information

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

B55 Hood Ajar Switch (L96/LC8/L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	—	—	Not Occupied	—	—
B	0.5	BN/L-GN	109	Hood Ajar Switch Signal	I	—
C	1	BK	250	Ground	I	—

B59L Front Impact Sensor - Left



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13593078
Service Connector: 13577629
Description: 2-Way F 0.64 Series, Sealed (L-GY)

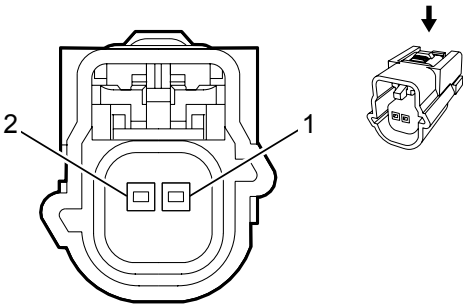
Terminal Part Information

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

B59L Front Impact Sensor - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/YE	354	Left Front Discriminating Sensor Signal	I	—
2	0.5	BK/OG	5045	Left Front Discriminating Sensor Low Reference	I	—

B59R Front Impact Sensor - Right



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13593078
Service Connector: 13577629
Description: 2-Way F 0.64 Series, Sealed (L-GY)

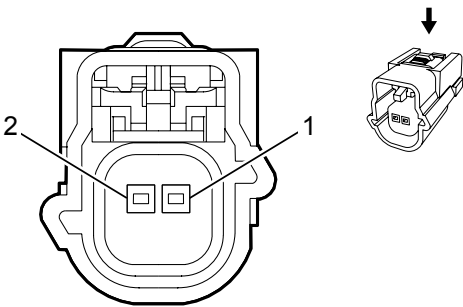
Terminal Part Information

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

B59R Front Impact Sensor - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/L-GN	1409	Right Front Discriminating Sensor Signal	I	—
2	0.5	BK/OG	5600	Right Front Discriminating Sensor Low Reference	I	—

B59 Front Impact Sensor



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13593078
Service Connector: 13577629
Description: 2-Way F 0.64 Series, Sealed (L-GY)

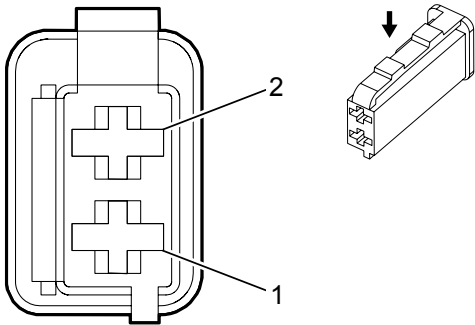
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	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	0.5	OG/GY	6618	Middle Front Discriminating Sensor Signal	I	—
2	0.5	BK/OG	6619	Middle Front Discriminating Sensor Low Reference	I	—

B60 Passenger Presence Sensor



Connector Part Information

Harness Type: Body
OEM Connector: 13670097
Service Connector: 13580951
Description: 2-Way F 1.6 Timer Series (BK)

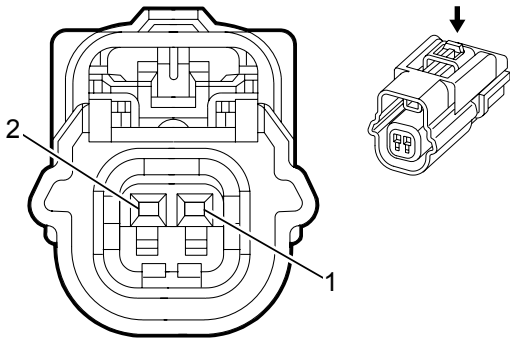
Terminal Part Information

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

B60 Passenger Presence Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU/RD	5612	Passenger Seat Belt Tension Sensor 5V Reference	I	—
2	0.35	VT/OG	5611	Passenger Seat Belt Tension Sensor Signal	I	—

B62D Seat Position Sensor - Driver



Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 54390239
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Kaizen Series, Sealed (BK)

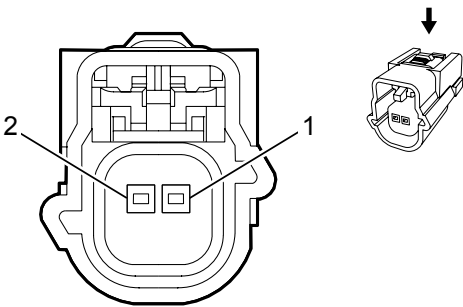
Terminal Part Information

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

B62D Seat Position Sensor - 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/L-GN	5055	Driver Seat Position Switch Signal	I	—

B63LF Side Impact Sensor - Left Front



Connector Part Information

Harness Type: Driver Door
OEM Connector: 13593078
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Series, Sealed (L-GY)

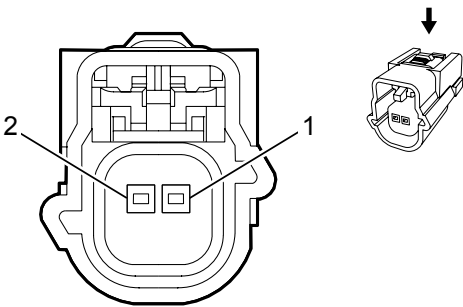
Terminal Part Information

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

B63LF Side Impact Sensor - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/L-GN	2132	Left Front Side Impact Sensing Module Signal	I	—
2	0.5	BK/OG	6628	Left Front Side Impact Sensing Module Low Reference	I	—

B63LR Side Impact Sensor - Left Rear



Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 13610095
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Series, Sealed (D-GY)

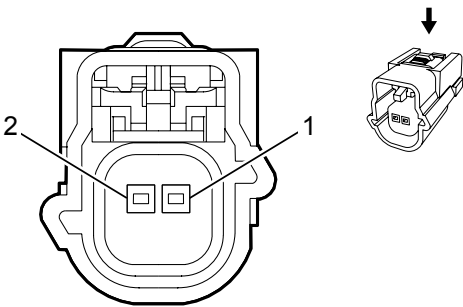
Terminal Part Information

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

B63LR Side Impact Sensor - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/D-BU	6620	Left Middle Side Impact Sensing Module Signal	I	—
2	0.5	BK/OG	6621	Left Middle Side Impact Sensing Module Low Reference	I	—

B63RF Side Impact Sensor - Right Front



Connector Part Information

Harness Type: Passenger Door
OEM Connector: 13593078
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Series, Sealed (L-GY)

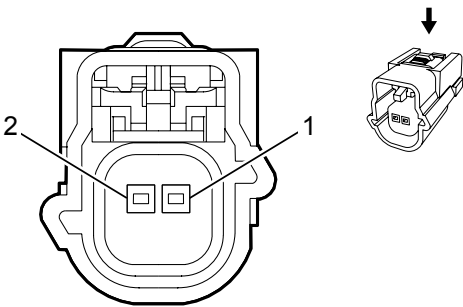
Terminal Part Information

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

B63RF Side Impact Sensor - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/L-GN	2134	Right Front Side Impact Sensing Module Signal	I	—
2	0.5	BK/OG	6629	Right Front Side Impact Sensing Module Low Reference	I	—

B63RR Side Impact Sensor - Right Rear



Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 13610095
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Series, Sealed (D-GY)

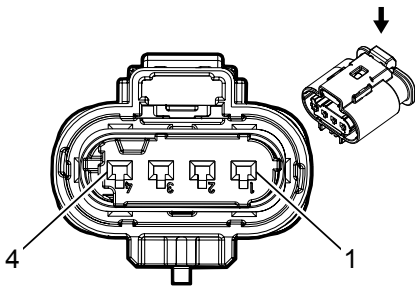
Terminal Part Information

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

B63RR Side Impact Sensor - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/VT	6624	Right Middle Side Impact Sensing Module Signal	I	—
2	0.5	BK/OG	6625	Right Middle Side Impact Sensing Module Low Reference	I	—

B65 Intake Manifold Pressure and Air Temperature Sensor (L5P)



Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 10010346
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

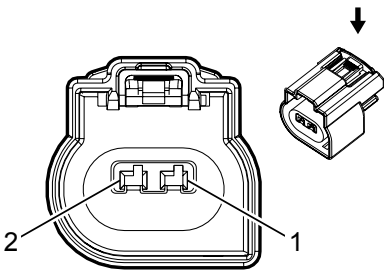
Terminal Part Information

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 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN	7348	Induction Air Temperature Sensor 2 Signal	I	L5P
2	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	L5P
3	0.5	BK/GN	469	Manifold Absolute Pressure Sensor Low Reference	I	L5P
4	0.5	GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	L5P

B68A Knock Sensor 1



Connector Part Information

Harness Type: Engine
OEM Connector: 13814755
Service Connector: 19301207
Description: 2-Way F 150 MX Series, Sealed (BK)

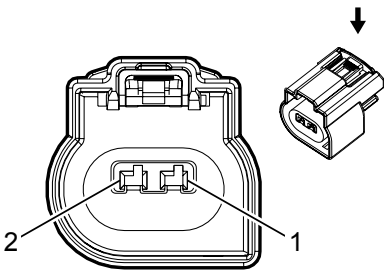
Terminal Part Information

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

B68A Knock Sensor 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT/GY	496	Knock Sensor Signal 1	I	—
2	0.75	BK/YE	1716	Knock Sensor Low Reference 1	I	—

B68B Knock Sensor 2



Connector Part Information

Harness Type: Engine
OEM Connector: 13814755
Service Connector: 19301207
Description: 2-Way F 150 MX Series, Sealed (BK)

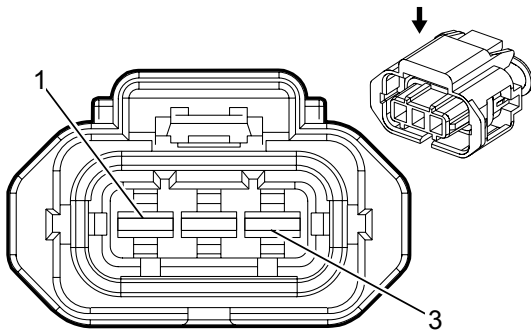
Terminal Part Information

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

B68B Knock Sensor 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH/GY	1876	Knock Sensor Signal 2	I	—
2	0.75	BK/GY	2303	Knock Sensor Low Reference 2	I	—

B74 Manifold Absolute Pressure Sensor (L96/LC8)



Connector Part Information

Harness Type: Engine
OEM Connector: 13639747
Service Connector: 19181248
Description: 3-Way F 2.8 Junior Power Timer Series, Sealed (BK)

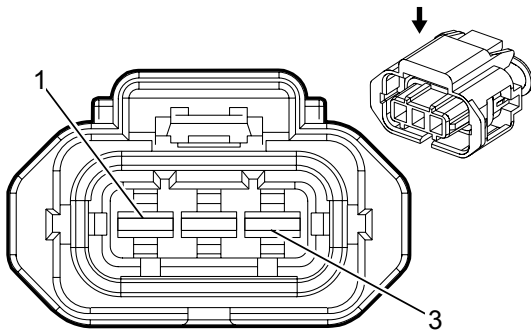
Terminal Part Information

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

B74 Manifold Absolute Pressure Sensor (L96/LC8)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	—
2	0.5	BK/L-GN	469	Manifold Absolute Pressure Sensor Low Reference	I	—
3	0.5	L-GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—

B74 Manifold Absolute Pressure Sensor (LV3+(NQG/NQH))



Connector Part Information

Harness Type: Engine
OEM Connector: 15397338
Service Connector: 13585845
Description: 3-Way F 2.8 Junior Power Timer Series, Sealed (BK)

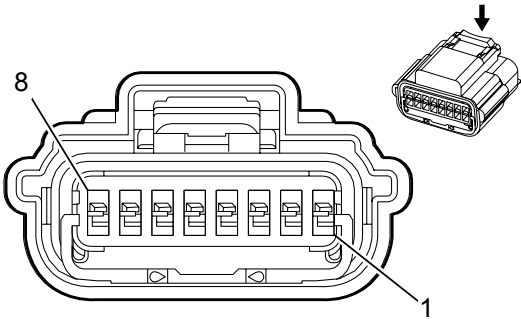
Terminal Part Information

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

B74 Manifold Absolute Pressure Sensor (LV3+(NQG/NQH))

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	—
2	0.5	BK/L-GN	469	Manifold Absolute Pressure Sensor Low Reference	I	—
3	0.5	L-GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—

B75C Multifunction Intake Air Sensor (L5P)



Connector Part Information

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

Terminal Part Information

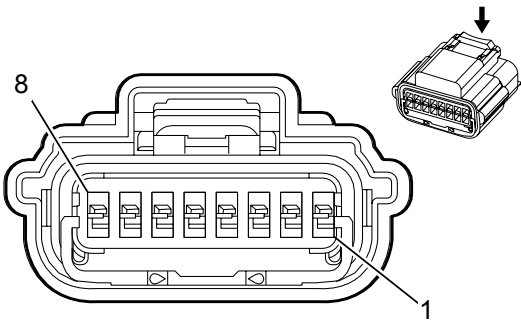
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B75C Multifunction Intake Air Sensor (L5P)

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	—

--	--	--	--	--	--	--	--

B75C Multifunction Intake Air Sensor (L96/LC8)



Connector Part Information

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

Terminal Part Information

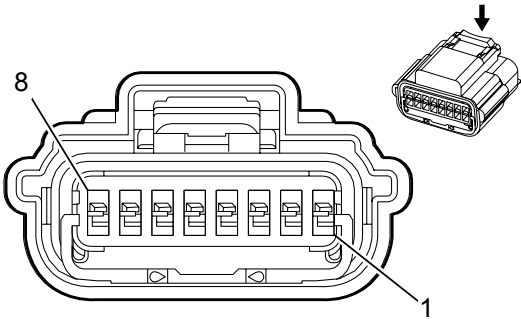
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B75C Multifunction Intake Air Sensor (L96/LC8)

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	YE/WH	3200	Throttle Inlet Absolute 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	GY/D-BU	7564	Humidity Sensor Signal	I	—

--	--	--	--	--	--	--	--

B75C Multifunction Intake Air Sensor (LV1/LV3)



Connector Part Information

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

Terminal Part Information

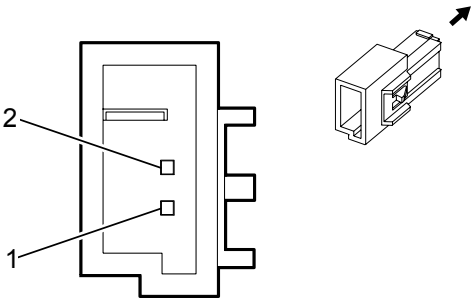
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B75C Multifunction Intake Air Sensor (LV1/LV3)

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	WH/YE	3202	Throttle Inlet Absolute Pressure Sensor Low Reference	I	—
4	0.5	YE/WH	3200	Throttle Inlet Absolute 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	GY/D-BU	7564	Humidity Sensor Signal	I	—

--	--	--	--	--	--	--

B77LF Radio Volume Compensator Interior Noise Microphone - Left Front



Connector Part Information

Harness Type: Headliner
OEM Connector: 13676029
Service Connector: 19260825
Description: 2-Way M 0.64 Series (BK)

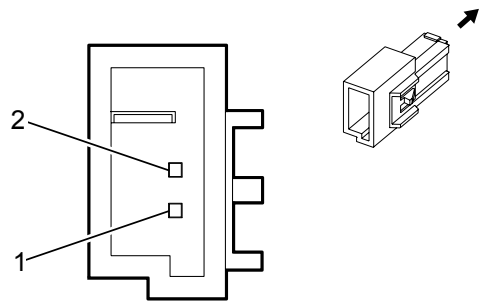
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B77LF Radio Volume Compensator Interior Noise Microphone - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	L-GN/BK	3008	Noise Reduction Microphone 1 Low Reference	I	—
2	0.35	L-GN/WH	3005	Noise Reduction Microphone 1 Signal	I	—

B77R Radio Volume Compensator Interior Noise Microphone - Rear



Connector Part Information

Harness Type: Headliner
OEM Connector: 13676029
Service Connector: 19260825
Description: 2-Way M 0.64 Series (BK)

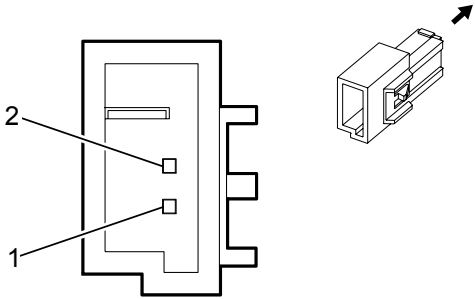
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B77R Radio Volume Compensator Interior Noise Microphone - Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY/BN	3010	Noise Reduction Microphone 3 Low Reference	I	—
2	0.35	GY/D-BU	3007	Noise Reduction Microphone 3 Signal	I	—

B77RF Radio Volume Compensator Interior Noise Microphone - Right Front



Connector Part Information

Harness Type: Headliner
OEM Connector: 13676029
Service Connector: 19260825
Description: 2-Way M 0.64 Series (BK)

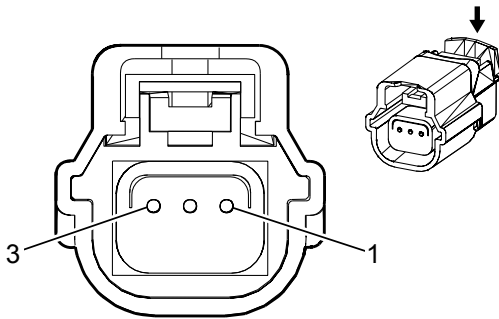
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B77RF Radio Volume Compensator Interior Noise Microphone - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU/BK	3009	Noise Reduction Microphone 2 Low Reference	I	—
2	0.35	D-BU/YE	3006	Noise Reduction Microphone 2 Signal	I	—

B78E Rear Object Sensor - Left Middle



Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 13512481
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 0.64 Series, Sealed (BK)

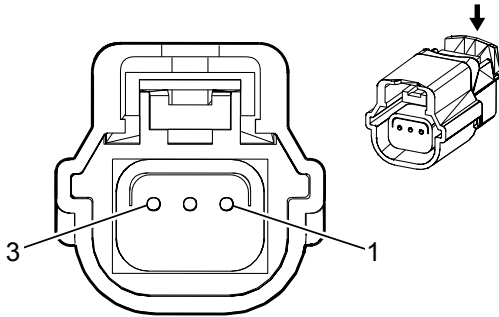
Terminal Part Information

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

B78E Rear Object Sensor - Left Middle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	2374	Object Sensor Control	I	—
2	0.5	YE/D-BU	2376	Left Rear Middle Object Sensor Signal	I	—
3	0.5	BK/GY	2379	Object Sensor Low Reference	I	—

B78F Rear Object Sensor - Right Middle



Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 13512481
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 0.64 Series, Sealed (BK)

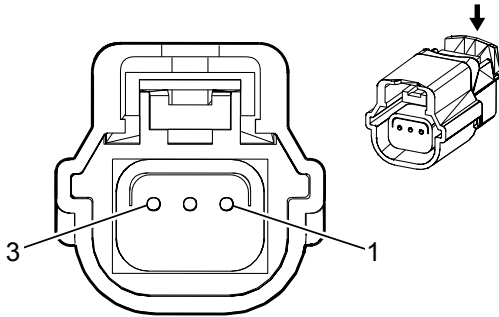
Terminal Part Information

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

B78F Rear Object Sensor - Right Middle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	2374	Object Sensor Control	I	—
2	0.5	YE/WH	2377	Right Rear Middle Object Sensor Signal	I	—
3	0.5	BK/GY	2379	Object Sensor Low Reference	I	—

B78G Rear Object Sensor - Left Outer



Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 13512481
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 0.64 Series, Sealed (BK)

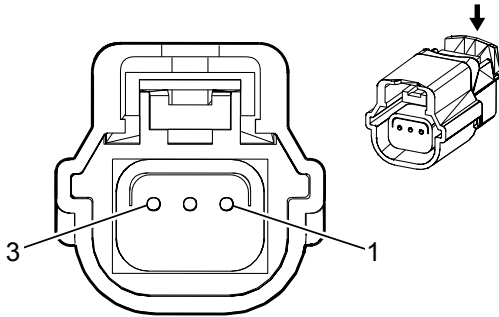
Terminal Part Information

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

B78G Rear Object Sensor - Left Outer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	2374	Object Sensor Control	I	—
2	0.5	YE	2375	Left Rear Corner Object Sensor Signal	I	—
3	0.5	BK/GY	2379	Object Sensor Low Reference	I	—

B78H Rear Object Sensor - Right Outer



Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 13512481
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 0.64 Series, Sealed (BK)

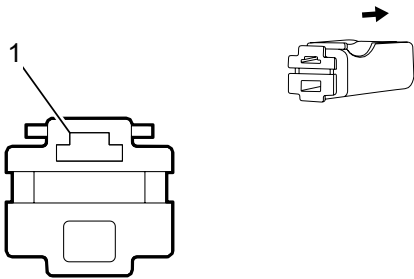
Terminal Part Information

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

B78H Rear Object Sensor - Right Outer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	2374	Object Sensor Control	I	—
2	0.5	YE/VT	2378	Right Rear Corner Object Sensor Signal	I	—
3	0.5	BK/GY	2379	Object Sensor Low Reference	I	—

B80 Park Brake Switch



Connector Part Information

Harness Type: Body
OEM Connector: 13511619
Service Connector: 88988465
Description: 1-Way F 250 Series (BK)

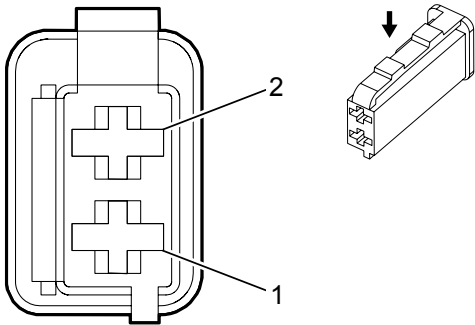
Terminal Part Information

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	—

B88D Seat Belt Switch - Driver



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)

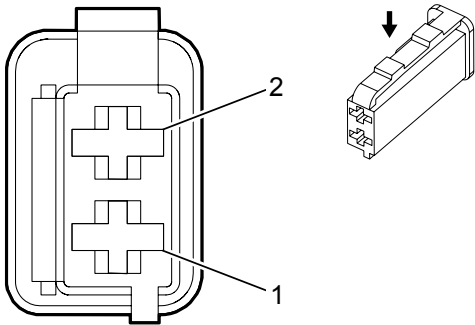
Terminal Part Information

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	—

B88P Seat Belt Switch - Passenger



Connector Part Information

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

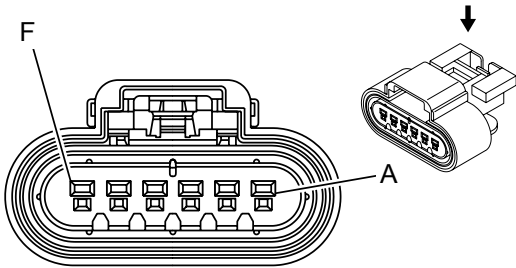
Terminal Part Information

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

B88P Seat Belt Switch - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/OG	1361	Passenger Seat Belt Switch Low Reference	I	—
2	0.35	OG/VT	1362	Passenger Seat Belt Switch Signal	I	—

B107 Accelerator Pedal Position Sensor (E29)



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)

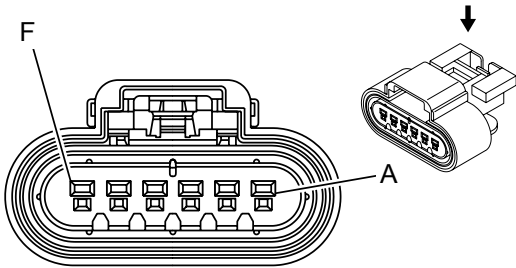
Terminal Part Information

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 (E29)

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	—

B107 Accelerator Pedal Position Sensor (-E29)



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)

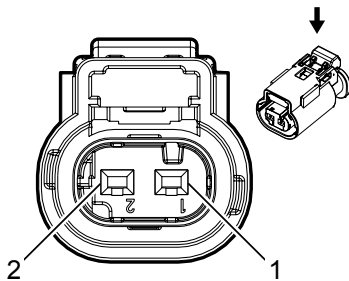
Terminal Part Information

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 (-E29)

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	—

B115 Vehicle Speed Sensor (L5P+MW7(-NQF/NQG))



Connector Part Information

Harness Type: Engine
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

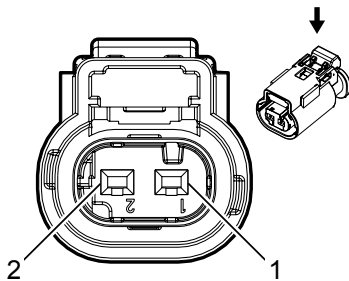
Terminal Part Information

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

B115 Vehicle Speed Sensor (L5P+MW7(-NQF/NQG))

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY/D-BU	6358	Output Speed Signal	I	—
2	0.75	YE/L-GN	4170	Transmission Position Sensor B 9V Reference	I	—

B115 Vehicle Speed Sensor (L5P+NQF+MW7)



Connector Part Information

Harness Type: Engine
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

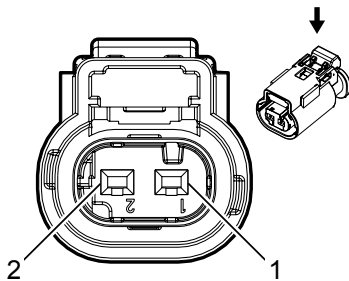
Terminal Part Information

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

B115 Vehicle Speed Sensor (L5P+NQF+MW7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/D-BU	6358	Output Speed Signal	I	—
2	0.5	YE/L-GN	4170	Transmission Position Sensor B 9V Reference	I	—

B115 Vehicle Speed Sensor (L5P+NQG+MW7)



Connector Part Information

Harness Type: Engine
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

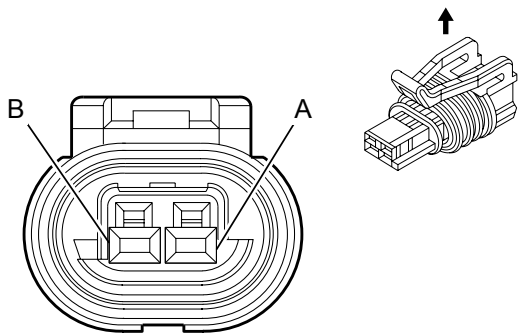
Terminal Part Information

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

B115 Vehicle Speed Sensor (L5P+NQG+MW7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/D-BU	6358	Output Speed Signal	I	—
2	0.5	YE/L-GN	4170	Transmission Position Sensor B 9V Reference	I	—

B115 Vehicle Speed Sensor (L96+ZW9)



Connector Part Information

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

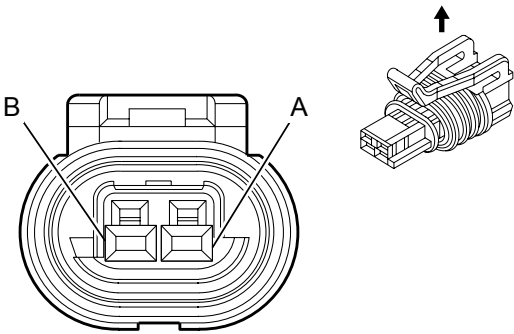
Terminal Part Information

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

B115 Vehicle Speed Sensor (L96+ZW9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	VT/WH	821	Vehicle Speed Sensor Signal	I	—
B	0.5	BK/L-GN	822	Vehicle Speed Sensor Low Reference	I	—

B115 Vehicle Speed Sensor (LC8/L96 with NQF)



Connector Part Information

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

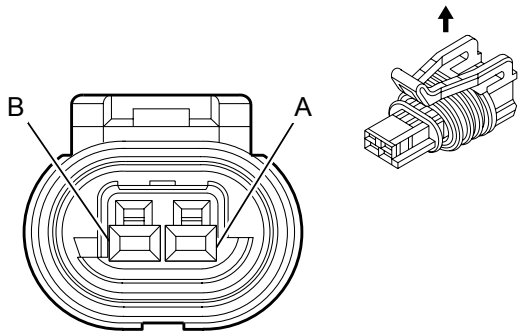
Terminal Part Information

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

B115 Vehicle Speed Sensor (LC8/L96 with NQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	VT/WH	821	Vehicle Speed Sensor Signal	I	—
B	0.5	BK/L-GN	822	Vehicle Speed Sensor Low Reference	I	—

B115 Vehicle Speed Sensor (LC8/L96 with NQG)



Connector Part Information

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

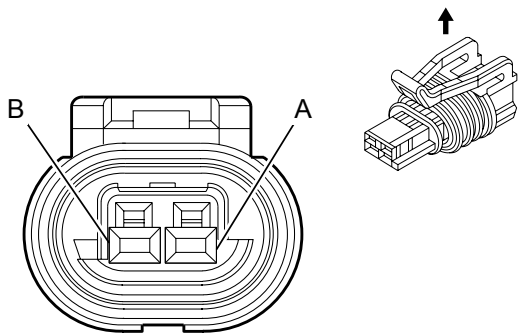
Terminal Part Information

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

B115 Vehicle Speed Sensor (LC8/L96 with NQG)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	VT/WH	821	Vehicle Speed Sensor Signal	I	—
B	0.5	BK/L-GN	822	Vehicle Speed Sensor Low Reference	I	—

B115 Vehicle Speed Sensor (LV3)



Connector Part Information

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

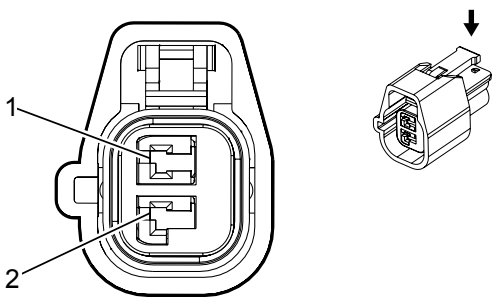
Terminal Part Information

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

B115 Vehicle Speed Sensor (LV3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	VT/WH	821	Vehicle Speed Sensor Signal	I	—
B	0.5	BK/L-GN	822	Vehicle Speed Sensor Low Reference	I	—

B118B Windshield Washer Fluid Level Switch



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 33113086
Service Connector: 13593220
Description: 2-Way F 1.5 Series (L-GY)

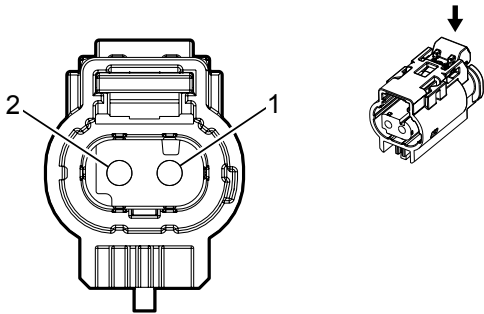
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	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
1	0.5	VT	185	Low Washer Fluid Indicator Control	I	—
2	0.5	BK	150	Ground	I	—

B130A Exhaust Gas Recirculation Temperature Sensor 1



Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 10094237
Service Connector: 19332628
Description: 2-Way F 1.2 Multilock Series, Sealed (GY)

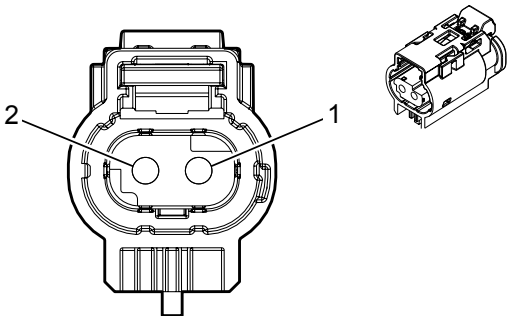
Terminal Part Information

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

B130A Exhaust Gas Recirculation Temperature Sensor 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/BN	3237	Exhaust Gas Recirculation Temperature Sensor Signal	I	L5P
2	0.5	BK/BU	6274	Exhaust Gas Recirculation Temperature Sensor Low Reference	I	L5P

B130B Exhaust Gas Recirculation Temperature Sensor 2



Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 10094241
Service Connector: 19354079
Description: 5-Way F 1.2 Multilock Series, Sealed

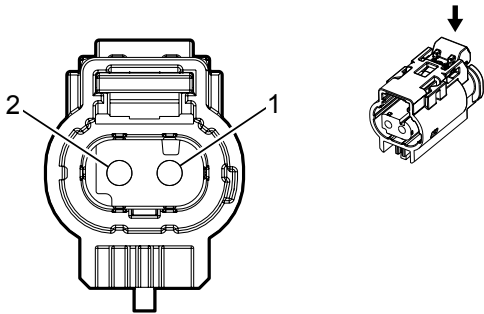
Terminal Part Information

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

B130B Exhaust Gas Recirculation Temperature Sensor 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/GN	3236	Exhaust Gas Recirculation Temperature Sensor 2 Signal	I	L5P
2	0.5	BK/YE	6275	Exhaust Gas Recirculation Temperature Sensor 2 Low Reference	I	L5P

B131A Exhaust Temperature Sensor 1



Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 10094234
Service Connector: 19332719
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

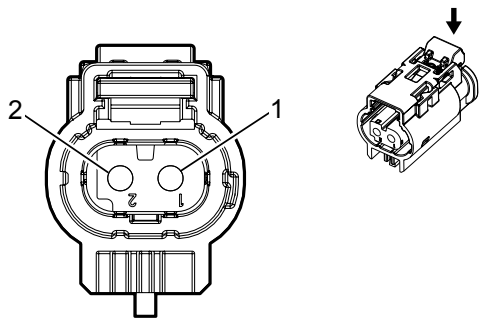
Terminal Part Information

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	L5P
2	0.5	BK/BN	6782	Exhaust Gas Temperature Sensor 1 Low Reference	I	L5P

B131B Exhaust Temperature Sensor 2



Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 10094236
Service Connector: 19332627
Description: 2-Way F 1.2 Multilock Series, Sealed (GY)

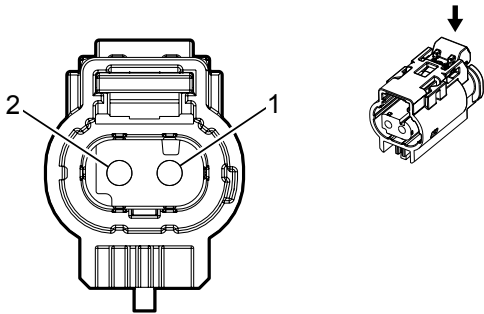
Terminal Part Information

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

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	L5P
2	0.5	BK/BU	6783	Exhaust Gas Temperature Sensor 2 Low Reference	I	L5P

B131C Exhaust Temperature Sensor 3



Connector Part Information

Harness Type: Chassis
OEM Connector: 33180624
Service Connector: 19332628
Description: 2-Way F 1.2 Multilock Series, Sealed (GY)

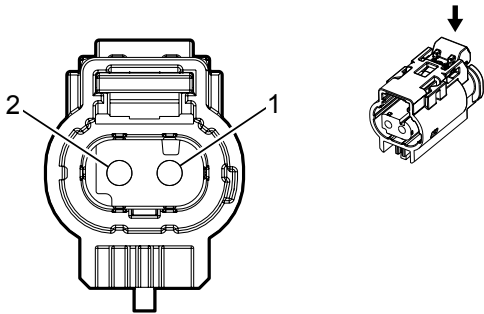
Terminal Part Information

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

B131C Exhaust Temperature Sensor 3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/L-GN	5378	Exhaust Gas Temperature Sensor 3	I	—
2	0.5	BK/L-GN	3657	Exhaust Gas Temperature Sensor 3 Low Reference	I	—

B131D Exhaust Temperature Sensor 4



Connector Part Information

Harness Type: Chassis
OEM Connector: 33180624
Service Connector: 19332628
Description: 2-Way F 1.2 Multilock Series, Sealed (GY)

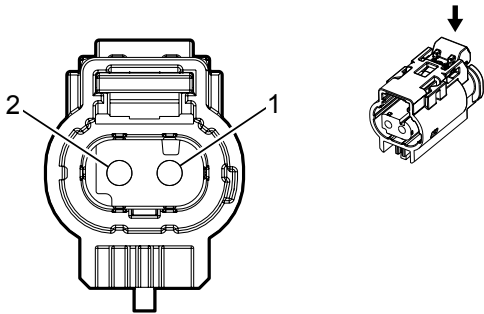
Terminal Part Information

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

B131D Exhaust Temperature Sensor 4

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

B131E Exhaust Temperature Sensor 5



Connector Part Information

Harness Type: Chassis
OEM Connector: 33180624
Service Connector: 19332628
Description: 2-Way F 1.2 Multilock Series, Sealed (GY)

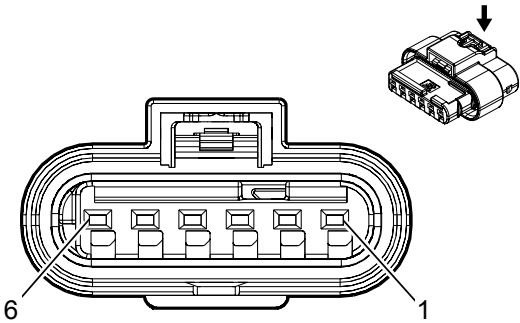
Terminal Part Information

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

B131E Exhaust Temperature Sensor 5

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	—

B136 Exhaust Particulate Matter Sensor



Connector Part Information

Harness Type: Chassis
OEM Connector: 15525825
Service Connector: 19329386
Description: 6-Way F 1.2 MCON-CB Series, Sealed (BN)

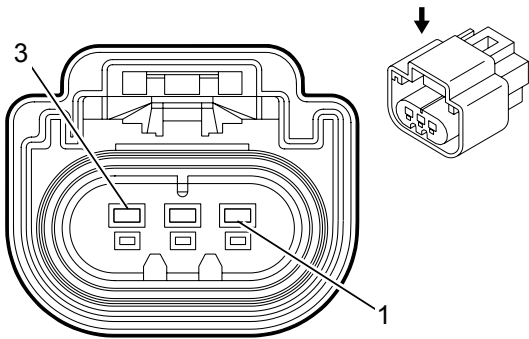
Terminal Part Information

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

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	D-BU/BN	4498	High Speed GMLAN Serial Data (+) 7	I	—
5	0.5	D-BU/BN	4498	High Speed GMLAN Serial Data (+) 7	I	—
6	1.5	VT/D-BU	3674	NOx Sensor 1 Control	I	—

B150 Fuel Tank Pressure Sensor



Connector Part Information

Harness Type: Chassis
OEM Connector: 13511996
Service Connector: 13580873
Description: 3-Way F 150 GT Series, Sealed (GY)

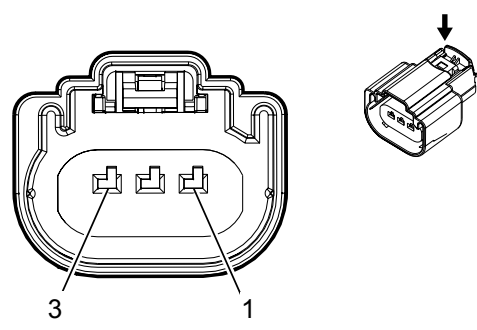
Terminal Part Information

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

B150 Fuel Tank Pressure Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU/WH	890	Fuel Tank Pressure Sensor Signal	I	—
2	0.5	BK/L-GN	6281	Fuel Level Sensor Low Reference	I	—
3	0.5	YE/RD	2709	Fuel Tank Pressure Sensor 5V Reference	I	—

B152LF Suspension Position Sensor - Left Front



Connector Part Information

Harness Type: Chassis
OEM Connector: 13873527
Service Connector: 19300594
Description: 3-Way F 1.5 Series, Sealed (GY)

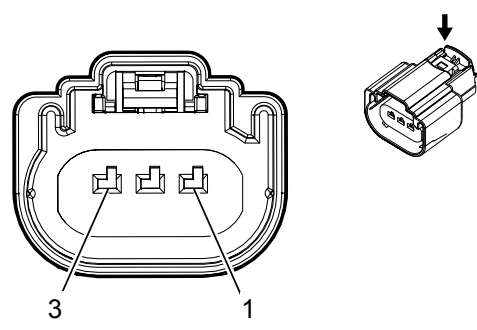
Terminal Part Information

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

B152LF Suspension Position Sensor - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU/RD	1205	Left Front Strut Position Sensor 5V Reference	I	—
2	0.5	BK/D-BU	1206	Left Front Strut Position Sensor Low Reference	I	—
3	0.5	BN/WH	1207	Left Front Strut Position Sensor Signal	I	—

B152LR Suspension Position Sensor - Left Rear



Connector Part Information

Harness Type: Chassis
OEM Connector: 13873527
Service Connector: 19300594
Description: 3-Way F 1.5 Series, Sealed (GY)

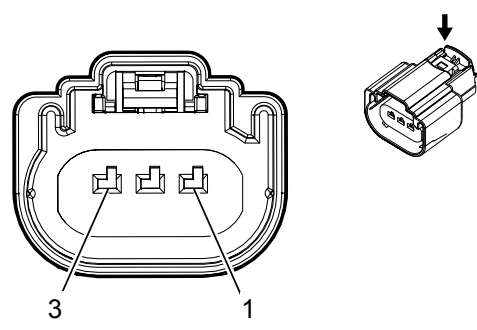
Terminal Part Information

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

B152LR Suspension Position Sensor - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/RD	1208	Left Rear Strut Position Sensor 5V Reference	I	—
2	0.5	BK/L-GN	1209	Left Rear Strut Position Sensor Low Reference	I	—
3	0.5	L-GN/WH	1210	Left Rear Strut Position Sensor Signal	I	—

B152RF Suspension Position Sensor - Right Front



Connector Part Information

Harness Type: Chassis
OEM Connector: 13873527
Service Connector: 19300594
Description: 3-Way F 1.5 Series, Sealed (GY)

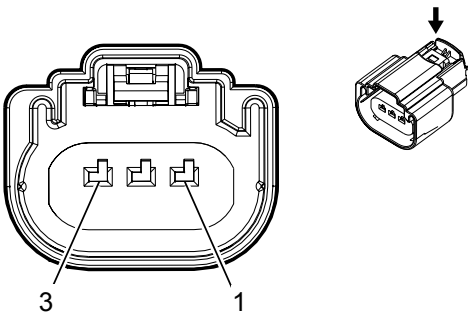
Terminal Part Information

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

B152RF Suspension Position Sensor - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/RD	1211	Right Front Strut Position Sensor 5V Reference	I	—
2	0.5	BK/GY	1212	Right Front Strut Position Sensor Low Reference	I	—
3	0.5	YE/WH	1213	Right Front Strut Position Sensor Signal	I	—

B152RR Suspension Position Sensor - Right Rear



Connector Part Information

Harness Type: Chassis
OEM Connector: 13873527
Service Connector: 19300594
Description: 3-Way F 1.5 Series, Sealed (GY)

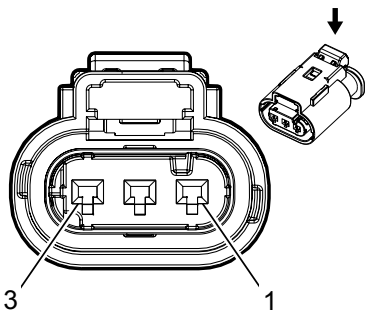
Terminal Part Information

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

B152RR Suspension Position Sensor - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/RD	1214	Right Rear Strut Position Sensor 5V Reference	I	—
2	0.5	BK/YE	1215	Right Rear Strut Position Sensor Low Reference	I	—
3	0.5	L-GN/GY	1216	Right Rear Strut Position Sensor Signal	I	—

B154 Diesel Particulate Filter Exhaust Differential Pressure Sensor



Connector Part Information

Harness Type: Chassis
OEM Connector: 13763990
Service Connector: 19299690
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

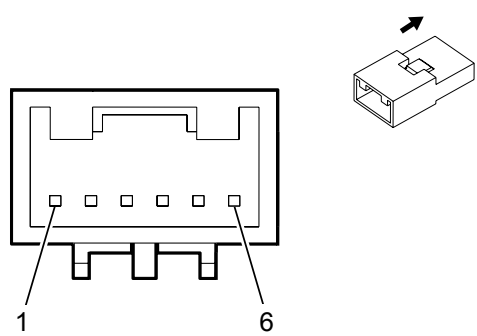
Terminal Part Information

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

B154 Diesel Particulate Filter Exhaust Differential Pressure Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-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	—

B160 Windshield Temperature and Inside Moisture Sensor



Connector Part Information

Harness Type: RH A Pillar
OEM Connector: 13770074
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way M 0.64 Kaizen Series (BK)

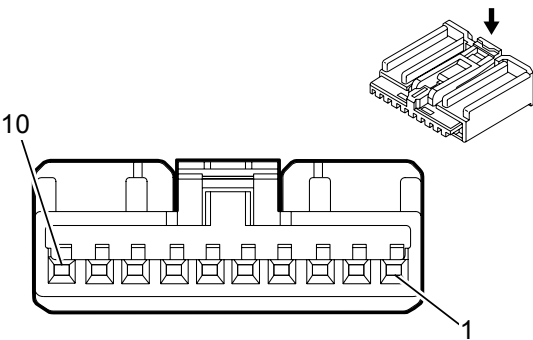
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B160 Windshield Temperature and Inside Moisture Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE/RD	597	5V Reference	I	—
2	0.35	GY/D-BU	7564	Humidity Sensor Signal	I	—
3	0.35	BK/D-BU	7566	Humidity/Windscreen Temp Sensor Low Reference	I	—
4	0.35	GY/D-GN	7565	Windscreen Temp Sensor Signal	I	—
5	0.35	YE/D-BU	3197	Humidity Temperature Sensor Signal	I	—
6	—	—	—	Not Occupied	—	—

B174W Frontview Camera - Windshield (UFL)



Connector Part Information

Harness Type: Headliner
OEM Connector: 13574592
Service Connector: 13576634
Description: 10-Way F 0.64 Kaizen Series (BK)

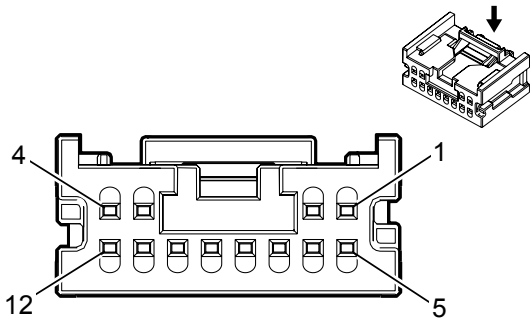
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300440	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

B174W Frontview Camera - Windshield (UFL)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1050	Ground	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	RD/L-GN	3140	Battery Positive Voltage	I	—
4	0.35	WH	3152	Lane Departure Warning Indicator Control	I	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	I	—

B174W Frontview Camera - Windshield (UHX)



Connector Part Information

Harness Type: Headliner
OEM Connector: 33235297
Service Connector: 19353780
Description: 12-Way F Mini 50 Series (BK)

Terminal Part Information

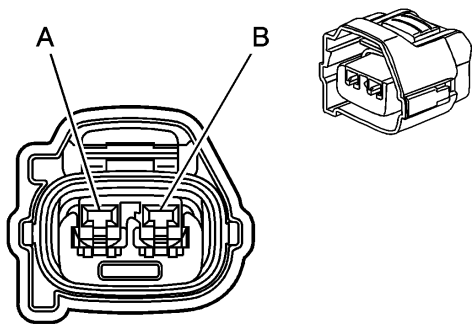
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579954	No Tool Required	J-38125-553	Not Available	Not Available	Not Available	Not Available

B174W Frontview Camera - Windshield (UHX)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1050	Ground	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	RD/L-GN	3140	Battery Positive Voltage	I	—
4	0.35	WH	3152	Lane Departure Warning Indicator Control	I	—
5	0.35	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	I	—
6	0.35	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	I	—
7	0.35	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	I	—
8	0.35	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	I	—

9	0.35	WH/D-BU	5986	Serial Data Communication Enable	I	—
10	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	I	—
11	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
12	—	—	—	Not Occupied	—	—

B193A Charge Air Cooler Inlet Temperature Sensor



Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 7283-7020-10
Service Connector: 13576415
Description: 2-Way F 2.3 Series, Sealed (D-GY)

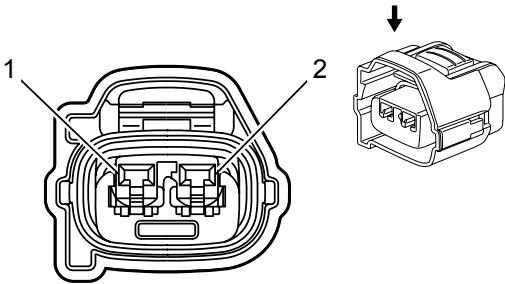
Terminal Part Information

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	L5P
2	0.5	YE/BK	3682	Charge Air Cooler Inlet Temperature Sensor Low Reference	I	L5P

B193B Charge Air Cooler Outlet Temperature Sensor



Connector Part Information

Harness Type: Engine
OEM Connector: 15401053
Service Connector: 13576415
Description: 2-Way F 090 Series, Sealed (D-GY)

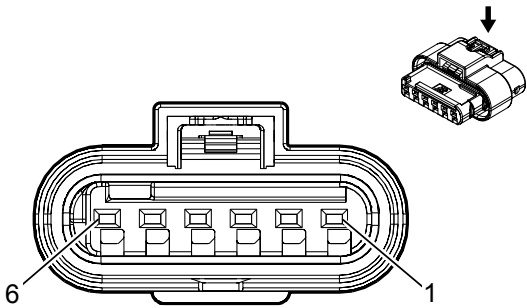
Terminal Part Information

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 (L5P)



Connector Part Information

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

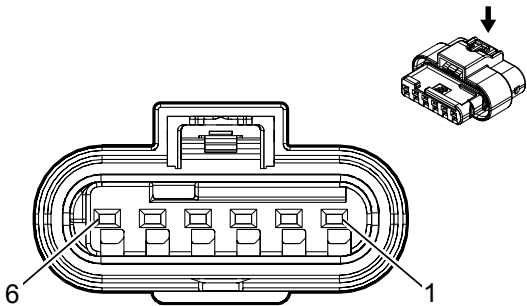
Terminal Part Information

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 (L5P)

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	0.75	BK/WH	451	Signal Ground	I	—

B195B Nitrogen Oxides Sensor 2



Connector Part Information

Harness Type: Chassis
OEM Connector: 13961841
Service Connector: 13586091
Description: 6-Way F 1.2 MCON-CB Series, Sealed (BN)

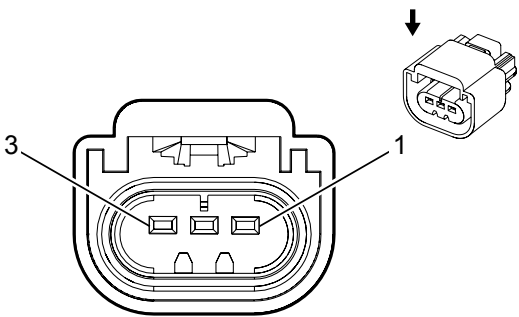
Terminal Part Information

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

B195B Nitrogen Oxides Sensor 2

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

B198 Fuel Composition Sensor



Connector Part Information

Harness Type: Chassis
OEM Connector: 13511132
Service Connector: 19301582
Description: 3-Way F 150 GT Series, Sealed (BN)

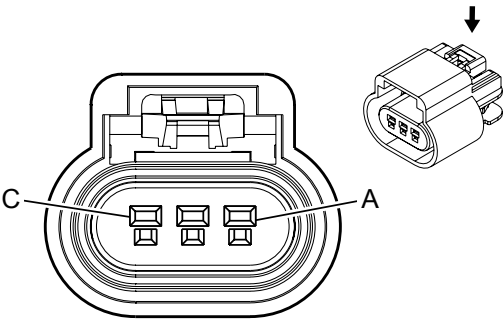
Terminal Part Information

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

B198 Fuel Composition Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	I	—
2	0.5	BK	2150	Ground	I	—
3	0.5	WH	1579	Fuel Temperature/Composition Signal	I	—

B227 Gear Position Sensor



Connector Part Information

Harness Type: Engine
OEM Connector: 15326808
Service Connector: 13580871
Description: 3-Way F 150 GT Series, Sealed (BK)

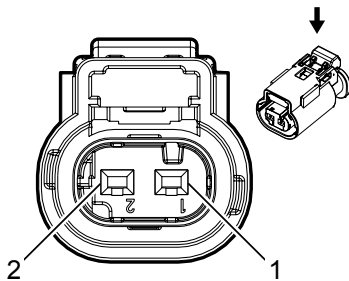
Terminal Part Information

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

B227 Gear Position Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	YE/BK	7478	Rotary Position Sensor Low Reference	I	—
B	0.5	WH/RD	7477	Rotary Position Sensor 5V Reference	I	—
C	0.5	WH/L-GN	7479	Rotary Position Sensor Signal	I	—

B235 Starter/Generator Coolant Temperature Sensor



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

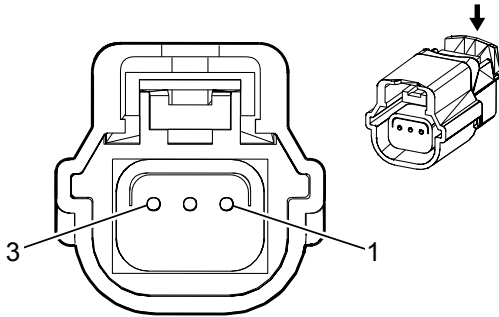
Terminal Part Information

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

B235 Starter/Generator Coolant Temperature Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/VT	3873	Powertrain Electronics Cooling Loop (PECL) Temperature Sensor Signal	I	—
2	0.5	BK/GY	3872	Powertrain Electronics Cooling Loop (PECL) Temperature Sensor Low Reference	I	—

B306A Parking Assist Sensor - Front Left Outer



Connector Part Information

Harness Type: Front Bumper
OEM Connector: 13512481
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 0.64 Series, Sealed (BK)

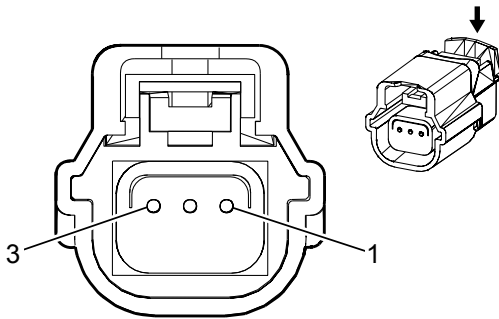
Terminal Part Information

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

B306A Parking Assist Sensor - Front Left Outer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/L-GN	5213	Front Parking Left/Right/Mid Sensor	I	—
2	0.5	VT/WH	5215	Front Parking Left Corner Sensor	I	—
3	0.5	BK/D-BU	5214	Front Parking Sensor Low Reference	I	—

B306B Parking Assist Sensor - Front Left Middle



Connector Part Information

Harness Type: Front Bumper
OEM Connector: 13512481
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 0.64 Series, Sealed (BK)

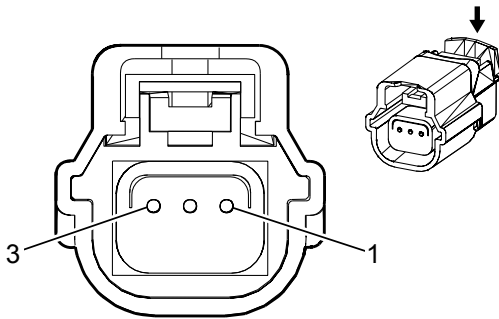
Terminal Part Information

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

B306B Parking Assist Sensor - Front Left Middle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/L-GN	5213	Front Parking Left/Right/Mid Sensor	I	—
2	0.5	YE/GY	5216	Front Parking Left Mid Sensor	I	—
3	0.5	BK/D-BU	5214	Front Parking Sensor Low Reference	I	—

B306C Parking Assist Sensor - Front Right Middle



Connector Part Information

Harness Type: Front Bumper
OEM Connector: 13512481
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 0.64 Series, Sealed (BK)

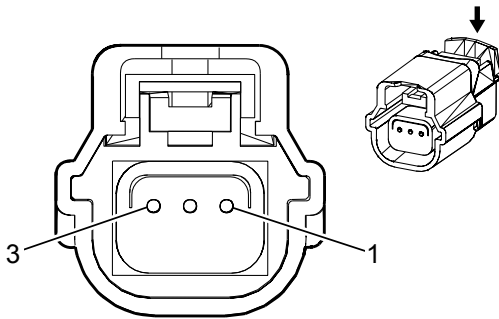
Terminal Part Information

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

B306C Parking Assist Sensor - Front Right Middle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/L-GN	5213	Front Parking Left/Right/Mid Sensor	I	—
2	0.5	VT/GY	5218	Front Parking Right Mid Sensor	I	—
3	0.5	BK/D-BU	5214	Front Parking Sensor Low Reference	I	—

B306D Parking Assist Sensor - Front Right Outer



Connector Part Information

Harness Type: Front Bumper
OEM Connector: 13512481
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 0.64 Series, Sealed (BK)

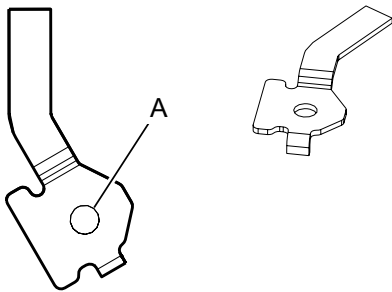
Terminal Part Information

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

B306D Parking Assist Sensor - Front Right Outer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/L-GN	5213	Front Parking Left/Right/Mid Sensor	I	—
2	0.5	WH/GY	5217	Front Parking Right Corner Sensor	I	—
3	0.5	BK/D-BU	5214	Front Parking Sensor Low Reference	I	—

C4A Hybrid/EV Battery Section 1 (HP5 (NEGATIVE))



Connector Part Information

Harness Type: High Voltage Battery Negative
OEM Connector: 15544775
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way Ring Terminal

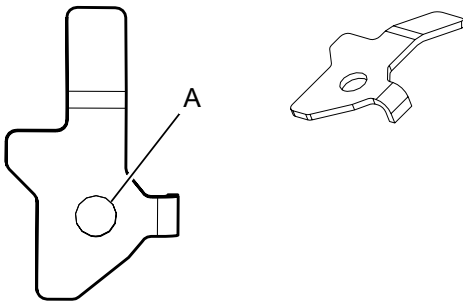
Terminal Part Information

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

C4A Hybrid/EV Battery Section 1 (HP5 (NEGATIVE))

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	12	OG	5084	High Voltage Battery (+)	I	—

C4A Hybrid/EV Battery Section 1 (HP5 (POSITIVE))



Connector Part Information

Harness Type: High Voltage Battery Manual Service Disconnect
OEM Connector: 15544777
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way Ring Terminal

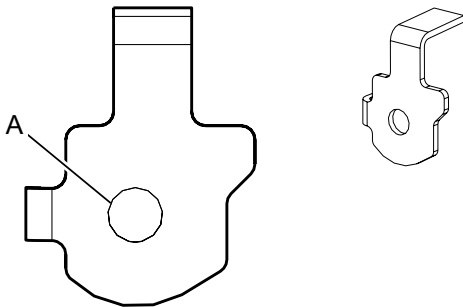
Terminal Part Information

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

C4A Hybrid/EV Battery Section 1 (HP5 (POSITIVE))

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	12	OG	3970	High Voltage Battery 4 (+)	I	—

C4B Hybrid/EV Battery Section 2 (HP5 (NEGATIVE))



Connector Part Information

Harness Type: High Voltage Battery Manual Service Disconnect
OEM Connector: 15544776
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way Ring Terminal

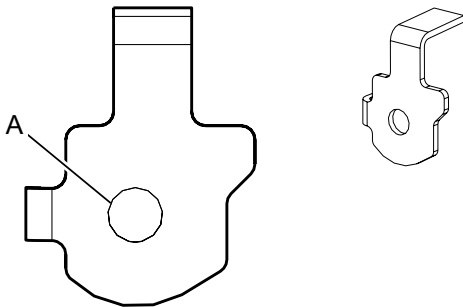
Terminal Part Information

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

C4B Hybrid/EV Battery Section 2 (HP5 (NEGATIVE))

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	12	OG	3970	High Voltage Battery 4 (+)	I	—

C4B Hybrid/EV Battery Section 2 (HP5 (POSITIVE))



Connector Part Information

Harness Type: High Voltage Battery Positive
OEM Connector: 15544776
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way Ring Terminal

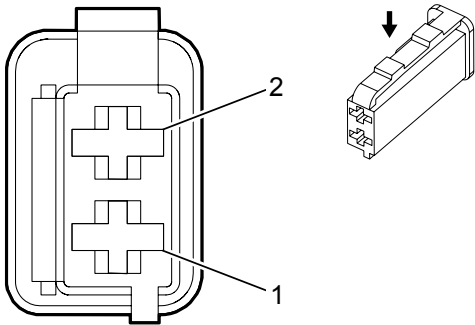
Terminal Part Information

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

C4B Hybrid/EV Battery Section 2 (HP5 (POSITIVE))

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	12	OG	5084	High Voltage Battery (+)	I	—

E1C Accent Lamp - Driver Door Handle



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)

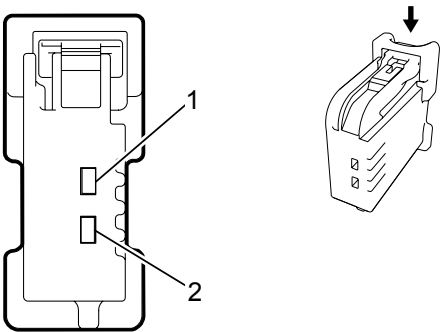
Terminal Part Information

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

E1C Accent Lamp - Driver Door Handle

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	—

E1L Accent Lamp - Overhead Console



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)

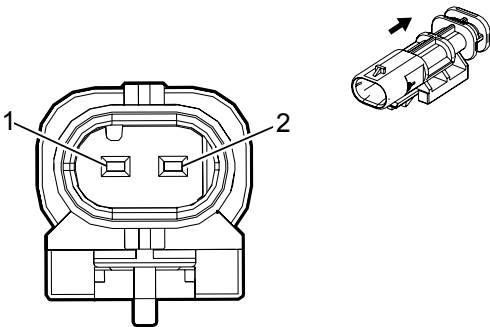
Terminal Part Information

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	—

E2A Marker Lamp - Endgate



Connector Part Information

Harness Type: Rear Clearance Lamps
OEM Connector: 13788295
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 Multilock Series, Sealed (BK)

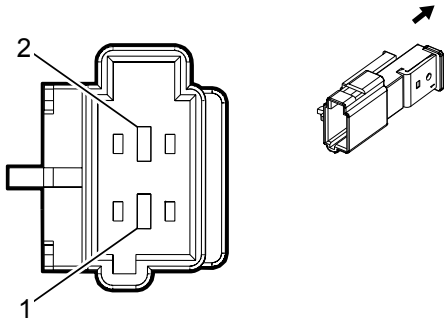
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E2A Marker Lamp - Endgate

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/BN	309	Right Park Lamp Control	I	—
2	0.5	BK	1750	Ground	I	—

E3A Roof Clearance Lamp - Left Front Outer



Connector Part Information

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

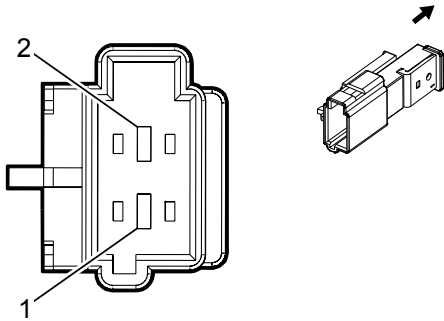
Terminal Part Information

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



Connector Part Information

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

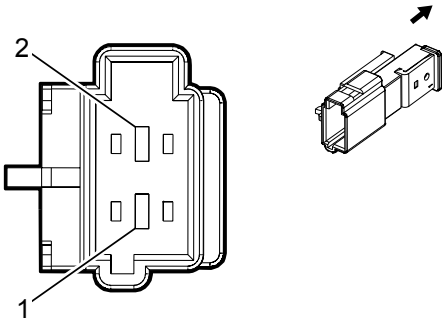
Terminal Part Information

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



Connector Part Information

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

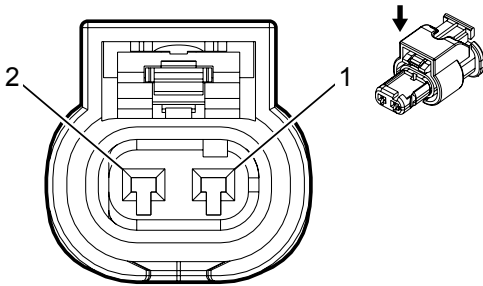
Terminal Part Information

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	—

E3LF Rear Fender Clearance Lamp - Left Front



Connector Part Information

- Harness Type: Rear Clearance Lamps
- OEM Connector: 13627836
- Service Connector: Service by Harness - See Part Catalog
- Description: 2-Way F 1.2 MCP Series, Sealed (BK)

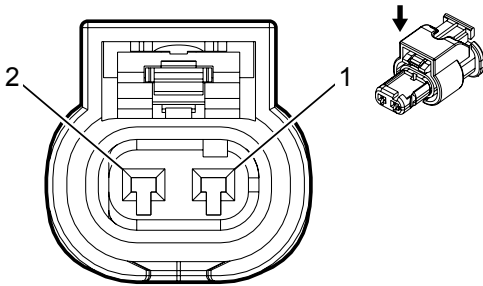
Terminal Part Information

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

E3LF Rear Fender Clearance Lamp - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/GY	709	Left Park Lamp Control	I	—
2	0.5	BK	1750	Ground	I	—

E3LR Rear Fender Clearance Lamp - Left Rear



Connector Part Information

Harness Type: Rear Clearance Lamps
OEM Connector: 13627836
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCP Series, Sealed (BK)

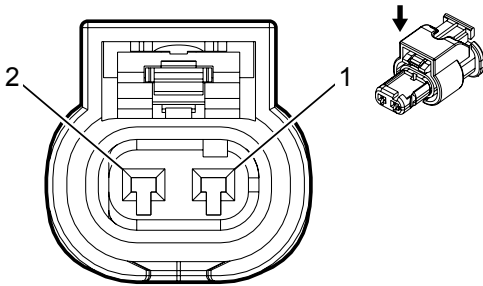
Terminal Part Information

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

E3LR Rear Fender Clearance Lamp - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/GY	709	Left Park Lamp Control	I	—
2	0.5	BK	1750	Ground	I	—

E3RF Rear Fender Clearance Lamp - Right Front



Connector Part Information

Harness Type: Rear Clearance Lamps
OEM Connector: 13627836
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCP Series, Sealed (BK)

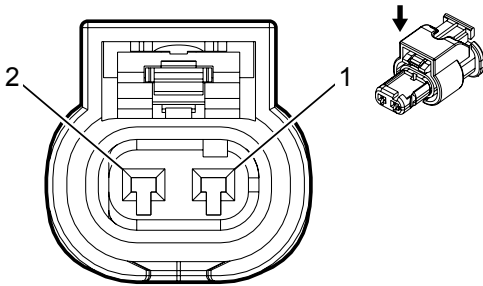
Terminal Part Information

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

E3RF Rear Fender Clearance Lamp - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/BN	309	Right Park Lamp Control	I	—
2	0.5	BK	1750	Ground	I	—

E3RR Rear Fender Clearance Lamp - Right Rear



Connector Part Information

Harness Type: Rear Clearance Lamps
OEM Connector: 13627836
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCP Series, Sealed (BK)

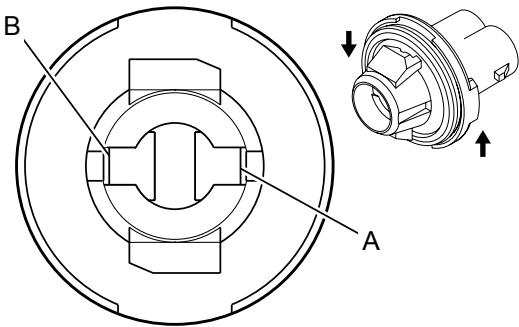
Terminal Part Information

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

E3RR Rear Fender Clearance Lamp - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/BN	309	Right Park Lamp Control	I	—
2	0.5	BK	1750	Ground	I	—

E7L License Plate Lamp - Left



Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 15324946
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Lamp Socket Wedge Base, Type W-2 (D-GY)

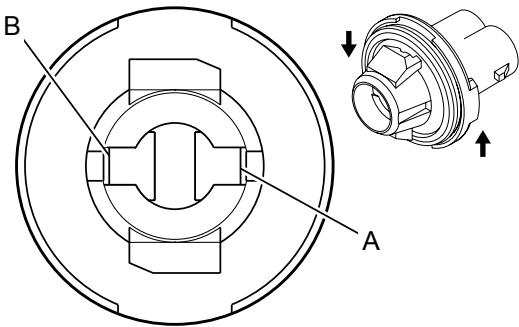
Terminal Part Information

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

E7L License Plate Lamp - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-GN/YE	6846	Rear License Lamp Control	I	—
B	0.5	BK	1750	Ground	I	—

E7R License Plate Lamp - Right



Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 15324946
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Lamp Socket Wedge Base, Type W-2 (D-GY)

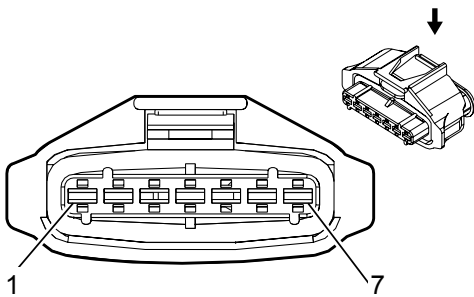
Terminal Part Information

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

E7R License Plate Lamp - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-GN/YE	6846	Rear License Lamp Control	I	—
B	0.5	BK	1750	Ground	I	—

E11A Fuel Heater/Water in Fuel Sensor



Connector Part Information

Harness Type: Chassis
OEM Connector: 10774827
Service Connector: 19354080
Description: 7-Way F 2.8 Junior Power Timer Series, Sealed (BK)

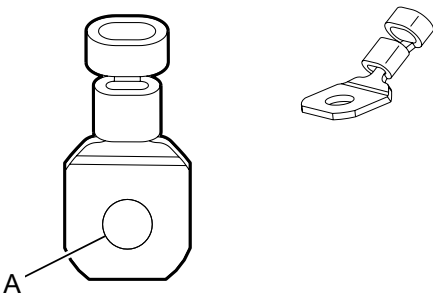
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-33 (YE)	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

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	II	—
2	0.5	BN/VT	455	Fuel Filter Temperature Signal	II	—
3	0.5	D-BU/YE	6861	Water In Fuel Sensor Signal	II	—
4	0.5	BK/D-BU	6863	Water In Fuel Sensor Low Reference	II	—
5	—	—	—	Not Occupied	—	—
6	2.5	VT/L-GN	355	Fuel Filter Heater Voltage	I	—
7	2.5	BK	2150	Ground	I	—

E12A Glow Plug 1



Connector Part Information

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

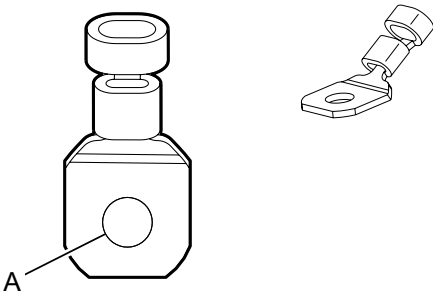
Terminal Part Information

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	L5P

E12B Glow Plug 2



Connector Part Information

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

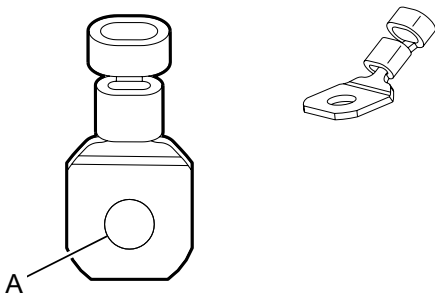
Terminal Part Information

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	L5P

E12C Glow Plug 3



Connector Part Information

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

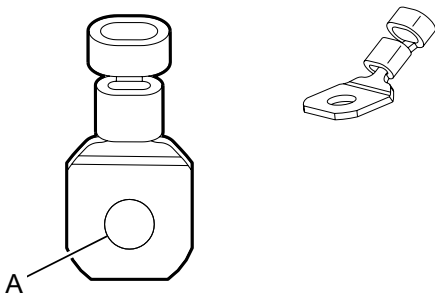
Terminal Part Information

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	L5P

E12D Glow Plug 4



Connector Part Information

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

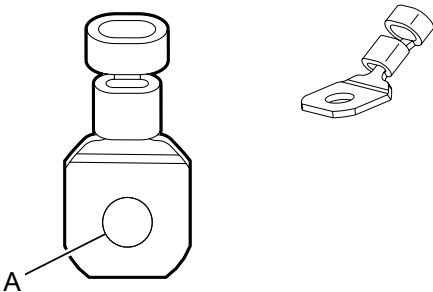
Terminal Part Information

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	L5P

E12E Glow Plug 5



Connector Part Information

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

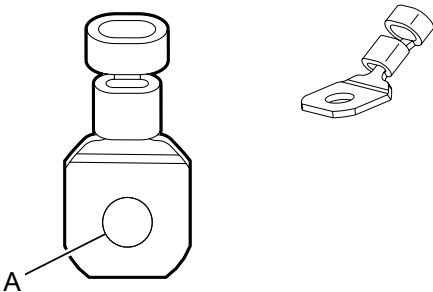
Terminal Part Information

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	L5P

E12F Glow Plug 6



Connector Part Information

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

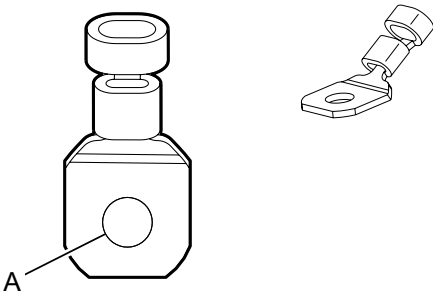
Terminal Part Information

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	L5P

E12G Glow Plug 7



Connector Part Information

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

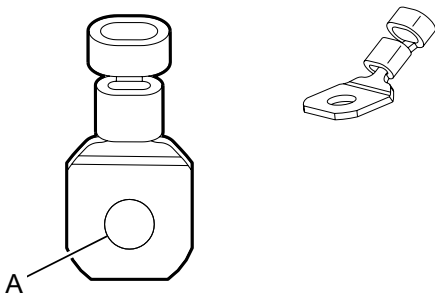
Terminal Part Information

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/BK	1587	Glow Plug Control 7	I	L5P

E12H Glow Plug 8



Connector Part Information

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

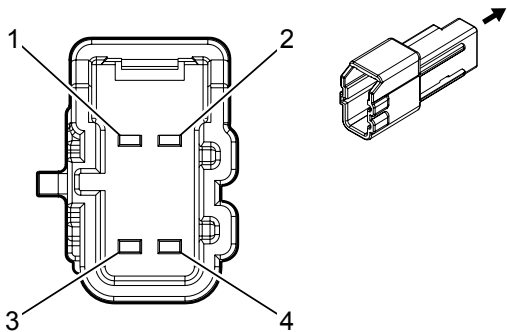
Terminal Part Information

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/BU	1588	Glow Plug Control 8	I	L5P

E14A Seat Heating Element - Driver Back



Connector Part Information

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

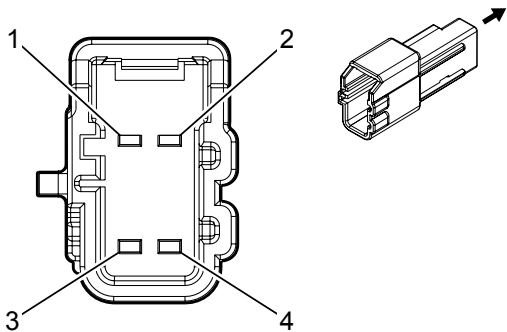
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14A Seat Heating Element - Driver Back

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



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)

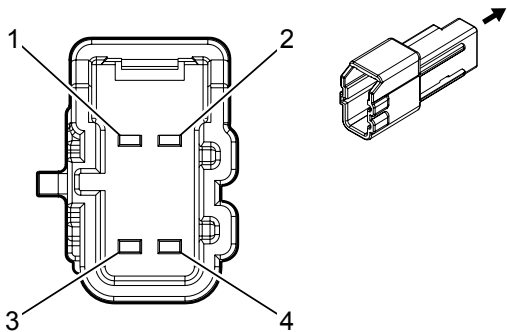
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14B Seat Heating Element - Driver Cushion

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	—

E14C Seat Heating Element - Passenger Back



Connector Part Information

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

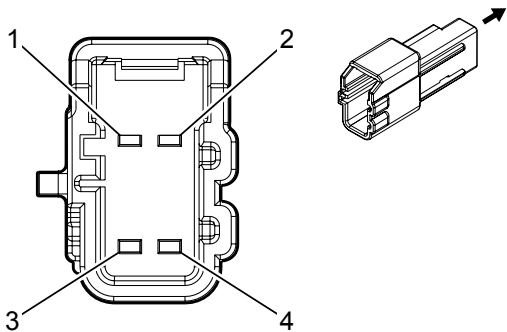
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14C Seat Heating Element - Passenger Back

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH/BN	2481	Passenger Heated Back Element Control	I	—
2	0.5	WH/L-BU	2436	Passenger Heated Back NTC Signal	I	—
3	0.5	BK/L-GN	2482	Passenger Heated Back NTC Low Reference	I	—
4	0.75	GY/BK	2480	Passenger Heated Seat Element Low Reference	I	—

E14D Seat Heating Element - Passenger Cushion



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)

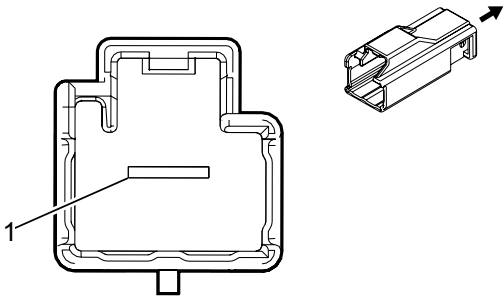
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14D Seat Heating Element - Passenger Cushion

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	—

E18 Rear Defogger Grid X1



Connector Part Information

Harness Type: Body
OEM Connector: 13953570
Service Connector: 19333227
Description: 1-Way M 6.3 Series (BK)

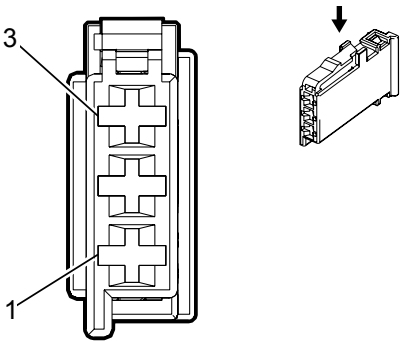
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-43 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E18 Rear Defogger Grid X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BN/VT	293	Rear Defog Element Control	I	—

E28 Center Console Compartment Lamp



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)

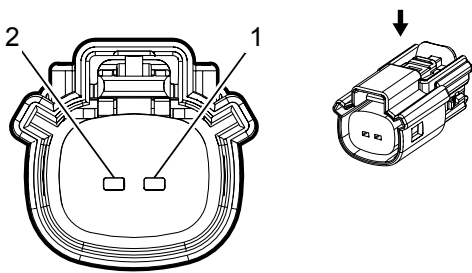
Terminal Part Information

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

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 (UD5)



Connector Part Information

Harness Type: Front Bumper
OEM Connector: 13782480
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series, Sealed (BK)

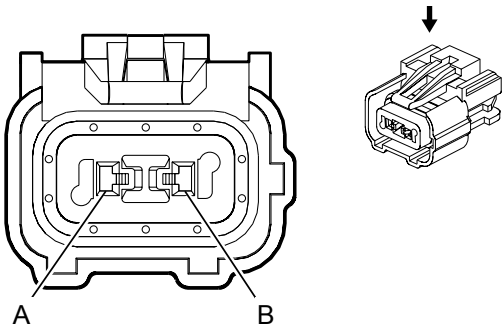
Terminal Part Information

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

E29LF Fog Lamp - Left Front (UD5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/VT	2234	Front Fog Lamp Control	I	—
2	0.5	BK	150	Ground	I	—

E29LF Fog Lamp - Left Front (-UD5)



Connector Part Information

Harness Type: Front Bumper
OEM Connector: 15489797
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 Series (BK)

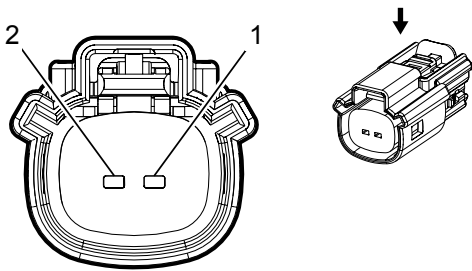
Terminal Part Information

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

E29LF Fog Lamp - Left Front (-UD5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BN/VT	2234	Front Fog Lamp Control	I	—
B	0.5	BK	150	Ground	I	—

E29RF Fog Lamp - Right Front (UD5)



Connector Part Information

Harness Type: Front Bumper
OEM Connector: 13782480
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 MX Series, Sealed (BK)

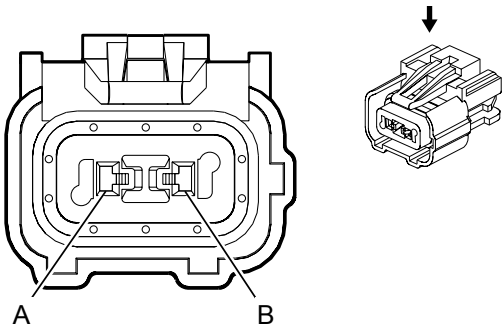
Terminal Part Information

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

E29RF Fog Lamp - Right Front (UD5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/VT	2234	Front Fog Lamp Control	I	—
2	0.5	BK	250	Ground	I	—

E29RF Fog Lamp - Right Front (-UD5)



Connector Part Information

Harness Type: Front Bumper
OEM Connector: 15489797
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 Series (BK)

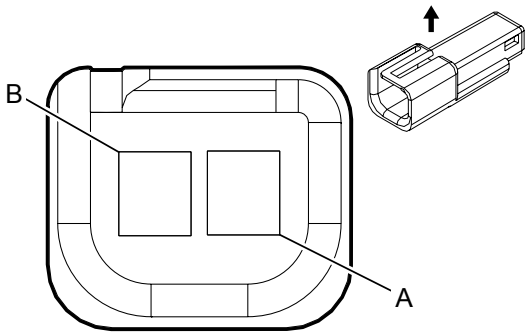
Terminal Part Information

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

E29RF Fog Lamp - Right Front (-UD5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BN/VT	2234	Front Fog Lamp Control	I	—
B	0.5	BK	250	Ground	I	—

E31L Sunshade Mirror Lamp - Left



Connector Part Information

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

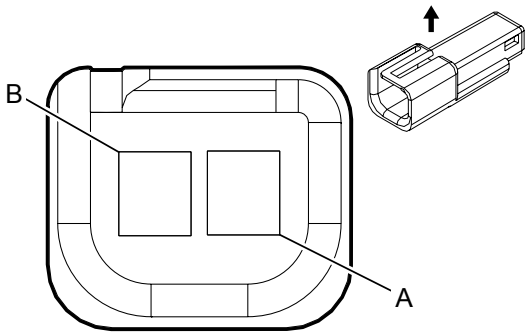
Terminal Part Information

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

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



Connector Part Information

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

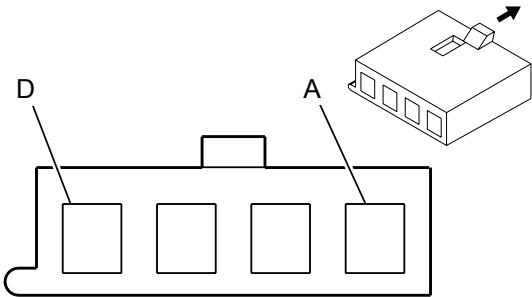
Terminal Part Information

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

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	—

E37B Dome/Reading Lamps - 2nd Row



Connector Part Information

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

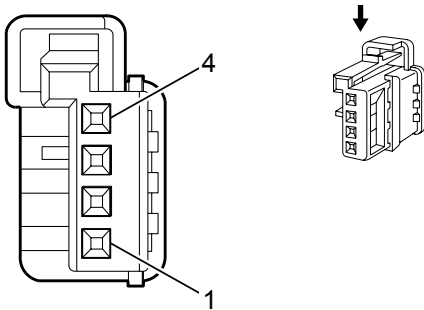
Terminal Part Information

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

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



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)

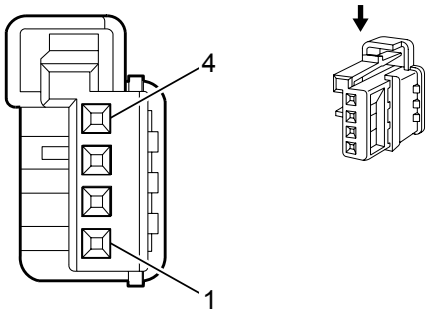
Terminal Part Information

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



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)

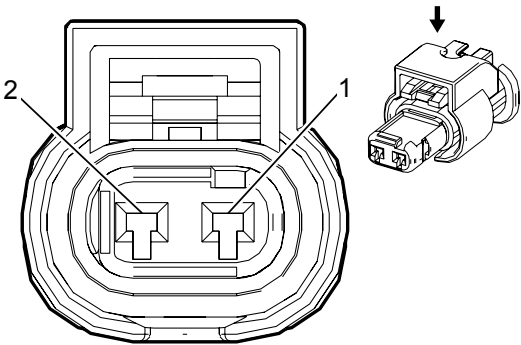
Terminal Part Information

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	—

F101 Passenger Instrument Panel Air Bag



Connector Part Information

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

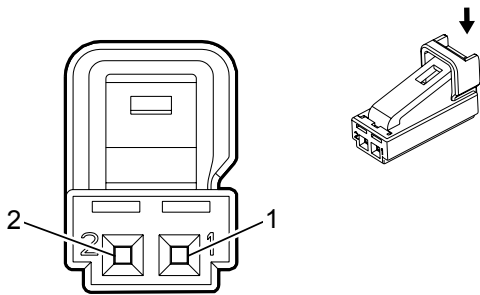
Terminal Part Information

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	0.35	YE/OG	3025	Passenger IP Module Stage 1 High Control	I	—
2	0.35	OG/WH	3024	Passenger IP Module Stage 1 Low Control	I	—

F102 Hybrid/EV Battery Pack Cable Cover



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 10865735
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Micro-Quadlock Series (BK)

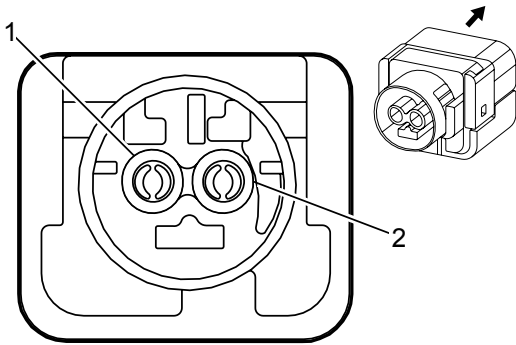
Terminal Part Information

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

F102 Hybrid/EV Battery Pack Cable Cover

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT	5087	High Voltage Interlock Loop Signal 1	I	—
2	0.5	BK/BN	5088	High Voltage Interlock Loop Low Reference 1	I	—

F106D Seat Side Air Bag - Driver



Connector Part Information

Harness Type: Driver Seat Back Jumper
OEM Connector: PPI0001142
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F FPB 180-1 Series (BK with YE Cover)

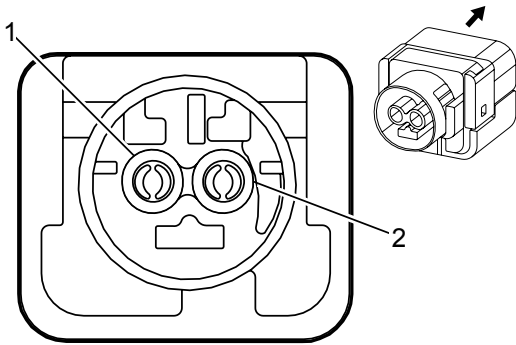
Terminal Part Information

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

F106D Seat Side Air Bag - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/L-BU	3068	Driver Side Impact Module High Control	I	—
2	0.5	L-GN/OG	3069	Driver Side Impact Module Low Control	I	—

F106P Seat Side Air Bag - Passenger



Connector Part Information

Harness Type: Passenger Seat Back
OEM Connector: PPI0001142
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F FPB 180-1 Series (BK with YE Cover)

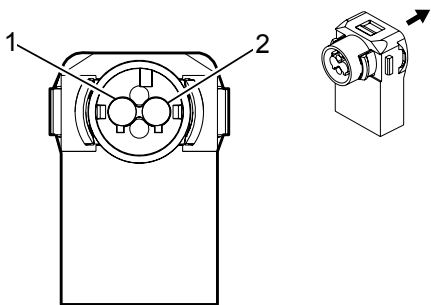
Terminal Part Information

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

F106P Seat Side Air Bag - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/GY	3066	Passenger Side Impact Module High Control	I	—
2	0.5	BN/OG	3067	Passenger Side Impact Module Low Control	I	—

F112D Seat Belt Retractor Pretensioner - Driver (Crew Cab)



Connector Part Information

Harness Type: Body
OEM Connector: 33154433
Service Connector: 19354083
Description: 2-Way F 1.0 MAC Series (PU with YE Cover)

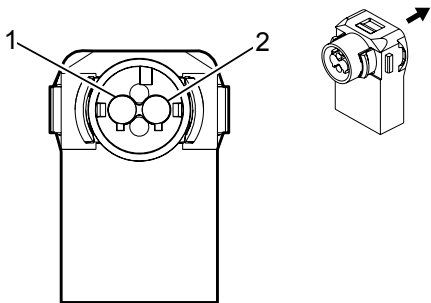
Terminal Part Information

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	—	—	3477	Driver Seat Belt Retractor Pretensioner High Control	I	—
2	—	—	3478	Driver Seat Belt Retractor Pretensioner Low Control	I	—

F112D Seat Belt Retractor Pretensioner - Driver (Extended Cab)



Connector Part Information

Harness Type: Body
OEM Connector: 33154433
Service Connector: 19354083
Description: 2-Way F 1.0 MAC Series (PU with YE Cover)

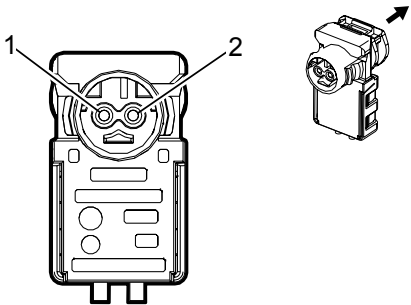
Terminal Part Information

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

F112D Seat Belt Retractor Pretensioner - Driver (Extended Cab)

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

F112D Seat Belt Retractor Pretensioner - Driver (Regular Cab)



Connector Part Information

Harness Type: Body
OEM Connector: 988530061
Service Connector: 19119345
Description: 2-Way F AK-2 Series (BK with YE Cover)

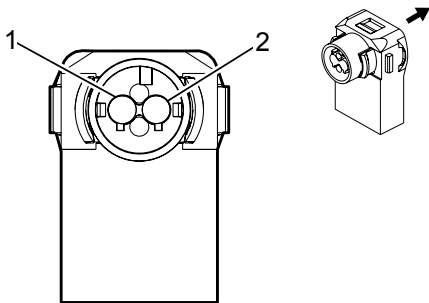
Terminal Part Information

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 (Regular Cab)

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

F112P Seat Belt Retractor Pretensioner - Passenger (Crew Cab)



Connector Part Information

Harness Type: Body
OEM Connector: 33154433
Service Connector: 19354083
Description: 2-Way F 1.0 MAC Series (PU with YE Cover)

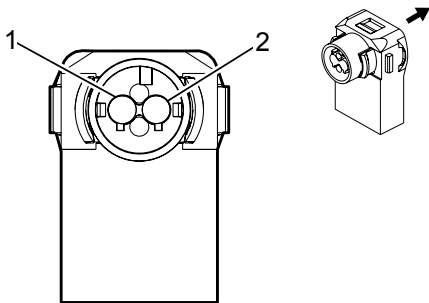
Terminal Part Information

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	—	—	3475	Passenger Seat Belt Retractor Pretensioner High Control	I	—
2	—	—	3476	Passenger Seat Belt Retractor Pretensioner Low Control	I	—

F112P Seat Belt Retractor Pretensioner - Passenger (Extended Cab)



Connector Part Information

Harness Type: Body
OEM Connector: 33154433
Service Connector: 19354083
Description: 2-Way F 1.0 MAC Series (PU with YE Cover)

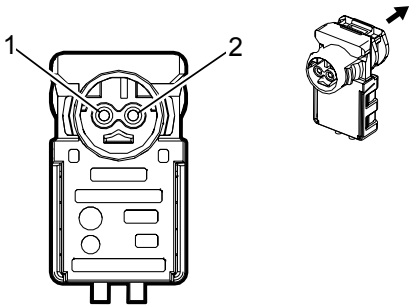
Terminal Part Information

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 (Extended Cab)

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

F112P Seat Belt Retractor Pretensioner - Passenger (Regular Cab)



Connector Part Information

Harness Type: Body
OEM Connector: 988530061
Service Connector: 19119345
Description: 2-Way F AK-2 Series (BK with YE Cover)

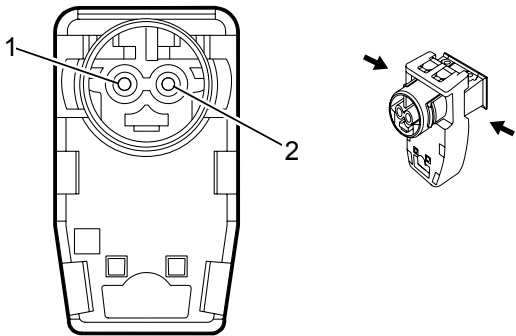
Terminal Part Information

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 (Regular Cab)

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

F113D Seat Belt Anchor Pretensioner - Driver



Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: PPI0001721
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Series, Sealed (BK with YE Cover)

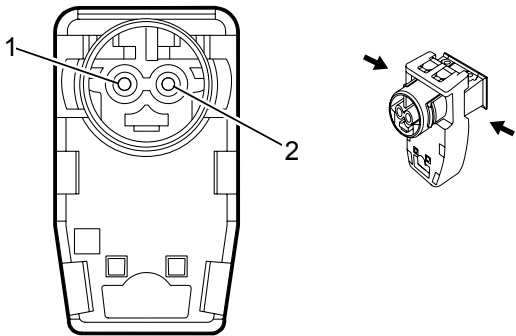
Terminal Part Information

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

F113D Seat Belt Anchor Pretensioner - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/YE	3481	Driver Seat Belt Anchor Pretensioner High Control	I	—
2	0.5	YE/OG	3482	Driver Seat Belt Anchor Pretensioner Low Control	I	—

F113P Seat Belt Anchor Pretensioner - Passenger



Connector Part Information

Harness Type: Passenger Seat Cushion
OEM Connector: PPI0001721
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Series, Sealed (BK with YE Cover)

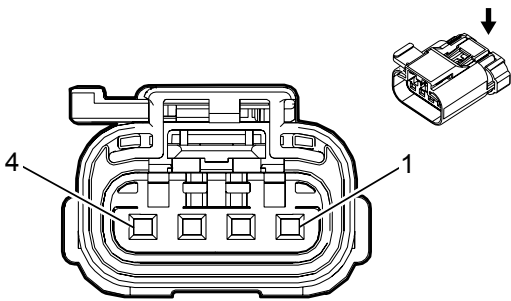
Terminal Part Information

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

F113P Seat Belt Anchor Pretensioner - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/BN	3479	Passenger Seat Belt Anchor Pretensioner High Control	I	—
2	0.5	GY/OG	3480	Passenger Seat Belt Anchor Pretensioner Low Control	I	—

G10L Cooling Fan Motor - Left



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 33234266
Service Connector: 19354081
Description: 4-Way F 2.8 APEX Series, Sealed (BK)

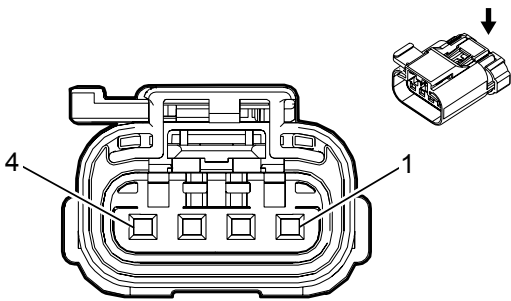
Terminal Part Information

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

G10L Cooling Fan Motor - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4	BK	150	Ground	I	—
2	4	RD/WH	342	Battery Positive Voltage	I	—
4	0.5	BN/YE	473	High Speed Cooling Fan Relay Control	I	—

G10R Cooling Fan Motor - Right



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 33234266
Service Connector: 19354081
Description: 4-Way F 2.8 APEX Series, Sealed (BK)

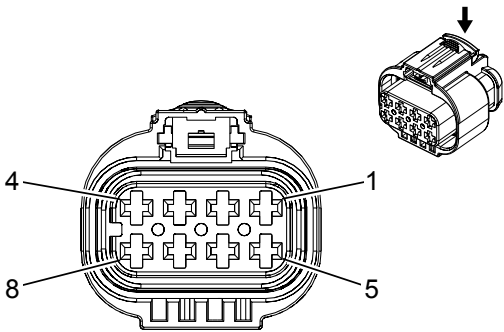
Terminal Part Information

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

G10R Cooling Fan Motor - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4	BK	250	Ground	I	—
2	4	RD/GY	642	Battery Positive Voltage	I	—
4	0.5	BN/YE	473	High Speed Cooling Fan Relay Control	I	—

G12A Fuel Pump - Primary



Connector Part Information

Harness Type: Chassis
OEM Connector: 33180742
Service Connector: 19354078
Description: 8-Way F 2.8 Series, Sealed (L-GY)

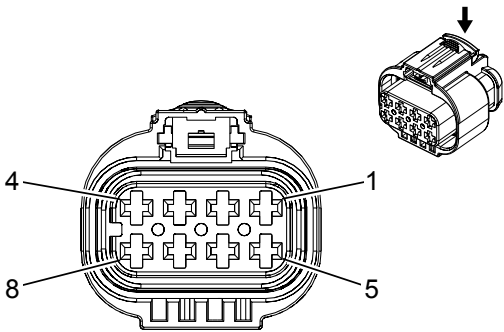
Terminal Part Information

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

G12A Fuel Pump - Primary

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	GY	120	Fuel Pump Control	I	—
2	2.5	YE/GY	4137	Fuel Pump Supply Voltage Phase 2	I	—
3	2.5	WH/BN	4138	Fuel Pump Supply Voltage Phase 3	I	—
4	0.5	BK	7444	Fuel System Control Module Shield Ground	I	—
5	0.5	D-BU/VT	1589	Primary Fuel Level Sensor Signal	I	—
6	0.5	BK/L-GN	6281	Fuel Level Sensor Low Reference	I	—
7 - 8	—	—	—	Not Occupied	—	—

G12B Fuel Pump - Secondary (L5P)



Connector Part Information

Harness Type: Chassis
OEM Connector: 33180742
Service Connector: 19354078
Description: 8-Way F 2.8 Series, Sealed (L-GY)

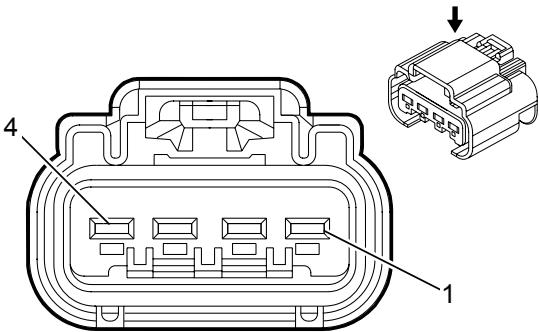
Terminal Part Information

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

G12B Fuel Pump - Secondary (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	GY	120	Fuel Pump Control	I	—
2	2.5	YE/GY	4137	Fuel Pump Supply Voltage Phase 2	I	—
3	2.5	WH/BN	4138	Fuel Pump Supply Voltage Phase 3	I	—
4	0.5	BK	7444	Fuel System Control Module Shield Ground	I	—
5	0.5	D-BU/VT	1589	Primary Fuel Level Sensor Signal	I	—
6	0.5	BK/L-GN	6281	Fuel Level Sensor Low Reference	I	—
7 - 8	—	—	—	Not Occupied	—	—

G12B Fuel Pump - Secondary (L96)



Connector Part Information

Harness Type: Chassis
OEM Connector: 13527865
Service Connector: 13587174
Description: 4-Way F 280 GT Series, Sealed (NA)

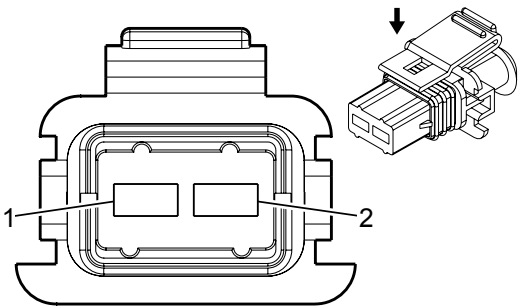
Terminal Part Information

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

G12B Fuel Pump - Secondary (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	GY	120	Fuel Pump Control	I	—
2	2.5	BK/L-GN	1580	Fuel Pump Low Reference	I	N2L
	2.5	BK	2150	Ground	I	N2N
3	0.5	BK/L-GN	6281	Fuel Level Sensor Low Reference	I	—
4	0.5	D-BU/WH	1937	Secondary Fuel Level Sensor Signal	I	N2N

G13E Generator - Auxiliary



Connector Part Information

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

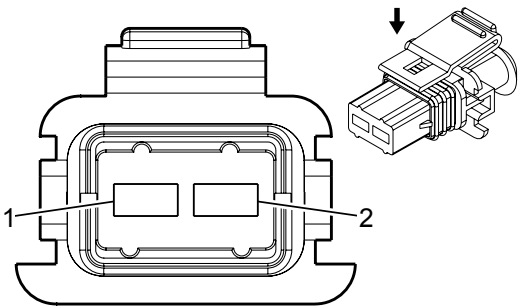
Terminal Part Information

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

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

G13 Generator X1



Connector Part Information

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

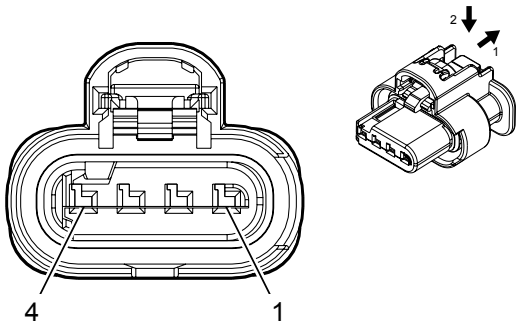
Terminal Part Information

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
II	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

G13 Generator X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN	25	Charge Indicator Control	I	1500
	0.75	BN	25	Charge Indicator Control	I	L5P
	0.5	BN	25	Charge Indicator Control	II	L96/LC8
2	0.5	GY	23	Generator Field Duty Cycle Signal	II	L96/LC8
	0.5	GY	23	Generator Field Duty Cycle Signal	I	-L96/LC8

G14 Hybrid/EV Battery Pack Cooling Fan



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 33150389
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.2 MCON-CB Series, Sealed (BK)

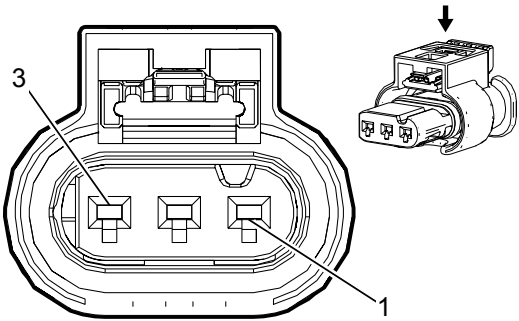
Terminal Part Information

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

G14 Hybrid/EV Battery Pack Cooling Fan

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/D-BU	6276	Fan Speed Sensor Low Reference	I	—
2	0.35	YE/L-GN	5598	Fan Speed Signal 1	I	—
3	0.35	D-BU/VT	5599	Fan Speed Signal 2	I	—
4	0.5	BN/WH	6277	Fan Speed Sensor Control	I	—

G17 Heater Coolant Pump (L8B)



Connector Part Information

Harness Type: Engine
OEM Connector: 13663390
Service Connector: 13574937
Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

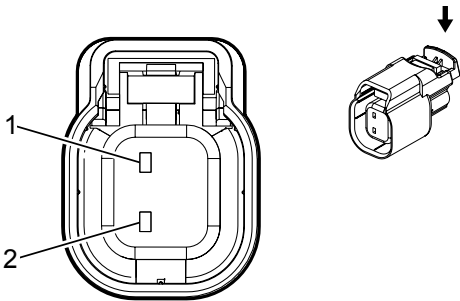
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

G17 Heater Coolant Pump (L8B)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	550	Ground	I	—
2	0.5	YE/D-BU	5126	After Boil Heater Pump Control	I	—
3	—	—	—	Not Occupied	—	—

G18 High Pressure Fuel Pump



Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 34062-4008
Service Connector: 19352068
Description: 2-Way F 1.5 Series, Sealed (BK)

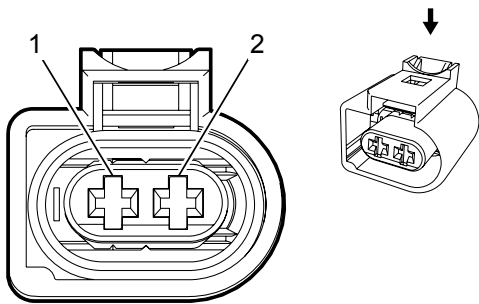
Terminal Part Information

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

G18 High Pressure Fuel Pump

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK/YE	2834	Fuel Rail Pressure Solenoid Low Reference	I	L5P
2	0.75	BU/WH	2530	Fuel Rail Pressure Solenoid Control	I	L5P

G24 Windshield Washer Pump



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 10863916
Service Connector: 13576532
Description: 2-Way F 2.8 MDK5 Series, Sealed (BK)

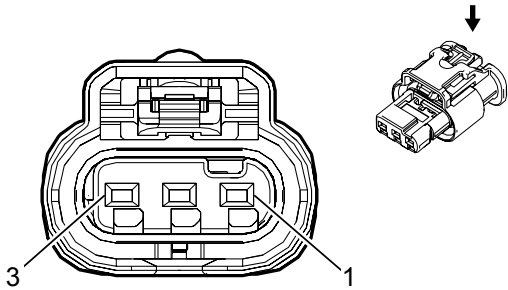
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	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	150	Ground	I	—

G43 Starter/Generator Coolant Pump



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13868589
Service Connector: 19329387
Description: 3-Way F 1.2 MCP Series, Sealed (BN)

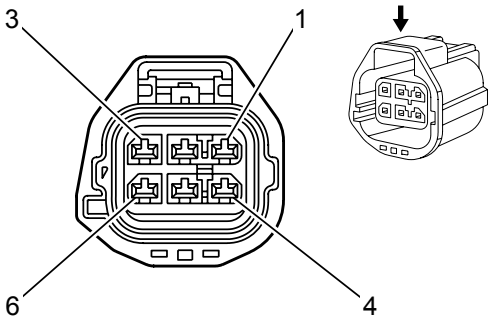
Terminal Part Information

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

G43 Starter/Generator Coolant Pump

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	BK	250	Ground	I	—
2	0.5	GY/D-BU	3769	MGU Coolant Pump Control	I	—
3	0.5	VT/D-BU	3790	Electric Coolant Motor Feedback Signal	I	—

K4 Assist Step Control Module X1



Connector Part Information

Harness Type: Chassis
OEM Connector: 15342659
Service Connector: 88988393
Description: 6-Way F 2.8 Series, Sealed (D-GY)

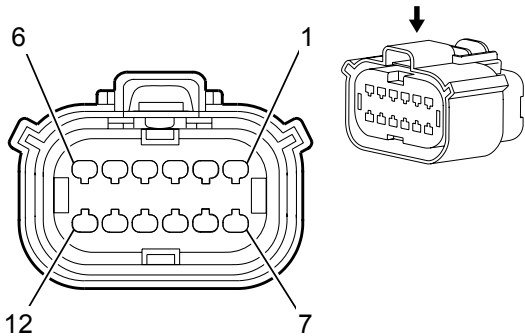
Terminal Part Information

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

K4 Assist Step Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	L-GN	7469	Articulating Running Boards Motor Right Control Retract	I	—
2	2.5	BK	2150	Ground	I	—
3	2	WH/BN	7471	Articulating Running Boards Motor Left Control Extend	I	—
4	2	D-BU	7470	Articulating Running Boards Motor Right Control Extend	I	—
5	2.5	RD/YE	1142	Battery Positive Voltage	I	—
6	2	GY	7472	Articulating Running Boards Motor Left Control Retract	I	—

K4 Assist Step Control Module X2



Connector Part Information

Harness Type: Chassis
OEM Connector: 13653762
Service Connector: 13503528
Description: 12-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	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

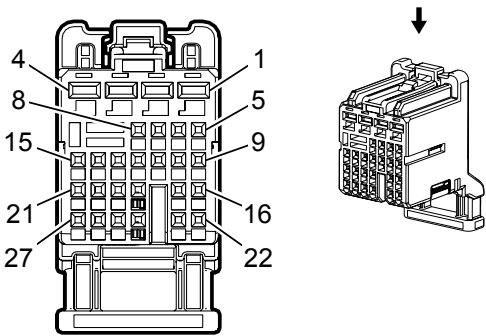
K4 Assist Step Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/RD	7468	Running Boards Motor Hall Sensor Left 5V Reference	I	—
2	0.5	L-GN/RD	7464	Running Boards Motor Hall Sensor Right 5V Reference	I	—
3	0.5	YE	7467	Running Boards Motor Hall Sensor Left Signal	I	—
4	0.5	VT	7465	Running Boards Motor Hall Sensor Right Signal	I	—
5	0.5	YE/BN	7466	Running Boards Motor Hall Sensor Left Low Reference	I	—
6	0.5	YE/BK	7463	Running Boards Motor Hall Sensor Right Low Reference	I	—
7	0.5	BN/WH	9002	—	I	—
8	0.5	L-GN	5060	Low Speed GMLAN Serial Data	I	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

9	—	—	—	Not Occupied	—	—
10	0.5	BN/WH	7462	Running Boards Disable Signal	I	—
11	0.5	BN/WH	9001	—	I	—
12	0.5	BN/WH	9000	—	I	—

9 - 9	—	—	—	Not Occupied	—	—
10	0.5	D-BU/VT	1134	Park Brake Switch Signal	III	—
11	0.35	L-GN/BN	306	Headlamp Switch Headlamps Off Signal Control	III	—
12	—	—	—	Not Occupied	—	—
13	0.35	D-BU/RD	1688	5V Reference	III	—
14	0.35	GY/L-GN	328	Interior Lamp Defeat Switch Signal	III	—
15	0.35	D-BU/GY	192	Front Fog Lamp Switch Signal	III	—
16	0.35	WH/VT	103	Headlamp Switch On Signal	III	—
17 - 18	—	—	—	Not Occupied	—	—
19	0.35	BK/L-GN	552	Sensor Low Reference	III	—
20	—	—	—	Not Occupied	—	—
21	0.35	GY	728	Security Indicator Control	III	—
22	0.35	L-GN/GY	13	Headlamp Switch Park Lamp Signal	III	—
23	0.5	VT/L-GN	7558	LED Ambient Lighting Control 2	III	—
24	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	III	—
25	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	III	—
26	0.35	D-BU/WH	3275	Remote Function Actuator Receive Signal	III	—

K9 Body Control Module X2



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

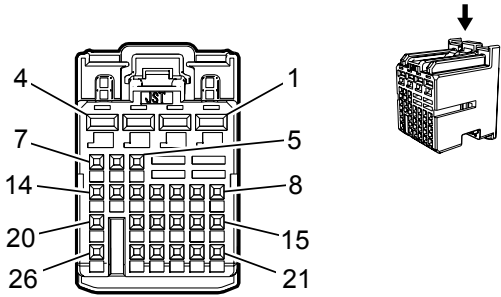
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A
II	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available

K9 Body Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/WH	2740	Battery Positive Voltage	I	—
2	0.75	BK	1850	Ground	I	—
3	0.5	RD/BN	2940	Battery Positive Voltage	I	—
4	0.75	RD/VT	4040	Battery Positive Voltage	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	GY	5697	Child Lockout Indicator Control	II	—
7	0.35	WH/L-GN	526	Stop Lamp Switch Signal	II	—
8	0.5	YE	6817	LED Backlight Dimming Control	II	—

9	0.35	YE/GY	44	Instrument Panel Lamp Dimmer Switch Signal	II	—
10	0.35	WH/D-BU	278	Ambient Light Sensor Signal	II	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.35	GY/RD	598	5V Reference	II	—
14	0.35	D-BU/VT	1788	Traction Control Switch Signal 1	II	—
15	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	II	—
16	0.35	GY	3273	Remote Function Actuator Low Reference	II	—
17	—	—	—	Not Occupied	—	—
18	0.5	GY	158	Cargo Lamp Switch Signal	II	—
19	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	II	—
20	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	II	—
21	0.5	L-GN/GY	6135	Local Interconnect Network Serial Data Bus 4	II	—
22 - 24	—	—	—	Not Occupied	—	—
25	0.35	GY/WH	3272	Remote Function Actuator Control	II	—
26	0.35	L-GN/WH	111	Hazard Switch Signal	II	—
27	0.35	YE/L-GN	3274	Remote Function Actuator Transmit Signal	II	—

K9 Body Control Module X4



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

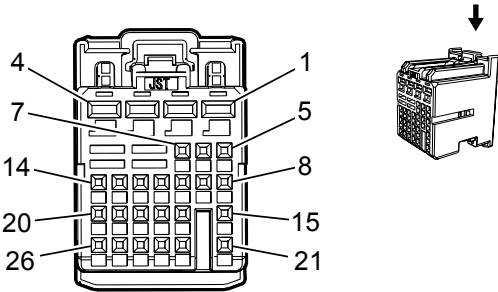
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A
II	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available

K9 Body Control Module X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE	712	Left Headlamp Low Beam Control	I	—
2	0.75	YE	312	Right Headlamp Low Beam Control	I	—
3	0.75	L-GN/VT	1315	Right Front Turn Signal Lamp Control	I	—
4	0.5	BN/L-GN	19	Right Rear Stop/Turn Lamp Control	I	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.75	GY/D-BU	7538	Left Front DRL Control	II	—
8 - 10	—	—	—	Not Occupied	—	—
11	0.5	VT/WH	5065	Stop Lamp Relay Coil Control	II	—

12	0.35	GY/VT	755	RAP Relay Coil Control	II	—
13	0.5	L-GN/YE	6846	Rear License Lamp Control	II	—
14	0.35	BN/GY	2268	Windshield Washer Relay Control	II	—
15	0.35	L-GN/VT	5199	Run/Crank Relay Coil Control	II	—
16	0.35	GY	91	Windshield Wiper Motor Relay Coil Control	II	—
17	0.5	BN/L-GN	196	Windshield Wiper Motor Park Switch Signal	II	—
18	0.35	WH/YE	5075	Current Sensor Signal	II	—
19	0.35	D-BU/YE	6844	ABS/TCS Hill Descent Control Switch Signal	II	—
20	0.75	RD/YE	2340	Battery Positive Voltage	II	—
21	0.35	D-BU/VT	5076	Current Sensor Control	II	—
22	0.35	VT/YE	5985	Accessory Wakeup Serial Data	II	—
23	0.5	WH/D-BU	5986	Serial Data Communication Enable	II	—
24	0.5	BN/L-GN	109	Hood Ajar Switch Signal	II	—
25	0.5	L-GN/YE	2081	Exhaust Brake Switch Control	II	—
26	0.75	BK/WH	451	Signal Ground	II	—

K9 Body Control Module X5



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

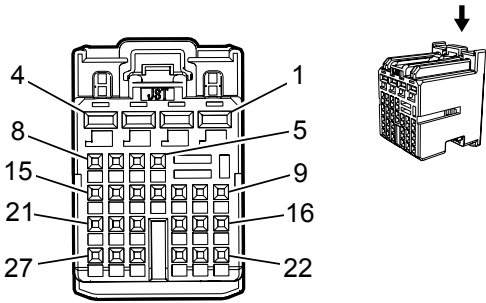
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A
II	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available

K9 Body Control Module X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/D-BU	18	Left Rear Stop/Turn Lamp Control	I	—
2	0.75	D-BU/WH	1314	Left Front Turn Signal Lamp Control	I	—
3	0.75	RD/L-GN	5140	Battery Positive Voltage	I	—
4	0.75	RD/WH	3440	Battery Positive Voltage	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	BK/VT	5077	Current Sensor Low Reference	II	—
7	0.75	D-BU/BN	7539	Right Front DRL Control	II	—
8	0.35	D-BU/WH	5186	Left Trailer Turn Signal Lamp Control	II	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

9	—	—	—	Not Occupied	—	—
10	0.5	BN	1317	Fog Lamp Relay Control	II	—
11	—	—	—	Not Occupied	—	—
12	0.35	WH/D-BU	6311	Cruise/ETC/TCC Brake Signal	II	—
13	—	—	—	Not Occupied	—	—
14	0.35	VT/BN	300	Run Ignition 3 Voltage	II	—
15	0.35	L-GN/WH	3438	Exhaust Brake Switch Signal	II	—
16	0.35	VT/YE	3267	Child Security Lock Relay Control	II	—
17	0.35	YE/GY	5187	Right Trailer Turn Signal Lamp Control	II	—
18	0.35	BN/VT	1969	Headlamp High Beam Relay Control	II	—
19	0.35	BN/WH	28	Horn Relay Control	II	—
20 - 21	—	—	—	Not Occupied	—	—
22	0.35	D-BU	45	Park Lamp Relay Control	II	—
23	0.35	YE	6812	Out of Park Signal	II	—
24	0.35	WH/VT	860	Front Windshield Wiper Switch High Signal	II	—
25	—	—	—	Not Occupied	—	—
26	0.35	D-BU/BN	38	Backup Lamp Relay Control	II	—

K9 Body Control Module X6



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

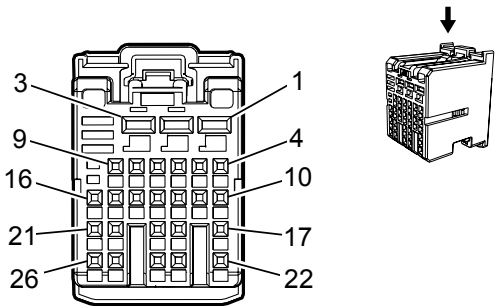
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	C	A
II	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A
III	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available

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	BN/YE	294	Door Lock Actuator Unlock Control	I	EXTENDED/CREW CAB
	0.75	BN/YE	294	Door Lock Actuator Unlock Control	II	REGULAR CAB
5	—	—	—	Not Occupied	—	—
6	0.35	D-BU/VT	1124	Door Lock Key Switch Unlock Signal	III	—
7 - 8	—	—	—	Not Occupied	—	—

9	0.5	L-GN/D-BU	6133	Local Interconnect Network Serial Data Bus 2	III	—
10	0.5	L-GN/YE	6134	Local Interconnect Network Serial Data Bus 3	III	—
11	—	—	—	Not Occupied	—	—
12	0.5	YE/BK	5356	Left Tail Lamp Outage Detection Signal	III	—
13 - 20	—	—	—	Not Occupied	—	—
21	0.35	WH/VT	3270	Driver Door Lock Motor Status Signal	III	—
22	0.5	VT/YE	5357	Right Tail Lamp Outage Detection Signal	III	—
23	—	—	—	Not Occupied	—	—
24	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	III	—
25	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	III	—
26	0.5	BN/WH	1429	Standing Lamp Relay Control	III	—
27	—	—	—	Not Occupied	—	—

K9 Body Control Module X7



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

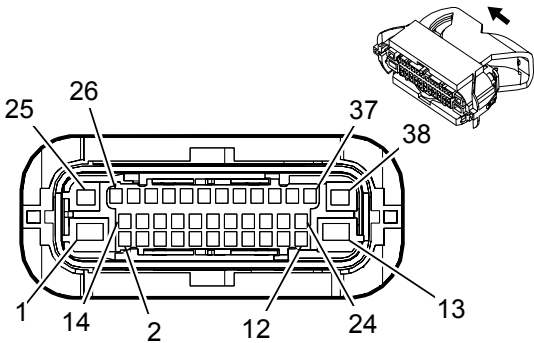
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A
II	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available

K9 Body Control Module X7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	157	Interior Lamp Control	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	WH/BN	6815	Inadvertent Power Control	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.35	YE/WH	816	Brake Transmission Shift Interlock Solenoid Control	II	—
7	—	—	—	Not Occupied	—	—
8	0.5	GY/L-GN	5996	Driver Outside Rear View Mirror Puddle Lamp Control	II	—
9	0.5	YE	6817	LED Backlight Dimming Control	II	—
10 - 11	—	—	—	Not Occupied	—	—

12	0.35	BN/WH	3269	Child Security Lock Motor Status Signal Left Rear	II	—
13	—	—	—	Not Occupied	—	—
14	0.35	GY	746	Right Front Door Ajar Switch Signal	II	—
15	0.35	YE/BN	3265	Child Security Lock Switch Signal	II	—
16	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	II	—
17	—	—	—	Not Occupied	—	—
18	0.35	GY/BK	3268	Child Security Lock Motor Status Signal Right Rear	II	—
19	0.35	GY	156	Courtesy Lamp Switch Signal	II	—
20	—	—	—	Not Occupied	—	—
21	0.35	YE/VT	244	Passenger Door Lock Switch Lock Control	II	—
22	0.35	WH/YE	7557	LED Ambient Lighting Control 1	II	—
23	0.5	L-GN	5060	Low Speed GMLAN Serial Data	II	—
24	0.35	BN/VT	245	Passenger Door Lock Switch Unlock Control	II	—
25	0.35	GY	745	Left Front Door Ajar Switch Signal	II	-A31
	0.35	L-GN	4512	Wireless Charging System Charge Indicator Control	II	K4C
26	—	—	—	Not Occupied	—	—

K17 Electronic Brake Control Module (Heavy Duty)



Connector Part Information

Harness Type: Chassis
OEM Connector: 33102987
Service Connector: 19329396
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	13575368	J-35616-35 (VT)	J-38125-557	1-968857-3	Lear 7	C	1
II	19119381	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
III	19119560	J-35616-40 (BU)	J-38125-556	1241408-1	Lear 28	B	G
IV	19329757	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

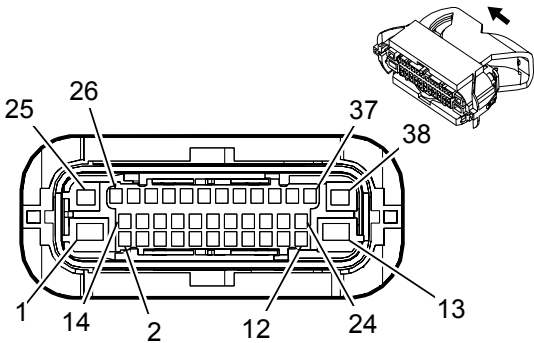
K17 Electronic Brake Control Module (Heavy Duty)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	5	RD/YE	442	Battery Positive Voltage	III	—
2	—	—	—	Not Occupied	—	—
3	0.5	GY/YE	7128	Wheel Speed Sensor Control Right Rear	II	—
4	0.5	VT	882	Wheel Speed Sensor Signal Right Rear	II	—
5	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	II	—
6	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—
7	—	—	—	Not Occupied	—	—

8	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
9	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
10	0.5	GY/BN	7065	Wheel Speed Sensor Control Right Front	II	—
11	0.5	YE	872	Wheel Speed Sensor Signal Right Front	II	—
12	—	—	—	Not Occupied	—	—
13	5	BK	2150	Ground	III	—
14 - 16	—	—	—	Not Occupied	—	—
17	0.5	L-GN/BN	2087	Combined Vehicle Inertial Sensor Supply Voltage	IV	—
18	0.5	L-GN/GY	333	Brake Fluid Level Sensor Signal	II	—
19	—	—	—	Not Occupied	—	—
20	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
21	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
22 - 24	—	—	—	Not Occupied	—	—
25	2.5	RD/VT	1640	Battery Positive Voltage	I	—
26 - 27	—	—	—	Not Occupied	—	—
28	0.5	WH/D-BU	5986	Serial Data Communication Enable	II	—
29	0.5	GY/BK	7127	Wheel Speed Sensor Control Left Rear	II	—
30	0.5	D-BU	884	Wheel Speed Sensor Signal Left Rear	II	—
31 - 32	—	—	—	Not Occupied	—	—

33	0.5	L-GN/GY	817	Vehicle Speed Signal	II	—
34	—	—	—	Not Occupied	—	—
35	0.5	GY/WH	7064	Wheel Speed Sensor Control Left Front	II	—
36	0.5	GY	830	Wheel Speed Sensor Signal Left Front	II	—
37	—	—	—	Not Occupied	—	—
38	2.5	BK	2150	Ground	I	—

K17 Electronic Brake Control Module (Light Duty)



Connector Part Information

Harness Type: 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	13575368	J-35616-35 (VT)	J-38125-557	1-968857-3	Lear 7	C	1
II	19119381	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
III	19119560	J-35616-40 (BU)	J-38125-556	1241408-1	Lear 28	B	G
IV	19329757	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

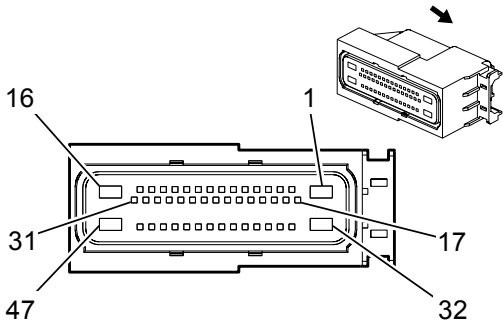
K17 Electronic Brake Control Module (Light Duty)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	5	RD/YE	442	Battery Positive Voltage	III	—
2	—	—	—	Not Occupied	—	—
3	0.5	GY/YE	7128	Wheel Speed Sensor Control Right Rear	II	—
4	0.5	VT	882	Wheel Speed Sensor Signal Right Rear	II	—
5	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	II	—
6	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—
7	—	—	—	Not Occupied	—	—

8	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
9	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
10	0.5	GY/BN	7065	Wheel Speed Sensor Control Right Front	II	—
11	0.5	YE	872	Wheel Speed Sensor Signal Right Front	II	—
12	—	—	—	Not Occupied	—	—
13	5	BK	2150	Ground	III	—
14 - 16	—	—	—	Not Occupied	—	—
17	0.5	L-GN/BN	2087	Combined Vehicle Inertial Sensor Supply Voltage	IV	—
18	0.5	L-GN/GY	333	Brake Fluid Level Sensor Signal	II	—
19	0.5	BN	6305	Brake Vacuum Switch Signal	II	—
20	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
21	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
22 - 23	—	—	—	Not Occupied	—	—
24	0.5	BK/YE	6032	Brake Vacuum Sensor Low Reference	II	—
25	2.5	RD/VT	1640	Battery Positive Voltage	I	—
26 - 27	—	—	—	Not Occupied	—	—
28	0.5	WH/D-BU	5986	Serial Data Communication Enable	II	—
29	0.5	GY/BK	7127	Wheel Speed Sensor Control Left Rear	II	—

30	0.5	D-BU	884	Wheel Speed Sensor Signal Left Rear	II	—
31	—	—	—	Not Occupied	—	—
32	0.5	YE/RD	6031	Brake Vacuum Sensor 5V Reference	II	—
33	0.5	L-GN/GY	817	Vehicle Speed Signal	II	—
34	0.5	YE/VT	6030	Brake Vacuum Sensor Signal	II	—
35	0.5	GY/WH	7064	Wheel Speed Sensor Control Left Front	II	—
36	0.5	GY	830	Wheel Speed Sensor Signal Left Front	II	—
37	—	—	—	Not Occupied	—	—
38	2.5	BK	2150	Ground	I	—

K19 Suspension Control Module



Connector Part Information

Harness Type: Chassis
OEM Connector: 15491306
Service Connector: 19168025
Description: 47-Way F 0.64, 6.3 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578883	J-35616-64B (LT BU)	J-38125-215A	SAITS-A03T-M064	Yazaki 14	9	9
II	13579754	J-35616-42 (RD)	J-38125-553	15476168	Delphi 5	F	3
III	13579754	J-35616-42 (RD)	J-38125-553	Not Available	Not Available	Not Available	Not Available
IV	13579755	J-35616-42 (RD)	J-38125-553	15476168	Delphi 5	F	3
V	13579766	J-35616-64B (LT BU)	J-38125-215A	SAITS-A03T-M064	Yazaki 14	9	9

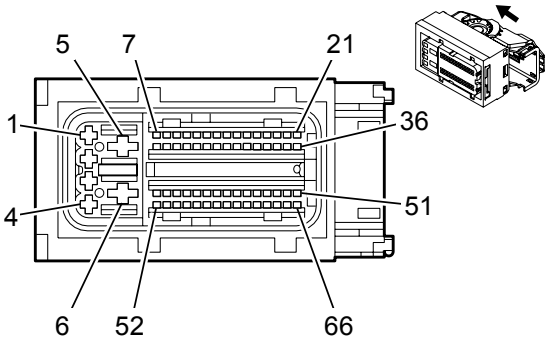
K19 Suspension Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	BK/L-GN	1209	Left Rear Strut Position Sensor Low Reference	I	—
3	0.5	YE/WH	1213	Right Front Strut Position Sensor Signal	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	BK/YE	1215	Right Rear Strut Position Sensor Low Reference	I	—
6	0.5	BN/WH	1207	Left Front Strut Position Sensor Signal	I	—
7 - 11	—	—	—	Not Occupied	—	—

12	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
13	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
14	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
15	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
16	0.75	WH/D-BU	5986	Serial Data Communication Enable	III	—
17	0.5	L-GN/WH	1210	Left Rear Strut Position Sensor Signal	I	—
18	0.5	BK/GY	1212	Right Front Strut Position Sensor Low Reference	I	—
19	—	—	—	Not Occupied	—	—
20	0.5	L-GN/GY	1216	Right Rear Strut Position Sensor Signal	I	—
21	0.5	BK/D-BU	1206	Left Front Strut Position Sensor Low Reference	I	—
22 - 23	—	—	—	Not Occupied	—	—
24	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
25	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
26	—	—	—	Not Occupied	—	—
27	0.75	BN	1009	Right Front Strut Motor Decrease Damping Control	V	—
28	0.75	WH/BK	1006	Right Front Strut Motor Increase Damping Control	V	—
29	—	—	—	Not Occupied	—	—
30	0.75	WH/L-GN	1005	Left Front Strut Motor Decrease Damping Control	V	—

31	0.75	WH/GY	1448	Left Front Strut Motor Increase Damping Control	V	—
32	3	RD/L-GN	2440	Battery Positive Voltage	II	—
33	0.5	YE/RD	1208	Left Rear Strut Position Sensor 5V Reference	I	—
34	0.5	BN/RD	1211	Right Front Strut Position Sensor 5V Reference	I	—
35	0.5	L-GN/RD	1214	Right Rear Strut Position Sensor 5V Reference	I	—
36	0.5	D-BU/RD	1205	Left Front Strut Position Sensor 5V Reference	I	—
37 - 38	—	—	—	Not Occupied	—	—
39	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
40	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
41	—	—	—	Not Occupied	—	—
42	0.75	WH/BK	1013	Left Rear Strut Motor Decrease Damping Control	V	—
43	0.75	BN/VT	1010	Left Rear Strut Motor Increase Damping Control	V	—
44	—	—	—	Not Occupied	—	—
45	0.75	VT	1017	Right Rear Strut Motor Decrease Damping Control	V	—
46	0.75	YE	1014	Right Rear Strut Motor Increase Damping Control	V	—
47	4	BK	1750	Ground	IV	—

K20 Engine Control Module X1 (L5P)



Connector Part Information

Harness Type: Engine
OEM Connector: 13647470
Service Connector: 19181736
Description: 66-Way F 0.64, 2.8, 6.3 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	13584448	J-35616-64B (LT BU)	J-38125-12A	1719532-5	Lear 7	J	J
II	13584528	J-35616-42 (RD)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	13584529	J-35616-42 (RD)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19353294	J-35616-4A (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	19354085	J-35616-4A (PU)	J-38125-36	4-964286-1	Lear 16	E	1

K20 Engine Control Module X1 (L5P)

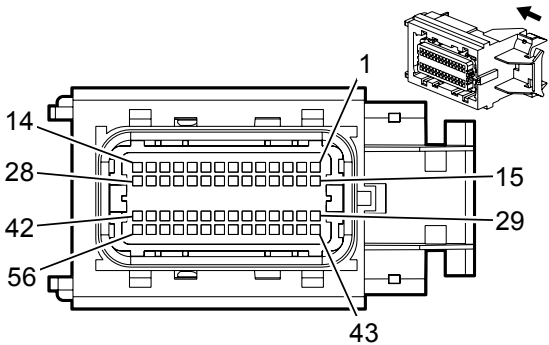
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	V	—
2	0.5	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	IV	—
3	—	—	—	Not Occupied	—	—
4	0.5	RD/BN	440	Battery Positive Voltage	IV	—
5	2.5	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	II	—
6	4	D-BU/WH	451	Signal Ground	III	—

7	0.5	VT/YE	5985	Accessory Wakeup Serial Data	I	—
8	0.5	WH/GY	1786	Transmission Park/Neutral Signal 1	I	—
9	0.5	GY/BK	1694	Four Wheel Drive Low Signal	I	—
10	0.5	L-GN/WH	492	Mass Air Flow Sensor Signal	I	—
11	0.5	D-BU/GY	636	Outside Ambient Air Temperature Sensor Signal	I	—
12	—	—	—	Not Occupied	—	—
13	0.5	WH/RD	1164	Accelerator Pedal Position 5V Reference 1	I	—
14	0.5	BN/RD	1274	Accelerator Pedal Position 5V Reference 2	I	—
15	0.5	L-GN/WH	1162	Accelerator Pedal Position Signal 2	I	—
16	0.5	BK/VT	1272	Accelerator Pedal Position Low Reference 2	I	—
17 - 20	—	—	—	Not Occupied	—	—
21	0.5	YE	2928	Fuel Metering Valve High Control	I	—
22	—	—	—	Not Occupied	—	—
23	0.5	YE/WH	1695	Four Wheel Drive Wheel Lock Indicator Control	I	—
24	0.5	WH/D-BU	6311	Cruise/ETC/TCC Brake Signal	I	—
25	0.5	BN/GY	4008	Humidity Sensor Signal	I	—
26	0.5	BK/D-BU	61	Outside Ambient Temperature Sensor Low Reference	I	—
27	0.5	BK/D-BU	1271	Accelerator Pedal Position Low Reference 1	I	—

28	0.5	YE/WH	1161	Accelerator Pedal Position Signal 1	I	—
29 - 32	—	—	—	Not Occupied	—	—
33	0.5	BN/WH	419	Check Engine Indicator Control	I	—
34	0.5	L-GN/BN	507	Wait To Start Indicator Control	I	—
35	0.5	WH/GY	459	A/C Compressor Clutch Relay Control	I	—
36	0.5	BN/BK	2929	Fuel Metering Valve Low Control	I	—
37 - 38	—	—	—	Not Occupied	—	—
39	0.5	WH	4499	High Speed GMLAN Serial Data (-) 7	I	—
40	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
41 - 42	—	—	—	Not Occupied	—	—
43	0.5	BK/BN	5360	Brake Apply Sensor Low Reference	I	—
44	0.5	WH	5359	Brake Apply Sensor Control	I	—
45	0.5	WH/D-BU	6289	Induction Air Temperature Sensor Signal	I	—
46	0.5	BN/RD	2700	A/C Pressure Sensor 5V Reference	I	—
47	0.5	L-GN	380	A/C Refrigerant Pressure Sensor Signal	I	—
48	0.5	BK/BN	5514	A/C Refrigerant Pressure Sensor Low Reference	I	—
49	0.5	WH/BN	1089	Coolant Pump Motor Relay Control	I	—

50	0.5	WH/BK	2366	Cooling Fan Control Relay Speed Signal	I	—
51	0.5	YE	5991	Powertrain Relay Coil Control	I	—
52 - 53	—	—	—	Not Occupied	—	—
54	0.5	D-BU/BN	4498	High Speed GMLAN Serial Data (+) 7	I	—
55	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
56 - 58	—	—	—	Not Occupied	—	—
59	0.5	D-BU/YE	5361	Brake Apply Sensor Signal	I	—
60	0.5	BK/VT	2760	Intake Air Temperature Sensor Low Reference	I	—
61 - 63	—	—	—	Not Occupied	—	—
64	0.5	YE/D-BU	1465	Secondary Fuel Pump Relay Control	I	—
65	0.5	YE/BK	625	Starter Enable Relay Control	I	—
66	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	I	—

K20 Engine Control Module X1 (L96)



Connector Part Information

Harness Type: Engine
OEM Connector: 13820449
Service Connector: 19329930
Description: 56-Way F 0.64 I Series, Sealed (BK with BU Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

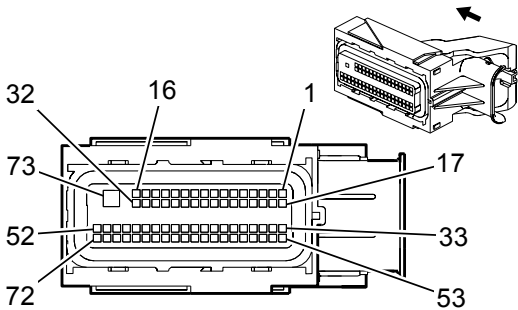
K20 Engine Control Module X1 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	L-GN/WH	1162	Accelerator Pedal Position Signal 2	I	—
3	0.5	L-GN/WH	492	Mass Air Flow Sensor Signal	I	—
4	0.5	GY/BK	1694	Four Wheel Drive Low Signal	I	—
5	0.5	YE/WH	1695	Four Wheel Drive Wheel Lock Indicator Control	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.5	GY/D-BU	7564	Humidity Sensor Signal	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	YE/WH	1161	Accelerator Pedal Position Signal 1	I	—

11	0.5	YE/WH	3200	Throttle Inlet Absolute Pressure Sensor Signal	I	—
12	0.5	L-GN	380	A/C Refrigerant Pressure Sensor Signal	I	—
13	0.5	BK/BN	5514	A/C Refrigerant Pressure Sensor Low Reference	I	—
14	0.5	YE/D-BU	1465	Secondary Fuel Pump Relay Control	I	—
15	—	—	—	Not Occupied	—	—
16	0.5	BN/RD	1274	Accelerator Pedal Position 5V Reference 2	I	—
17	—	—	—	Not Occupied	—	—
18	0.5	VT/YE	5985	Accessory Wakeup Serial Data	I	—
19	—	—	—	Not Occupied	—	—
20	0.5	RD/BN	440	Battery Positive Voltage	I	—
21 - 23	—	—	—	Not Occupied	—	—
24	0.5	WH/RD	1164	Accelerator Pedal Position 5V Reference 1	I	—
25	0.5	WH/RD	3201	Throttle Inlet Absolute Pressure Sensor 5V Reference	I	—
26	0.5	BN/RD	2700	A/C Pressure Sensor 5V Reference	I	—
27	0.5	YE/BK	625	Starter Enable Relay Control	I	—
28	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	I	—
29	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
30	0.5	BK/VT	1272	Accelerator Pedal Position Low Reference 2	I	—

31	0.5	BK/VT	2760	Intake Air Temperature Sensor Low Reference	I	—
32	—	—	—	Not Occupied	—	—
33	0.5	WH/D-BU	6311	Cruise/ETC/TCC Brake Signal	I	—
34	0.5	WH/GY	1786	Transmission Park/Neutral Signal 1	I	—
35 - 37	—	—	—	Not Occupied	—	—
38	0.5	BK/D-BU	1271	Accelerator Pedal Position Low Reference 1	I	—
39	—	—	—	Not Occupied	—	—
40	0.5	YE	5991	Powertrain Relay Coil Control	I	—
41 - 42	—	—	—	Not Occupied	—	—
43	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
44	—	—	—	Not Occupied	—	—
45	0.5	WH/D-BU	6289	Induction Air Temperature Sensor Signal	I	—
46	—	—	—	Not Occupied	—	—
47	0.5	BN	25	Charge Indicator Control	I	—
48 - 51	—	—	—	Not Occupied	—	—
52	0.5	BN/WH	419	Check Engine Indicator Control	I	—
53	0.5	WH/GY	459	A/C Compressor Clutch Relay Control	I	—
54 - 55	—	—	—	Not Occupied	—	—
56	0.5	WH	1310	EVAP Canister Vent Solenoid Control	I	—

K20 Engine Control Module X1 (LV3/L83/L86/L8B)



Connector Part Information

Harness Type: Engine
OEM Connector: 13820453
Service Connector: 19260919
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with BU Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available
II	13579770	J-35616-35 (VT)	J-38125-11A	7116-4152-02	Yazaki 9	A	5

K20 Engine Control Module X1 (LV3/L83/L86/L8B)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	D-BU/WH	7446	Fuel Line Pressure Sensor Signal	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	YE/WH	3200	Throttle Inlet Absolute Pressure Sensor Signal	I	—
5	0.5	WH/RD	3201	Throttle Inlet Absolute Pressure Sensor 5V Reference	I	—
6	0.5	L-GN	380	A/C Refrigerant Pressure Sensor Signal	I	—
7	0.5	YE	5530	Hood Open Switch Signal	I	—
8	0.5	BK/YE	7447	Fuel Line Pressure Sensor Low Reference	I	—

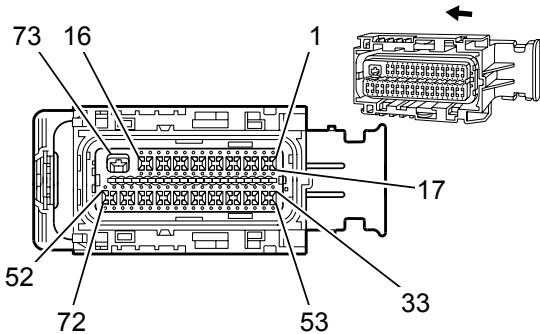
9	0.5	D-BU/WH	890	Fuel Tank Pressure Sensor Signal	I	—
10	0.5	YE/RD	2709	Fuel Tank Pressure Sensor 5V Reference	I	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.5	D-BU/GY	636	Outside Ambient Air Temperature Sensor Signal	I	—
14	0.5	WH/RD	1164	Accelerator Pedal Position 5V Reference 1	I	—
15	0.5	YE/WH	1161	Accelerator Pedal Position Signal 1	I	—
16 - 20	—	—	—	Not Occupied	—	—
21	0.5	BN/RD	2700	A/C Pressure Sensor 5V Reference	I	—
22	0.5	BK/BN	5514	A/C Refrigerant Pressure Sensor Low Reference	I	—
23	—	—	—	Not Occupied	—	—
24	0.5	BN/RD	7445	Fuel Line Pressure Sensor 5V Reference	I	—
25	0.5	D-BU/VT	1589	Primary Fuel Level Sensor Signal	I	—
26	0.5	BK/L-GN	6281	Fuel Level Sensor Low Reference	I	—
27 - 29	—	—	—	Not Occupied	—	—
30	0.5	BK/D-BU	1271	Accelerator Pedal Position Low Reference 1	I	—
31	—	—	—	Not Occupied	—	—
32	0.5	WH/GY	459	A/C Compressor Clutch Relay Control	I	—
33	0.5	BN/RD	1274	Accelerator Pedal Position 5V Reference 2	I	—
34	0.5	L-GN/WH	1162	Accelerator Pedal Position Signal 2	I	—

35	—	—	—	Not Occupied	—	—
36	0.5	D-BU/BK	7493	High Speed GMLAN Serial Data (+)3	I	—
37	0.5	WH	7494	High Speed GMLAN Serial Data (-)3	I	—
38	0.5	WH	1579	Fuel Temperature/Composition Signal	I	—
39	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
40	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
41	0.5	D-BU/WH	2918	Fuel Rail Pressure Sensor Signal	I	—
42 - 43	—	—	—	Not Occupied	—	—
44	0.5	GY	5660	Fuel Pump Controller Data Out Signal	I	—
45	—	—	—	Not Occupied	—	—
46	0.5	BN/WH	419	Check Engine Indicator Control	I	—
47	0.5	GY/RD	6109	Clutch Apply Sensor 5V Reference	I	M2P/MXW
	0.5	WH	5359	Brake Apply Sensor Control	I	MYC
48	0.5	YE	6111	Clutch Apply Sensor Signal	I	M2P/MXW
	0.5	D-BU/YE	5361	Brake Apply Sensor Signal	I	MYC
49 - 50	—	—	—	Not Occupied	—	—
51	0.5	VT/L-GN	439	Run/Crank Ignition 1 Voltage	I	—
52	0.5	RD/BN	440	Battery Positive Voltage	I	—

53	0.5	BK/VT	1272	Accelerator Pedal Position Low Reference 2	I	—
54	0.5	L-GN/VT	4621	Local Interconnect Network Serial Data Bus 21	I	—
55 - 56	—	—	—	Not Occupied	—	—
57	0.5	WH/D-BU	6311	Cruise/ETC/TCC Brake Signal	I	—
58	—	—	—	Not Occupied	—	—
59	0.5	BN/YE	473	High Speed Cooling Fan Relay Control	I	—
60	0.5	YE/WH	1695	Four Wheel Drive Wheel Lock Indicator Control	I	—
61	0.5	GY/BK	1694	Four Wheel Drive Low Signal	I	—
62	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—
63	0.5	YE/BK	625	Starter Enable Relay Control	I	—
64 - 65	—	—	—	Not Occupied	—	—
66	0.5	WH	1310	EVAP Canister Vent Solenoid Control	I	—
67	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—
68	0.5	BK/GY	6110	Clutch Apply Sensor Low Reference	I	M2P/MXW
	0.5	BK/BN	5360	Brake Apply Sensor Low Reference	I	MYC
69	—	—	—	Not Occupied	—	—
70	0.5	VT/YE	5985	Accessory Wakeup Serial Data	I	—
71	—	—	—	Not Occupied	—	—
72	0.5	YE	5991	Powertrain Relay Coil Control	I	—

73	2.5	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	II	—

K20 Engine Control Module X2 (L83 with MYC except NQH/NQG)



Connector Part Information

Harness Type: Engine
OEM Connector: 33157043
Service Connector: 19301191
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with BK Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575812	J-35616-64B (LT BU)	J-38125-213	33467-0003	Delphi 23	J	J
II	13579770	J-35616-35 (VT)	J-38125-11A	7116-4152-02	Yazaki 9	A	5

K20 Engine Control Module X2 (L83 with MYC except NQH/NQG)

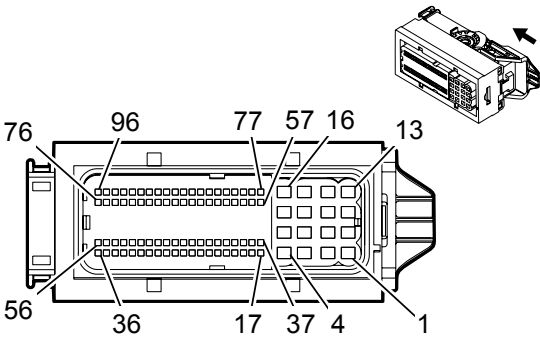
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	BK/L-GN	2919	Fuel Rail Pressure Sensor Low Reference	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	GY/BK	3096	Output Speed (Digital) Sensor 5V Reference	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.5	L-GN	3098	Output Speed (Digital) Signal	I	—
	0.5	BN/WH	6354	Output Speed High (Replicated TOS) Input Signal	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	VT/GY	3110	Heated Oxygen Sensor High Signal Bank 1 Sensor 1	I	—
11	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	I	—

11	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	I	—
12	0.5	VT/D-BU	3120	Heated Oxygen Sensor High Signal Bank 1 Sensor 2	I	—
13	0.5	VT/L-GN	3220	Heated Oxygen Sensor High Signal Bank 2 Sensor 2	I	—
14	—	—	—	Not Occupied	—	—
15	0.5	GY/D-BU	7564	Humidity Sensor Signal	I	—
16	0.5	BN/WH	582	Throttle Actuator Control Close	I	—
17	—	—	—	Not Occupied	—	—
18	0.5	BN/RD	2917	Fuel Rail Pressure Sensor 5V Reference	I	—
19	0.5	D-BU/WH	2918	Fuel Rail Pressure Sensor Signal	I	—
20	—	—	—	Not Occupied	—	—
21	0.5	WH/BK	3097	Output Speed (Digital) Sensor Low Reference	I	—
22	—	—	—	Not Occupied	—	—
23	0.5	L-GN/WH	5007	Reverse Switch Signal	I	—
24 - 25	—	—	—	Not Occupied	—	—
26	0.5	WH/BK	3111	Heated Oxygen Sensor Low Signal Bank 1 Sensor 1	I	—
27	0.5	YE/WH	3211	Heated Oxygen Sensor Low Signal Bank 2 Sensor 1	I	—
28	0.5	WH/YE	3121	Heated Oxygen Sensor Low Signal Bank 1 Sensor 2	I	—
29	0.5	YE/D-BU	3221	Heated Oxygen Sensor Low Signal Bank 2 Sensor 2	I	—
30 - 31	—	—	—	Not Occupied	—	—

32	0.5	YE	581	Throttle Actuator Control Open	I	—
33	—	—	—	Not Occupied	—	—
34	0.5	BN/RD	2701	Throttle Position Sensor 5V Reference	I	—
35	—	—	—	Not Occupied	—	—
36	0.75	VT/GY	496	Knock Sensor Signal 1	I	—
37	0.75	WH/GY	1876	Knock Sensor Signal 2	I	—
38 - 39	—	—	—	Not Occupied	—	—
40	0.5	VT/D-BU	6091	Crankshaft Position Sensor Replicated Signal	I	—
41	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1	I	—
42	0.5	GY/WH	3122	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2	I	—
43	0.5	L-GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—
44	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	—
45 - 48	—	—	—	Not Occupied	—	—
49	0.5	WH/D-BU	6289	Induction Air Temperature Sensor Signal	I	—
50	—	—	—	Not Occupied	—	—
51	0.5	L-GN/D-BU	428	EVAP Canister Purge Solenoid Control	I	—
52	0.5	L-GN/WH	492	Mass Air Flow Sensor Signal	I	—
53	0.5	BN	25	Charge Indicator Control	I	—
54	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	I	—

55	0.5	GY	23	Generator Field Duty Cycle Signal	I	—
56	0.75	BK/YE	1716	Knock Sensor Low Reference 1	I	—
57	0.75	BK/GY	2303	Knock Sensor Low Reference 2	I	—
58	0.5	WH/GY	1786	Transmission Park/Neutral Signal 1	I	—
59	0.5	D-BU	179	Oil Pump Command Signal	I	—
60	0.5	BN/L-GN	1174	Oil Level Switch Signal	I	—
61	0.5	L-GN/YE	3212	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1	I	—
62	0.5	WH/BN	3223	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2	I	—
63	0.5	BK/L-GN	469	Manifold Absolute Pressure Sensor Low Reference	I	—
64	—	—	—	Not Occupied	—	—
65	0.5	BK/D-BU	61	Outside Ambient Temperature Sensor Low Reference	I	—
66 - 68	—	—	—	Not Occupied	—	—
69	0.5	WH/YE	3202	Throttle Inlet Absolute Pressure Sensor Low Reference	I	—
70	0.5	D-BU/WH	3630	Throttle Position Sensor (SENT1) Signal	I	—
71 - 72	—	—	—	Not Occupied	—	—
73	2.5	BK/WH	451	Signal Ground	II	—

K20 Engine Control Module X2 (L5P)



Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 33237908
Service Connector: 13586128
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	13584530	J-35616-4A (PU)	J-38125-36	4-964286-1	Lear 16	E	1

K20 Engine Control Module X2 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT/GN	4806	Direct Fuel Injector (DFI) High Voltage Control Cylinder 6	II	L5P
2	0.75	YE/GY	4807	Direct Fuel Injector (DFI) High Voltage Control Cylinder 7	II	L5P
3	0.75	GY/BU	4804	Direct Fuel Injector (DFI) High Voltage Control Cylinder 4	II	L5P
4	0.75	BN	4801	Direct Fuel Injector (DFI) High Voltage Control Cylinder 1	II	L5P
5	0.75	VT/GY	4906	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6	II	L5P
6	0.75	WH/YE	4907	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 7	II	L5P
7	0.75	BU/WH	4904	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4	II	L5P

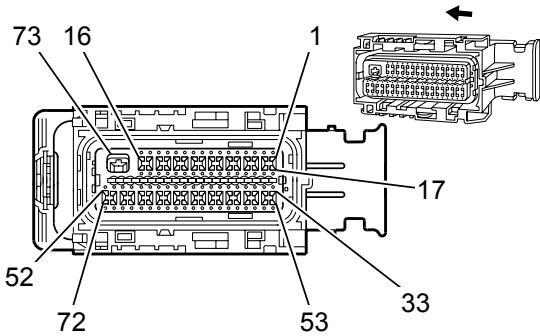
8	0.75	BN/WH	4901	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1	II	L5P
9	0.75	GN/GY	4903	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3	II	L5P
10	0.75	GY/WH	4908	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 8	II	L5P
11	0.75	GN/WH	4905	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5	II	L5P
12	0.75	BU/GY	4902	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2	II	L5P
13	0.75	GN	4803	Direct Fuel Injector (DFI) High Voltage Control Cylinder 3	II	L5P
14	0.75	GY	4808	Direct Fuel Injector (DFI) High Voltage Control Cylinder 8	II	L5P
15	0.75	WH/GN	4805	Direct Fuel Injector (DFI) High Voltage Control Cylinder 5	II	L5P
16	0.75	BU	4802	Direct Fuel Injector (DFI) High Voltage Control Cylinder 2	II	L5P
17	0.5	BK/VT	2755	Oil Pressure Sensor Low Reference	I	L5P
18	0.5	YE/BN	331	Oil Pressure Sensor Signal	I	L5P
19	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	I	L5P
20	0.5	BU/RD	2702	Exhaust Gas Recirculation 5V Reference 2	I	L5P
21	0.5	BN/WH	5763	Exhaust Gas Recirculation Valve Sensor Signal	I	L5P
22	0.5	BK/BN	2753	Exhaust Gas Recirculation Sensor Low Reference	I	L5P
23	—	—	—	Not Occupied	—	—
24	0.5	BN/YE	2161	Fuel Rail Pressure Sensor 2 Signal	I	L5P

25	—	—	—	Not Occupied	—	—
26	0.5	BN	7348	Induction Air Temperature Sensor 2 Signal	I	L5P
27 - 29	—	—	—	Not Occupied	—	—
30	0.5	BU	410	Engine Coolant Temperature Sensor Signal	I	L5P
31	0.5	BN	25	Charge Indicator Control	I	L5P
32 - 36	—	—	—	Not Occupied	—	—
37	0.5	BK/GN	5301	Camshaft Position Intake Sensor Low Reference 1	I	L5P
38	0.5	YE/VT	5275	Camshaft Position Intake Sensor 1	I	L5P
39	0.5	GY/BU	5300	Camshaft Position Intake Sensor Control 1	I	L5P
40	0.5	VT/RD	3652	EGR Cooler Bypass Position Sensor 5V Reference	I	L5P
41	0.5	GN/GY	3654	EGR Cooler Bypass Position Sensor Signal	I	L5P
42	0.5	BK/BU	3653	EGR Cooler Bypass Position Sensor Low Reference	I	L5P
43	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	I	L5P
44	0.5	BU/WH	3630	Throttle Position Sensor (SENT1) Signal	I	L5P
45	0.5	BN/RD	2701	Throttle Position Sensor 5V Reference	I	L5P
46 - 49	—	—	—	Not Occupied	—	—
50	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	I	L5P
51	0.5	GY	23	Generator Field Duty Cycle Signal	I	L5P

52 - 56	—	—	—	Not Occupied	—	—
57	0.5	BK/GN	2919	Fuel Rail Pressure Sensor Low Reference	I	L5P
58	0.5	BU/WH	2918	Fuel Rail Pressure Sensor Signal	I	L5P
59	0.5	BN/RD	2917	Fuel Rail Pressure Sensor 5V Reference	I	L5P
60	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	L5P
61	0.5	GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	L5P
62	0.5	BK/GN	469	Manifold Absolute Pressure Sensor Low Reference	I	L5P
63 - 68	—	—	—	Not Occupied	—	—
69	0.5	BN/BU	2926	Hydrocarbon Injector High Control	I	L5P
70	—	—	—	Not Occupied	—	—
71	0.5	VT/BU	6091	Crankshaft Position Sensor Replicated Signal	I	L5P
72	0.5	VT/BN	2927	Hydrocarbon Injector Low Control	I	L5P
73	—	—	—	Not Occupied	—	—
74	0.5	YE	581	Throttle Actuator Control Open	I	L5P
75	0.5	BN/WH	582	Throttle Actuator Control Close	I	L5P
76	0.75	BK/YE	2834	Fuel Rail Pressure Solenoid Low Reference	I	L5P
77 - 79	—	—	—	Not Occupied	—	—
80	0.5	BN/RD	7445	Fuel Line Pressure Sensor 5V Reference	I	L5P

81	0.5	BU/WH	7446	Fuel Line Pressure Sensor Signal	I	L5P
82	0.5	BK/YE	7447	Fuel Line Pressure Sensor Low Reference	I	L5P
83	—	—	—	Not Occupied	—	—
84	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	I	L5P
85	0.5	GN	6271	Crankshaft 60X Sensor Signal	I	L5P
86	0.5	VT/BU	6270	Crankshaft 60X Sensor 5V Reference	I	L5P
87	0.5	BN/GN	1174	Oil Level Switch Signal	I	L5P
88 - 90	—	—	—	Not Occupied	—	—
91	0.5	BU/GN	7071	Heater Fuel Control	I	L5P
92	0.5	BN/VT	3656	EGR Cooler Bypass Motor Close Control	I	L5P
93	0.5	YE/GN	3655	EGR Cooler Bypass Motor Open Control	I	L5P
94	0.5	VT/BK	5746	Exhaust Gas Recirculation Valve Motor Low Signal	I	L5P
95	0.5	WH/VT	5764	Exhaust Gas Recirculation Valve Motor High Signal	I	L5P
96	0.75	BU/WH	2530	Fuel Rail Pressure Solenoid Control	I	L5P

K20 Engine Control Module X2 (L96)



Connector Part Information

Harness Type: Engine
OEM Connector: 33152986
Service Connector: 19301191
Description: 73-Way F 0.64, 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	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available
II	13579770	J-35616-35 (VT)	J-38125-11A	7116-4152-02	Yazaki 9	A	5

K20 Engine Control Module X2 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU/VT	2121	Ignition Control 1	I	—
2	0.5	L-GN/YE	1744	Fuel Injector Control 1	I	—
3	0.5	BN/GY	878	Fuel Injector Control 8	I	—
4	0.5	BN/VT	877	Fuel Injector Control 7	I	—
5	0.5	YE/WH	1745	Fuel Injector Control 2	I	—
6	0.5	BN/D-BU	846	Fuel Injector Control 6	I	—
7	0.5	BN/L-GN	845	Fuel Injector Control 5	I	—

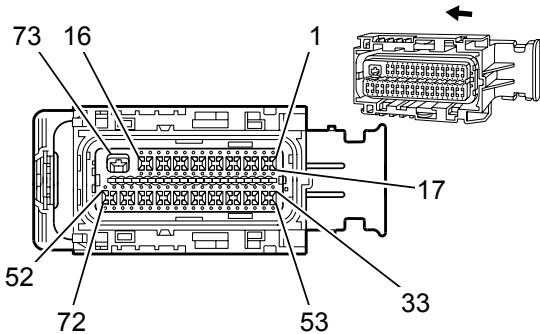
10/25/2016 - VERSION 1.02017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION859 / 1254

8	0.5	BN/YE	844	Fuel Injector Control 4	I	—
9	0.5	BN/VT	1746	Fuel Injector Control 3	I	—
10	—	—	—	Not Occupied	—	—
11	0.5	VT/BN	5284	Camshaft Phaser Intake Solenoid 1	I	—
12 - 14	—	—	—	Not Occupied	—	—
15	0.5	YE	581	Throttle Actuator Control Open	I	—
16	0.5	BN/WH	582	Throttle Actuator Control Close	I	—
17	0.5	VT/WH	2128	Ignition Control 8	I	—
18	0.5	YE/D-BU	2124	Ignition Control 4	I	—
19	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	I	—
20	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	I	—
21 - 23	—	—	—	Not Occupied	—	—
24	0.5	BK/L-GN	5301	Camshaft Position Intake Sensor Low Reference 1	I	—
25	0.5	BK/VT	2755	Oil Pressure Sensor Low Reference	I	—
26 - 27	—	—	—	Not Occupied	—	—
28	0.75	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	I	—
29	0.5	BK/BN	6753	Cam Phaser W Low Reference	I	—
30 - 32	—	—	—	Not Occupied	—	—
33	0.5	L-GN/GY	2127	Ignition Control 7	I	—

34	0.5	D-BU/GY	2125	Ignition Control 5	I	—
35	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	I	—
36	0.5	VT/D-BU	6270	Crankshaft 60X Sensor 5V Reference	I	—
37 - 39	—	—	—	Not Occupied	—	—
40	0.5	GY/D-BU	5300	Camshaft Position Intake Sensor Control 1	I	—
41	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	I	—
42	—	—	—	Not Occupied	—	—
43	0.5	BN/YE	2701	Throttle Position Sensor 5V Reference	I	—
44	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	I	—
45	0.5	D-BU/WH	3630	Throttle Position Sensor (SENT1) Signal	I	—
46	—	—	—	Not Occupied	—	—
47	0.5	WH/BK	3111	Heated Oxygen Sensor Low Signal Bank 1 Sensor 1	I	—
48	0.5	YE/WH	3211	Heated Oxygen Sensor Low Signal Bank 2 Sensor 1	I	—
49	0.75	BK/YE	1716	Knock Sensor Low Reference 1	I	—
50	0.75	BK/GY	2303	Knock Sensor Low Reference 2	I	—
51	—	—	—	Not Occupied	—	—
52	0.5	L-GN/YE	3212	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1	I	—
53	0.5	D-BU/WH	2122	Ignition Control 2	I	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION						

54	0.5	BN/D-BU	2126	Ignition Control 6	I	—
55	0.5	L-GN/D-BU	2123	Ignition Control 3	I	—
56	0.5	L-GN	6271	Crankshaft 60X Sensor Signal	I	—
57 - 59	—	—	—	Not Occupied	—	—
60	0.5	YE/VT	5275	Camshaft Position Intake Sensor 1	I	—
61	0.5	YE/BN	331	Oil Pressure Sensor Signal	I	—
62 - 66	—	—	—	Not Occupied	—	—
67	0.5	VT/GY	3110	Heated Oxygen Sensor High Signal Bank 1 Sensor 1	I	—
68	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	I	—
69	0.75	VT/GY	496	Knock Sensor Signal 1	I	—
70	0.75	WH/GY	1876	Knock Sensor Signal 2	I	—
71	—	—	—	Not Occupied	—	—
72	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1	I	—
73	2.5	BK/WH	451	Signal Ground	II	—

K20 Engine Control Module X2 (LV3-(NQG/NQH))



Connector Part Information

Harness Type: Engine
OEM Connector: 33264057
Service Connector: Service by Harness - See Part Catalog
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with BK Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available
II	13579770	J-35616-35 (VT)	J-38125-11A	7116-4152-02	Yazaki 9	A	5

K20 Engine Control Module X2 (LV3-(NQG/NQH))

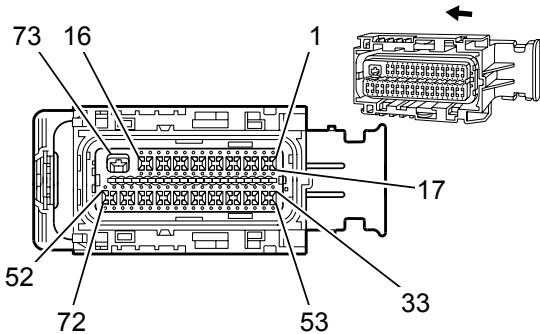
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	BK/L-GN	2919	Fuel Rail Pressure Sensor Low Reference	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	GY/BK	3096	Output Speed (Digital) Sensor 5V Reference	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.5	L-GN	3098	Output Speed (Digital) Signal	I	M2P/MXW
	0.5	BN/WH	6354	Output Speed High (Replicated TOS) Input Signal	I	-NQG/NQH
9	—	—	—	Not Occupied	—	—
10	0.5	VT/GY	3110	Heated Oxygen Sensor High Signal Bank 1 Sensor 1	I	—
11	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	I	—

11	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	I	—
12	0.5	VT/D-BU	3120	Heated Oxygen Sensor High Signal Bank 1 Sensor 2	I	—
13	0.5	VT/L-GN	3220	Heated Oxygen Sensor High Signal Bank 2 Sensor 2	I	—
14	—	—	—	Not Occupied	—	—
15	0.5	GY/D-BU	7564	Humidity Sensor Signal	I	—
16	0.5	BN/WH	582	Throttle Actuator Control Close	I	—
17	—	—	—	Not Occupied	—	—
18	0.5	BN/RD	2917	Fuel Rail Pressure Sensor 5V Reference	I	—
19 - 20	—	—	—	Not Occupied	—	—
21	0.5	WH/BK	3097	Output Speed (Digital) Sensor Low Reference	I	—
22	—	—	—	Not Occupied	—	—
23	0.5	L-GN/WH	5007	Reverse Switch Signal	I	—
24 - 25	—	—	—	Not Occupied	—	—
26	0.5	WH/BK	3111	Heated Oxygen Sensor Low Signal Bank 1 Sensor 1	I	—
27	0.5	YE/WH	3211	Heated Oxygen Sensor Low Signal Bank 2 Sensor 1	I	—
28	0.5	WH/YE	3121	Heated Oxygen Sensor Low Signal Bank 1 Sensor 2	I	—
29	0.5	YE/D-BU	3221	Heated Oxygen Sensor Low Signal Bank 2 Sensor 2	I	—
30 - 31	—	—	—	Not Occupied	—	—
32	0.5	YE	581	Throttle Actuator Control Open	I	—
33	—	—	—	Not Occupied	—	—

34	0.5	BN/RD	2701	Throttle Position Sensor 5V Reference	I	—
35	—	—	—	Not Occupied	—	—
36	0.75	VT/GY	496	Knock Sensor Signal 1	I	—
37	0.75	WH/GY	1876	Knock Sensor Signal 2	I	—
38 - 40	—	—	—	Not Occupied	—	—
41	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1	I	—
42	0.5	GY/WH	3122	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2	I	—
43	0.5	L-GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—
44	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	—
45	—	—	—	Not Occupied	—	—
46	0.5	GY/BN	2410	—	I	—
47 - 48	—	—	—	Not Occupied	—	—
49	0.5	WH/D-BU	6289	Induction Air Temperature Sensor Signal	I	—
50	—	—	—	Not Occupied	—	—
51	0.5	L-GN/D-BU	428	EVAP Canister Purge Solenoid Control	I	—
52	0.5	L-GN/WH	492	Mass Air Flow Sensor Signal	I	—
53	0.5	BN	25	Charge Indicator Control	I	—
54	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	I	—

55	0.5	GY	23	Generator Field Duty Cycle Signal	I	—
56	0.75	BK/YE	1716	Knock Sensor Low Reference 1	I	—
57	0.75	BK/GY	2303	Knock Sensor Low Reference 2	I	—
58	0.5	WH/GY	1786	Transmission Park/Neutral Signal 1	I	—
59	0.5	D-BU	179	Oil Pump Command Signal	I	—
60	0.5	BN/L-GN	1174	Oil Level Switch Signal	I	—
61	0.5	L-GN/YE	3212	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1	I	—
62	0.5	WH/BN	3223	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2	I	—
63	0.5	BK/L-GN	469	Manifold Absolute Pressure Sensor Low Reference	I	—
64	—	—	—	Not Occupied	—	—
65	0.5	BK/D-BU	61	Outside Ambient Temperature Sensor Low Reference	I	—
66 - 68	—	—	—	Not Occupied	—	—
69	0.5	WH/YE	3202	Throttle Inlet Absolute Pressure Sensor Low Reference	I	—
70	0.5	D-BU/WH	3630	Throttle Position Sensor (SENT1) Signal	I	—
71 - 72	—	—	—	Not Occupied	—	—
73	2.5	BK/WH	451	Signal Ground	II	—

K20 Engine Control Module X2 (L83/L86/LV3+(NQG/NQH))



Connector Part Information

Harness Type: Engine
OEM Connector: 33264056
Service Connector: Service by Harness - See Part Catalog
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with BK Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available
II	13579770	J-35616-35 (VT)	J-38125-11A	7116-4152-02	Yazaki 9	A	5

K20 Engine Control Module X2 (L83/L86/LV3+(NQG/NQH))

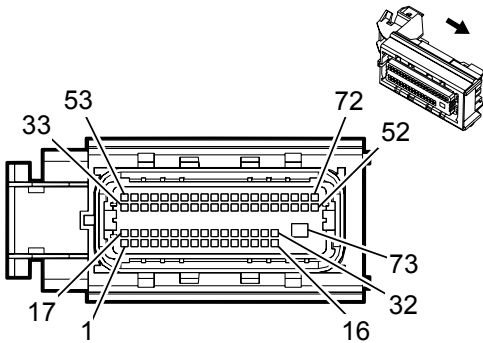
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	BK/L-GN	2919	Fuel Rail Pressure Sensor Low Reference	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.5	VT/WH	821	Vehicle Speed Sensor Signal	I	—
7	0.5	BK/L-GN	822	Vehicle Speed Sensor Low Reference	I	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.5	VT/GY	3110	Heated Oxygen Sensor High Signal Bank 1 Sensor 1	I	—
11	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	I	—
12	0.5	VT/D-BU	3120	Heated Oxygen Sensor High Signal Bank 1 Sensor 2	I	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION						

13	0.5	VT/L-GN	3220	Heated Oxygen Sensor High Signal Bank 2 Sensor 2	I	—
14	—	—	—	Not Occupied	—	—
15	0.5	GY/D-BU	7564	Humidity Sensor Signal	I	—
16	0.5	BN/WH	582	Throttle Actuator Control Close	I	—
17	—	—	—	Not Occupied	—	—
18	0.5	BN/RD	2917	Fuel Rail Pressure Sensor 5V Reference	I	—
19 - 25	—	—	—	Not Occupied	—	—
26	0.5	WH/BK	3111	Heated Oxygen Sensor Low Signal Bank 1 Sensor 1	I	—
27	0.5	YE/WH	3211	Heated Oxygen Sensor Low Signal Bank 2 Sensor 1	I	—
28	0.5	WH/YE	3121	Heated Oxygen Sensor Low Signal Bank 1 Sensor 2	I	—
29	0.5	YE/D-BU	3221	Heated Oxygen Sensor Low Signal Bank 2 Sensor 2	I	—
30 - 31	—	—	—	Not Occupied	—	—
32	0.5	YE	581	Throttle Actuator Control Open	I	—
33	—	—	—	Not Occupied	—	—
34	0.5	BN/RD	2701	Throttle Position Sensor 5V Reference	I	—
35	—	—	—	Not Occupied	—	—
36	0.75	VT/GY	496	Knock Sensor Signal 1	I	—
37	0.75	WH/GY	1876	Knock Sensor Signal 2	I	—
38 - 40	—	—	—	Not Occupied	—	—

41	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1	I	—
42	0.5	GY/WH	3122	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2	I	—
43	0.5	L-GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—
44	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	—
45	—	—	—	Not Occupied	—	—
46	0.5	GY/BN	2410	—	I	—
47 - 48	—	—	—	Not Occupied	—	—
49	0.5	WH/D-BU	6289	Induction Air Temperature Sensor Signal	I	—
50	—	—	—	Not Occupied	—	—
51	0.5	L-GN/D-BU	428	EVAP Canister Purge Solenoid Control	I	—
52	0.5	L-GN/WH	492	Mass Air Flow Sensor Signal	I	—
53	0.5	BN	25	Charge Indicator Control	I	—
54	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	I	—
55	0.5	GY	23	Generator Field Duty Cycle Signal	I	—
56	0.75	BK/YE	1716	Knock Sensor Low Reference 1	I	—
57	0.75	BK/GY	2303	Knock Sensor Low Reference 2	I	—
58	0.5	WH/GY	1786	Transmission Park/Neutral Signal 1	I	—
59	0.5	D-BU	179	Oil Pump Command Signal	I	—

60	0.5	BN/L-GN	1174	Oil Level Switch Signal	I	—
61	0.5	L-GN/YE	3212	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1	I	—
62	0.5	WH/BN	3223	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2	I	—
63	0.5	BK/L-GN	469	Manifold Absolute Pressure Sensor Low Reference	I	—
64	—	—	—	Not Occupied	—	—
65	0.5	BK/D-BU	61	Outside Ambient Temperature Sensor Low Reference	I	—
66 - 68	—	—	—	Not Occupied	—	—
69	0.5	WH/YE	3202	Throttle Inlet Absolute Pressure Sensor Low Reference	I	—
70	0.5	D-BU/WH	3630	Throttle Position Sensor (SENT1) Signal	I	—
71 - 72	—	—	—	Not Occupied	—	—
73	2.5	BK/WH	451	Signal Ground	II	—

K20 Engine Control Module X3 (L83/L86)



Connector Part Information

Harness Type: Engine
OEM Connector: 33157045
Service Connector: 19260918
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with GY Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575812	J-35616-64B (LT BU)	J-38125-213	33467-0003	Delphi 23	J	J
II	13579770	J-35616-35 (VT)	J-38125-11A	7116-4152-02	Yazaki 9	A	5

K20 Engine Control Module X3 (L83/L86)

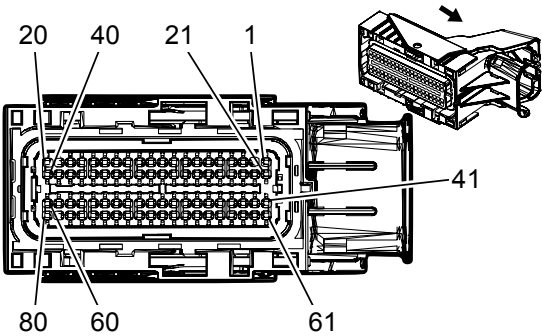
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BN	331	Oil Pressure Sensor Signal	I	—
2	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	I	—
3	0.5	BN/YE	2161	Fuel Rail Pressure Sensor 2 Signal	I	—
4 - 7	—	—	—	Not Occupied	—	—
8	0.5	D-BU	410	Engine Coolant Temperature Sensor Signal	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	VT/D-BU	6270	Crankshaft 60X Sensor 5V Reference	I	—
11	0.5	L-GN/D-BU	2123	Ignition Control 3	I	—

12	0.5	YE/D-BU	2124	Ignition Control 4	I	—
13	0.5	D-BU/GY	2125	Ignition Control 5	I	—
14	0.5	BN/D-BU	2126	Ignition Control 6	I	—
15	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	I	—
16	0.75	YE	7301	High Pressure Fuel Pump Actuator High - Control	I	—
17	0.5	BK/PU	2755	Oil Pressure Sensor Low Reference	I	—
18 - 23	—	—	—	Not Occupied	—	—
24	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	I	—
25	0.5	BK/PU	6272	Crankshaft 60X Sensor Low Reference	I	—
26	0.5	L-GN	6271	Crankshaft 60X Sensor Signal	I	—
27	0.5	D-BU/WH	2122	Ignition Control 2	I	—
28	0.5	L-GN/GY	2127	Ignition Control 7	I	—
29	0.5	VT/WH	2128	Ignition Control 8	I	—
30	0.5	D-BU/VT	2121	Ignition Control 1	I	—
31	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	I	—
32	0.75	VT/BK	7300	High Pressure Fuel Pump Actuator Low - Control	I	—
33	0.5	YE/VT	5275	Camshaft Position Intake Sensor 1	I	—

34	0.5	GY/D-BU	5300	Camshaft Position Intake Sensor Control 1	I	—
35 - 38	—	—	—	Not Occupied	—	—
39	0.5	VT/BN	5284	Camshaft Phaser Intake Solenoid 1	I	—
40 - 42	—	—	—	Not Occupied	—	—
43	0.5	GY	5493	Cylinder Shutoff Solenoid Control 3	I	—
44	0.5	YE/D-BU	5494	Cylinder Shutoff Solenoid Control 4	I	—
45	0.75	GY/D-BU	4804	Direct Fuel Injector (DFI) High Voltage Control Cylinder 4	I	—
46	0.75	D-BU	4802	Direct Fuel Injector (DFI) High Voltage Control Cylinder 2	I	—
47	0.75	L-GN/VT	4806	Direct Fuel Injector (DFI) High Voltage Control Cylinder 6	I	—
48	0.75	GY	4808	Direct Fuel Injector (DFI) High Voltage Control Cylinder 8	I	—
49	0.75	L-GN	4803	Direct Fuel Injector (DFI) High Voltage Control Cylinder 3	I	—
50	0.75	YE/GY	4807	Direct Fuel Injector (DFI) High Voltage Control Cylinder 7	I	—
51	0.75	WH/L-GN	4805	Direct Fuel Injector (DFI) High Voltage Control Cylinder 5	I	—
52	0.75	BN	4801	Direct Fuel Injector (DFI) High Voltage Control Cylinder 1	I	—
53	0.5	BK/L-GN	5301	Camshaft Position Intake Sensor Low Reference 1	I	—
54 - 58	—	—	—	Not Occupied	—	—
59	0.5	BK/BN	6753	Cam Phaser W Low Reference	I	—
60 - 62	—	—	—	Not Occupied	—	—

60 - 62	—	—	—	Not Occupied	—	—
63	0.5	D-BU	5491	Cylinder Shutoff Solenoid Control 1	I	—
64	0.5	L-GN	5492	Cylinder Shutoff Solenoid Control 2	I	—
65	0.75	D-BU/WH	4904	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4	I	—
66	0.75	BN/L-GN	4902	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2	I	—
67	0.75	VT	4906	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6	I	—
68	0.75	WH/L-GN	4908	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 8	I	—
69	0.75	L-GN/BK	4903	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3	I	—
70	0.75	WH/YE	4907	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 7	I	—
71	0.75	L-GN/WH	4905	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5	I	—
72	0.75	BN/WH	4901	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1	I	—
73	2.5	BK/WH	451	Signal Ground	II	—

K20 Engine Control Module X3 (L5P)



Connector Part Information

Harness Type: Engine
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

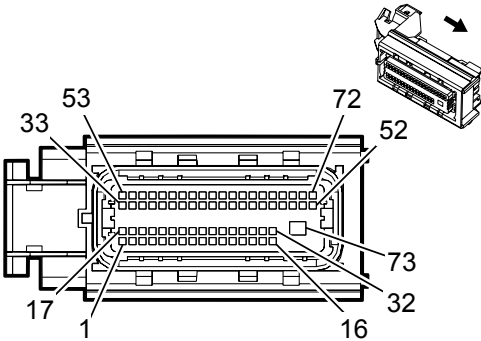
K20 Engine Control Module X3 (L5P)

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	—
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 - 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	—	—

K20 Engine Control Module X3 (L96)



Connector Part Information

Harness Type: Engine
OEM Connector: 33157048
Service Connector: 19260918
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with GY Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

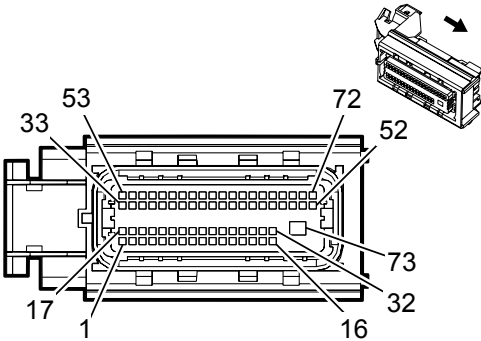
K20 Engine Control Module X3 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/WH	5007	Reverse Switch Signal	I	—
2 - 9	—	—	—	Not Occupied	—	—
10	0.5	L-GN/D-BU	428	EVAP Canister Purge Solenoid Control	I	—
11 - 15	—	—	—	Not Occupied	—	—
16	0.5	WH/BN	3223	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2	I	—
17	0.5	GY	23	Generator Field Duty Cycle Signal	I	—
18 - 21	—	—	—	Not Occupied	—	—
22	0.5	BK/GY	6110	Clutch Apply Sensor Low Reference	I	E29
	0.5	BK/BN	5360	Brake Apply Sensor Low Reference	I	-E29
23 - 26	—	—	—	Not Occupied	—	—

27	0.5	BK/L-GN	6281	Fuel Level Sensor Low Reference	I	—
28	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	—
29	0.5	BK/L-GN	469	Manifold Absolute Pressure Sensor Low Reference	I	—
30	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	I	—
31	—	—	—	Not Occupied	—	—
32	0.5	GY/WH	3122	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2	I	—
33 - 37	—	—	—	Not Occupied	—	—
38	0.5	GY/RD	6109	Clutch Apply Sensor 5V Reference	I	E29
	0.5	WH	5359	Brake Apply Sensor Control	I	-E29
39 - 42	—	—	—	Not Occupied	—	—
43	0.5	YE/RD	2709	Fuel Tank Pressure Sensor 5V Reference	I	—
44	0.5	D-BU/WH	1937	Secondary Fuel Level Sensor Signal	I	—
45	0.5	L-GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—
46	0.5	D-BU	410	Engine Coolant Temperature Sensor Signal	I	—
47	—	—	—	Not Occupied	—	—
48	0.5	VT/WH	821	Vehicle Speed Sensor Signal	I	—
49	0.5	BK/L-GN	822	Vehicle Speed Sensor Low Reference	I	—
50 - 54	—	—	—	Not Occupied	—	—
55	0.5	BN/WH	6354	Output Speed High (Replicated TOS) Input Signal	I	—

56 - 57	—	—	—	Not Occupied	—	—
58	0.5	YE	6111	Clutch Apply Sensor Signal	I	E29
	0.5	D-BU/YE	5361	Brake Apply Sensor Signal	I	-E29
59 - 62	—	—	—	Not Occupied	—	—
63	0.5	D-BU/WH	890	Fuel Tank Pressure Sensor Signal	I	—
64	0.5	D-BU/VT	1589	Primary Fuel Level Sensor Signal	I	—
65	0.5	VT/L-GN	3220	Heated Oxygen Sensor High Signal Bank 2 Sensor 2	I	—
66	0.5	YE/D-BU	3221	Heated Oxygen Sensor Low Signal Bank 2 Sensor 2	I	—
67	0.5	VT/D-BU	3120	Heated Oxygen Sensor High Signal Bank 1 Sensor 2	I	—
68	0.5	WH/YE	3121	Heated Oxygen Sensor Low Signal Bank 1 Sensor 2	I	—
69 - 73	—	—	—	Not Occupied	—	—

K20 Engine Control Module X3 (LV3)



Connector Part Information

Harness Type: Engine
OEM Connector: 33157046
Service Connector: 19260918
Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with GY Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available
II	13579770	J-35616-35 (VT)	J-38125-11A	7116-4152-02	Yazaki 9	A	5

K20 Engine Control Module X3 (LV3)

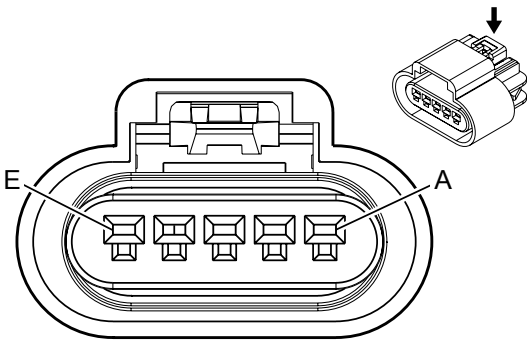
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BN	331	Oil Pressure Sensor Signal	I	—
2	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	I	—
3 - 7	—	—	—	Not Occupied	—	—
8	0.5	D-BU	410	Engine Coolant Temperature Sensor Signal	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	VT/D-BU	6270	Crankshaft 60X Sensor 5V Reference	I	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.5	D-BU/WH	2122	Ignition Control 2	I	—
14	0.5	L-GN/D-BU	2123	Ignition Control 3	I	—

15	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	I	—
16	0.75	YE	7301	High Pressure Fuel Pump Actuator High - Control	I	—
17	0.5	BK/VT	2755	Oil Pressure Sensor Low Reference	I	—
18 - 23	—	—	—	Not Occupied	—	—
24	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	I	—
25	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	I	—
26	0.5	L-GN	6271	Crankshaft 60X Sensor Signal	I	—
27	0.5	YE/D-BU	2124	Ignition Control 4	I	—
28	0.5	D-BU/GY	2125	Ignition Control 5	I	—
29	0.5	BN/D-BU	2126	Ignition Control 6	I	—
30	0.5	D-BU/VT	2121	Ignition Control 1	I	—
31	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	I	—
32	0.75	VT/BK	7300	High Pressure Fuel Pump Actuator Low - Control	I	—
33	0.5	YE/VT	5275	Camshaft Position Intake Sensor 1	I	—
34	0.5	GY/D-BU	5300	Camshaft Position Intake Sensor Control 1	I	—
35 - 38	—	—	—	Not Occupied	—	—
39	0.5	VT/BN	5284	Camshaft Phaser Intake Solenoid 1	I	—

40 - 45	—	—	—	Not Occupied	—	—
46	0.75	GY/D-BU	4804	Direct Fuel Injector (DFI) High Voltage Control Cylinder 4	I	—
47	0.75	L-GN	4803	Direct Fuel Injector (DFI) High Voltage Control Cylinder 3	I	—
48	0.75	L-GN/VT	4806	Direct Fuel Injector (DFI) High Voltage Control Cylinder 6	I	—
49	—	—	—	Not Occupied	—	—
50	0.75	WH/L-GN	4805	Direct Fuel Injector (DFI) High Voltage Control Cylinder 5	I	—
51	0.75	D-BU	4802	Direct Fuel Injector (DFI) High Voltage Control Cylinder 2	I	—
52	0.75	BN	4801	Direct Fuel Injector (DFI) High Voltage Control Cylinder 1	I	—
53	0.5	BK/L-GN	5301	Camshaft Position Intake Sensor Low Reference 1	I	—
54 - 58	—	—	—	Not Occupied	—	—
59	0.5	BK/BN	6753	Cam Phaser W Low Reference	I	—
60 - 62	—	—	—	Not Occupied	—	—
63	0.5	D-BU	5491	Cylinder Shutoff Solenoid Control 1	I	—
64	0.5	L-GN	5492	Cylinder Shutoff Solenoid Control 2	I	—
65	—	—	—	Not Occupied	—	—
66	0.75	D-BU/WH	4904	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4	I	—
67	0.75	L-GN/BK	4903	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3	I	—
68	0.75	VT	4906	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6	I	—
69	—	—	—	Not Occupied	—	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION						

69	—	—	—	Not Occupied	—	—
70	0.75	L-GN/WH	4905	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5	I	—
71	0.75	BN/L-GN	4902	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2	I	—
72	0.75	BN/WH	4901	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1	I	—
73	2.5	BK/WH	451	Signal Ground	II	—

K22 Cooling Fan Control Module



Connector Part Information

Harness Type: Engine
OEM Connector: 13519051
Service Connector: 13585858
Description: 5-Way F 150 GT Series, Sealed (BK)

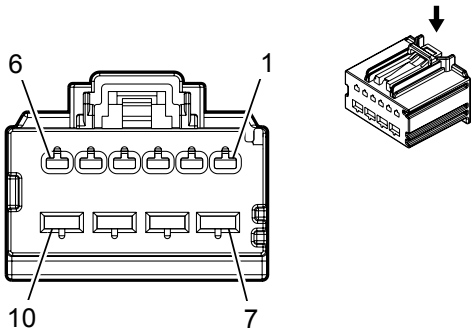
Terminal Part Information

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

K22 Cooling Fan Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	BK	550	Ground	I	—
B	0.5	WH	2368	Cooling Fan Control Signal	I	—
C	0.5	BK/BN	6141	Cooling Fan Speed Low Reference	I	—
D	0.5	D-BU/VT	2364	Cooling Fan Speed Signal	I	—
E	0.5	GY/RD	2365	Cooling Fan Speed 5V Reference	I	—

K29 Seat Heating Control Module X1



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

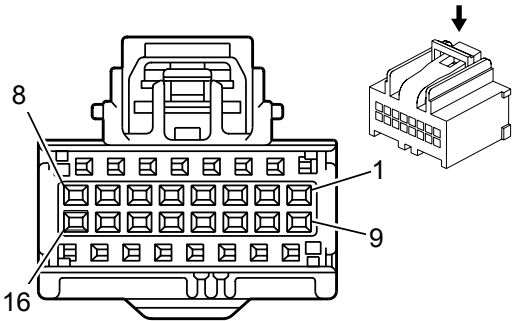
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K29 Seat Heating Control Module X1

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



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

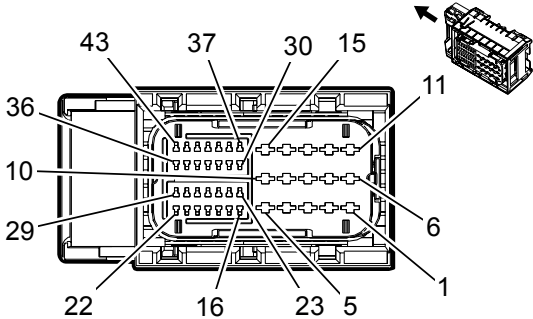
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K29 Seat Heating Control Module X2

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	0.35	L-GN/VT	5906	Driver Seat Vent Motor Control 1	I	—
10	0.35	VT/WH	5908	Passenger Seat Vent Motor Control 1	I	—
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



Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 10023701
Service Connector: Service by Harness - See Part Catalog
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

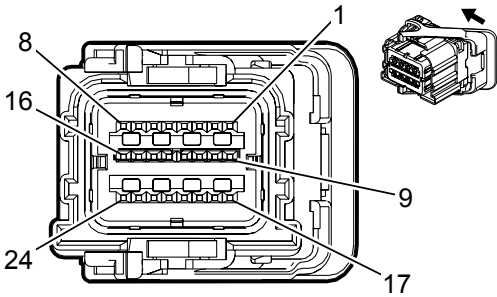
K34 Glow Plug Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	2	GY/YE	1584	Glow Plug Control 4	I	L5P
3	2	GY/GN	1583	Glow Plug Control 3	I	L5P
4	2	GY/BN	1582	Glow Plug Control 2	I	L5P
5	2	GY/BU	1581	Glow Plug Control 1	I	L5P
6 - 9	—	—	—	Not Occupied	—	—
10	2	BK	550	Ground	I	L5P
11	—	—	—	Not Occupied	—	—
12	2	GY/WH	1585	Glow Plug Control 5	I	L5P
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION						

13	2	GY/VT	1586	Glow Plug Control 6	I	L5P
14	2	WH/BK	1587	Glow Plug Control 7	I	L5P
15	2	WH/BU	1588	Glow Plug Control 8	I	L5P
16	0.5	BK	C92	Cavity Seal	II	L5P
17	0.5	BK	C93	Cavity Seal	II	L5P
18	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	L5P
19	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	L5P
20 - 22	—	—	—	Not Occupied	—	—
23	0.5	BK	D23	Cavity Seal	II	L5P
24	0.5	BK	D24	Cavity Seal	II	L5P
25	0.5	BU	2500	High Speed GMLAN Serial Data (+) 1	II	L5P
26	0.5	BU	2500	High Speed GMLAN Serial Data (+) 1	II	L5P
27 - 29	—	—	—	Not Occupied	—	—
30	0.5	BK	D30	Cavity Seal	II	L5P
31	0.5	BK	D31	Cavity Seal	II	L5P
32	—	—	—	Not Occupied	—	—
33	0.5	VT/BK	2139	Run/Crank Ignition 1 Voltage	II	L5P
34 - 36	—	—	—	Not Occupied	—	—

34 - 36	—	—	—	Not Occupied	—	—
37	0.5	BK	D37	Cavity Seal	II	L5P
38	0.5	BK	D38	Cavity Seal	II	L5P
39	—	—	—	Not Occupied	—	—
40	0.5	VT/YE	443	Accessory Ignition Voltage	II	L5P
41 - 43	—	—	—	Not Occupied	—	—

K36 Inflatable Restraint Sensing and Diagnostic Module X1



Connector Part Information

Harness Type: Body
OEM Connector: 13887360
Service Connector: 19328755
Description: 24-Way F 0.64 Series, Sealed (YE)

Terminal Part Information

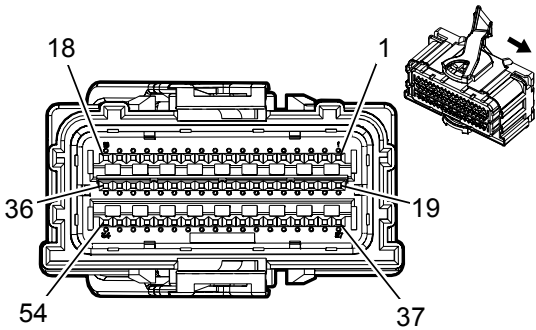
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19328872	J-35616-64B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

K36 Inflatable Restraint Sensing and Diagnostic Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	OG/L-GN	3023	Steering Wheel Module Stage 2 High Control	I	—
2	0.35	WH/OG	3022	Steering Wheel Module Stage 2 Low Control	I	—
3	0.35	BN/OG	3020	Steering Wheel Module Stage 1 Low Control	I	—
4	0.35	OG/VT	3021	Steering Wheel Module Stage 1 High Control	I	—
5	0.35	YE/OG	3025	Passenger IP Module Stage 1 High Control	I	—
6	0.35	OG/WH	3024	Passenger IP Module Stage 1 Low Control	I	—
7	0.35	OG/VT	3026	Passenger IP Module Stage 2 Low Control	I	—
8	0.35	GY/OG	3027	Passenger IP Module Stage 2 High Control	I	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

9	0.5	RD/L-GN	4440	Battery Positive Voltage	I	—
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	I	—
16	—	—	—	Not Occupied	—	—
17	0.5	WH/D-BU	5986	Serial Data Communication Enable	I	—
18	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
19	0.5	BK/WH	2751	Signal Ground	I	AL0
	0.75	BK/WH	2751	Signal Ground	I	-AL0
20	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
21 - 24	—	—	—	Not Occupied	—	—

K36 Inflatable Restraint Sensing and Diagnostic Module X2



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

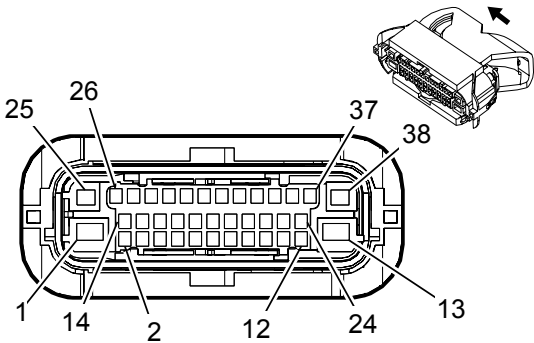
K36 Inflatable Restraint Sensing and Diagnostic Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 8	—	—	—	Not Occupied	—	—
9	0.35	OG/YE	3481	Driver Seat Belt Anchor Pretensioner High Control	II	—
10	0.35	YE/OG	3482	Driver Seat Belt Anchor Pretensioner Low Control	II	—
11	0.35	GY/OG	3480	Passenger Seat Belt Anchor Pretensioner Low Control	II	—
12	0.35	OG/BN	3479	Passenger Seat Belt Anchor Pretensioner High Control	II	—
13	0.35	OG/BU	3068	Driver Side Impact Module High Control	II	—
14	0.35	GN/OG	3069	Driver Side Impact Module Low Control	II	—
15	0.35	BN/OG	3067	Passenger Side Impact Module Low Control	II	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

16	0.35	OG/GY	3066	Passenger Side Impact Module High Control	II	—
17	0.35	OG/GN	5019	Left Front Head Curtain Module High Control	II	—
18	0.35	VT/OG	5020	Left Front Head Curtain Module Low Control	II	—
19	0.35	OG/GN	2132	Left Front Side Impact Sensing Module Signal	II	—
20	0.35	BK/OG	6628	Left Front Side Impact Sensing Module Low Reference	II	—
21	0.35	BK/OG	6629	Right Front Side Impact Sensing Module Low Reference	II	—
22	0.35	BN/OG	2134	Right Front Side Impact Sensing Module Signal	II	—
23	0.35	OG/YE	354	Left Front Discriminating Sensor Signal	II	—
24	0.35	BK/OG	5045	Left Front Discriminating Sensor Low Reference	II	—
25	0.35	BK/OG	5600	Right Front Discriminating Sensor Low Reference	II	—
26	0.35	OG/GN	1409	Right Front Discriminating Sensor Signal	II	—
27	0.35	OG/BU	6620	Left Middle Side Impact Sensing Module Signal	II	—
28	0.35	BK/OG	6621	Left Middle Side Impact Sensing Module Low Reference	II	—
29	0.35	BK/OG	6625	Right Middle Side Impact Sensing Module Low Reference	II	—
30	0.35	OG/VT	6624	Right Middle Side Impact Sensing Module Signal	II	—
31 - 36	—	—	—	Not Occupied	—	—

37	0.5	RD	3477	Driver Seat Belt Retractor Pretensioner High Control	I	—
38	0.5	GY	3478	Driver Seat Belt Retractor Pretensioner Low Control	I	—
39	0.5	WH	3476	Passenger Seat Belt Retractor Pretensioner Low Control	I	—
40	0.5	GN	3475	Passenger Seat Belt Retractor Pretensioner High Control	I	—
41	0.35	OG/BN	238	Driver Seat Belt Switch Signal	II	—
42	0.35	OG/GN	5055	Driver Seat Position Switch Signal	II	—
43	0.35	BK/OG	1363	Driver Seat Belt Switch Low Reference	II	—
44	0.35	BK/OG	1361	Passenger Seat Belt Switch Low Reference	II	—
45	0.35	OG/VT	1362	Passenger Seat Belt Switch Signal	II	—
46	0.35	OG/BU	5056	Passenger Seat Position Switch Signal	II	—
47 - 52	—	—	—	Not Occupied	—	—
53	0.35	OG/GY	5021	Right Front Head Curtain Module High Control	II	—
54	0.35	WH/OG	5022	Right Front Head Curtain Module Low Control	II	—

K38A Chassis Control Module - Auxiliary (JL1)



Connector Part Information

Harness Type: Chassis
OEM Connector: 33102981
Service Connector: 19329471
Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 MCP Series, Sealed (BK)

Terminal Part Information

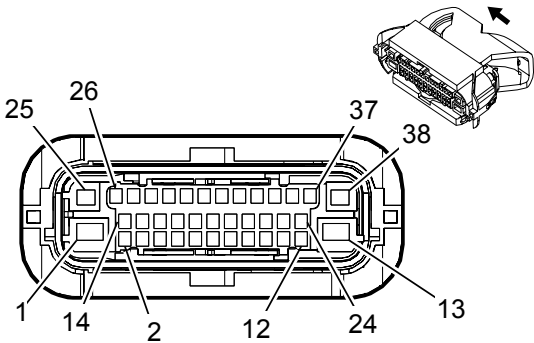
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19119381	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
II	19119772	J-35616-35 (VT)	J-38125-557	1241388-1	Lear 17	E	C
III	19353101	J-35616-40 (BU)	J-38125-556	Not Available	Not Available	Not Available	Not Available

K38A Chassis Control Module - Auxiliary (JL1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/WH	2040	Battery Positive Voltage	III	—
2 - 12	—	—	—	Not Occupied	—	—
13	0.75	BK	1750	Ground	III	—
14	0.5	VT/YE	5985	Accessory Wakeup Serial Data	I	—
15	—	—	—	Not Occupied	—	—
16	0.5	D-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	L-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	0.75	VT/L-GN	439	Run/Crank Ignition 1 Voltage	II	—
26	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
27	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
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	L-GN/VT	4114	Local Interconnect Network Serial Data Bus 14	I	—
31 - 38	—	—	—	Not Occupied	—	—

K38 Chassis Control Module (Light Duty)



Connector Part Information

Harness Type: Chassis
OEM Connector: 33102981
Service Connector: 19329471
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	19119381	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
II	19119772	J-35616-35 (VT)	J-38125-557	1241388-1	Lear 17	E	C
III	19353101	J-35616-40 (BU)	J-38125-556	Not Available	Not Available	Not Available	Not Available

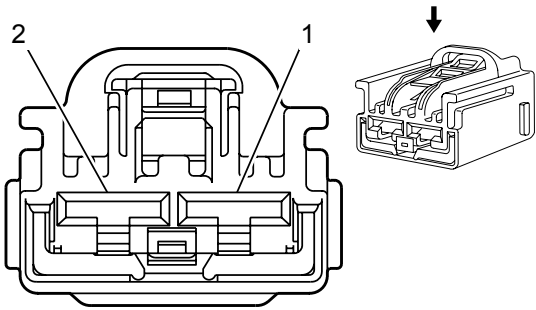
K38 Chassis Control Module (Light Duty)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/WH	2040	Battery Positive Voltage	III	—
2 - 12	—	—	—	Not Occupied	—	—
13	0.75	BK	1750	Ground	III	—
14	0.5	VT/YE	5985	Accessory Wakeup Serial Data	I	—
15	—	—	—	Not Occupied	—	—
16	0.5	D-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	—

10/25/2016 - VERSION 1.02017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION900 / 1254

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	L-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	0.75	VT/L-GN	439	Run/Crank Ignition 1 Voltage	II	—
26	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
27	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
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	L-GN/VT	4114	Local Interconnect Network Serial Data Bus 14	I	—
31 - 38	—	—	—	Not Occupied	—	—

K40 Seat Memory Control Module X1



Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 7283-6458-40
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 6.3 Series (L-GY)

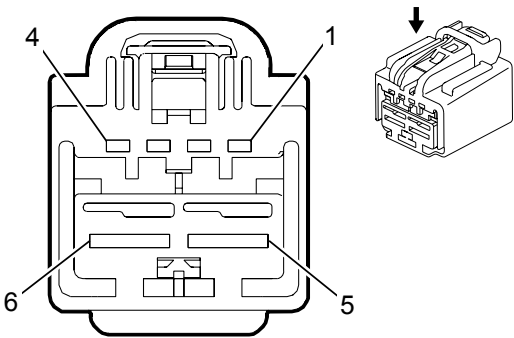
Terminal Part Information

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

K40 Seat Memory Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/BN	1140	Battery Positive Voltage	I	—
2	2.5	RD/YE	5040	Battery Positive Voltage	I	—

K40 Seat Memory Control Module X2



Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 7283-9749-30
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F YESC Kaizen Series (BK)

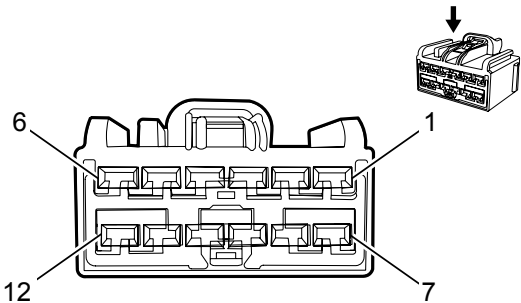
Terminal Part Information

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

K40 Seat Memory Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN	5060	Low Speed GMLAN Serial Data	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	L-GN/WH	7530	Local Interconnect Network Serial Data Bus 8	I	—
4	—	—	—	Not Occupied	—	—
5	2.5	BK	1150	Ground	II	—
6	—	—	—	Not Occupied	—	—

K40 Seat Memory Control Module X3



Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 7283-6467-40
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 2.8 Kaizen Series (L-GY)

Terminal Part Information

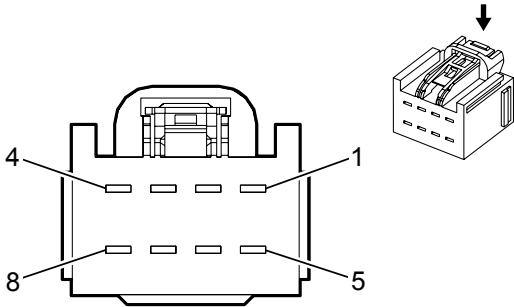
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K40 Seat Memory Control Module X3

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	1.5	L-BU/YE	277	Driver Power Seat Recline Motor Rearward Control	I	—
3	1.5	L-GN/BN	286	Driver Power Seat Front Vertical Motor Up Control	I	—
4	1.5	L-BU/VT	287	Driver Power Seat Front Vertical Motor Down Control	I	—
5	1.5	YE	282	Driver Power Seat Rear Vertical Motor Up Control	I	—
6	1.5	GY/L-BU	283	Driver Power Seat Rear Vertical Motor Down Control	I	—
7	1.5	YE/BN	768	Driver Power Seat Lumbar Motor Up Control	I	—
8	1.5	YE/L-BU	767	Driver Power Seat Lumbar Motor Down Control	I	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

9	1.5	L-BU	611	Driver Power Seat Lumbar Motor Forward Control	I	—
10	1.5	VT	610	Driver Power Seat Lumbar Motor Rearward Control	I	—
11	1.5	YE/L-BU	285	Driver Power Seat Horizontal Motor Forward Control	I	—
12	1.5	GY/L-GN	284	Driver Power Seat Horizontal Motor Rearward Control	I	—

K40 Seat Memory Control Module X4



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)

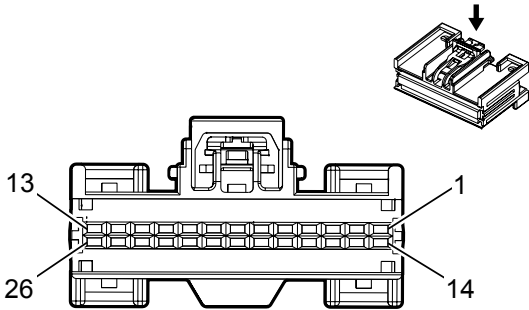
Terminal Part Information

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

K40 Seat Memory Control Module X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	L-GN/VT	5130	Adjustable Pedal Actuator Forward Control	I	—
2	1.5	YE	5129	Adjustable Pedal Actuator Rearward Control	I	—
3 - 8	—	—	—	Not Occupied	—	—

K40 Seat Memory Control Module X5



Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 7287-2043-30
Service Connector: Service by Harness - See Part Catalog
Description: 26-Way F 0.64 Series (BK)

Terminal Part Information

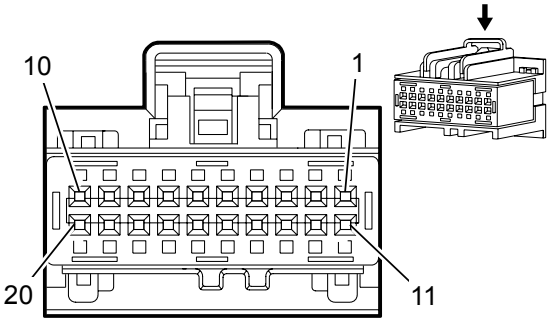
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K40 Seat Memory Control Module X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/RD	3298	Memory Sensor High Reference 2	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.5	BN	3038	Right Rear Haptic Seat Motor Control	I	—
5	0.5	YE/BN	3037	Left Rear Haptic Seat Motor Control	I	—
6	0.5	BK/GY	6206	Memory Sensor Low Reference	I	—
7	0.5	YE/BN	1522	Power Seat Horizontal Forward Switch Signal	I	—
8	0.5	GY/L-GN	1523	Power Seat Horizontal Rearward Switch Signal	I	—
9	0.5	L-GN/BN	1518	Power Seat Front Vertical Up Switch Signal	I	—

10	0.5	L-BU/VT	1520	Power Seat Front Vertical Down Switch Signal	I	—
11	0.5	L-GN	569	Memory Seat Horizontal Motor Position Sensor Signal	I	—
12	0.5	BN/WH	557	Memory Seat Front Vertical Motor Position Sensor Signal	I	—
13	0.5	WH/RD	6207	Memory Sensor High Reference	I	—
14	0.5	YE	1065	Driver Seat Lumbar Forward Switch Signal	I	—
15	0.5	L-BU/VT	1064	Driver Seat Lumbar Rearward Switch Signal	I	—
16	0.5	WH	1066	Driver Seat Lumbar Up Switch Signal	I	—
17	0.5	YE/BK	1067	Driver Seat Lumbar Down Switch Signal	I	—
18	—	—	—	Not Occupied	—	—
19	0.5	YE	1519	Power Seat Rear Vertical Up Switch Signal	I	—
20	0.5	YE/L-BU	1521	Power Seat Rear Vertical Down Switch Signal	I	—
21	0.5	GY/BK	1269	Power Seat Recline Forward Switch Signal	I	—
22	0.5	L-GN/GY	1270	Power Seat Recline Rearward Switch Signal	I	—
23 - 24	—	—	—	Not Occupied	—	—
25	0.5	YE/L-BU	568	Memory Seat Rear Vertical Motor Position Sensor Signal	I	—
26	0.5	WH/BK	570	Driver Memory Seat Recline Motor Position Sensor Signal	I	—

K40 Seat Memory Control Module X6



Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 31410-1201
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 64 Series, Sealed (GY)

Terminal Part Information

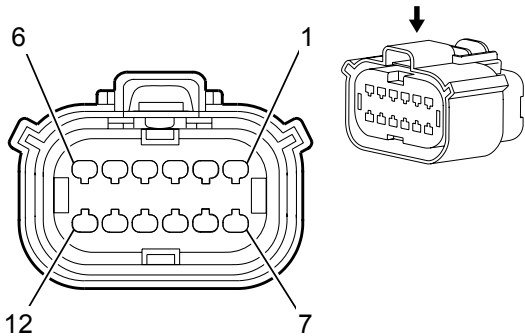
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K40 Seat Memory Control Module X6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	L-BU	5952	Adjustable Pedal Position Sensor Brake Signal	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	L-GN/GY	5286	Adjustable Pedal Switch Forward Signal	I	—
7	0.35	WH/GY	5285	Adjustable Pedal Switch Rearward Signal	I	—
8 - 10	—	—	—	Not Occupied	—	—
11	0.35	BK/L-BU	5978	Memory Switch Low Reference	I	—
12	0.35	WH	615	Memory Seat Switch Signal 1	I	—
13 - 14	—	—	—	Not Occupied	—	—
15	0.35	L-GN/L-BU	614	Memory Seat Switch Set Signal	I	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

16 - 20	—	—	—	Not Occupied	—	—

K43 Power Steering Control Module



Connector Part Information

Harness Type: Chassis
OEM Connector: 13595088
Service Connector: 19150019
Description: 12-Way F 1.5 Series, Sealed (BK)

Terminal Part Information

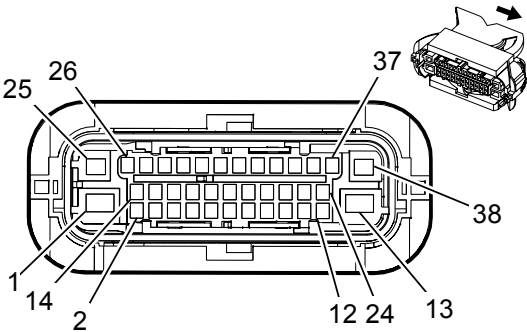
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	19300635	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

K43 Power Steering Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
2	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
3	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	II	—
4	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—
5	0.5	RD/WH	2740	Battery Positive Voltage	II	—
6	—	—	—	Not Occupied	—	—
7	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
8	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

9	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	II	—
10	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—
11	0.75	BK	2150	Ground	I	—
12	0.5	WH/D-BU	5986	Serial Data Communication Enable	II	—

K44 Power Take-Off Control Module X1



Connector Part Information

Harness Type: Engine
OEM Connector: 15498534
Service Connector: 19329924
Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 MCP Series, Sealed (BK)

Terminal Part Information

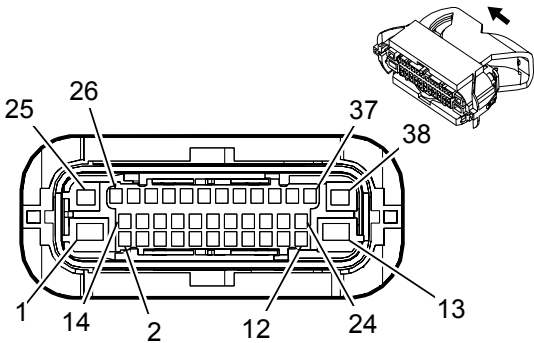
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13582180	J-35616-14 (GN)	J-38125-560	1241374-1	Lear 17	E	2
II	19119560	J-35616-40 (BU)	J-38125-556	1241408-1	Lear 28	C	A
III	19119772	J-35616-35 (VT)	J-38125-557	1241388-1	Lear 17	E	C
IV	19353101	J-35616-40 (BU)	J-38125-556	Not Available	Not Available	Not Available	Not Available

K44 Power Take-Off Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/D-BU	4540	Battery Positive Voltage	IV	—
2 - 12	—	—	—	Not Occupied	—	—
13	1.5	BK/WH	451	Signal Ground	II	—
14	0.5	WH/D-BU	5986	Serial Data Communication Enable	I	—
15	0.5	L-GN/WH	488	Power Take Off Control Switch	I	—
16 - 17	—	—	—	Not Occupied	—	—
18	0.5	BN/L-GN	4311	Power Take Off Enable In Cab Switch Normally Closed Signal	I	—
19 - 24	—	—	—	Not Occupied	—	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

19 - 24	—	—	—	Not Occupied	—	—
25	0.75	BN/WH	6085	Power Take Off Remote Engine Start Switch Signal	III	—
26	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
27	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
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 - 38	—	—	—	Not Occupied	—	—

K44 Power Take-Off Control Module X2



Connector Part Information

Harness Type: Engine
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

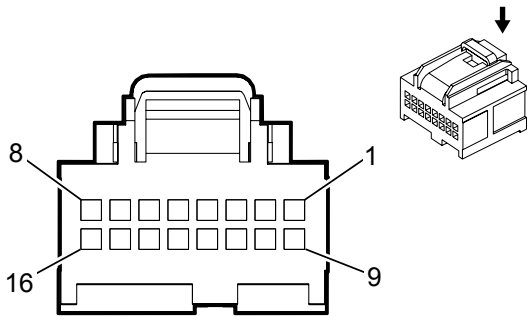
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19119381	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

K44 Power Take-Off Control Module X2

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	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

38	—	—	—	Not Occupied	—	—

K56 Serial Data Gateway Module X1



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13819409
Service Connector: 13582576
Description: 16-Way F 0.64 OCS Series (BK)

Terminal Part Information

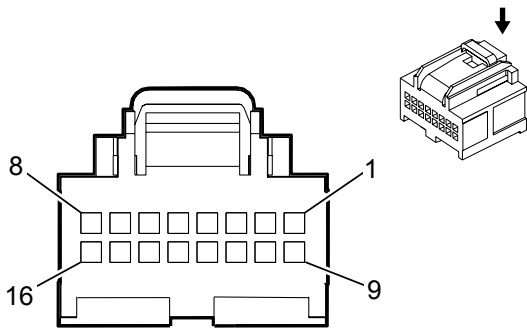
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

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	0.75	BK/WH	1851	Signal Ground	I	E29
	0.35	BK/WH	1851	Signal Ground	I	-E29
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



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13781484
Service Connector: 13582575
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	0.35	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	I	—
4	0.35	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	I	—
5	0.35	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	I	—
6	0.35	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	I	—
7	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
8	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

9	—	—	—	Not Occupied	—	—
10	0.5	GY/L-GN	1102	Low Speed GMLAN Serial Data #2	I	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.35	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	I	—
14	0.35	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	I	—
15	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
16	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—

GRAPHIC PENDING

Connector Part Information

Harness Type: High Voltage Body
OEM Connector: 33199304
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Power Pack 1000 Series, Sealed (OG)

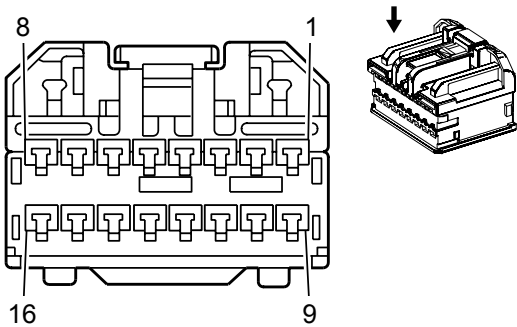
Terminal Part Information

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

K59 Starter/Generator Control Module X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	12	OG	5084	High Voltage Battery (+)	I	—
B	12	OG	5083	High Voltage Battery (-)	I	—

K69 Transfer Case Control Module X1



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

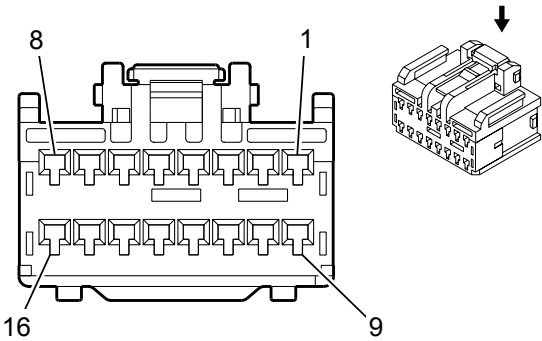
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K69 Transfer Case Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BK	7478	Rotary Position Sensor Low Reference	I	—
2	0.5	WH/L-GN	7479	Rotary Position Sensor Signal	I	—
3	0.35	YE	7474	Incremental Encoder Direction Signal	I	—
4	0.5	GY/BK	1570	Front Axle Actuator Control	I	—
5	0.35	D-BU/GY	7473	Incremental Encoder Impulse Signal	I	—
6	0.35	GY/RD	6029	Four Wheel Drive Mode Switch 5V Reference	I	—
7	0.35	D-BU/YE	1693	Four Wheel Drive Switch Signal	I	—
8	—	—	—	Not Occupied	—	—

9	0.5	WH/RD	7477	Rotary Position Sensor 5V Reference	I	—
10	0.35	WH/L-GN	7475	Incremental Encoder Sensor 8V Reference	I	—
11	0.35	VT	7476	Incremental Encoder Sensor Low Reference	I	—
12	0.5	YE/WH	1695	Four Wheel Drive Wheel Lock Indicator Control	I	—
13	1	YE/BN	1569	Transfer Case Lock Solenoid Control	I	—
14 - 16	—	—	—	Not Occupied	—	—

K69 Transfer Case Control Module X2



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

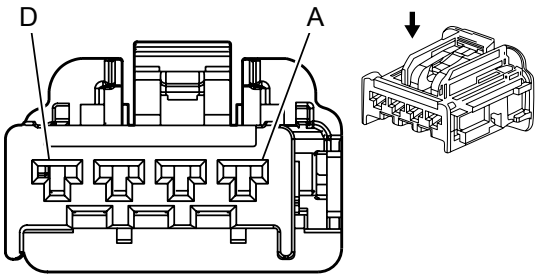
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K69 Transfer Case Control Module X2

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



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)

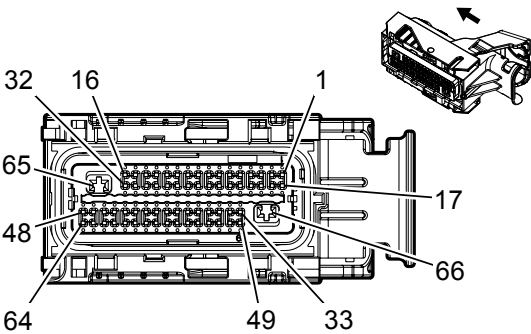
Terminal Part Information

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

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



Connector Part Information

Harness Type: Engine
OEM Connector: 13965710
Service Connector: 19329822
Description: 66-Way F 0.64, 2.8 Series, Sealed (BK with BK Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13505803	J-35616-35 (VT)	J-38125-12A	1326030-8	Lear 17	A	4
II	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

K71 Transmission Control Module

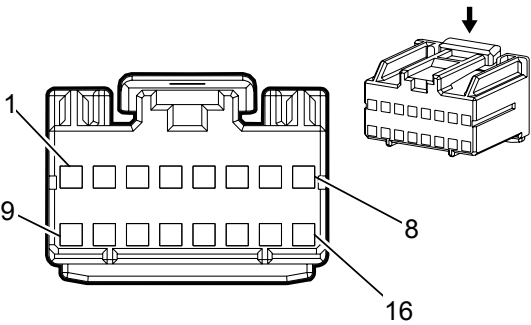
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.75	D-BU	6401	Clutch B Control	II	—
3 - 6	—	—	—	Not Occupied	—	—
7	0.5	YE/L-GN	4170	Transmission Position Sensor B 9V Reference	II	NQF/NQG
	0.75	YE/L-GN	4170	Transmission Position Sensor B 9V Reference	II	-NQF/NQG
8	0.75	YE/D-BU	4171	Transmission Position Sensor A 9V Reference	II	—
9	0.75	WH/BN	1226	Transmission Fluid Pressure Switch Signal Bit 3	II	—
10	0.75	L-GN/BK	2529	Transmission Fluid Pressure Switch Signal Bit 4	II	—
11 - 13	—	—	—	Not Occupied	—	—

14	0.5	GY/D-BU	6358	Output Speed Signal	II	NQF/NQG
	0.75	GY/D-BU	6358	Output Speed Signal	II	-NQF/NQG
15	0.75	L-GN/YE	6353	Input Speed Signal	II	—
16	—	—	—	Not Occupied	—	—
17	0.75	WH	4508	Transmission Clutch G Control	II	—
18	0.75	BN	6400	Clutch A Control	II	—
19	0.75	GY	6402	Clutch C Control	II	—
20	—	—	—	Not Occupied	—	—
21	0.75	WH/BN	2527	Shift Solenoid Control 5	II	—
22	—	—	—	Not Occupied	—	—
23	0.75	WH/L-GN	1222	1 Shift Solenoid Valve Control	II	—
24	0.75	YE/BK	1223	2 Shift Solenoid Valve Control	II	—
25	—	—	—	Not Occupied	—	—
26	0.5	WH/BK	5983	PRNDL C Signal	II	—
27	0.5	VT/WH	5981	PRNDL A Signal	II	—
28	0.75	BK/BN	586	Transmission Oil Temperature Sensor Low Reference	II	—
29 - 32	—	—	—	Not Occupied	—	—
33	0.75	L-GN/GY	6387	Transmission High Side Driver 1 Signal Driver	II	—
34	—	—	—	Not Occupied	—	—

35	0.5	VT/BK	2139	Run/Crank Ignition 1 Voltage	II	—
36	0.75	L-GN/VT	1225	Transmission Fluid Pressure Switch Signal Bit 2	II	—
37	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
38	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
39 - 48	—	—	—	Not Occupied	—	—
49	0.75	GY/BN	6388	Transmission High Side Driver 2 Signal	II	—
50	—	—	—	Not Occupied	—	—
51	0.5	VT/YE	5985	Accessory Wakeup Serial Data	II	—
52	0.75	VT/GY	1224	Transmission Fluid Pressure Switch Signal Bit 1	II	—
53	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
54	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
55	0.5	GY/WH	4168	PRNDL P Signal	II	—
56 - 57	—	—	—	Not Occupied	—	—
58	0.5	GY/BN	5982	PRNDL B Signal	II	—
59 - 62	—	—	—	Not Occupied	—	—
63	0.75	BN/WH	585	Transmission Oil Temperature Sensor Signal	II	—
64	—	—	—	Not Occupied	—	—
65	1.5	BK/WH	451	Signal Ground	I	—
66	1.5	RD/L-GN	1840	Battery Positive Voltage	I	—

--	--	--	--	--	--	--	--

K73 Telematics Communication Interface Control Module X1



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

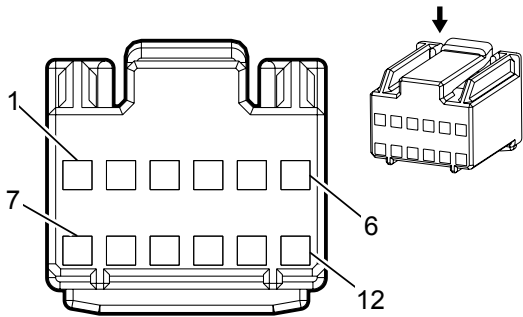
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575546	J-35616-16 (LT GN)	J-38125-559	15445905	Delphi 23	J	J

K73 Telematics Communication Interface Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/L-GN	1102	Low Speed GMLAN Serial Data #2	I	—
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	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION						

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



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

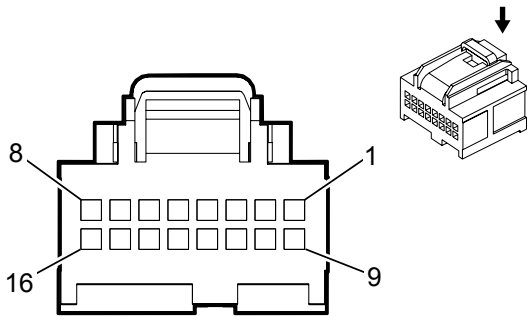
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575546	J-35616-16 (LT GN)	J-38125-559	15445905	Delphi 23	J	J

K73 Telematics Communication Interface Control Module X2

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	I	—
4	0.5	WH/L-GN	1305	High Speed GMLAN Serial Data (-)9	I	—
5	0.5	BARE	1792	Low Reference	I	—
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



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13819409
Service Connector: 13582576
Description: 16-Way F 0.64 OCS Series (BK)

Terminal Part Information

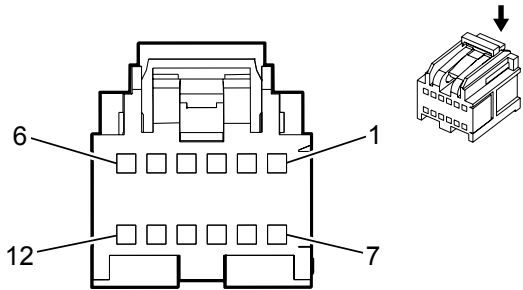
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

K74 Human Machine Interface Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY/YE	5149	Voice Recognition Audio Signal	I	UE1
	0.35	D-BU	655	Cellular Telephone Microphone Signal	I	-UE1
2	0.35	BK/GY	5152	Voice Recognition Audio Low Reference	I	UE1
	0.35	BK/BN	654	Cellular Telephone Microphone Low Reference	I	-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	D-BU/L-GN	1304	High Speed GMLAN Serial Data (+)9	I	UE1
	0.35	D-BU/L-GN	1304	High Speed GMLAN Serial Data (+)9	I	-UE1
12	0.5	WH/L-GN	1305	High Speed GMLAN Serial Data (-)9	I	UE1
	0.35	WH/L-GN	1305	High Speed GMLAN Serial Data (-)9	I	-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



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33104389
Service Connector: 13594072
Description: 12-Way F 0.64 OCS Series (GY)

Terminal Part Information

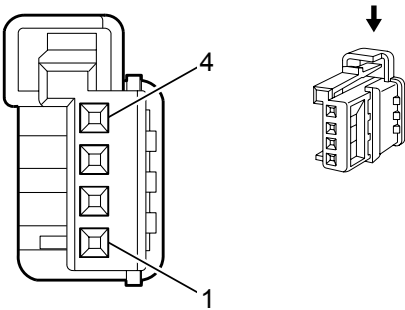
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

K74 Human Machine Interface Control Module X2

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	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

10 - 12	—	—	—	Not Occupied	—	—

K77 Remote Control Door Lock Receiver



Connector Part Information

Harness Type: Body
OEM Connector: 10768790
Service Connector: 13584096
Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

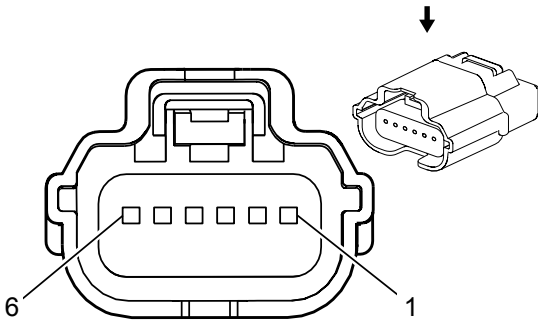
Terminal Part Information

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	—

K85 Passenger Presence Module



Connector Part Information

Harness Type: Passenger Seat Cushion
OEM Connector: 31404-6132
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Series, Sealed (BK)

Terminal Part Information

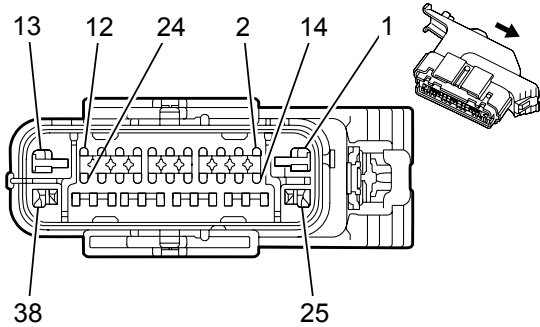
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K85 Passenger Presence Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD/L-GN	4440	Battery Positive Voltage	I	—
2	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
3	—	—	—	Not Occupied	—	—
4	0.35	BK/WH	2751	Signal Ground	I	—
5	0.35	L-BU/RD	5612	Passenger Seat Belt Tension Sensor 5V Reference	I	—
6	0.35	VT/OG	5611	Passenger Seat Belt Tension Sensor Signal	I	—

14	0.5	D-BU/WH	1937	Secondary Fuel Level Sensor Signal	II	—
15	0.5	WH	4499	High Speed GMLAN Serial Data (-) 7	II	—
16	0.5	VT/D-BU	3674	NOx Sensor 1 Control	II	—
17	0.75	VT/L-GN	439	Run/Crank Ignition 1 Voltage	II	—
18	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	II	—
19	0.5	BK/VT	412	Fuel Filter Temperature Sensor Low Reference	II	—
20 - 21	—	—	—	Not Occupied	—	—
22	2.5	BK	2150	Ground	I	—
23	0.5	BK	7444	Fuel System Control Module Shield Ground	I	—
24	2.5	WH/BN	4138	Fuel Pump Supply Voltage Phase 3	I	—
25	0.5	BK/D-BU	6863	Water In Fuel Sensor Low Reference	II	—
26 - 27	—	—	—	Not Occupied	—	—
28	0.5	BK/L-GN	6281	Fuel Level Sensor Low Reference	II	—
29	0.5	BK/L-GN	6281	Fuel Level Sensor Low Reference	II	—
30	0.5	D-BU/BN	4498	High Speed GMLAN Serial Data (+) 7	II	—

K38 Chassis Control Module (L96)



Connector Part Information

Harness Type: Chassis
OEM Connector: 13518748
Service Connector: 19178089
Description: 38-Way F 0.64, 2.8 GT Series, Sealed (BK)

Terminal Part Information

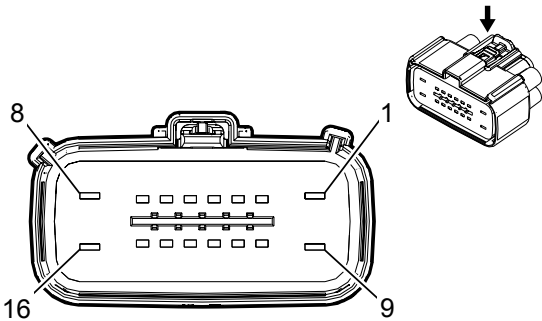
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575408	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
II	13576407	J-35616-4A (PU)	J-38125-553	15304720	Delphi 19	4	5
III	13578883	J-35616-64B (LT BU)	J-38125-215A	SAITS-A03T-M064	Yazaki 14	9	9
IV	13578924	J-35616-64B (LT BU)	J-38125-215A	SAITS-A03T-M064	Yazaki 14	9	9
V	13579766	J-35616-64B (LT BU)	J-38125-215A	SAITS-A03T-M064	Yazaki 14	9	9

K38 Chassis Control Module (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	RD/VT	1940	Battery Positive Voltage	II	—
2 - 4	—	—	—	Not Occupied	—	—
5	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	IV	—
6	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	IV	—
7	—	—	—	Not Occupied	—	—
8	0.5	VT/YE	5985	Accessory Wakeup Serial Data	III	—
9	—	—	—	Not Occupied	—	—

10	0.5	D-BU/WH	7446	Fuel Line Pressure Sensor Signal	III	—
11 - 12	—	—	—	Not Occupied	—	—
13	2.5	GY	120	Fuel Pump Control	I	—
14 - 16	—	—	—	Not Occupied	—	—
17	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	IV	—
18	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	IV	—
19	—	—	—	Not Occupied	—	—
20	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	III	—
21	0.75	VT/L-GN	439	Run/Crank Ignition 1 Voltage	V	—
22	0.5	BN/RD	7445	Fuel Line Pressure Sensor 5V Reference	III	—
23	0.5	BK/YE	7447	Fuel Line Pressure Sensor Low Reference	III	—
24	0.5	D-BU	7444	Fuel System Control Module Shield Ground	III	—
25	2.5	BK	2150	Ground	I	—
26 - 37	—	—	—	Not Occupied	—	—
38	2.5	BK/L-GN	1580	Fuel Pump Low Reference	I	—

K111 Fuel Pump Driver Control Module (Light Duty)



Connector Part Information

Harness Type: Chassis
OEM Connector: 33103129
Service Connector: 13589631
Description: 16-Way F 1.5, 2.8 Series, Sealed (GY)

Terminal Part Information

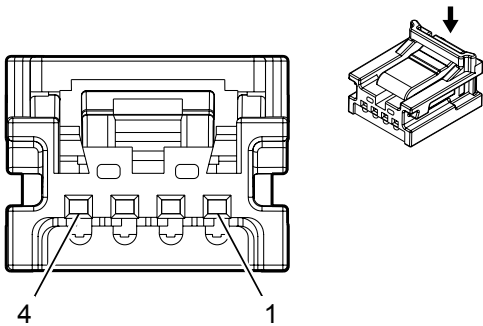
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13505803	J-35616-35 (VT)	J-38125-12A	1326030-8	Lear 17	4	D
II	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

K111 Fuel Pump Driver Control Module (Light Duty)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	RD/VT	1940	Battery Positive Voltage	I	—
2	0.5	GY	5660	Fuel Pump Controller Data Out Signal	II	—
3	—	—	—	Not Occupied	—	—
4	0.5	D-BU/BK	7493	High Speed GMLAN Serial Data (+)3	II	—
5	0.5	WH	7494	High Speed GMLAN Serial Data (-)3	II	—
6	0.5	VT/L-GN	439	Run/Crank Ignition 1 Voltage	II	—
7	0.5	VT/YE	5985	Accessory Wakeup Serial Data	II	—
8	2.5	GY	120	Fuel Pump Control	I	—

9	2.5	BK	2150	Ground	I	—
10 - 14	—	—	—	Not Occupied	—	—
15	0.5	D-BU	7444	Fuel System Control Module Shield Ground	II	—
16	2.5	BK/L-GN	1580	Fuel Pump Low Reference	I	—

K112A Hybrid/EV Battery Interface Control Module 1 X1



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 33228283
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F Mini 50 Series (BK)

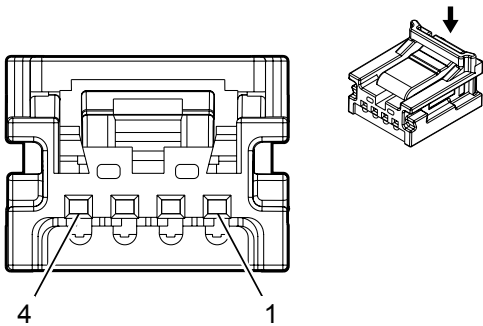
Terminal Part Information

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

K112A Hybrid/EV Battery Interface Control Module 1 X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	L-GN	1726	Battery Cell Sensing Serial Data (-) 3	I	—
2	0.35	WH/L-GN	1725	Battery Cell Sensing Serial Data (+) 3	I	—
3	0.35	VT	1759	Battery Cell Sensing Serial Data (-) 4	I	—
4	0.35	WH/VT	1758	Battery Cell Sensing Serial Data (+) 4	I	—

K112A Hybrid/EV Battery Interface Control Module 1 X2



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 33228285
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F Mini 50 Series (GY)

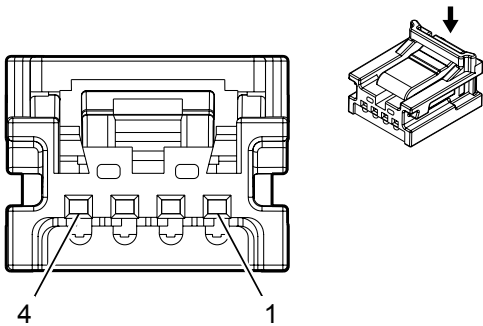
Terminal Part Information

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

K112A Hybrid/EV Battery Interface Control Module 1 X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU	1626	Battery Cell Sensing Serial Data (-) 2	I	—
2	0.35	WH/D-BU	1625	Battery Cell Sensing Serial Data (+) 2	I	—
3	0.35	WH	1511	Battery Cell Sensing Serial Data (-) 1	I	—
4	0.35	WH/BN	1510	Battery Cell Sensing Serial Data (+) 1	I	—

K112B Hybrid/EV Battery Interface Control Module 2 X1



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 33228283
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F Mini 50 Series (BK)

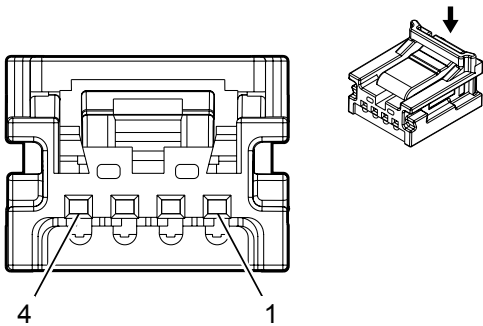
Terminal Part Information

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

K112B Hybrid/EV Battery Interface Control Module 2 X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH	1511	Battery Cell Sensing Serial Data (-) 1	I	—
2	0.35	WH/BN	1510	Battery Cell Sensing Serial Data (+) 1	I	—
3	0.35	WH	1511	Battery Cell Sensing Serial Data (-) 1	I	—
4	0.35	WH/BN	1510	Battery Cell Sensing Serial Data (+) 1	I	—

K112B Hybrid/EV Battery Interface Control Module 2 X2



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 33228285
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F Mini 50 Series (GY)

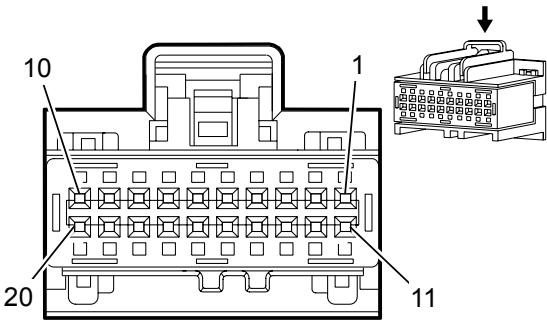
Terminal Part Information

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

K112B Hybrid/EV Battery Interface Control Module 2 X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT	1759	Battery Cell Sensing Serial Data (-) 4	I	—
2	0.35	WH/VT	1758	Battery Cell Sensing Serial Data (+) 4	I	—
3	0.35	L-GN	1726	Battery Cell Sensing Serial Data (-) 3	I	—
4	0.35	WH/L-GN	1725	Battery Cell Sensing Serial Data (+) 3	I	—

K114B Hybrid/EV Powertrain Control Module 2 X1



Connector Part Information

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

Terminal Part Information

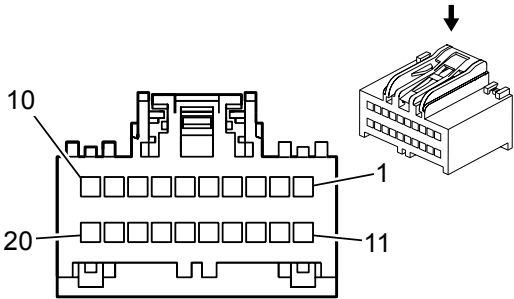
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300440	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

K114B Hybrid/EV Powertrain Control Module 2 X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	7494	High Speed GMLAN Serial Data (-)3	I	—
2	0.5	D-BU/BK	7493	High Speed GMLAN Serial Data (+)3	I	—
3 - 6	—	—	—	Not Occupied	—	—
7	0.5	L-GN	5060	Low Speed GMLAN Serial Data	I	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.5	YE	5530	Hood Open Switch Signal	I	—
11	—	—	—	Not Occupied	—	—
12	0.5	WH	7494	High Speed GMLAN Serial Data (-)3	I	—
13	0.5	D-BU/BK	7493	High Speed GMLAN Serial Data (+)3	I	—
14 - 19	—	—	—	Not Occupied	—	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

14 - 19	—	—	—	Not Occupied	—	—
20	0.35	D-BU/VT	5599	Fan Speed Signal 2	I	—

K114B Hybrid/EV Powertrain Control Module 2 X2



Connector Part Information

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

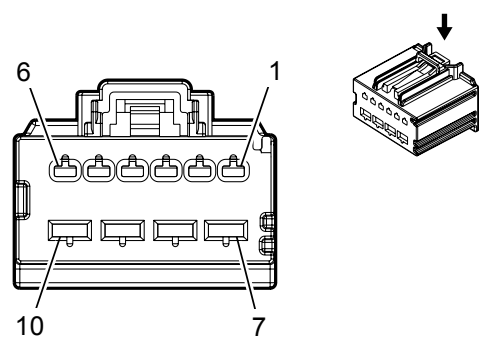
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300440	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

K114B Hybrid/EV Powertrain Control Module 2 X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	YE/L-GN	5598	Fan Speed Signal 1	I	—
5 - 8	—	—	—	Not Occupied	—	—
9	0.5	VT/BK	2139	Run/Crank Ignition 1 Voltage	I	—
10 - 20	—	—	—	Not Occupied	—	—

K114B Hybrid/EV Powertrain Control Module 2 X3



Connector Part Information

Harness Type: Body
OEM Connector: 33175128
Service Connector: 13596102
Description: 10-Way F 1.5, 2.8 Series (BK)

Terminal Part Information

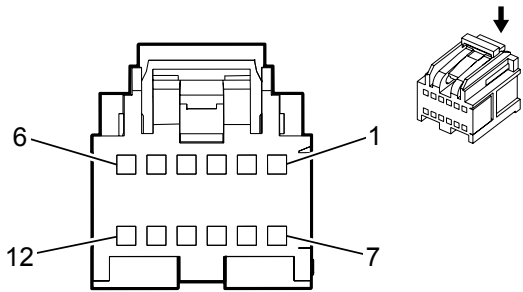
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578893	J-35616-35 (VT)	J-38125-11A	7116-4110-02	Yazaki 9	E	C
II	19300635	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

K114B Hybrid/EV Powertrain Control Module 2 X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
3	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
4	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
5	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
6	—	—	—	Not Occupied	—	—
7	0.5	BK	1250	Ground	I	—
8	—	—	—	Not Occupied	—	—
9	0.35	VT/YE	5985	Accessory Wakeup Serial Data	I	—

10	0.5	RD/BN	2940	Battery Positive Voltage	I	—

K114B Hybrid/EV Powertrain Control Module 2 X4



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 33104389
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 0.64 OCS Series (GY)

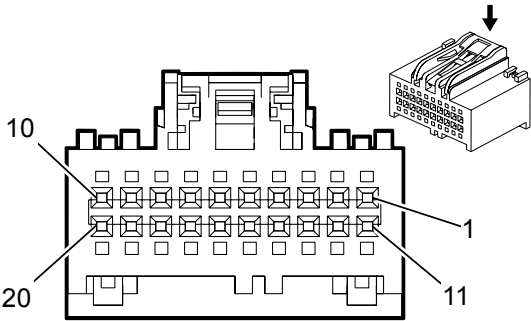
Terminal Part Information

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

K114B Hybrid/EV Powertrain Control Module 2 X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BN/L-GN	3959	High Voltage Battery 1 (+) Relay Control	I	—
2	0.35	VT/GY	3961	High Voltage Battery (-) Relay Control	I	—
3	0.35	GY	5138	Precharge Relay	I	—
4 - 6	—	—	—	Not Occupied	—	—
7	0.35	BK	150	Ground	I	—
8 - 12	—	—	—	Not Occupied	—	—

K114B Hybrid/EV Powertrain Control Module 2 X5



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 33125545
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 64 Series, Sealed (BK)

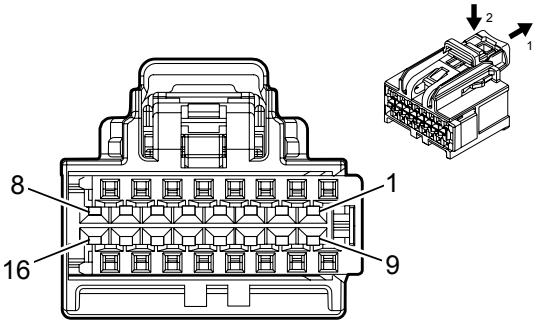
Terminal Part Information

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

K114B Hybrid/EV Powertrain Control Module 2 X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT	5087	High Voltage Interlock Loop Signal 1	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.35	D-BU/YE	2962	High Voltage Battery Current Sensor Course Signal	I	—
5 - 10	—	—	—	Not Occupied	—	—
11	0.5	BK/BN	5088	High Voltage Interlock Loop Low Reference 1	I	—
12	—	—	—	Not Occupied	—	—
13	0.35	VT/RD	2965	High Voltage Battery Current Sensor Voltage Reference	I	—
14	0.35	BK/GY	2963	High Voltage Battery Current Sensor Low Reference	I	—
15 - 20	—	—	—	Not Occupied	—	—

K114B Hybrid/EV Powertrain Control Module 2 X6



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 33104226
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 0.64 OCS Series (BN)

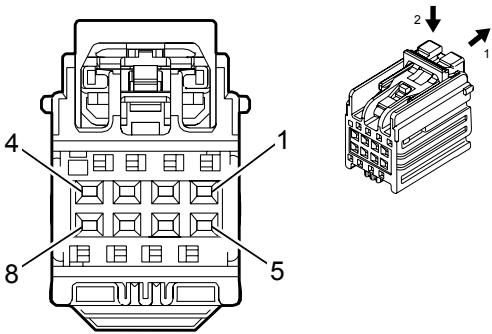
Terminal Part Information

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

K114B Hybrid/EV Powertrain Control Module 2 X6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	VT	3546	High Voltage Battery Positive Monitor Signal	I	—
3 - 6	—	—	—	Not Occupied	—	—
7	0.5	GY/VT	3548	High Voltage Battery Negative Monitor Signal	I	—
8 - 16	—	—	—	Not Occupied	—	—

K114B Hybrid/EV Powertrain Control Module 2 X7



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 33183559
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F YESC Kaizen Series (GY)

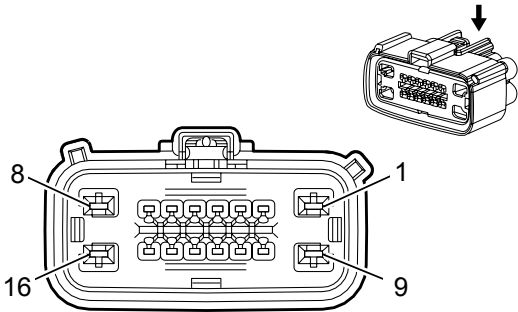
Terminal Part Information

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

K114B Hybrid/EV Powertrain Control Module 2 X7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH	1511	Battery Cell Sensing Serial Data (-) 1	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.35	D-BU	1626	Battery Cell Sensing Serial Data (-) 2	I	—
5	0.35	WH/BN	1510	Battery Cell Sensing Serial Data (+) 1	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.35	WH/D-BU	1625	Battery Cell Sensing Serial Data (+) 2	I	—

K133 Trailer Brake Power Control Module



Connector Part Information

Harness Type: Chassis
OEM Connector: 33181359
Service Connector: 13597503
Description: 16-Way F 1.5, 2.8 Series, Sealed (D-GY)

Terminal Part Information

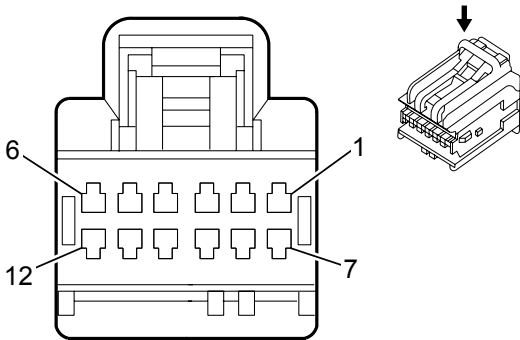
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13505803	J-35616-35 (VT)	J-38125-12A	1326030-8	Lear 17	4	D
II	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

K133 Trailer Brake Power Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	RD/L-GN	242	Battery Positive Voltage	I	—
2	0.5	WH/BK	2223	Trailer Brake Control Signal	II	—
3 - 4	—	—	—	Not Occupied	—	—
5	0.5	YE/BK	2224	Trailer Brake Enable Signal	II	—
6 - 7	—	—	—	Not Occupied	—	—
8	2.5	D-BU	47	Trailer Auxiliary Control	I	—
9	2.5	BK	1750	Ground	I	—
10 - 11	—	—	—	Not Occupied	—	—
12	0.5	L-GN/VT	4114	Local Interconnect Network Serial Data Bus 14	II	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

13 - 16	—	—	—	Not Occupied	—	—

K182 Parking Assist Control Module X1



Connector Part Information

Harness Type: Body
OEM Connector: 13551678
Service Connector: 89047364
Description: 12-Way F 0.64 Series (BK)

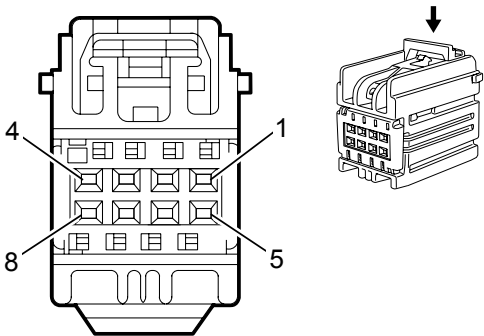
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575845	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	13579945	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

K182 Parking Assist Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/L-GN	3140	Battery Positive Voltage	II	—
2	—	—	—	Not Occupied	—	—
3	0.35	L-GN/BN	5852	Rear Park Assist LED Disable Signal	I	—
4	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.75	BK/WH	2751	Signal Ground	II	—
8	0.35	GY/L-GN	2555	Rear Park Assist Disable Signal	I	—
9 - 12	—	—	—	Not Occupied	—	—

K182 Parking Assist Control Module X2



Connector Part Information

Harness Type: Body
OEM Connector: 13551679
Service Connector: 19115653
Description: 8-Way F YESC Kaizen Series (L-GY)

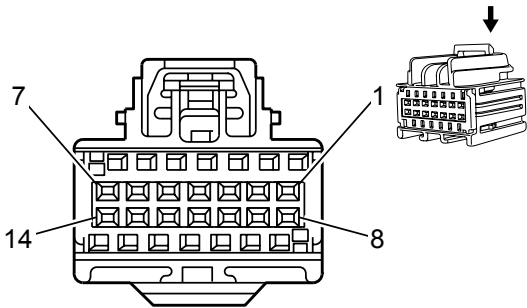
Terminal Part Information

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

K182 Parking Assist Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	2375	Left Rear Corner Object Sensor Signal	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	YE/D-BU	2376	Left Rear Middle Object Sensor Signal	I	—
4	0.35	BN/WH	2374	Object Sensor Control	I	—
5	0.35	YE/VT	2378	Right Rear Corner Object Sensor Signal	I	—
6	—	—	—	Not Occupied	—	—
7	0.35	YE/WH	2377	Right Rear Middle Object Sensor Signal	I	—
8	0.35	BK/GY	2379	Object Sensor Low Reference	I	—

K182 Parking Assist Control Module X3



Connector Part Information

Harness Type: Body
OEM Connector: 15491263
Service Connector: 15127038
Description: 14-Way F 0.64 Kaizen Series (BU)

Terminal Part Information

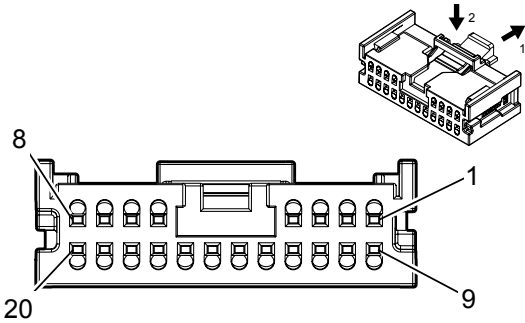
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575845	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	19300440	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

K182 Parking Assist Control Module X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE/VT	5213	Front Parking Left/Right/Mid Sensor	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.35	VT/WH	5215	Front Parking Left Corner Sensor	II	—
5	0.35	YE/GY	5216	Front Parking Left Mid Sensor	II	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.35	BK/D-BU	5214	Front Parking Sensor Low Reference	II	—
9 - 10	—	—	—	Not Occupied	—	—
11	0.35	WH/GY	5217	Front Parking Right Corner Sensor	II	—
12	0.35	VT/GY	5218	Front Parking Right Mid Sensor	II	—
				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		

13 - 14	—	—	—	Not Occupied	—	—

K188 Human Machine Interface Control Module Bypass Module X1



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 33167777
Service Connector: 13596105
Description: 20-Way F Mini 50 Series (BK)

Terminal Part Information

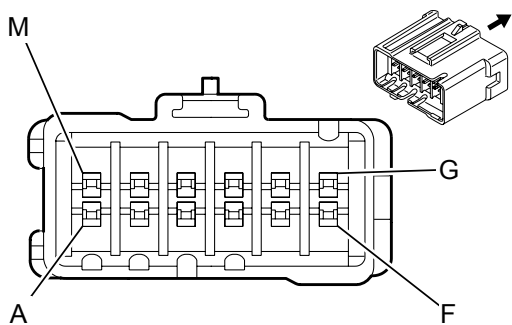
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579954	No Tool Required	J-38125-553	Not Available	Not Available	Not Available	Not Available
II	19330186	No Tool Required	J-38125-11A	Not Available	Not Available	Not Available	Not Available

K188 Human Machine Interface Control Module Bypass Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD/GY	2840	Battery Positive Voltage	I	—
2	0.35	GY/VT	755	RAP Relay Coil Control	I	—
3	0.35	GN/WH	7527	Local Interconnect Network Serial Data Bus 5	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	BK	2550	Ground	I	—
6	0.35	GY/YE	6972	Camera Signal 2 +	I	—
7	—	—	—	Not Occupied	—	—
8	0.35	GY/YE	6972	Camera Signal 2 +	I	—

9	0.35	GN/WH	24	Backup Lamp Control	I	—
10 - 17	—	—	—	Not Occupied	—	—
18	0.35	WH/BU	6973	Camera Signal 2	I	—
19	0.35	BARE	6974	Camera Low Reference	II	—
20	0.35	WH/BU	6973	Camera Signal 2	I	—

JX200 Splice Pack



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15305291
Service Connector: 15305291
Description: 12-Way F 280 Metri-Pack Series (BK)

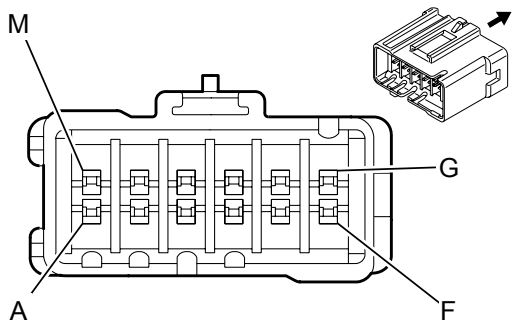
Terminal Part Information

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



Connector Part Information

Harness Type: Body
OEM Connector: 15305291
Service Connector: 15305291
Description: 12-Way F 280 Metri-Pack Series (BK)

Terminal Part Information

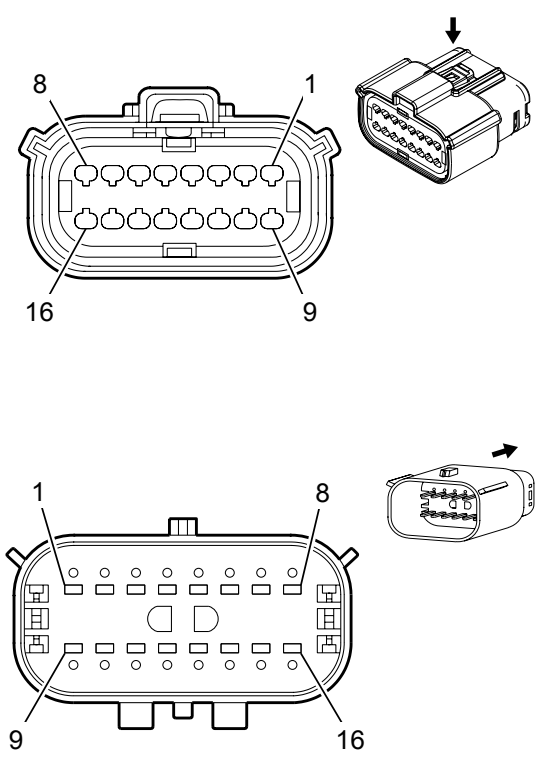
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575721	J-35616-4A (PU)	J-38125-553	12110844	Delphi 4	E	4
II	13575721	J-35616-4A (PU)	J-38125-553	12110844	Delphi 4	E	A

JX300 Splice Pack

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-GN	5060	Low Speed GMLAN Serial Data	II	—
B - C	—	—	—	Not Occupied	—	—
D	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
E	—	—	—	Not Occupied	—	—
F	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	AL0
	0.5	L-GN	5060	Low Speed GMLAN Serial Data	II	HP5
G - H	—	—	—	Not Occupied	—	—
J	0.5	L-GN	5060	Low Speed GMLAN Serial Data	II	—
K	0.5	L-GN	5060	Low Speed GMLAN Serial Data	II	—
10/25/2016 - VERSION 1.0				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION		965 / 1254

L	0.5	L-GN	5060	Low Speed GMLAN Serial Data	II	—
M	0.5	L-GN	5060	Low Speed GMLAN Serial Data	II	—

X100 Forward Lamp Harness to Front Bumper Harness (X88+UD5)



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 33120329
Service Connector: 19354087
Description: 16-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Front Bumper
OEM Connector: 15533030
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

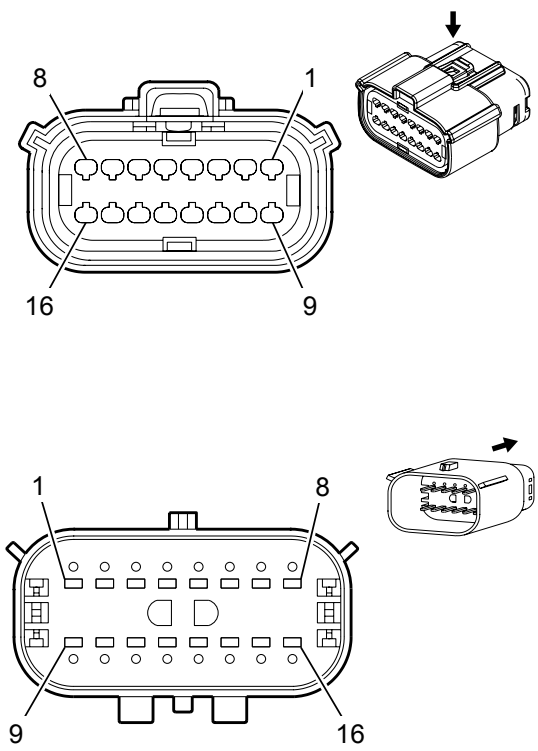
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X100 Forward Lamp Harness to Front Bumper Harness (X88+UD5)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BK	150	I	—	Ground	1	0.5	BK	150	II	—
2	1	BK	250	I	—	Ground	2	0.5	BK	250	II	—

3	0.5	BN/VT	2234	I	—	Front Fog Lamp Control	3	0.5	BN/VT	2234	II	—
4	0.5	YE/VT	5213	I	—	Front Parking Left/Right/Mid Sensor	4	0.5	YE/L-GN	5213	II	—
5	0.5	VT/WH	5215	I	—	Front Parking Left Corner Sensor	5	0.5	VT/WH	5215	II	—
6	0.5	YE/GY	5216	I	—	Front Parking Left Mid Sensor	6	0.5	YE/GY	5216	II	—
7	0.5	WH/GY	5217	I	—	Front Parking Right Corner Sensor	7	0.5	WH/GY	5217	II	—
8 - 9	—	—	—	—	—	Not Occupied	8 - 9	—	—	—	—	—
10	0.5	VT/GY	5218	I	—	Front Parking Right Mid Sensor	10	0.5	VT/GY	5218	II	—
11	0.5	BK/D-BU	5214	I	—	Front Parking Sensor Low Reference	11	0.5	BK/D-BU	5214	II	—
12 - 16	—	—	—	—	—	Not Occupied	12 - 16	—	—	—	—	—

X100 Forward Lamp Harness to Front Bumper Harness (X88-UD5)



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 33122174
Service Connector: 19354087
Description: 16-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Front Bumper
OEM Connector: 33101516
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

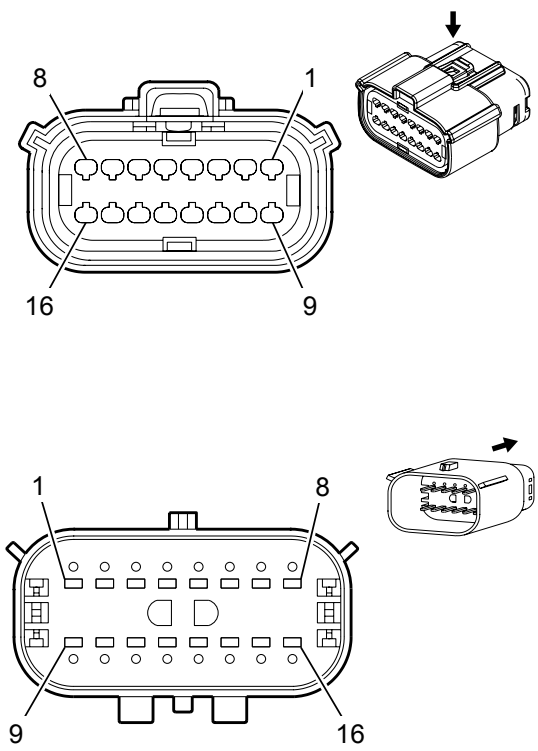
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X100 Forward Lamp Harness to Front Bumper Harness (X88-UD5)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BK	150	I	—	Ground	1	0.5	BK	150	II	—
2	1	BK	250	I	—	Ground	2	0.5	BK	250	II	—

3	0.5	BN/VT	2234	I	—	Front Fog Lamp Control	3	0.5	BN/VT	2234	II	—
4 - 16	—	—	—	—	—	Not Occupied	4 - 16	—	—	—	—	—

X100 Forward Lamp Harness to Front Bumper Harness (Z88+UD5)



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 33120329
Service Connector: 19354087
Description: 16-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Front Bumper
OEM Connector: 15533030
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

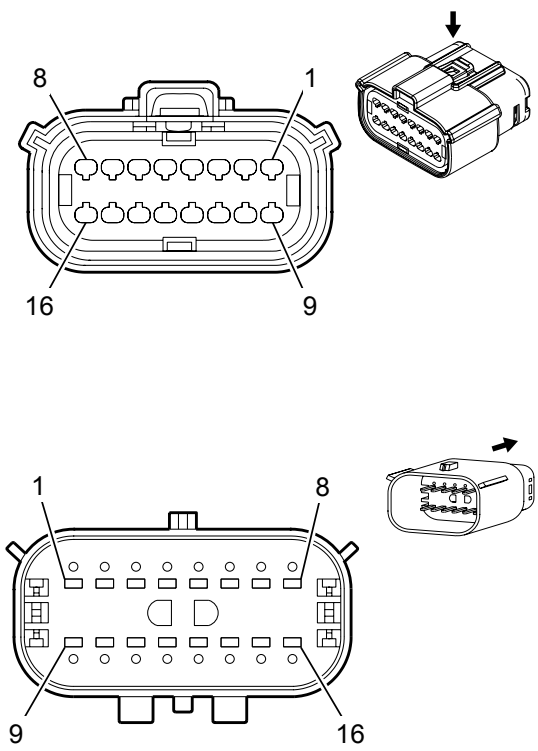
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X100 Forward Lamp Harness to Front Bumper Harness (Z88+UD5)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BK	150	I	—	Ground	1	0.5	BK	150	II	—
2	1	BK	250	I	—	Ground	2	0.5	BK	250	II	—

3	0.5	BN/VT	2234	I	—	Front Fog Lamp Control	3	0.5	BN/VT	2234	II	—
4	0.5	YE/VT	5213	I	—	Front Parking Left/Right/Mid Sensor	4	0.5	YE/L-GN	5213	II	—
5	0.5	VT/WH	5215	I	—	Front Parking Left Corner Sensor	5	0.5	VT/WH	5215	II	—
6	0.5	YE/GY	5216	I	—	Front Parking Left Mid Sensor	6	0.5	YE/GY	5216	II	—
7	0.5	WH/GY	5217	I	—	Front Parking Right Corner Sensor	7	0.5	WH/GY	5217	II	—
8 - 9	—	—	—	—	—	Not Occupied	8 - 9	—	—	—	—	—
10	0.5	VT/GY	5218	I	—	Front Parking Right Mid Sensor	10	0.5	VT/GY	5218	II	—
11	0.5	BK/D-BU	5214	I	—	Front Parking Sensor Low Reference	11	0.5	BK/D-BU	5214	II	—
12 - 16	—	—	—	—	—	Not Occupied	12 - 16	—	—	—	—	—

X100 Forward Lamp Harness to Front Bumper Harness (Z88-UD5)



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 33122174
Service Connector: 19354087
Description: 16-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Front Bumper
OEM Connector: 33101516
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

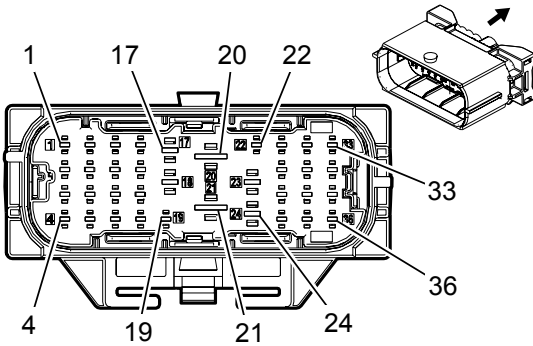
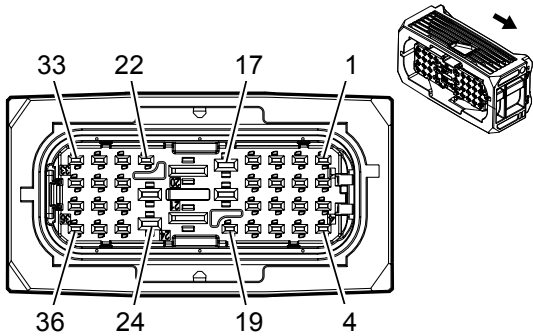
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X100 Forward Lamp Harness to Front Bumper Harness (Z88-UD5)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BK	150	I	—	Ground	1	0.5	BK	150	II	—
2	1	BK	250	I	—	Ground	2	0.5	BK	250	II	—

3	0.5	BN/VT	2234	I	—	Front Fog Lamp Control	3	0.5	BN/VT	2234	II	—
4 - 16	—	—	—	—	—	Not Occupied	4 - 16	—	—	—	—	—

X101 Engine Harness to Engine Chassis Harness (L5P)



Connector Part Information

Harness Type: Engine
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 Chassis
OEM Connector: 13930004
Service Connector: 19330685
Description: 36-Way M 1.5, 2.8, 5.8 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	13582180	J-35616-14 (GN)	J-38125-560	1241374-1	Lear 17	E	2
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	19354091	J-35616-35 (VT)	J-38125-557	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	13580819	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VII	19353104	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X101 Engine Harness to Engine Chassis Harness (L5P)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option

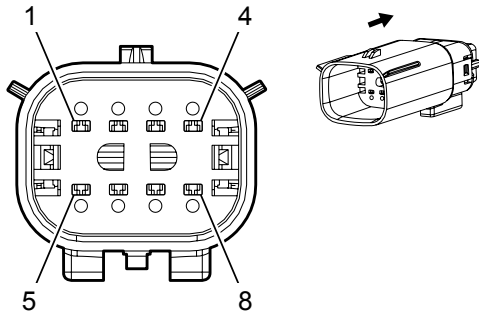
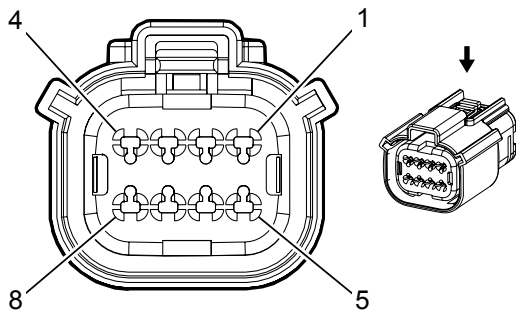
1	0.5	D-BU/BN	4498	II	—	High Speed GMLAN Serial Data (+) 7	1	0.5	BU/BN	4498	VII	L5P
2	0.5	WH	4499	II	—	High Speed GMLAN Serial Data (-) 7	2	0.5	WH	4499	VII	L5P
3	0.5	D-BU	2500	I	—	High Speed GMLAN Serial Data (+) 1	3	0.5	BU	2500	VII	L5P
4	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	4	0.5	WH	2501	VII	L5P
5	0.5	BK/BN	6782	II	—	Exhaust Gas Temperature Sensor 1 Low Reference	5	0.5	BK/BN	6782	VII	L5P
6	0.5	D-BU/WH	5277	II	—	Exhaust Gas Temperature Sensor 1	6	0.5	BU/WH	5277	VII	L5P
7	0.5	BK/D-BU	6783	II	—	Exhaust Gas Temperature Sensor 2 Low Reference	7	0.5	BK/BU	6783	VII	L5P
8	0.5	D-BU/L-GN	5377	II	—	Exhaust Gas Temperature Sensor 2	8	0.5	BU/GN	5377	VII	L5P
9	0.5	BK/D-BU	6274	II	—	Exhaust Gas Recirculation Temperature Sensor Low Reference	9	0.5	BK/BU	6274	VII	L5P
10	0.5	WH/BN	3237	II	—	Exhaust Gas Recirculation Temperature Sensor Signal	10	0.5	WH/BN	3237	VII	L5P
11	0.5	BK/YE	6275	II	—	Exhaust Gas Recirculation Temperature Sensor 2	11	0.5	BK/YE	6275	VII	L5P

						Low Reference						
12	0.5	YE/L-GN	3236	II	—	Exhaust Gas Recirculation Temperature Sensor 2 Signal	12	0.5	YE/GN	3236	VII	L5P
13	0.5	YE/BK	3682	II	—	Charge Air Cooler Inlet Temperature Sensor Low Reference	13	0.5	YE/BK	3682	VII	L5P
14	0.5	L-GN	3683	II	—	Charge Air Cooler Inlet Temperature Sensor Signal	14	0.5	GN	3683	VII	L5P
15	0.5	BN/BK	2929	II	—	Fuel Metering Valve Low Control	15	0.5	BN/BK	2929	VII	L5P
16	0.5	YE	2928	II	—	Fuel Metering Valve High Control	16	0.5	YE	2928	VII	L5P
17	0.5	VT/YE	5985	IV	—	Accessory Wakeup Serial Data	17	0.5	VT/YE	443	VI	L5P
18	0.5	VT/BK	2139	IV	—	Run/Crank Ignition 1 Voltage	18	0.5	VT/BK	2139	VI	L5P
19 - 21	—	—	—	—	—	Not Occupied	19 - 21	—	—	—	—	—
22	0.5	VT/D-BU	3674	I	—	NOx Sensor 1 Control	22	0.5	VT/BU	3674	V	L5P
23	0.5	GY	23	III	—	Generator Field Duty Cycle Signal	23	0.5	GY	23	VI	L5P
24	0.75	BN	25	III	—	Charge Indicator Control	24	0.5	BN	25	VI	L5P

25	0.5	BN/RD	7445	II	—	Fuel Line Pressure Sensor 5V Reference	25	0.5	BN/RD	7445	VII	L5P
26	0.5	BK/YE	7447	II	—	Fuel Line Pressure Sensor Low Reference	26	0.5	BK/YE	7447	VII	L5P
27	0.5	D-BU/WH	7446	II	—	Fuel Line Pressure Sensor Signal	27	0.5	BU/WH	7446	VII	L5P
28	—	—	—	—	—	Crankshaft Position Sensor Replicated Signal	28	0.5	VT/BU	6091	VII	L5P
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	0.5	D-BU/L-GN	7071	II	—	Heater Fuel Control	30	0.5	BU/GN	7071	VII	L5P
31	0.5	VT/BN	2927	II	—	Hydrocarbon Injector Low Control	31	0.5	VT/BN	2927	VII	L5P
32	0.5	BN/D-BU	2926	II	—	Hydrocarbon Injector High Control	32	0.5	BN/BU	2926	VII	L5P
33	0.5	D-BU/BN	4498	II	—	High Speed GMLAN Serial Data (+) 7	33	0.5	BU/BN	4498	VII	L5P
34	0.5	WH	4499	II	—	High Speed GMLAN Serial Data (-) 7	34	0.5	WH	4499	VII	L5P
35	0.5	D-BU	2500	I	—	High Speed GMLAN Serial Data (+) 1	35	0.5	BU	2500	VII	L5P
36	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	36	0.5	WH	2501	VII	L5P

--	--	--	--	--	--	--	--	--	--	--	--	--

X105 Engine Harness to Forward Lamp Harness (L8B)



Connector Part Information

Harness Type: Engine
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 15456955
Service Connector: 19300474
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	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

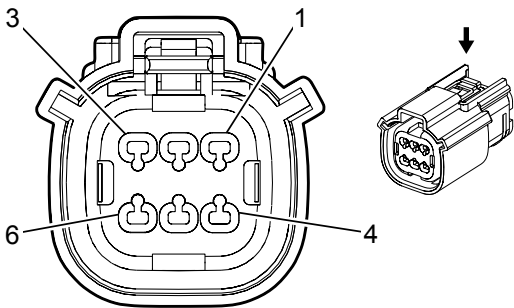
X105 Engine Harness to Forward Lamp Harness (L8B)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BN/YE	473	I	—	High Speed Cooling Fan Relay Control	1	0.5	BN/YE	473	II	—
2	0.5	BK/D-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	2	0.5	BK/D-BU	61	II	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

						Outside Ambient Temperature Sensor Low Reference						
2	0.5	BK/D-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference Outside Ambient Temperature Sensor Low Reference	2	0.5	BK/D-BU	61	II	—
3	0.5	D-BU/GY	636	I	—	Outside Ambient Air Temperature Sensor Signal Outside Ambient Air Temperature Sensor Signal	3	0.5	D-BU/GY	636	II	—
3	0.5	D-BU/GY	636	I	—	Outside Ambient Air Temperature Sensor Signal Outside Ambient Air Temperature Sensor Signal	3	0.5	D-BU/GY	636	II	—
4	0.5	GY/VT	3873	I	—	Powertrain Electronics Cooling Loop (PECL) Temperature Sensor Signal	4	0.5	GY/VT	3873	II	—
5	0.5	VT/D-BU	5290	I	—	Powertrain Main Relay Fused Supply 1	5	0.5	VT/D-BU	5290	II	—
6	0.5	L-GN/VT	4621	I	—	Local Interconnect Network Serial Data Bus 21	6	0.5	L-GN/VT	4621	II	—
7	0.5	VT/D-BU	3790	I	—	Electric Coolant Motor Feedback Signal	7	0.5	VT/D-BU	3790	II	—

8	0.5	BK/GY	3872	I	—	Powertrain Electronics Cooling Loop (PECL) Temperature Sensor Low Reference	8	0.5	BK/GY	3872	II	—
---	-----	-------	------	---	---	--	---	-----	-------	------	----	---

X105 Engine Harness to Forward Lamp Harness (LV3/LV1)



Connector Part Information

Harness Type: Engine
OEM Connector: 13609714
Service Connector: 13585853
Description: 6-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way M

Terminal Part Information

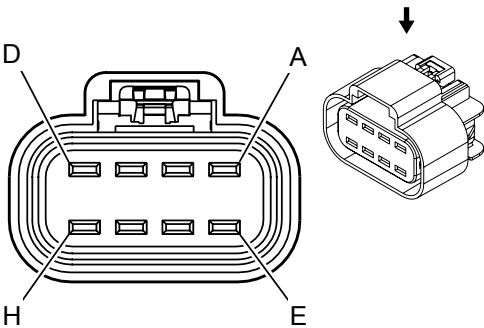
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required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

X105 Engine Harness to Forward Lamp Harness (LV3/LV1)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BN/YE	473	I	—	High Speed Cooling Fan Relay Control	1	0.5	BN/YE	473	II	—
2	0.5	BK/D-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	2	0.5	BK/D-BU	61	II	—
3	0.5	D-BU/GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	3	0.5	D-BU/GY	636	II	—
4	—	—	—	—	—	Not Occupied	4	—	—	—	—	—
5	0.75	VT/D-BU	5290	I	—	Powertrain Main Relay Fused Supply 1	5	0.75	VT/D-BU	5290	II	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

						Power Supply 1						
6	0.5	L-GN/VT	4621	I	—	Local Interconnect Network Serial Data Bus 21	6	0.5	L-GN/VT	4621	II	—

X110 Forward Lamp Harness to Front Bumper Harness (Heavy Duty)



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 15326654
Service Connector: 88986254
Description: 8-Way F 280 GT Series, Sealed (BK)

Connector Part Information

Harness Type: Front Bumper
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

Terminal Part Information

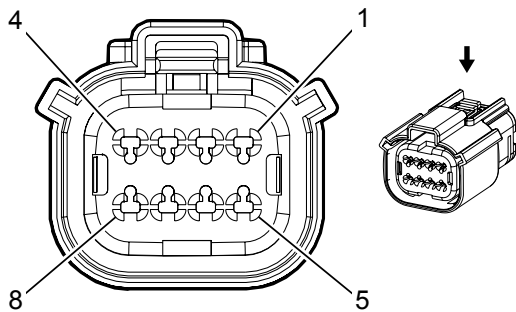
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required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

X110 Forward Lamp Harness to Front Bumper Harness (Heavy Duty)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	1.5	BK	150	I	—	Ground	A	1.5	BK	150	II	—
B	0.75	YE	712	I	—	Left Headlamp Low Beam Control	B	0.75	YE	712	II	—
C	0.5	WH	711	I	—	Left Headlamp High Beam Control	C	0.5	WH	711	II	—
D	—	—	—	—	—	Not Occupied	D	—	—	—	—	—
E	0.5	VT/GY	709	I	—	Left Park Lamp Control	E	0.5	VT/GY	709	II	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

F	0.75	D-BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	F	0.75	D-BU/WH	1314	II	—
G	0.75	GY/D-BU	7538	I	—	Left Front DRL Control	G	0.75	GY/D-BU	7538	II	—
H	0.5	VT/GY	709	I	—	Left Park Lamp Control	H	0.5	VT/GY	709	II	—

X110 Forward Lamp Harness to Front Bumper Harness (Light Duty)



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13654393
Service Connector: 13577527
Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Front Bumper
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

Terminal Part Information

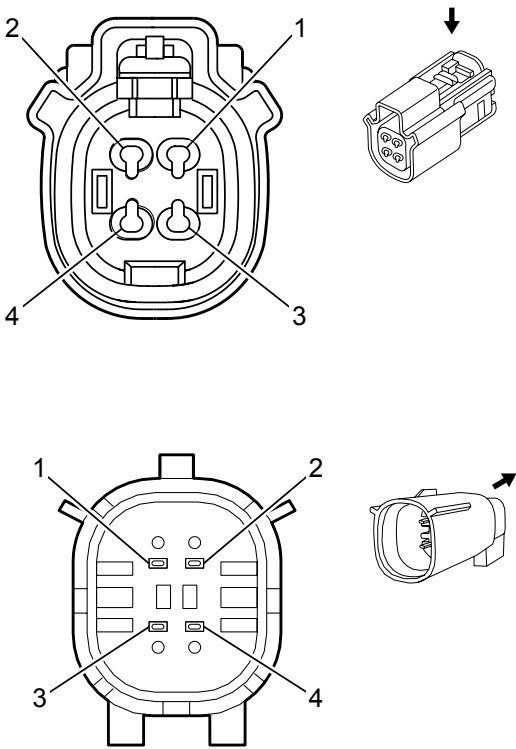
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required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

X110 Forward Lamp Harness to Front Bumper Harness (Light Duty)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	BK	150	I	—	Ground	1	1.5	BK	150	II	—
2	0.75	YE	712	I	—	Left Headlamp Low Beam Control	2	0.75	YE	712	II	—
3	0.5	WH	711	I	—	Left Headlamp High Beam Control	3	0.5	WH	711	II	—
4	0.5	VT/GY	709	I	—	Left Park Lamp Control	4	0.5	VT/GY	709	II	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

5	0.5	D-BU/VT	3204	I	—	Left Headlamp Bulb Outage Signal	5	0.5	D-BU/VT	3204	II	—
6	0.5	VT/GY	3139	I	—	Run/Crank Ignition 1 Voltage	6	0.5	VT/GY	3139	II	—
7	0.75	D-BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	7	0.75	D-BU/WH	1314	II	—
8	0.75	GY/D-BU	7538	I	—	Left Front DRL Control	8	0.75	GY/D-BU	7538	II	—

X111 Front Axle Harness to Engine Harness



Connector Part Information

Harness Type: Front Axle Jumper
OEM Connector: 13872556
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Engine
OEM Connector: 13586625
Service Connector: 19329823
Description: 4-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

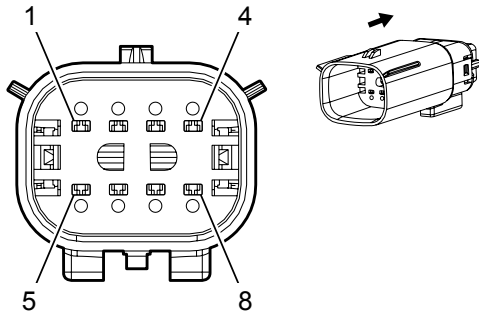
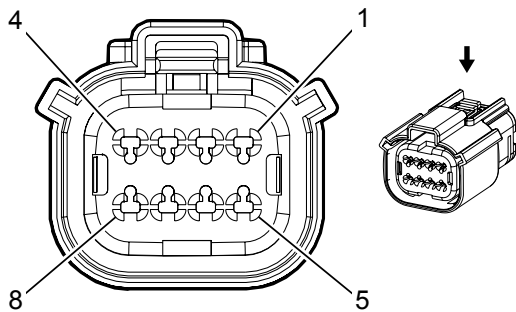
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X111 Front Axle Harness to Engine Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	YE/WH	1695	I	—	Four Wheel Drive Wheel Lock Indicator Control	1	0.5	YE/WH	1695	II	—
2	0.5	GY/BK	1570	I	—	Front Axle Actuator Control	2	0.5	GY/BK	1570	II	—

3	0.5	VT/BK	2139	I	—	Run/Crank Ignition 1 Voltage	3	0.5	VT/BK	2139	II	—
						Run/Crank Ignition 1 Voltage						
4	0.5	BK	550	I	—	Ground	4	1	BK	550	II	—

X112 Engine Chassis Harness to Engine Jumper Harness (L5P)



Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 33472-0806
Service Connector: 13577527
Description: 8-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Engine
OEM Connector: 33482-0801
Service Connector: 19300474
Description: 8-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

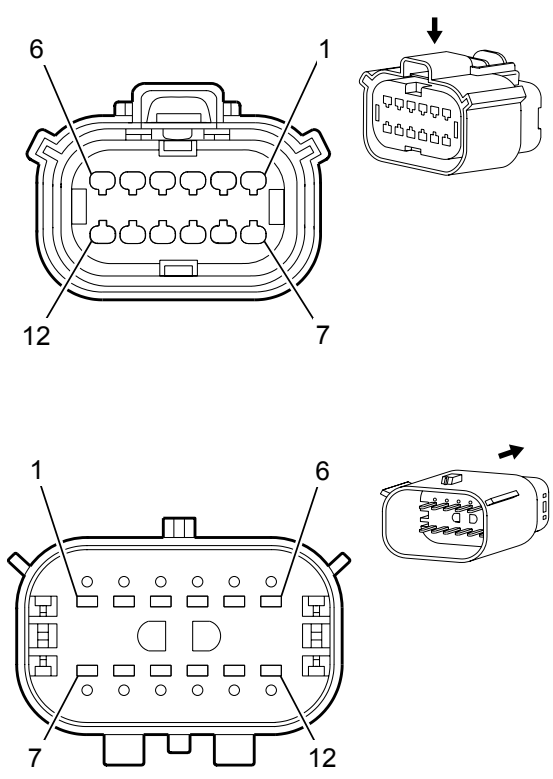
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X112 Engine Chassis Harness to Engine Jumper Harness (L5P)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT/BU	6270	I	L5P	Crankshaft 60X Sensor 5V Reference	1	0.5	VT/BU	6270	II	L5P
2	0.5	BK/VT	6272	I	L5P	Crankshaft 60X Sensor Low Reference	2	0.5	BK/VT	6272	II	L5P

3	0.5	GN	6271	I	L5P	Crankshaft 60X Sensor Signal	3	0.5	GN	6271	II	L5P
4	0.5	BN/RD	2917	I	L5P	Fuel Rail Pressure Sensor 5V Reference	4	0.5	BN/RD	2917	II	L5P
5	0.5	BK/GN	2919	I	L5P	Fuel Rail Pressure Sensor Low Reference	5	0.5	BK/GN	2919	II	L5P
6	0.5	BU/WH	2918	I	L5P	Fuel Rail Pressure Sensor Signal	6	0.5	BU/WH	2918	II	L5P
7	0.5	BN/YE	2161	I	L5P	Fuel Rail Pressure Sensor 2 Signal	7	0.5	BN/YE	2161	II	L5P
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X113 Engine Chassis Harness to Engine Jumper Harness (L5P)



Connector Part Information

Harness Type: Engine Chassis
OEM Connector: 33472-1206
Service Connector: 13503528
Description: 12-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Engine
OEM Connector: 33482-1201
Service Connector: 13503540
Description: 12-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

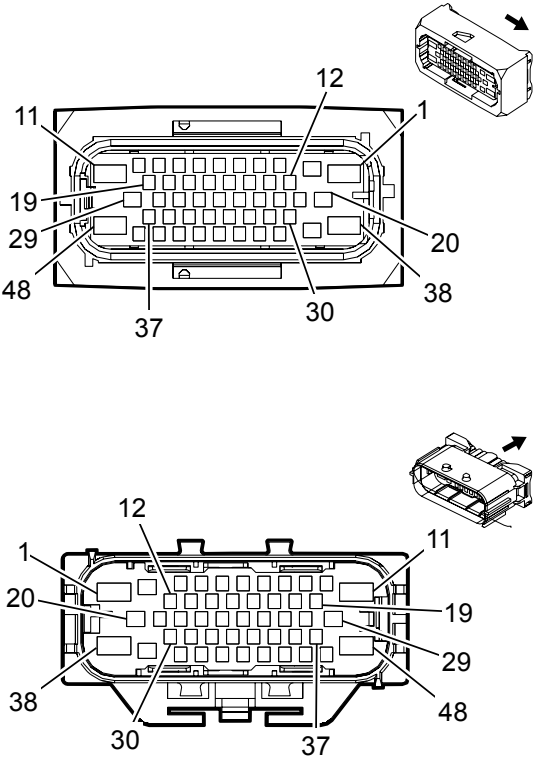
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578813	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	13580014	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

X113 Engine Chassis Harness to Engine Jumper Harness (L5P)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	WH/RD	2705	I	L5P	Oil Pressure Sensor 5V Reference	1	0.5	WH/RD	2705	II	L5P
2	0.5	BK/VT	2755	I	L5P	Oil Pressure Sensor Low Reference	2	0.5	BK/VT	2755	II	L5P

3	0.5	YE/BN	331	I	L5P	Oil Pressure Sensor Signal	3	0.5	YE/BN	331	II	L5P
4	0.5	BU	410	I	L5P	Engine Coolant Temperature Sensor Signal	4	0.5	BU	410	II	L5P
5	0.5	BK/BN	2761	I	L5P	Coolant Temperature Sensor Low Reference	5	0.5	BK/BN	2761	II	L5P
6	0.5	BK/WH	251	I	L5P	Signal Ground	6	0.5	BK/WH	251	II	L5P
7	0.5	BN/GN	1174	I	L5P	Oil Level Switch Signal	7	0.5	BN/GN	1174	II	L5P
8 - 9	—	—	—	—	—	Not Occupied	8 - 9	—	—	—	—	—
10	0.5	YE	2928	I	L5P	Fuel Metering Valve High Control	10	0.5	YE	2928	II	L5P
11	0.5	BN/BK	2929	I	L5P	Fuel Metering Valve Low Control	11	0.5	BN/BK	2929	II	L5P
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—

X115 Engine Harness to Body Harness



Connector Part Information

Harness Type: Engine
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	13580829	J-35616-4A (PU)	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	13582180	J-35616-14 (GN)	J-38125-560	1241374-1	Lear 17	E	2
IV	19119381	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
V	19119560	J-35616-40 (BU)	J-38125-556	1241408-1	Lear 28	B	G
VI	19329757	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
VII	13505807	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VIII	13575380	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IX	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
X	13580827	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION							

X	19330627	J-35616-3 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
XI	19329756	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
XII	19352419	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
XIII	19353142	J-35616-3 (GY)	J-38125-560	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	3	RD/GY	1342	V	—	Battery Positive Voltage	1	4	RD/GY	1342	XI	—
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	III	L5P	Check Engine Indicator Control	3	0.35	BN/WH	419	XII	—
	0.5	BN/WH	419	IV	-L5P	Check Engine Indicator Control						
4	0.5	WH/D-BU	6311	III	L5P	Cruise/ETC/TCC Brake Signal	4	0.35	WH/D-BU	6311	XII	—
	0.5	WH/D-BU	6311	IV	-L5P	Cruise/ETC/TCC Brake Signal						
5	0.5	WH	2501	III	L5P	High Speed GMLAN Serial Data (-) 1	5	0.5	WH	2501	VII	—
	0.5	WH	2501	IV	-L5P	High Speed GMLAN Serial Data (-) 1						
6	0.5	D-BU	2500	III	L5P	High Speed GMLAN Serial Data (+) 1	6	0.5	D-BU	2500	VII	—
	0.5	D-BU	2500	IV	-L5P	High Speed GMLAN Serial Data (+) 1						

7	0.5	WH	5359	III	L5P	Brake Apply Sensor Control	7	0.35	WH	5359	XII	—
	0.5	WH	5359	IV	-L5P	Brake Apply Sensor Control						
8	0.5	BK/BN	5360	III	L5P	Brake Apply Sensor Low Reference	8	0.35	BK/BN	5360	XII	—
	0.5	BK/BN	5360	IV	-L5P	Brake Apply Sensor Low Reference						
9	0.5	D-BU/YE	5361	III	L5P	Brake Apply Sensor Signal	9	0.35	D-BU/YE	5361	XII	—
	0.5	D-BU/YE	5361	IV	-L5P	Brake Apply Sensor Signal						
10	0.5	YE/WH	1161	VI	—	Accelerator Pedal Position Signal 1	10	0.35	YE/WH	1161	XIII	—
11	3	BK	550	V	—	Ground	11	4	BK	550	XI	—
12	0.5	WH/L-GN	7479	IV	—	Rotary Position Sensor Signal	12	0.5	WH/L-GN	7479	VII	—
13	0.5	YE/BK	7478	IV	—	Rotary Position Sensor Low Reference	13	0.5	YE/BK	7478	VII	—
14	0.5	YE/WH	1695	III	L5P	Four Wheel Drive Wheel Lock Indicator Control	14	0.5	YE/WH	1695	VII	—
		YE/WH	1695	IV	-L5P							

	0.5					Four Wheel Drive Wheel Lock Indicator Control						
15	0.5	GY/BK	1570	III	L5P	Front Axle Actuator Control	15	0.5	GY/BK	1570	VII	—
		GY/BK	1570	IV	-L5P	Front Axle Actuator Control						
	0.5											
16	0.5	VT/YE	5985	III	L5P	Accessory Wakeup Serial Data	16	0.35	VT/YE	5985	XII	—
		VT/YE	5985	IV	-L5P	Accessory Wakeup Serial Data						
	0.5											
17	0.5	WH/D-BU	5986	III	—	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	XIII	—
19	0.5	BK/D-BU	1271	VI	—	Accelerator Pedal Position Low Reference 1	19	0.35	BK/D-BU	1271	XIII	—
20	0.75	D-BU/YE	7574	II	—	Electric Variable Displacement Control	20	0.5	D-BU/YE	7574	X	—
21	0.5	WH/RD	7477	IV	—	Rotary Position Sensor 5V Reference	21	0.5	WH/RD	7477	VII	—
22	0.5	D-BU/GY	7473	III	L5P	Incremental Encoder Impulse Signal	22	0.35	D-BU/GY	7473	XII	—
		D-BU/GY	7473	IV	-L5P	Incremental Encoder Impulse Signal						
	0.5											

23	0.5	VT	7476	III	L5P	Incremental Encoder Sensor Low Reference	23	0.35	VT	7476	XII	—
	0.5	VT	7476	IV	-L5P	Incremental Encoder Sensor Low Reference						
24	0.5	YE	5530	IV	—	Hood Open Switch Signal	24	0.5	YE	5530	VII	—
25	0.5	BN/RD	1274	VI	—	Accelerator Pedal Position 5V Reference 2	25	0.35	BN/RD	1274	XIII	—
26	0.5	L-GN/WH	1162	VI	—	Accelerator Pedal Position Signal 2	26	0.35	L-GN/WH	1162	XIII	—
27	0.5	BK/VT	1272	VI	—	Accelerator Pedal Position Low Reference 2	27	0.35	BK/VT	1272	XIII	—
28	—	—	—	—	—	Crankshaft Position Sensor Replicated Signal	28	0.35	VT/D-BU	6091	XII	—
29	2.5	YE/BN	1569	I	—	Transfer Case Lock Solenoid Control	29	2.5	YE/BN	1569	IX	—
30	0.5	WH/L-GN	7475	III	L5P	Incremental Encoder Sensor 8V Reference	30	0.35	WH/L-GN	7475	XII	—
	0.5	WH/L-GN	7475	IV	-L5P	Incremental Encoder Sensor 8V Reference						
31	0.5	YE	7474	III	L5P	Incremental Encoder Direction Signal	31	0.35	YE	7474	XII	—

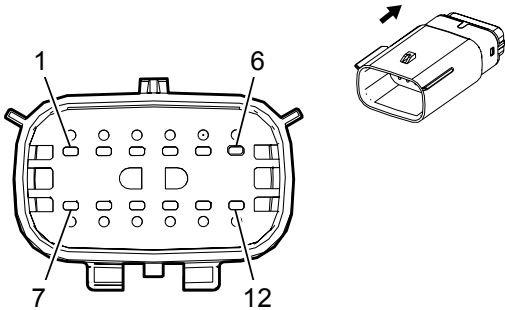
	0.5	YE	7474	IV	-L5P	Incremental Encoder Direction Signal						
32	0.5	BK/VT	5077	IV	L5P	Current Sensor Low Reference	32	0.35	BK/VT	5077	XII	—
	0.5	BK/VT	5077	IV	-L5P	Current Sensor Low Reference						
33	0.5	WH/YE	5075	IV	—	Current Sensor Signal	33	0.35	WH/YE	5075	XII	—
34	0.5	D-BU/VT	5076	IV	—	Current Sensor Control	34	0.35	D-BU/VT	5076	XII	—
35	0.5	D-BU/YE	6105	III	L5P	High Speed GMLAN Serial Data (+) 2	35	0.5	D-BU/YE	6105	VII	—
	0.5	D-BU/YE	6105	IV	-L5P	High Speed GMLAN Serial Data (+) 2						
36	0.5	WH	6106	III	L5P	High Speed GMLAN Serial Data (-) 2	36	0.5	WH	6106	VII	—
	0.5	WH	6106	IV	-L5P	High Speed GMLAN Serial Data (-) 2						
37	0.75	RD/D-BU	4540	III	—	Battery Positive Voltage	37	0.75	RD/D-BU	4540	VIII	—
38	3	YE/VT	1553	V	—	Transfer Case Motor Counter Clockwise Control	38	4	YE/VT	1553	XI	—
		RD/VT	2640	II	—	Battery Positive Voltage			RD/VT	2640	X	—

39	0.75	RD/V I	2040	II	—	Battery Positive Voltage	39	0.75	RD/V I	2040	^	—
40	0.5	BN/L-GN	4311	III	—	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	III	—	Power Take Off Control Switch	41	0.35	L-GN/WH	488	XII	—
42	0.5	VT/BN	300	IV	—	Run Ignition 3 Voltage	42	0.35	VT/BN	300	XII	—
43	0.5	L-GN/BN	507	III	—	Wait To Start Indicator Control	43	0.35	L-GN/BN	507	XII	—
44	0.5	D-BU/YE	68	III	—	Low Coolant Level Indicator Control	44	0.5	D-BU/YE	68	VII	—
45	0.5	D-BU/GY	636	IV	L5P	Outside Ambient Air Temperature Sensor Signal Clutch Apply Sensor 5V Reference	45	0.35	D-BU/GY	636	XII	L5P
	0.5	GY/RD	6109	IV	-L5P			0.5	GY/RD	6109	VII	-L5P
46	0.5	BK/D-BU	61	IV	L5P	Outside Ambient Temperature Sensor Low Reference Clutch Apply Sensor Low Reference	46	0.35	BK/D-BU	61	XII	L5P
	0.5	BK/GY	6110	IV	-L5P			0.5	BK/GY	6110	VII	-L5P
47	0.5	YE	6111	IV	—	Clutch Apply Sensor Signal	47	0.5	YE	6111	VII	—
48	3	OG	1552	V	—	Transfer Case Motor Clockwise Control	48	4	YE/GY	1552	XI	—

--	--	--	--	--	--	--	--	--	--	--	--	--

X116 Engine Harness to Body Harness

—



Connector Part Information

Harness Type: Engine
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F

Connector Part Information

Harness Type: Body
OEM Connector: 13534850
Service Connector: 13503540
Description: 12-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

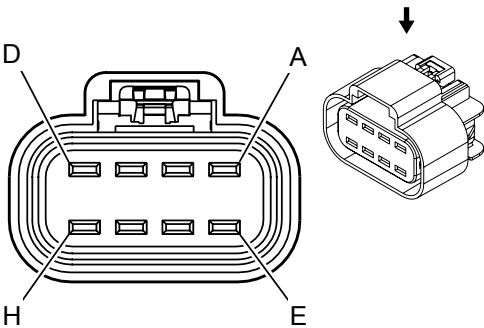
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

X116 Engine Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
3	0.5	D-BU	2500	I	—	High Speed GMLAN Serial Data (+) 1	3	0.5	D-BU	2500	II	—
4	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	4	0.5	WH	2501	II	—
9	0.5	D-BU/BK	7493	I	—	High Speed GMLAN Serial Data (+)3	9	0.5	D-BU/BK	7493	II	—
10	0.5	WH	7494	I	—	High Speed GMLAN Serial Data (-)3	10	0.5	WH	7494	II	—

--	--	--	--	--	--	--	--	--	--	--	--	--	--

X120 Forward Lamp Harness to Front Bumper Harness (Heavy Duty)



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 15326654
Service Connector: 88986254
Description: 8-Way F 280 GT Series, Sealed (BK)

Connector Part Information

Harness Type: Front Bumper
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M

Terminal Part Information

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

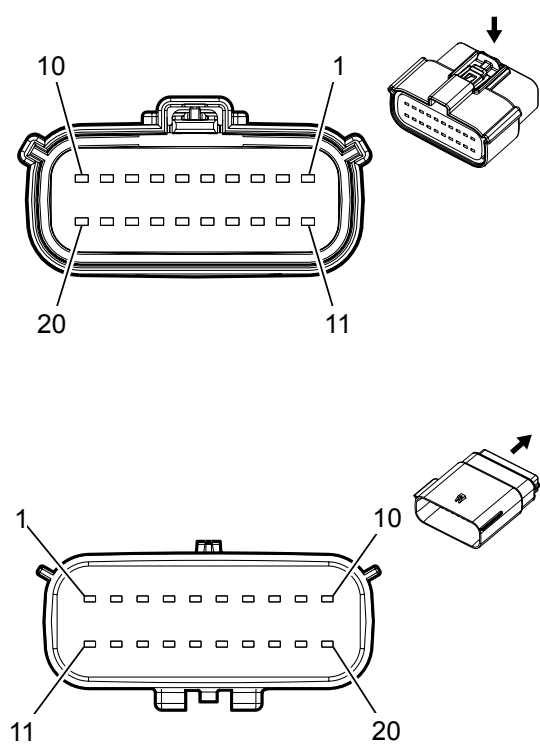
X120 Forward Lamp Harness to Front Bumper Harness (Heavy Duty)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	1.5	BK	250	I	—	Ground	A	1.5	BK	250	II	—
B	0.75	YE	312	I	—	Right Headlamp Low Beam Control	B	0.75	YE	312	II	—
C	0.5	WH	311	I	—	Right Headlamp High Beam Control	C	0.5	WH	311	II	—
D	—	—	—	—	—	Not Occupied	D	—	—	—	—	—
E	0.5	GY/BN	309	I	—	Right Park Lamp Control	E	0.5	GY/BN	309	II	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

F	0.75	L-GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	F	0.75	L-GN/VT	1315	II	—
G	0.75	D-BU/BN	7539	I	—	Right Front DRL Control	G	0.75	D-BU/BN	7539	II	—
H	0.5	GY/BN	309	I	—	Right Park Lamp Control	H	0.5	GY/BN	309	II	—

5	0.5	WH/D-BU	3203	I	—	Right Headlamp Bulb Outage Signal	5	0.5	WH/D-BU	3203	II	—
6	0.5	VT/GY	3139	I	—	Run/Crank Ignition 1 Voltage	6	0.5	VT/GY	3139	II	—
7	0.75	L-GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	7	0.75	L-GN/VT	1315	II	—
8	0.75	D-BU/BN	7539	I	—	Right Front DRL Control	8	0.75	D-BU/BN	7539	II	—

X125 Engine Harness to Chassis Harness (L5P)



Connector Part Information

Harness Type: Engine
OEM Connector: 13650143
Service Connector: 19300557
Description: 20-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Chassis
OEM Connector: 33181044
Service Connector: 19351705
Description: 20-Way M 1.5 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300432	J-35616-2A (GY)	J-38125-217	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	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
IV	19119842	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

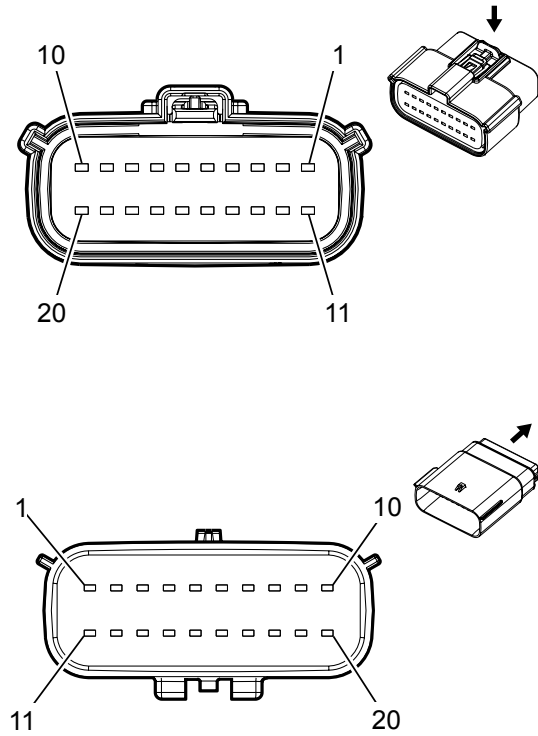
X125 Engine Harness to Chassis Harness (L5P)

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	D-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	0.5	D-BU/YE	6105	II	—	High Speed GMLAN Serial Data (+) 2	5	0.5	D-BU/YE	6105	III	—
6	0.5	WH	6106	II	—	High Speed GMLAN Serial Data (-) 2	6	0.5	WH	6106	III	—
7	0.5	BK/L-GN	3657	II	—	Exhaust Gas Temperature Sensor 3 Low Reference	7	0.5	BK/L-GN	3657	III	—
8	0.5	D-BU/WH	7446	II	—	Fuel Line Pressure Sensor Signal	8	0.5	D-BU/WH	7446	III	—
9	0.5	BK/YE	7447	II	—	Fuel Line Pressure Sensor Low Reference	9	0.5	BK/YE	7447	III	—
10	0.5	RD/WH	2740	II	—	Battery Positive Voltage	10	0.5	RD/WH	2740	III	—
11	0.5	GY/L-GN	5378	II	—	Exhaust Gas Temperature Sensor 3	11	0.5	GY/L-GN	5378	III	—
12	0.5	BN/D-BU	2926	II	—	Hydrocarbon Injector High Control	12	0.5	BN/D-BU	2926	III	—

13	0.5	WH	4499	II	—	High Speed GMLAN Serial Data (-) 7	13	0.5	WH	4499	III	—
14	0.5	D-BU/BN	4498	II	—	High Speed GMLAN Serial Data (+) 7	14	0.5	D-BU/BN	4498	III	—
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	D-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/D-BU	3674	IV	—
20	0.5	VT/BN	2927	II	—	Hydrocarbon Injector Low Control	20	0.5	VT/BN	2927	III	—

X125 Engine Harness to Chassis Harness (L96/LC8/LV3/LV1)



Connector Part Information

Harness Type: Engine
OEM Connector: 13650143
Service Connector: 19300557
Description: 20-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Chassis
OEM Connector: 33181840
Service Connector: 19300560
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	19300635	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

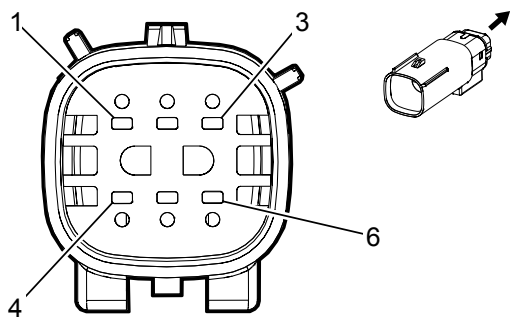
X125 Engine Harness to Chassis Harness (L96/LC8/LV3/LV1)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT/D-BU	3120	I	—	Heated Oxygen Sensor High Signal Bank 1 Sensor 2	1	0.5	VT/D-BU	3120	II	—
2	0.5	WH/YE	3121	I	—	Heated Oxygen Sensor Low Signal Bank 1 Sensor 2	2	0.5	WH/YE	3121	II	—

3	0.5	GY/WH	3122	I	—	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2	3	0.5	GY/WH	3122	II	—
4	0.5	VT/D-BU	5294	I	—	Powertrain Main Relay Fused Supply 5	4	0.5	VT/D-BU	5294	II	—
5	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	5	0.5	D-BU/YE	6105	II	—
6	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	6	0.5	WH	6106	II	—
7	0.5	WH	1310	I	—	EVAP Canister Vent Solenoid Control	7	0.5	WH	1310	II	—
8	0.5	D-BU/WH	1937	I	L96/LC8	Secondary Fuel Level Sensor Signal	8	0.5	D-BU/WH	7446	II	—
	0.5	D-BU/WH	7446	I	-L96/LC8	Fuel Line Pressure Sensor Signal						
9	0.5	BK/YE	7447	I	—	Fuel Line Pressure Sensor Low Reference	9	0.5	BK/YE	7447	II	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	0.5	D-BU/VT	1589	I	—	Primary Fuel Level Sensor Signal	11	0.5	D-BU/VT	1589	II	—
12	0.5	BK/L-GN	6281	I	—	Fuel Level Sensor Low Reference	12	0.5	BK/L-GN	6281	II	—
13	0.5	D-BU/BK	7493	I	—	High Speed GMLAN Serial Data (+)3	13	0.5	D-BU/BK	7493	II	—

14	0.5	WH	7494	I	—	High Speed GMLAN Serial Data (-)3	14	0.5	WH	7494	II	—
15	0.5	D-BU/WH	890	I	—	Fuel Tank Pressure Sensor Signal	15	0.5	D-BU/WH	890	II	—
16	0.5	YE/RD	2709	I	—	Fuel Tank Pressure Sensor 5V Reference	16	0.5	YE/RD	2709	II	—
17	0.5	WH	1579	I	—	Fuel Temperature/Compositi on Signal	17	0.5	WH	1579	II	—
18	0.5	BN/RD	7445	I	—	Fuel Line Pressure Sensor 5V Reference	18	0.5	BN/RD	7445	II	—
19 - 20	—	—	—	—	—	Not Occupied	19 - 20	—	—	—	—	—

X132 Aero Shutter Jumper Harness to Forward Lamp Harness



Connector Part Information

Harness Type: Aero Shutter Jumper
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 33104948
Service Connector: 19333101
Description: 6-Way M 150 MX Series, Sealed (GY)

Terminal Part Information

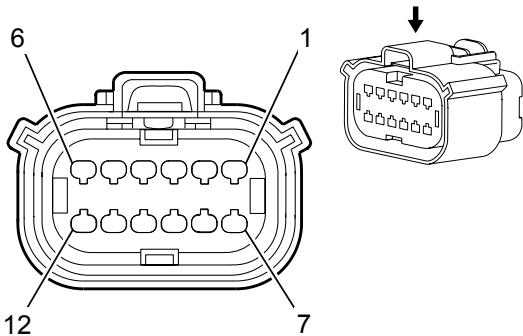
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X132 Aero Shutter 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	BK	250	I	—	Ground	1	1	BK	250	II	—
2	0.5	VT/D-BU	5290	I	—	Powertrain Main Relay Fused Supply 1	2	0.5	VT/D-BU	5290	II	—
3	0.5	L-GN/VT	4621	I	—	Local Interconnect Network Serial Data Bus 21	3	0.5	L-GN/VT	4621	II	—
5	0.5	BK/D-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	5	0.5	BK/D-BU	61	II	—
25/2016 - VERSION 1.0				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION								

6	0.5	D-BU/GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	6	0.5	D-BU/GY	636	II	—

X134 Chassis Harness to Ignition Coil Harness



Connector Part Information

Harness Type: Chassis
OEM Connector: 13609715
Service Connector: 19178148
Description: 12-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Ignition Coil
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way M

Terminal Part Information

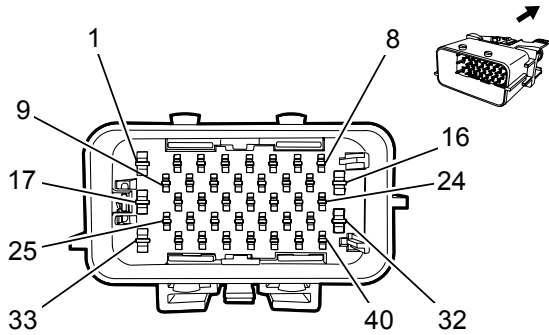
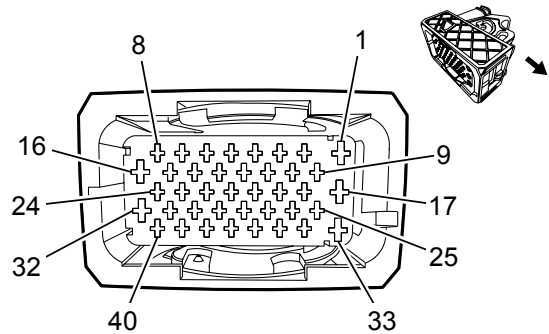
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

X134 Chassis Harness to Ignition Coil Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	2	0.5	WH	2501	II	—
3	0.5	D-BU	2500	I	—	High Speed GMLAN Serial Data (+) 1	3	0.5	D-BU	2500	II	—
4	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	4	0.5	WH	6106	II	—
5	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	5	0.5	D-BU/YE	6105	II	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

						Serial Data (+) 1						
6 - 7	—	—	—	—	—	Not Occupied	6 - 7	—	—	—	—	—
8	0.5	WH/D-BU	5986	I	—	Serial Data Communication Enable	8	0.5	WH/D-BU	5986	II	—
9	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	9	0.5	WH	2501	II	—
10	0.5	D-BU	2500	I	—	High Speed GMLAN Serial Data (+) 1	10	0.5	D-BU	2500	II	—
11	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	11	0.5	WH	6106	II	—
12	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	12	0.5	D-BU/YE	6105	II	—

X138 Chassis Harness to Body Harness



Connector Part Information

Harness Type: Chassis
OEM Connector: 13603185
Service Connector: 13576549
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	13578884	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	13580829	J-35616-4A (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
III	13580834	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	19353105	J-35616-4A (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	13505807	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	13575380	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VII	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VIII	13580827	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IX	19352419	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X138 Chassis Harness to Body Harness

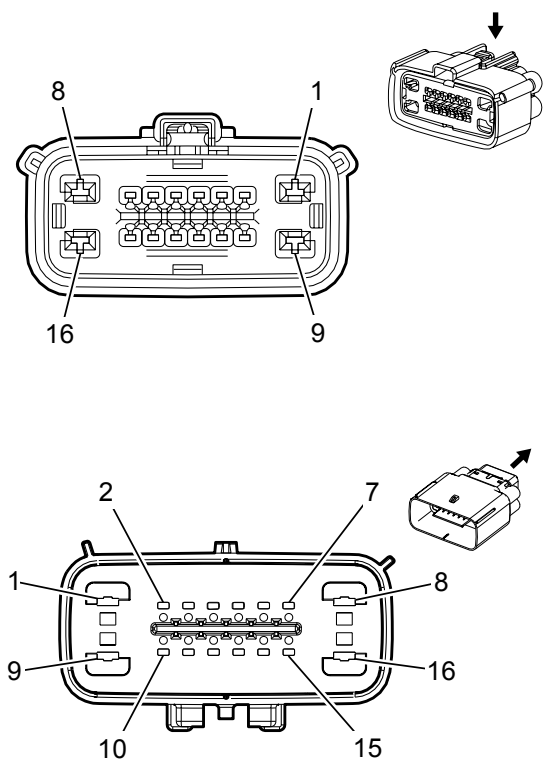
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	L-GN/BK	7633	IV	—	Integrated Trailer Brake Controller User Gain Signal	1	0.5	L-GN/BK	7633	VIII	—
2	0.5	L-GN/BN	2087	I	—	Combined Vehicle Inertial Sensor Supply Voltage	2	0.35	L-GN/BN	2087	IX	—
3	0.5	YE	7635	I	—	Integrated Trailer Brake Controller Manual Apply Signal	3	0.5	YE	7635	V	—
4	0.5	D-BU/RD	7632	I	—	Integrated Trailer Brake Controller Switch 5V Reference	4	0.5	D-BU/RD	7632	V	—
5	0.5	BN	7634	I	—	Integrated Trailer Brake Controller Redundant Manual Apply Signal	5	0.5	BN	7634	V	—
6	0.5	BK/BN	7631	I	—	Integrated Trailer Brake Controller Switch Low Reference	6	0.5	BK/BN	7631	V	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	0.5	L-GN	5060	I	—	Low Speed GMLAN Serial Data	8	0.5	L-GN	5060	V	—
9	0.5	BN/WH	2374	I	—	Object Sensor Control	9	0.35	BN/WH	2374	IX	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	0.5	YE	2375	I	—	Left Rear Corner Object Sensor Signal	11	0.35	YE	2375	IX	—
12	0.5	YE/D-BU	2376	I	—	Left Rear Middle Object Sensor Signal	12	0.35	YE/D-BU	2376	IX	—

13	0.5	YE/VT	2378	I	—	Right Rear Corner Object Sensor Signal	13	0.35	YE/VT	2378	IX	—
14	0.5	YE/WH	2377	I	—	Right Rear Middle Object Sensor Signal	14	0.35	YE/WH	2377	IX	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	0.5	L-GN/YE	6846	IV	—	Rear License Lamp Control	16	0.5	L-GN/YE	6846	VIII	—
17	0.5	WH/D-BU	5986	IV	—	Serial Data Communication Enable	17	0.5	WH/D-BU	5986	VIII	—
18	0.5	D-BU	2500	I	—	High Speed GMLAN Serial Data (+) 1	18	0.5	D-BU	2500	V	—
19	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	19	0.5	WH	2501	V	—
20	0.5	VT/YE	5985	I	—	Accessory Wakeup Serial Data	20	0.5	VT/YE	5985	V	—
21	0.5	BK/GY	2379	I	—	Object Sensor Low Reference	21	0.35	BK/GY	2379	IX	—
22	—	—	—	—	—	Not Occupied	22	—	—	—	—	—
23	0.5	GY/BN	309	I	—	Right Park Lamp Control	23	0.5	GY/BN	309	V	—
24	0.75	BN/YE	294	III	—	Door Lock Actuator Unlock Control	24	0.75	BN/YE	294	VI	—

25	0.75	GY	5911	III	—	Door Lock Actuator Lock Control 2	25	0.75	GY	295	VI	—
26	0.5	D-BU/BK	7493	I	—	High Speed GMLAN Serial Data (+)3	26	0.5	D-BU/BK	7493	V	—
27	0.5	WH	7494	I	—	High Speed GMLAN Serial Data (-)3	27	0.5	WH	7494	V	—
28	—	—	—	—	—	Not Occupied	28	—	—	—	—	—
29	0.5	BK	2550	I	—	Ground	29	0.75	BK	2550	VI	—
30	0.5	BK	6974	I	—	Camera Low Reference	30	0.5	BK	6974	V	—
31	—	—	—	—	—	Not Occupied	31	—	—	—	—	—
32	2.5	D-BU	47	II	—	Trailer Auxiliary Control	32	2.5	D-BU	47	VII	—
33	—	—	—	—	—	Battery Positive Voltage	33	2.5	RD/D-BU	1842	VII	—
34 - 35	—	—	—	—	—	Not Occupied	34 - 35	—	—	—	—	—
36	0.75	WH/VT	1430	III	—	Exterior Courtesy Lamp Control	36	0.75	WH/VT	1430	VI	—
37	0.5	GY/YE	6972	I	—	Camera Signal 2 +	37	0.35	GY/YE	6972	IX	—
38	0.5	WH/D-BU	6973	I	—	Camera Signal 2	38	0.35	WH/D-BU	6973	IX	—

39	0.5	BN/WH	7462	I	—	Running Boards Disable Signal	39	0.35	D-BU/YE	6844	IX	—
40	0.5	L-GN/GY	817	I	—	Vehicle Speed Signal	40	0.5	L-GN/GY	817	V	—

X143 DEF Jumper Harness to Engine Harness (L5P)



Connector Part Information

Harness Type: DEF Jumper
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F

Connector Part Information

Harness Type: Engine
OEM Connector: 33182033
Service Connector: 19354088
Description: 16-Way M 150 MX Series, Sealed (L-GY)

Terminal Part Information

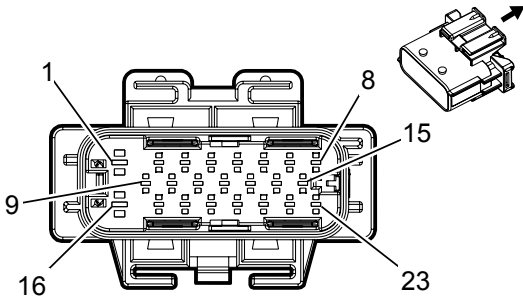
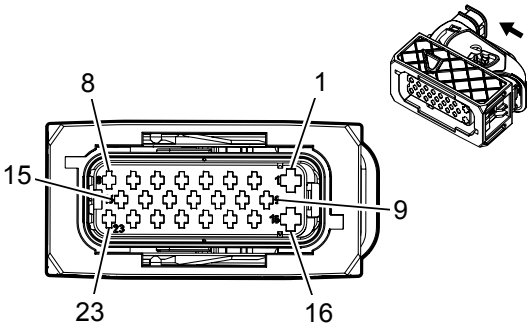
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not 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	19329833	J-35616-5 (PU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

X143 DEF Jumper Harness to Engine Harness (L5P)

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	—
					2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION							

2 - 3	—	—	—	—	—	Not Occupied	2 - 3	—	—	—	—	—
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	—
6 - 7	—	—	—	—	—	Not Occupied	6 - 7	—	—	—	—	—
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	—
10 - 13	—	—	—	—	—	Not Occupied	10 - 13	—	—	—	—	—
14	0.5	WH	4499	I	—	High Speed GMLAN Serial Data (-) 7	14	0.5	WH	4499	II	—
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	3921	I	—	DEF Heater Supply 1	16	2.5	D-BU	3921	V	—

X150 Body Harness to Forward Lamp Harness (Extended Cab)



Connector Part Information

Harness Type: Body
OEM Connector: 13674800
Service Connector: 19300480
Description: 23-Way F 1.5 DSQ, 2.8 AST Series, Sealed (BK)

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13750011
Service Connector: 19301797
Description: 23-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	13575389	J-35616-4A (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
II	13576369	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
III	13575380	J-35616-3 (GY)	J-38125-560	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

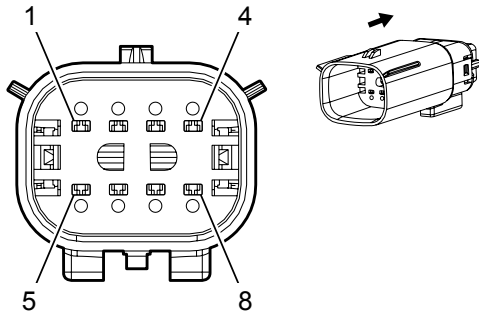
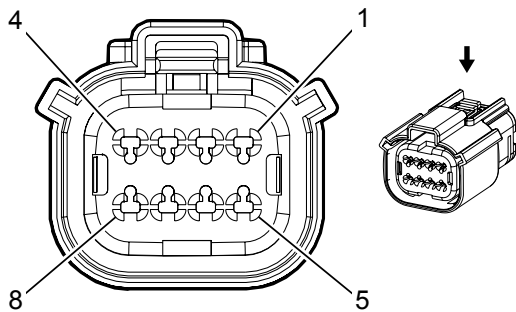
X150 Body Harness to Forward Lamp Harness (Extended Cab)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	BK/D-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	1	0.5	BK/D-BU	61	IV	—
2 - 3	—	—	—	—	—	Not Occupied	2 - 3	—	—	—	—	—
10/25/2016 - VERSION 1.0				2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION								

2 - 3	—	—	—	—	—	Not Occupied	2 - 3	—	—	—	—	—
4	0.35	YE/GY	5216	II	—	Front Parking Left Mid Sensor	4	0.5	YE/GY	5216	III	—
5	0.35	WH/GY	5217	II	—	Front Parking Right Corner Sensor	5	0.5	WH/GY	5217	III	—
6	0.35	VT/GY	5218	II	—	Front Parking Right Mid Sensor	6	0.5	VT/GY	5218	III	—
7	0.35	BK/D-BU	5214	II	—	Front Parking Sensor Low Reference	7	0.5	BK/D-BU	5214	III	—
8	0.35	VT/WH	5215	II	—	Front Parking Left Corner Sensor	8	0.5	VT/WH	5215	III	—
9 - 10	—	—	—	—	—	Not Occupied	9 - 10	—	—	—	—	—
11	0.35	OG/L-GN	1409	II	—	Right Front Discriminating Sensor Signal	11	0.5	OG/L-GN	1409	III	—
12	0.35	BK/OG	5600	II	—	Right Front Discriminating Sensor Low Reference	12	0.5	BK/OG	5600	III	—
13	—	—	—	—	—	Not Occupied	13	—	—	—	—	—
14	0.35	VT	185	II	—	Low Washer Fluid Indicator Control	14	0.5	VT	185	III	—
15	0.35	YE/VT	5213	II	—	Front Parking Left/Right/Mid Sensor	15	0.5	YE/VT	5213	III	—
16	0.35	D-BU/GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	16	0.5	D-BU/GY	636	IV	—

17 - 19	—	—	—	—	—	Not Occupied	17 - 19	—	—	—	—	—
20	0.35	OG/YE	354	II	—	Middle Front Discriminating Sensor Signal Left Front Discriminating Sensor Signal	20	0.5	OG/GY OG/YE	6618 354	III III	3500 1500/2500
21	0.35	BK/OG	5045	II	—	Middle Front Discriminating Sensor Low Reference Left Front Discriminating Sensor Low Reference	21	0.5	BK/OG BK/OG	6619 5045	III III	3500 1500/2500
22	0.5	YE	5530	II	—	Hood Open Switch Signal	22	0.5	YE	5530	III	—
23	0.5	BN/L-GN	109	II	—	Hood Ajar Switch Signal	23	0.5	BN/L-GN	109	III	—

X154 Engine Harness to Camshaft Position Sensor Jumper Harness



Connector Part Information

Harness Type: Engine
OEM Connector: 13884361
Service Connector: 19301723
Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Camshaft Position Sensor Jumper
OEM Connector: 13790317
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-35616-2A (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

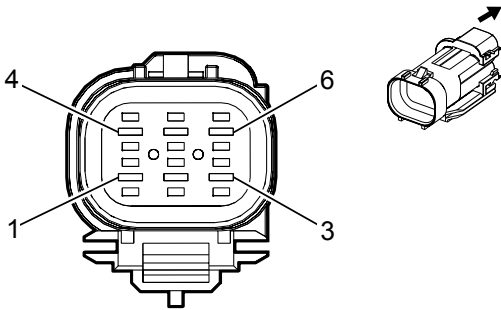
X154 Engine Harness to Camshaft Position Sensor Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY/D-BU	5300	I	—	Camshaft Position Intake Sensor Control 1	1	0.5	GY/D-BU	5300	II	—
2	0.5	BK/L-GN	5301	I	—	Camshaft Position Intake Sensor Low Reference 1	2	0.5	BK/L-GN	5301	II	—

3	0.5	YE/VT	5275	I	—	Camshaft Position Intake Sensor 1	3	0.5	YE/VT	5275	II	—
4	0.5	D-BU	179	I	—	Oil Pump Command Signal	4	0.5	D-BU	179	II	—
5	0.5	VT/BN	5284	I	—	Camshaft Phaser Intake Solenoid 1	5	0.5	VT/BN	5284	II	—
6	0.5	BK/BN	6753	I	—	Cam Phaser W Low Reference	6	0.5	BK/BN	6753	II	—
7	0.75	VT/D-BU	5293	I	—	Powertrain Main Relay Fused Supply 4	7	0.5	VT/D-BU	5293	II	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X158 Auxiliary Battery Harness to Engine Harness

—



Connector Part Information

Harness Type: Auxiliary Battery
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F

Connector Part Information

Harness Type: Engine
OEM Connector: 13893482
Service Connector: 19329921
Description: 6-Way M 2.8 Series, Sealed (BK)

Terminal Part Information

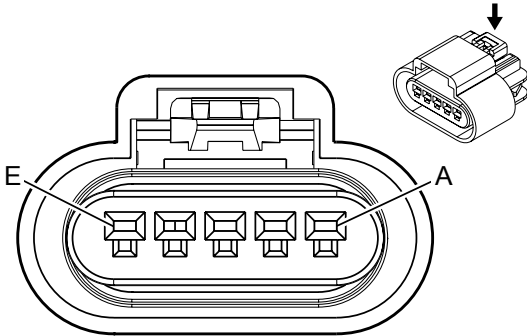
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X158 Auxiliary Battery Harness to Engine Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT/BN	300	I	—	Run Ignition 3 Voltage	1	0.5	VT/BN	300	II	—
3	0.5	RD/WH	3440	I	—	Battery Positive Voltage	3	0.5	RD/WH	3440	II	—
4	1	BK	550	I	—	Ground	4	1	BK	550	II	—
6	2.5	RD/L-GN	742	I	—	Battery Positive Voltage	6	2.5	RD/L-GN	742	II	—

--	--	--	--	--	--	--	--	--	--	--	--	--	--

X159 Engine Harness to Camshaft Position Sensor Jumper Harness



Connector Part Information

Harness Type: Engine
OEM Connector: 15326822
Service Connector: 13585858
Description: 5-Way F 150 GT Series, Sealed (BK)

Connector Part Information

Harness Type: Camshaft Position Sensor Jumper
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M

Terminal Part Information

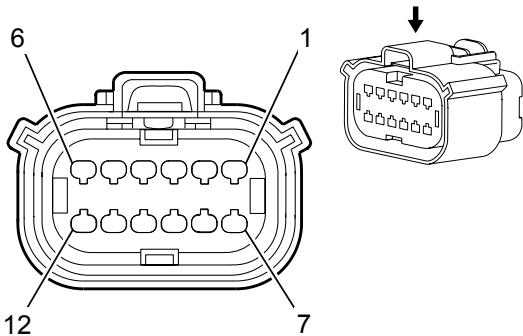
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required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

X159 Engine Harness to Camshaft Position Sensor Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.5	GY/D-BU	5300	I	—	Camshaft Position Intake Sensor Control 1	A	0.5	GY/D-BU	5300	II	—
B	0.5	BK/L-GN	5301	I	—	Camshaft Position Intake Sensor Low Reference 1	B	0.5	BK/L-GN	5301	II	—
C	0.5	YE/VT	5275	I	—	Camshaft Position Intake Sensor 1	C	0.5	YE/VT	5275	II	—
D	0.5	VT/BN	5284	I	—	Camshaft Phaser Intake Solenoid 1	D	0.5	VT/BN	5284	II	—

E	0.5	BK/BN	6753	I	—	Cam Phaser W Low Reference	E	0.5	BK/BN	6753	II	—

X160 Engine Harness to Odd Fuel Injector Harness



Connector Part Information

Harness Type: Engine
OEM Connector: 13653762
Service Connector: 13503528
Description: 12-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Odd Fuel Injector
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way M

Terminal Part Information

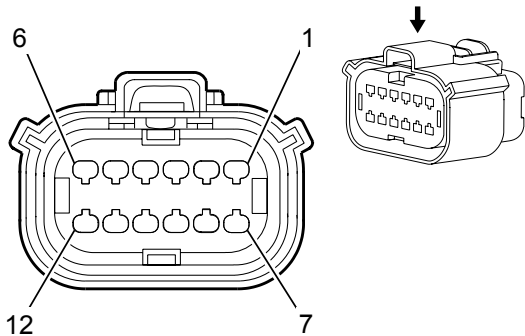
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	19300635	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
III	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

X160 Engine Harness to Odd Fuel Injector Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.75	BN/WH	4901	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1	2	0.75	BN/WH	4901	III	—
3	0.75	L-GN/BK	4903	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3	3	0.75	L-GN/BK	4903	III	—
4	0.75	L-GN/WH	4905	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5	4	0.75	L-GN/WH	4905	III	—
10/25/2016 - VERSION 1.0						2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION						

5	0.75	BN	4801	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 1	5	0.75	BN	4801	III	—
6 - 7	—	—	—	—	—	Not Occupied	6 - 7	—	—	—	—	—
8	0.75	L-GN	4803	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 3	8	0.75	L-GN	4803	III	—
9	0.75	WH/L-GN	4805	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 5	9	0.75	WH/L-GN	4805	III	—
10	0.5	BN/RD	2917	II	—	Fuel Rail Pressure Sensor 5V Reference	10	0.5	BN/RD	2917	III	—
11	0.5	D-BU/WH	2918	II	—	Fuel Rail Pressure Sensor Signal	11	0.5	D-BU/WH	2918	III	—
12	0.5	BK/L-GN	2919	II	—	Fuel Rail Pressure Sensor Low Reference	12	0.5	BK/L-GN	2919	III	—

X161 Engine Harness to Even Fuel Injector Harness



Connector Part Information

Harness Type: Engine
OEM Connector: 13863397
Service Connector: 19329931
Description: 12-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Even Fuel Injector
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way M

Terminal Part Information

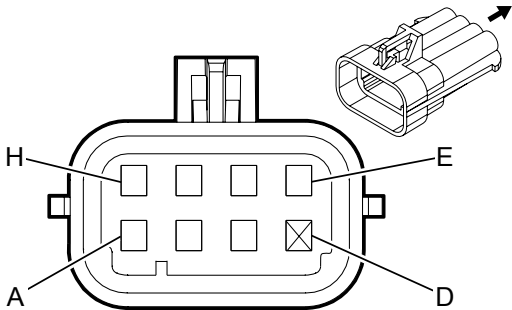
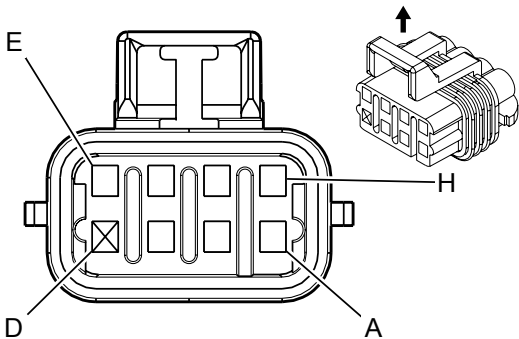
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

X161 Engine Harness to Even Fuel Injector Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.75	BN/L-GN	4902	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2	2	0.75	BN/L-GN	4902	II	—
3	0.75	D-BU/WH	4904	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4	3	0.75	D-BU/WH	4904	II	—
4	0.75	VT	4906	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6	4	0.75	VT	4906	II	—
5	0.75	D-BU	4802	I	—	Direct Fuel Injector (DFI) High Voltage	5	0.75	D-BU	4802	II	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

						Direct Fuel Injector Control Cylinder 2							
6 - 7	—	—	—	—	—	Not Occupied	6 - 7	—	—	—	—	—	—
8	0.75	GY/D-BU	4804	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 4	8	0.75	GY/D-BU	4804	II	—	—
9	0.75	L-GN/VT	4806	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 6	9	0.75	L-GN/VT	4806	II	—	—
10	0.75	VT/BK	7300	I	—	High Pressure Fuel Pump Actuator Low - Control	10	0.75	VT/BK	7300	II	—	—
11	0.75	YE	7301	I	—	High Pressure Fuel Pump Actuator High - Control	11	0.75	YE	7301	II	—	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—	—

X170 Engine Harness to Ignition Coil Odd Jumper Harness (L96 (ODD BANK))



Connector Part Information

Harness Type: Engine
OEM Connector: 12047938
Service Connector: 13580883
Description: 8-Way F 150 Metri-Pack Series, Sealed (L-GY)

Connector Part Information

Harness Type: Ignition Coil Jumper
OEM Connector: 15496016
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M 150 Metri-Pack Series (GY)

Terminal Part Information

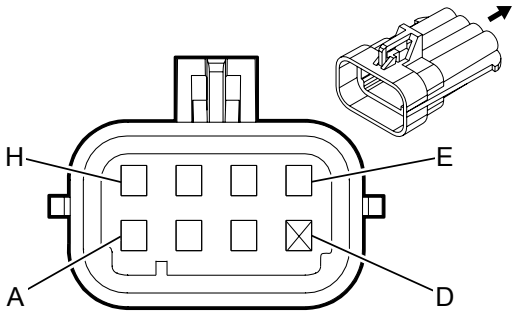
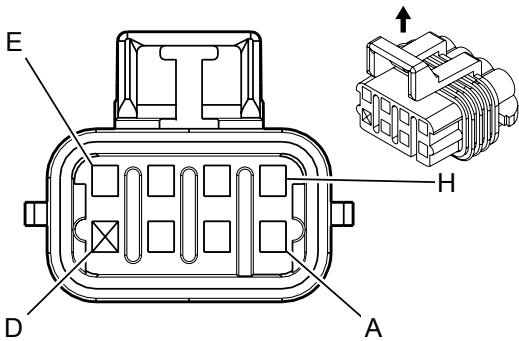
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X170 Engine Harness to Ignition Coil Odd Jumper Harness (L96 (ODD BANK))

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	BK	350	I	—	Ground	A	0.8	BK	350	II	—
B	0.5	L-GN/GY	2127	I	—	Ignition Control 7	B	0.5	RD	2127	II	—

C	0.5	D-BU/GY	2125	I	—	Ignition Control 5	C	0.5	D-GN	2125	II	—
E	0.5	BK/D-BU	2129	I	—	Ignition Control Low Reference Bank 1	E	0.5	BN	2129	II	—
F	0.5	L-GN/D-BU	2123	I	—	Ignition Control 3	F	0.5	L-BU	2123	II	—
G	0.5	D-BU/VT	2121	I	—	Ignition Control 1	G	0.5	VT	2121	II	—
H	0.75	VT/D-BU	5291	I	—	Powertrain Main Relay Fused Supply 2	H	0.8	PK	39	II	—

X171 Engine Harness to Ignition Coil Even Jumper Harness (L96 (EVEN BANK))



Connector Part Information

Harness Type: Engine
OEM Connector: 12047938
Service Connector: 13580883
Description: 8-Way F 150 Metri-Pack Series, Sealed (L-GY)

Connector Part Information

Harness Type: Ignition Coil Jumper
OEM Connector: 15496016
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M 150 Metri-Pack Series (GY)

Terminal Part Information

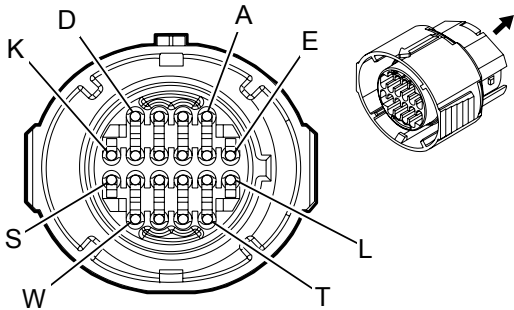
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X171 Engine Harness to Ignition Coil Even Jumper Harness (L96 (EVEN BANK))

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	BK	350	I	—	Ground	A	0.8	BK	450	II	—
B	0.5	D-BU/WH	2122	I	—	Ignition Control 2	B	0.5	BU/WH	2122	II	—

C	0.5	YE/D-BU	2124	I	—	Ignition Control 4	C	0.5	YE/BU	2124	II	—
E	0.5	BK/GY	2130	I	—	Ignition Control Low Reference Bank 2	E	0.5	BN	2129	II	—
F	0.5	BN/D-BU	2126	I	—	Ignition Control 6	F	0.5	BN/BU	2126	II	—
G	0.5	VT/WH	2128	I	—	Ignition Control 8	G	0.5	VT/WH	2128	II	—
H	0.75	VT/D-BU	5292	I	—	Powertrain Main Relay Fused Supply 3	H	0.8	PK	39	II	—

X175 Engine Harness to Transmission Harness (MW7)



Connector Part Information

Harness Type: Engine
OEM Connector: 13603424
Service Connector: 13503285
Description: 20-Way F 100W Micro-Pack Series, Sealed (BK)

Connector Part Information

Harness Type: Transmission
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 20-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	13579969	J-35616-6 (BN)	J-38125-33	12084913	Delphi 5	W	W
II	19301406	J-35616-6 (BN)	J-38125-33	12084912	Delphi 5	W	W
III	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

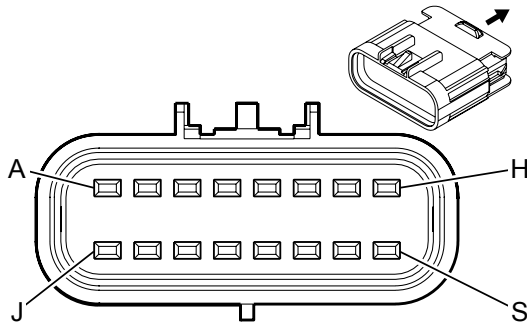
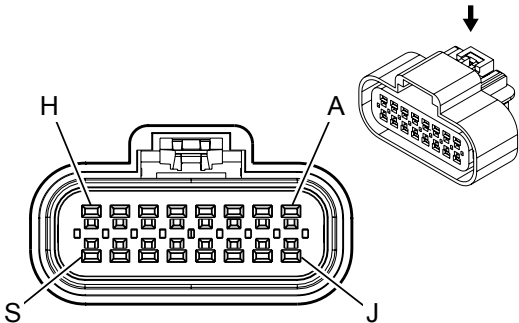
X175 Engine Harness to Transmission Harness (MW7)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	WH/L-GN	1222	II	—	1 Shift Solenoid Valve Control	A	0.75	WH/L-GN	1222	III	—
B	0.75	YE/BK	1223	II	—	2 Shift Solenoid Valve Control	B	0.75	YE/BK	1223	III	—
C	0.75	WH/BN	2527	II	—	Shift Solenoid Control 5	C	0.75	WH/BN	2527	III	—
D	0.75	VT/GY	1224	II	—	Transmission Fluid Pressure Switch Signal	D	0.75	VT/GY	1224	III	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

						Transmission Oil Temperature Sensor Signal Bit 1							
E	0.75	WH/BN	1226	II	—	Transmission Fluid Pressure Switch Signal Bit 3	E	0.75	WH/BN	1226	III	—	
F	0.75	L-GN/VT	1225	II	—	Transmission Fluid Pressure Switch Signal Bit 2	F	0.75	L-GN/VT	1225	III	—	
G	0.75	BN/WH	585	II	—	Transmission Oil Temperature Sensor Signal	G	0.75	BN/WH	585	III	—	
H	0.75	BK/BN	586	II	—	Transmission Oil Temperature Sensor Low Reference	H	0.75	BK/BN	586	III	—	
J	0.75	GY	6402	II	—	Clutch C Control	J	0.75	GY	6402	III	—	
K	0.75	L-GN/BK	2529	II	—	Transmission Fluid Pressure Switch Signal Bit 4	K	0.75	L-GN/BK	2529	III	—	
L	0.75	GY/BN	6388	II	—	Transmission High Side Driver 2 Signal	L	0.75	GY/BN	6388	III	—	
M	0.75	BN	6400	II	—	Clutch A Control	M	0.75	BN	6400	III	—	
N	0.75	L-GN/GY	6387	II	—	Transmission High Side Driver 1 Signal Driver	N	0.75	L-GN/GY	6387	III	—	
P	0.75	WH	4508	II	—	Transmission Clutch G Control	P	0.75	WH	4508	III	—	
R	0.5	WH/GY	1786	I	—	Transmission Park/Neutral Signal 1	R	0.5	WH/GY	1786	III	—	

R	0.5					PRNDL Neutral Signal	R	0.5				
S	0.75	D-BU	6401	II	—	Clutch B Control	S	0.75	D-BU	6401	III	—
T	0.5	WH/BK	5983	I	—	PRNDL C Signal	T	0.5	WH/BK	5983	III	—
U	0.5	GY/BN	5982	I	—	PRNDL B Signal	U	0.5	GY/BN	5982	III	—
V	0.5	VT/WH	5981	I	—	PRNDL A Signal	V	0.5	VT/WH	5981	III	—
W	0.5	GY/WH	4168	I	—	PRNDL P Signal	W	0.5	GY/WH	4168	III	—

X191 Engine Harness to Power Take-Off Jumper Harness (L5P+PTO)



Connector Part Information

Harness Type: Engine
OEM Connector: 15326863
Service Connector: 19180282
Description: 16-Way F 150 GT Series, Sealed (BK)

Connector Part Information

Harness Type: Engine
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	E	1
II	13575412	J-35616-14 (GN)	J-38125-553	Not Available	Not Available	Not Available	Not Available
III	13575397	J-35616-3 (GY)	J-38125-553	15326269	Delphi 19	E	4

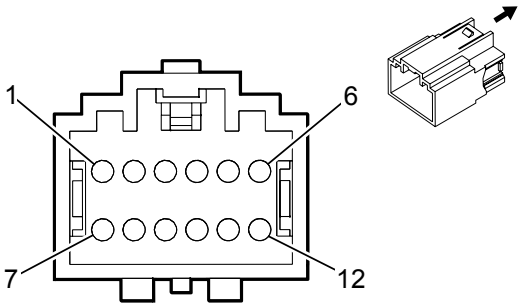
X191 Engine Harness to Power Take-Off Jumper Harness (L5P+PTO)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	BN/WH	6085	II	—	Power Take Off Remote Engine Start Switch Signal	A	0.5	BN/WH	6085	III	—
B	0.75	BN	6381	II	—	Power Take Off Relay	B	—	—	—	—	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

B	0.75					Engage Signal	B	—					
C	—	—	—	—	—	Not Occupied	C	—	—	—	—	—	—
D	0.75	BK	550	II	—	Ground	D	—	—	—	—	—	—
E - F	—	—	—	—	—	Not Occupied	E - F	—	—	—	—	—	—
G	0.75	YE	2522	II	—	Power Take Off Status Signal	G	—	—	—	—	—	—
H	0.5	VT/D-BU	2562	I	—	Power Take Off Relay Coil Control	H	—	—	—	—	—	—
J	0.5	WH/L-GN	6142	I	—	Power Take Off Engine Shutdown Signal	J	0.5	BN/WH	6085	III	—	—
K	0.75	RD/VT	2640	II	—	Battery Positive Voltage	K	—	—	—	—	—	—
L - M	—	—	—	—	—	Not Occupied	L - M	—	—	—	—	—	—
N	0.5	D-BU/GY	6089	I	—	Power Take Off Remote Switch Set Signal 1	N	—	—	—	—	—	—
P	—	—	—	—	—	Not Occupied	P	—	—	—	—	—	—
R	0.5	VT/WH	239	I	—	Run/Crank Ignition 1 Voltage	R	—	—	—	—	—	—
S	—	—	—	—	—	Not Occupied	S	—	—	—	—	—	—

X201 Steering Column Harness to Instrument Panel Harness (E29)

—



Connector Part Information

Harness Type: Steering Column
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F

Connector Part Information

Harness Type: Instrument Panel
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	Not Required	Not Available	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

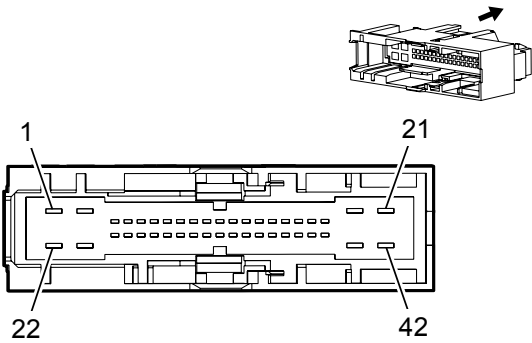
X201 Steering Column Harness to Instrument Panel Harness (E29)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	BN	6136	I	—	Control	1	0.35	BN	6136	II	—
2	0.35	RD/YE	3040	I	—	Battery Positive Voltage	2	0.35	RD/YE	3040	II	—
3	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	3	0.5	D-BU/YE	6105	II	—
4	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	4	0.5	D-BU/YE	6105	II	—
						2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION						

5	0.35	L-GN/BN	2087	I	—	Combined Vehicle Inertial Sensor Supply Voltage	5	0.35	L-GN/BN	2087	II	—
6	0.5	BK/WH	1851	I	—	Signal Ground	6	0.5	BK/WH	1851	II	—
7	0.35	RD/D-BU	540	I	—	Battery Positive Voltage	7	0.35	RD/D-BU	540	II	—
8	0.35	L-GN/WH	111	I	—	Hazard Switch Signal	8	0.35	L-GN/WH	111	II	—
9	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	9	0.5	WH	6106	II	—
10	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	10	0.5	WH	6106	II	—
12	0.5	BK	1050	I	—	Ground	12	0.5	BK	1050	II	—

X201 Steering Column Harness to Instrument Panel Harness (-E29)

—



Connector Part Information

Harness Type: Steering Column
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 42-Way F

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	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	13575823	J-35616-5 (PU)	J-38125-11A	7114-4110-02	Yazaki 9	E	C
III	19301762	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IV	19301763	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available

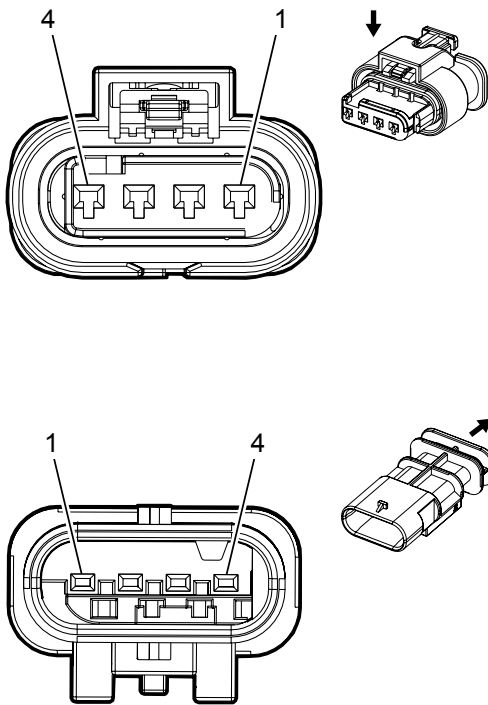
X201 Steering Column Harness to Instrument Panel Harness (-E29)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
4	0.35	RD/D-BU	540	I	—	Battery Positive Voltage	4	0.35	RD/D-BU	540	III	—
9	0.35	L-GN/BN	2087	I	—	Combined Vehicle Inertial Sensor Supply Voltage	9	0.35	L-GN/BN	2087	III	—
10	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	10	0.5	D-BU/YE	6105	IV	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

11	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	11	0.5	D-BU/YE	6105	IV	—
16	0.35	L-GN/WH	111	I	—	Hazard Switch Signal	16	0.35	L-GN/WH	111	III	—
17	0.35	YE/WH	816	I	—	Brake Transmission Shift Interlock Solenoid Control	17	0.35	YE/WH	816	III	—
20	0.5	BK	1050	I	—	Ground	20	0.5	BK	1050	II	—
25	0.35	RD/YE	3040	I	—	Battery Positive Voltage	25	0.35	RD/YE	3040	III	—
30	0.5	L-GN/WH	7527	I	—	Local Interconnect Network Serial Data Bus 5	30	0.5	L-GN/WH	7527	IV	—
31	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	31	0.5	WH	6106	IV	—
32	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	32	0.5	WH	6106	IV	—
33	0.5	L-GN/BK	3894	I	—	Local Interconnect Network Serial Data Bus 12	33	0.5	L-GN/BK	3894	IV	—
38	0.35	BN	6136	I	—	Control	38	0.35	BN	6136	III	—
41	0.5	VT/WH	1139	I	—	Run/Crank Ignition 1 Voltage	41	0.5	VT/WH	1139	II	—

42	0.5	BK/WH	1851	I	—	Signal Ground	42	0.5	BK/WH	1851	II	—
----	-----	-------	------	---	---	---------------	----	-----	-------	------	----	---

X205 Instrument Panel Harness to Instrument Panel Extension Harness



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: Instrument Panel Extension
OEM Connector: 13854529
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 Series, Sealed (YE)

Terminal Part Information

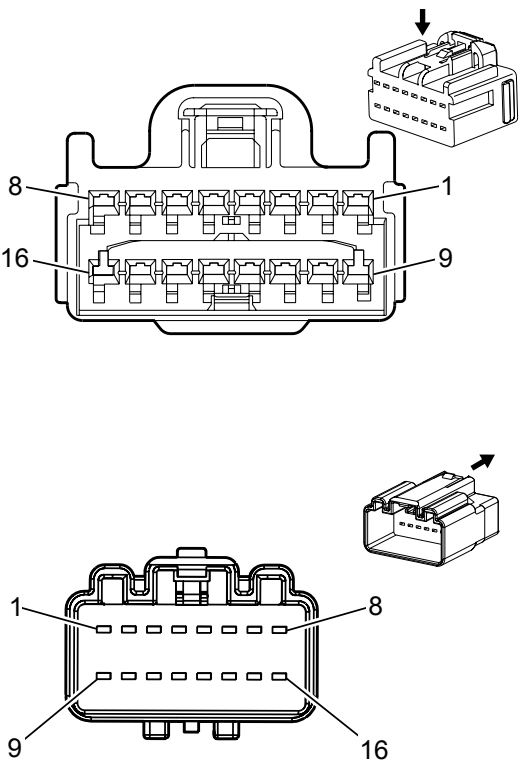
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X205 Instrument Panel Harness to Instrument Panel Extension 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/OG	3025	II	—
2	0.35	OG/WH	3024	I	—	Passenger IP Module Stage 1 Low Control	2	0.35	OG/WH	3024	II	—

3	0.35	GY/OG	3027	I	—	Passenger IP Module Stage 2 High Control	3	—	—	—	—	—
4	0.35	OG/VT	3026	I	—	Passenger IP Module Stage 2 Low Control	4	—	—	—	—	—

X206 Headliner Harness to Body Harness



Connector Part Information

Harness Type: Headliner
OEM Connector: 10847013
Service Connector: 89047090
Description: 16-Way F 1.5 Kaizen Series (GN)

Connector Part Information

Harness Type: Body
OEM Connector: 13507433
Service Connector: 89047072
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	13578891	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
III	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

X206 Headliner Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 2	—	—	—	—	—	Not Occupied	1 - 2	—	—	—	—	—
3	0.35	L-GN/RD	2308	I	—	Passenger Air Bag Off Indicator Control	3	0.35	L-GN	2308	II	—

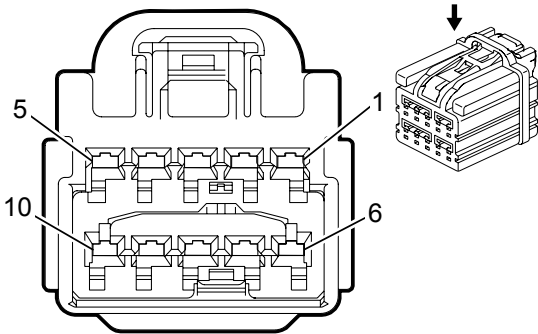
4	0.35	D-BU	2307	I	—	Passenger Air Bag On Indicator Control	4	0.35	D-BU	2307	II	—
5	0.35	VT/WH	5234	I	—	Passenger Seat Belt Indicator Control	5	0.35	VT/WH	5234	III	—
6	0.5	VT/GY	1054	I	—	Stop Lamp Control	6	0.5	VT/GY	1054	II	—
7 - 9	—	—	—	—	—	Not Occupied	7 - 9	—	—	—	—	—
10	0.35	L-GN/BK	3008	I	—	Noise Reduction Microphone 1 Low Reference	10	0.35	L-GN/BK	3008	II	—
11	0.5	GY	157	I	E29	Interior Lamp Control	11	0.5	GY	157	II	E29
	0.35	L-GN/WH	3005	I	NKC/UQS	Noise Reduction Microphone 1 Signal		0.35	L-GN/BN	3005	II	NKC/UQS
12	0.5	WH/BN	6815	I	E29	Inadvertent Power Control	12	0.5	WH/BN	6815	II	E29
	0.35	D-BU/BK	3009	I	NKC	Noise Reduction Microphone 2 Low Reference		0.35	D-BU/BK	3009	II	NKC
13	0.35	D-BU/YE	3006	I	—	Noise Reduction Microphone 2 Signal	13	0.35	D-BU/YE	3006	II	—
14	0.35	GY/D-BU	156	I	E29	Courtesy Lamp Switch Signal	14	0.35	GY	156	II	E29
	0.35	GY/BN	3010	I	NKC	Noise Reduction Microphone 3 Low Reference		0.35	GY/BN	3010	II	NKC

15	0.35	GY/D-BU	3007	I	—	Noise Reduction Microphone 3 Signal	15	0.35	GY/D-BU	3007	II	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—

7	0.35	YE/D-BU	3197	I	—	Humidity Temperature Sensor Signal	7	0.35	YE/D-BU	3197	II	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.35	YE/RD	597	I	—	5V Reference	9	0.35	YE/RD	597	II	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—

9	0.5	BK/WH	1851	I	E29	Signal Ground	9	0.5	BK/WH	1851	II	E29
	0.35	BK/WH	1851	I	-E29	Signal Ground		0.35	BK/WH	1851	II	-E29
10	0.35	BK/YE	1791	I	—	Air Temperature Door Control Low Reference	10	0.35	BK/YE	1791	II	—
11	0.35	D-BU/WH	734	I	—	Inside Air Temperature Sensor Signal	11	0.35	D-BU/WH	734	II	—
12	0.35	GY	590	I	—	Solar Sensor Driver Signal	12	0.35	GY	590	II	—
13	0.35	YE/VT	1783	I	—	Twilight Sentinel Delay Signal	13	0.35	YE/VT	1783	II	—

X216 Body Harness to HVAC Harness



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: —
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way M

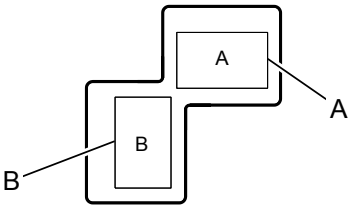
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	Not Required	Not Available	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	I	—	Rear Defog Relay Control	4	0.35	BN/VT	193	II	—
5	0.5	D-BU/BN	7573	I	—	Electric Variable Displacement Supply	5	0.5	D-BU/BN	7573	II	—
6	0.5	D-BU/YE	7574	I	—	Electric Variable Displacement Control	6	0.5	D-BU/YE	7574	II	—
7 - 10	—	—	—	—	—	Not Occupied	7 - 10	—	—	—	—	—

X217 Body Harness to HVAC Harness



Connector Part Information

Harness Type: Body
OEM Connector: 10721337
Service Connector: 88953301
Description: 2-Way F 56 Series (BK)

Connector Part Information

Harness Type: HVAC
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M

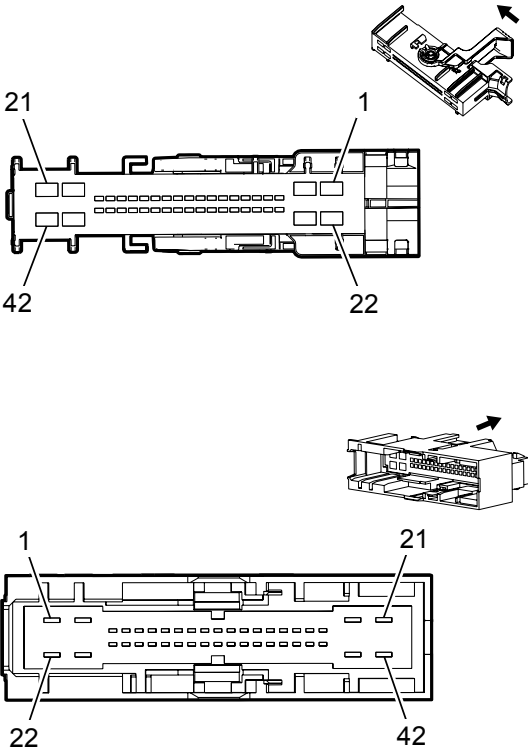
Terminal Part Information

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	Not Available	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
A	4	RD/VT	542	I	—	Battery Positive Voltage	A	4	RD/VT	542	II	—
B	10	RD/GY	642	I	—	Battery Positive Voltage	B	10	RD/GY	642	II	—

X225 Body Harness to Instrument Panel Harness (Extended Cab/Crew Cab)



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: 13597186
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	13580025	J-35616-35 (VT)	J-38125-11A	7116-4111-02	Yazaki 9	E	A
II	19300649	J-35616-64B (LT BU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-557	Not Available	Not Available	Not Available	Not Available
V	19301762	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VI	19301763	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VII	19329828	J-35616-5 (PU)	J-38125-212	1326029-1	Lear 17	E	C
VIII	19329828	J-35616-5 (PU)	J-38125-212	Not Available	Not Available	Not Available	Not Available

X225 Body Harness to Instrument Panel Harness (Extended Cab/Crew Cab)

Pin	Size	Color	Circuit	Terminal Type	Option	Function	Pin	Size	Color	Circuit	Terminal Type	Option
					2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL	SECTION						

				ID							ID	
1	0.75	YE/GY	1956	I	—	Left Front Tweeter Speaker (-) Low Reference	1	0.75	YE/GY	1956	VIII	—
2	1.5	BK	1850	IV	—	Ground	2	0.75	BK	1850	VIII	—
3	—	—	—	—	—	High Speed GMLAN Serial Data (-) 2	3	0.5	WH	6106	VI	—
4	0.5	WH/BN	6815	II	—	Inadvertent Power Control	4	0.5	WH/BN	6815	VI	—
5	0.35	GY/WH	3272	II	—	Remote Function Actuator Control	5	0.35	GY/WH	3272	V	—
6	0.35	D-BU/WH	3275	II	—	Remote Function Actuator Receive Signal	6	0.35	D-BU/WH	3275	V	—
7	0.35	L-GN/BN	507	II	—	Wait To Start Indicator Control	7	0.35	L-GN/BN	507	V	—
8	0.5	L-GN	3998	II	UQA/UQG/UQH/U QS	MOST Serial Data (+)	8	0.5	GY/VT	3998	VI	—
	0.5	GY/VT	3998	II	- UQA/UQG/UQH/U QS	MOST Serial Data (+)						
9	0.35	D-BU/YE	6844	II	—	ABS/TCS Hill Descent Control Switch Signal	9	0.35	D-BU/YE	6844	V	—
10	—	—	—	—	—	Low Washer Fluid Indicator Control	10	0.35	VT	185	V	—

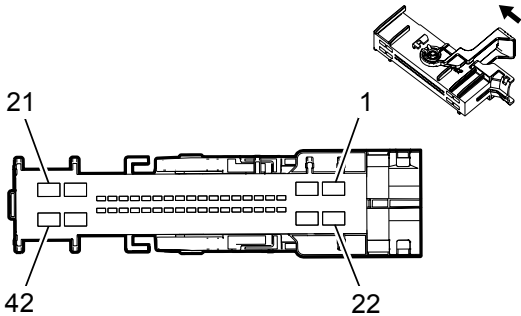
11	0.5	WH/L-GN	3997	II	—	MOST Serial Data (-)	11	0.5	WH/L-GN	3997	VI	—
12	0.5	BN/D-BU	118	II	—	Left Front Speaker Signal (-) 1	12	0.5	BN/D-BU	118	VI	—
13	—	—	—	—	—	Park Brake Switch Signal	13	0.5	D-BU/VT	1134	VI	—
14	0.5	L-GN	199	II	—	Left Rear Speaker Control (+)	14	0.5	L-GN	199	VI	—
15	—	—	—	—	—	High Speed GMLAN Serial Data (+) 1	15	0.5	D-BU	2500	VI	—
16	—	—	—	—	—	High Speed GMLAN Serial Data (-) 1	16	0.5	WH	2501	VI	—
17	0.35	D-BU/GY	636	II	—	Outside Ambient Air Temperature Sensor Signal	17	0.35	D-BU/GY	636	V	—
18	—	—	—	—	—	Stop Lamp Switch Signal	18	0.35	WH/L-GN	526	V	—
19	0.35	BK/D-BU	61	II	—	Outside Ambient Temperature Sensor Low Reference	19	0.35	BK/D-BU	61	V	—
20	0.5	BN/D-BU	118	III	UQ3	Left Front Speaker Signal (-) 1	20	0.75	BN/D-BU	118	VIII	—
	0.75	BN/D-BU	118	III	UQ3/UQ5	Left Front Speaker Signal (-) 1						

21	—	—	—	—	—	Driver Door Lock Switch Unlock Signal	21	0.35	BN/WH	781	VII	—
22	0.75	YE/D-BU	1856	I	—	Left Front Tweeter Speaker Control (+)	22	0.75	YE/D-BU	1856	VIII	—
23	0.35	L-GN	4512	III	—	Wireless Charging System Charge Indicator Control	23	0.35	L-GN	4512	VIII	—
24	0.35	L-GN/WH	3438	II	—	Exhaust Brake Switch Signal	24	0.35	L-GN/WH	3438	V	—
25	0.35	BN/WH	419	II	—	Check Engine Indicator Control	25	0.35	BN/WH	419	V	—
26	0.35	YE/L-GN	3274	II	—	Remote Function Actuator Transmit Signal	26	0.35	YE/L-GN	3274	V	—
27	0.35	GY	3273	II	—	Remote Function Actuator Low Reference	27	0.35	GY	3273	V	—
28	0.5	BK	1850	II	—	Ground	28	0.5	BK	1850	VI	—
29	0.5	YE	3997	II	UQA/UQG/UQH/U QS	MOST Serial Data (-)	29	0.5	WH/L-GN	3997	VI	—
	0.5	WH/L-GN	3997	II	- UQA/UQG/UQH/U QS	MOST Serial Data (-)						
30	0.35	L-GN/WH	488	II	—	Power Take Off Control Switch	30	0.35	L-GN/WH	488	V	—

31	0.35	BN/L-GN	4311	II	—	Power Take Off Enable In Cab Switch Normally Closed Signal	31	0.35	BN/L-GN	4311	V	—
32	0.5	GY/VT	3998	II	—	MOST Serial Data (+)	32	0.5	GY/VT	3998	VI	—
33	0.5	D-BU	201	II	—	Left Front Speaker Control (+) 1	33	0.5	D-BU	201	VI	—
34	0.5	D-BU/YE	68	II	—	Low Coolant Level Indicator Control	34	0.5	D-BU/YE	68	VI	—
35	0.5	L-GN/BK	116	II	—	Left Rear Speaker Signal (-)	35	0.5	L-GN/BK	116	VI	—
36	0.5	L-GN/YE	2081	II	—	Exhaust Brake Switch Control	36	0.5	L-GN/YE	2081	VI	—
37	0.35	VT/YE	43	II	—	Accessory Ignition Voltage	37	0.35	VT/YE	43	V	—
38	0.35	L-GN/BN	2087	II	—	Combined Vehicle Inertial Sensor Supply Voltage	38	0.35	L-GN/BN	2087	V	—
39	—	—	—	—	—	Not Occupied	39	—	—	—	—	—
40	0.5	L-GN/GY	6135	II	—	Local Interconnect Network Serial Data Bus 4	40	0.5	L-GN/GY	6135	VI	—
41	0.5	D-BU	201	III	UQ3	Left Front Speaker Control (+) 1	41	0.75	D-BU	201	VIII	—
	0.75	D-BU	201	III	UQ3/UQ5	Left Front Speaker Control (+) 1						
25/2016 - VERSION 1.0												
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

42	0.35	D-BU/YE	6844	III	—	ABS/TCS Hill Descent Control Switch Signal	42	0.35	D-BU/YE	6844	VIII	—
----	------	---------	------	-----	---	---	----	------	---------	------	------	---

X225 Body Harness to Instrument Panel Harness (Regular Cab)



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: —
Service Connector: Service by Harness - See Part Catalog
Description: 42-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	13580025	J-35616-35 (VT)	J-38125-11A	7116-4111-02	Yazaki 9	E	A
II	19300649	J-35616-64B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19300649	J-35616-64B (LT BU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
V	19301761	J-35616-35 (VT)	J-38125-557	Not Available	Not Available	Not Available	Not Available
VI	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

X225 Body Harness to Instrument Panel Harness (Regular Cab)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BK	2550	I	—	Ground	1	0.75	BK	2550	VI	—
2	1.5	BK	1850	V	—	Ground	2	1.5	BK	1850	VI	—
3	0.5	WH	6106	III	—	High Speed GMLAN Serial Data (-) 2	3	0.5	WH	6106	VI	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

3	0.5					Serial Data (-) 2	3	0.5				
4	0.5	D-BU/YE	6105	III	—	High Speed GMLAN Serial Data (+) 2	4	0.5	D-BU/YE	6105	VI	—
5	0.35	GY/WH	3272	III	—	Remote Function Actuator Control	5	0.35	GY/WH	3272	VI	—
6	0.35	D-BU/WH	3275	III	—	Remote Function Actuator Receive Signal	6	0.35	D-BU/WH	3275	VI	—
7	0.35	L-GN/BN	507	III	E29	Wait To Start Indicator Control	7	0.35	L-GN/BN	507	VI	E29
		BK/L-GN	552	III	L5P	Sensor Low Reference			BK/L-GN	552	VI	L5P
	0.35							0.35				
8	0.5	GY/VT	3998	III	—	MOST Serial Data (+)	8	0.5	GY/VT	3998	VI	—
9	0.5	RD/WH	961	III	—	—	9	0.5	RD/WH	961	VI	—
10	0.35	VT	185	III	—	Low Washer Fluid Indicator Control	10	0.35	VT	185	VI	—
11	0.5	WH/L-GN	3997	III	—	MOST Serial Data (-)	11	0.5	WH/L-GN	3997	VI	—
12	0.5	BN/D-BU	118	III	—	Left Front Speaker Signal (-) 1	12	0.5	BN/D-BU	118	VI	—
13	1	D-BU/VT	1134	II	—	Park Brake Switch Signal	13	1	D-BU/VT	1134	VI	—

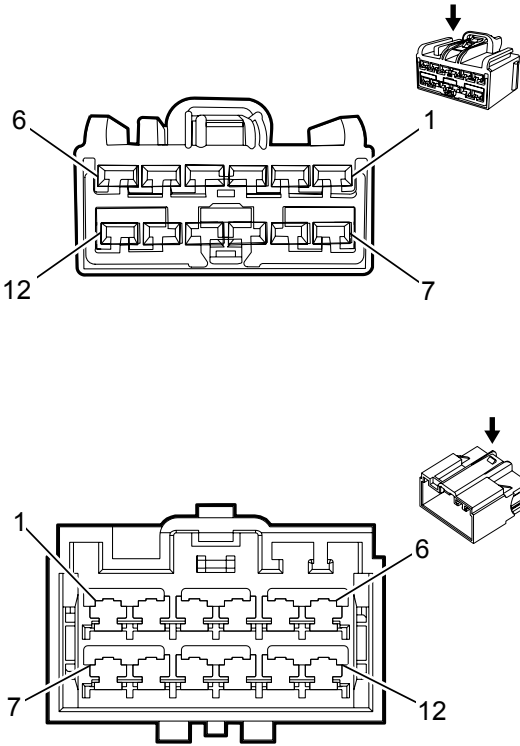
14	0.5	L-GN	199	III	—	Left Rear Speaker Control (+)	14	0.5	L-GN	199	VI	—
15	0.5	D-BU	2500	III	—	High Speed GMLAN Serial Data (+) 1	15	0.5	D-BU	2500	VI	—
16	0.5	WH	2501	III	—	High Speed GMLAN Serial Data (-) 1	16	0.5	WH	2501	VI	—
17	0.35	D-BU/GY	636	III	—	Outside Ambient Air Temperature Sensor Signal	17	0.35	D-BU/GY	636	VI	—
18	0.35	WH/L-GN	526	III	—	Stop Lamp Switch Signal	18	0.35	WH/L-GN	526	VI	—
19	0.35	BK/D-BU	61	III	—	Outside Ambient Temperature Sensor Low Reference	19	0.35	BK/D-BU	61	VI	—
20	0.5	BN/D-BU	118	IV	UQ3	Left Front Speaker Signal (-) 1	20	0.5	BN/D-BU	118	VI	UQ3
	0.75	BN/D-BU	118	IV	UQ3/UQ5	Left Front Speaker Signal (-) 1		0.75	BN/D-BU	118	VI	UQ3/UQ5
21	0.35	BN/WH	781	IV	—	Driver Door Lock Switch Unlock Signal	21	0.35	BN/WH	781	VI	—
22	0.35	BN/YE	780	IV	—	Driver Door Lock Switch Lock Signal	22	0.35	BN/YE	780	VI	—
23	0.5	WH/D-BU	3691	IV	—	Trailer Brake Apply Signal	23	0.5	WH/D-BU	3691	VI	—

24	0.35	L-GN/WH	3438	III	—	Exhaust Brake Switch Signal	24	0.35	L-GN/WH	3438	VI	—
25	0.35	BN/WH	419	III	—	Check Engine Indicator Control	25	0.35	BN/WH	419	VI	—
26	0.35	YE/L-GN	3274	III	—	Remote Function Actuator Transmit Signal	26	0.35	YE/L-GN	3274	VI	—
27	0.35	GY	3273	III	—	Remote Function Actuator Low Reference	27	0.35	GY	3273	VI	—
28	0.5	BK	1850	III	—	Ground	28	0.5	BK	1850	VI	—
29	0.5	WH/L-GN	3997	III	—	MOST Serial Data (-)	29	0.5	WH/L-GN	3997	VI	—
30	0.5	L-GN/GY	963	III	E29	—	30	0.5	L-GN/GY	963	VI	E29
	0.35	L-GN/WH	488	III	PTO	Power Take Off Control Switch		0.35	L-GN/WH	488	VI	PTO
31	0.5	WH/D-BU	964	III	E29	—	31	0.5	WH/D-BU	964	VI	E29
	0.35	BN/L-GN	4311	III	PTO	Power Take Off Enable In Cab Switch Normally Closed Signal		0.35	BN/L-GN	4311	VI	PTO
32	0.5	GY/VT	3998	III	—	MOST Serial Data (+)	32	0.5	GY/VT	3998	VI	—

33	0.5	D-BU	201	III	—	Left Front Speaker Control (+) 1	33	0.5	D-BU	201	VI	—
34	0.5	D-BU/YE	68	III	—	Low Coolant Level Indicator Control	34	0.5	D-BU/YE	68	VI	—
35	0.5	L-GN/BK	116	III	—	Left Rear Speaker Signal (-)	35	0.5	L-GN/BK	116	VI	—
36	0.5	D-BU/YE	6105	III	E29	High Speed GMLAN Serial Data (+) 2	36	0.5	D-BU/YE	6105	VI	E29
	0.5	L-GN/YE	2081	III	K40	Exhaust Brake Switch Control		0.5	L-GN/YE	2081	VI	K40
37	0.5	WH	6106	III	—	High Speed GMLAN Serial Data (-) 2	37	0.5	WH	6106	VI	—
38	0.35	L-GN/BN	2087	III	—	Combined Vehicle Inertial Sensor Supply Voltage	38	0.35	L-GN/BN	2087	VI	—
39	0.5	YE/WH	962	III	—	—	39	0.5	YE/WH	962	VI	—
40	0.35	GY/RD	598	III	—	5V Reference	40	0.35	GY/RD	598	VI	—
41	0.5	D-BU	201	IV	UQ3	Left Front Speaker Control (+) 1	41	0.5	D-BU	201	VI	UQ3
	0.75	D-BU	201	IV	UQ3/UQ5	Left Front Speaker Control (+) 1		0.75	D-BU	201	VI	UQ3/UQ5

42	2.5	BK	1050	IV	E29	Ground	42	2.5	BK	1050	VI	E29
		D-BU/YE	6844	IV	JHD	ABS/TCS Hill Descent Control Switch Signal			D-BU/YE	6844	VI	JHD
	0.35							0.35				

X241 Instrument Panel Harness to Instrument Panel Extension Harness



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 10846814
Service Connector: 13580444
Description: 12-Way F 2.8 Kaizen Series (L-GY)

Connector Part Information

Harness Type: Instrument Panel Extension
OEM Connector: 10846810
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way M (L-GY)

Terminal Part Information

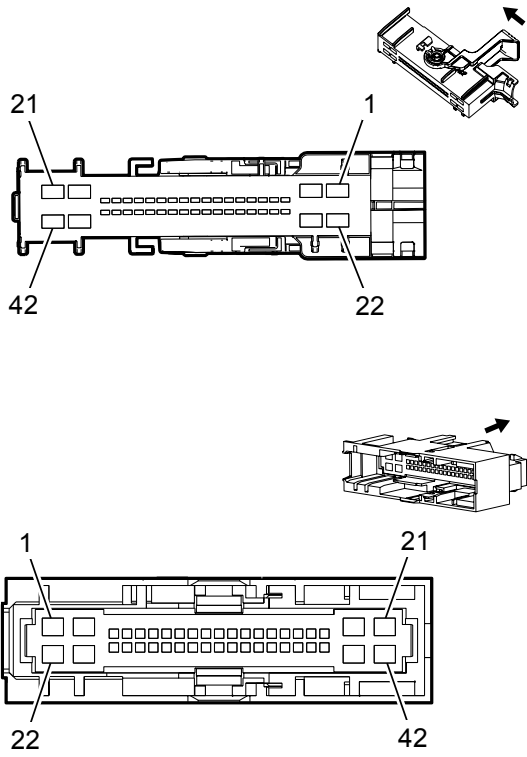
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575836	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	13575839	J-35616-35 (VT)	J-38125-11A	7116-4112-02	Yazaki 9	C	D
III	13575839	J-35616-35 (VT)	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

X241 Instrument Panel Harness to Instrument Panel Extension 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	5683	III	—	120 V AC Phase A	2	1.5	BK	5683	IV	—
					2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION							

3 - 5	—	—	—	—	—	Not Occupied	3 - 5	—	—	—	—	—
6	2.5	RD/GY	4140	II	—	Battery Positive Voltage	6	2.5	RD/GY	4140	IV	—
7	1.5	RD	5684	III	—	120 V AC Phase B	7	1.5	RD	5684	IV	—
8 - 9	—	—	—	—	—	Not Occupied	8 - 9	—	—	—	—	—
10	0.5	BARE	514	I	—	Low Reference	10	0.35	BARE	514	IV	—
11	2.5	BK	1050	II	—	Ground	11	2.5	BK	1050	IV	—
12	0.35	D-BU/BN	6807	I	—	DC To AC Inverter Control	12	0.35	D-BU/BN	6807	IV	—

X275 Instrument Panel Harness to Body Harness



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-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
II	19300649	J-35616-64B (LT BU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-557	Not Available	Not Available	Not Available	Not Available
V	13575823	J-35616-5 (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
VI	13575824	J-35616-5 (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
VII	19301762	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VIII	19301763	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IX	19329828	J-35616-5 (PU)	J-38125-212	Not Available	Not Available	Not Available	Not Available
X	19329836	J-35616-65B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

X275 Instrument Panel Harness to Body Harness

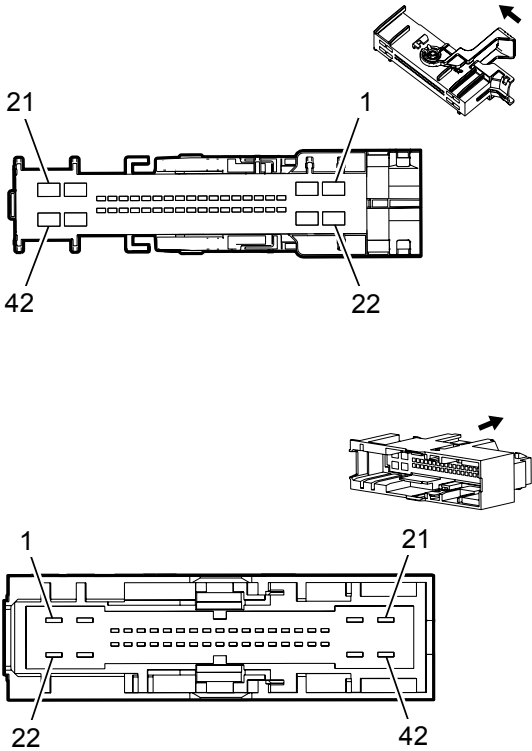
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	VT/BN	1952	III	—	Right Front Tweeter Speaker (-) Low Reference	1	0.75	VT/BN	1952	IX	—
2	1.5	VT/YE	143	IV	—	Accessory Ignition Voltage	2	1.5	VT/YE	143	VI	—
3	0.35	D-BU	2060	II	—	Auxiliary Detection Signal	3	0.5	D-BU	2060	VIII	—
4	0.5	BARE	5842	II	—	Auxiliary Audio Screen 2	4	0.5	BARE	5842	VIII	—
5	0.35	VT	5843	II	—	Auxiliary Audio Common Signal	5	0.5	VT	5843	VIII	—
6	0.35	GY	5839	II	—	Left Auxiliary Audio Signal 2	6	0.5	GY	5839	VIII	—
7	0.35	L-GN	5841	II	—	Right Auxiliary Audio Signal 2	7	0.5	L-GN	5841	VIII	—
8	0.35	GY/YE	6972	II	—	Camera Signal 2 +	8	0.35	GY/YE	6972	VII	—
9	0.35	WH/D-BU	6973	II	—	Camera Signal 2	9	0.35	WH/D-BU	6973	VII	—
10	0.35	L-GN/WH	24	II	—	Backup Lamp Control	10	0.35	L-GN/WH	24	VII	—

11	0.35	WH/VT	3999	II	—	MOST Control	11	0.35	WH/VT	3999	VII	—
12	0.5	YE/BK	117	II	—	Right Front Speaker Signal (-) 1	12	0.5	YE/BK	117	VIII	—
13	0.5	BN/WH	1429	II	—	Standing Lamp Relay Control	13	0.5	BN/WH	1429	VIII	—
14	0.5	WH	46	II	—	Right Rear Speaker Control (+)	14	0.5	WH	46	VIII	—
15	0.35	YE/OG	3025	I	—	Passenger IP Module Stage 1 High Control	15	0.35	YE/OG	3025	X	—
16	0.35	OG/WH	3024	I	—	Passenger IP Module Stage 1 Low Control	16	0.35	OG/WH	3024	X	—
17	0.35	GY/OG	3027	I	—	Passenger IP Module Stage 2 High Control	17	0.35	GY/OG	3027	X	—
18	0.35	OG/VT	3026	I	—	Passenger IP Module Stage 2 Low Control	18	0.35	OG/VT	3026	X	—
19	—	—	—	—	—	Not Occupied	19	—	—	—	—	—
20	0.75	YE/BK	117	III	—	Right Front Speaker Signal (-) 1 Right Front Speaker Signal (-) 1	20	0.5 0.75	YE/BK YE/BK	117 117	V V	UQ3 UQ3/UQ5
21	1.5	VT/YE	243	IV	—	Accessory Ignition Voltage	21	1.5	VT/YE	243	VI	—

22	0.75	BN/L-GN	1852	III	—	Right Front Tweeter Speaker Control (+)	22	0.75	BN/L-GN	1852	IX	—
23	0.35	WH/D-BU	5986	III	IO3	Serial Data Communication Enable	23	0.5	WH/D-BU	5986	IX	—
	0.5	WH/D-BU	5986	III	IO5/IO6+UE1/UHX	Serial Data Communication Enable						
24	0.35	GY/VT	755	II	—	RAP Relay Coil Control	24	0.35	GY/VT	755	VII	—
25	0.5	L-GN	5060	II	—	Low Speed GMLAN Serial Data	25	0.5	L-GN	5060	VIII	—
26 - 28	—	—	—	—	—	Not Occupied	26 - 28	—	—	—	—	—
29	0.35	BARE	6974	II	—	Camera Low Reference	29	0.35	BARE	6974	VII	—
30	0.35	YE	6812	II	—	Out of Park Signal	30	0.35	YE	6812	VII	—
31	—	—	—	—	—	Not Occupied	31	—	—	—	—	—
32	0.5	GY/L-GN	1102	II	—	Low Speed GMLAN Serial Data #2	32	0.5	GY/L-GN	1102	VIII	—
33	0.5	YE	200	II	—	Right Front Speaker Control (+) 1	33	0.5	YE	200	VIII	—
34	—	—	—	—	—	Not Occupied	34	—	—	—	—	—
35	0.5	D-BU/BK	115	II	—	Right Rear Speaker Signal (-)	35	0.5	D-BU/BK	115	VIII	—

36	0.35	D-BU/OG	7328	II	—	Passenger IP Module Disable Switch Low Reference	36	0.35	D-BU/OG	7328	VII	—
37	0.35	VT/OG	371	II	—	Passenger IP Module Disable Switch Signal	37	0.35	VT/OG	371	VII	—
38 - 40	—	—	—	—	—	Not Occupied	38 - 40	—	—	—	—	—
41	0.75	YE	200	III	—	Right Front Speaker Control (+) 1	41	0.5	YE	200	V	UQ3
						Right Front Speaker Control (+) 1		0.75	YE	200	V	UQ3/UQ5
42	—	—	—	—	—	Not Occupied	42	—	—	—	—	—

X300 Instrument Panel Harness to Floor Console Harness



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-35616-64B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19300649	J-35616-64B (LT BU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-557	Not Available	Not Available	Not Available	Not Available
V	Not Required	J-35616-18 (BK)	No Tool Required	Not Required	Not Required	Not Required	Not Required
VI	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X300 Instrument Panel Harness to Floor Console Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
		VT/YE	243	IV	—	Accessory Ignition			VT/YE	243	VI	—

10/25/2016 - VERSION 1.0

2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION

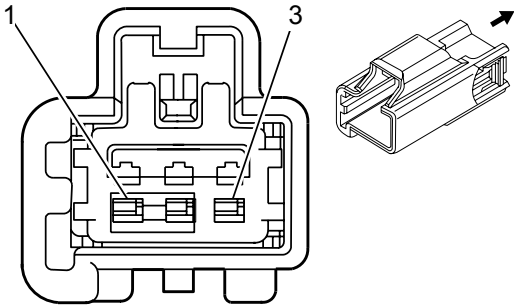
1084 / 1254

1	1.5					Voltage	1	1.5				
2	—	—	—	—	—	Accessory Ignition Voltage	2	1.5	VT/YE	143	VI	—
3	—	—	—	—	—	Not Occupied	3	—	—	—	—	—
4	0.35	D-BU	2060	II	—	Auxiliary Detection Signal	4	0.35	D-BU	2060	V	—
5	0.35	BK	2550	II	—	Ground Ground	5	0.35	BK	2550	V	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.35	VT/YE	43	II	—	Accessory Ignition Voltage	7	0.35	VT/YE	43	V	—
8 - 12	—	—	—	—	—	Not Occupied	8 - 12	—	—	—	—	—
13	0.5	BARE	5842	II	—	Auxiliary Audio Screen 2	13	0.5	BARE	5842	V	—
14	0.35	VT	5843	II	—	Auxiliary Audio Common Signal	14	0.35	VT	5843	V	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	0.35	L-GN/WH	3355	II	—	Left Rear Seat Audio Headphone Signal	16	0.35	L-GN/WH	3355	V	—
17	0.5	BARE	3354	II	—	Rear Seat Audio Headphone Low Reference	17	0.5	BARE	3354	V	—
18 - 22	—	—	—	—	—	Not Occupied	18 - 22	—	—	—	—	—
23	2.5	BK	1050	IV	—	Ground	23	2.5	BK	1050	VI	—

23	2.5						23	2.5				
24	0.75	RD/VT	340	I	—	Battery Positive Voltage	24	0.75	RD/VT	340	V	—
25 - 27	—	—	—	—	—	Not Occupied	25 - 27	—	—	—	—	—
28	0.5	WH/BN	6815	II	—	Inadvertent Power Control	28	0.5	WH/BN	6815	V	—
29	0.35	L-GN	4512	II	—	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	II	—	Right Auxiliary Audio Signal 2	34	0.35	L-GN	5841	V	—
35	0.35	GY	5839	II	—	Left Auxiliary Audio Signal 2	35	0.35	GY	5839	V	—
36	—	—	—	—	—	Not Occupied	36	—	—	—	—	—
37	0.35	BN/GY	3357	II	—	Right Rear Seat Audio Headphone Signal	37	0.35	BN/GY	3357	V	—
38	0.35	D-BU/VT	3356	II	—	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	VI	—

X302 Power Mat Jumper Harness to Floor Console Harness

—



Connector Part Information

Harness Type: Power Mat Jumper
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F

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)

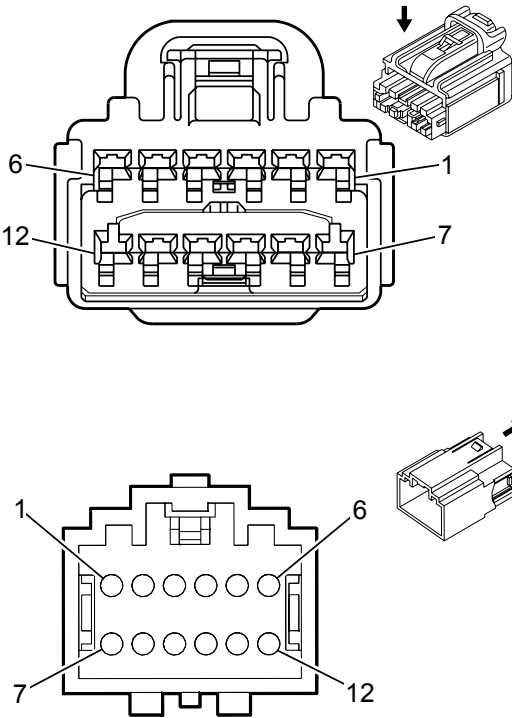
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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
III	Not Required	J-35616-41 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X302 Power Mat Jumper Harness to Floor Console Harness

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	III	—
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	III	—

X305 Instrument Panel Harness to Headliner Harness (LUX+Console)



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	19301756	J-35616-14 (GN)	J-38125-560	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

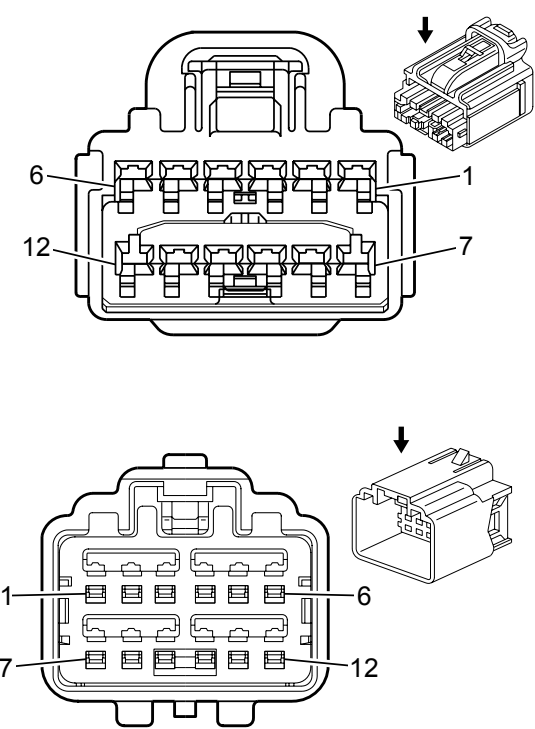
X305 Instrument Panel Harness to Headliner Harness (LUX+Console)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	BK	2550	I	—	Ground	1	0.75	BK	1050	II	E29
						Ground				2550	II	U42
								0.5				

2	—	—	—	—	—	Exterior Courtesy Lamp Control	2	0.75	WH/VT	1430	II	—
3	0.35	BK/BN	654	I	—	Cellular Telephone Microphone Low Reference	3	0.35	BK/BN	654	II	-UE1
								0.35	GY/L-GN	328	II	E29
4	0.35	D-BU	655	I	—	Cellular Telephone Microphone Signal	4	0.35	D-BU	655	II	—
5	0.5	RD/L-GN	1540	I	—	Battery Positive Voltage	5	0.5	RD/L-GN	1540	II	—
6	0.35	D-BU/GY	3935	I	—	High Speed GMLAN Serial Data (+) 8	6	0.35	D-BU/GY	3935	II	—
7	0.35	WH/GY	3936	I	—	High Speed GMLAN Serial Data (-) 8	7	0.35	WH/GY	3936	II	—
8	0.5	WH/D-BU	5986	I	—	Serial Data Communication Enable	8	0.35	WH/D-BU	5986	II	—
9	—	—	—	—	—	LED Ambient Lighting Control 2	9	0.35	VT/L-GN	7558	II	—
10	0.35	L-GN/YE	7066	I	—	LED Backlight Dimming Control	10	0.5	YE	6817	II	E29
						Entertainment Remote Enable Signal		0.35	L-GN/YE	7066	II	U42

11	0.5	D-BU/GY	3935	I	—	High Speed GMLAN Serial Data (+) 8	11	0.35	D-BU/GY	3935	II	—
12	0.5	WH/GY	3936	I	—	High Speed GMLAN Serial Data (-) 8	12	0.35	WH/GY	3936	II	—

X305 Instrument Panel Harness to Headliner Harness (LUX-Console)



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: —
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way M

Terminal Part Information

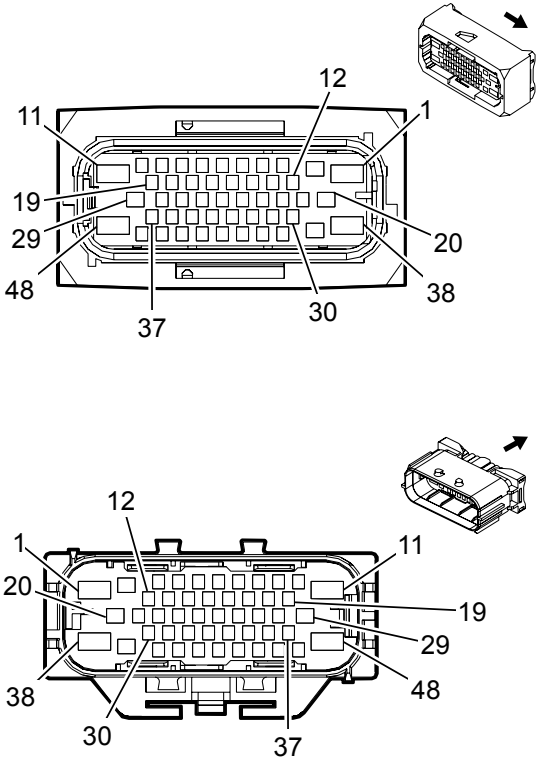
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19301756	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	19301756	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
III	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

X305 Instrument Panel Harness to Headliner Harness (LUX-Console)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BK	1050	I	—	Ground	1	0.5	BK	1050	III	—
2	0.75	WH/VT	1430	II	—	Exterior Courtesy Lamp	2	0.75	WH/VT	1430	III	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

2	0.75					Control	2	0.75				
3	0.35	GY/L-GN	328	I	E29	Interior Lamp Defeat Switch Signal	3	0.35	GY/L-GN	328	III	E29
		BK/BN	654	I	UE1	Cellular Telephone Microphone Low Reference			BK/BN	654	III	UE1
	0.35							0.35				
4	0.35	D-BU	655	I	—	Cellular Telephone Microphone Signal	4	0.35	D-BU	655	III	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	0.35	D-BU/GY	3935	I	—	High Speed GMLAN Serial Data (+) 8	6	0.35	D-BU/GY	3935	III	—
7	0.35	WH/GY	3936	I	—	High Speed GMLAN Serial Data (-) 8	7	0.35	WH/GY	3936	III	—
8	0.5	WH/D-BU	5986	I	—	Serial Data Communication Enable	8	0.5	WH/D-BU	5986	III	—
9	0.5	VT/L-GN	7558	I	—	LED Ambient Lighting Control 2	9	0.5	VT/L-GN	7558	III	—
10	0.5	YE	6817	I	—	LED Backlight Dimming Control	10	0.5	YE	6817	III	—
11	0.5	D-BU/GY	3935	I	—	High Speed GMLAN Serial Data (+) 8	11	0.5	D-BU/GY	3935	III	—
12	0.5	WH/GY	3936	I	—	High Speed GMLAN Serial Data (-) 8	12	0.5	WH/GY	3936	III	—

X310 Driver Seat Cushion Harness to Body Harness (AG1)



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: 15513436
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-35616-19 (BK)	J-38125-560	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	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VII	19329756	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VIII	19331731	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IX	19352419	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
X	19353142	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X310 Driver Seat Cushion Harness to Body Harness (AG1)

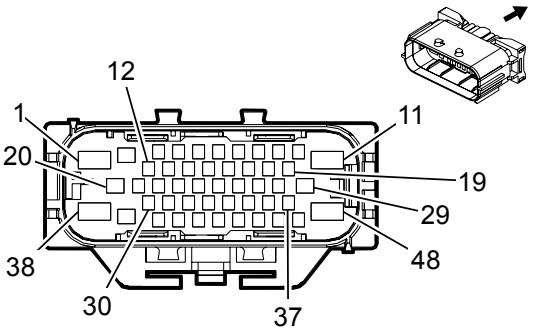
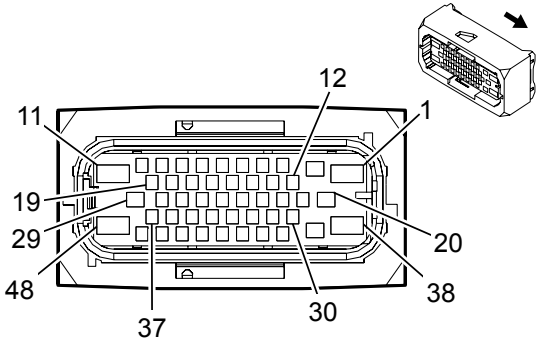
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2.5	RD/YE	5040	III	—	Battery Positive Voltage	2	2.5	RD/YE	5040	VI	—
3	1.5	YE	5129	I	—	Adjustable Pedal Actuator Rearward Control	3	1.5	YE	5129	VIII	—
4	1.5	L-GN/VT	5130	I	—	Adjustable Pedal Actuator Forward Control	4	1.5	L-GN/VT	5130	VIII	—
5	0.35	OG/L-GN	5055	I	—	Driver Seat Position Switch Signal	5	0.35	OG/L-GN	5055	IX	—
6	0.35	OG/BN	238	I	—	Driver Seat Belt Switch Signal	6	0.35	OG/BN	238	IX	—
7	0.35	BK/OG	1363	I	—	Driver Seat Belt Switch Low Reference	7	0.35	BK/OG	1363	IX	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.35	L-GN/GY	5286	I	—	Adjustable Pedal Switch Forward Signal	9	0.35	L-GN/GY	5286	IX	—
10	0.35	WH/GY	5285	I	—	Adjustable Pedal Switch Rearward Signal	10	0.35	WH/GY	5285	IX	—
11	4	BK	1150	II	—	Ground	11	4	BK	1150	VII	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—

13	0.5	WH/RD	6207	I	—	Memory Sensor High Reference	13	0.35	WH/RD	6207	IX	—
14	0.35	L-BU	5952	I	—	Adjustable Pedal Position Sensor Brake Signal	14	0.35	D-BU	5952	IX	—
15	0.5	BK/GY	6206	I	—	Memory Sensor Low Reference	15	0.35	BK/GY	6206	IX	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.5	L-GN/WH	7530	I	—	Local Interconnect Network Serial Data Bus 8	17	0.5	L-GN/WH	7530	IV	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.35	L-GN/VT	5906	I	—	Driver Seat Vent Motor Control 1	19	0.35	L-GN/VT	5906	IX	—
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	V	—
23	0.75	RD/BN	1140	I	—	Battery Positive Voltage	23	0.5	RD/BN	1140	IV	—
24	0.5	L-GN/OG	3069	I	—	Driver Side Impact Module Low Control	24	0.35	L-GN/OG	3069	X	—
25	0.5	YE/OG	3482	I	—	Driver Seat Belt Anchor Pretensioner Low Control	25	0.35	YE/OG	3482	X	—
26	0.5	L-GN	5060	I	—	Low Speed GMLAN Serial Data	26	0.5	L-GN	5060	IV	—

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	0.35	OG/D-BU	3068	X	—
34	0.5	OG/YE	3481	I	—	Driver Seat Belt Anchor Pretensioner High Control	34	0.35	OG/YE	3481	X	—
35	0.35	L-GN/L-BU	614	I	—	Memory Seat Switch Set Signal	35	0.35	D-BU/L-GN	614	IX	—
36	0.75	BN	2432	I	—	Driver Heated Back Element Control	36	0.75	BN	2432	V	—
37	0.75	BN/VT	2077	I	—	Driver Heated Seat Element Control	37	0.75	BN/VT	2077	V	—
38 - 39	—	—	—	—	—	Not Occupied	38 - 39	—	—	—	—	—
40	0.35	BK/L-BU	5978	I	—	Memory Switch Low Reference	40	0.35	BK/D-BU	5978	IX	—
41	0.35	WH	615	I	—	Memory Seat Switch Signal 1	41	0.35	WH	615	IX	—

42 - 46	—	—	—	—	—	Not Occupied	42 - 46	—	—	—	—	—
47	0.75	RD/L-GN	5140	I	—	Battery Positive Voltage	47	0.75	RD/L-GN	5140	V	—
48	—	—	—	—	—	Not Occupied	48	—	—	—	—	—

X310 Driver Seat Cushion Harness to Body Harness (-AG1)



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: 33157079
Service Connector: 19329476
Description: 48-Way M 1.6, 2.8, 5.8 Series, Sealed (YE)

Terminal Part Information

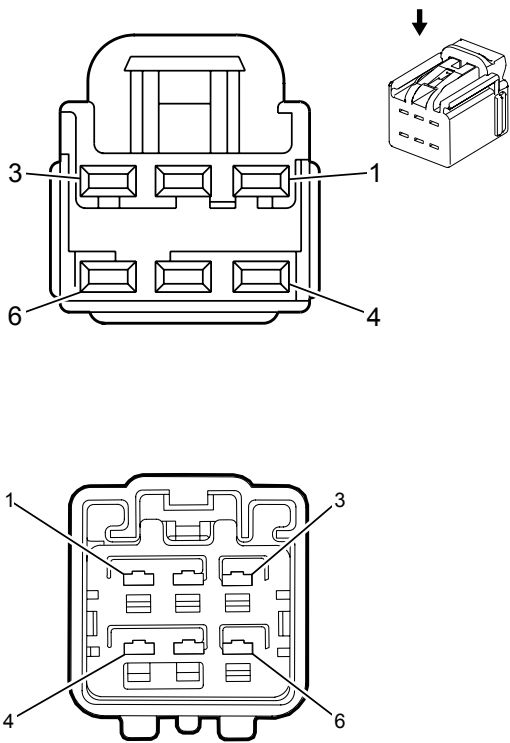
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	13505807	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
III	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IV	19329756	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	19352419	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	19353142	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X310 Driver Seat Cushion Harness to Body Harness (-AG1)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 4	—	—	—	—	—	Not Occupied	1 - 4	—	—	—	—	—

5	0.35	OG/L-GN	5055	I	—	Driver Seat Position Switch Signal	5	0.35	OG/L-GN	5055	V	—
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 - 23	—	—	—	—	—	Not Occupied	8 - 23	—	—	—	—	—
24	0.5	L-GN/OG	3069	I	—	Driver Side Impact Module Low Control	24	0.35	L-GN/OG	3069	VI	—
25	0.5	YE/OG	3482	I	—	Driver Seat Belt Anchor Pretensioner Low Control	25	0.35	YE/OG	3482	VI	—
26 - 32	—	—	—	—	—	Not Occupied	26 - 32	—	—	—	—	—
33	0.5	OG/L-BU	3068	I	—	Driver Side Impact Module High Control	33	0.35	OG/D-BU	3068	VI	—
34	0.5	OG/YE	3481	I	—	Driver Seat Belt Anchor Pretensioner High Control	34	0.35	OG/YE	3481	VI	—
35 - 48	—	—	—	—	—	Not Occupied	35 - 48	—	—	—	—	—

X311 Driver Seat Back Harness to Driver Seat Cushion Harness



Connector Part Information

Harness Type: Driver Seat Back Jumper
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

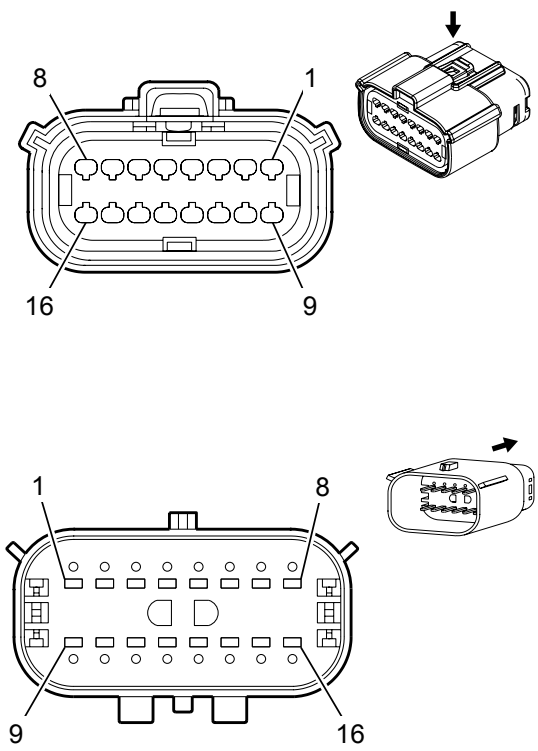
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X311 Driver Seat Back Harness to Driver Seat Cushion Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	YE/L-BU	767	I	—	Driver Power Seat Lumbar Motor Down Control	1	1.5	YE/L-BU	767	II	—
2	0.75	YE/BN	768	I	—	Driver Power Seat Lumbar Motor Up Control	2	1.5	YE/BN	768	II	—

3	0.75	L-BU	611	I	AL2	Driver Power Seat Lumbar Motor Forward Control	3	1.5	L-BU	611	II	—
	1.5	L-BU	611	I	AL9	Driver Power Seat Lumbar Motor Forward Control						
4	0.75	VT	610	I	AL2	Driver Power Seat Lumbar Motor Rearward Control	4	1.5	VT	610	II	—
	1.5	VT	610	I	AL9	Driver Power Seat Lumbar Motor Rearward Control						
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 (AG1)



Connector Part Information

Harness Type: Driver Seat Back Jumper
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-35616-2A (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

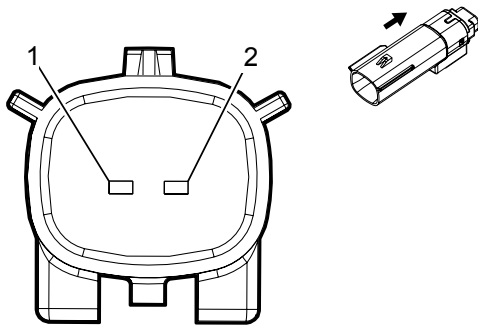
X312 Driver Seat Back Harness to Driver Seat Cushion Harness (AG1)

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	II	—
2	0.5	L-GN/OG	3069	I	—	Driver Side Impact Module Low Control	2	0.5	L-GN/OG	3069	II	—

3 - 4	—	—	—	—	—	Not Occupied	3 - 4	—	—	—	—	—
5	0.75	BK	1150	I	—	Ground	5	0.75	BK	1150	II	—
6	0.75	BN	2432	I	—	Driver Heated Back Element Control	6	0.75	BN	2432	II	—
7	0.35	L-GN/VT	5906	I	—	Driver Seat Vent Motor Control 1	7	0.35	L-GN/VT	5906	II	—
8	0.5	BK/YE	2080	I	—	Driver Heated Seat NTC Low Reference	8	0.5	BN/YE	2080	II	—
9	0.75	BN/BK	2078	I	—	Driver Heated Seat Element Low Reference	9	0.75	BN/BK	2078	II	—
10	0.5	L-BU	2425	I	—	Driver Heated Back NTC Signal	10	0.5	L-BU	2425	II	—
11	0.75	RD/L-GN	5140	I	—	Battery Positive Voltage	11	0.75	RD/L-GN	5140	II	—
12	0.35	WH/BK	570	I	—	Driver Memory Seat Recline Motor Position Sensor Signal	12	0.5	WH/BK	570	II	—
13	0.35	WH/RD	3298	I	—	Memory Sensor High Reference 2	13	0.35	WH/RD	3298	II	—
14 - 16	—	—	—	—	—	Not Occupied	14 - 16	—	—	—	—	—

X312 Driver Seat Back Harness to Driver Seat Cushion Harness (-AG1)

—



Connector Part Information

Harness Type: Driver Seat Back
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

Connector Part Information

Harness Type: Driver Seat Cushion
OEM Connector: 33481-0210
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.5 MX Series, Sealed (YE)

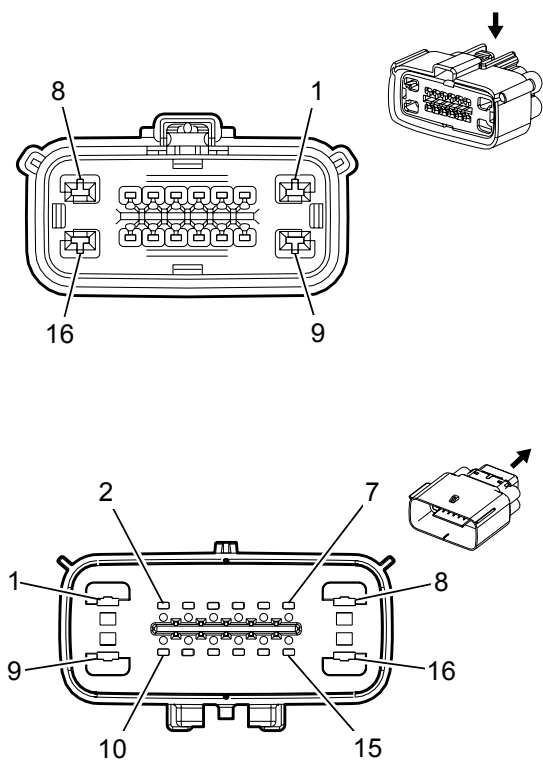
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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

X312 Driver Seat Back Harness to Driver Seat Cushion Harness (-AG1)

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	II	—
2	0.5	L-GN/OG	3069	I	—	Driver Side Impact Module Low Control	2	0.5	L-GN/OG	3069	II	—

X314 Center Seat Harness to Body Harness



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-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
IV	19329833	J-35616-5 (PU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

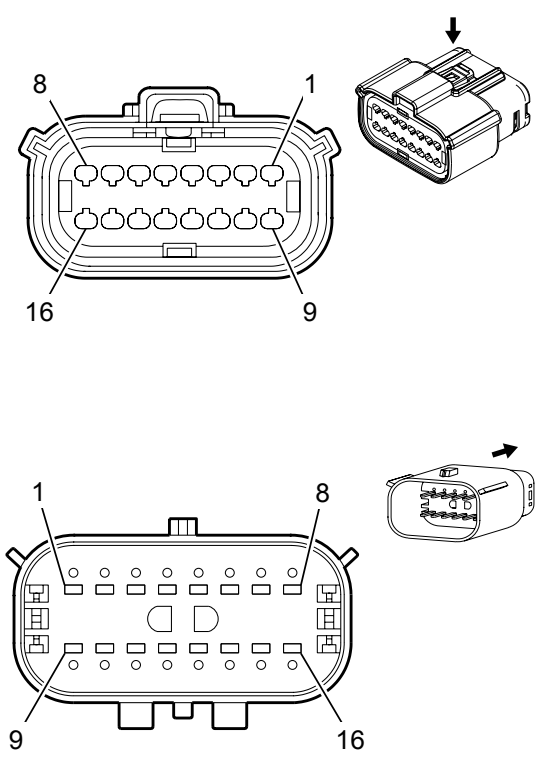
X314 Center Seat Harness to Body Harness

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	IV	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—

2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.35	BK	5842	I	—	Auxiliary Audio Screen 2	3	0.5	BK	5842	III	—
4	0.35	GY	5839	I	—	Left Auxiliary Audio Signal 2	4	0.5	GY	5839	III	—
5	0.35	L-BU	2060	I	—	Auxiliary Detection Signal	5	0.5	D-BU	2060	III	—
6	0.35	BK	2550	I	—	Ground	6	0.75	BK	2550	III	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	1.5	BK	1250	II	—	Ground	8	1.5	BK	1250	IV	—
9	1.5	VT/YE	243	II	—	Accessory Ignition Voltage	9	1.5	VT/YE	243	IV	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	0.35	L-GN	5841	I	—	Right Auxiliary Audio Signal 2	11	0.5	L-GN	5841	III	—
12	0.35	VT	5843	I	—	Auxiliary Audio Common Signal	12	0.5	VT	5843	III	—
13	—	—	—	—	—	Not Occupied	13	—	—	—	—	—
14	0.75	RD/VT	340	I	—	Battery Positive Voltage	14	0.75	RD/VT	340	III	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
		BK	1250	II	—	Ground			BK	1250	IV	—

16	1.5						16	1.5				
----	-----	--	--	--	--	--	----	-----	--	--	--	--

X315 Body Harness to Brake Clutch Harness (E29)



Connector Part Information

Harness Type: Brake Clutch
OEM Connector: 13778557
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Body
OEM Connector: 13551665
Service Connector: 19300393
Description: 16-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	13580014	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
III	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

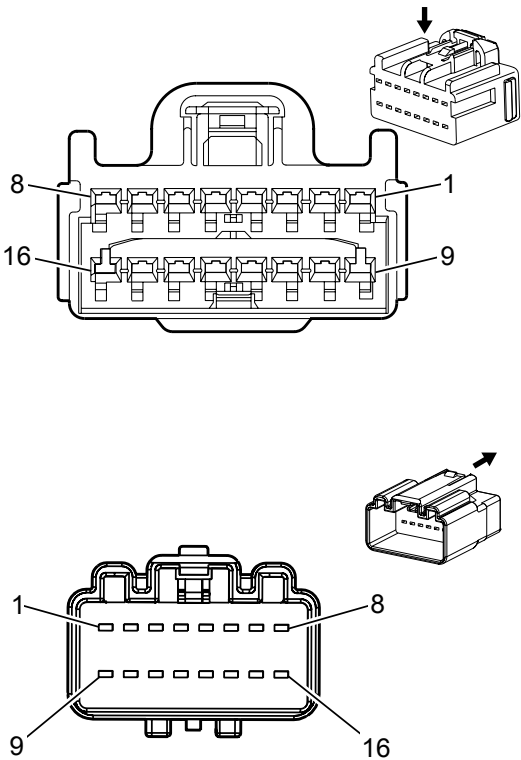
X315 Body Harness to Brake Clutch Harness (E29)

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	II	—
2	0.35	YE/WH	1161	I	—	Accelerator Pedal	2	0.35	YE/WH	1161	II	—

2	0.35					Position Signal 1	2	0.35				
3	0.35	WH/RD	1164	I	—	Accelerator Pedal Position 5V Reference 1	3	0.35	WH/RD	1164	II	—
4	0.35	BK/VT	1272	I	—	Accelerator Pedal Position Low Reference 2	4	0.35	BK/VT	1272	II	—
5	0.35	L-GN/WH	1162	I	—	Accelerator Pedal Position Signal 2	5	0.35	L-GN/WH	1162	II	—
6	0.35	BN/RD	1274	I	—	Accelerator Pedal Position 5V Reference 2	6	0.35	BN/RD	1274	II	—
7 - 9	—	—	—	—	—	Not Occupied	7 - 9	—	—	—	—	—
10	0.5	WH/L-GN	526	I	—	Stop Lamp Switch Signal	10	0.35	WH/L-GN	526	III	—
11	0.5	BK/L-GN	552	I	—	Sensor Low Reference	11	0.35	BK/L-GN	552	III	—
12	0.5	GY/RD	598	I	—	5V Reference	12	0.35	GY/RD	598	III	—
13	0.5	GY/RD	6109	I	—	Clutch Apply Sensor 5V Reference	13	0.5	GY/RD	6109	III	—
14	0.5	BK/GY	6110	I	—	Clutch Apply Sensor Low Reference	14	0.5	BK/GY	6110	III	—
15	0.5	YE	6111	I	—	Clutch Apply Sensor Signal	15	0.5	YE	6111	III	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—

16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
----	---	---	---	---	---	--------------	----	---	---	---	---	---

X315 Body Harness to Brake Clutch Harness (-E29)



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

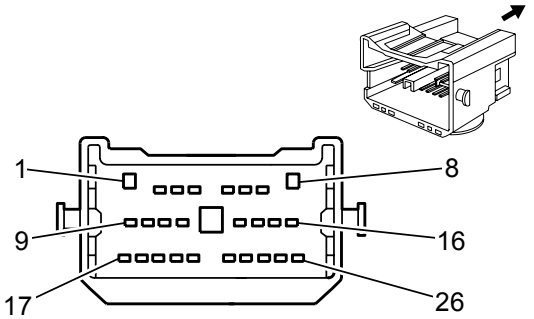
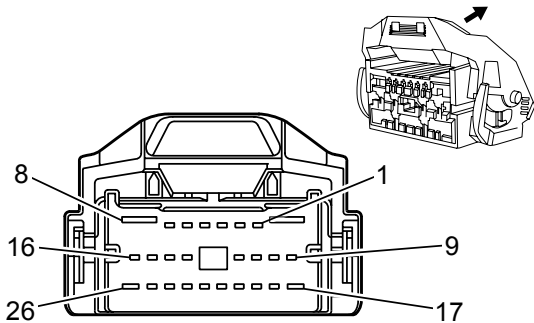
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578813	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	13578891	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	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 (-E29)

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	2	0.35	YE/WH	1161	III	—

2	0.35					Position Signal 1	2	0.35				
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	—
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	0.5	YE/BK	7478	II	—	Rotary Position Sensor Low Reference	10	0.5	YE/BK	7478	III	—
11	0.5	WH/RD	7477	II	—	Rotary Position Sensor 5V Reference	11	0.5	WH/RD	7477	III	—
12	0.5	WH/L-GN	7479	II	—	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



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 Hybrid 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	13578891	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	13578893	J-35616-35 (VT)	J-38125-11A	7116-4110-02	Yazaki 9	E	C
III	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

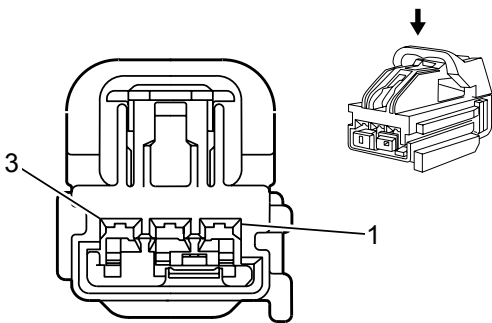
X316 Headliner Harness to Overhead Console Harness

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	I	—	Accessory Ignition Voltage	3	0.35	VT/YE	43	III	—
					2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION							

4	0.5	BK	1050	I	—	Ground	4	0.5	BK	1050	III	—
5	0.35	GY/L-GN	328	I	—	Interior Lamp Defeat Switch Signal	5	0.35	GY/L-GN	328	III	—
6	0.35	GY/D-BU	156	I	—	Courtesy Lamp Switch Signal	6	0.35	GY	156	III	—
7	0.5	WH/BN	6815	I	—	Inadvertent Power Control	7	0.5	WH/BN	6815	III	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.35	VT/L-GN	7558	I	—	LED Ambient Lighting Control 2	9	0.35	VT/L-GN	7558	III	—
10	0.5	YE	6817	I	—	LED Backlight Dimming Control	10	0.5	YE	6817	III	—
11	0.35	VT/BK	1139	I	—	Run/Crank Ignition 1 Voltage	11	0.35	VT/WH	1139	III	—
12	0.35	VT/WH	5234	I	—	Passenger Seat Belt Indicator Control	12	0.35	VT/WH	5234	III	—
13	0.35	D-BU	2307	I	—	Passenger Air Bag On Indicator Control	13	0.35	D-BU	2307	III	—
14	0.35	L-GN/RD	2308	I	—	Passenger Air Bag Off Indicator Control	14	0.35	L-GN	2308	III	—
15 - 16	—	—	—	—	—	Not Occupied	15 - 16	—	—	—	—	—

17	0.5	RD/YE	240	II	—	Battery Positive Voltage	17	0.5	RD/YE	240	IV	TRW/UG1
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.35	YE/VT	6191	I	—	Power Sliding Window Switch Open Signal	19	0.35	YE/VT	6191	III	—
20	0.35	WH	6192	I	—	Power Sliding Window Switch Close Signal	20	0.35	WH	6192	III	—
21	0.5	GY	157	I	—	Interior Lamp Control	21	0.5	GY	157	III	—
22	—	—	—	—	—	Not Occupied	22	—	—	—	—	—
23	0.35	VT/YE	43	I	—	Accessory Ignition Voltage	23	0.35	VT/YE	43	III	—
24 - 26	—	—	—	—	—	Not Occupied	24 - 26	—	—	—	—	—

X317 Headliner Harness to Center High Mounted Stop Lamp Jumper Harness



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 Jumper
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way M

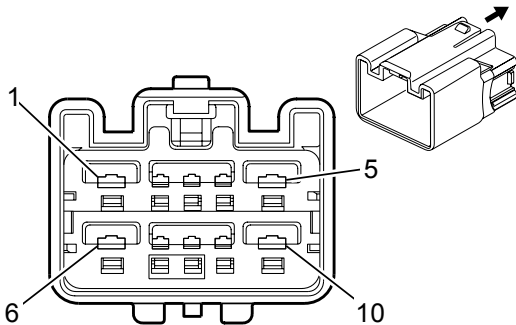
Terminal Part Information

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

X317 Headliner Harness to Center High Mounted Stop Lamp Jumper 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	—

X318 Sunroof Jumper Harness to Overhead Console Harness



Connector Part Information

Harness Type: Sunroof Jumper
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F

Connector Part Information

Harness Type: Overhead Console
OEM Connector: 13506926
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way M YESC Kaizen Series (L-GY)

Terminal Part Information

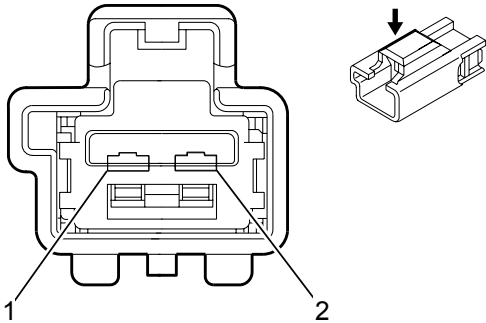
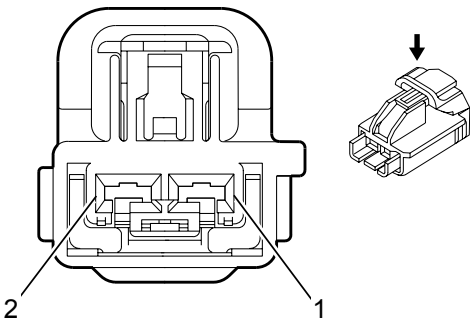
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X318 Sunroof Jumper Harness to Overhead Console Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
2	0.35	L-GN/WH	100	I	—	Sunroof Switch Open Signal	2	0.35	L-GN/WH	100	II	—
3	0.35	BN/D-BU	2074	I	—	Sunroof Switch Express Signal	3	0.35	BN/D-BU	2074	II	—
4	0.35	GY/VT	2075	I	—	Sunroof Switch Close Vent Signal	4	0.35	GY/VT	2075	II	—
6	0.35	VT/YE	43	I	—	Accessory Ignition Voltage	6	0.35	VT/YE	43	III	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

						Voltage						
7	0.35	D-BU/WH	110	I	—	Sunroof Switch Close Signal	7	0.35	D-BU/WH	110	II	—
8	0.35	YE/VT	144	I	—	Sunroof Switch Open Vent Signal	8	0.35	YE/VT	144	II	—

X319 Overhead Console Harness to RH A Pillar Harness



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: RH 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

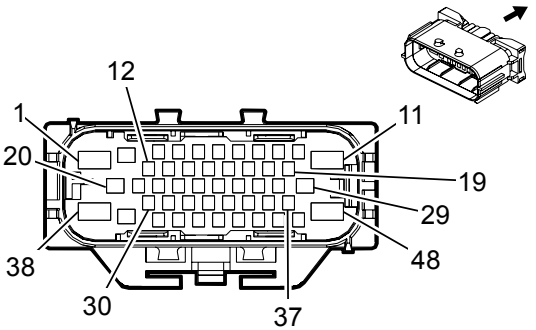
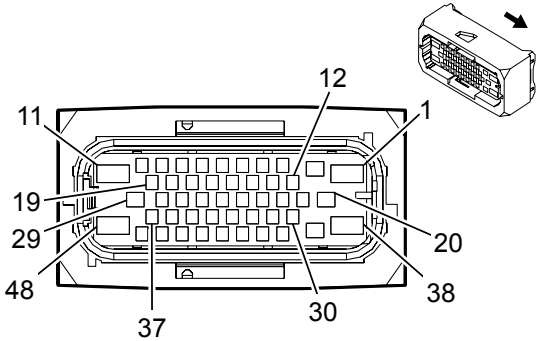
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X319 Overhead Console Harness to RH A Pillar Harness

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 (Extended Cab/Crew Cab)



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: 15513436
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-35616-19 (BK)	J-38125-560	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	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VII	19329756	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VIII	19352419	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IX	19353142	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X320 Passenger Seat Cushion Harness to Body Harness (Extended Cab/Crew Cab)

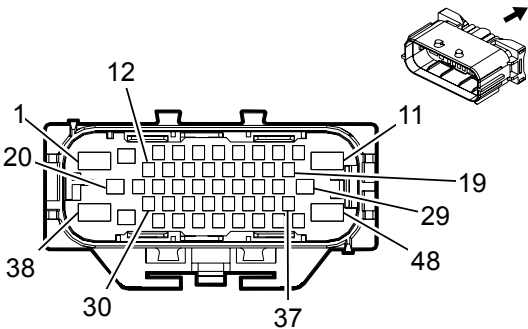
Passenger Seat Element Harness to Body Harness (Passenger Side Only)												
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2.5	RD/BN	1440	III	—	Battery Positive Voltage	2	2.5	RD/BN	1440	VI	—
3 - 4	—	—	—	—	—	Not Occupied	3 - 4	—	—	—	—	—
5	—	—	—	—	—	Passenger Seat Position Switch Signal	5	0.35	OG/D-BU	5056	VIII	—
6	0.35	OG/VT	1362	I	—	Passenger Seat Belt Switch Signal	6	0.35	OG/VT	1362	VIII	—
7	0.35	BK/OG	1361	I	—	Passenger Seat Belt Switch Low Reference	7	0.35	BK/OG	1361	VIII	—
8	0.75	BN/VT	2077	I	—	Driver Heated Seat Element Control	8	0.75	BN/VT	2077	V	—
9	0.75	BN	2432	I	—	Driver Heated Back Element Control	9	0.75	BN	2432	V	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	4	BK	1250	II	—	Ground	11	4	BK	1250	VII	—
12 - 13	—	—	—	—	—	Not Occupied	12 - 13	—	—	—	—	—
14	0.35	L-BU/RD	5612	I	—	Passenger Seat Belt Tension Sensor 5V Reference	14	0.35	D-BU/RD	5612	VIII	—
15	0.35	VT/OG	5611	I	—	Passenger Seat Belt Tension Sensor Signal	15	0.35	VT/OG	5611	VIII	—
10/25/2016 - VERSION 1.0					2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION							1123 / 1254

16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.75	RD/L-GN	6140	I	—	Battery Positive Voltage	17	0.75	RD/L-GN	6140	V	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.35	L-GN/VT	5906	I	—	Driver Seat Vent Motor Control 1	19	0.35	L-GN/VT	5906	VIII	—
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	V	—
23	—	—	—	—	—	Not Occupied	23	—	—	—	—	—
24	0.5	BN/OG	3067	I	—	Passenger Side Impact Module Low Control	24	0.35	BN/OG	3067	IX	—
25	0.5	GY/OG	3480	I	—	Passenger Seat Belt Anchor Pretensioner Low Control	25	0.35	GY/OG	3480	IX	—
26	0.5	L-GN	5060	I	A45/UFL/UHX	Low Speed GMLAN Serial Data	26	0.35	L-GN	5060	VIII	—
	0.35	L-GN	5060	I	AL0-ULT	Low Speed GMLAN Serial Data						
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	—	—	—	—	—
		L-BU	2425	I	—	Driver Heated Back			D-BU	2425	IV	—

30	0.5					NTC Signal	30	0.5				
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	0.35	OG/GY	3066	IX	—
34	0.5	OG/BN	3479	I	—	Passenger Seat Belt Anchor Pretensioner High Control	34	0.35	OG/BN	3479	IX	—
35	0.35	RD/L-GN	4440	I	—	Battery Positive Voltage	35	0.35	RD/L-GN	4440	VIII	—
36	0.35	BK/WH	2751	I	—	Signal Ground	36	0.5	BK/WH	2751	IV	—
37 - 46	—	—	—	—	—	Not Occupied	37 - 46	—	—	—	—	—
47	0.75	RD/L-GN	5140	I	—	Battery Positive Voltage	47	0.75	RD/L-GN	5140	V	—
48	—	—	—	—	—	Not Occupied	48	—	—	—	—	—

X320 Passenger Seat Cushion Harness to Body Harness (Regular Cab)

—



Connector Part Information

Harness Type: Passenger Seat Cushion
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 48-Way F

Connector Part Information

Harness Type: Body
OEM Connector: 33157081
Service Connector: 19329476
Description: 48-Way M 1.6, 2.8, 5.8 Series, Sealed (YE)

Terminal Part Information

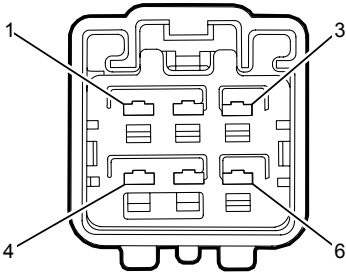
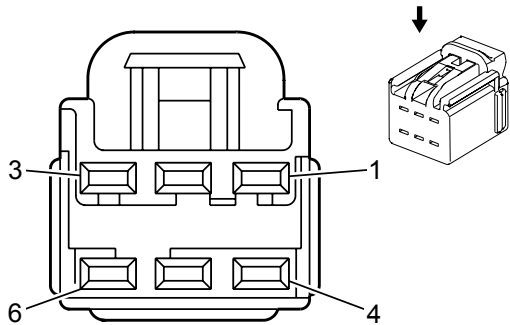
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	13505807	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
III	19352419	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	19353142	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X320 Passenger Seat Cushion Harness to Body Harness (Regular Cab)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
5	0.35	OG/D-BU	5056	I	—	Passenger Seat Position Switch Signal	5	0.35	OG/D-BU	5056	III	—
6	0.35	OG/VT	1362	I	—	Passenger Seat Belt Switch Signal	6	0.35	OG/VT	1362	III	—
7	0.35	BK/OG	1361	I	—	Passenger Seat Belt Switch Low Reference	7	0.35	BK/OG	1361	III	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

14	0.35	D-BU/RD	5612	I	—	Passenger Seat Belt Tension Sensor 5V Reference	14	0.35	D-BU/RD	5612	III	—
15	0.35	VT/OG	5611	I	—	Passenger Seat Belt Tension Sensor Signal	15	0.35	VT/OG	5611	III	—
24	0.35	BN/OG	3067	I	—	Passenger Side Impact Module Low Control	24	0.35	BN/OG	3067	IV	—
25	0.35	GY/OG	3480	I	—	Passenger Seat Belt Anchor Pretensioner Low Control	25	0.35	GY/OG	3480	IV	—
26	0.35	L-GN	5060	I	—	Low Speed GMLAN Serial Data	26	0.35	L-GN	5060	III	—
33	0.35	OG/GY	3066	I	—	Passenger Side Impact Module High Control	33	0.35	OG/GY	3066	IV	—
34	0.35	OG/BN	3479	I	—	Passenger Seat Belt Anchor Pretensioner High Control	34	0.35	OG/BN	3479	IV	—
35	0.35	RD/L-GN	4440	I	—	Battery Positive Voltage	35	0.35	RD/L-GN	4440	III	—
36	0.5	BK/WH	2751	I	—	Signal Ground	36	0.5	BK/WH	2751	II	—

X321 Passenger Seat Back Harness to Passenger Seat Cushion Harness



Connector Part Information

Harness Type: Passenger 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: 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

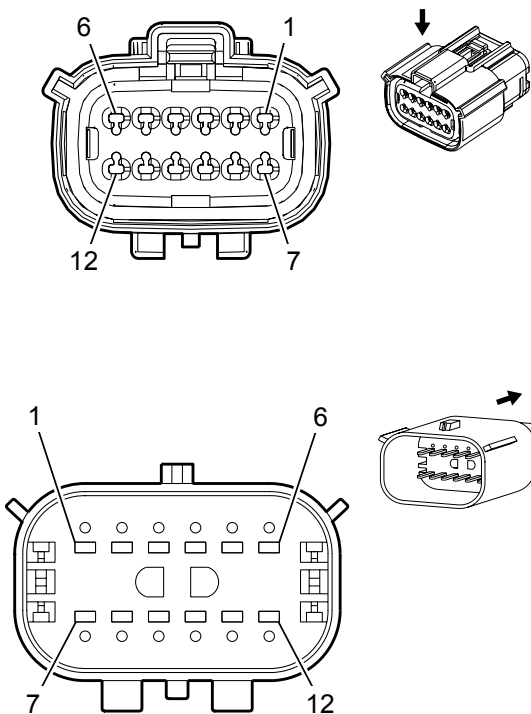
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X321 Passenger Seat Back Harness to Passenger Seat Cushion Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	L-BU/YE	792	I	—	Passenger Power Seat Lumbar Motor Down Control	1	1.5	L-BU/YE	792	II	—
2	0.75	BN/YE	793	I	—	Passenger Power Seat Lumbar Motor Up Control	2	1.5	BN/YE	793	II	—

3	1.5	L-BU	211	I	AG2/AG6+AL9-A45	Passenger Power Seat Lumbar Motor Forward Control	3	1.5	L-BU	211	II	—
	0.75	L-BU	211	I	AL2	Passenger Power Seat Lumbar Motor Forward Control						
4	1.5	VT	210	I	AG2/AG6+AL9-A45	Passenger Power Seat Lumbar Motor Rearward Control	4	1.5	VT	210	II	—
	0.75	VT	210	I	AL2	Passenger Power Seat Lumbar Motor Rearward Control						
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



Connector Part Information

Harness Type: Passenger Seat Back
OEM Connector: 33472-1292
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 150 MX Series, Sealed (YE)

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

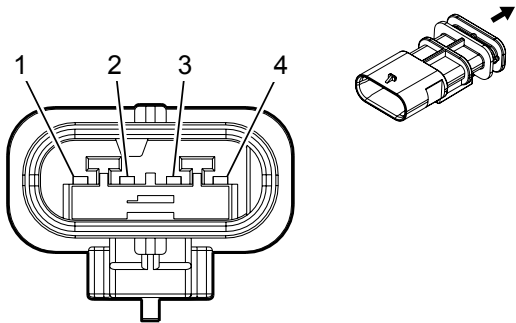
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness

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	0.35	VT/WH	5908	I	—	Passenger Seat Vent Motor Control 1	5	0.35	VT/WH	5908	II	—
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	—
8	0.5	WH/L-BU	2436	I	—	Passenger Heated Back NTC Signal	8	0.5	WH/L-BU	2436	II	—
9	0.75	RD/L-GN	6140	I	—	Battery Positive Voltage	9	0.75	RD/L-GN	6140	II	—
10 - 12	—	—	—	—	—	Not Occupied	10 - 12	—	—	—	—	—

GRAPHIC PENDING



Connector Part Information

Harness Type: High Voltage Battery Monitoring
OEM Connector: 33195373
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.2 MCON-CB Series, Sealed (GY)

Connector Part Information

Harness Type: Body
OEM Connector: 33178128
Service Connector: 19352602
Description: 4-Way M 1.2 MCON-CB Series, Sealed (BK)

Terminal Part Information

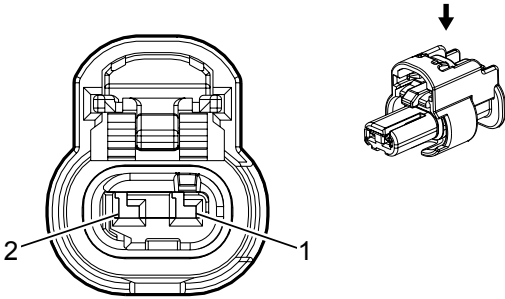
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X363 High Voltage Battery Monitoring Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BK/D-BU	6276	I	—	Fan Speed Sensor Low Reference	1	0.5	BK	1250	II	—
2	0.35	YE/L-GN	5598	I	—	Fan Speed Signal 1	2	0.35	YE/L-GN	5598	II	—

3	0.35	D-BU/VT	5599	I	—	Fan Speed Signal 2	3	0.35	D-BU/VT	5599	II	—
4	0.5	BN/WH	6277	I	—	Fan Speed Sensor Control	4	0.5	VT/BK	739	II	—

X380 Body Harness to Roof Rail Air Bag Jumper Harness



Connector Part Information

Harness Type: Body
OEM Connector: 33134903
Service Connector: 19353941
Description: 2-Way F 1.2 MCON Series, Sealed (YE)

Connector Part Information

Harness Type: Roof Rail Air Bag Jumper
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M

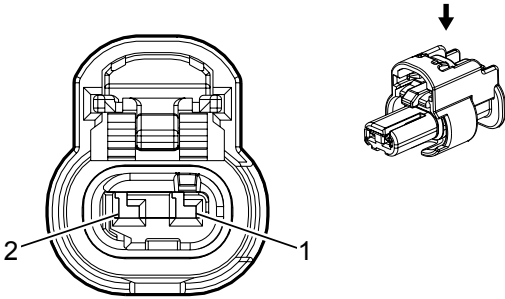
Terminal Part Information

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

X380 Body Harness to Roof Rail Air Bag Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	OG/L-GN	5019	I	—	Left Front Head Curtain Module High Control	1	0.35	OG/L-GN	5019	II	—
2	0.35	VT/OG	5020	I	—	Left Front Head Curtain Module Low Control	2	0.35	VT/OG	5020	II	—

X390 Body Harness to Roof Rail Air Bag Jumper Harness



Connector Part Information

Harness Type: Body
OEM Connector: 33134903
Service Connector: 19353941
Description: 2-Way F 1.2 MCON Series, Sealed (YE)

Connector Part Information

Harness Type: Roof Rail Air Bag Jumper
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M

Terminal Part Information

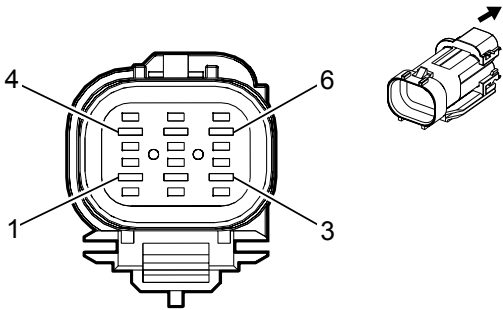
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required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

X390 Body Harness to Roof Rail Air Bag Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	OG/GY	5021	I	—	Right Front Head Curtain Module High Control	1	0.35	OG/GY	5021	II	—
2	0.35	WH/OG	5022	I	—	Right Front Head Curtain Module Low Control	2	0.35	WH/OG	5022	II	—

X400 Accessory Cargo Kit Harness to Chassis Harness

—



Connector Part Information

Harness Type: Accessory Cargo Kit
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F

Connector Part Information

Harness Type: Chassis
OEM Connector: 10865189
Service Connector: 93185233
Description: 6-Way M 2.8 Series, Sealed (BK)

Terminal Part Information

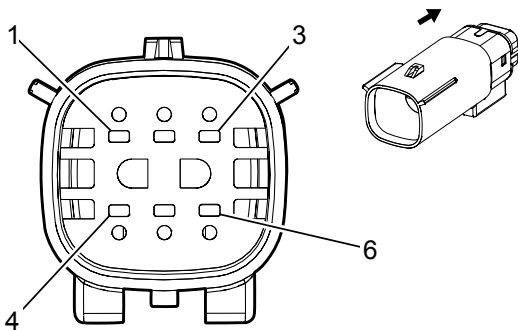
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X400 Accessory Cargo Kit Harness to Chassis 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	—
4	0.5	VT/GY	1054	I	—	Stop Lamp Control	4	0.5	VT/GY	1054	II	—
6	1	BK	1750	I	—	Ground	6	1	BK	1750	II	—

X410 Tail Lamp - Left Harness to Chassis Harness

—



Connector Part Information

Harness Type: Tail Lamp - Left
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F

Connector Part Information

Harness Type: Chassis
OEM Connector: 13950454
Service Connector: 13576414
Description: 6-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

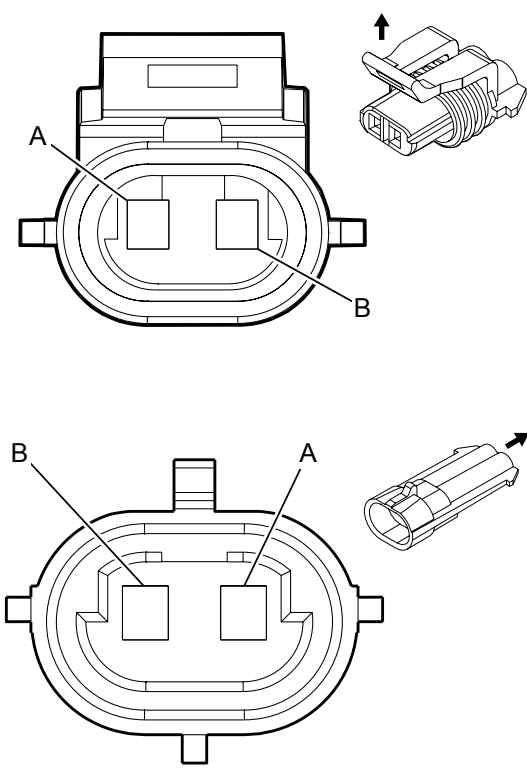
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X410 Tail Lamp - Left Harness to Chassis Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	YE/D-BU	18	I	—	Left Rear Stop/Turn Lamp Control	1	0.75	YE/D-BU	18	II	—
2	0.5	YE/BK	5356	I	—	Left Tail Lamp Outage Detection Signal	2	0.5	YE/BK	5356	II	—
4	0.75	L-GN/WH	24	I	—	Backup Lamp Control	4	0.75	L-GN/WH	24	II	—
5	0.75	VT/GY	709	I	—	Left Park Lamp Control	5	0.75	VT/GY	709	II	—
						2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION						

6	1.5	BK	1750	I	—	Ground	6	1.5	BK	1750	II	—

X416 Rear Bumper Harness to Rear Clearance Lamps Harness



Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 12052644
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 Metri-Pack Series, Sealed (GY)

Connector Part Information

Harness Type: Rear Clearance Lamps
OEM Connector: 12162343
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 150 Metri-Pack Series (GY)

Terminal Part Information

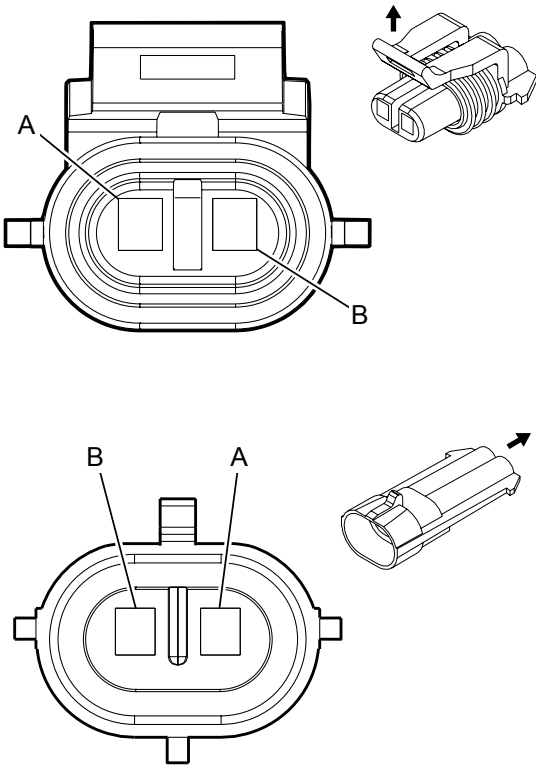
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X416 Rear Bumper Harness to Rear Clearance Lamps Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.5	VT/GY	709	I	—	Left Park Lamp Control	A	0.5	VT/GY	709	II	—
B	0.5	BK	1750	I	—	Ground	B	0.5	BK	1750	II	—

--	--	--	--	--	--	--	--	--	--	--	--	--

X417 Rear Bumper Harness to Rear Clearance Lamps Harness



Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 12052641
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 Metri-Pack Series (BK)

Connector Part Information

Harness Type: Rear Clearance Lamps
OEM Connector: 12162000
Service Connector: Service by Harness - See Part Catalog
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-35616-14 (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

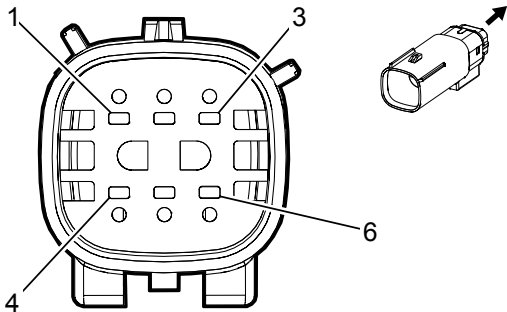
X417 Rear Bumper Harness to Rear Clearance Lamps Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.5	GY/BN	309	I	—	Right Park Lamp Control	A	0.5	GY/BN	309	II	—
B	0.5	BK	1750	I	—	Ground	B	0.5	BK	1750	II	—

--	--	--	--	--	--	--	--	--	--	--	--	--

X420 Tail Lamp - Right Harness to Chassis Harness (Heavy Duty)

—



Connector Part Information

Harness Type: Tail Lamp - Right
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F

Connector Part Information

Harness Type: Chassis
OEM Connector: 33171739
Service Connector: 19333224
Description: 6-Way M 150 MX Series, Sealed (GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

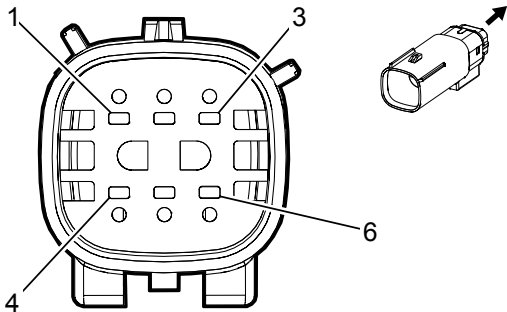
X420 Tail Lamp - Right Harness to Chassis Harness (Heavy Duty)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	GY/BN	309	I	—	Right Park Lamp Control	1	0.75	GY/BN	309	II	—
4	0.75	L-GN/WH	24	I	—	Backup Lamp Control	4	0.75	L-GN/WH	24	II	—
5	0.75	BN/L-GN	19	I	—	Right Rear Stop/Turn Lamp Control	5	0.75	BN/L-GN	19	II	—
6	1.5	BK	2150	I	—	Ground	6	1.5	BK	2150	II	—

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

X420 Tail Lamp - Right Harness to Chassis Harness (Light Duty)

—



Connector Part Information

Harness Type: Tail Lamp - Right
OEM Connector: —
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F

Connector Part Information

Harness Type: Chassis
OEM Connector: 33162427
Service Connector: 19333223
Description: 6-Way M 150 MX Series, Sealed (GY)

Terminal Part Information

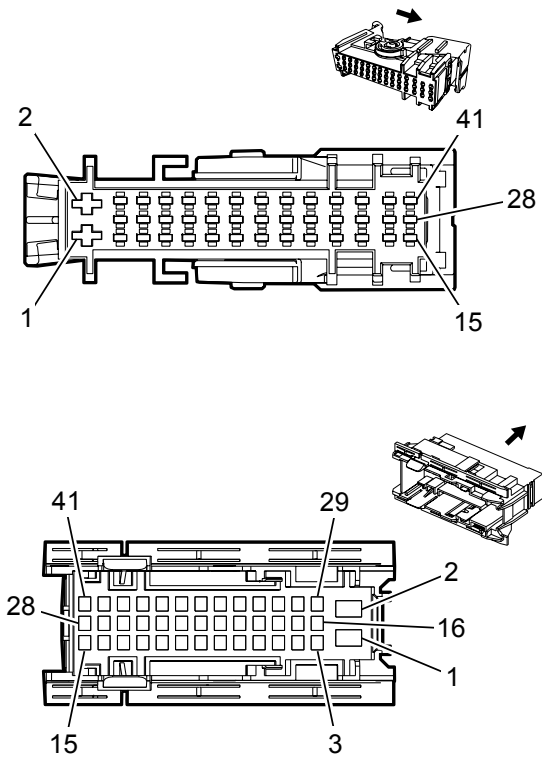
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X420 Tail Lamp - Right Harness to Chassis Harness (Light Duty)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	GY/BN	309	I	—	Right Park Lamp Control	1	0.75	GY/BN	309	II	—
2	0.5	VT/YE	5357	I	—	Right Tail Lamp Outage Detection Signal	2	0.5	VT/YE	5357	II	—
4	0.75	L-GN/WH	24	I	—	Backup Lamp Control	4	0.75	L-GN/WH	24	II	—
5	0.75	BN/L-GN	19	I	—	Right Rear Stop/Turn Lamp Control	5	0.75	BN/L-GN	19	II	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

6	1.5	BK	2150	I	—	Ground	6	1.5	BK	2150	II	—

X500 Driver Door Harness to Body Harness



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	13575556	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	13575593	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	2
V	13575706	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VI	13575775	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VII	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	2
VIII	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	C
IX	13575857	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available

X500 Driver Door Harness to Body Harness

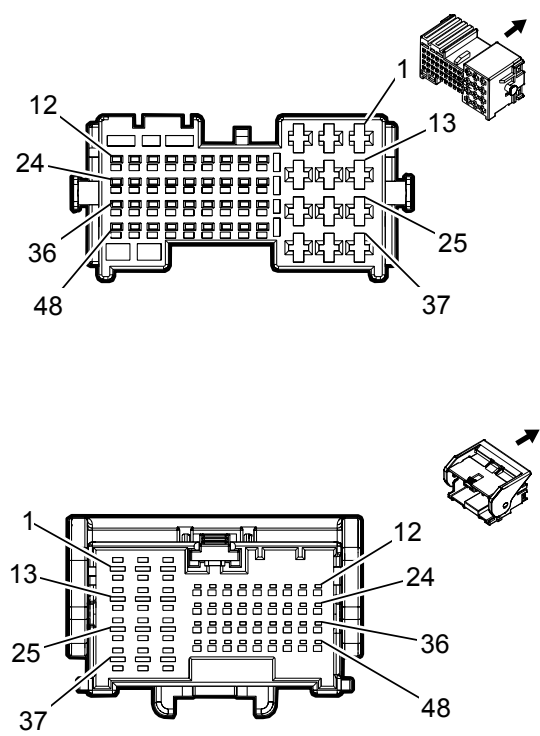
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	RD/D-BU	1842	II	—	Battery Positive Voltage	1	2.5	RD/D-BU	1842	IX	—
2	3	BK	1150	II	—	Ground	2	4	BK	1150	V	—
3	0.5	GY/WH	5996	I	—	Driver Outside Rear View Mirror Puddle Lamp Control	3	0.5	GY/L-GN	5996	IV	—
4	0.5	WH	3398	I	—	Passenger Mirror Motor Common Control	4	0.5	WH	3398	VII	—
5	0.35	YE/BK	1690	I	—	Automatic Day/Night Mirror Signal	5	0.35	YE/WH	1690	VI	—
6	0.35	BK/YE	1691	I	—	Automatic Day/Night Mirror Low Reference	6	0.35	BK/YE	1691	VI	—
7	0.35	D-BU/L-GN	614	I	A45	Memory Seat Switch Set Signal	7	0.35	D-BU/L-GN	614	VI	A45
	0.5	WH/L-GN	3412	I	DL3/DQS-A45	Driver Mirror Motor Fold In Control		0.5	WH/L-GN	3412	VII	DL3/DQS-A45
8	0.35	WH	615	I	A45	Memory Seat Switch Signal 1	8	0.35	WH	615	VI	A45
	0.5	GY/WH	3411	I	DL3/DQS-A45	Driver Mirror Motor Fold Out Control		0.5	GY/WH	3411	VII	DL3/DQS-A45
9	0.5	WH/VT	1430	I	—	Exterior Courtesy Lamp Control	9	0.5	WH/VT	1430	VII	—

10	1	D-BU	201	I	—	Left Front Speaker Control (+) 1 Left Front Speaker Control (+) 1	10	0.75 1	D-BU D-BU	201 201	VIII III	UQ3/UQ5 UQA/UQG/UQS
11	0.5	VT/GY	709	I	—	Left Park Lamp Control	11	0.5	VT/GY	709	VII	—
12	0.35	GY	745	I	—	Left Front Door Ajar Switch Signal	12	0.35	GY	745	VI	—
13	0.35	WH/VT	3270	I	—	Driver Door Lock Motor Status Signal Driver Door Lock Motor Status Signal	13	0.35 0.35	WH/VT WH/VT	3270 3270	VI IV	-REGULAR CAB REGULAR CAB/EXTENDED CAB/CREW CAB
14	0.5	OG/L-GN	2132	I	—	Left Front Side Impact Sensing Module Signal	14	0.35	OG/L-GN	2132	VI	—
15	0.5	BK/OG	6628	I	—	Left Front Side Impact Sensing Module Low Reference	15	0.35	BK/OG	6628	VI	—
16	0.35	WH	6816	I	—	Indicator Dimming Control	16	0.5	WH	6816	VII	—
17	0.35	BN/WH	781	I	—	Driver Door Lock Switch Unlock Signal	17	0.35	BN/WH	781	VI	—
18	0.35	BN/YE	780	I	—	Driver Door Lock Switch Lock Signal	18	0.35	BN/YE	780	VI	—

19	0.75	BN/BK	294	I	—	Door Lock Actuator Unlock Control	19	0.75	BN/YE	294	VIII	—
20	0.75	GY	5911	I	—	Door Lock Actuator Lock Control 2	20	0.75	GY	5911	VIII	—
21	0.35	BK/D-BU	5978	I	—	Memory Switch Low Reference	21	0.35	BK/D-BU	5978	VI	—
22	—	—	—	—	—	Not Occupied	22	—	—	—	—	—
23	1	BN/D-BU	118	I	—	Left Front Speaker Signal (-) 1	23	0.75	BN/D-BU	118	VIII	UQ3/UQ5
						Left Front Speaker Signal (-) 1		1	BN/D-BU	118	III	UQA/UQG/UQS
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	VI	-REGULAR CAB
						Door Lock Key Switch Unlock Signal		0.35	D-BU/VT	1124	IV	REGULAR CAB/EXTENDED CAB/CREW CAB
27 - 28	—	—	—	—	—	Not Occupied	27 - 28	—	—	—	—	—
29	0.35	YE	6817	I	—	LED Backlight Dimming Control	29	0.35	YE	6817	VI	—
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	VII	—

32	0.35	GY	5697	I	—	Child Lockout Indicator Control	32	0.35	GY	5697	VI	—
33	0.5	L-GN/YE	6134	I	—	Local Interconnect Network Serial Data Bus 3	33	0.5	L-GN/YE	6134	IV	—
34	0.5	L-GN/WH	7530	I	—	Local Interconnect Network Serial Data Bus 8	34	0.5	L-GN/WH	7530	VII	—
35	0.35	BN/RD	3265	I	—	Child Security Lock Switch Signal	35	0.35	YE/BN	3265	VI	—
36	0.5	L-GN/BK	3396	I	—	Passenger Mirror Motor Right (+) Left (-) Control	36	0.5	L-GN/BK	3396	VII	—
37	—	—	—	—	—	Not Occupied	37	—	—	—	—	—
38	0.5	YE/VT	3397	I	—	Passenger Mirror Motor Up (+) Down (-) Control	38	0.5	YE/VT	3397	VII	—
39	—	—	—	—	—	Not Occupied	39	—	—	—	—	—
40	0.5	RD/VT	1940	I	—	Battery Positive Voltage	40	0.5	RD/VT	1940	VII	—
41	0.5	D-BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	41	0.75	D-BU/WH	1314	VIII	—

X505 Driver Door Harness to Driver Door Trim Harness



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

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-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-13 (BU)	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

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 LED Backlight Dimming	1	0.35	YE	6817	IV	—

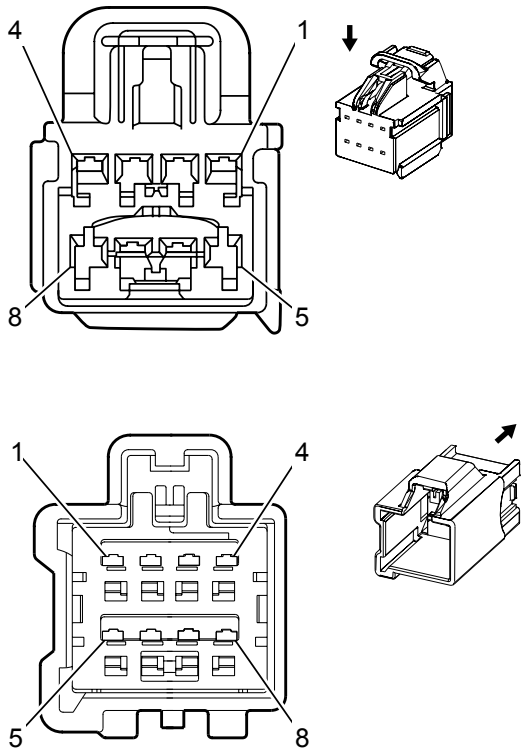
						Control						
2	0.35	WH/YE	7557	II	—	LED Ambient Lighting Control 1	2	0.35	WH/YE	7557	IV	—
3	0.35	WH	6816	II	—	Indicator Dimming Control	3	0.35	WH	6816	IV	—
4	—	—	—	—	—	Not Occupied	4	—	—	—	—	—
5	0.5	BN/BK	3389	I	—	Driver Mirror Motor Right (+) Left (-) Control	5	0.75	BN/BK	3389	III	—
6	0.5	VT/D-BU	3390	I	—	Driver Mirror Motor Up (+) Down (-) Control	6	0.75	VT/D-BU	3390	III	—
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	—
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	—
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



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

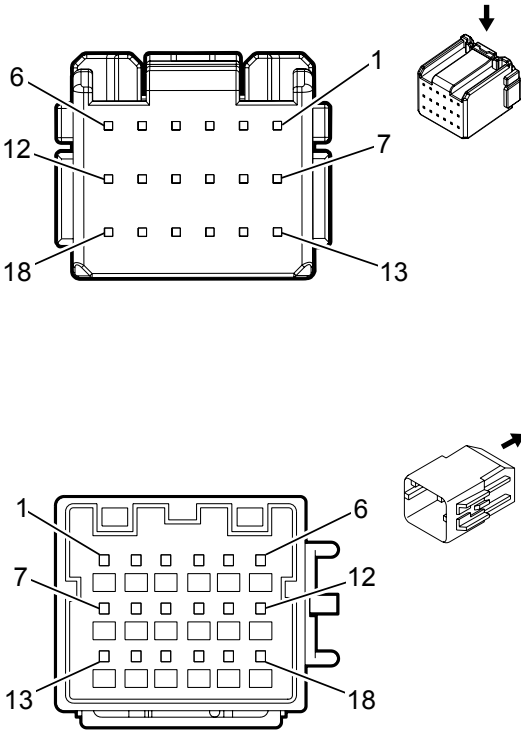
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X506 Driver Door Trim Harness to Driver Door Harness

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	5	0.35	BN/WH	781	II	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

5	0.35					Unlock Signal	5	0.35				
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 Driver Door Trim Harness to Driver Door Harness



Connector Part Information

Harness Type: Driver Door Trim
OEM Connector: —
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	Not Available	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

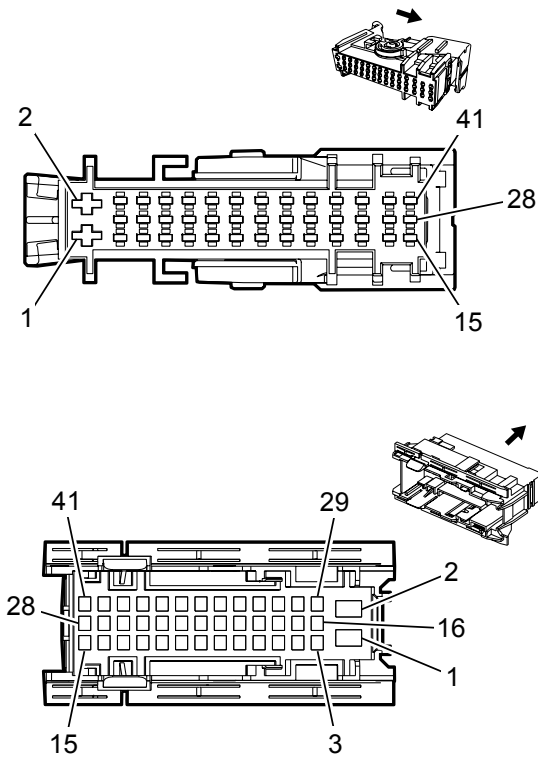
X510 Driver Door Trim Harness to Driver Door Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY/WH	5996	I	DL3	Driver Outside Rear View Mirror Puddle Lamp Control	1	0.5	GY/WH	5996	II	DL3
		VT/GY	709	I	DQS/DPN	Left Park Lamp Control			VT/GY	709	II	DQS/DPN
	0.5							0.5				

2	0.35	YE/BK	1690	I	DL3/DR4	Automatic Day/Night Mirror Signal	2	0.35	YE/BK	1690	II	DL3/DR4
		WH/VT	1430	I	DQS/DPN	Exterior Courtesy Lamp Control			WH/VT	1430	II	DQS/DPN
	0.5							0.5				
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	—
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



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	13575556	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	13575593	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	C	A
V	13575775	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	2
VII	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	C
VIII	13575857	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IX	13582220	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

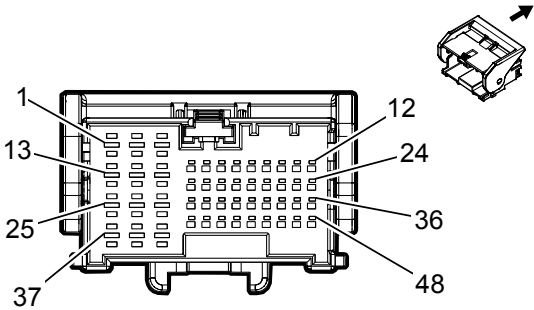
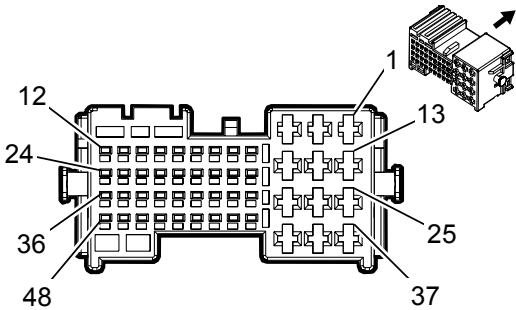
X600 Passenger Door Harness to Body Harness

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	VIII	—
2	2.5	BK	1250	II	—	Ground	2	2.5	BK	1250	IX	—
3	0.5	GY/L-GN	5996	I	—	Driver Outside Rear View Mirror Puddle Lamp Control	3	0.5	GY/L-GN	5996	VI	—
4	0.5	WH	3398	I	—	Passenger Mirror Motor Common Control	4	0.5	WH	3398	VI	—
5 - 6	—	—	—	—	—	Not Occupied	5 - 6	—	—	—	—	—
7	0.5	WH/L-GN	3412	I	—	Driver Mirror Motor Fold In Control	7	0.5	WH/L-GN	3412	VI	—
8	0.5	GY/WH	3411	I	—	Driver Mirror Motor Fold Out Control	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	YE/BK	117	I	—	Right Front Speaker Signal (-) 1	10	0.75	YE/BK	117	VII	UQ3/UQ5
						Right Front Speaker Signal (-) 1		1	YE/BK	117	IV	UQ3
11	0.5	GY/BN	309	I	—	Right Park Lamp Control	11	0.5	GY/BN	309	VI	—

12	0.35	GY	746	I	—	Right Front Door Ajar Switch Signal	12	0.35	GY	746	V	—
13	—	—	—	—	—	Not Occupied	13	—	—	—	—	—
14	0.5	OG/L-GN	2134	I	—	Right Front Side Impact Sensing Module Signal	14	0.35	BN/OG	2134	V	—
15	0.5	BK/OG	6629	I	—	Right Front Side Impact Sensing Module Low Reference	15	0.35	BK/OG	6629	V	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.35	BN/VT	245	I	—	Passenger Door Lock Switch Unlock Control	17	0.35	BN/VT	245	V	—
18	0.35	YE/BK	244	I	—	Passenger Door Lock Switch Lock Control	18	0.35	YE/VT	244	V	—
19	0.75	BN/YE	294	I	—	Door Lock Actuator Unlock Control	19	0.75	BN/YE	294	VII	—
20	0.75	GY	295	I	—	Door Lock Actuator Lock Control	20	0.75	GY	295	VII	—
21	0.5	BK/D-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	21	0.35	BK/D-BU	61	V	—
22	—	—	—	—	—	Not Occupied	22	—	—	—	—	—
23	1	YE	200	I	—	Right Front Speaker Control (+) 1	23	0.75	YE	200	VII	UQ3/UQ5
						Right Front Speaker Control (+) 1		1	YE	200	III	UQ3

24	0.5	D-BU/GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	24	0.35	D-BU/GY	636	V	—
25 - 28	—	—	—	—	—	Not Occupied	25 - 28	—	—	—	—	—
29	0.35	YE	6817	I	—	LED Backlight Dimming Control	29	0.5	YE	6817	VI	—
30	0.35	WH/YE	7557	I	—	LED Ambient Lighting Control 1	30	0.35	WH/YE	7557	V	—
31	0.5	BN/OG	2267	I	—	Mirror Heating Element Control	31	0.5	BN/YE	2267	VI	—
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	VI	—
34	0.5	L-GN/WH	7530	I	—	Local Interconnect Network Serial Data Bus 8	34	0.5	L-GN/WH	7530	VI	—
35	—	—	—	—	—	Not Occupied	35	—	—	—	—	—
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 - 40	—	—	—	—	—	Not Occupied	39 - 40	—	—	—	—	—
41	0.5	L-GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	41	0.75	L-GN/VT	1315	VII	—

X605 Passenger Door Harness to Passenger Door Trim Harness



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

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-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

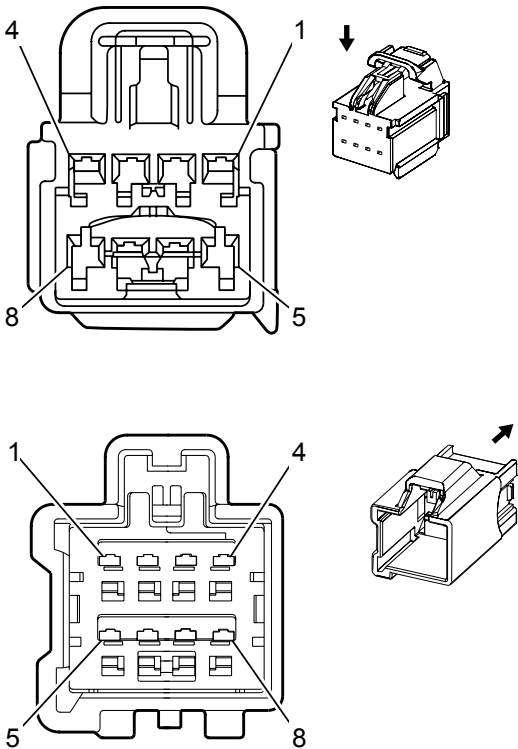
X605 Passenger Door Harness to Passenger Door Trim Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	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	—
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	—	—	—	—	—
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



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

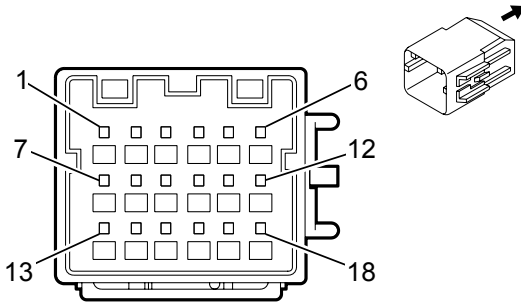
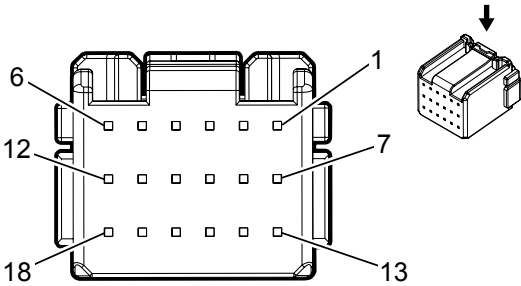
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X606 Passenger Door Trim Harness to Passenger Door Harness

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	5	0.35	BN/VT	245	II	—
2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL SECTION												

5	0.35					Switch Unlock Control	5	0.35				
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 Passenger Door Trim Harness to Passenger Door Harness



Connector Part Information

Harness Type: Passenger Door Trim
OEM Connector: —
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	Not Available	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 Passenger Door Trim Harness to Passenger Door Harness

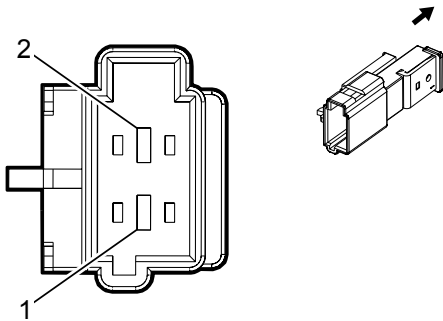
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY/L-GN	5996	I	DL3	Driver Outside Rear View Mirror Puddle Lamp Control	1	0.5	GY/L-GN	5996	II	DL3
		GY/BN	309	I	DQS/DPN	Right Park Lamp Control			GY/BN	309	II	DQS/DPN
	0.5							0.5				

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	&DL3/DL8/DPN/DQS/DR4-A45	Driver Mirror Motor Fold Out Control	4	0.5	GY/WH	3411	II	&DL3/DL8/DPN/DQS/DR4-A45
	0.5	YE/GY	3413	I	A45+DL3/DQS	Passenger Mirror Motor Fold Out Control		0.5	YE/GY	3413	II	A45+DL3/DQS
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	—
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	D-BU/GY	3414	I	A45+DL3/DQS	Passenger Mirror Motor Fold In Control	18	0.5	D-BU/GY	3414	II	A45+DL3/DQS
	0.5	WH/L-GN	3412	I	DL3/DL8/DPN/DQS /DR4-A45	Driver Mirror Motor Fold In Control		0.5	WH/L-GN	3412	II	DL3/DL8/DPN/DQS/D R4-A45

X611 Outside Rear View Mirror Harness to Passenger Door Harness

—



Connector Part Information

Harness Type: Outside Rear View Mirror
OEM Connector: —
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)

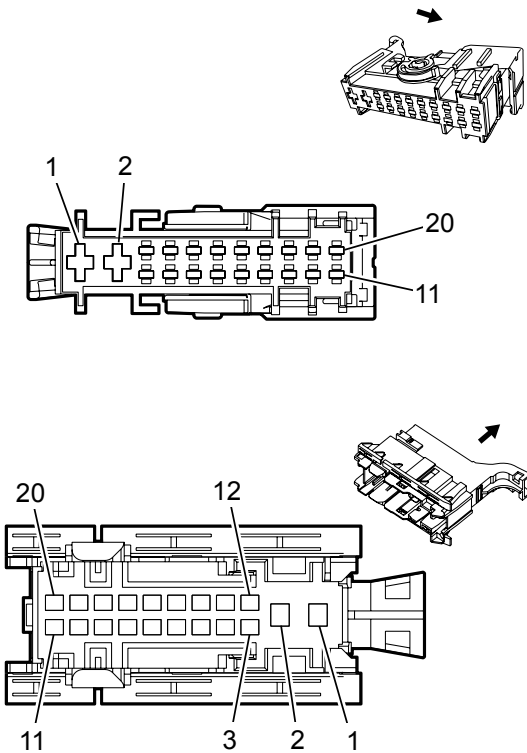
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	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 Rear View Mirror Harness to Passenger Door Harness

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



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	13575556	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	13575706	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	13575775	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	2
VII	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	C
VIII	13575857	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available

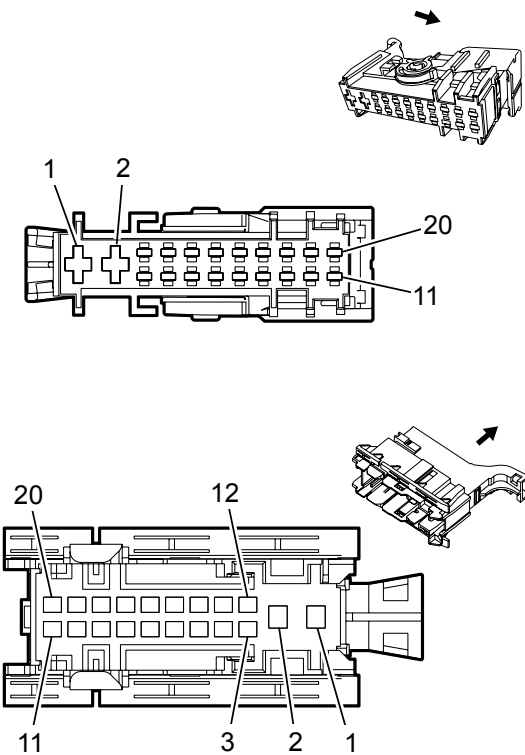
X700 Left Rear Door Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type	Option	Function	Pin	Size	Color	Circuit	Terminal Type	Option
					2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL	SECTION						

				ID							ID	
1	2.5	RD/D-BU	1842	II	—	Battery Positive Voltage	1	2.5	RD/D-BU	1842	VIII	—
2	3	BK	1150	II	—	Ground	2	4	BK	1150	IV	—
3 - 6	—	—	—	—	—	Not Occupied	3 - 6	—	—	—	—	—
7	1	L-GN	199	I	—	Left Rear Speaker Control (+)	7	0.5	L-GN	199	VI	UQ3
						Left Rear Speaker Control (+)		1	L-GN	199	III	UQA/UQG
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	VII	—
10	0.75	BN/YE	294	I	—	Door Lock Actuator Unlock Control	10	0.75	BN/YE	294	VII	—
11	0.75	GY	295	I	—	Door Lock Actuator Lock Control	11	0.75	GY	295	VII	—
12 - 15	—	—	—	—	—	Not Occupied	12 - 15	—	—	—	—	—
16	1	L-GN/BK	116	I	—	Left Rear Speaker Signal (-)	16	0.5	L-GN/BK	116	VI	UQ3
						Left Rear Speaker Signal (-)		1	L-GN/BK	116	III	UQA/UQG
17	0.5	OG/D-BU	6620	I	—	Left Middle Side Impact Sensing Module Signal	17	0.35	OG/D-BU	6620	V	—

18	0.5	BK/OG	6621	I	—	Left Middle Side Impact Sensing Module Low Reference	18	0.35	BK/OG	6621	V	—
19	0.35	BN/WH	3269	I	—	Child Security Lock Motor Status Signal Left Rear	19	0.35	BN/WH	3269	V	—
20	0.5	L-GN/GY	6135	I	—	Local Interconnect Network Serial Data Bus 4	20	0.5	L-GN/GY	6135	VI	—

X800 Right Rear Door Harness to Body Harness



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	13575556	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	13575775	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
V	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	2
VI	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	C
VII	13575857	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VIII	13582220	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X800 Right Rear Door Harness to Body Harness

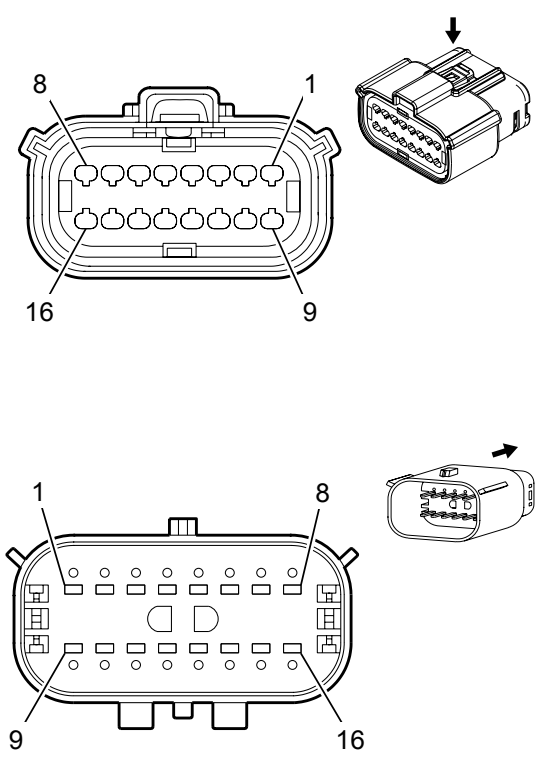
Pin	Size	Color	Circuit	Terminal Type	Option	Function	Pin	Size	Color	Circuit	Terminal Type	Option
					2017 CHEVROLET SILVERADO/GMC SIERRA ELECTRICAL	SECTION						

				ID							ID	
1	2.5	RD/WH	1340	II	—	Battery Positive Voltage	1	2.5	RD/WH	1340	VII	—
2	2.5	BK	1250	II	—	Ground	2	2.5	BK	1250	VIII	—
3 - 6	—	—	—	—	—	Not Occupied	3 - 6	—	—	—	—	—
7	1	WH	46	I	—	Right Rear Speaker Control (+)	7	0.5	WH	46	V	UQ3
						Right Rear Speaker Control (+)		1	WH	46	III	UQS/UQG/UQH
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	—
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 - 15	—	—	—	—	—	Not Occupied	12 - 15	—	—	—	—	—
16	1	D-BU/BK	115	I	—	Right Rear Speaker Signal (-)	16	0.5	D-BU/BK	115	V	UQ3
						Right Rear Speaker Signal (-)		1	D-BU/BK	115	III	UQS/UQG/UQH
17	0.5	OG/VT	6624	I	—	Right Middle Side Impact Sensing Module Signal	17	0.35	OG/VT	6624	IV	—

18	0.5	BK/OG	6625	I	—	Right Middle Side Impact Sensing Module Low Reference	18	0.35	BK/OG	6625	IV	—
19	0.35	GY/BK	3268	I	—	Child Security Lock Motor Status Signal Right Rear	19	0.35	GY/BK	3268	IV	—
20	0.5	L-GN/GY	6135	I	—	Local Interconnect Network Serial Data Bus 4	20	0.5	L-GN/GY	6135	V	—

5	0.75	BN/YE	294	I	—	Door Lock Actuator Unlock Control	5	0.75	BN/YE	294	II	—
6	0.5	BK	6974	I	—	Camera Low Reference	6	0.5	BK	6974	II	—
7	0.5	BK	2550	I	—	Ground	7	0.5	BK	2550	II	—
8	0.5	WH/D-BU	6973	I	—	Camera Signal 2	8	0.5	WH/D-BU	6973	II	—

X901 Rear Bumper Harness to Chassis Harness



Connector Part Information

Harness Type: Rear Bumper
OEM Connector: 33177214
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Chassis
OEM Connector: 33162428
Service Connector: 19300393
Description: 16-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	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

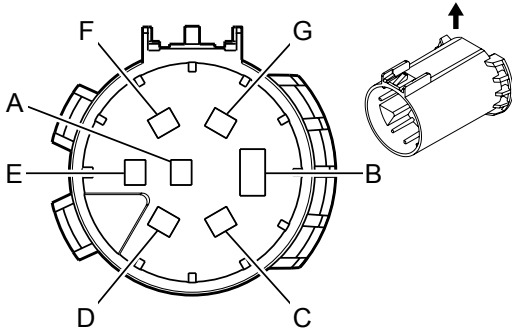
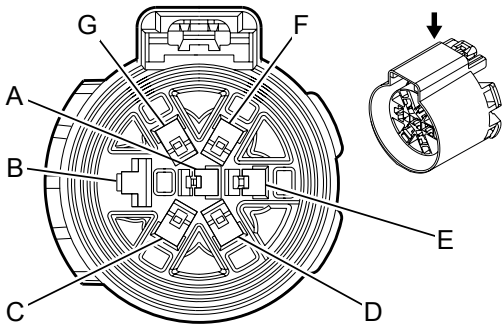
X901 Rear Bumper Harness to Chassis Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY/BN	309	I	—	Right Park Lamp Control	1	0.75	GY/BN	309	II	—
2	0.5	VT/GY	709	I	—	Left Park Lamp Control	2	0.75	VT/GY	709	II	—

3	0.5	L-GN/YE	6846	I	—	Rear License Lamp Control	3	0.5	L-GN/YE	6846	II	—
4	0.5	L-GN/YE	6846	I	—	Rear License Lamp Control	4	0.5	L-GN/YE	6846	II	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	0.5	BK/GY	2379	I	—	Object Sensor Low Reference	6	0.5	BK/GY	2379	II	—
7	0.5	BN/WH	2374	I	—	Object Sensor Control	7	0.5	BN/WH	2374	II	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.5	YE	2375	I	—	Left Rear Corner Object Sensor Signal	9	0.5	YE	2375	II	—
10	0.5	YE/D-BU	2376	I	—	Left Rear Middle Object Sensor Signal	10	0.5	YE/D-BU	2376	II	—
11	0.5	YE/WH	2377	I	—	Right Rear Middle Object Sensor Signal	11	0.5	YE/WH	2377	II	—
12	0.5	YE/VT	2378	I	—	Right Rear Corner Object Sensor Signal	12	0.5	YE/VT	2378	II	—
13	0.5	BK	1750	I	—	Ground	13	0.5	BK	1750	II	—
14	0.5	BK	1750	I	—	Ground	14	0.5	BK	1750	II	—

15	0.5	BK	1750	I	—	Ground	15	0.5	BK	1750	II	—
16	0.5	BK	1750	I	—	Ground	16	0.5	BK	1750	II	—

X950 Chassis Harness to Backup Alarm Harness (8S3)



Connector Part Information

Harness Type: Chassis
OEM Connector: 13857223
Service Connector: 13583927
Description: 7-Way F 280, 630 Metri-Pack Series, Sealed (BK)

Connector Part Information

Harness Type: Back up Alarm
OEM Connector: 15317327
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way M 280 Metri-Pack Series (BK)

Terminal Part Information

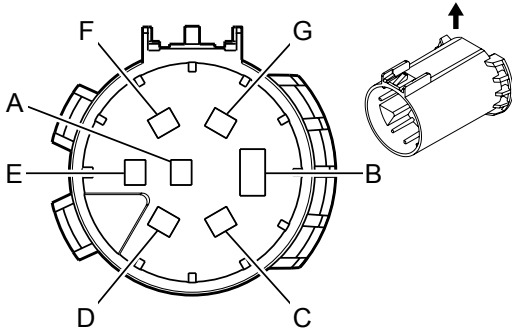
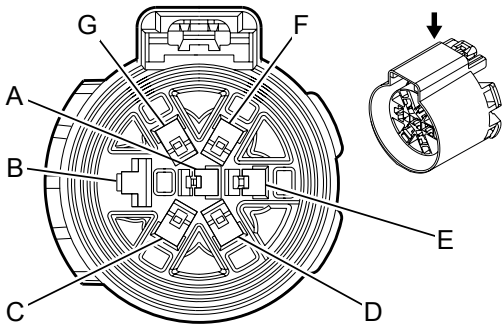
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-43 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X950 Chassis Harness to Backup Alarm Harness (8S3)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	—	—	—	—	—	Trailer Backup Lamp Control	A	1	L-GN	1624	IV	—

B	5	WH	22	I	—	Trailer Ground	B	5	WH	22	III	—
C	—	—	—	—	—	Trailer Auxiliary Control	C	3	D-BU	47	IV	—
D	—	—	—	—	—	Right Rear Trailer Stop/Turn Lamp Control	D	0.8	D-GN	1619	IV	—
E	—	—	—	—	—	Battery Positive Voltage	E	3	RD/BK	742	IV	—
F	—	—	—	—	—	Trailer Park Lamp Control	F	1	BN	2109	IV	—
G	—	—	—	—	—	Left Rear Trailer Stop/Turn Lamp Control	G	0.8	YE	1618	IV	—

X950 Chassis Harness to Camper Harness (UY2)



Connector Part Information

Harness Type: Chassis
OEM Connector: 13857223
Service Connector: 13583927
Description: 7-Way F 280, 630 Metri-Pack Series, Sealed (BK)

Connector Part Information

Harness Type: Camper
OEM Connector: 15317327
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way M 280 Metri-Pack Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-43 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X950 Chassis Harness to Camper Harness (UY2)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	WH/L-GN	1624	II	—	Trailer Backup Lamp Control	A	0.75	WH/L-GN	1624	IV	—

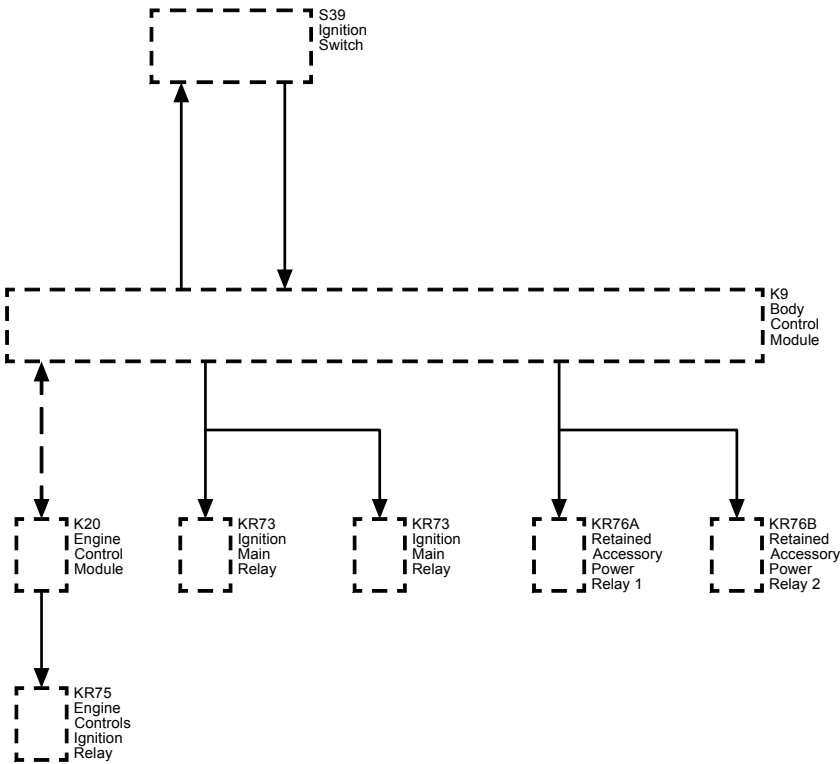
B	5	WH	22	I	—	Trailer Ground	B	6	WH	22	III	—
C	2.5	D-BU	47	II	—	Trailer Auxiliary Control	C	4	D-BU	47	IV	-8S3
						Trailer Auxiliary Control		2.5	D-BU	47	IV	8S3
D	0.75	L-GN/VT	1619	II	—	Right Rear Trailer Stop/Turn Lamp Control	D	0.75	L-GN/VT	1619	IV	—
E	4	RD/L-GN	742	II	—	Battery Positive Voltage	E	4	RD/L-GN	742	IV	—
F	1.5	GY/BN	2109	II	—	Trailer Park Lamp Control	F	1.5	GY/BN	2109	IV	—
G	0.75	YE/GY	1618	II	—	Left Rear Trailer Stop/Turn Lamp Control	G	0.75	YE/GY	1618	IV	—

Description and Operation

Power Mode Description and Operation

Serial Data Power Mode Master

Power Moding Description and Operation Block Diagram



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](#) 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:

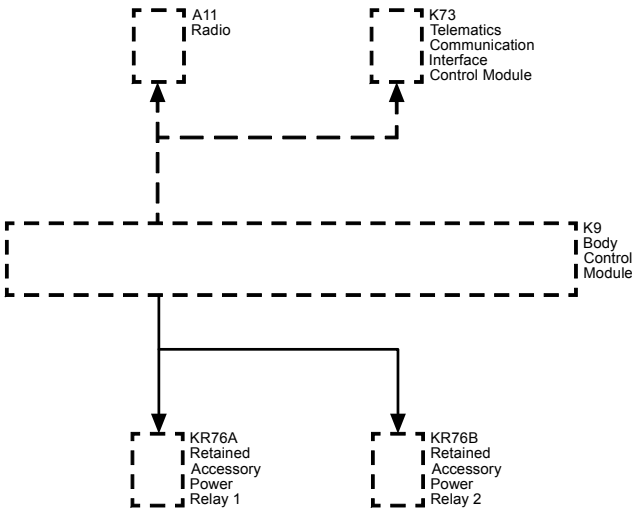
- The ignition switch is OFF, key out.
- Ignition OFF, transmitter is out of range
- No activity exists on the serial data line.
- No outputs are commanded.
- No delay timers are actively counting.
- No wake-up inputs are present.

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



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.

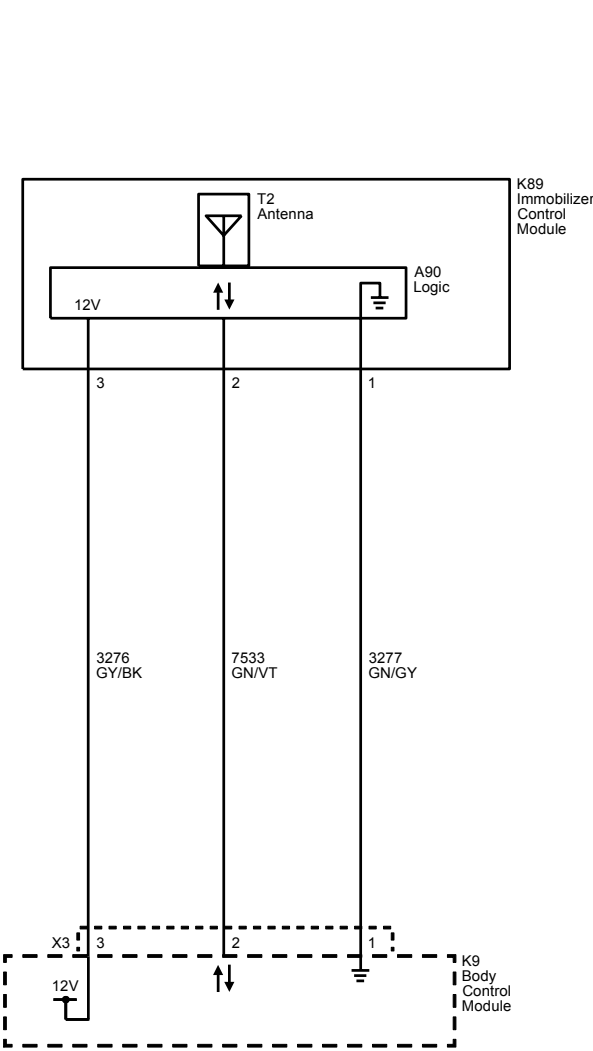
Safety and Security

Immobilizer

Schematic and Routing Diagrams

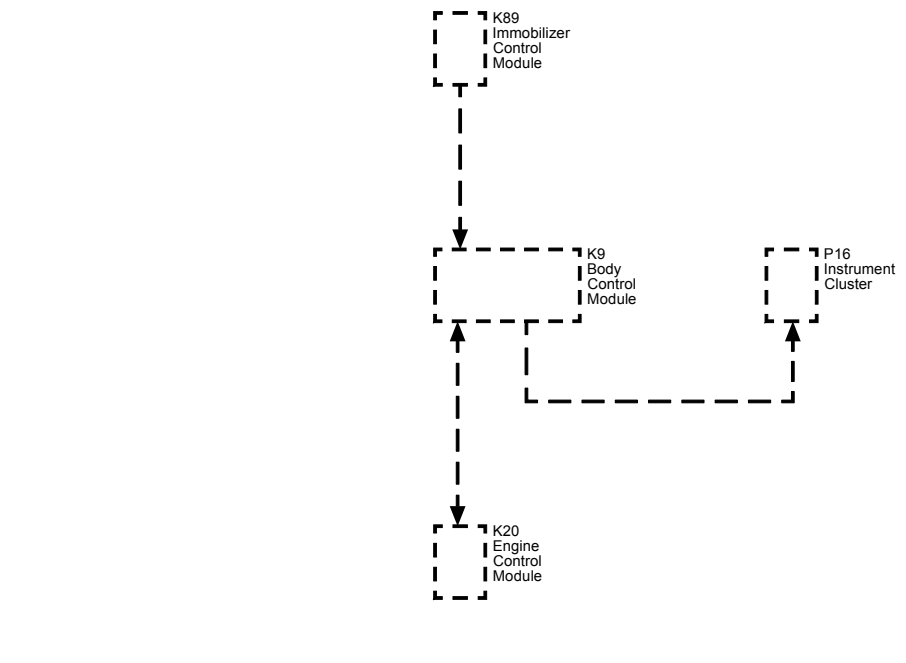
Immobilizer Schematics

Immobilizer



Description and Operation

Immobilizer Description and Operation



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.

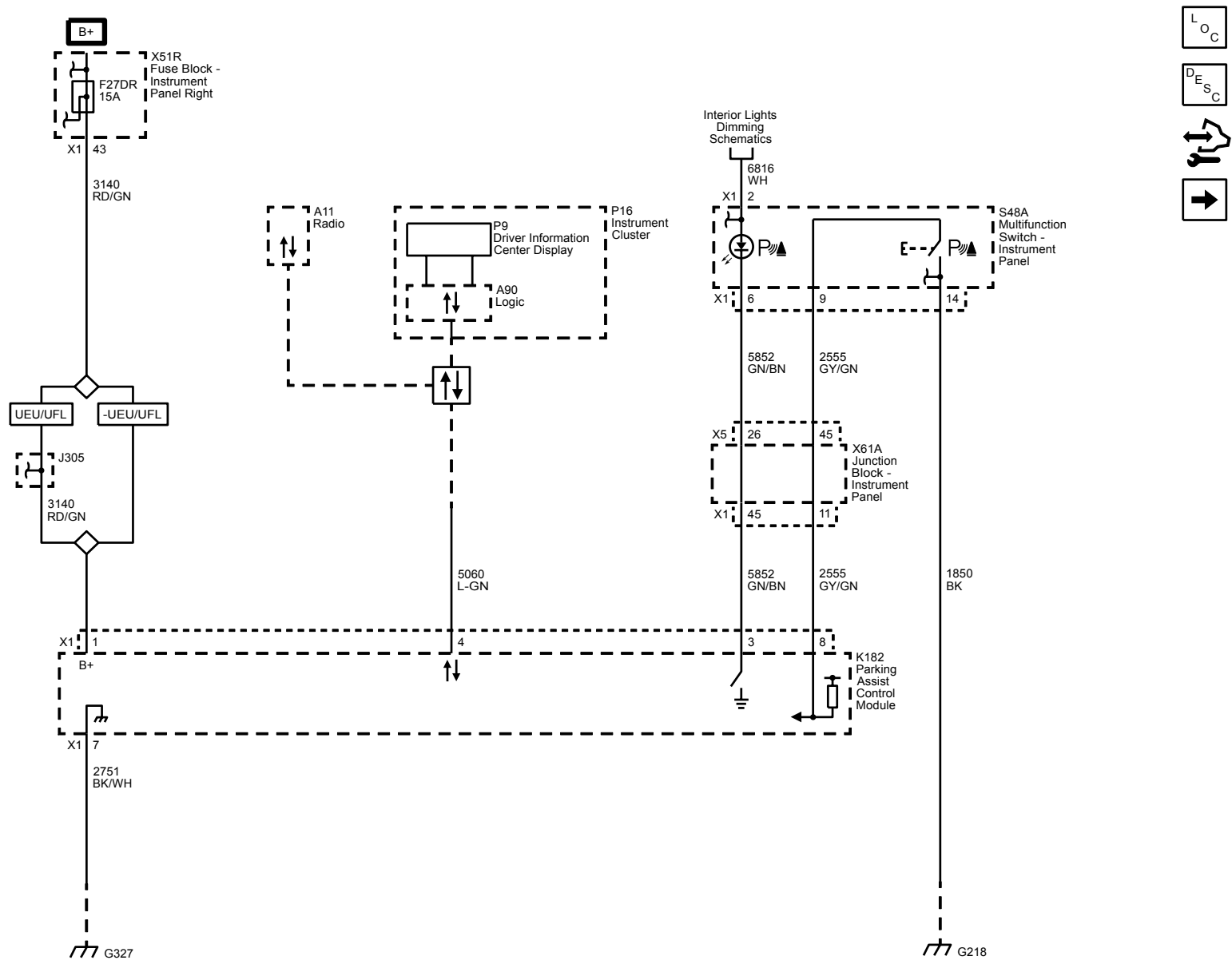
Safety and Security

Object Detection and Pedestrian Protection

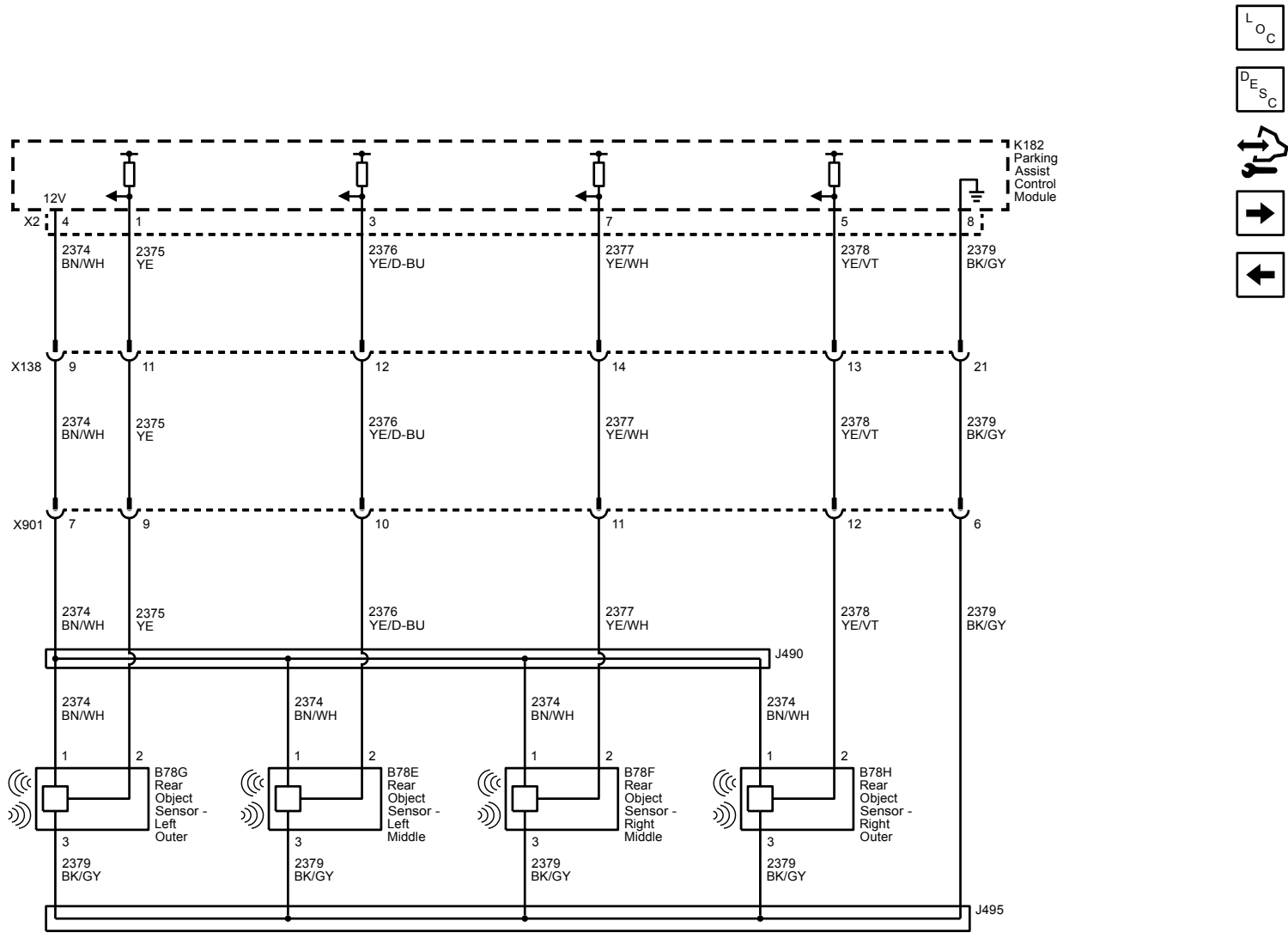
Schematic and Routing Diagrams

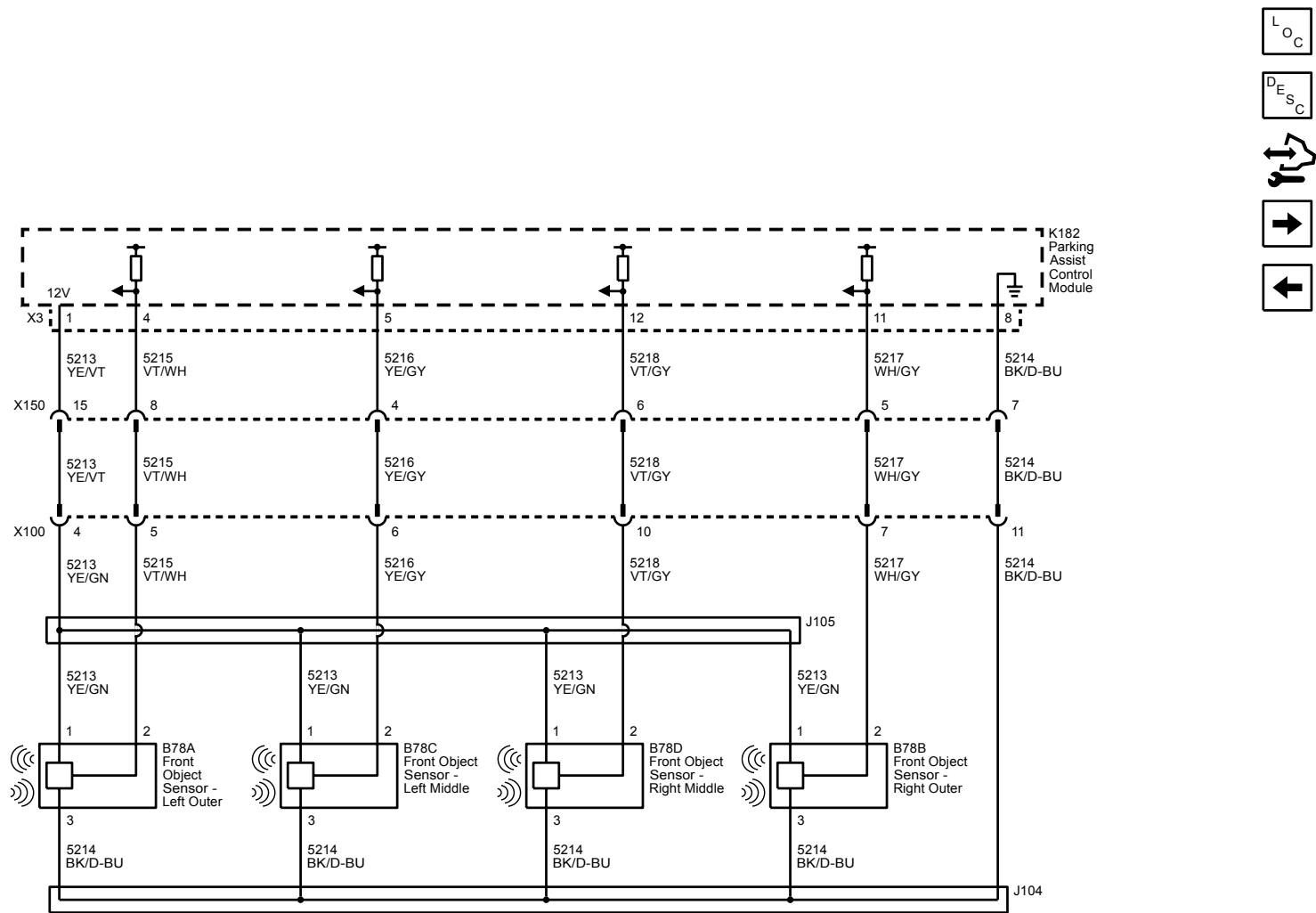
Object Detection Schematics

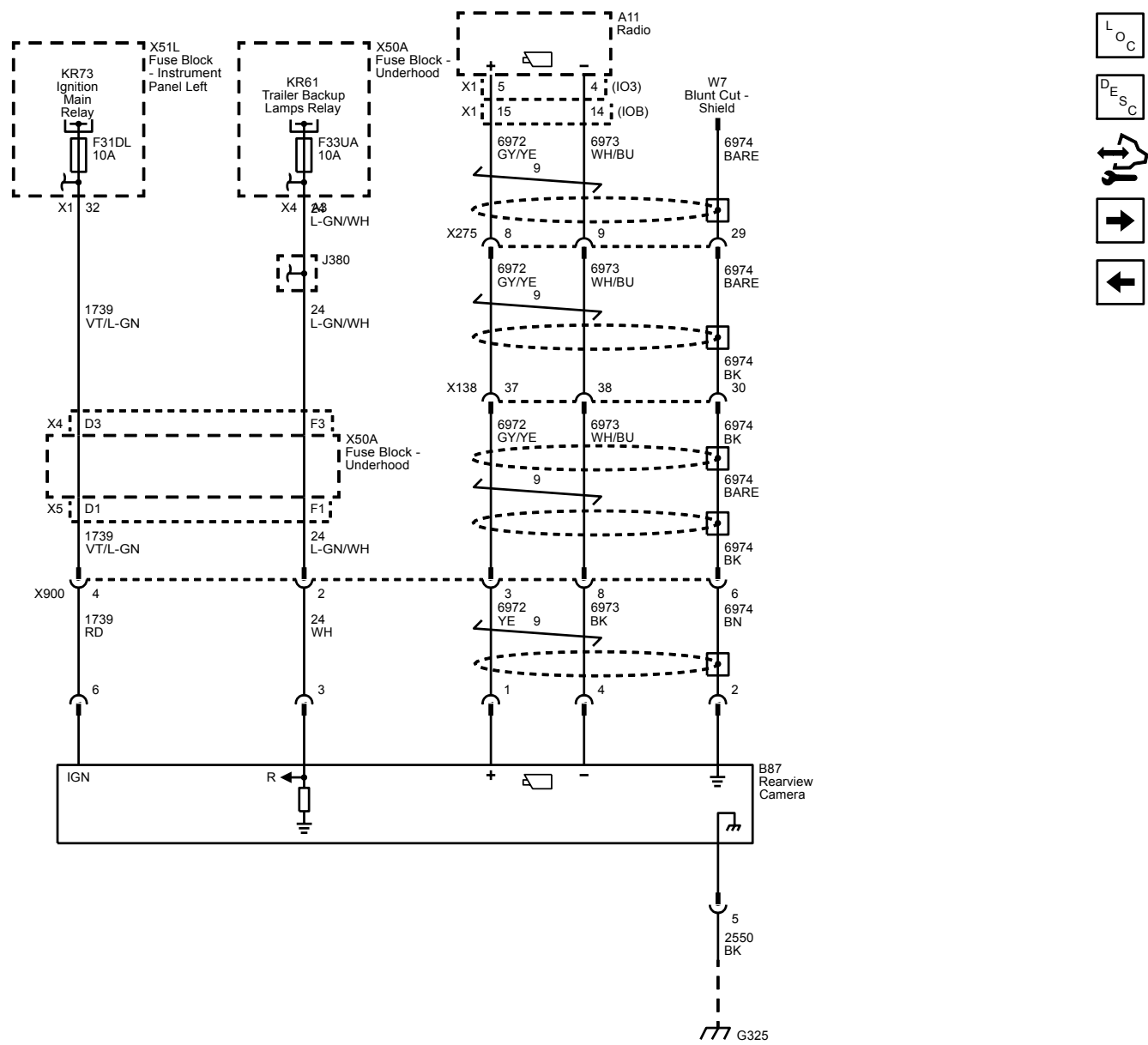
Park Assist - Power, Ground, Serial Data and Control (UD7 or UD5)

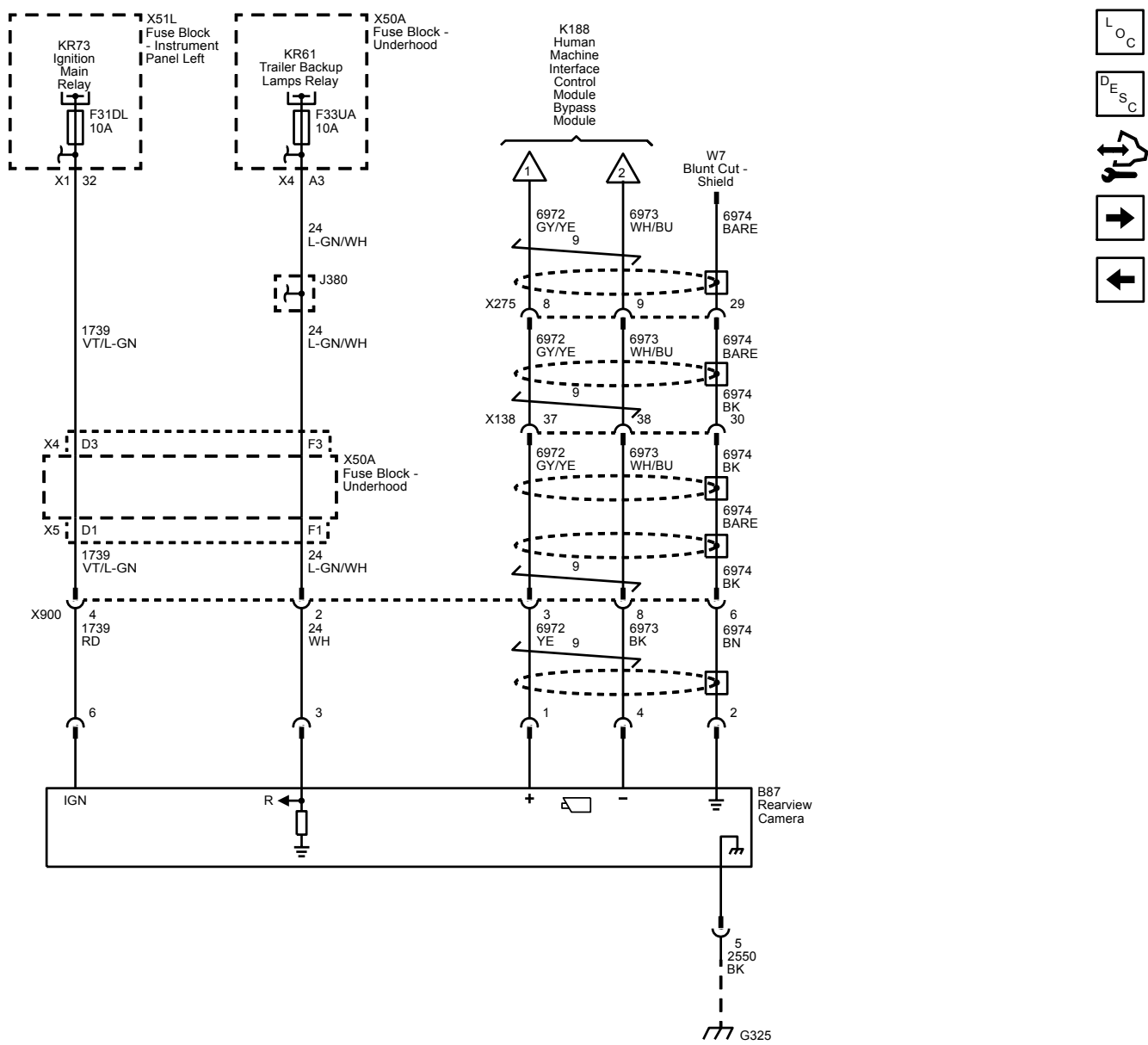


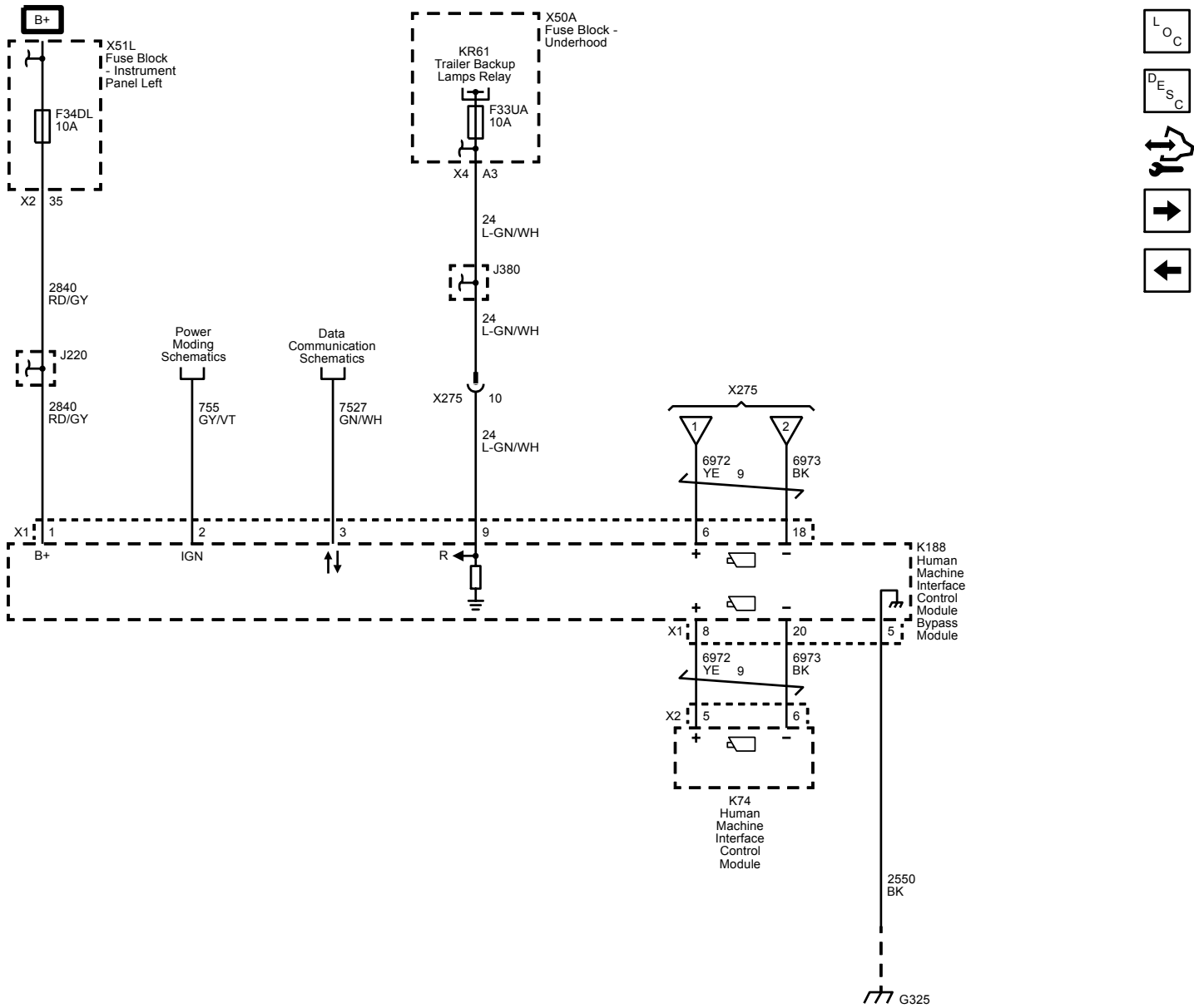
Park Assist - Rear Sensors (UD7 or UD5)



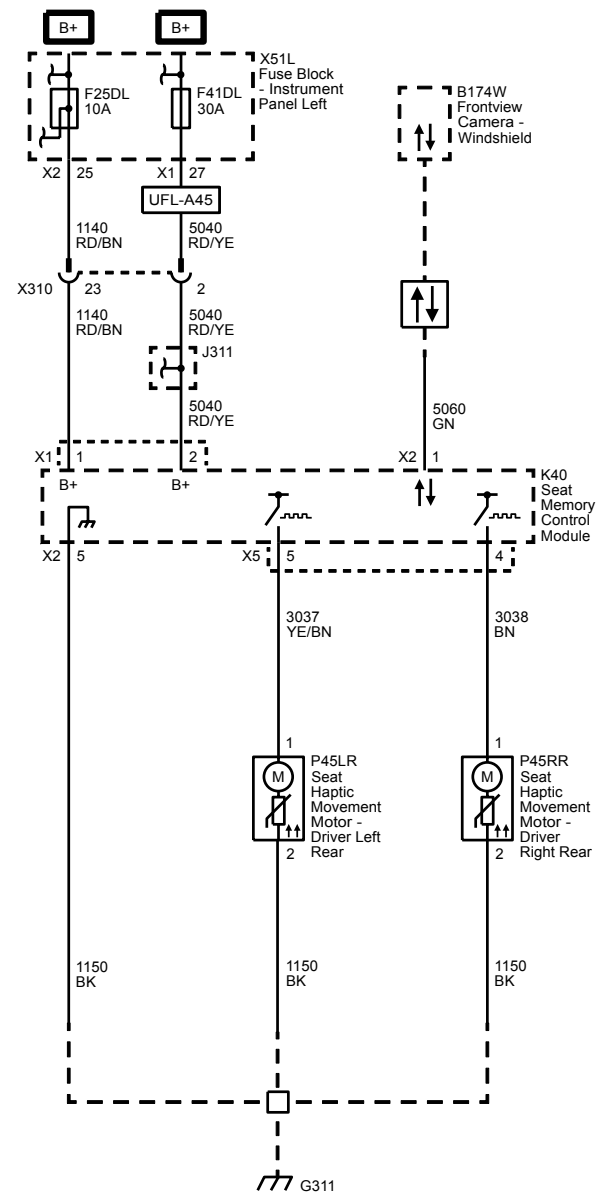




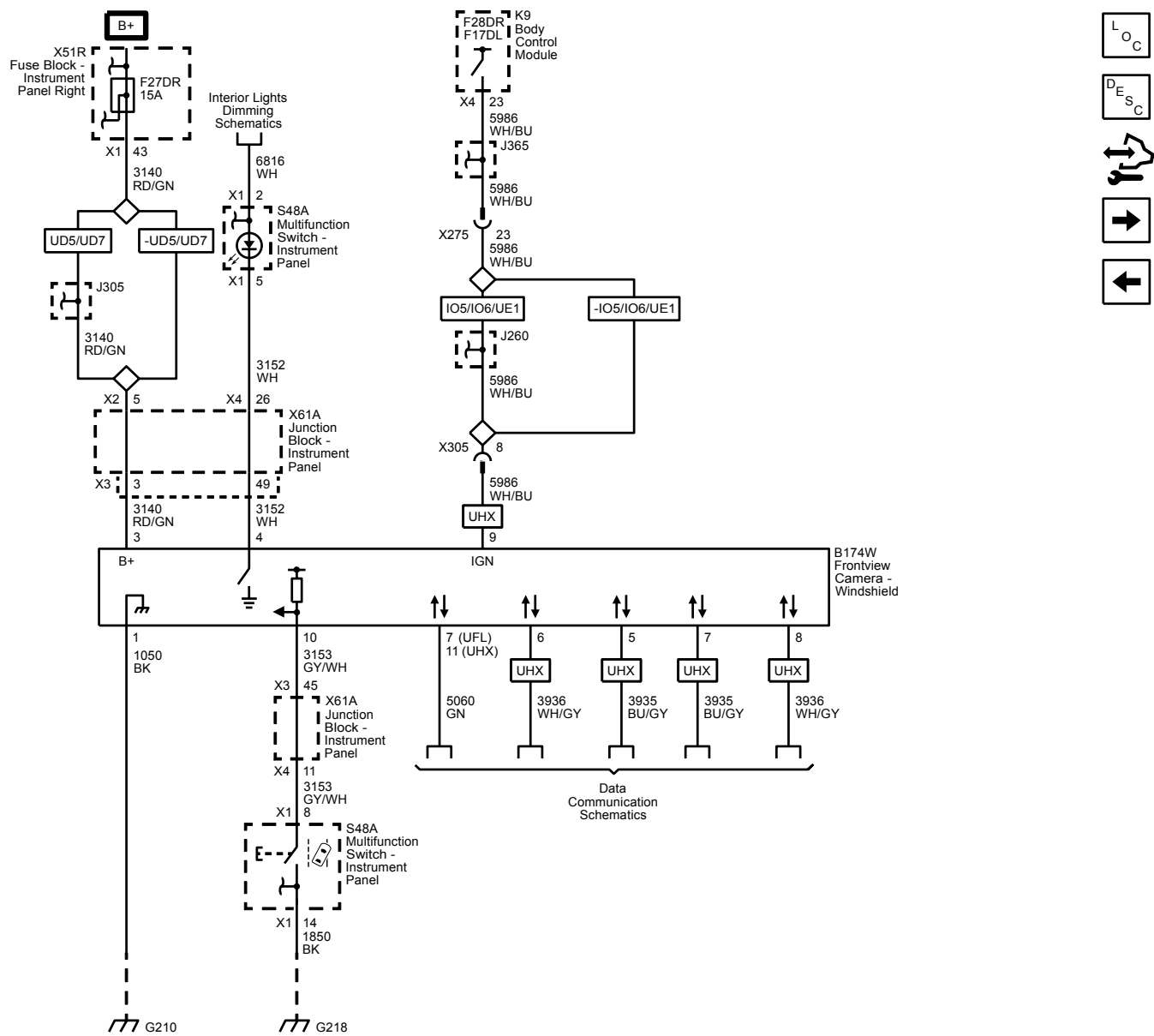




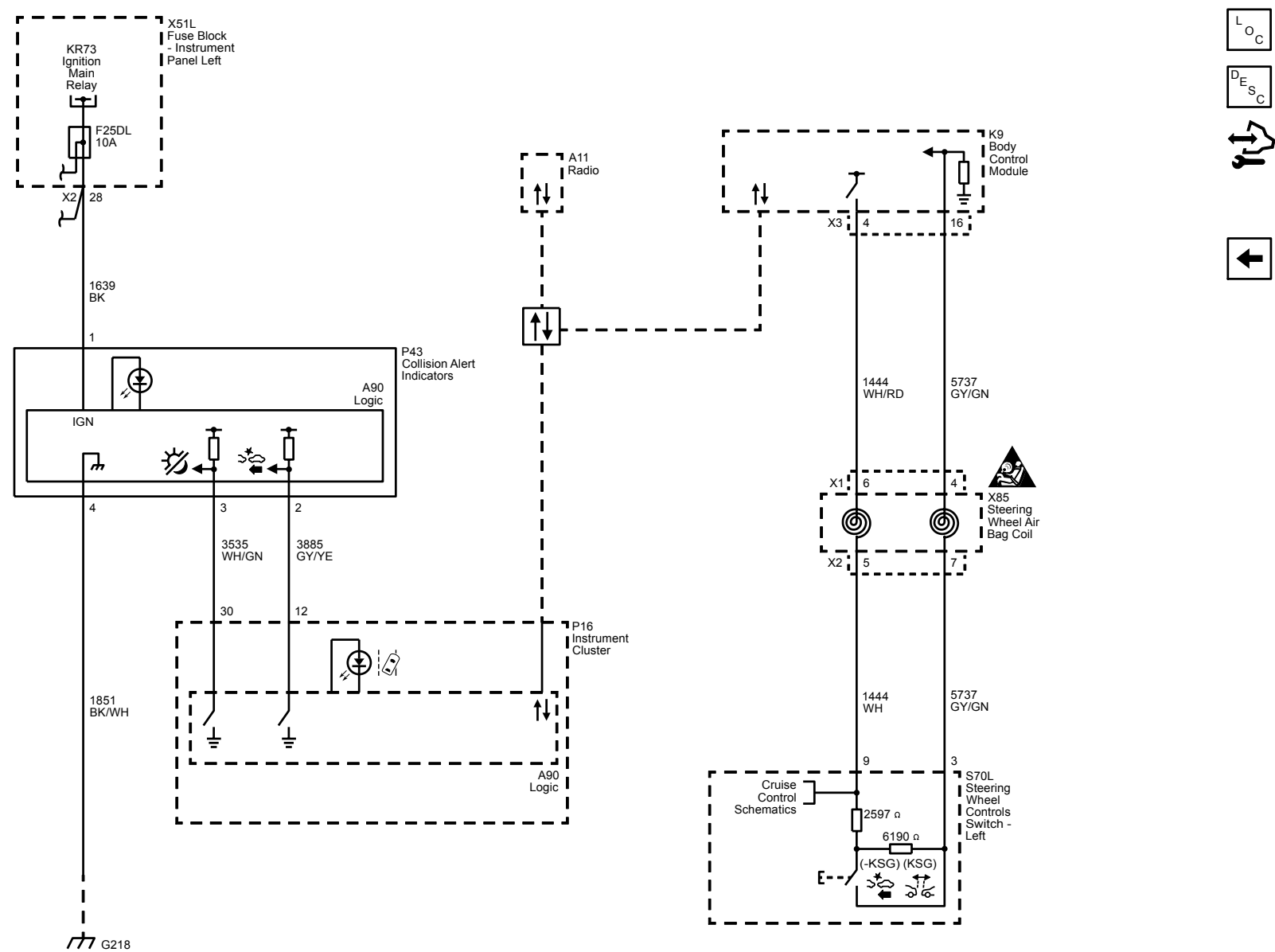
Safety Alert Seat (UEU, UFL or UHX)



Lane Departure Warning (UFL) or Lane Active Safety Keep Assist (UHX)



Forward Collision Alert (UEU)



Description and Operation

Parking Assist Description and Operation (with UD7)

The parking assist system is designed to identify and notify the driver of an object in the vehicle path when reversing at speeds of less than 8 km/h (5 MPH). The distance and location of the object is determined by four object sensors located in the rear bumper. The parking assist system will notify the driver using audible beeps through the infotainment system.

The parking assist system is made up of the following components:

- Parking assist control module
- Object sensors
- Parking assist switch
- Parking assist switch indicator
- Infotainment system

Parking Assist Control Module

The parking assist control module provides a reference voltage and a low reference to the four object alarm sensors. The parking assist control module receives individual signals from each of the four sensors and determines the location and distance of an object based on these inputs. When an object is detected, the parking assist control module will send a message via serial data to the infotainment system requesting an audible alert.

Object Sensors

The object sensors are located in the rear bumper. The sensors are used to determine the distance between an object and the rear of the vehicle. Each sensor emits an ultrasonic frequency which is reflected off an object behind the vehicle. These reflections are received by the sensors. The time difference between the emission of the frequency and when the reflection is received is known as sensor echo time, it is used to determine the distance to the object. The sensors report this information to the parking assist control module.

Parking Assist Switch

The parking assist system can be activated and deactivated by pressing the parking assist switch. The parking assist control module applies voltage and monitors the parking assist switch signal circuit. The parking assist switch is a normally open switch. With the switch open, voltage seen at the parking assist control module is high. When the parking assist switch is pressed, the switch is closed and the signal circuit is pulled to ground. With the switch closed, voltage seen at the parking assist control module is low. The parking assist control module will respond to this by activating or deactivating the parking assist function.

Parking Assist Switch Indicator

When the parking assist system is enabled, the parking assist control module will illuminate the indicator on the switch. The indicator receives voltage through a high control circuit from the body control module (BCM) and is controlled through a low control circuit by the parking assist control module.

Infotainment System

The infotainment system controls the audible alert for the park assist alert. If the an object is detected the infotainment system will command beeps as an audible alert to the driver.

Parking Assist Operation

When an object is within the measuring range of the sensor, the ultrasonic pulse is reflected and is received by the sending or a neighboring sensor. The sensor converts this signal into a voltage signal and sends this signal to the parking assist control module. The parking assist control module evaluates the received sensor signals. As soon as an object is within the measuring range, the parking assist control module sends a message via serial data to the infotainment system to provide an alert signal.

The parking assist system can detect objects greater than 7.6 cm (3 in) wide and 25.4 cm (10 in) tall. The system cannot detect objects below the bumper or underneath the vehicle.

The parking assist system can be activated and deactivated by pressing the parking assist switch. When the transmission is in R, park assist is automatically activated, unless disable by the switch.

The parking assist control module carries out a self test and monitors the sensors for electrical and mechanical faults. Monitored is the power supply of each sensor and the sensor signals. Mud, ice and snow may cause obstruction of the function of the sensors. The parking assist control module also determines if the correct type of sensor is installed. If any of these tests fails, a DTC with corresponding symptom is set and the parking assist system is deactivated.

Parking Assist System Driver Information Center Messages

SERVICE PARK ASSIST

The driver information center displays SERVICE PARK ASSIST when the parking assist control module detects a malfunction in the parking assist system and the system is disabled. The driver information center also displays SERVICE PARK ASSIST when a loss of communication occurs with the parking assist control module.

PARK ASSIST OFF

The PARK ASSIST OFF message is displayed in the driver information center when the parking assist system is disabled due to conditions that disable or inhibit the system. The parking assist control module requests the driver information center display PARK ASSIST OFF when it detects that one of the following conditions:

- The parking assist system is manually disabled using the parking assist switch.
- An object is attached to the rear of the vehicle, such as a trailer, bicycle rack, trailer hitch receiver, or tow bar. Also, an object extending beyond a lowered tailgate will disable the system.
- The object sensors are covered by snow, mud, dirt, slush, or ice.
- The rear bumper is damaged.
- Excessive paint thickness on a replacement parking assist sensor.
- The object sensors are disrupted by vibrations, like those caused by a large nearby vehicle or from heavy equipment such as a jackhammer.

Parking Assist Description and Operation (with UD5)

The parking assist system is designed to identify and notify the driver of an object in the vehicle path when moving forward or reversing at speeds of less than 8 km/h (5 MPH). The distance and location of the object is determined by four object sensor located in the rear bumper and four object sensors located in the front bumper. The parking assist system will notify the driver using audible beeps through the infotainment system or haptic pulses through the driver's seat (if equipped).

The parking assist system is made up of the following components:

- Front and rear parking assist control module
- Front object sensors
- Rear object sensors
- Parking assist switch
- Parking assist indicator
- Infotainment system
- Safety alert seat, if equipped.

Front and rear parking assist control module

The front and rear parking assist control module provides a reference voltage and a low reference to the eight object alarm sensors. The front and rear parking assist control module receives individual signals from each of the eight sensors and determines the location and distance of an object based on these inputs. When an object is detected, the front and rear parking assist control module will send a serial data message to the infotainment system requesting an audible alert.

Object Sensors

The object sensors are located in the front and rear bumpers of the vehicle. The sensors are used to determine the distance between an object and the bumper. Each sensor emits an ultrasonic frequency which is reflected off any object located in front of or behind the vehicle. These reflections are received by the sensors. The time difference between the emission of the frequency and when the reflection is received is known as sensor echo time, it is used to determine the distance to the object. The sensors report this information to the front and rear parking assist control module.

Parking Assist Switch

The parking assist system can be activated and deactivated by pressing the parking assist switch. The front and rear parking assist control module applies voltage and monitors the parking assist switch signal circuit. The parking assist switch is a normally open switch. With the switch open, voltage seen at the front and rear parking assist control module is high. When the parking assist switch is pressed, the switch is closed and the signal circuit is pulled to ground. With the switch closed, voltage seen at the front and rear parking assist control module is low. The front and rear parking assist control module will respond to this by activating or deactivating the parking assist function.

Parking Assist Indicator

When the parking assist system is enabled, the front and rear parking assist control module will illuminate the indicator on the switch. The indicator receives voltage through a high control circuit from the body control module (BCM) and is controlled through a low control circuit by the front and rear parking assist control module.

Infotainment system

The infotainment system controls the audible alert for the park assist alert. If the an object is detected the infotainment system will command beeps as an audible alert to the driver.

Safety alert seat (if equipped)

The memory seat module controls the haptic alert provided by the seats. If an object is detected, the memory seat module will command pulses to the driver's seat.

Parking Assist Operation

When an object is within the measuring range of the sensor, the ultrasonic pulse is reflected and is received by the sending or a neighboring sensor. The sensor converts this signal into a voltage signal and sends this signal to the front and rear parking assist control module. The front and rear parking assist control module evaluates the received sensor signals. As soon as an object is within the measuring range, the front and rear parking assist control module sends a message via serial data to the infotainment system to provide an alert signal.

The parking assist system can detect objects greater than 7.6 cm (3 in) wide and 25.4 cm (10 in) tall. The system cannot detect objects below the bumper or underneath the vehicle.

The parking assist system can be activated and deactivated by pressing the parking assist switch. When the transmission is in R, park assist is automatically activated, unless disable by the switch.

The front and rear parking assist control module carries out a self test and monitors the sensors for electrical and mechanical faults. Monitored is the power supply of each sensor and the sensor signals. Mud, ice and snow may cause obstruction of the function of the sensors. The front and rear parking assist control module also determines if the correct type of sensor is installed. If any of these tests fails, a DTC with corresponding symptom is set and the parking assist system is deactivated.

When an object is 120 cm (47 in) to 31 cm (12 in) in front of the vehicle, the proximity of the object from the vehicle communicated via the instrument cluster.

When an object is very close (<0.6 m (2 ft) in the vehicle rear, or <0.3 m (1 ft) in the vehicle front), a continuous beep will sound from the front or rear, or both sides of the Safety Alert Seat (if equipped) will pulse.

Parking Assist System Driver Information Center Messages

SERVICE PARK ASSIST

The driver information center displays SERVICE PARK ASSIST when the front and rear parking assist control module detects a malfunction in the parking assist system and the system is disabled. The driver information center also displays SERVICE PARK ASSIST when a loss of communication occurs with the front and rear parking assist control module.

PARK ASSIST OFF

The PARK ASSIST OFF message is displayed in the driver information center when the parking assist system is disabled due to conditions that disable or inhibit the system. The front and rear parking assist control module requests the driver information center display PARK ASSIST OFF when it detects that one of the following conditions:

- The parking assist system is manually disabled using the parking assist switch.
- An object is attached to the rear of the vehicle, such as a trailer, bicycle rack, trailer hitch receiver, or tow bar. Also, an object extending beyond a lowered tailgate will disable the system.

- The parking assist sensors are covered by snow, mud, dirt, slush, or ice.
- The vehicle bumper is damaged.
- Excessive paint thickness on a replacement parking assist sensor.
- The parking assist sensors are disrupted by vibrations, like those caused by a large nearby vehicle or from heavy equipment such as a jackhammer.

Lane Departure Warning Description and Operation

The lane departure warning system is a convenience feature that utilizes the frontview camera module to determine if the vehicle has unintentionally crossed a lane marking and issue a warning. The frontview camera module is located behind the windshield, looking out at the road ahead and detecting any lane markings. When the vehicle unintentionally leaves a detected lane, visual and audible or haptic (if equipped) alerts are given to the driver. The visual alert cannot be changed, but the driver can select between audible or haptic alerts (if equipped)vin the vehicle personalization menus. Refer to the vehicle owner's manual for vehicle personalization options.

The lane departure warning system utilizes the following components:

- Frontview camera module
- Lane departure warning switch
- Instrument cluster
- Infotainment system
- Safety alert seat, if equipped

Frontview Camera Module

The frontview camera module detects visual queues such as lane markings. When it is determined that the vehicle has unintentionally moved outside of the lane, visual and audible or haptic (if equipped) warning is given to the driver. The frontview camera module receives an input from the lane departure warning switch and controls the lane departure warning switch indicator output. The frontview camera module also communicates via serial data with the instrument cluster, infotainment system, and memory seat module to request visual, audible, and/or haptic alerts.

Lane Departure Warning Switch

The lane departure warning switch provides an input to the frontview camera module to turn the lane departure warning system on and off. The frontview camera module applies voltage and monitors the parking assist switch signal circuit. The lane departure warning switch is a normally open switch. With the switch open, voltage seen at the frontview camera module is high. When the lane departure warning switch is pressed, the switch is closed and the signal circuit is pulled to ground. With the switch closed, voltage seen at the frontview camera module is low. The frontview camera module will respond to this by activating or deactivating the lane departure warning system.

The lane departure warning switch also utilizes the lane departure warning indicator, which is part of the lane departure warning switch and is controlled by the frontview camera module to indicate the operational status of the lane departure warning system. When the lane departure warning is enabled, the frontview camera module will illuminate the indicator on the switch. The indicator receives voltage through a high control circuit from the body control module (BCM) and is controlled through a low control circuit by the frontview camera module.

Instrument Cluster

The instrument cluster contains green and amber lane departure warning indicators. These indicators inform the driver of the current status of the lane departure warning system and are controlled via serial data by the frontview camera module. When the vehicle speed is above 56 km/h (35 MPH) and the system has detected the required lane markings and is ready to assist, the green indicator will be illuminated. If the vehicle has unintentionally left the lane, the amber indicator will flash.

Infotainment System

The infotainment system controls the audible alert for the lane departure warning. If the vehicle has unintentionally left the lane, the frontview camera module will request via serial data an audible alert to the driver through the infotainment system

Safety Alert Seat

The memory seat module controls the haptic alert provided by the seats. If the vehicle has unintentionally left the lane, the memory seat module will command pulses to the left or right side of the seat, depending on the lane departure direction.

Lane Departure Warning Operation

System Operational Modes

- Off State: The system has been turned off by the driver using the lane departure warning switch. The lane departure warning indicator located on the lane departure warning switch will not be illuminated.
- Not Ready To Assist: The system is enabled and the lane departure warning indicator located on the lane departure warning switch is illuminated, but the system is not ready to assist because one of the following conditions is true:
 - Vehicle speed is less than 56 km/h (35 MPH). The system is designed to function at speeds greater than 56 km/h (35 MPH).
 - The system cannot detect lane markings. This may be because there are no lane markings or the lane markings cannot be determined due to snow, rain, or other driving conditions.
 - The windshield area in front of the camera or the camera lens is blocked by fog, dirt, damage to the windshield, or other elements that may prevent the camera from detecting lane markings.
- Ready To Assist: The system is enabled and ready to warn of the unintentional lane crossing. The system is ready to assist when the green lane departure warning indicator is illuminated on the instrument cluster.

Lane Crossing Alerts

- A lane crossing alert consists of the following:
 - The amber lane departure warning indicator located on instrument cluster will flash.
 - Three chimes are activated through the infotainment system or three pulses to the left or right side of the seat, if equipped with safety alert seat
- When any of the following conditions occurs, the system will not give alerts:
 - The appropriate turn signal is activated. An activated turn signal is interpreted as an intentional lane crossing.
 - The operator makes an intentional steering maneuver.
 - The operator makes an intentional accelerating maneuver.
 - The operator makes an intentional braking maneuver.

Forward Collision Alert Description and Operation (without UGN)

The forward collision alert system is a convenience feature of the frontview camera module that issues a warning to the driver when a potential collision risk exists. The frontview camera module is located behind the windshield, looking out at the road ahead and detecting vehicles directly ahead. When the system detects a vehicle in the path ahead, the green vehicle ahead indicator is illuminated on the instrument cluster. When approaching another vehicle too rapidly, the collision alert symbol will flash in the head-up display (if equipped) or a series of red collision alert indicators will flash. An audible alert sound will simultaneously sound or the safety alert seat will provide haptic feedback. The visual alert cannot be changed, but the driver can select between audible or haptic alerts in the vehicle personalization menus. The forward collision alert system can also be turned on or off through the vehicle personalization menus. See the vehicle owner manual for more detailed information on vehicle personalization.

Forward collision alert does not provide a warning to help avoid a crash, unless it detects a vehicle. Forward collision alert may not detect a vehicle ahead if the frontview camera module is blocked by dirt, snow, or ice, or if the windshield is damaged. It may also not detect a vehicle on winding or hilly roads, or in conditions that can limit visibility such as fog, rain, or snow, or if the headlamps or windshield are not cleaned or in proper condition. Keep the windshield, headlamps, and frontview camera module clean and in good repair.

Forward collision alert may provide unnecessary alerts for turning vehicles, vehicles in other lanes, objects that are not vehicles, or shadows. These alerts are normal operation and the vehicle does not need service.

Front Automatic Braking (if equipped)

When the system detects a vehicle ahead in your path that is traveling in the same direction that you may be about to crash into, it can provide a boost to braking or automatically brake the vehicle. This can help avoid or lessen the severity of crashes when driving in a forward gear. Depending on the situation, the vehicle may automatically brake moderately or hard. This front automatic braking can only occur if a vehicle is detected.

The system works when driving in a forward gear between 5 mph (8 km/h) and 50 mph (80 km/h), or on vehicles with Adaptive Cruise Control above 2 mph (4 km/h). It can detect vehicles up to approximately 197 ft (60 m).

Pedestrian Collision Mitigation Braking (if equipped) is a feature subset of Front Impact Mitigation that aims to reduce the likelihood of collisions or reduce the impact speed with pedestrians in the forward direction by the following:

- Determining the forward path of the vehicle
- Monitoring this path with respect to pedestrians in or near the forward path
- When appropriate, providing pedestrian detection pedestrian and alerts to the driver, and if certain conditions are met, providing autonomous braking to help avoid or reducing the impact speed of a collision with the pedestrian

This system is not intended to replace the driver responsibility paying careful attention to the forward scene for pedestrian, vehicle, and other potential hazards. Its function is limited to supplemental use only to assist rather than replace the driver in responding to pedestrians in the forward scene.

The Pedestrian Collision Mitigation Braking system can detect and alert to up to 10 pedestrians in a forward gear at speeds between 5 mph (8 km/h) and 50 mph (80 km/h). During daytime driving, the system detects pedestrians up to a distance of approximately 40 m (131 ft). Pedestrians must be at least 31.5 inches (80 cm) tall to be detected.

No added components are required for Front Automatic Braking, or Pedestrian Collision Mitigation Braking. Refer to Owner Manual – Driver Assistance Systems for more details.

The forward collision alert system is made up of the following components:

- Frontview camera module
- Forward collision alert switch
- Instrument cluster
- Collision alert indicators (without UV6)
- Head-up display (with UV6)
- Infotainment system
- Safety alert seat, if equipped

Frontview Camera Module

The frontview camera module detects vehicles in front of the vehicle. The frontview camera module communicates with the instrument cluster via serial data to illuminate the appropriate amber or green vehicle ahead indicator, collision alert symbol will flash in the head-up display, or collision alert indicators. The frontview camera module also communicates via serial data with the infotainment system and memory seat module to request audible or haptic alerts.

Forward Collision Alert Switch

The forward collision alert switch provides an input to the frontview camera module to select the alert timing sensitivity when approaching another vehicle too rapidly. The forward collision alert switch is part of the steering wheel controls switch – left and provides inputs to the body control module (BCM), which then communicates with the frontview camera module via serial data.

The BCM applies a reference voltage and monitors a low signal voltage from the normally open switch. When the switch is pressed, the signal circuit is pulled low through a specific series of resistors, indicating that the system has been requested to change the alert timing sensitivity. The first button press will show the current alert timing setting on the driver information center. With every subsequent button press, the alert timing sensitivity is changed.

Instrument Cluster

The instrument cluster communicates via serial data with the frontview camera module and will illuminate the amber or green vehicle ahead indicator as requested by the frontview camera module. The instrument cluster also controls the head-up display or the collision alert indicators.

Collision Alert Indicators (without UV6)

The collision alert indicators are a series of red LEDs that will flash when approaching another vehicle too rapidly. The collision alert indicators are located in the upper instrument panel area and reflect off the windshield when illuminated.

The collision alert indicators receive power and ground and are discretely controlled by the instrument cluster through a pair of low control circuits. When requested by the frontview camera module, the instrument panel will pulse the low control circuits, flashing the LEDs as a visual alert that another vehicle is being approached too rapidly.

Head-up Display (with UV6)

The instrument cluster controls the head-up display via serial data. The instrument cluster will command the head-up display to flash the collision alert indicator as a visual alert when approaching another vehicle too rapidly as requested by the frontview camera module.

Infotainment System

The infotainment system controls the audible alerts for the forward collision alert system. If the host vehicle is approaching another vehicle too rapidly, the frontview camera module will command the infotainment system issue an audible alert to the driver.

Safety Alert Seat (if equipped)

The memory seat module controls the haptic alert provided by the seats. If the vehicle is approaching another vehicle too quickly, the frontview camera module will command the memory seat module to pulse both sides of the seat.

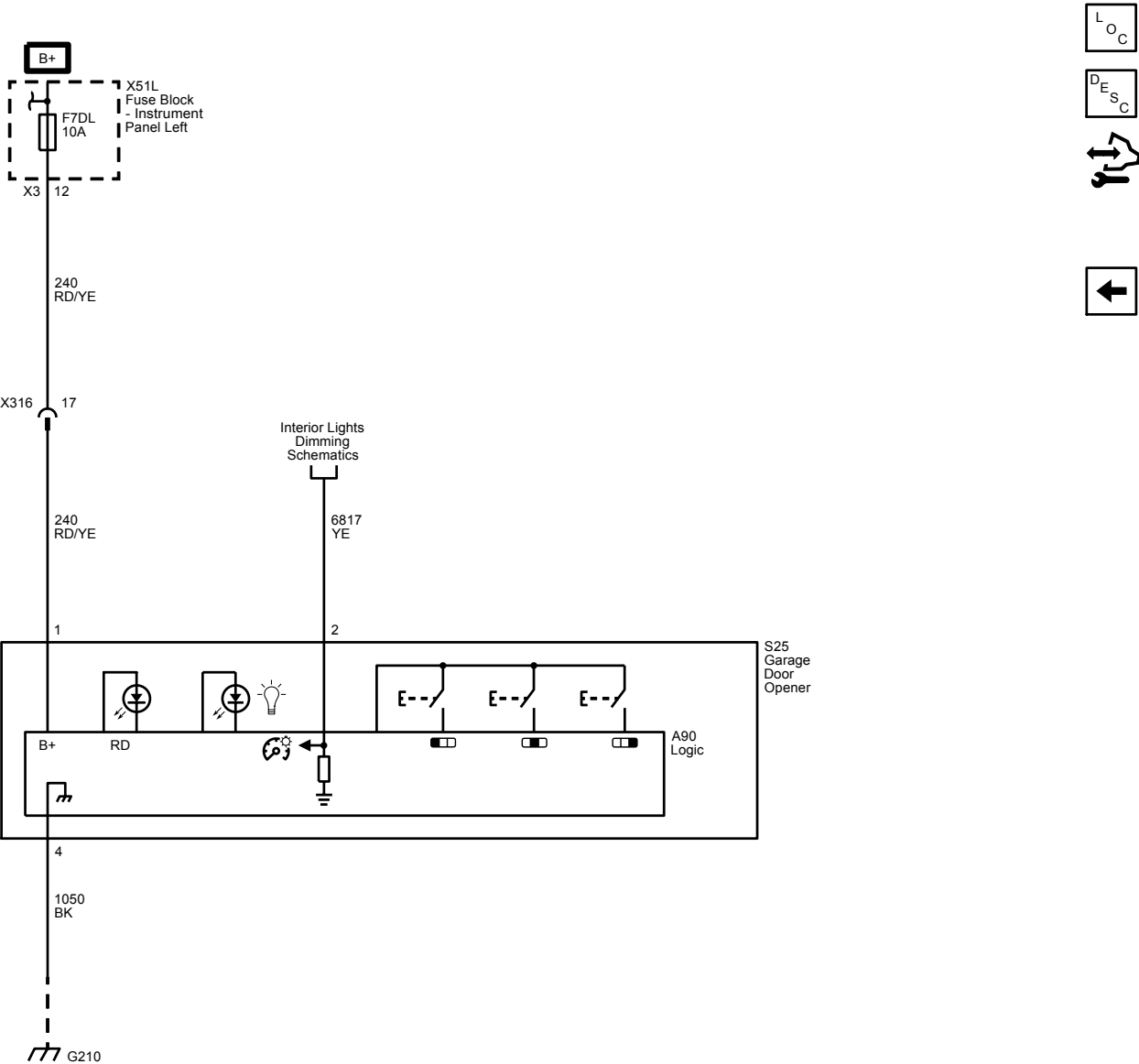
Rear Vision Camera Description and Operation

The rear vision camera system consists of the rearview camera and the infotainment system.

When the transmission is placed into R, 12 V is applied to the reverse lamp control circuit by the body control module (BCM). The rearview camera monitors this circuit and when 12 V is seen, indicating that the transmission is in R, the rearview camera will activate. The rearview camera receives ignition voltage and a constant ground to power the camera. Video signal + and video signal – circuits carry the video image from the rearview camera to the infotainment system. Additionally, the video signal circuits are shielded to prevent any interference which may lead to a loss of video signal resolution and cause a degraded video image. The shield is grounded by the rearview camera.

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

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



Repair Instructions

Remote Control Door Lock Transmitter Learn

Erase/Program All Key Fobs

Note:

- Verify all mechanical keys operate correctly before beginning any programming procedures.
- All transmitters must be programmed in a single programming sequence. Once the Erase/Program All Key Fobs selection is made, all learned transmitters will be erased. If all the existing transmitters associated with the vehicle are not learned at this time, they will become inoperative and require additional programming.
- Do not operate or program the transmitters in the vicinity of other vehicles that are in the transmitter program mode. This will prevent the programming of the transmitters to the incorrect vehicle.

This procedure will first erase all known keyless entry transmitters. After all transmitters are erased, the procedure will begin to program keyless entry transmitters in sequential order, beginning with transmitter 1.

1. With a scan tool, access the Body Control Module Configuration/Reset Functions menu. Select Add/Replace Key Fobs.
2. Select Erase/Program Fobs. This will erase all learned transmitters and prepare the BCM to learn new transmitters. Follow the on-screen instructions.
3. When all the desired transmitters have been programmed, cycle the ignition from ON to OFF, and exit the vehicle.
4. Verify each transmitter and key is operating properly. Operate each of the keyless entry functions using the buttons on the transmitter. On vehicles with a keyed ignition switch, verify the mechanical key by starting the vehicle using the ignition switch. When verifying operation, make sure that no other transmitters are near the vehicle.

Next Available Slot

Note:

- Verify all mechanical keys operate correctly before beginning any programming procedures.
- Do not operate or program the transmitters in the vicinity of other vehicles that are in the transmitter program mode. This will prevent the programming of the transmitters to the incorrect vehicle.

This procedure will program keyless entry transmitters in sequential order. If two transmitters are currently learned to the vehicle as transmitters 1 and 2, using this procedure will learn the next transmitter are transmitter 3, and so on.

1. With a scan tool, access the Body Control Module Configuration/Reset Functions menu. Select Add/Replace Key Fobs.
2. Select Next Available Slot. Follow the on-screen instructions.
3. When all the desired transmitters have been programmed, cycle the ignition from ON to OFF, and exit the vehicle.
4. Verify each transmitter and key is operating properly. Operate each of the keyless entry functions using the buttons on the transmitter. On vehicles with a keyed ignition switch, verify the mechanical key by starting the vehicle using the ignition switch. When verifying operation, make sure that no other transmitters are near the vehicle.

Slot Programming

Note:

- Verify all mechanical keys operate correctly before beginning any programming procedures.
- If a slot already has a transmitter programmed to it, programming will not occur. A transmitter will only program to an open slot with no transmitter already programmed to it.
- Do not operate or program the transmitters in the vicinity of other vehicles that are in the keyless entry program mode. This prevents the programming of the transmitters to the incorrect vehicle.

Transmitter slot programming allows a single transmitter to be programmed into a specific slot without affecting any of the other programmed transmitters.

1. With a scan tool, access the Body Control Module Configuration/Reset Functions menu. Select Add/Replace Key Fobs.
2. Select the desired slot in the on-screen menu. Follow the on-screen instructions.
3. When all the desired transmitters have been programmed, cycle the ignition from ON to OFF, and exit the vehicle.
4. Verify each transmitter and key is operating properly. Operate each of the keyless entry functions using the buttons on the transmitter. On vehicles with a keyed ignition switch, verify the mechanical key by starting the vehicle using the ignition switch. When verifying operation, make sure that no other transmitters are near the vehicle.

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.

Enable/Disable Remote Vehicle Start

Using the driver information center, remote vehicle start may be enabled or disabled as a part of vehicle personalization. Refer to the vehicle owners manual for more information.

Hood Ajar Switch

The hood switch provides status of the hood to the BCM for remote vehicle start purposes. The switch is integrated into the hood latch assembly.

Remote Vehicle Start Circuit Description

The BCM receives a signal from the keyless entry transmitter indicating a remote vehicle start request. A message is then sent to the BCM which determines if a crank request message will be sent to the ECM to allow engine starting. To determine if conditions are correct for 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.

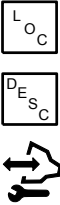
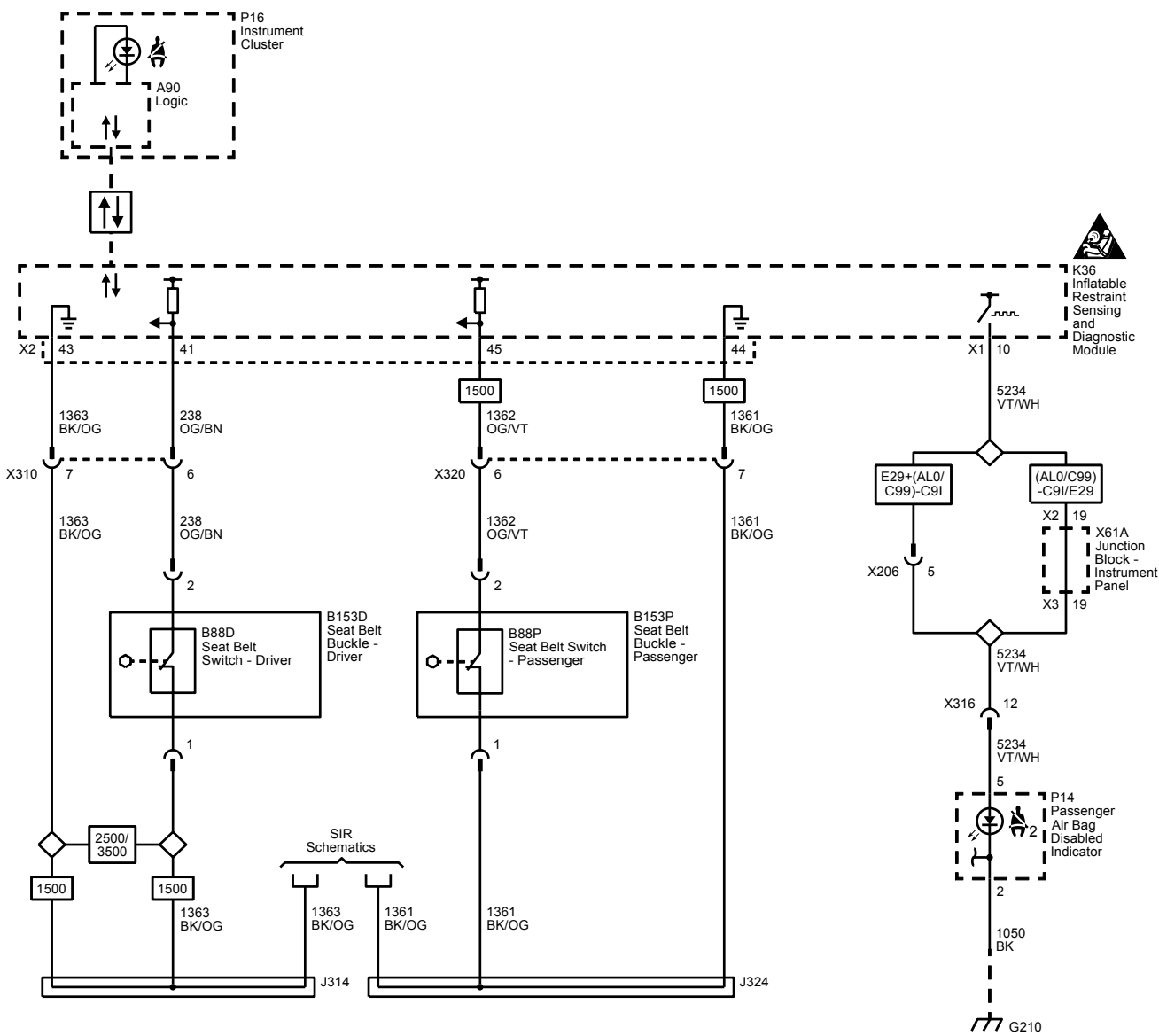
Safety and Security

Seat Belts

Schematic and Routing Diagrams

Seat Belt Schematics

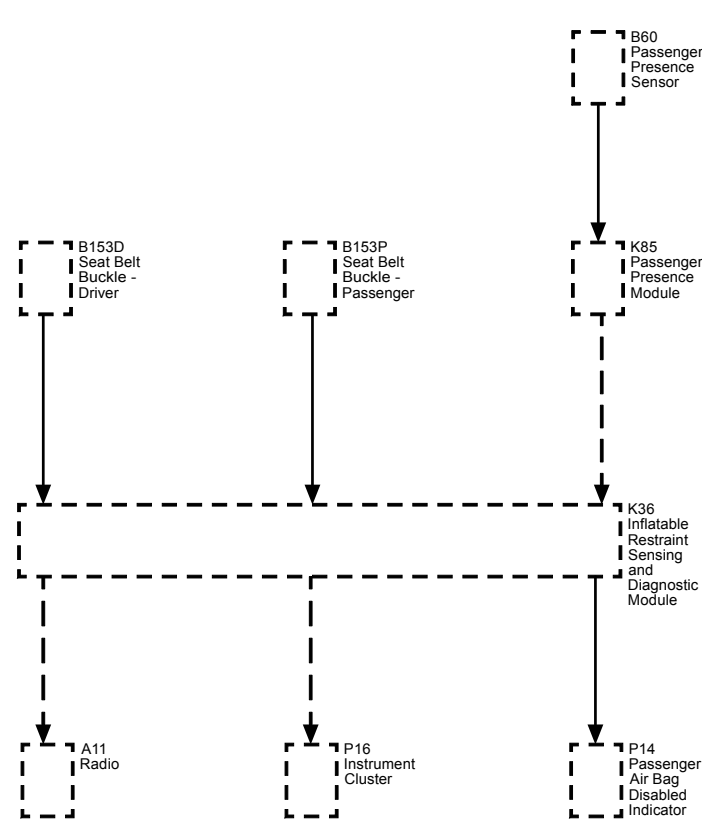
Seat Belts



Description and Operation

Seat Belt System Description and Operation

Seat Belt with P14 Block Diagram



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 [CELL Link Error - Link target cell \(cell ID 69000\) is invalid for this publication.](#)

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 [CELL Link Error - Link target cell \(cell ID 62350\) is invalid for this publication.](#)

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 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.

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.

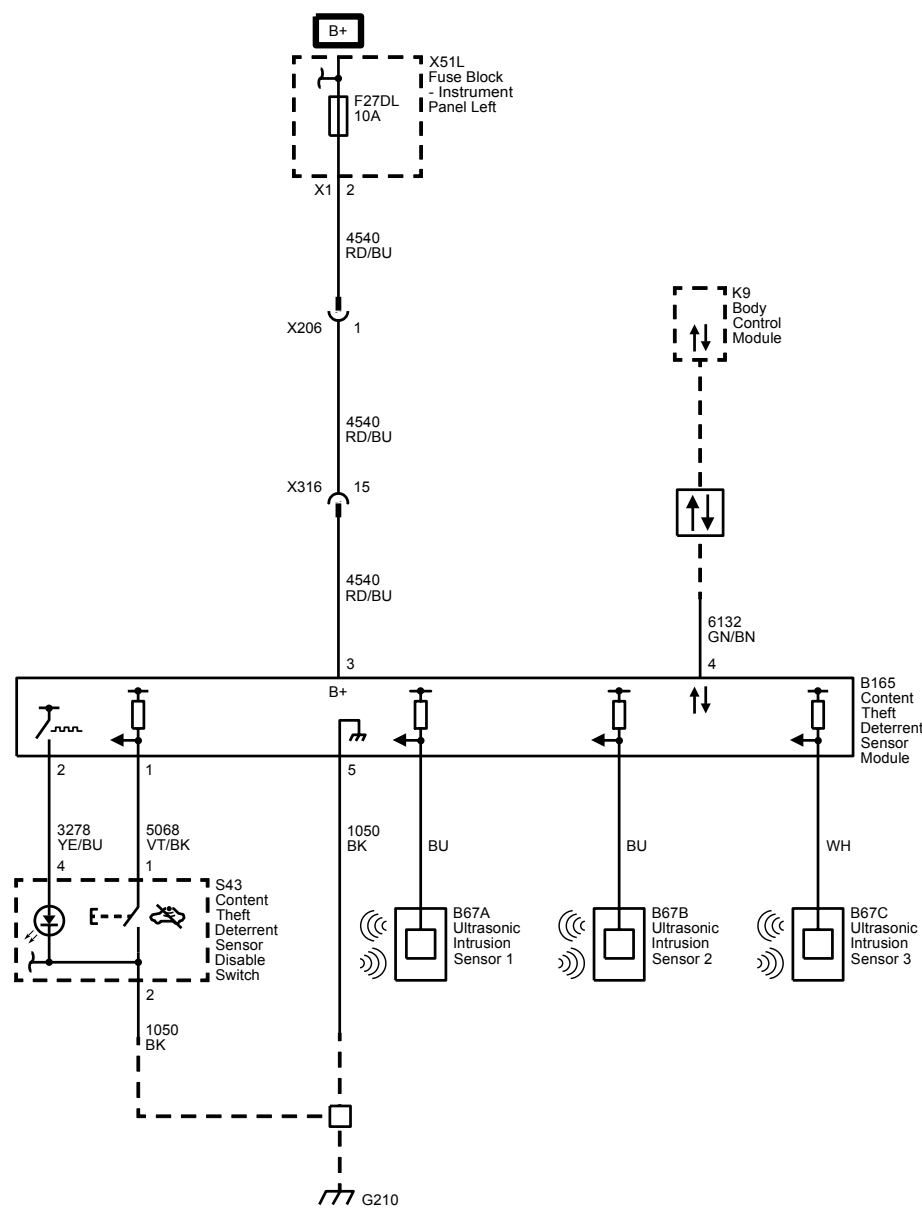
All vehicles are equipped with a dual-mode type retractor with emergency and automatic locking features. The automatic locking feature is for restraint of a child seat. The child seat can be secured by pulling the seat belt all the way out to lock it. Then tighten the seat belt around the child seat.

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.



Description and Operation

Theft Systems Description and Operation

When armed, the content theft deterrent system is designed to deter vehicle content theft by pulsing the horns and exterior lamps for approximately 30 s when an unauthorized vehicle entry is detected. However, the content theft deterrent system does not affect engine starting.

An unauthorized entry can be any of the following with the content theft deterrent system armed:

- Unauthorized entry into the underhood area
- Unauthorized entry into the rear compartment
- When any door is opened without using the UNLOCK command from a keyless entry transmitter
- After a battery reconnect, if the battery was disconnected with the content theft deterrent system armed

The components of the content theft deterrent system are:

- Body control module (BCM)
- Keyless entry control module (RPO ATH)
- Remote control door lock receiver
- Security indicator
- Door ajar switches
- Rear compartment ajar switch
- Hood ajar switch

Arming the Content Theft Deterrent System

Use the following procedure in order to arm the system:

1. Place the shift lever in P (park).
2. Turn OFF the ignition.
3. Open any door.

Note: The system is not armed if the doors are locked manually; the power door lock switch or remote keyless entry transmitter must be used to arm the content theft deterrent system.
4. Lock the doors with the power door lock switch or by pressing the LOCK button on the transmitter. The system is in standby mode and will not start the arming timer until all doors are closed.
5. The system will begin the arm sequence immediately after the last door is closed. If the keyless entry transmitter is used the arm the system after the vehicle doors are closed, the arm sequence will begin as soon as the LOCK command is received by the transmitter.
6. Pressing the LOCK button on the keyless entry transmitter a second time will bypass the delayed arming function and force the system to arm.

Locking the Vehicle Without Arming the Content Theft Deterrent System

Locking the vehicle may be accomplished without arming the content theft deterrent system. Use of the manual door locks will lock the vehicle, but will not arm the content theft deterrent system.

Disarming an Armed System/Silencing an Alarm

If system arming has been requested by the power door lock switch or the keyless entry transmitter, it must be disarmed.

Note: Disconnecting the battery or removing fuses does not disable the arm or alarm modes, since the BCM stores the content theft deterrent mode status in memory.

- To disarm the content theft deterrent system in standby mode, perform one of the following:
 - Press the UNLOCK button on the keyless entry transmitter.
 - Approach the vehicle with a valid keyless entry transmitter and pull the vehicle door handle (RPO ATH).
 - Insert a valid key into the ignition and switch to the ON position.
- To disarm the content theft deterrent system in the armed mode (non-event) or when activated (during an alarm event):
 - Press the UNLOCK button on the keyless entry transmitter.
 - Insert a valid key into the ignition and switch to the ON position

Content Theft Deterrent Circuit Description

The following is a description of each component used in the content theft deterrent system:

Body Control Module

The content theft deterrent system is an internal function of the BCM which utilizes serial data and various switch inputs information to perform content theft deterrent functions. When the BCM detects an unauthorized entry, it activates the horns and exterior lamps. The BCM has 4 basic modes (disarmed, standby, armed, and alarm) for operating the content theft deterrent system. The different modes are described below.

1. The BCM has the content theft deterrent system in a disarmed mode until the following conditions are detected:
 - Ignition key turned to the OFF position.
 - Doors locked by either the power door lock switch or the LOCK button on the transmitter.

2. The BCM enters the standby mode when the above conditions are detected. If a door was already opened when the arm mode was requested, the standby mode does not start the timer until the last door is closed.
3. When the last door is closed, a 15 s timer is activated. Once the timer has expired, the BCM enters the armed mode. After this delay, any unauthorized entry will activate the alarm mode.
4. When the BCM detects an unauthorized entry, the BCM enters the alarm mode. The BCM activates the horns and exterior lamps for 30 s. This is followed by a three minute time-out with the horn no longer active. If no new intrusions are detected after the time-out, the horn is not active. The system must be disarmed or the intrusion condition removed after the time-out for the system to exit alarm mode.

Keyless Entry Control Module (RPO ATH)

The passive keyless entry system can arm and disarm the content theft deterrent system. When a valid keyless entry transmitter is detected while attempting to passively access the vehicle, the keyless entry module will send a message via serial data to disarm the content theft deterrent system.

Remote Control Door Lock Receiver

The keyless entry system can arm and disarm the content theft deterrent system. When the remote control door lock receiver receives a door lock or unlock signal from the transmitter, the remote control door lock receiver sends a message to the BCM via serial data to perform the appropriate arm/disarm functions.

Security Indicator

The security LED is illuminated on the upper instrument panel by the BCM. The content theft deterrent system uses the security LED to inform the driver of system status prior to arming.

Door Ajar Switches

The content theft deterrent system uses the door ajar switches as a status indicator to activate the alarm. The door ajar switches are monitored by the body control module via a discrete input from each door ajar switch. If the BCM receives a signal indicating a door is opened when the content theft deterrent system is armed, the BCM activates the alarm.

Hood Ajar Switch

The content theft deterrent system uses the hood ajar switch as a status indicator to activate the alarm. The BCM monitors the hood ajar switch via a discrete input from the switch. If the BCM receives a signal indicating the hood has been opened when the content theft deterrent system is armed, the BCM activates the alarm.

Rear Compartment Ajar Switch

The content theft deterrent system uses the rear compartment ajar switch as a status indicator to activate the alarm. The BCM monitors the rear compartment ajar switch via a discrete input from the switch. If the BCM receives a signal indicating the rear compartment has been opened when content theft deterrent system is armed, the BCM activates the alarm.

Inputs

The BCM monitors the following inputs for content theft deterrent:

- The door ajar switches
- The keyless entry transmitter LOCK/UNLOCK buttons; a message from the remote control door lock receiver
- The BCM uses the immobilizer status for disarming the system or silencing an alarm when the correct vehicle key is used to start the vehicle
- The rear compartment ajar switch
- The hood ajar switch

Outputs

The BCM controls the following for content theft deterrent:

- The horn relay
- The exterior lamps

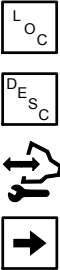
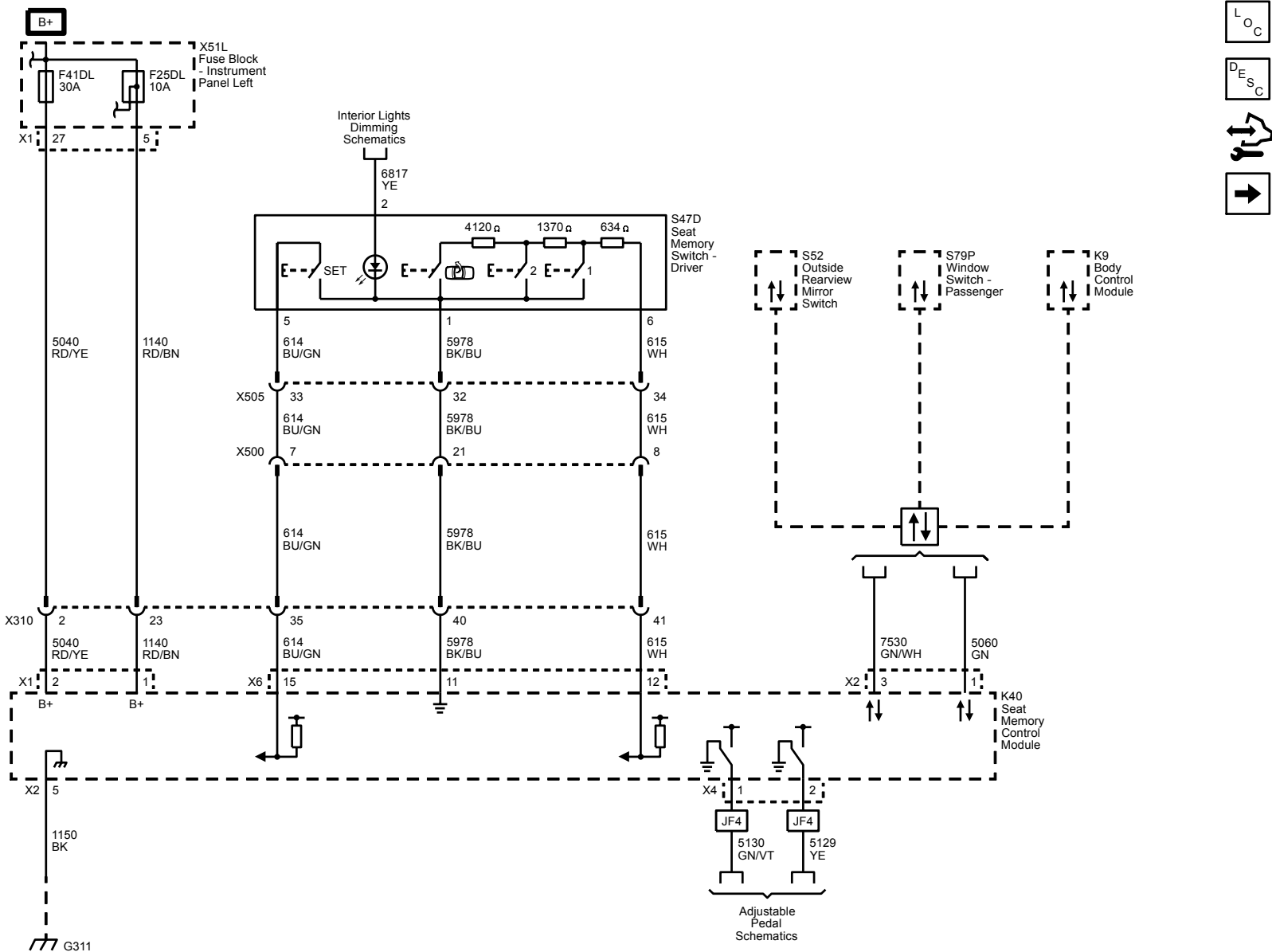
Seats

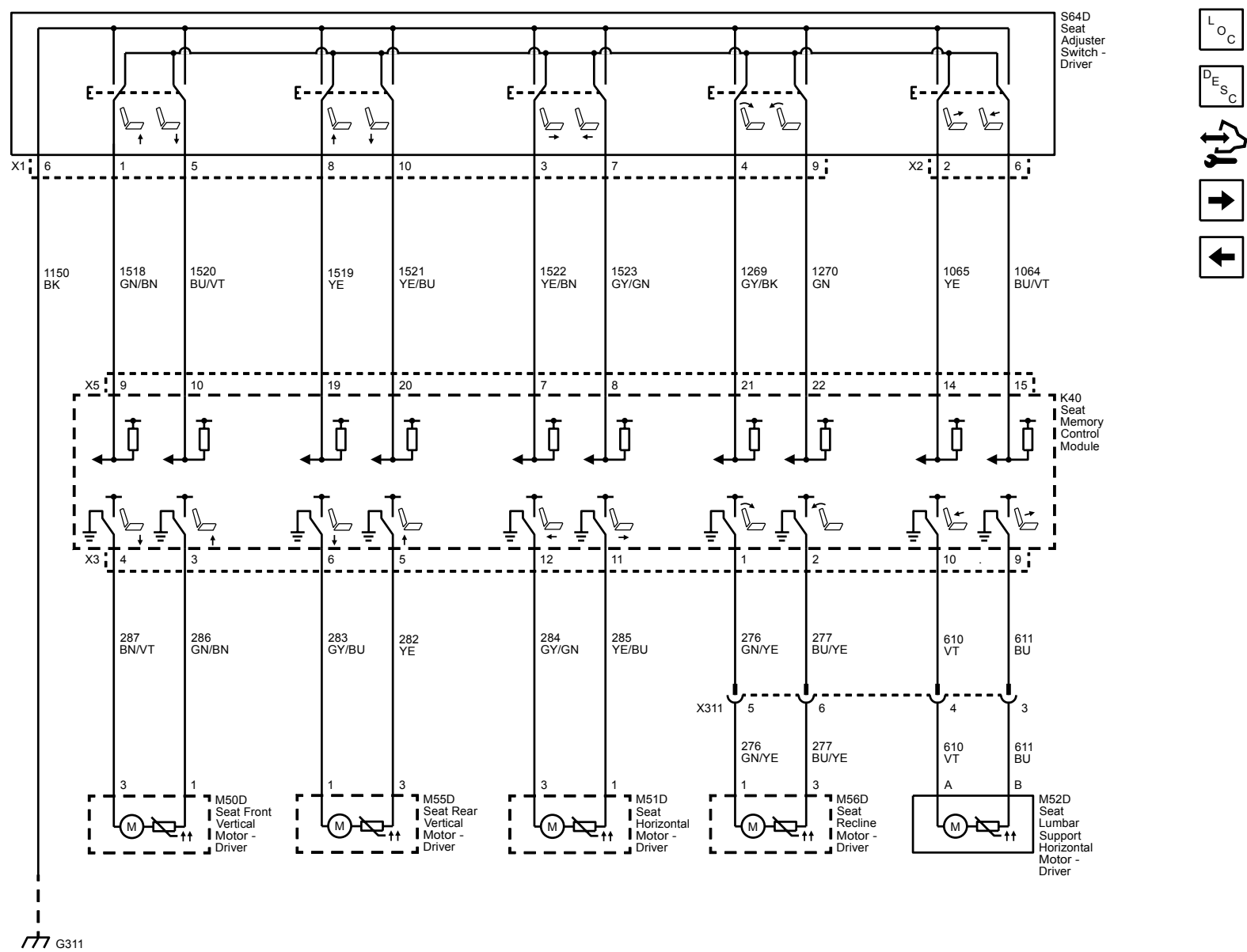
Power Seats

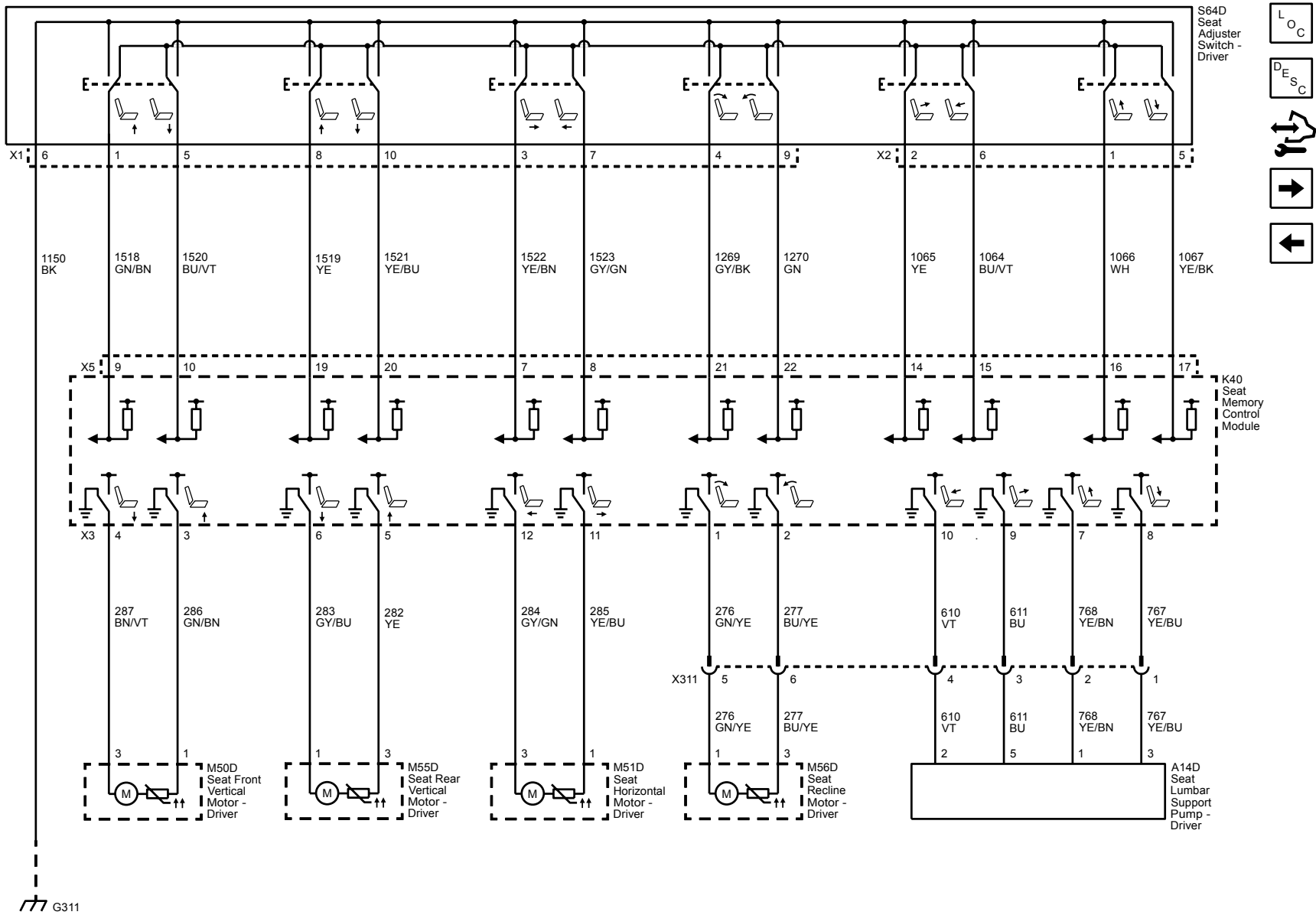
Schematic and Routing Diagrams

Driver Seat Schematics

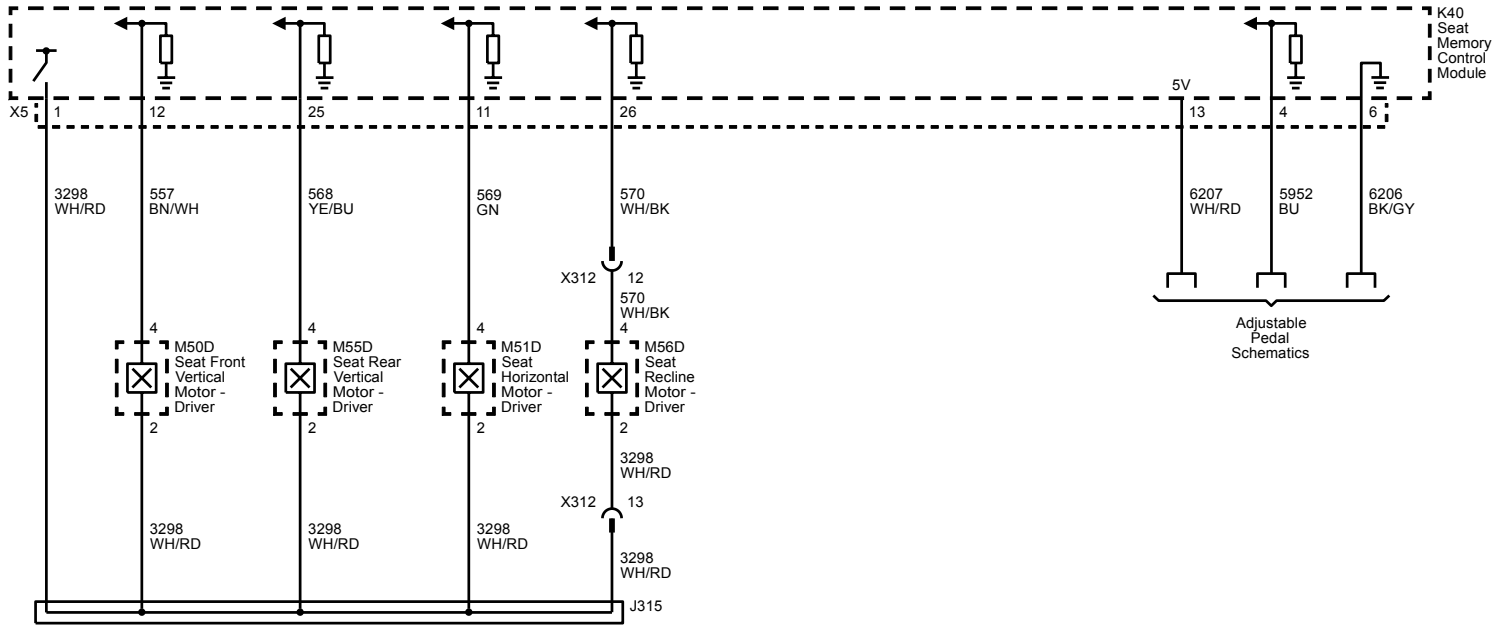
Power, Ground, Serial Data and Memory Switch (A45)



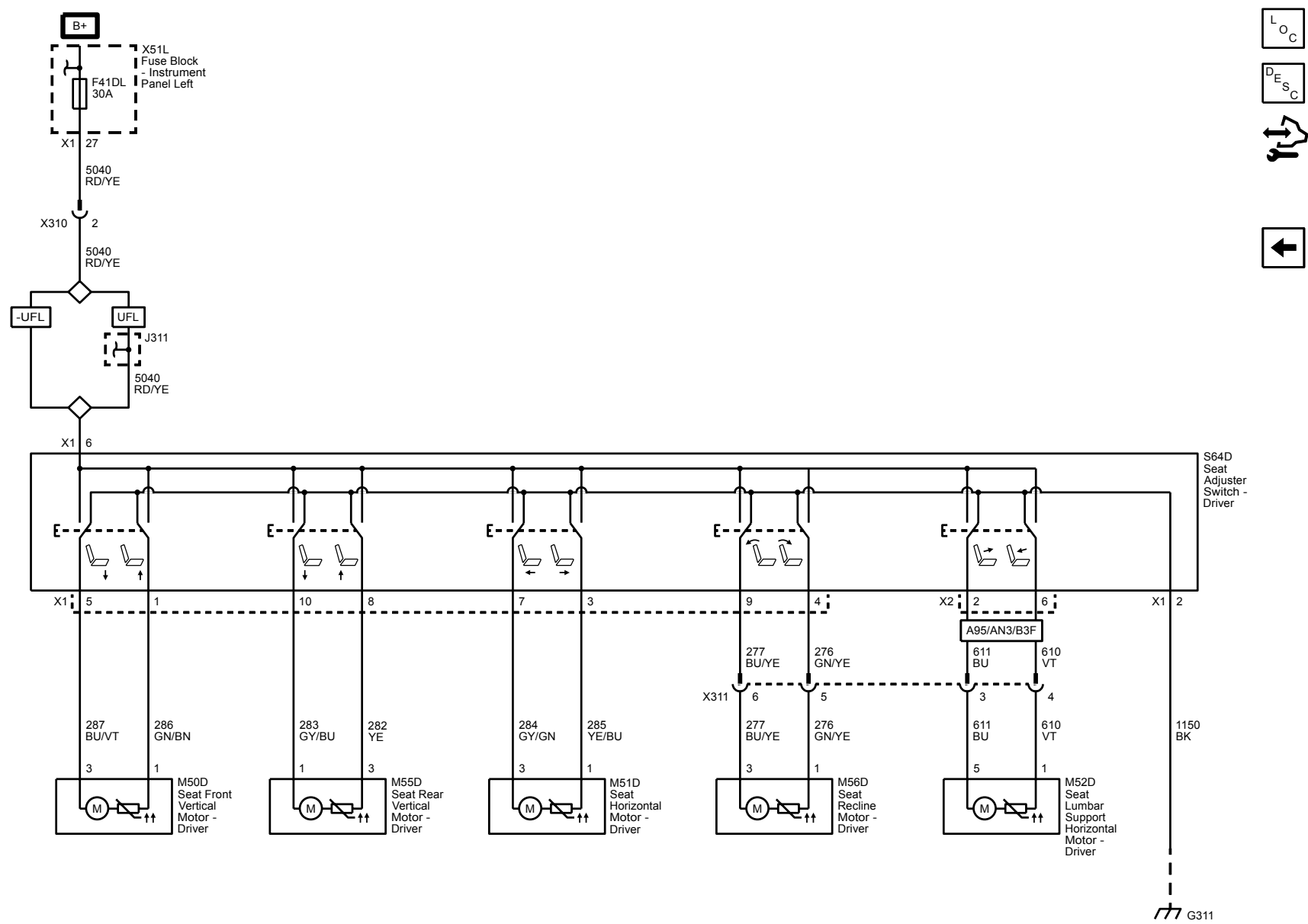




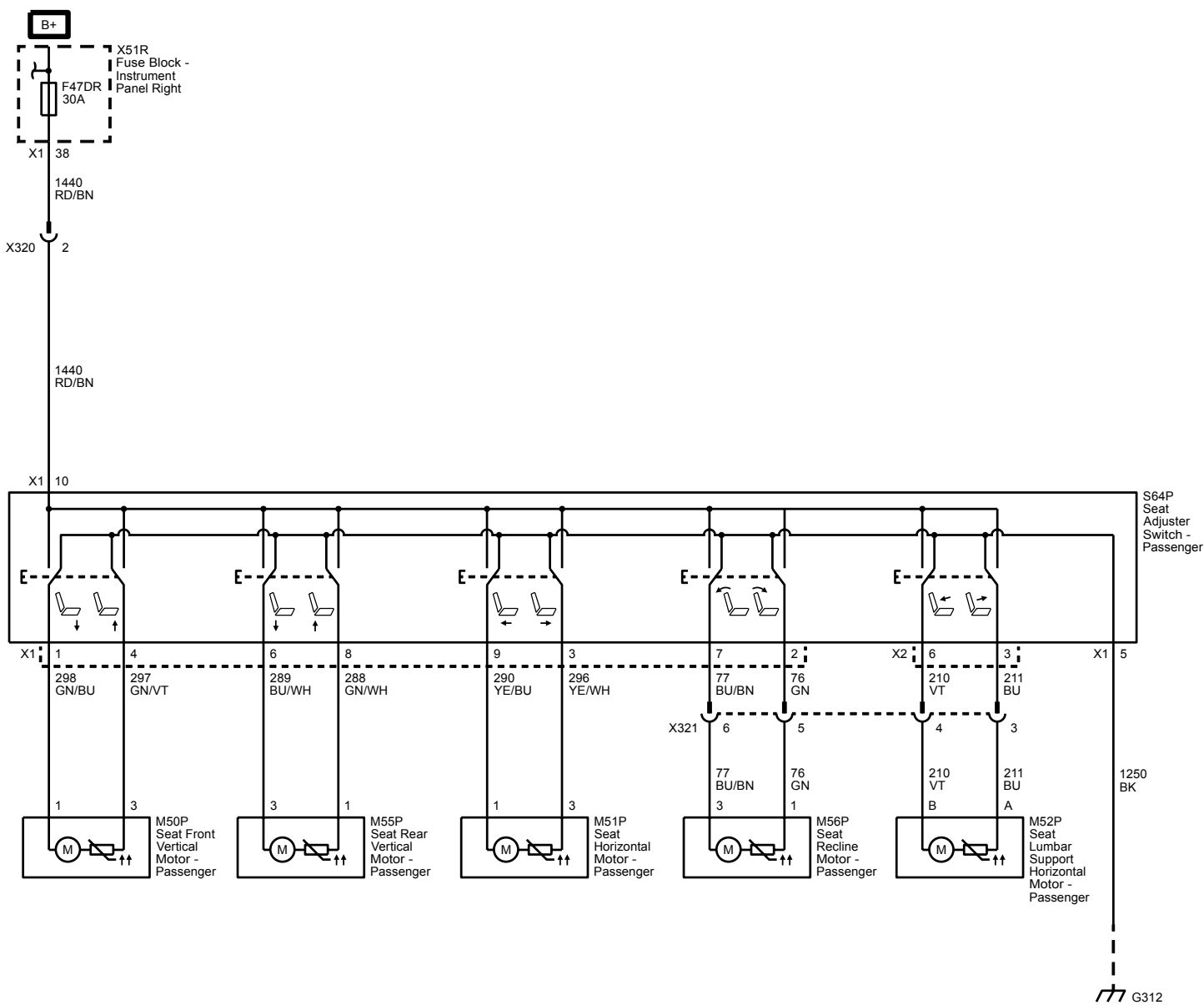
Position Sensors (A45)



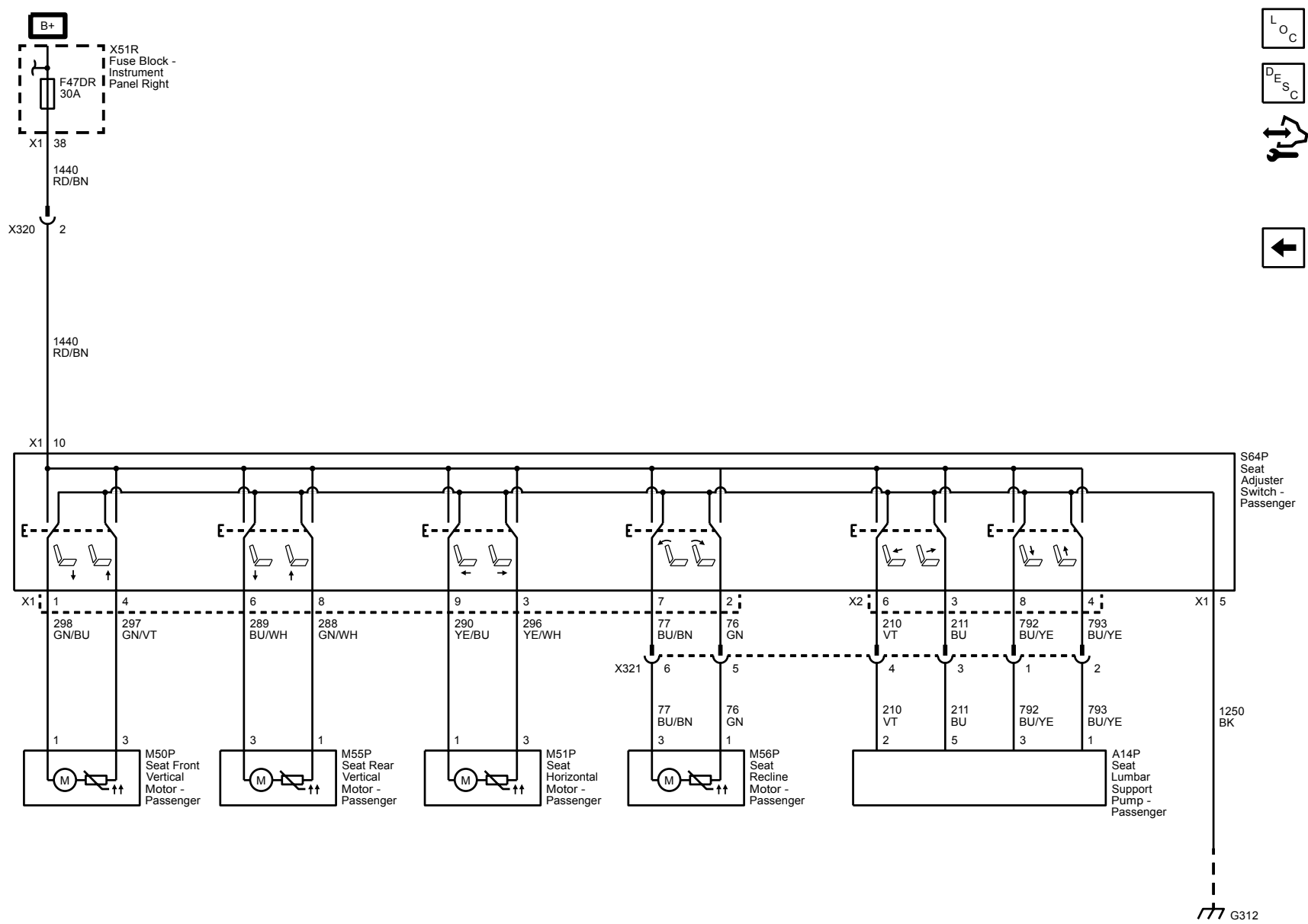
Power Seat (without A45)



Power Seat (without GAJ or Y91)



Power Seat (GAJ or Y91)



Description and Operation

Lumbar Support Description and Operation (With Memory A45)

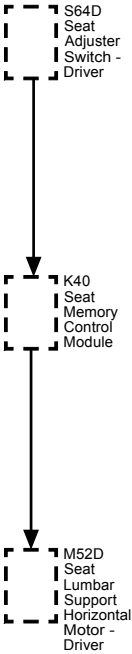
Lumbar Support Components

The driver seat lumbar support system with memory (A45) consists of the following components:

- Seat adjuster switch
- Seat memory control module
- Seat lumbar support horizontal motor

Lumbar Circuit Description

Lumbar Block Diagram



Ground is supplied at all times to the driver seat adjuster switch through the switch ground circuit and ground connection. The seat memory control module supplies a low current voltage to each signal circuit of the seat lumbar support switch. When the seat switches are pressed, the appropriate signal circuit from the seat memory control module is pulled low through the switch contacts indicating the lumbar command. In response to this signal, the seat memory control module applies battery voltage through the driver seat lumbar motor forward control circuit and ground through the driver seat lumbar motor rearward control circuit to the motor. The motor runs to drive the lumbar support forward towards the occupants back until the switch is released. Moving the lumbar support rearward works similarly to moving the lumbar support forward, except that battery positive voltage and ground are applied on the opposite

Lumbar Support Description and Operation (Without Memory A45)

Lumbar Support Components

The power seat lumbar support systems consist of the following components:

- Seat lumbar switch
- Lumbar support motor

The seat lumbar switch provides both power and ground to the lumbar support motor. The motor contains an electronic circuit breaker (PTC) that will reset only after voltage has been removed from the motor. The motor moves the lumbar support forward and rearward.

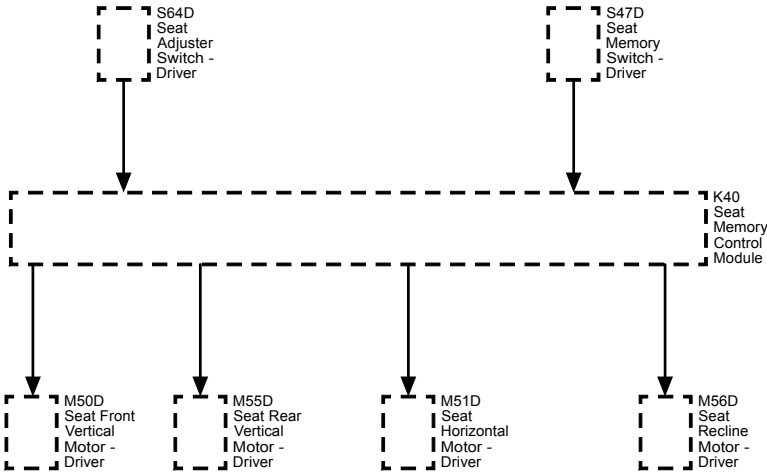
When the lumbar switch is operated to move the lumbar support rearward, battery positive voltage is applied through the lumbar rearward switch contacts and the lumbar motor rearward control circuit to the lumbar support motor. The motor is grounded through the lumbar forward switch contacts and the lumbar motor forward control circuit to the motor. The motor runs to drive the lumbar support rearward away from the occupant's back until the switch is released. Moving the lumbar support forward works similarly to moving the lumbar support rearward, except that battery positive voltage and ground are applied on opposite circuits causing the motor to run in the opposite direction.

Memory Seats Description and Operation

The memory seat system consists of the following components:

- Seat memory control module
- Driver seat adjuster switch
- Driver seat memory switch
- Driver seat horizontal motor
- Driver seat front vertical motor
- Driver seat rear vertical motor
- Driver seat recline motor
- Driver seat horizontal motor position sensor
- Driver seat front vertical motor position sensor
- Driver seat rear vertical motor position sensor
- Driver seat recline motor position sensor

Memory Seat Block Diagram



Driver Seat Adjuster Switch

The seat memory control module supplies a low current voltage to each signal circuit of the seat adjuster switch. When the driver seat adjuster switches are pressed, the appropriate signal circuit from the seat memory control module is pulled low through the switch contacts indicating the power seat command. The seat memory control module then commands the appropriate driver seat motor to move in response to the switch signal.

Seat Memory Control Module Power and Grounds

Battery voltage is supplied at all times to the seat memory control module through two different circuits. One circuit is used by the module to apply power to the driver seat motors and lumbar motors, if equipped, when commanded ON. The second battery voltage circuit is used to power up module and supply a reference voltage to the seat position sensors. Ground is provided to the seat memory control module through a single ground circuit and ground connection.

Seat Motors

There are 4 motors that move the position of the seat. These are the seat horizontal motor, seat front vertical motor, seat rear vertical motor, and the seat back recline motor. The horizontal motor moves the entire seat forward and rearward. The seat front vertical motor moves the front of the seat cushion up or down. The seat rear vertical motor moves the rear of the seat cushion up and down. Due to the seat adjuster switch design the front tilt and the seat height adjuster motor cannot be operated at the same time The recline motor moves the angle of the seat back forward or rearward.

The seat memory control module controls all seat and lumbar motors via half bridges that are connected to a single power rail internal to the module. The module connects all seat and lumbar motor outputs to a common ground whenever they are not in operation. The seat memory control module checks to see if any motor control circuits are shorted to ground or voltage before enabling any seat or lumbar motor. All of the motors operate independently of each other. Each motor contains a electronic circuit breaker (PTC), which will reset only after voltage has been removed from the motor.

All seat motors are reversible. For example, when a seat switch is pressed to move the entire seat forward, ground is applied through the switch contacts onto the seat horizontal forward switch signal circuit to the seat memory control module. In response to this signal, the module applies battery voltage through the driver seat horizontal motor forward control circuit and ground through the driver seat horizontal motor rearward control circuit to the motor. The motor runs in order to drive the entire seat forward. Moving the entire seat rearward works similarly to moving the entire seat forward, except that battery voltage and ground are applied on the opposite circuits causing the motor to run in the opposite direction. All of the motors are powered this way.

Position Sensors

To monitor seat position, each seat motor has an internal 2-wire hall-effect position sensor. The seat memory control module supplies all the sensors with a common 12 V reference when the seat is moving and a unique signal circuit for each sensor. During seat motor operation, the position sensors provide a specific number of pulse signals for every revolution of the motor shaft.

The seat memory control module determines seat position by keeping a running counter where movement in the forward/upward direction adds counts and movement in the rearward/down direction subtracts counts. The value of the counter will be in the range of 0 – 65,535

The value of these counters, which represent seat positions, are stored in memory for future seat memory recall operation. During a memory seat position recall, the seat memory control module moves the seat in such a way to return it the stored counter value.

Memory Functions

In all power modes except crank, memory recalls can be initiated by pressing and holding one of the memory position buttons until the seat reaches the stored memory position associated with the activated button. This is called a supervised recall.

The seat memory control module supplies a ground at all times through a low reference circuit to the driver seat memory switch. The module also supplies memory set and memory recall signal circuits to the seat memory switch. When a memory recall switch is pressed, the signal circuit from the seat memory control module is pulled low through the switch contacts and a series of resistors indicating the memory recall request. In response to this signal, the seat memory control module commands the appropriate seat motors to move to the pre-recorded seat positions stored in memory.

Refer to the Owner's Manual for storing memory positions.

Auto Memory Recall and Easy Exit

The seat memory control module will not perform Auto Memory Seat Recall and Easy Exit functions unless these options are enabled in vehicle personalization using the radio/HVAC controls.

Refer to Instruments and Controls/Vehicle Personalization in the Owner's Manual for the following memory personalization options:

- Auto Memory Recall
- Easy Exit Options

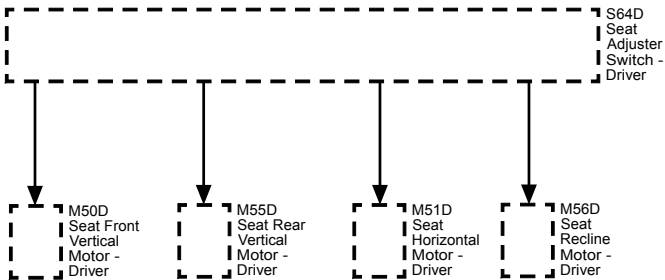
The radio/HVAC controls reports the auto memory recall option settings to the seat memory control module via serial data message. The module will then store the memory recall option setting and examine it before making a memory seat adjustment. The auto memory recall option setting stored within the module will not change until the auto memory recall option setting in vehicle personalization is changed.

Power Seats System Description and Operation

The driver and passenger power seat systems each consist of the following components:

- Seat adjuster switch
- Seat horizontal motor
- Seat front vertical motor (If Equipped)
- Seat rear vertical motor
- Seat recline motor

Power Seat Block Diagram



Seat Motors

The seat switches provide both power and ground to the selected seat motors.

All of the seat motors operate independently of each other. Each motor contains an electronic circuit breaker (PTC) that opens in the event of a circuit overload and will reset only after voltage has been removed from the circuit. There are four seat position motors and two lumbar motors. These are the horizontal motor, front vertical motor, rear vertical motor, and the seat back recline motor. The seat horizontal motor moves the entire seat forward and rearward. The seat vertical motors may operate independently to tilt the front or rear of the seat cushion up or down. Both motors can also run simultaneously to move the entire seat up or down. The recline motor moves the angle of the seat back forward or rearward.

Seat Operation

All seat motors are reversible. For example, when the seat horizontal forward switch is pressed to move the entire seat forward, battery voltage is applied through the switch contacts and the seat horizontal motor forward control circuit to the motor. With the horizontal motor rearward switch contacts closed to the switch ground circuit, the motor runs in order to drive the entire seat forward until the switch is released. Moving the entire seat rearward works similarly to moving the entire seat forward, except that battery voltage and ground are applied on opposite circuits causing the motor to run in the opposite direction. All seat motors are powered this way.

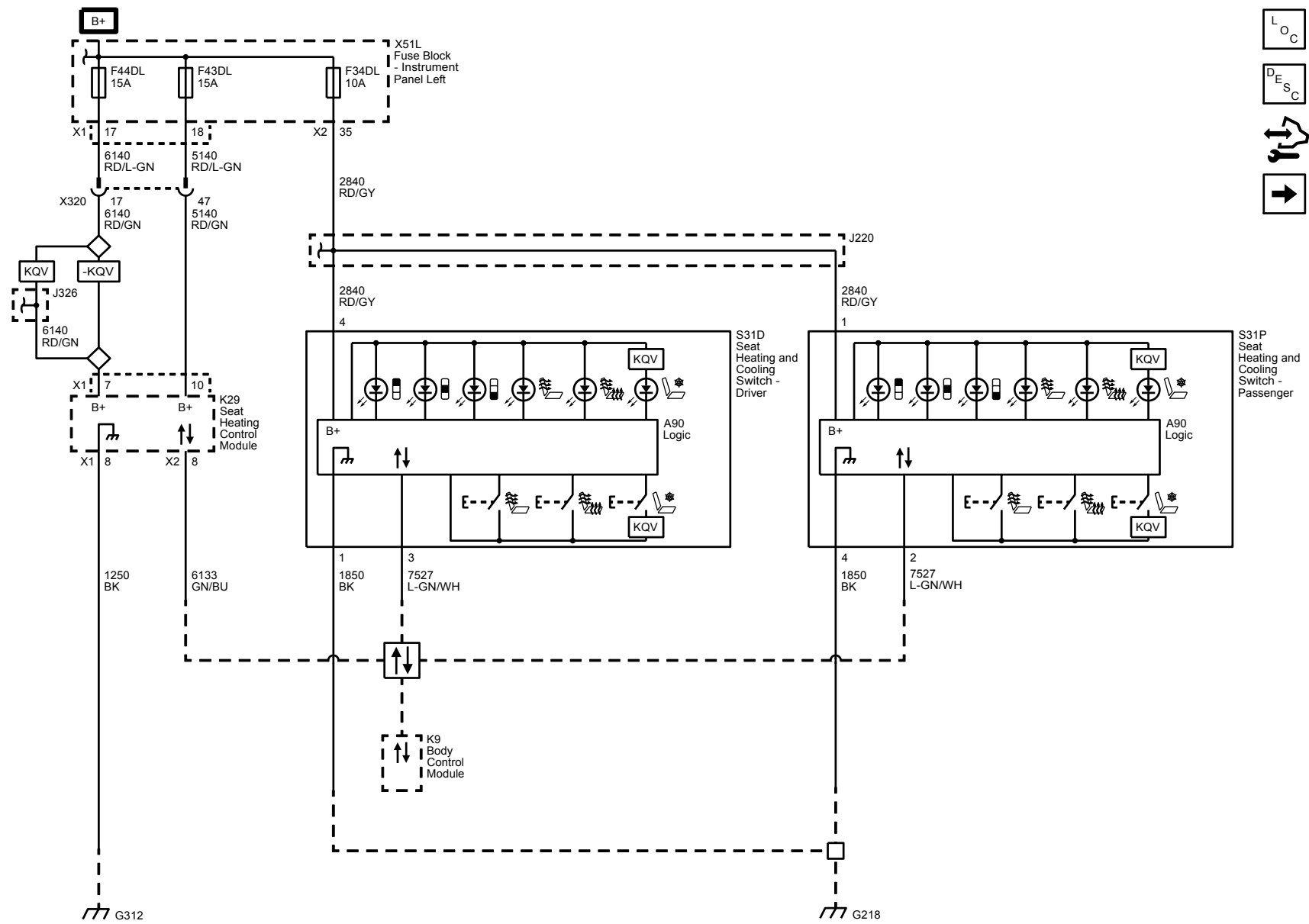
Seats

Seat Heating and Cooling

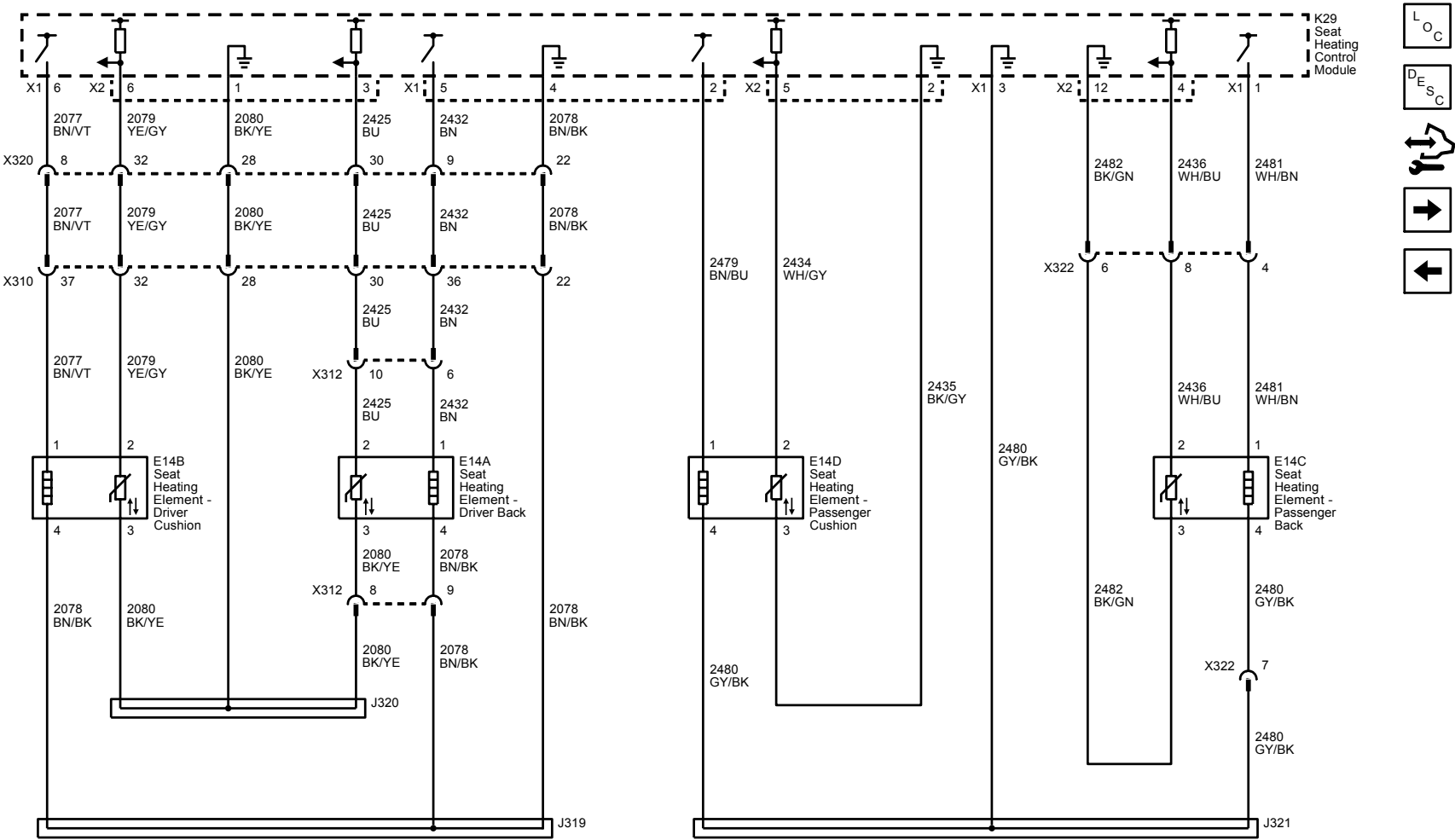
Schematic and Routing Diagrams

Heated/Cooled Seat Schematics

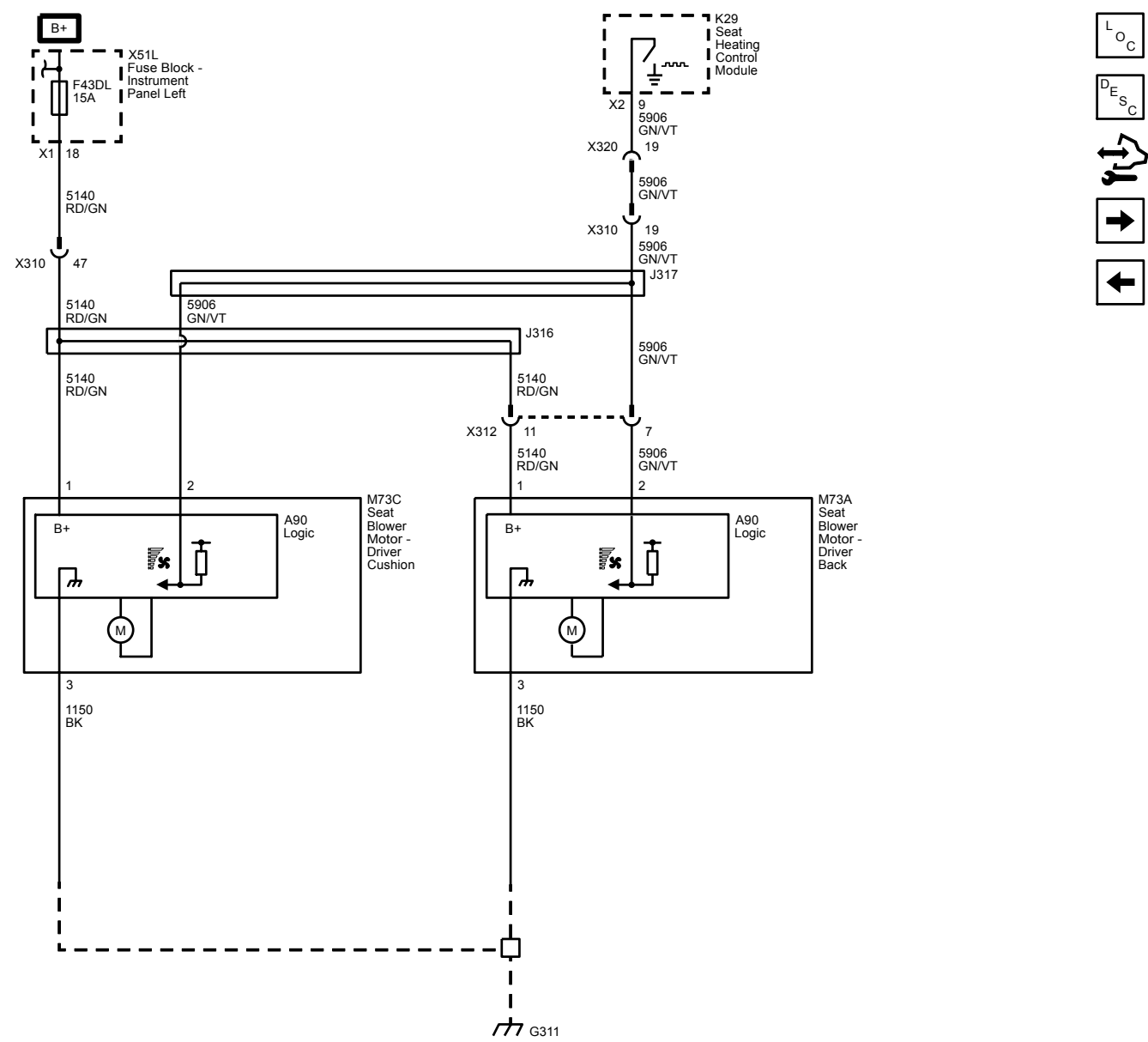
Power, Ground, Serial Data and Switches (KA1)



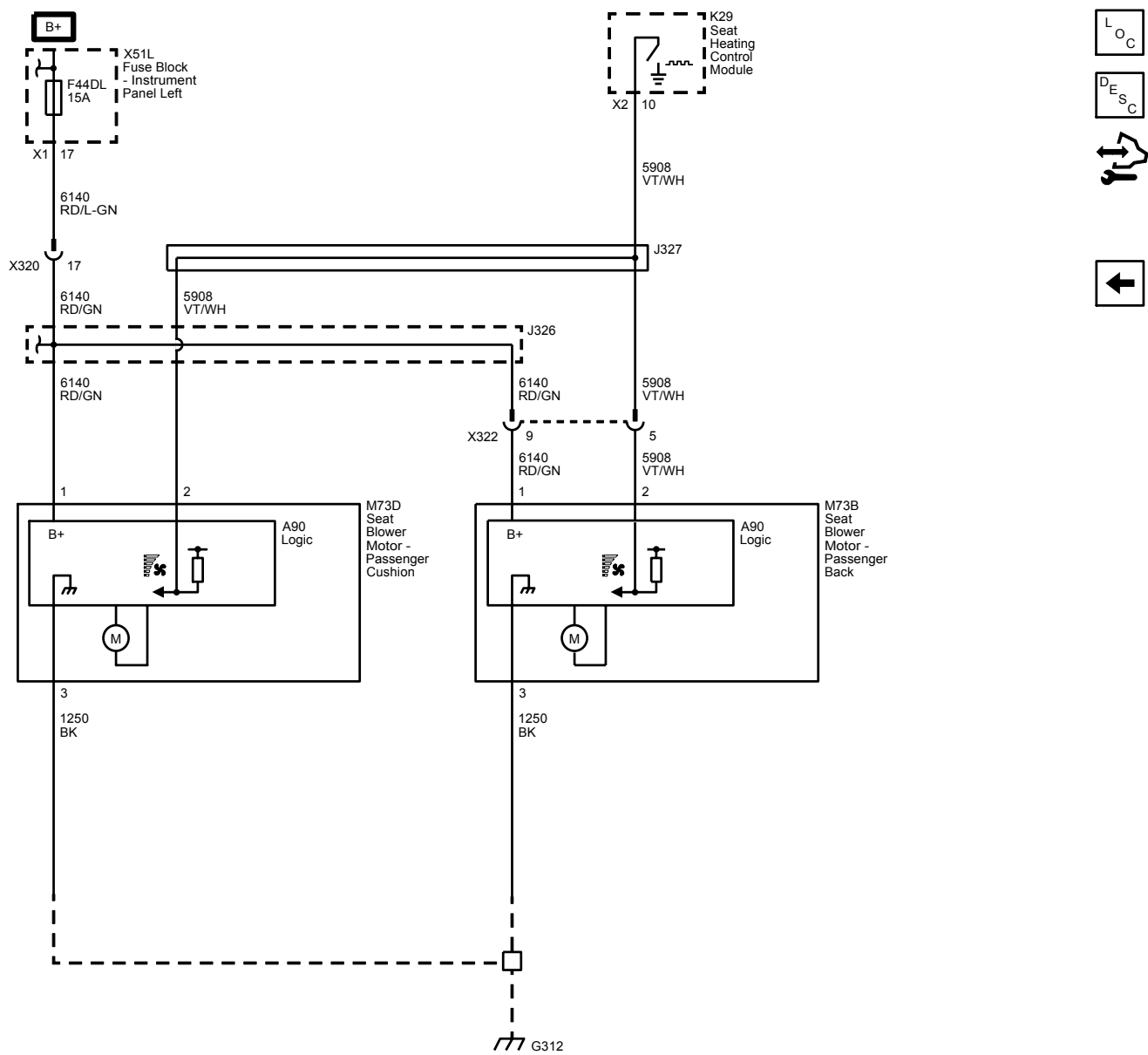
Heating Elements (KA1)



Driver Seat (KQV)



Passenger Seat (KQV)



Description and Operation

Heated/Vented Seat Description and Operation

Heated/Vented Seat Components

The heated/vented seat system consists of the following components:

- Heated and vented seat switches
- Body control module
- Seat heating control module
- Driver seat cushion heating element
- Driver seat cushion temperature sensor
- Driver seat back heating element
- Driver seat back temperature sensor
- Driver seat temperature control module
- Driver seat cushion blower motor
- Driver seat back blower motor
- Passenger seat cushion heating element
- Passenger seat cushion temperature sensor
- Passenger seat back heating element
- Passenger seat back temperature sensor
- Passenger seat temperature control module
- Passenger seat cushion blower motor
- Passenger seat back blower motor

Heated/Vented Seat Switches

The driver and passenger heated and vented seats are controlled by separate heated/vented seat switches located on the center stack near the HVAC controls. To operate the engine must be running. The BCM is the heated and vented seat system master. It monitors heated/vented seat switch activations to determine user requested operating mode. Based on the requested operating mode, the BCM sends a LIN Bus serial data message to the Seat Heating Control Module how to drive the self-regulated heating pads or ventilation motors. The BCM also controls the indicators used to provide the operator with feedback as to the operating status of the system. With each press of the switch, the system will cycle through High, Medium, Low, and then back to Off again. The BCM also controls the seat temperature and mode indicators, via the serial data line, used to provide the operator with feedback as to the operating status of the system.

Heated Seat Operation

The seat heating control module controls heated seat operation for the driver and passenger seats. There are two modes for heated seat operation; seat back and cushion heat mode and seat back only heat mode. When active, power is applied to the seat cushion and back heater elements through individual pulse width modulated (PWM) voltage supply control circuits. Each individual heater element is switched to ground by the module through a common low side drive control circuit.

When inactive the seat heating control module connects the heating element low side outputs to a common reference point internal to the module which is biased to approximately 3.5 V. The module uses this biased voltage in order to check the high side and low side control circuits for a short to battery or ground before enabling the driver and passenger seat heating elements. During heated seat operation, the seat heating control module interrupts control of the heating elements every 10 s for approximately 10 ms to make this biased voltage check.

With both the seat cushion and seat back heater elements disconnected, if the high side output of the module is measured it will display a low current 12 V bleed off voltage. This bleed off voltage does not have a meaningful diagnostic purpose. With the heater element connected you would just see the 3.5 V biased voltage from this circuit.

Temperature Regulation

The seat back and cushion temperature sensors (thermistors) are packaged with the seat heating elements located just under the seat covers. The seat heating control module supplies each temperature sensor with a 5 V reference signal circuit and a low reference circuit. The module monitors the voltage from the signal circuit to determine the temperature of the seat.

The temperature sensor varies in resistance based on the temperature of the heating element causing the signal voltage to change. Once the module senses the seat reached the set temperature, it will then begin regulate the current flow through the heater elements in order to maintain the desired seat temperature based on the feedback voltage from the sensor.

If the heated seats are on high, the temperature level may automatically be lowered after approximately 30 min of operation.

Vented Seat Operation

Each vented seat system consists of 2 blower motors; one in the seat back and one in the seat cushion. During vented seat operation, the vented seat blower motors move cabin air through channels in the foam pad and small holes in the seat covers causing a cooling effect to the occupant.

Battery voltage is supplied to the blower motors through a 15 A fuse located in the left instrument panel fuse block. Ground for each blower motor is provided through separate ground circuits and a common ground connection.

When the seat heating control module receives a ventilation seat command, it sends a low side drive pulse width modulation (PWM) signal through the blower motor control circuit to each blower motor indicating the seat ventilation command. The logic in the blower motors interprets this signal then sets the blower speed to the switch set point. The blower motors run causing a cooling effect to the occupant.

Heated and Vented Seat Operation During Remote Start

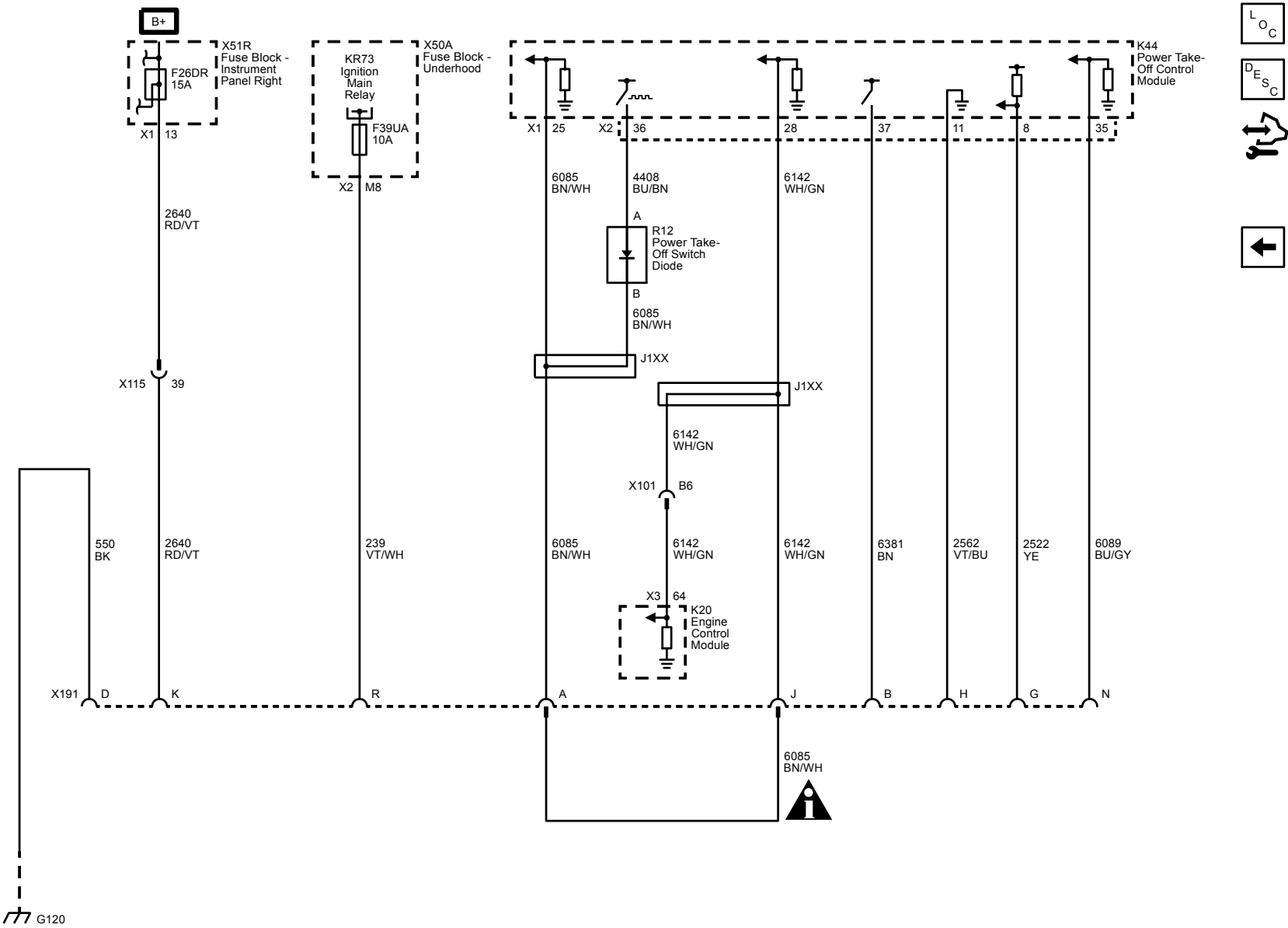
Refer to Vehicle Personalization in the Owner's Manual for Remote Start Auto Heated and Ventilation Seats.

During remote start, the heated seats will turn ON when the ambient temperature is below 10° C (50° F).

During remote start, the seat ventilation system will turn ON when the ambient temperature is above 27° C (80° F).

Load Shed Management

The electrical power management function is designed to monitor the vehicle electrical load and determine when the battery is potentially in a high discharge condition. The heated seat system is one of the vehicle loads that is subject to reduction during a battery discharge condition. For more information on load management refer to [Electrical Power Management Description and Operation \(Gasoline\)](#)[Electrical Power Management Description and Operation \(Diesel\)](#).



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

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 No (default)	Scan Tool
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 [CELL Link Error - Link target cell \(cell ID 72864\) is invalid for this publication..](#)

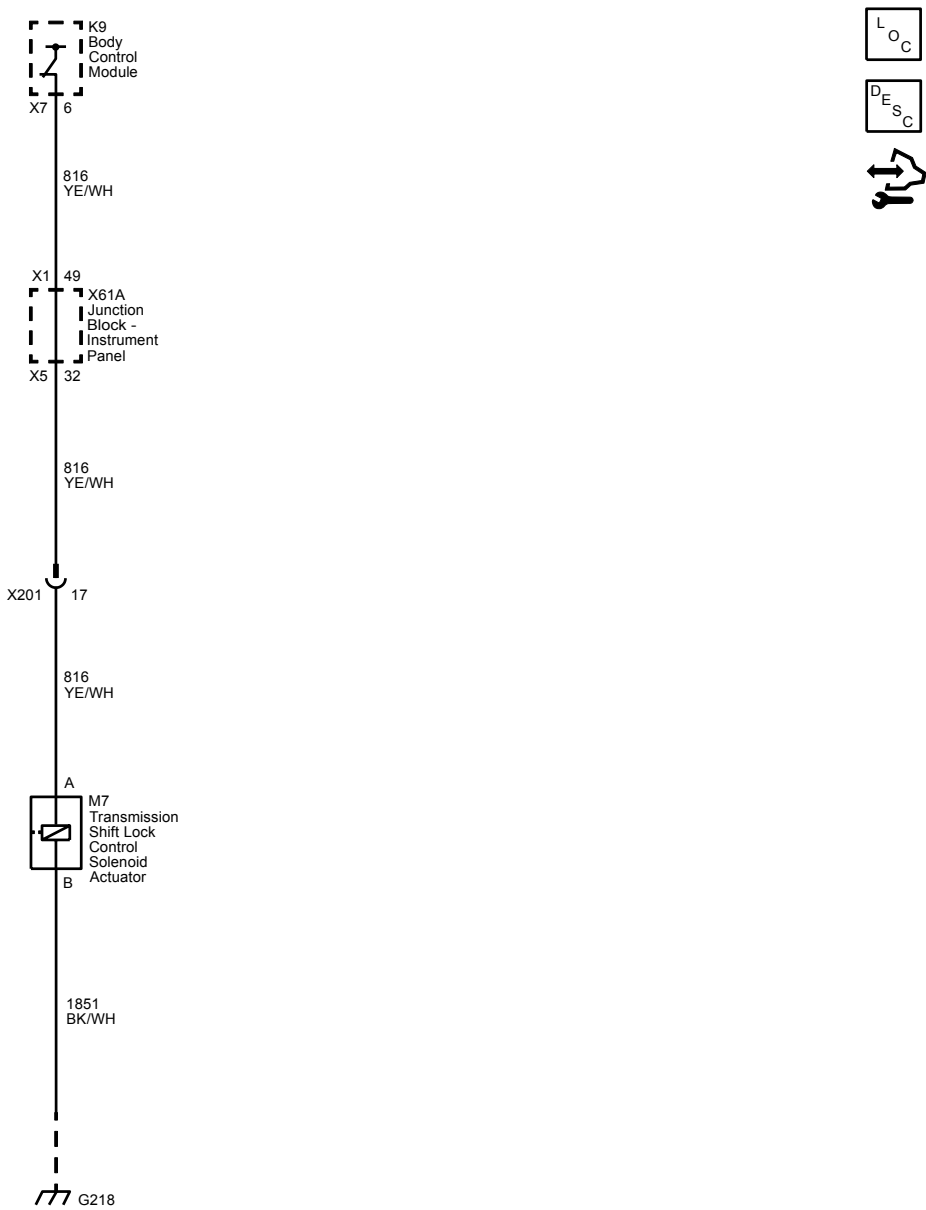
Transmission

Shift Lock Control

Schematic and Routing Diagrams

Shift Lock Control Schematics

Shift Lock Control (M5U, MW7, MYC or MYD)



Description and Operation

Automatic Transmission Shift Lock Control Description and Operation (Without T4Z)

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

Automatic Transmission Shift Lock Control Description and Operation (With T4Z)

The Automatic Transmission Shift Lock Control System is a safety device that prevents an inadvertent shift out of PARK when the engine is running. Vehicles equipped with the Safety Belt Assurance System (RPO T4Z), the driver must press the brake pedal and have the driver and if present, the front outboard passenger safety belt(s) buckled before moving the park 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 Inflatable Restraint Sensing and Diagnostic Module (SDM).

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.
- The SDM determines if the occupied driver and front outboard passenger, if present, have their safety belt(s) buckled.

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 energize the shift lock control circuit, locking the shift lever in the PARK position.

Vehicles with the Safety Belt Assurance System, will display the following message “Shift Locked, Buckle Seatbelt” if the driver or front outboard passenger, if present, and safety belt(s) are not buckled. The vehicle will not shift out of PARK. Buckle the safety belt(s) to unlock the shifter.

This system may not allow the vehicle to shift out of PARK if an object such as a briefcase, handbag, grocery bag, laptop, or other electronic devices is on the front outboard passenger seat. If this happens, remove the object from the seat or buckle the safety belt.

Vehicles with the Safety Belt Assurance System, will display the following message “Shift Unlocked, Brake To Shift” if the system times out and allows the vehicle to be shifted out of PARK after 30 s following brake applied.

The Safety Belt Assurance System can be disabled with a calibration file update in the K36 Inflatable Restraint Sensing and Diagnostic Module using SPS. This procedure should only be done to help resolve a customer dissatisfaction issue.