Wiring Systems and Power Management

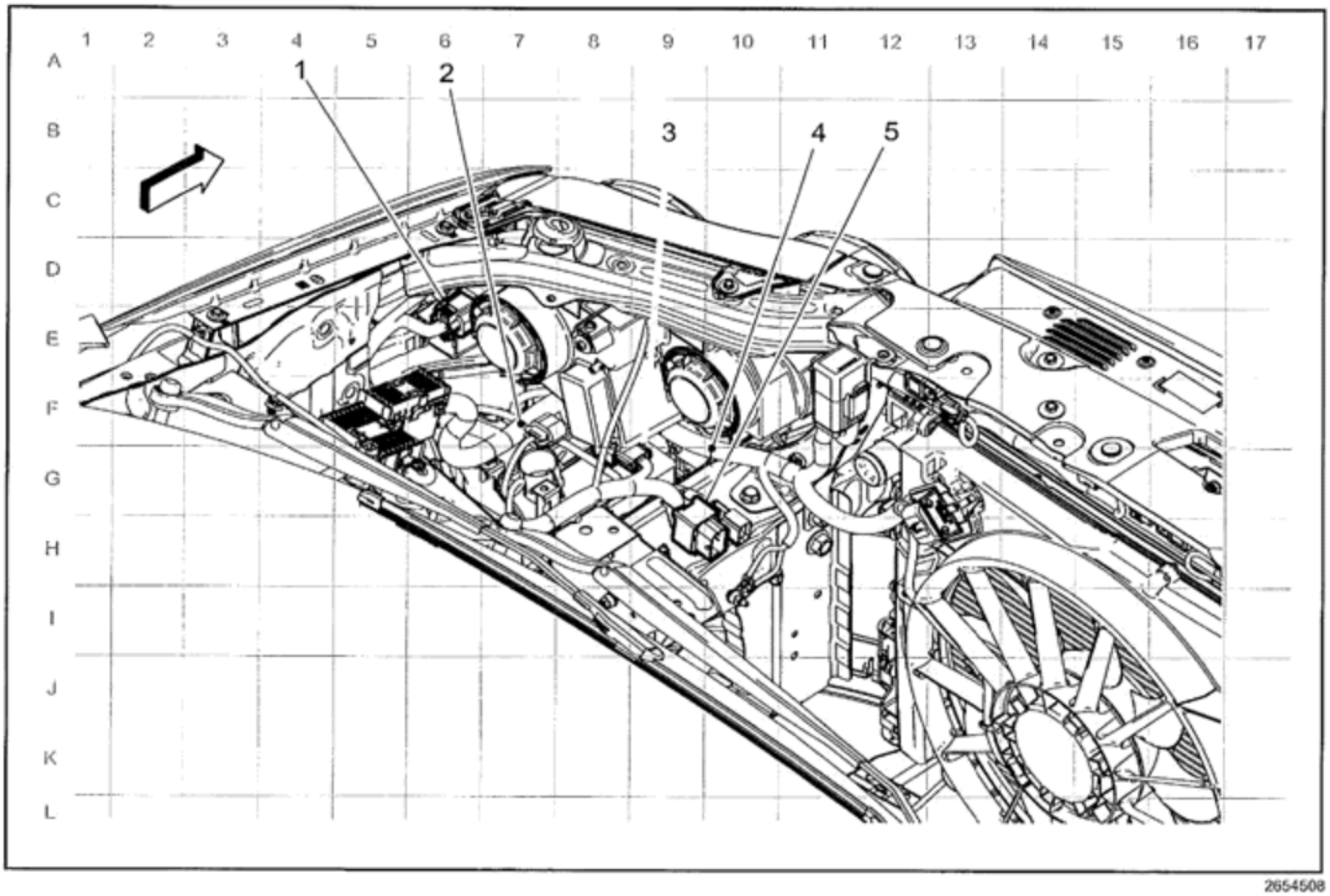
Specifications

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Junction Block Base Nut	9 N•m	79 lb in
Junction Block Bolts	9 N•m	79 lb in
Junction Block Nut	7 N•m	61 lb in
Positive Battery Cable Nut	5 N•m	44 lb in

Schematic and Routing Diagrams

Harness Routing Views (Left Front of Engine Compartment Harness Routing)

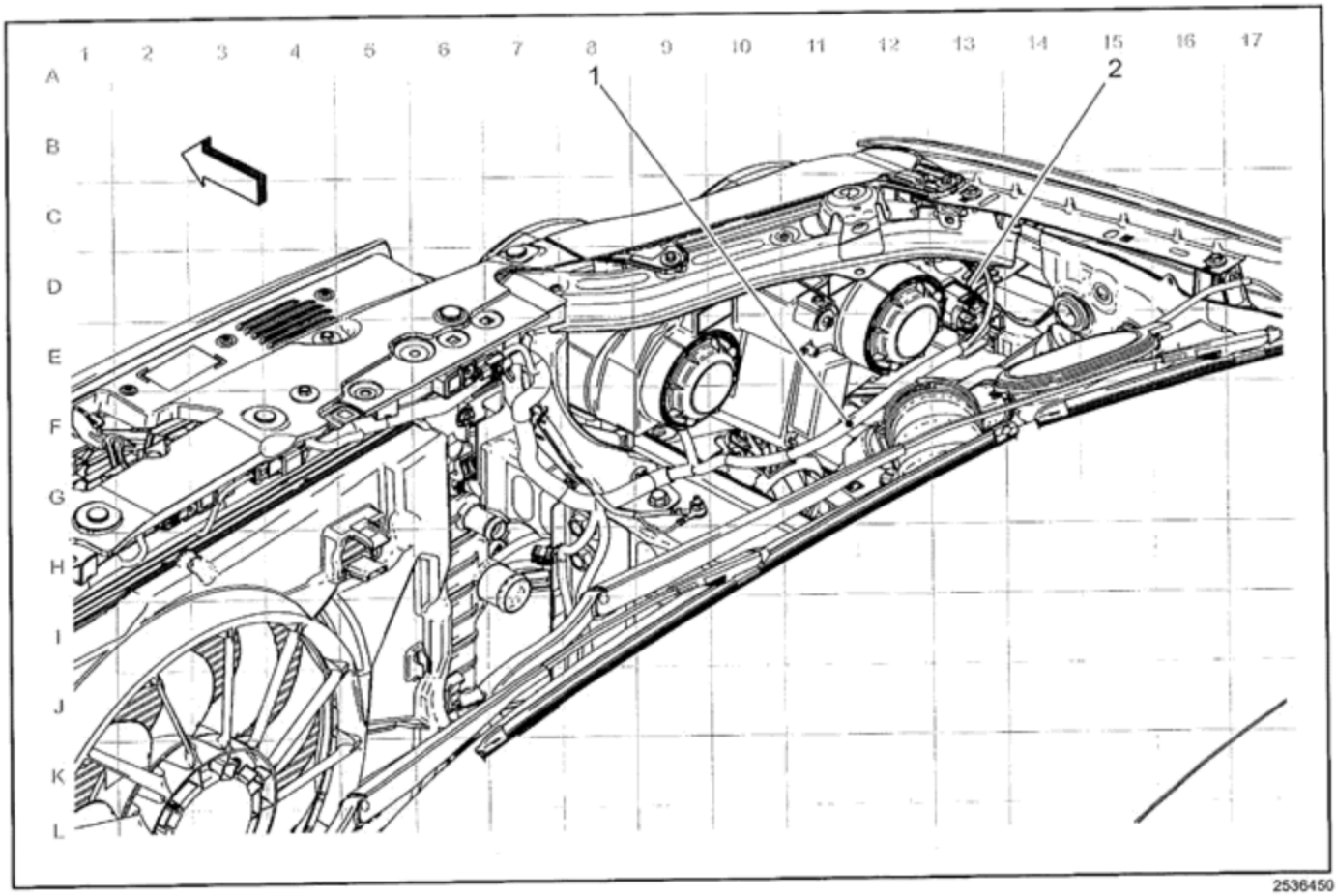


2654508

Items

(1) X110
(2) J125 (T3U)
(3) X100
(4) J123
(5) X101

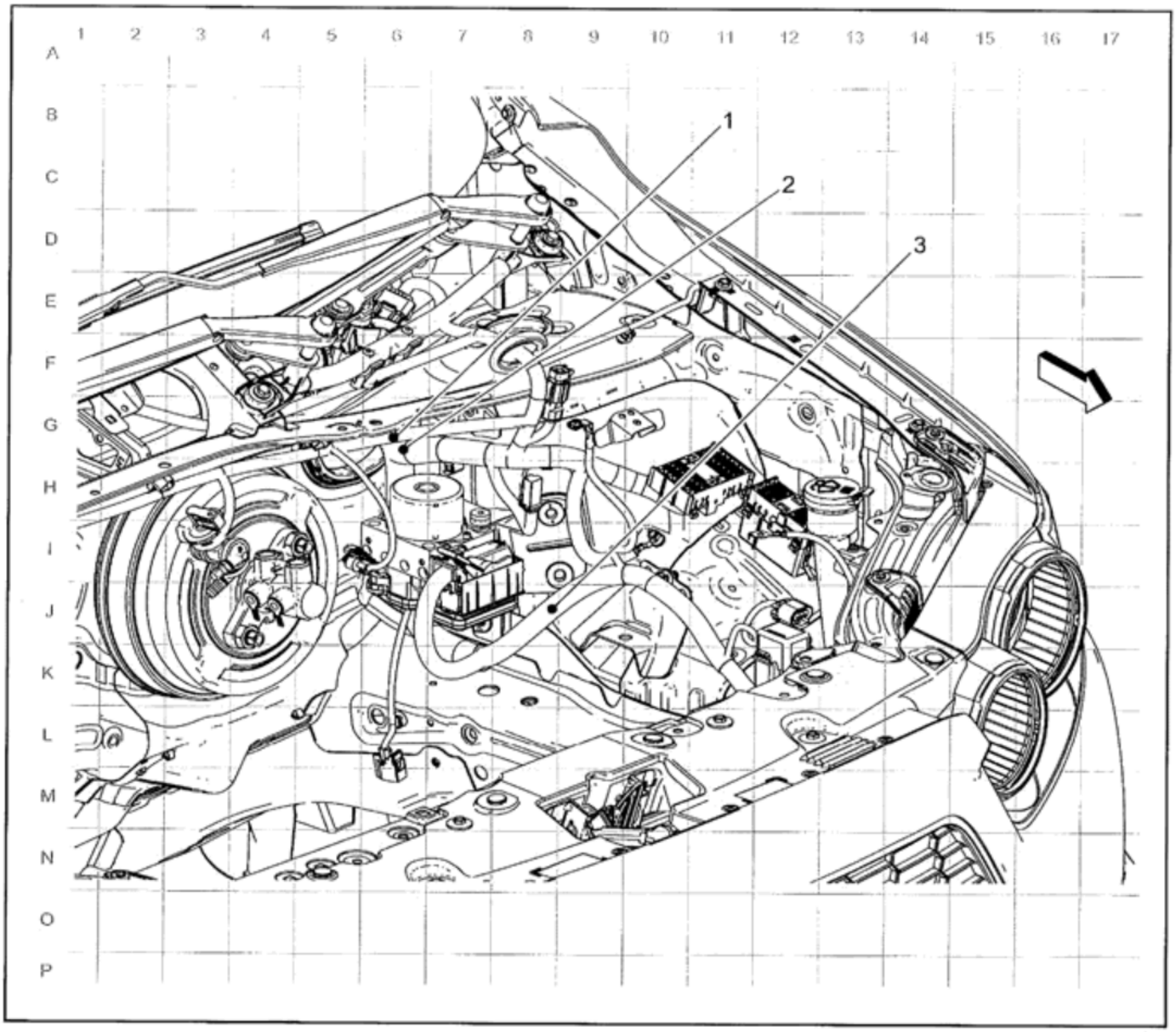
Harness Routing Views (Right Front of Engine Compartment Harness Routing)



Items

(1) J124
(2) X120

Harness Routing Views (Rear of Engine Compartment Harness Routing)

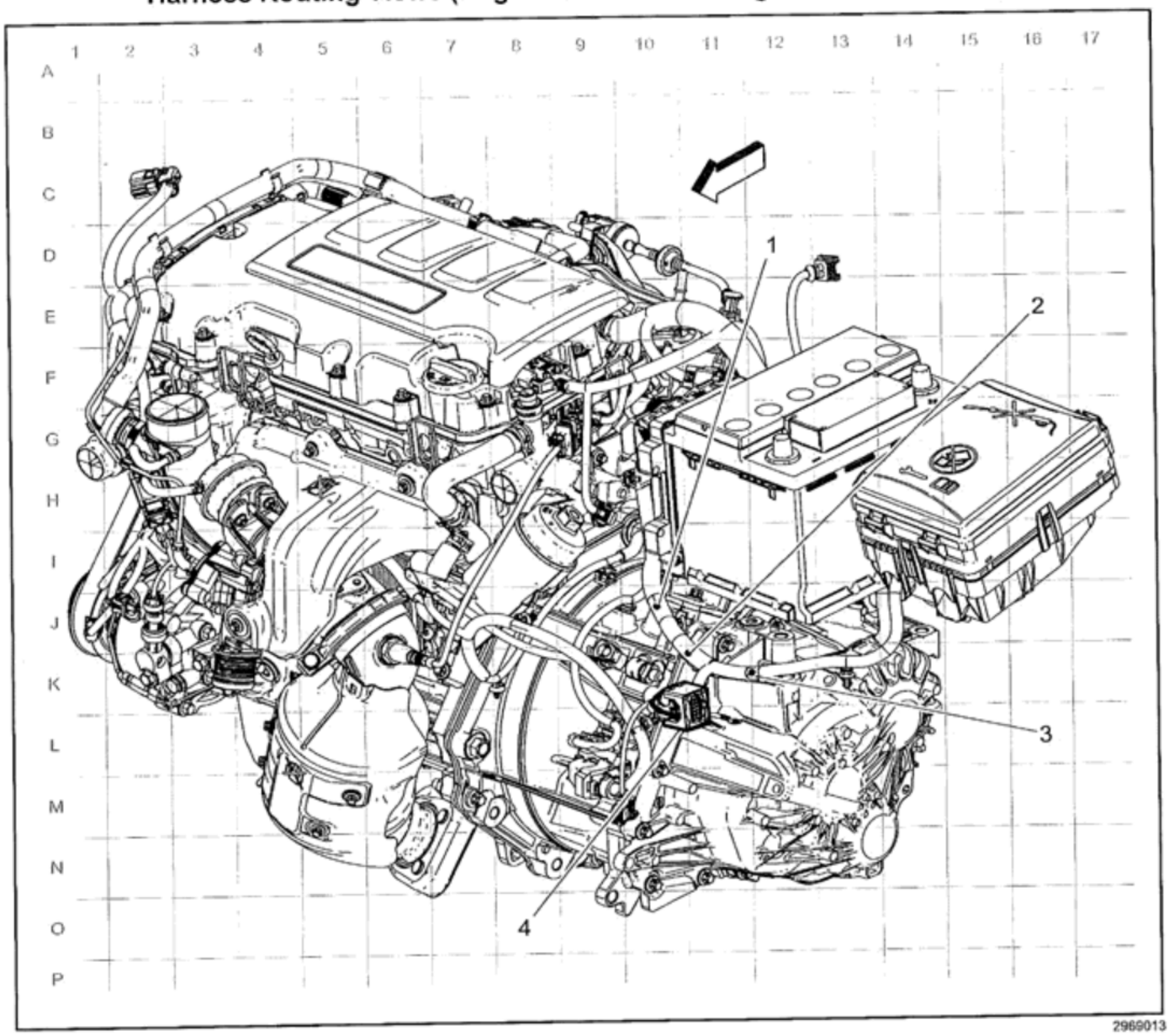


2654511

Items

(1) J114
(2) J139
(3) J141

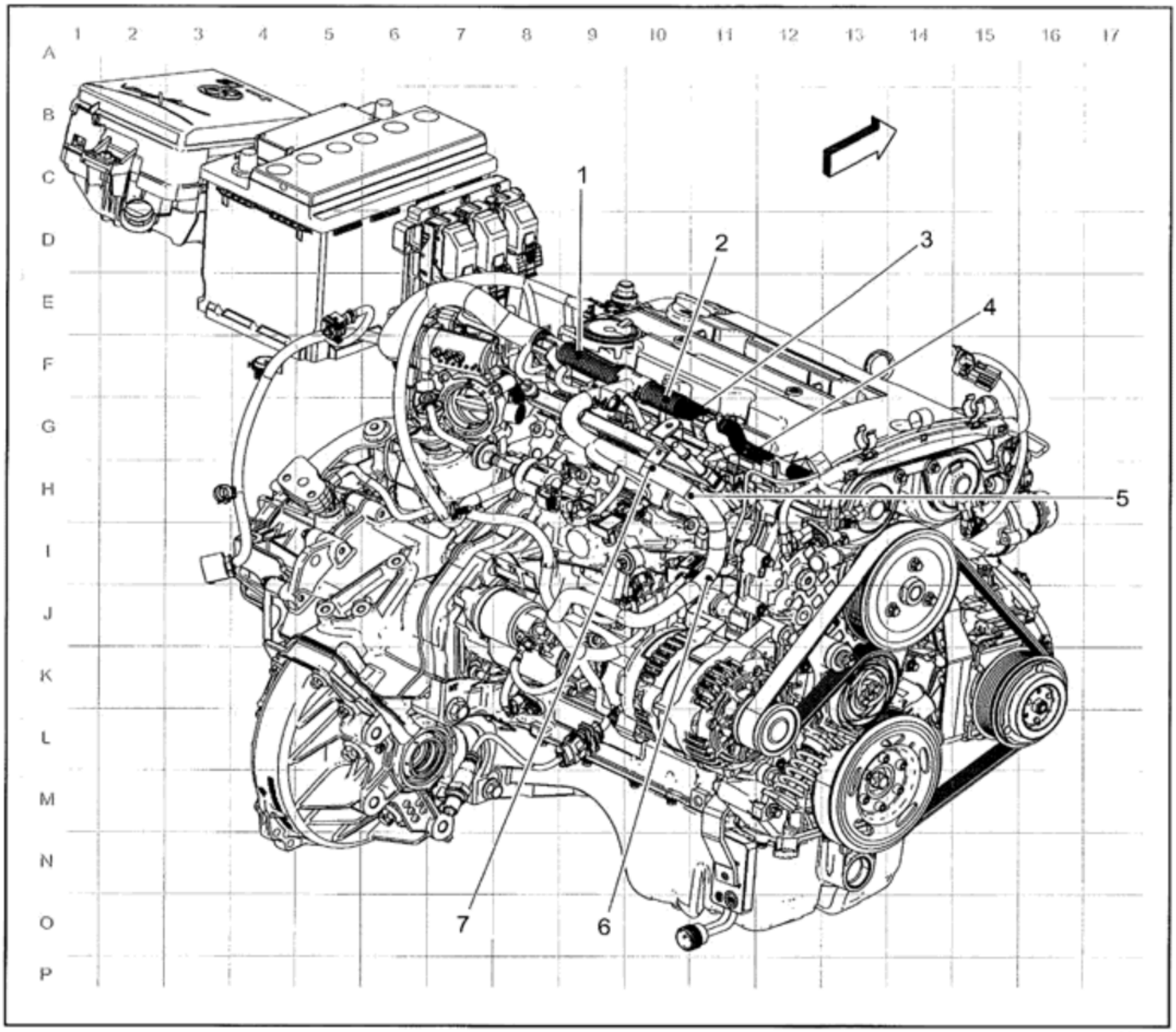
Harness Routing Views (Engine Harness Routing - 1.4L Front (LUV))



Items

(1) J104 (LUV)
(2) J100
(3) J101
(4) X101

Harness Routing Views (Engine Harness Routing - 1.4L Rear (LUV))

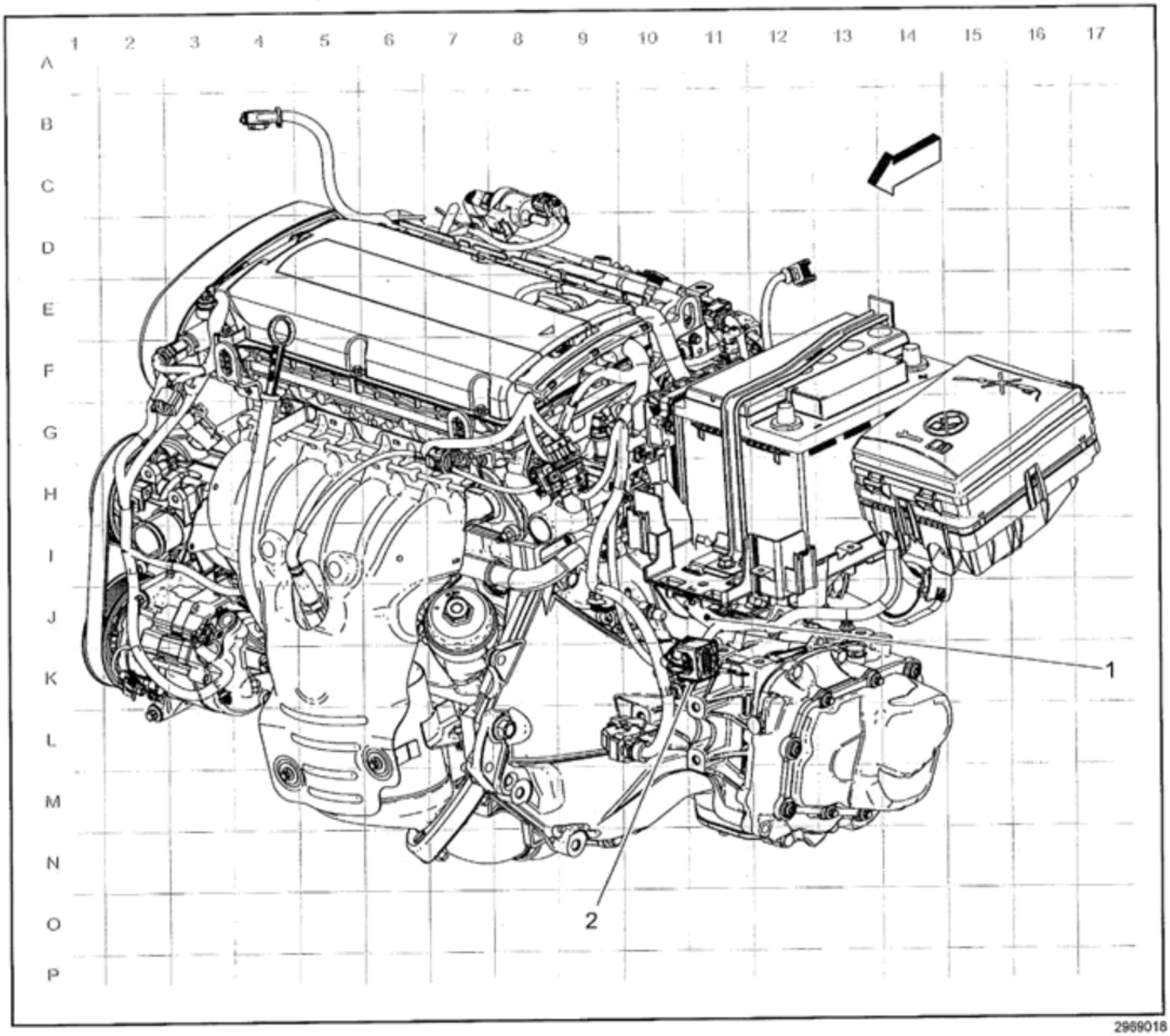


2969015

Items

(1) J118
(2) J128
(3) J127 (LUV)
(4) J132
(5) J117
(6) J110
(7) J133

Harness Routing Views (Engine Harness Routing - 1.8L Front (LUW/LWE))

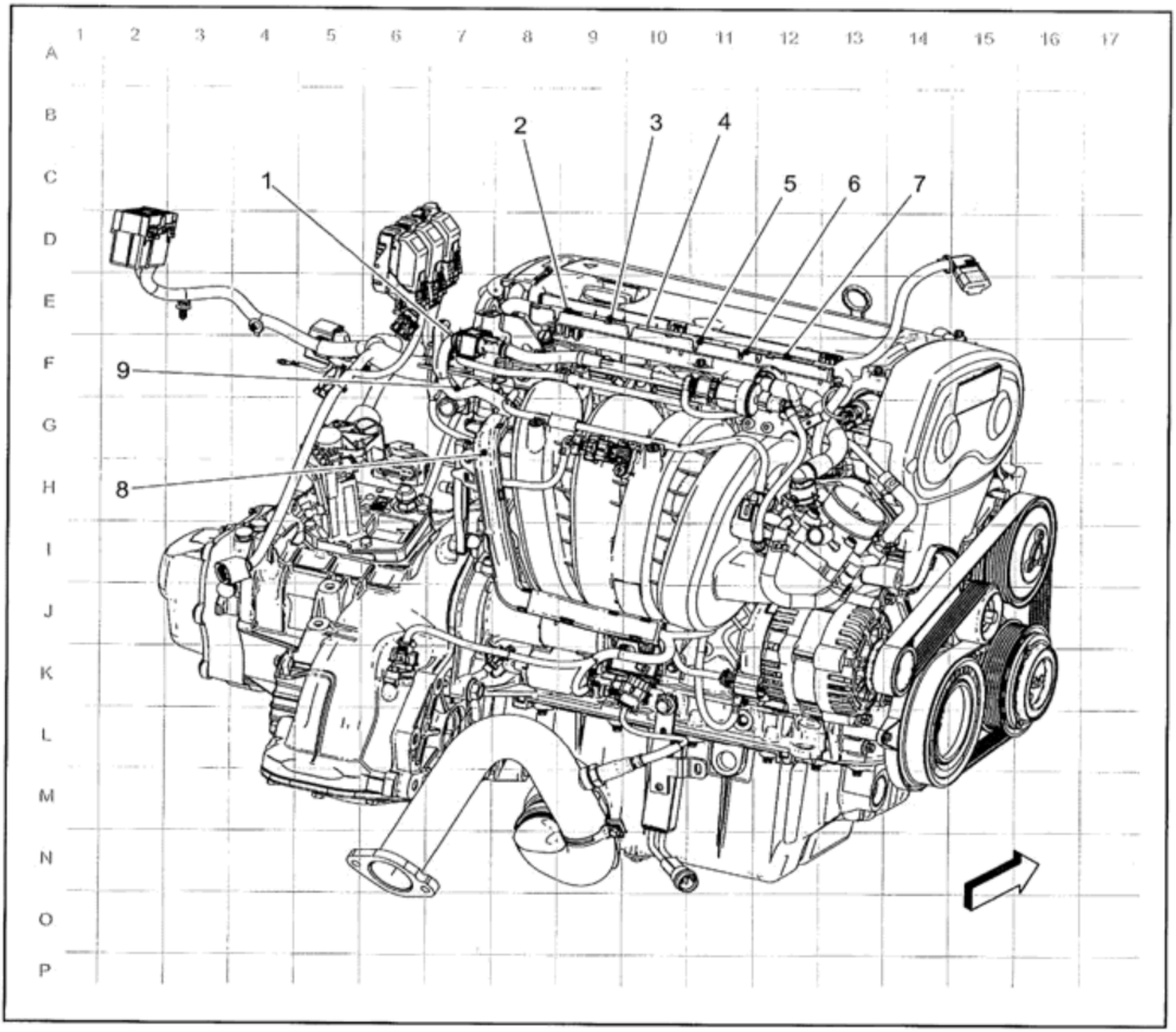


2959018

Items

(1) J118
(2) X101

Harness Routing Views (Engine Harness Routing - 1.8L Rear (LUW/LWE))

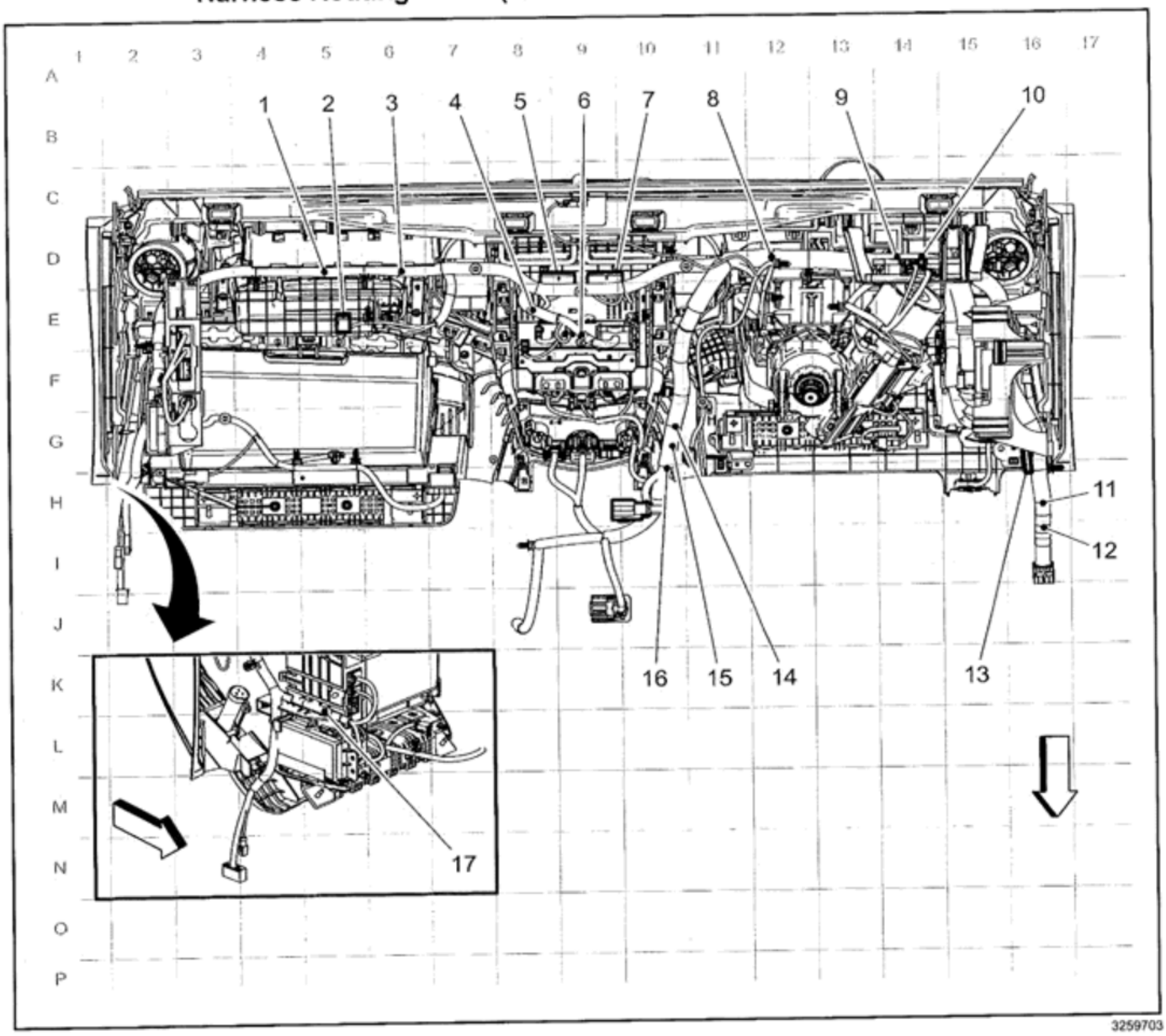


2969021

Items

(1) X160 (LUW/LWE)
(2) J101
(3) J132
(4) J100
(5) J128
(6) J122 (LUW or LWE)
(7) J110
(8) J133
(9) J117

Harness Routing Views (Instrument Panel Harness Routing)

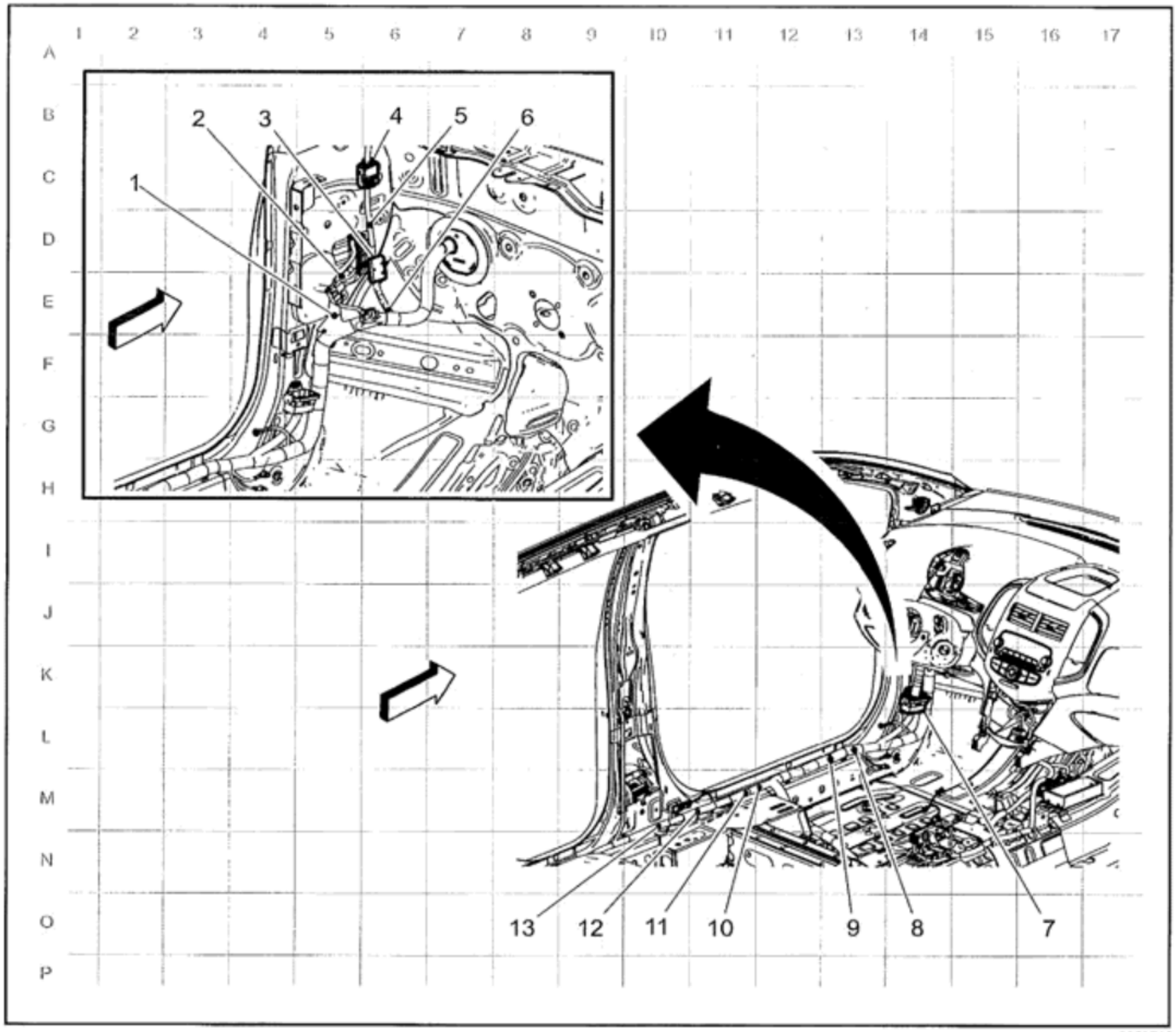


3259703

Items

(1) J200
(2) X207
(3) J216 (UE1)
(4) J211 (UH7)
(5) JX200
(6) J229 (UH7)
(7) JX202
(8) J224
(9) J236
(10) J212
(11) J215
(12) J207 (UE1 or UH7)
(13) JX203
(14) J203 (UE1)
(15) J214
(16) J202
(17) J201 (UE1)

Harness Routing Views (Left Front of Passenger Compartment Harness Routing)

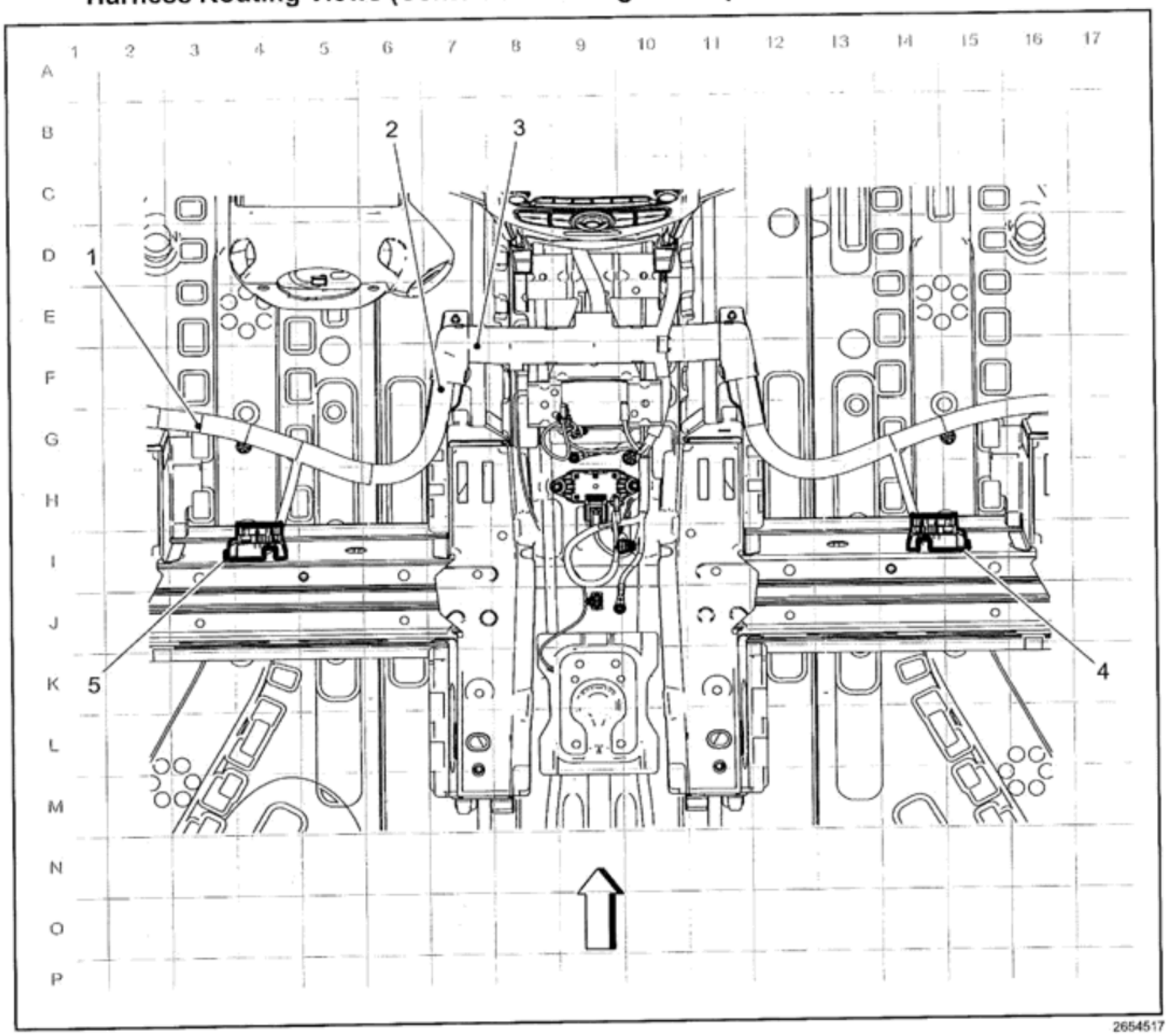


3259715

Items

(1) J230
(2) J225
(3) JX201
(4) X208
(5) J234 (UE1 or UH7)
(6) J209 (UE1 or UH7)
(7) X202
(8) J327
(9) J326
(10) J331 (AXG)
(11) J317
(12) J332 (A33)
(13) J325 (KA1)

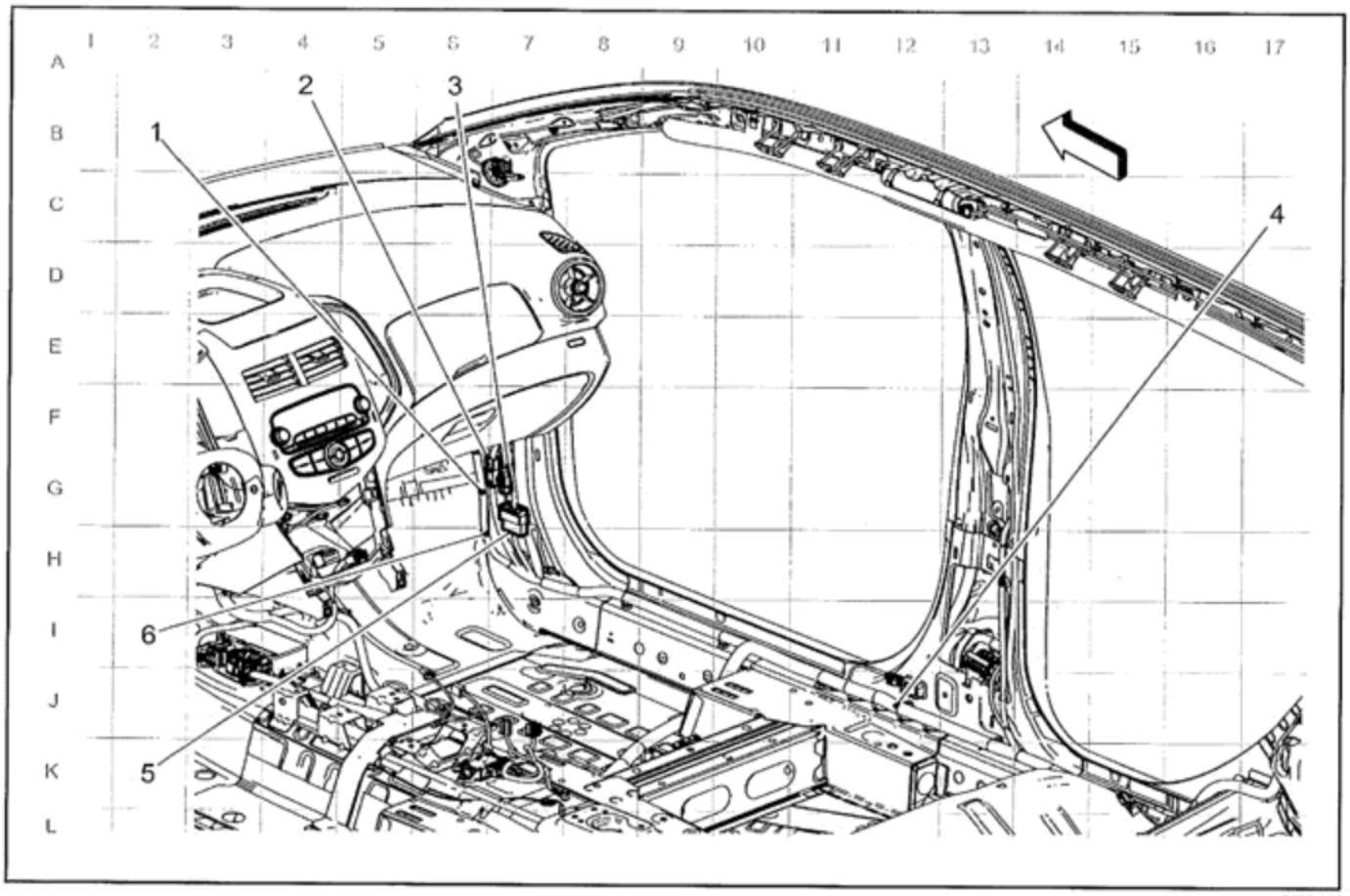
Harness Routing Views (Center of Passenger Compartment Harness Routing)



Items

(1) J334
(2) J328
(3) J329
(4) X302
(5) X301

Harness Routing Views (Right Front of Passenger Compartment Harness Routing)

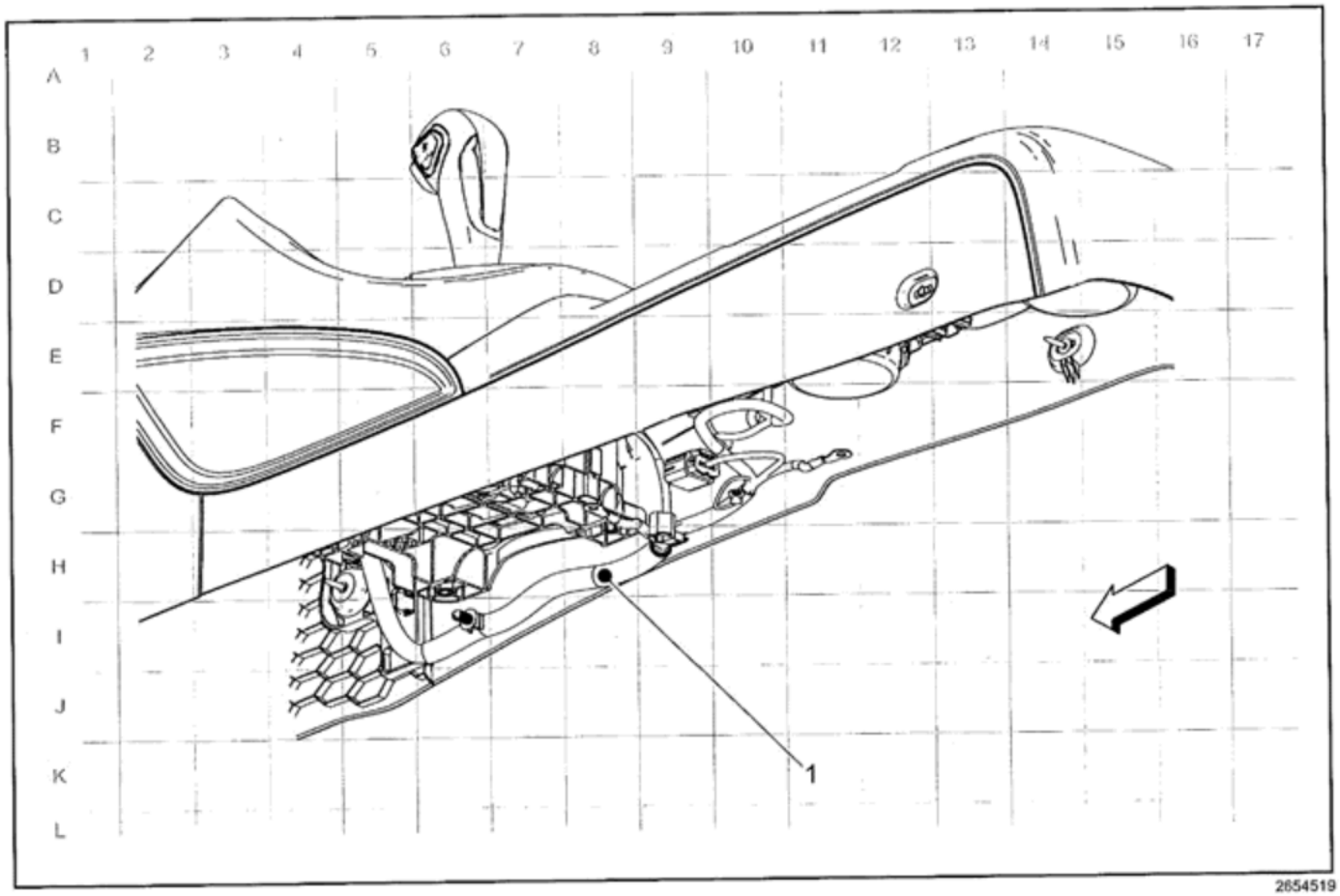


2732168

Items

(1) J232
(2) X205 (UE1)
(3) X206
(4) J314
(5) X200
(6) J231

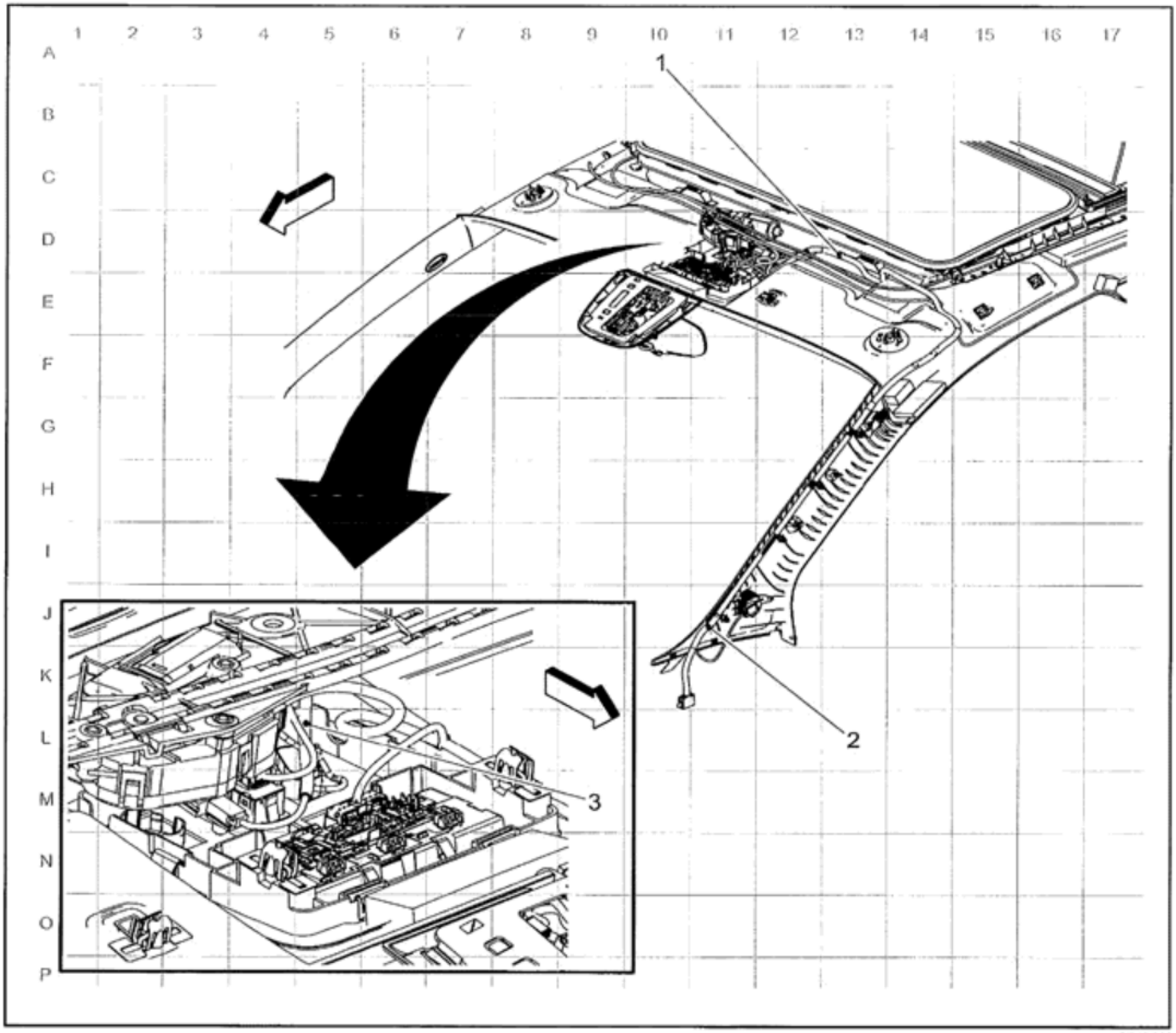
Harness Routing Views (Center Console Harness Routing)



Items

(1) J336

Harness Routing Views (Headliner Harness Routing)

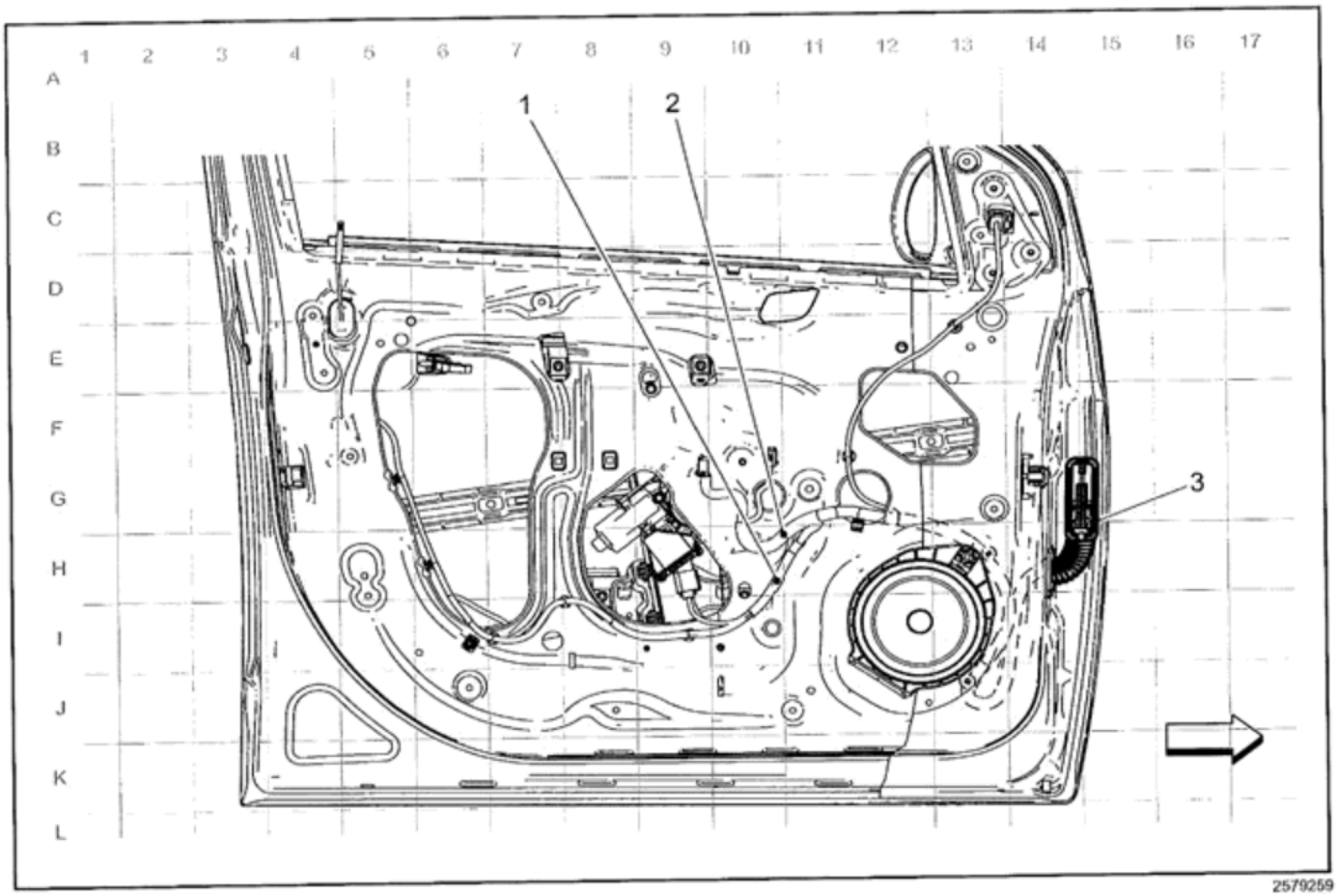


2540418

Items

(1) J302 (CF5)
(2) J233 (UE1 or UH7)
(3) J310 (UE1 or UH7)

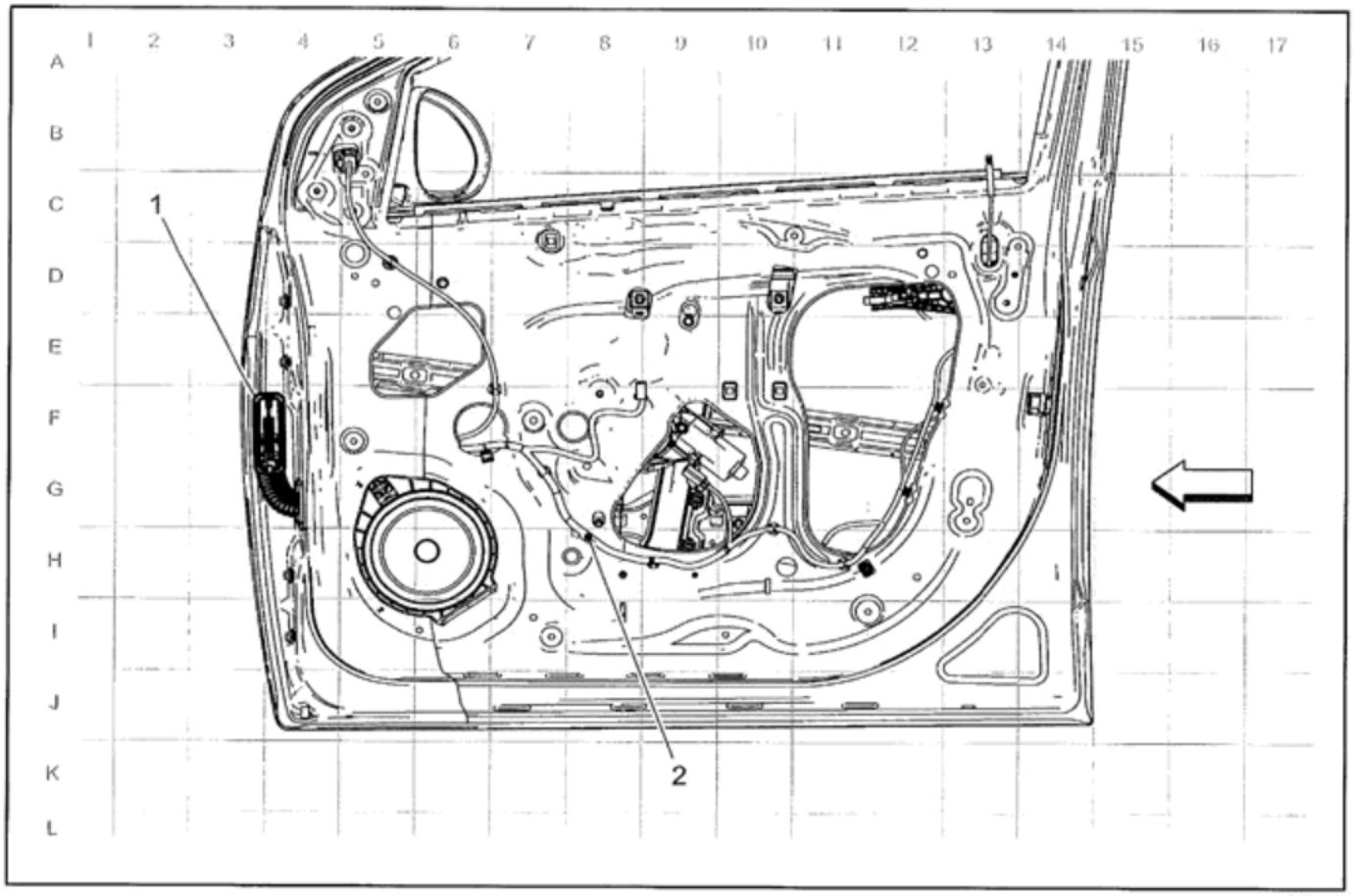
Harness Routing Views (Driver Door Harness Routing)



Items

(1) J500 (AXG or DG6)
(2) J503 (AXG)
(3) X500

Harness Routing Views (Passenger Door Harness Routing)

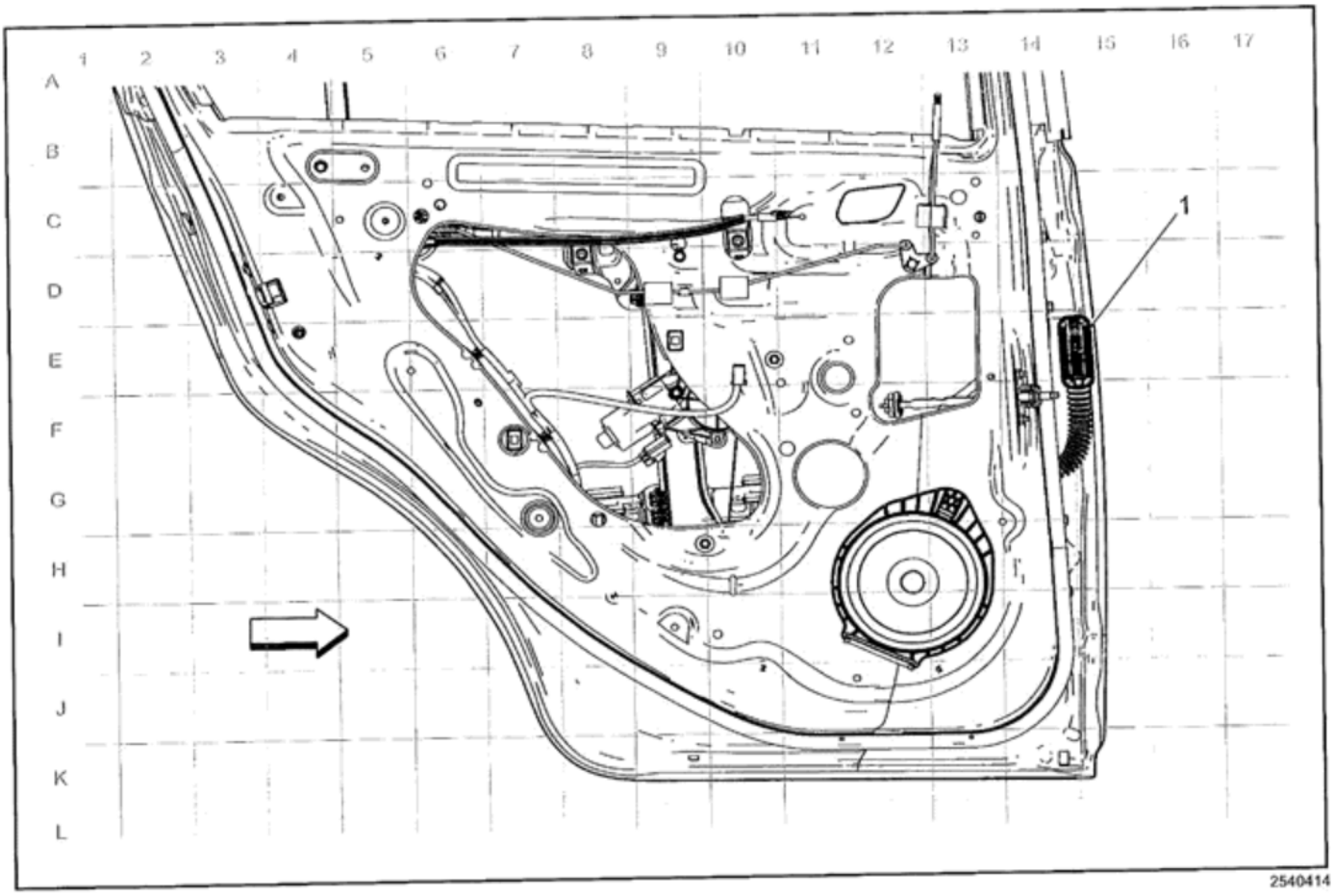


2537411

Items

(1) X600
(2) J600 (DG6)

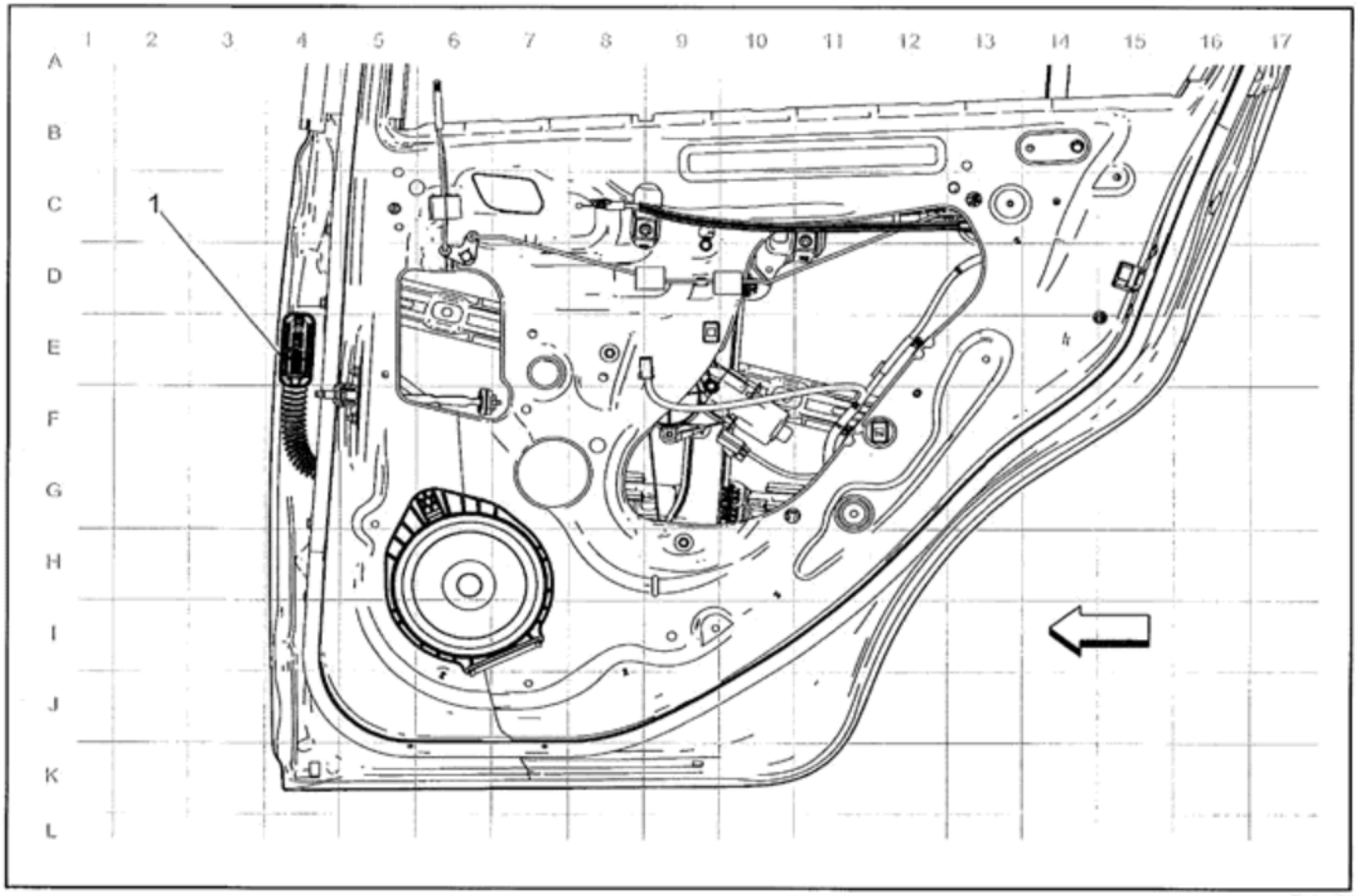
Harness Routing Views (Left Rear Door Harness Routing)



Items

(1) X700

Harness Routing Views (Right Rear Door Harness Routing)

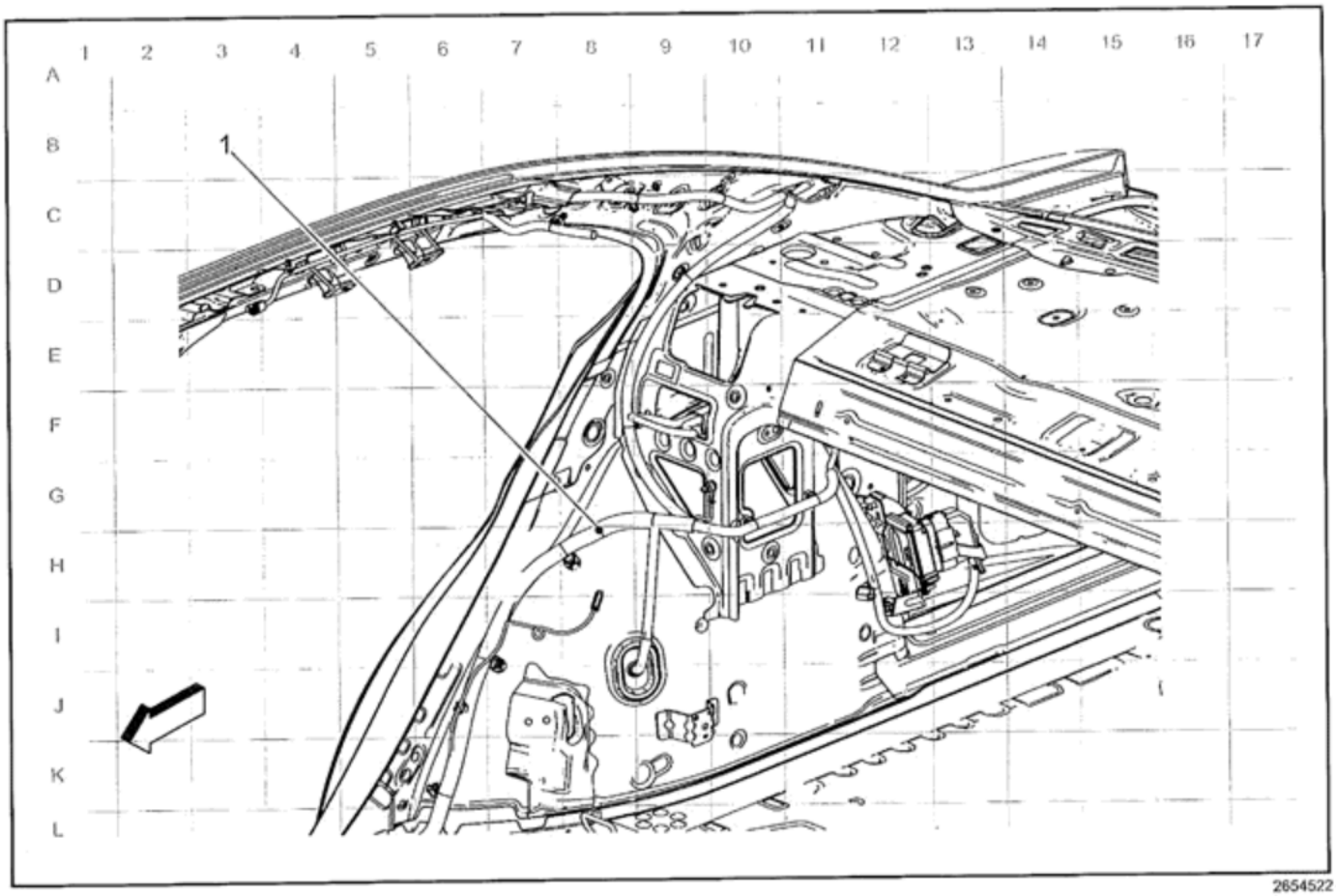


2540415

Items

(1) X800

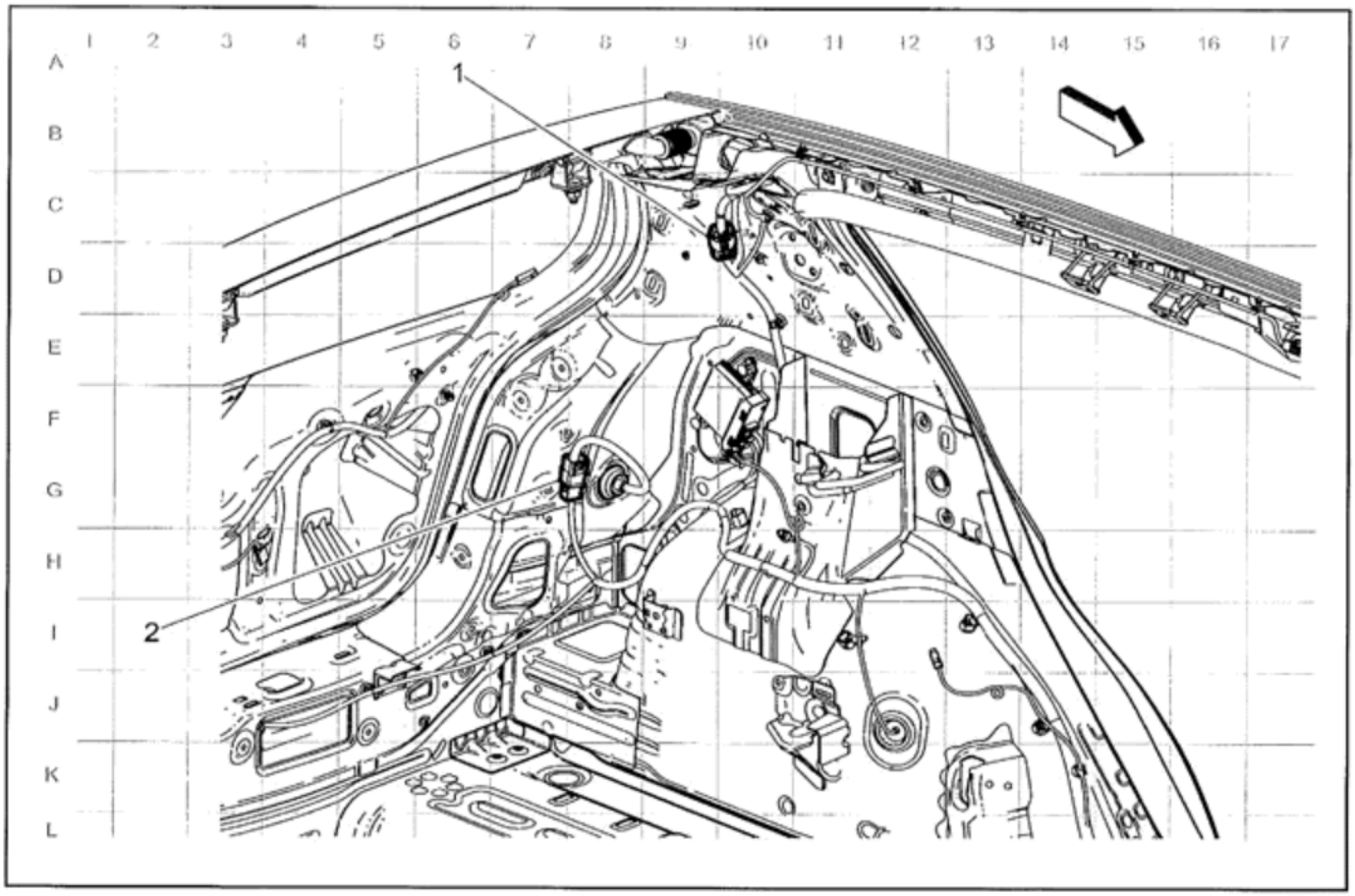
Harness Routing Views (Right Rear of Passenger Compartment Harness Routing (Notchback))



Items

(1) J335

Harness Routing Views (Left Luggage Compartment Harness Routing (Hatchback))

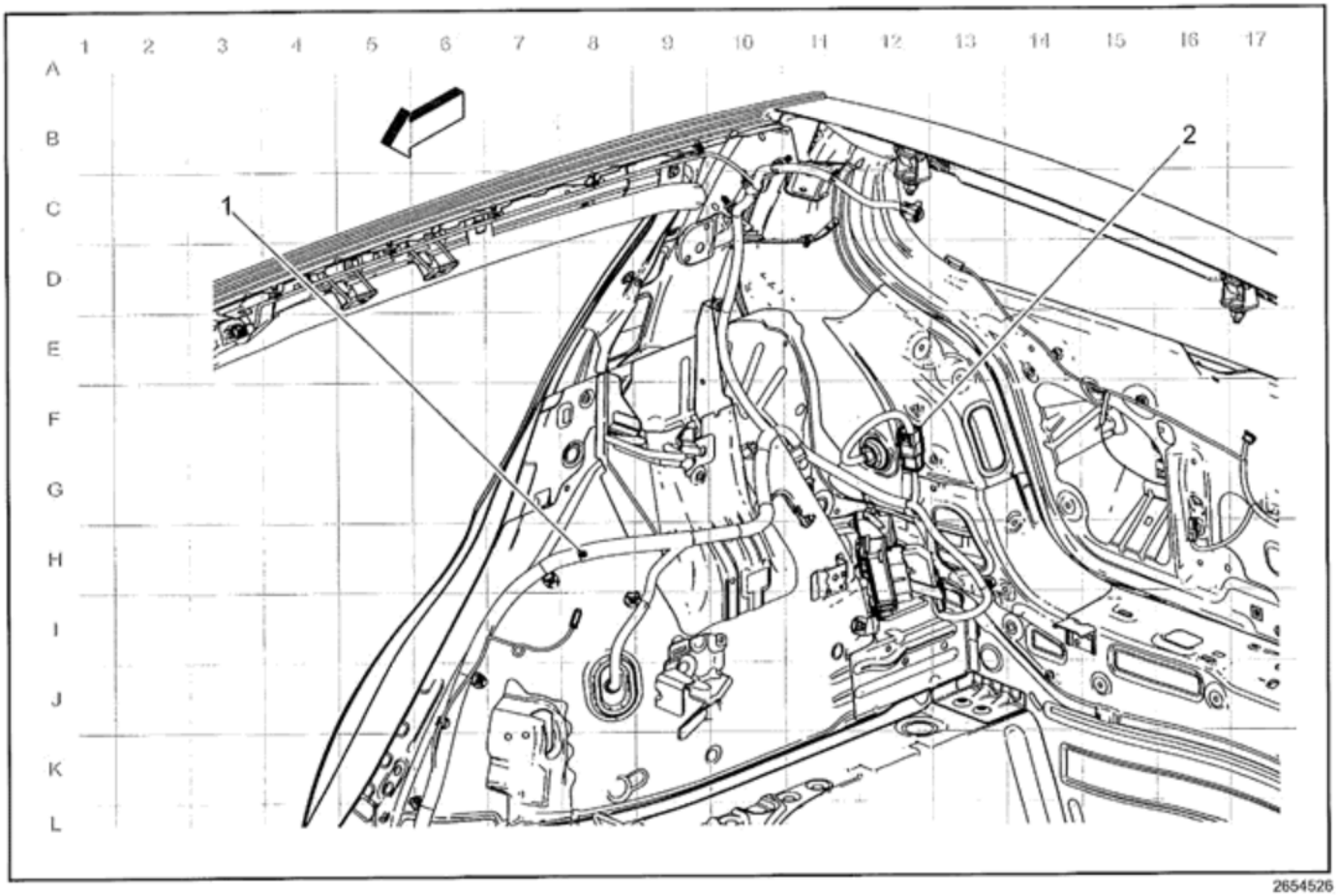


2540481

Items

(1) X900
(2) X405

Harness Routing Views (Right Luggage Compartment Harness Routing (Hatchback))

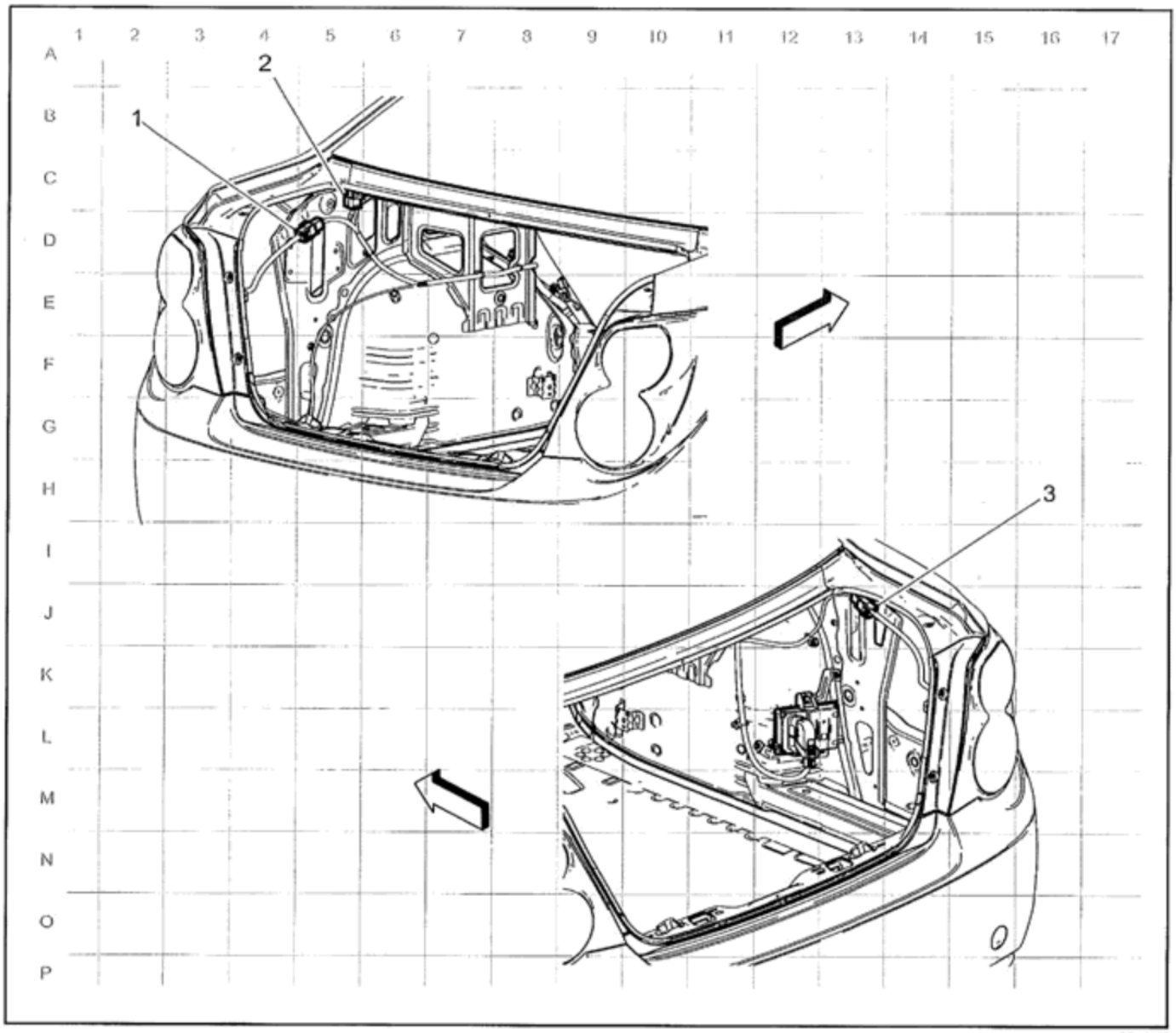


2654526

Items

(1) J335
(2) X406

Harness Routing Views (Luggage Compartment Harness Routing (Notchback))

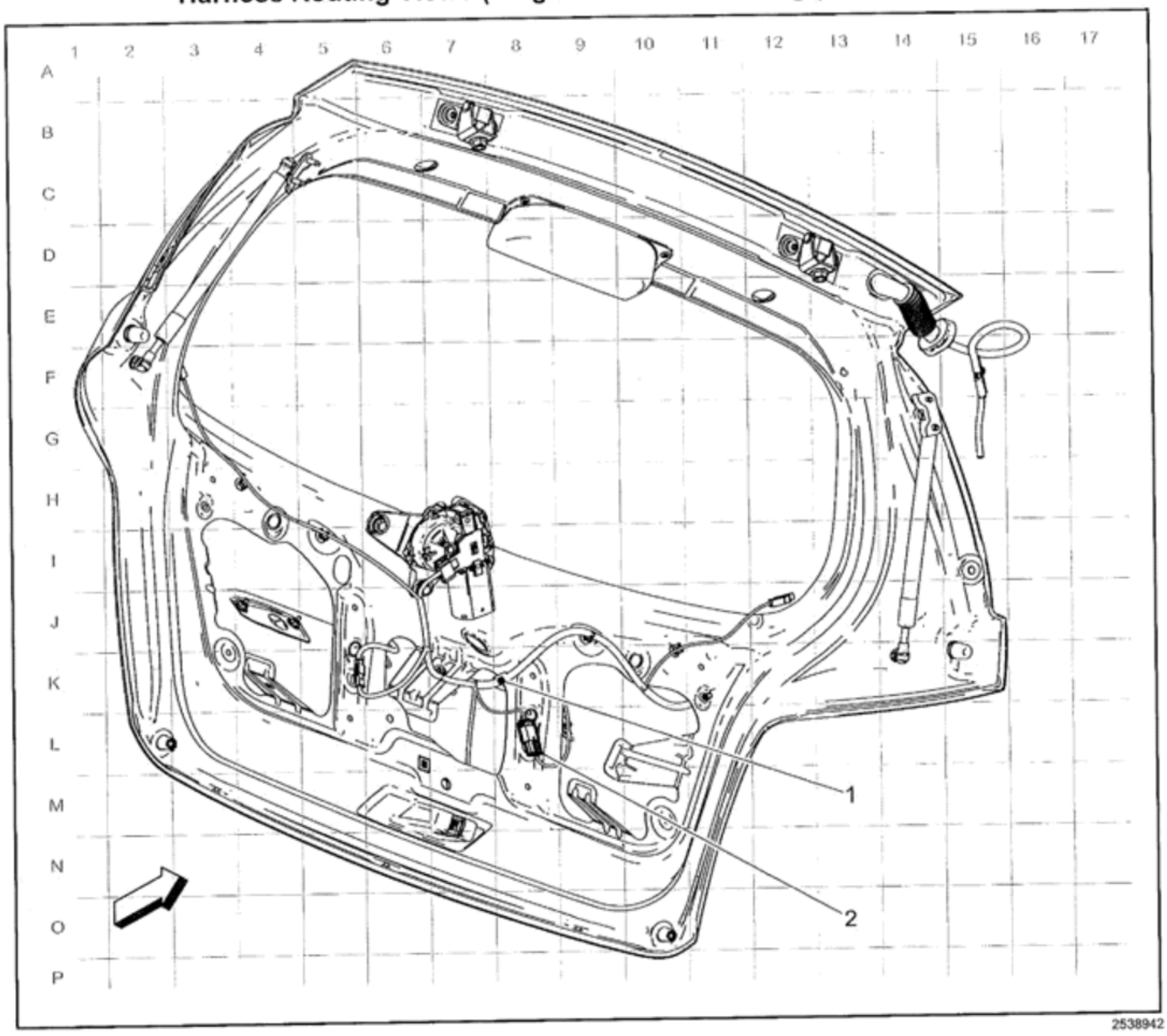


2541110

Items

(1) X405
(2) X900
(3) X406

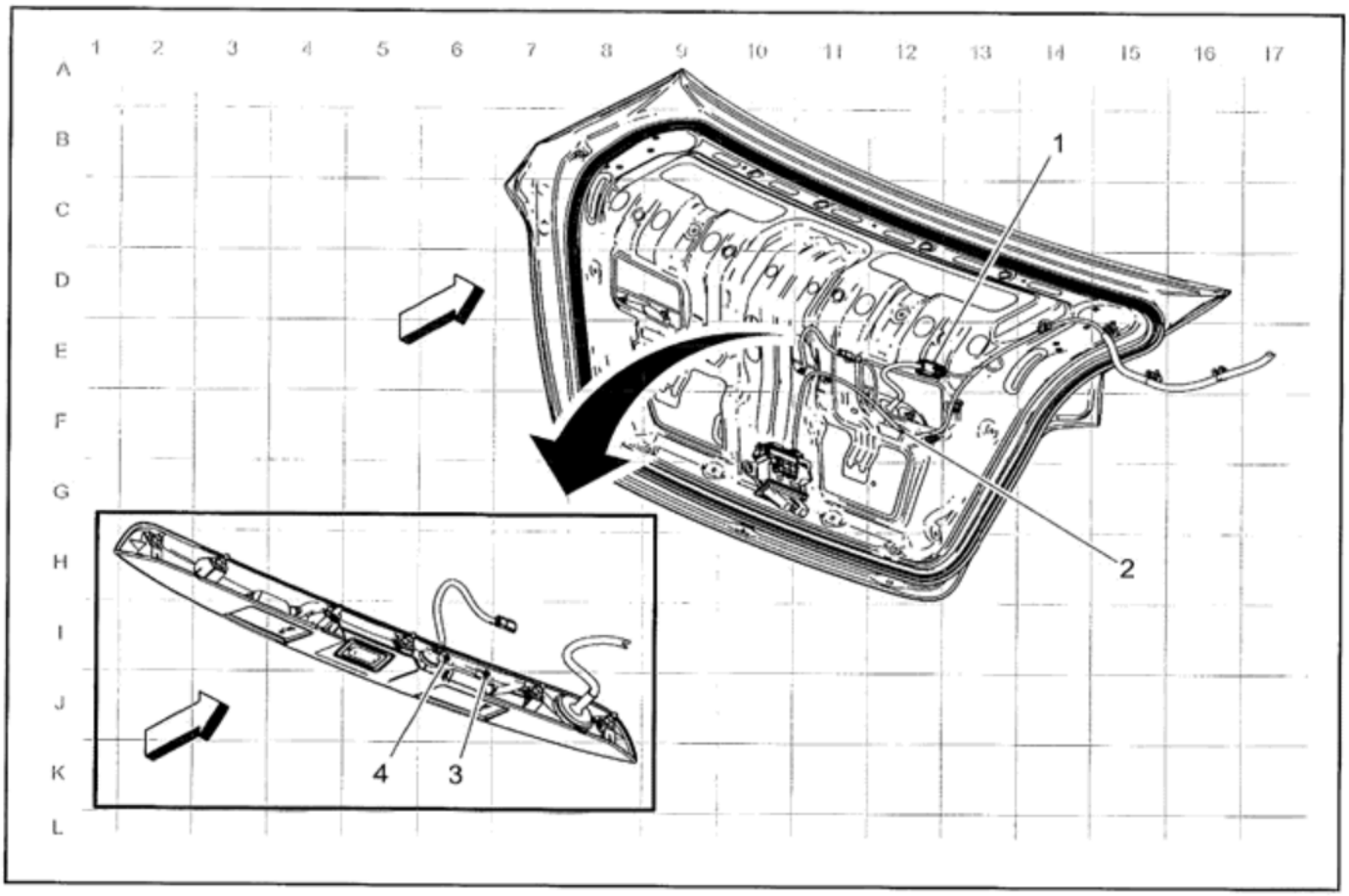
Harness Routing Views (Liftgate Harness Routing (Hatchback))



Items

(1) J900
(2) X901

Harness Routing Views (Decklid Harness Routing (Notchback))

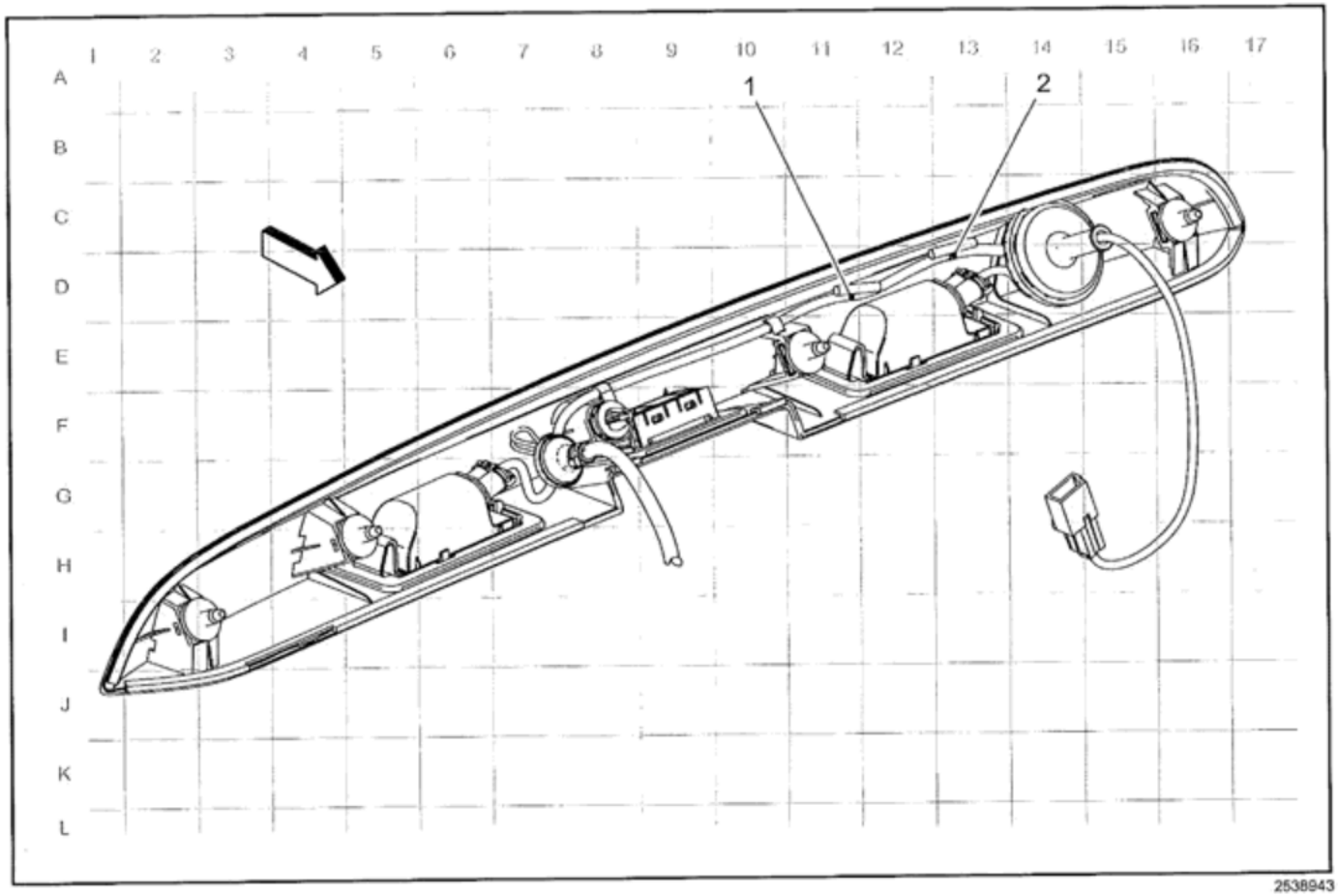


2540413

Items

(1) X901
(2) J900
(3) J903
(4) J902

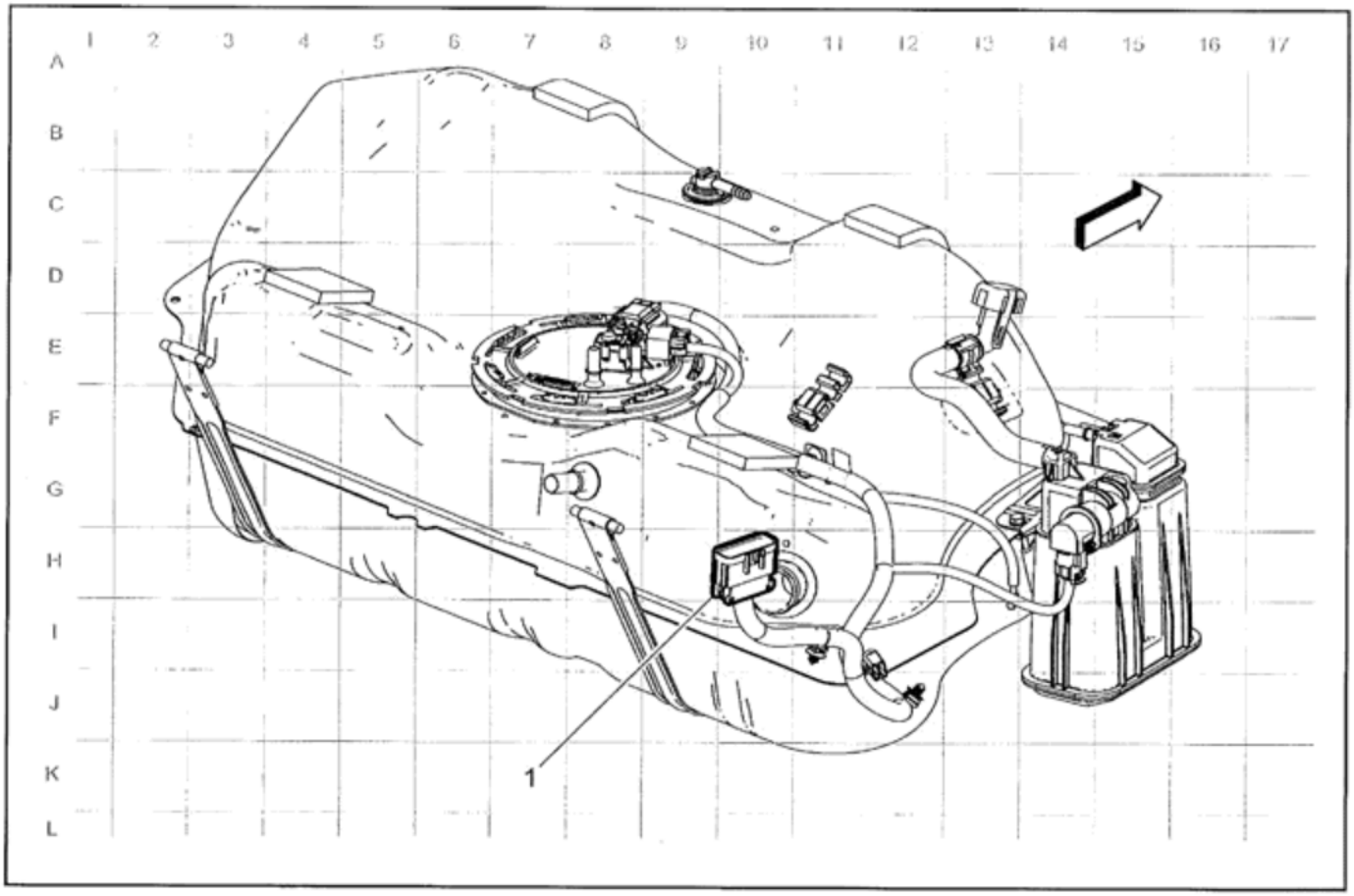
Harness Routing Views (License Lamp Harness Routing (Hatchback))



Items

(1) J902
(2) J903

Harness Routing Views (Fuel Tank Harness Routing)



2654527

Items

(1) X350

Electrical Schematic Symbols

Voltage Indicators

Symbol	Description
 1988677	Battery Voltage
 1988679	Ignition Switch– Off Position
 1988682	Ignition Switch– Accessory Position
 1988686	Ignition Switch– Run Position
 1988691	Ignition Switch– Start Position

General Icons

Symbol	Description
 1990537	Master Component List Icon This icon is used on the schematic to link to the Master Electrical Component List.
 1990538	Description and Operation Icon This icon is used on the schematic to link to the Description and Operation of that particular system.
 1988674	Computer Programming Icon This icon is used on the schematic to link to Control Module References, which identifies which components need programming upon replacement.
 1990541	Next Schematic Page Icon This icon is used on the schematic to navigate to the next schematic in the subsystem.
 1990542	Previous Schematic Page Icon This icon is used on the schematic to navigate to the previous schematic in the subsystem.

General Icons (cont'd)

Symbol	Description
 1988667	Supplemental Inflatable Restraint (SIR) or Supplemental Restraint System (SRS) Icon This icon is used to alert the technician that the system contains SIR/SRS components that require certain precautions before servicing.
 1988670	Information Icon This icon is used to alert the technician that there is additional information that will aid in servicing a system.
 1988672	Danger Icon This icon is intended to alert the technician that a component within the system contains labeling with the same icon. This icon is used when a source component has potential for 60 volts DC or greater or has potential for 42 volts AC or greater.
 1988673	High Voltage Icon This icon is intended to alert the technician that a component within the system contains labeling with the same icon. This icon is used when a component/circuit has potential for 60 volts DC or greater or has potential for 42 volts AC or greater.
 1990543	Caution Icon This icon is used to advise the technician to use caution when servicing this component. This icon may be used when a component/circuit has a voltage range potential between 30-60 volts DC or 15-42 volts AC.

General Icons (cont'd)

Symbol	Description
 1988675	Functional Serial Data Communication This icon is used to show the technician that the serial data circuit detail is shown incomplete. It also provides an active link to the Data Communication Schematics were the circuit is shown complete.

Switch Position Icons

Symbol	Description
 1989016	Generic Up Arrows
 1990554	Generic Down Arrows
 1990555	Generic Left Arrows
 1990556	Generic Right Arrows

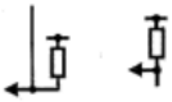
Switch Position Icons (cont'd)

Symbol	Description
 1990557	Generic Express Down Arrows
 1990558	On/Off Icon
 1990559	Generic Lock Icon
 1990560	Generic Unlock Icon
 1989018	Generic Window Switch Positions– 4 Door

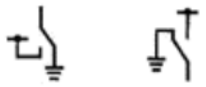
Switch Position Icons (cont'd)

Symbol	Description
 1989020	Generic Window Switch Positions– 2 Door

Module Circuit Function Icons

Symbol	Description
 1988774	I/O Pull-Down Resistors (–)
 1990567	I/O Pull-Up Resistors (+)
 1988775	I/O High-Side Drive Switch (+)
 1990568	I/O Low-Side Drive Switch (+)

Module Circuit Function Icons (cont'd)

Symbol	Description
 1990570	I/O Bidirectional Switch (+/−)
1990571	Pulse-Width Modulation Symbol
B+ 1990573	Battery Voltage
IGN 1990574	Ignition Voltage
5V 1990576	Voltage Reference

Module Circuit Function Icons (cont'd)

Symbol	Description
5V AC 1990577	A/C Voltage
 1988986	Low Reference
 1990578	Ground
 1990579	Serial Data
 1988973	Antenna Signal– In

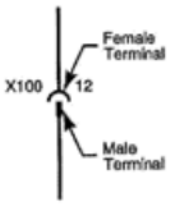
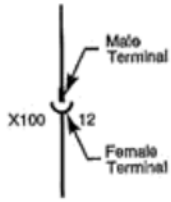
Module Circuit Function Icons (cont'd)

Symbol	Description
 1988974	Antenna Signal-- Out
 2161152	Brake Apply

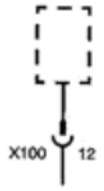
Harness Components

Symbol	Description
 1988731	Fuse
 1988733	Fuse Supplied by a Relay
 1988740	Circuit Breaker

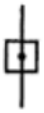
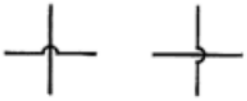
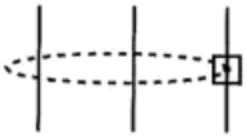
Harness Components (cont'd)

Symbol	Description
 1988745	Fusible Link
 1988987	Ground
 1988746	Case Ground
 1988977	Inline Harness Connector
 1990974	Inline Harness Connector

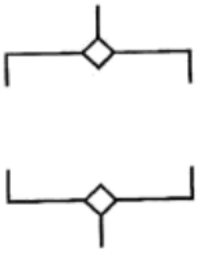
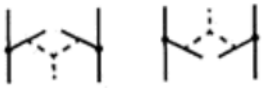
Harness Components (cont'd)

Symbol	Description
 1990975	Pigtail Connection
 1990976	Pigtail Connection
 1990977	Provisional or Diagnostic Connector
 1990978	Blunt Cut Wire
 1988980	Incomplete Physical Splice

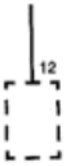
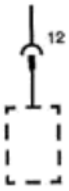
Harness Components (cont'd)

Symbol	Description
 1988981	Complete Physical Splice– 2 Wires
 1988982	Complete Physical Splice– 3 or more wires
 1990979	Wire Crosses
 1988988	Twisted Wires
 1988990	Shield

Harness Components (cont'd)

Symbol	Description
 1990980	Circuit References
 1990981	Circuit Continuation Arrowheads
 1988983	Option Breakpoint
 1988984	Ground Circuit Connection
 1988985	Connector Shorting Clip

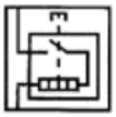
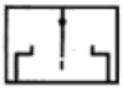
Component Parts

Symbol	Description
 1988694	Partial Component When a component is represented in a dashed box, the component or its wiring is not shown in its entirety.
 1988698	Entire Component When a component is represented in a solid box the component or its wiring is shown in its entirety.
 1988712	Connector Directly Attached to Component
 1988715	Pigtail Connector

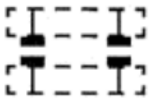
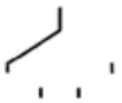
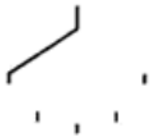
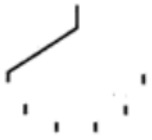
Switches and Relays

Symbol	Description
 1991015	Accessory Power Outlet

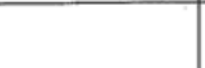
Switches and Relays (cont'd)

Symbol	Description
 1991016	Cigar Lighter
 1988991	Switch– 2 Position Normally Open
 1988992	Switch– 2 Position Normally Closed
 1988993	Switch– Rocker
 1991017	Switch– Contact Plate (1 Wire)

Switches and Relays (cont'd)

Symbol	Description
 1988994	Switch– Contact Plate (2 Wire)
 1991018	Switch– 3 Position
 1988995	Switch– 4 Position
 1991019	Switch– 5 Position
 1991021	Switch– 6 Position

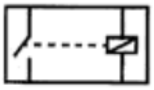
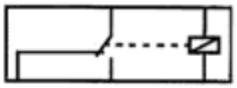
Switches and Relays (cont'd)

Symbol	Description
 1988997	Switch Actuator– Push (Momentary)
 1988998	Switch Actuator– Push (Latching)
1988999	Switch Actuator– Pull (Momentary)
1989000	Switch Actuator– Pull (Latching)
 1989001	Switch Actuator– Rotate (Momentary)

Switches and Relays (cont'd)

Symbol	Description
1989002	Switch Actuator– Rotate (Latching)
1989003	Switch Actuator– Slide (Momentary)
1989004	Switch Actuator– Slide (Latching)
1989007	Switch Actuator– Pressure (Momentary)
1989010	Switch Actuator– Temperature (Momentary)

Switches and Relays (cont'd)

Symbol	Description
 1989013	Switch Actuator– Volume (Latching)
 1988975	4-Pin Single Pole/Throw Relay– Normally Open
 1990539	5-Pin Relay– Normally Closed

Devices and Sensors

Symbol	Description
 1988751	Battery
 1988753	Battery Assembly– Hybrid

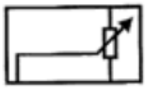
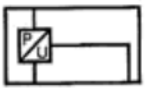
Devices and Sensors (cont'd)

Symbol	Description
 1988717	Single Filament Light Bulb
 1988719	Double Filament Light Bulb
 1988722	Light Emitting Diode (LED)
 1988725	Photo Sensor
 1990988	Gauge

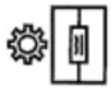
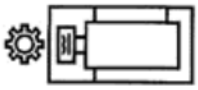
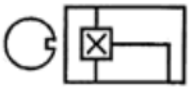
Devices and Sensors (cont'd)

Symbol	Description
 1988776	Diode
 1988748	Capacitor
 1988755	Resistor
 1988759	Variable Resistor
 1990991	Variable Resistor– NTC

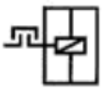
Devices and Sensors (cont'd)

Symbol	Description
 1990992	Breakable Wire
 1988778	Heating Element
 1988771	Position Sensor
 1988773	Pressure Sensor
 1990993	Knock Sensor

Devices and Sensors (cont'd)

Symbol	Description
 1990994	Inductive Type Sensor– 2-Wire
 1990996	Inductive Type Sensor– 3-Wire
 1990998	Hall Effect Sensor– 2-Wire
 1990999	Hall Effect Sensor– 3-Wire
 1991000	Oxygen Sensor– 2-Wire

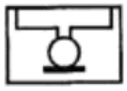
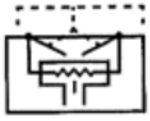
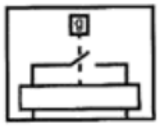
Devices and Sensors (cont'd)

Symbol	Description
 1991001	Heated Oxygen Sensor– 4-Wire
 1988970	Solenoid– Actuator
 1988971	Solenoid– Valve
 1988972	Clutch
 1988779	Motor

Devices and Sensors (cont'd)

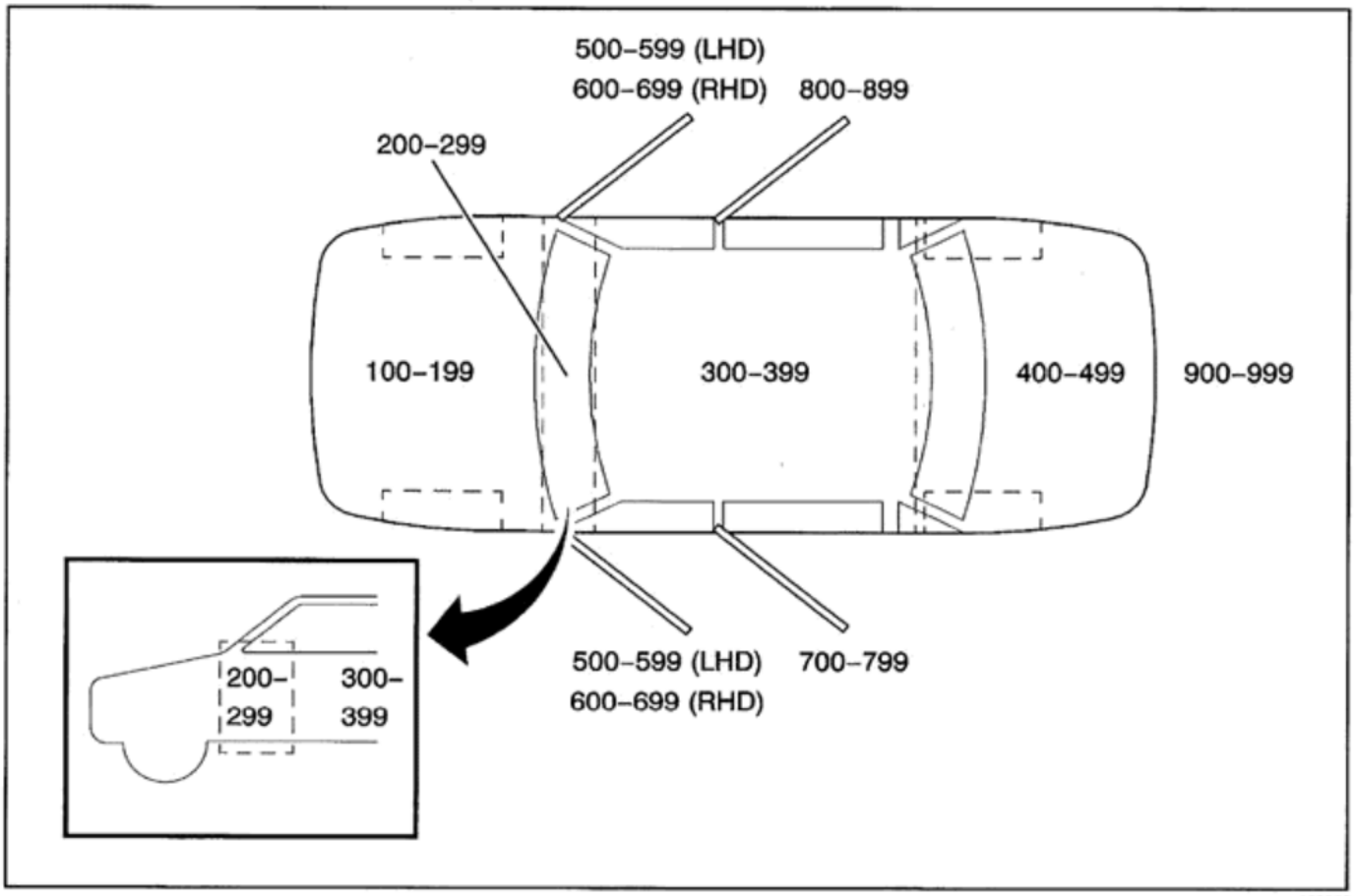
Symbol	Description
 1991003	Motor with PTC
 1988729	Antenna
 1991005	Speaker
 1991006	Horn

Devices and Sensors (cont'd)

Symbol	Description
 1991007	Microphone
 1991008	Airbag
 1991009	SIR Coil
 1991010	SIR Impact Sensor

Vehicle Zoning Strategy

All grounds, in-line connectors, and splices have identifying numbers that correspond to where they are located in the vehicle. The following table explains the numbering system.



160960

Vehicle Zoning Strategy

Callout Numbers	Zone Description
100-199	Engine compartment (all forward of the instrument panel)
200-299	Within the instrument panel area (between the bulkhead and the front plane of the instrument panel)
300-399	Passenger compartment (from instrument panel to the back of the rear seats)
400-499	Luggage compartment (from the back of the rear seats to the rear of the vehicle)

Vehicle Zoning Strategy (cont'd)

Callout Numbers	Zone Description
500-599	Inline harness connectors to or within the driver door
600-699	Inline harness connectors to or within the front passenger door
700-799	Inline harness connectors to or within the left rear door
800-899	Inline harness connectors to or within the right rear door
900-999	Inline harness connectors to or within the luggage compartment lid or hatch

Schematics RPO Code List

RPO	Option Name	Country Group
AXJ	VEHICLE TYPE-PASSENGER CAR	U.S.A., PR and USVI (MAH),Canada (MBC)
LHD	VEHICLE DRIVE-LEFTHAND DRIVE	U.S.A., PR and USVI (MAH),Canada (MBC)
BAG	PARTS PKG-EXPORT	U.S.A., PR and USVI (MAH),Canada (MBC)
VPH	VEHICLE PREPARATION-OVERSEAS DELIVERY	U.S.A., PR and USVI (MAH)
I13	ENGINEERING YEAR-2013	U.S.A., PR and USVI (MAH),Canada (MBC)
VZD	VIN MODEL YEAR-2013	U.S.A., PR and USVI (MAH),Canada (MBC)
KPK	HEATER-OIL PAN	U.S.A., PR and USVI (MAH),Canada (MBC)
LUV	ENGINE-GAS, 4 CYL, 1.4L, MFI, DOHC, TURBO, VVT, ALUM, GME, E85 MAX	U.S.A., PR and USVI (MAH),Canada (MBC)
LUW	ENGINE-GAS, 4 CYL, 1.8L, MFI, 103KW, DOHC, E85 MAX	U.S.A., PR and USVI (MAH),Canada (MBC)
LWE	ENGINE-GAS, 4 CYL, 1.8L, MFI, DOHC, VVT, 103 KW, GME	U.S.A., PR and USVI (MAH)
M26	TRANSMISSION-MAN 5 SPD, OPEL, 65 MM, 1.96 2ND, 1.323 3RD, 0.946 4TH, 0.756 5TH, F17 (WR)	U.S.A., PR and USVI (MAH),Canada (MBC)
MZ4	TRANSMISSION-MAN 6 SPD, OPEL, 76.5 MM, 3.82 1ST, 0.615 6TH, (M32 WR)	U.S.A., PR and USVI (MAH),Canada (MBC)
MR5	TRANSMISSION-MAN 6 SPD, OPEL, 76.5 MM, 4.273 1ST, 2.353 2ND, 1.475 3RD, 1.067 4TH, 0.875 5TH, 0.744 6TH, M32-6 WR	U.S.A., PR and USVI (MAH),Canada (MBC)
MH9	TRANSMISSION-AUTO 6 SPD, HMD, X24F	U.S.A., PR and USVI (MAH),Canada (MBC)
MH8	TRANSMISSION-AUTO 6 SPD, HMD, X23F	U.S.A., PR and USVI (MAH),Canada (MBC)
V5M	CALIBRATION-TCM, NEUTRAL IDLE CONTROL	U.S.A., PR and USVI (MAH),Canada (MBC)
NT7	EMISSION SYSTEM-FEDERAL, TIER 2	U.S.A., PR and USVI (MAH),Canada (MBC)
NU5	EMISSION SYSTEM-CALIFORNIA, BIN 4	U.S.A., PR and USVI (MAH)
NU6	EMISSION SYSTEM-CALIFORNIA, PZEV	U.S.A., PR and USVI (MAH)
FE9	CERTIFICATION-EMISSION, FEDERAL	U.S.A., PR and USVI (MAH),Canada (MBC)
NE1	CERTIFICATION-EMISSION, GEOGRAPHICALLY RESTRICTED REGISTRATION FOR VEHICLES UP TO 14,000 LBS GVW (USE 2003 MDL YR	U.S.A., PR and USVI (MAH)
YF5	CERTIFICATION-EMISSION, CALIFORNIA	U.S.A., PR and USVI (MAH)
K34	CRUISE CONTROL-AUTOMATIC, ELECTRONIC	U.S.A., PR and USVI (MAH),Canada (MBC)
VYE	KNOB-TRANS CONT LEVER, LEATHER, SPORT	U.S.A., PR and USVI (MAH),Canada (MBC)
KI2	KNOB-TRANS CONT LEVER, POLYURETHANE	U.S.A., PR and USVI (MAH),Canada (MBC)
KE3	KNOB-TRANS CONT LEVER, CHROME	U.S.A., PR and USVI (MAH),Canada (MBC)
KNV	KNOB-TRANS CONT LEVER, SATIN SILVER, CHROME	U.S.A., PR and USVI (MAH),Canada (MBC)
KRK	KNOB-TRANS CONT LEVER, LEATHER, SATIN SILVER, CHROME	U.S.A., PR and USVI (MAH),Canada (MBC)
M97	SHIFTER INTERLOCK-BRAKE, TRANS	U.S.A., PR and USVI (MAH),Canada (MBC)

Schematics RPO Code List (cont'd)

RPO	Option Name	Country Group
NPH	EXHAUST SYSTEM-HEAVY DUTY	U.S.A., PR and USVI (MAH),Canada (MBC)
F82	RATIO-TRANSAXLE FINAL DRIVE 3.23	U.S.A., PR and USVI (MAH),Canada (MBC)
FHB	RATIO-TRANSAXLE FINAL DRIVE 3.47	U.S.A., PR and USVI (MAH),Canada (MBC)
FXH	RATIO-TRANSAXLE FINAL DRIVE 3.53	U.S.A., PR and USVI (MAH),Canada (MBC)
FXB	RATIO-TRANSAXLE FINAL DRIVE 3.65	U.S.A., PR and USVI (MAH),Canada (MBC)
FX1	RATIO-TRANSAXLE FINAL DRIVE 3.94	U.S.A., PR and USVI (MAH),Canada (MBC)
FV2	RATIO-TRANSAXLE FINAL DRIVE 4.18	U.S.A., PR and USVI (MAH),Canada (MBC)
FHS	VEHICLE FUEL-GASOLINE E85	U.S.A., PR and USVI (MAH),Canada (MBC)
FHN	VEHICLE FUEL-GASOLINE E5	U.S.A., PR and USVI (MAH)
FHA	FUEL SYSTEM-ELECTRONIC, RETURNLESS	U.S.A., PR and USVI (MAH),Canada (MBC)
FX3	RIDE AND HANDLING-AUTOMATIC ELECTRONIC CONTROLLED	U.S.A., PR and USVI (MAH),Canada (MBC)
NJ1	STEERING-POWER, NON-VARIABLE RATIO, ELECTRIC	U.S.A., PR and USVI (MAH),Canada (MBC)
N37	STEERING COLUMN-TILT, TELESCOPING	U.S.A., PR and USVI (MAH),Canada (MBC)
FE1	SUSPENSION SYSTEM-SOFT RIDE	U.S.A., PR and USVI (MAH),Canada (MBC)
FE3	SUSPENSION SYSTEM-SPORT	U.S.A., PR and USVI (MAH),Canada (MBC)
ZAD	TIRE SPARE-T115/70R16 SL 92M BW SPR	U.S.A., PR and USVI (MAH),Canada (MBC)
RVZ	WHEEL SPARE-16 X 4.0, T, STEEL, DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
9L3	TIRE SPARE-NONE	U.S.A., PR and USVI (MAH),Canada (MBC)
5A7	WHEEL SPARE-NONE	U.S.A., PR and USVI (MAH),Canada (MBC)
KTI	KIT, TIRE-INFLATOR	U.S.A., PR and USVI (MAH),Canada (MBC)
Q1H	TIRE ALL-P195/65R15 SL 89H BW AL2	U.S.A., PR and USVI (MAH),Canada (MBC)
QLG	TIRE ALL-P205/55R16 SL 89H BW AL3	U.S.A., PR and USVI (MAH),Canada (MBC)
RKJ	TIRE ALL-P205/50R17 SL 88H BW AL3	U.S.A., PR and USVI (MAH),Canada (MBC)
RRL	WHEEL-15 X 6.0, J, STEEL, DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
RRK	WHEEL-15 X 6.0, J, ALUMINUM, DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
RRV	WHEEL-16 X 6.0, J, ALUMINUM, DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
RJX	WHEEL-17 X 6.5, J, ALUMINUM, DESIGN 2	U.S.A., PR and USVI (MAH),Canada (MBC)
RS7	WHEEL-17 X 6.5, J, ALUMINUM, DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)

Schematics RPO Code List (cont'd)

RPO	Option Name	Country Group
J93	BRAKE SYSTEM-POWER, FRT DISC, RR DRUM, ABS, 15"	U.S.A., PR and USVI (MAH),Canada (MBC)
J67	BRAKE SYSTEM-POWER, FRT and RR DISC, ABS, 15"	U.S.A., PR and USVI (MAH),Canada (MBC)
JBD	BOOSTER-BRAKE, SINGLE RATE	U.S.A., PR and USVI (MAH),Canada (MBC)
Q8E	JACK-MECHANICAL, W/TOOLS	U.S.A., PR and USVI (MAH),Canada (MBC)
V48	COOLANT-ENGINE MAXIMUM PROTECTION	U.S.A., PR and USVI (MAH),Canada (MBC)
C60	HVAC SYSTEM-AIR CONDITIONER FRT, MAN CONTROLS	U.S.A., PR and USVI (MAH),Canada (MBC)
C41	HVAC SYSTEM-HEATER, OUTSIDE AIR, WITH FAN	Canada (MBC)
K12	FILTER-AIR, POLLUTANT	U.S.A., PR and USVI (MAH),Canada (MBC)
C49	DEFOGGER-RR WINDOW, ELECTRIC	U.S.A., PR and USVI (MAH),Canada (MBC)
C35	HEATER-DUCT, RR PASS	Canada (MBC)
VWC	PANEL CENTER-INSTRUMENT, HIGH GLOSS BLACK	U.S.A., PR and USVI (MAH),Canada (MBC)
VMO	PANEL CENTER-INSTRUMENT, GRAPHITE SILVER MET	U.S.A., PR and USVI (MAH),Canada (MBC)
UQL	RESTRAINT PROVISIONS-CHILD, ISOFIX 2 POINT ONLY, POINT/LAT CH(INC 3 TOP TETHER POINTS)	U.S.A., PR and USVI (MAH),Canada (MBC)
N54	STEERING WHEEL-3 SPOKES, SPORT	U.S.A., PR and USVI (MAH),Canada (MBC)
N35	STEERING WHEEL-LEATHER, 3 SPOKES, SPORT	U.S.A., PR and USVI (MAH),Canada (MBC)
N30	STEERING WHEEL-DELUXE	U.S.A., PR and USVI (MAH),Canada (MBC)
AAL	RESTRAINT-KNEE, BOLSTER, LH/RH	U.S.A., PR and USVI (MAH),Canada (MBC)
DUJ	ASHTRAY-SMOKERS PACKAGE	U.S.A., PR and USVI (MAH),Canada (MBC)
ECE	TRIM SEAT-LEATHER,(TBD1-GSV)(GMDAT)	U.S.A., PR and USVI (MAH),Canada (MBC)
ECD	TRIM SEAT-LEATHER, (TBD2-GSV)(GMDAT)	U.S.A., PR and USVI (MAH),Canada (MBC)
EW3	TRIM SEAT-CLOTH, FLASH DANCE	U.S.A., PR and USVI (MAH),Canada (MBC)
EW1	TRIM SEAT-CLOTH, BRAVO	U.S.A., PR and USVI (MAH),Canada (MBC)
01E	TRIM COLOR SEAT-DK TITANIUM	U.S.A., PR and USVI (MAH),Canada (MBC)
07S	TRIM COLOR SEAT-MEDIUM VALUE GREY	U.S.A., PR and USVI (MAH),Canada (MBC)
03G	TRIM COLOR SEAT-JET BLACK, VAR 2	U.S.A., PR and USVI (MAH),Canada (MBC)
01K	TRIM COLOR SEAT-BRICK	U.S.A., PR and USVI (MAH),Canada (MBC)
06A	TRIM COLOR SEAT-DK TITANIUM and STITCHING ICE BLUE	U.S.A., PR and USVI (MAH),Canada (MBC)
AH3	ADJUSTER FRT ST-MANUAL, 4 WAY, DRIVER	U.S.A., PR and USVI (MAH),Canada (MBC)

Schematics RPO Code List (cont'd)

RPO	Option Name	Country Group
AG5	ADJUSTER PASS ST-MANUAL, 2 WAY	U.S.A., PR and USVI (MAH),Canada (MBC)
KA1	HEATER SEAT FRT-DRVR and PASS	U.S.A., PR and USVI (MAH),Canada (MBC)
AR7	SEAT-FRT BKT, STANDARD	U.S.A., PR and USVI (MAH),Canada (MBC)
D05	ARM REST-FRT SEAT, DRIVER	U.S.A., PR and USVI (MAH),Canada (MBC)
AJC	RESTRAINT-HEAD, FRT SEAT, UP/DOWN ADJUSTMENT	U.S.A., PR and USVI (MAH),Canada (MBC)
AMA	SEAT RR-SPLIT BACK, FOLDING, HEADREST	U.S.A., PR and USVI (MAH),Canada (MBC)
01A	TRIM COLOR SEAT-JET BLACK VAR 1	U.S.A., PR and USVI (MAH),Canada (MBC)
E91	POCKET-FRONT SEAT BACK, PASS	U.S.A., PR and USVI (MAH),Canada (MBC)
ABX	INTERIOR TRIM CONFIG-#19	U.S.A., PR and USVI (MAH),Canada (MBC)
ABY	INTERIOR TRIM CONFIG-#20	U.S.A., PR and USVI (MAH),Canada (MBC)
ACB	INTERIOR TRIM CONFIG-#21	U.S.A., PR and USVI (MAH),Canada (MBC)
ACC	INTERIOR TRIM CONFIG-#22	U.S.A., PR and USVI (MAH)
ACI	INTERIOR TRIM CONFIG-#23	U.S.A., PR and USVI (MAH),Canada (MBC)
ADN	INTERIOR TRIM CONFIG-#24	U.S.A., PR and USVI (MAH),Canada (MBC)
ADP	INTERIOR TRIM CONFIG-#25	U.S.A., PR and USVI (MAH),Canada (MBC)
ADQ	INTERIOR TRIM CONFIG-#26	U.S.A., PR and USVI (MAH)
ADH	INTERIOR TRIM CONFIG-#32	U.S.A., PR and USVI (MAH),Canada (MBC)
4AA	INTERIOR TRIM-JET BLACK	U.S.A., PR and USVI (MAH),Canada (MBC)
4AQ	INTERIOR TRIM-V DK PEWTER	U.S.A., PR and USVI (MAH),Canada (MBC)
1AB	TRIM COLOR DR PANEL-JET BLACK	U.S.A., PR and USVI (MAH),Canada (MBC)
1AF	TRIM COLOR DR PANEL-DK TITANIUM	U.S.A., PR and USVI (MAH),Canada (MBC)
1BF	TRIM COLOR DR PANEL-BRICK	U.S.A., PR and USVI (MAH),Canada (MBC)
FHF	TRIM DOOR-HARD TOUCH PAINT	U.S.A., PR and USVI (MAH),Canada (MBC)
E27	HANDLE-ASSIST, PASS	U.S.A., PR and USVI (MAH),Canada (MBC)
E22	HANDLE-ASSIST, RR	U.S.A., PR and USVI (MAH),Canada (MBC)
DLV	MIRROR I/S FRT VAN-SUNSHADE, DRIVER and PASS, W/ MIRROR and COVER	U.S.A., PR and USVI (MAH),Canada (MBC)
B37	COVERING-FLOOR MAT, FRT and RR, AUX	U.S.A., PR and USVI (MAH),Canada (MBC)
B32	COVERING FRT-FLOOR MATS, AUX	U.S.A., PR and USVI (MAH),Canada (MBC)

Schematics RPO Code List (cont'd)

RPO	Option Name	Country Group
BCM	COVERING-LOAD COMPARTMENT, MOVABLE	U.S.A., PR and USVI (MAH),Canada (MBC)
C90	LAMP-INTR, FRT and RR DRS, COURTESY	U.S.A., PR and USVI (MAH),Canada (MBC)
C95	LAMP-INTR, ROOF, COURTESY and DUAL READING	U.S.A., PR and USVI (MAH),Canada (MBC)
U25	LAMP-INTR, RR COMPT, COURTESY	U.S.A., PR and USVI (MAH),Canada (MBC)
AHU	RESTRAINT PROVISIONS-BELTS, ADJUSTER, HEIGHT, FRT	U.S.A., PR and USVI (MAH),Canada (MBC)
A70	RESTRAINT-SEAT BELT TENSIONER, FRT	U.S.A., PR and USVI (MAH),Canada (MBC)
A69	RESTRAINT-SEAT BELT TENSIONER, FRT, VAR. 2	U.S.A., PR and USVI (MAH),Canada (MBC)
AY0	RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER and PASS FRT, SEAT SIDE, ROOF SIDE	Canada (MBC)
AYF	RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER and PASS FRT, FRT SEAT SIDE and RR SEAT SIDE, ROOF SIDE, KNEE	U.S.A., PR and USVI (MAH),Canada (MBC)
VNU	VIN FORMAT-U.S. TYPE	U.S.A., PR and USVI (MAH),Canada (MBC)
VIX	PLATE-VEHICLE IDENTIFICATION - VISUAL (GMDAT)	U.S.A., PR and USVI (MAH),Canada (MBC)
VHY	PROTECTOR-BODY SHEET METAL, HIGH CORROSION PREVENTIVE	U.S.A., PR and USVI (MAH),Canada (MBC)
GAZ	PRIMARY COLOR-EXTERIOR, SUMMIT WHITE (G) 8624	U.S.A., PR and USVI (MAH),Canada (MBC)
GAR	PRIMARY COLOR-EXTERIOR, CARBON FLASH MET (G) 501Q	U.S.A., PR and USVI (MAH),Canada (MBC)
GAN	PRIMARY COLOR-EXTERIOR, SWITCHBLADE SILVER MET (G) 636R	U.S.A., PR and USVI (MAH),Canada (MBC)
GBV	PRIMARY COLOR-EXTERIOR, CYBER GRAY MET (G) 637R	U.S.A., PR and USVI (MAH),Canada (MBC)
GCN	PRIMARY COLOR-EXTERIOR, VICTORY RED 9260	U.S.A., PR and USVI (MAH),Canada (MBC)
GTS	PRIMARY COLOR-EXTERIOR, LUXO BLUE MET (933L) (44U)	U.S.A., PR and USVI (MAH),Canada (MBC)
GBE	PRIMARY COLOR-EXTERIOR, CRYSTAL CLARET TINTCOAT (G) 505Q	U.S.A., PR and USVI (MAH),Canada (MBC)
GVU	PRIMARY COLOR-EXTERIOR, MOCHA BRONZE MET (518Q)	U.S.A., PR and USVI (MAH),Canada (MBC)
GBN	PRIMARY COLOR-EXTERIOR, WHITE DIAMOND TRICOAT (G) 800J	U.S.A., PR and USVI (MAH),Canada (MBC)
GCR	PRIMARY COLOR-EXTERIOR, INFERNO ORANGE MET (502Q)	U.S.A., PR and USVI (MAH),Canada (MBC)
AKP	WINDOW TYPE-SOLAR ABSORBING	U.S.A., PR and USVI (MAH),Canada (MBC)
D75	HANDLE O/S DOOR-BODY COLOR	U.S.A., PR and USVI (MAH),Canada (MBC)
D7A	HANDLE O/S DOOR-BODY COLOR, CHROME STRIP	U.S.A., PR and USVI (MAH),Canada (MBC)
E21	HANDLE-I/S, DR, CHROME	U.S.A., PR and USVI (MAH),Canada (MBC)
ABR	WINDOW-MANUAL OPERATED, FRT DR	U.S.A., PR and USVI (MAH),Canada (MBC)
A66	WINDOW-POWER OPERATED, PASSENGER	U.S.A., PR and USVI (MAH),Canada (MBC)

Schematics RPO Code List (cont'd)

RPO	Option Name	Country Group
A33	WINDOW-POWER OPERATED, RR DRS	U.S.A., PR and USVI (MAH),Canada (MBC)
AXG	WINDOW-POWER OPERATED-EXPRESS DRIVER UP/DOWN	U.S.A., PR and USVI (MAH),Canada (MBC)
AU3	LOCK CONTROL-SIDE DR, ELEC	U.S.A., PR and USVI (MAH),Canada (MBC)
NCG	LOCK-ELECTRICAL CHILD LOCK SYSTEM (REAR DOOR LATCH)	U.S.A., PR and USVI (MAH),Canada (MBC)
KTF	KEY-PRIMARY FOLDABLE, ADDITIONAL FOLDABLE	U.S.A., PR and USVI (MAH),Canada (MBC)
KTH	LOCK CONTROL-SIDE DOOR LOCK/UNLOCK (DO NOT USE FOR NEW MAJOR PROGRAMS)	U.S.A., PR and USVI (MAH),Canada (MBC)
KTJ	LOCK CONTROL-SIDE DOOR LOCK/UNLOCK, TRUNK RELEASE (DO NOT USE FOR NEW MAJOR PROGRAMS)	U.S.A., PR and USVI (MAH),Canada (MBC)
KTK	LOCK CONTROL-SIDE DOOR LOCK/UNLOCK, REMOTE START (DO NOT USE FOR NEW MAJOR PROGRAMS)	U.S.A., PR and USVI (MAH),Canada (MBC)
KTL	LOCK CONTROL-SIDE DOOR LOCK/UNLOCK, TRUNK RELEASE, REMOTE START (DO NOT USE FOR NEW MAJOR PROGRAMS)	U.S.A., PR and USVI (MAH),Canada (MBC)
D91	HANDLE, REAR CLOSURE-O/S, L/GATE, R/CMPT, COLOR	U.S.A., PR and USVI (MAH),Canada (MBC)
AE2	LATCH-RR COMPARTMENT, SAFETY, MANUAL RELEASE	U.S.A., PR and USVI (MAH),Canada (MBC)
E3E	HANDLE, REAR CLOSURE-O/S, L/GATE, R/CMPT, CHROME	U.S.A., PR and USVI (MAH),Canada (MBC)
D31	MIRROR I/S R/V-TILT	U.S.A., PR and USVI (MAH),Canada (MBC)
DG2	MIRROR O/S-LH and RH, REMOTE CONTROL, MANUAL FOLDING, COLOR	U.S.A., PR and USVI (MAH),Canada (MBC)
DG6	MIRROR O/S-LH and RH, REMOTE CONTROL, ELECTRIC, MANUAL FOLDING,HEATED, COLOR	U.S.A., PR and USVI (MAH),Canada (MBC)
YG3	ORNAMENTATION-EXTR, HEAD and TAIL LAMPS,CHROME BEZEL	U.S.A., PR and USVI (MAH),Canada (MBC)
YG5	ORNAMENTATION-EXTR, HEAD and TAIL LAMPS, HIGH GLOSS FINISH	U.S.A., PR and USVI (MAH),Canada (MBC)
AKJ	WINDSHIELD STYLE-SHADE BAND	U.S.A., PR and USVI (MAH),Canada (MBC)
VEE	BUMPER FRT-BODY COLOR, FRT and RR	U.S.A., PR and USVI (MAH),Canada (MBC)
E19	BUMPER-5.0 MPH	U.S.A., PR and USVI (MAH),Canada (MBC)
V22	GRILLE-RADIATOR, CHROME	U.S.A., PR and USVI (MAH),Canada (MBC)
VKD	LICENSE PLATE-FRT and RR MOUNTING, SAE	U.S.A., PR and USVI (MAH),Canada (MBC)
BPF	BUMPER PROVISIONS-FRONT, LOWER SPOILER EDGE	U.S.A., PR and USVI (MAH),Canada (MBC)
CF5	ROOF-SUN, GLASS, SLIDING, ELEC	U.S.A., PR and USVI (MAH),Canada (MBC)
B6E	MOLDING ROCKER-SPORTY	U.S.A., PR and USVI (MAH),Canada (MBC)
MDC	MOLDING B/S UPPER-BRIGHT	U.S.A., PR and USVI (MAH),Canada (MBC)
T4A	HEADLAMPS-HALOGEN	U.S.A., PR and USVI (MAH),Canada (MBC)

Schematics RPO Code List (cont'd)

RPO	Option Name	Country Group
T83	CONTROL, HEADLAMPS-AUTOMATIC ON-OFF	U.S.A., PR and USVI (MAH),Canada (MBC)
T3W	LAMP SYSTEM-DAYTIME RUNNING, REDUCED INTENSITY LOW BEAM	U.S.A., PR and USVI (MAH),Canada (MBC)
T3U	LAMP FRT FOG-FRT FOG	U.S.A., PR and USVI (MAH),Canada (MBC)
TR1	LAMP-TAIL and STOP	U.S.A., PR and USVI (MAH),Canada (MBC)
TS6	LAMP-STOP, HIGH LEVEL	U.S.A., PR and USVI (MAH),Canada (MBC)
CD4	WIPER SYS WINDSHIELD-PULSE, VARIABLE DELAY	U.S.A., PR and USVI (MAH),Canada (MBC)
C25	WIPER SYS RR WINDOW-INTERMITTENT	U.S.A., PR and USVI (MAH),Canada (MBC)
BJ6	ORNAMENTATION-NAME PLATE "SONIC"	U.S.A., PR and USVI (MAH),Canada (MBC)
WCM	ORNAMENTATION-LETTERING "LT"	U.S.A., PR and USVI (MAH),Canada (MBC)
WWA	ORNAMENTATION-LETTERING "LTZ"	U.S.A., PR and USVI (MAH),Canada (MBC)
BQH	ORNAMENTATION-LETTERING, "TURBO"	U.S.A., PR and USVI (MAH),Canada (MBC)
FG5	ORNAMENTATION-EXTR, EMBLEM FLEXFUEL	U.S.A., PR and USVI (MAH),Canada (MBC)
TTV	SPOILER-RR, LID/LIFTGATE, SPORT,	U.S.A., PR and USVI (MAH),Canada (MBC)
D59	SPOILER-RR, INTEGRAL DECKLID	U.S.A., PR and USVI (MAH),Canada (MBC)
BXQ	ORNAMENTATION-EXTR, PLR APLQ, REVEAL, BLACK	U.S.A., PR and USVI (MAH),Canada (MBC)
UDB	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (SEGMENTED)	U.S.A., PR and USVI (MAH),Canada (MBC)
U18	SPEEDOMETER-INST, KILO	Canada (MBC)
UC1	SPEEDOMETER-INST, MILES	U.S.A., PR and USVI (MAH)
U68	DISPLAY-DRIVER INFO CENTER	U.S.A., PR and USVI (MAH),Canada (MBC)
UH0	INDICATOR-SEAT BELT WARNING , LH	U.S.A., PR and USVI (MAH),Canada (MBC)
UH1	INDICATOR-SEAT BELT WARNING , RH	U.S.A., PR and USVI (MAH),Canada (MBC)
UJ2	INDICATOR-ENGINE OIL LIFE	U.S.A., PR and USVI (MAH),Canada (MBC)
UJM	TIRE PRESS INDICATOR-MANUAL LEARN	U.S.A., PR and USVI (MAH),Canada (MBC)
WU5	SWITCH-I/P LP DIMR	U.S.A., PR and USVI (MAH),Canada (MBC)
USR	RECEPTACLE-USB	U.S.A., PR and USVI (MAH),Canada (MBC)
UM7	RADIO-AM/FM STEREO, SEEK/SCAN, CLOCK, ETR	U.S.A., PR and USVI (MAH),Canada (MBC)
UH7	RADIO-AM/FM STEREO, SEEK/SCAN, CD, ETR, CLOCK DSP, MP3/WMA, USB, AUX/IN, WIRELESS INTERFACE	U.S.A., PR and USVI (MAH),Canada (MBC)
UF7	RADIO-AM/FM STEREO, SEEK/SCAN, ETR, CLOCK DSP, MP3/WMA, USB, AUX/IN, WIRELESS INTERFACE	U.S.A., PR and USVI (MAH),Canada (MBC)

Schematics RPO Code List (cont'd)

RPO	Option Name	Country Group
U58	RADIO FACEPLATE-INTEGRATED CENTER CONSOLE	U.S.A., PR and USVI (MAH),Canada (MBC)
UW4	SPEAKER SYSTEM-4, CUSTOM	U.S.A., PR and USVI (MAH),Canada (MBC)
UQ3	SPEAKER SYSTEM-ENHANCED AUDIO	U.S.A., PR and USVI (MAH),Canada (MBC)
U2K	DIGITAL AUDIO SYSTEM-S-BAND	U.S.A., PR and USVI (MAH),Canada (MBC)
UC3	CONTROL-STEERING WHEEL, RADIO and PHONE, REDUNDANT CONTROLS	U.S.A., PR and USVI (MAH),Canada (MBC)
U80	DISPLAY-COMPASS	U.S.A., PR and USVI (MAH),Canada (MBC)
UBA	ANTENNA-ROOF, RADIO, GPS, PHONE, S BAND XM	U.S.A., PR and USVI (MAH),Canada (MBC)
UE1	COMMUNICATION SYSTEM-VEHICLE, ONSTAR	U.S.A., PR and USVI (MAH),Canada (MBC)
UPF	WIRELESS INTERFACE-SHORT RANGE, VOICE REC	U.S.A., PR and USVI (MAH),Canada (MBC)
UGM	SENSOR EQUIPMENT-OUTSIDE AIR TEMPERATURE SENSOR	U.S.A., PR and USVI (MAH),Canada (MBC)
AL0	SENSOR INDICATOR-INFLATABLE RESTRAINT, FRT PASS/ CHILD PRESENCE DETECTOR	U.S.A., PR and USVI (MAH),Canada (MBC)
B9U	LOCK CONTROL RR CMPT-L/GATE REM CONT, ELEC OPEN/ CLOSE	U.S.A., PR and USVI (MAH),Canada (MBC)
A90	LOCK CONTROL RR CMPT-LID, REM CONT ELEC RELEASE	U.S.A., PR and USVI (MAH),Canada (MBC)
BAH	EQUIPMENT-SECURITY SYSTEM, IMMOBILIZATION, STEP TWO	U.S.A., PR and USVI (MAH),Canada (MBC)
UTJ	THEFT DETERENT-ELECTRICAL, UNAUTHORIZED ENTRY	U.S.A., PR and USVI (MAH),Canada (MBC)
BTV	REMOTE START-ENGINE	U.S.A., PR and USVI (MAH),Canada (MBC)
XL7	FREQUENCIES RATING-315 MHZ, LONG DISTANCE	U.S.A., PR and USVI (MAH),Canada (MBC)
BTT	ALARM-REMOTE PANIC	U.S.A., PR and USVI (MAH),Canada (MBC)
U04	HORN-SINGLE NOTE	U.S.A., PR and USVI (MAH),Canada (MBC)
TM7	BATTERY-LN2, FLA, 12V, 60AH, 438 ENCCA	U.S.A., PR and USVI (MAH),Canada (MBC)
K60	GENERATOR-100 AMP	U.S.A., PR and USVI (MAH),Canada (MBC)
ORN	PLANT CODE-ORION, MI, USA	U.S.A., PR and USVI (MAH),Canada (MBC)
5JL	ACCESSORY-BRAKE UPGRADE PKG 1 - COMPLETE	U.S.A., PR and USVI (MAH),Canada (MBC)
SCJ	ACCESSORY-SUSPENSION LOWERING KIT	U.S.A., PR and USVI (MAH),Canada (MBC)
SG3	ACCESSORY-SPRINGS - SPORT SUSPENSION	U.S.A., PR and USVI (MAH),Canada (MBC)
VKX	ACCESSORY-SPARE WHEEL and TIRE	U.S.A., PR and USVI (MAH)
RXZ	ACCESSORY-CRUISE CONTROL KIT	U.S.A., PR and USVI (MAH),Canada (MBC)
5BA	ACCESSORY-WHEEL - 17" X 6.5 - J - ALUMINUM - DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)

Schematics RPO Code List (cont'd)

RPO	Option Name	Country Group
5BB	ACCESSORY-WHEEL - 17" X 6.5 - J - ALUMINUM - DESIGN 2	U.S.A., PR and USVI (MAH),Canada (MBC)
5BC	ACCESSORY-WHEEL - 17" X 6.5 - J - ALUMINUM - DESIGN 3	U.S.A., PR and USVI (MAH),Canada (MBC)
5BD	ACCESSORY-WHEEL - 17" X 6.5 - J - ALUMINUM - DESIGN 4	U.S.A., PR and USVI (MAH),Canada (MBC)
5V4	ACCESSORY-EXTERIOR APPEARANCE PACKAGE 1	U.S.A., PR and USVI (MAH),Canada (MBC)
5KW	ACCESSORY-EXTERIOR APPEARANCE PACKAGE 2	U.S.A., PR and USVI (MAH),Canada (MBC)
5KX	ACCESSORY-EXTERIOR APPEARANCE PACKAGE 3	U.S.A., PR and USVI (MAH),Canada (MBC)
5KY	ACCESSORY-EXTERIOR APPEARANCE PACKAGE 4	U.S.A., PR and USVI (MAH),Canada (MBC)
SDZ	ACCESSORY-WHEEL - 17" - ALLOY - DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
VSR	ACCESSORY-WHEEL - 16" - ALLOY - DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
5ZY	ACCESSORY-WHEEL-16 X 6.0 - J - ALUMINUM - DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
SE0	ACCESSORY-WHEEL - 17" - ALUMINUM - DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
SE1	ACCESSORY-WHEEL - 17" - ALUMINUM - DESIGN 2	U.S.A., PR and USVI (MAH),Canada (MBC)
SE4	ACCESSORY-WHEEL - 18" - ALUMINUM - DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
RXH	ACCESSORY-CENTER CAP - WHEEL - DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
RX6	ACCESSORY-CARRIER - BICYCLE - TRAILER HITCH MOUNTED	Canada (MBC)
RWU	ACCESSORY-CARGO AREA ORGANIZER - COLLAPSIBLE	U.S.A., PR and USVI (MAH),Canada (MBC)
W2D	ACCESSORY-CARGO NET	U.S.A., PR and USVI (MAH),Canada (MBC)
CAV	ACCESSORY-TRAY - TRUNK/CARGO AREA	U.S.A., PR and USVI (MAH),Canada (MBC)
VYW	ACCESSORY-FLOOR MATS - PREMIUM CARPET - DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
VAV	ACCESSORY-FLOOR MATS - ALL WEATHER	U.S.A., PR and USVI (MAH),Canada (MBC)
SAO	ACCESSORY-SMOKERS PACKAGE	U.S.A., PR and USVI (MAH),Canada (MBC)
RWK	ACCESSORY-BODY SIDE MOLDINGS - PAINTED	U.S.A., PR and USVI (MAH),Canada (MBC)
SB7	ACCESSORY-DECAL PACKAGE - DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
VKY	ACCESSORY-DOOR HANDLES - ALTERNATE FINISH - CHROME	U.S.A., PR and USVI (MAH),Canada (MBC)
VQK	ACCESSORY-SPLASH GUARDS - CUSTOM MOLDED	U.S.A., PR and USVI (MAH),Canada (MBC)
VLL	ACCESSORY-CROSS RAILS - ROOF RACK - REMOVABLE	U.S.A., PR and USVI (MAH),Canada (MBC)
S3U	ACCESSORY-LAMP KIT - FRONT FOG	U.S.A., PR and USVI (MAH),Canada (MBC)
SB2	ACCESSORY-SPOILER - DECKLID - FLUSH MOUNT	U.S.A., PR and USVI (MAH),Canada (MBC)

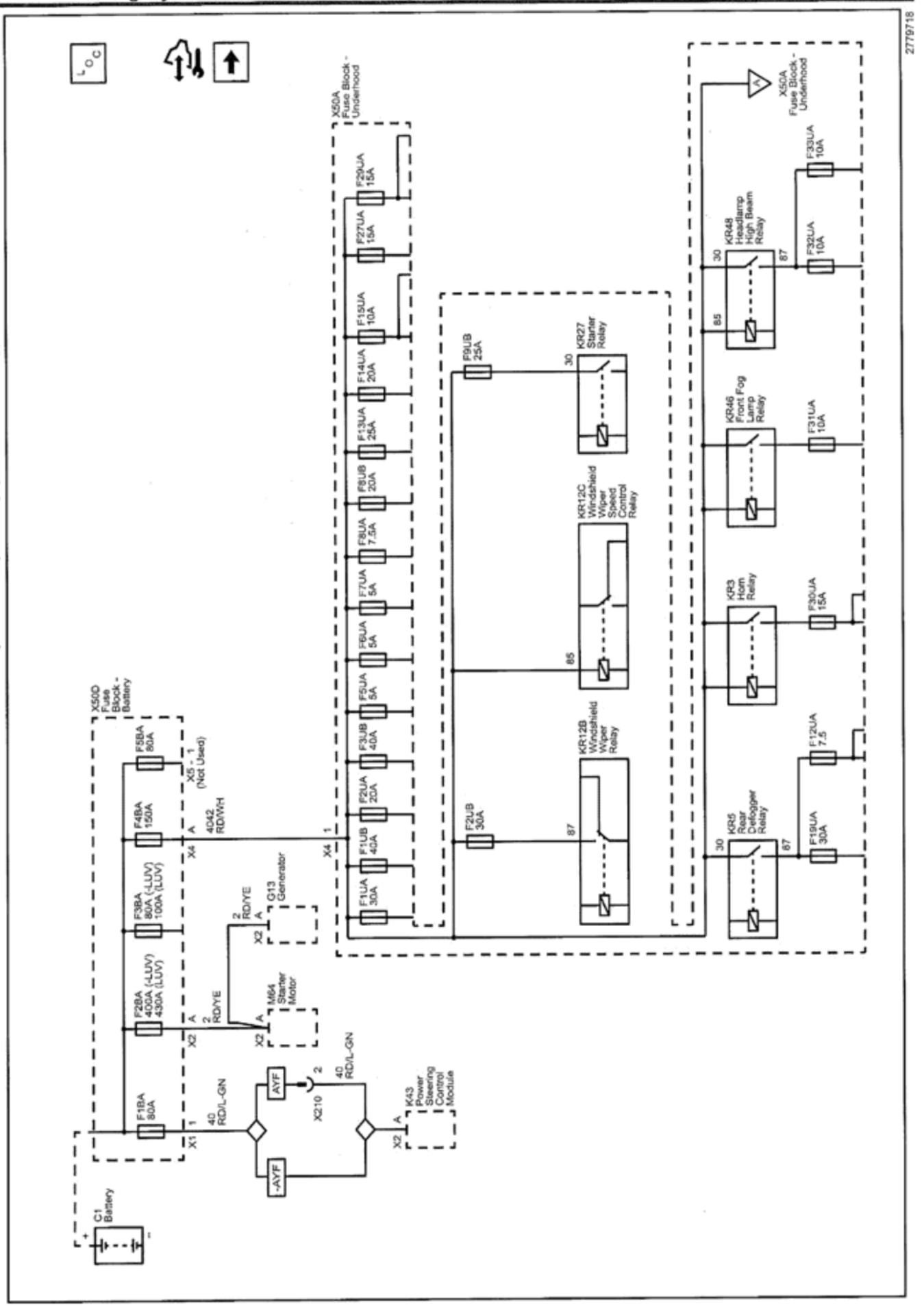
Schematics RPO Code List (cont'd)

RPO	Option Name	Country Group
VKU	ACCESSORY-MIRROR CAPS - CHROME	U.S.A., PR and USVI (MAH),Canada (MBC)
SFE	ACCESSORY-WHEEL LOCKS	U.S.A., PR and USVI (MAH),Canada (MBC)
RYV	ACCESSORY-FLOOR MATS - ECONOMY CARPET	U.S.A., PR and USVI (MAH),Canada (MBC)
VTB	ACCESSORY-PROTECTOR - REAR BUMPER	U.S.A., PR and USVI (MAH),Canada (MBC)
S6P	ACCESSORY-REMOTE START KIT	U.S.A., PR and USVI (MAH),Canada (MBC)
SAI	ACCESSORY-SILL PLATES - STAINLESS	U.S.A., PR and USVI (MAH),Canada (MBC)
SDS	ACCESSORY-WEATHER DEFLECTORS - SIDE WINDOW - SMOKED	U.S.A., PR and USVI (MAH),Canada (MBC)
VTG	ACCESSORY-INTERIOR TRIM KIT	U.S.A., PR and USVI (MAH),Canada (MBC)
RWS	ACCESSORY-FLOOR MATS - CARPET	U.S.A., PR and USVI (MAH),Canada (MBC)
5V5	ACCESSORY-SPOILER DESIGN 1	U.S.A., PR and USVI (MAH),Canada (MBC)
VTD	ACCESSORY-GROUND EFFECTS PACKAGE	U.S.A., PR and USVI (MAH),Canada (MBC)
SBZ	ACCESSORY-SPORT PEDAL KIT	U.S.A., PR and USVI (MAH),Canada (MBC)
SA0	ACCESSORY-LINERS - INTERIOR STORAGE COMPT	U.S.A., PR and USVI (MAH),Canada (MBC)
SFY	ACCESSORY-CARGO AREA LOAD FLOOR - SLIDING	U.S.A., PR and USVI (MAH),Canada (MBC)

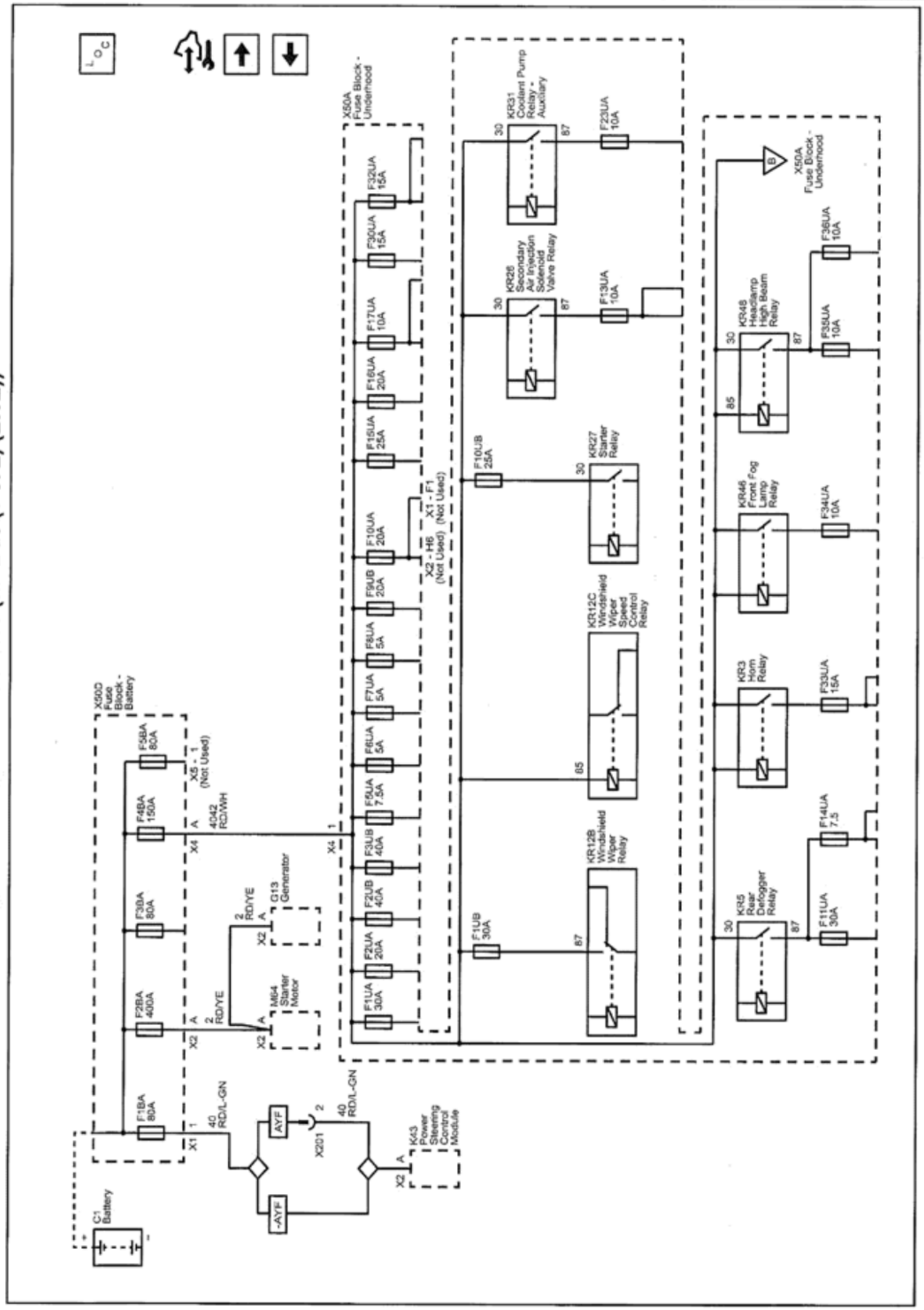
Master Electrical Schematic Icons

Icon	Icon Definition
 19386	***Warning: When performing service on or near the SIR components or the SIR wiring, the SIR system must be disabled. Refer to SIR Disabling and Enabling . Failure to observe the correct procedure could cause deployment of the SIR components, personal injury, or unnecessary SIR system repairs.***
 902886	**Note:** Twisted wires provide an effective shield that helps protect sensitive electronic components from electrical interference. In order to prevent electrical interference from degrading the performance of the connected components, you must maintain the proper specification when making any repairs to the twisted wires shown : • The wires must be twisted a minimum of 10 turns per 31 cm (12 in) as measured anywhere along the length of the wires. • The outside diameter of the twisted wires must not exceed 6.0 mm (0.25 in).

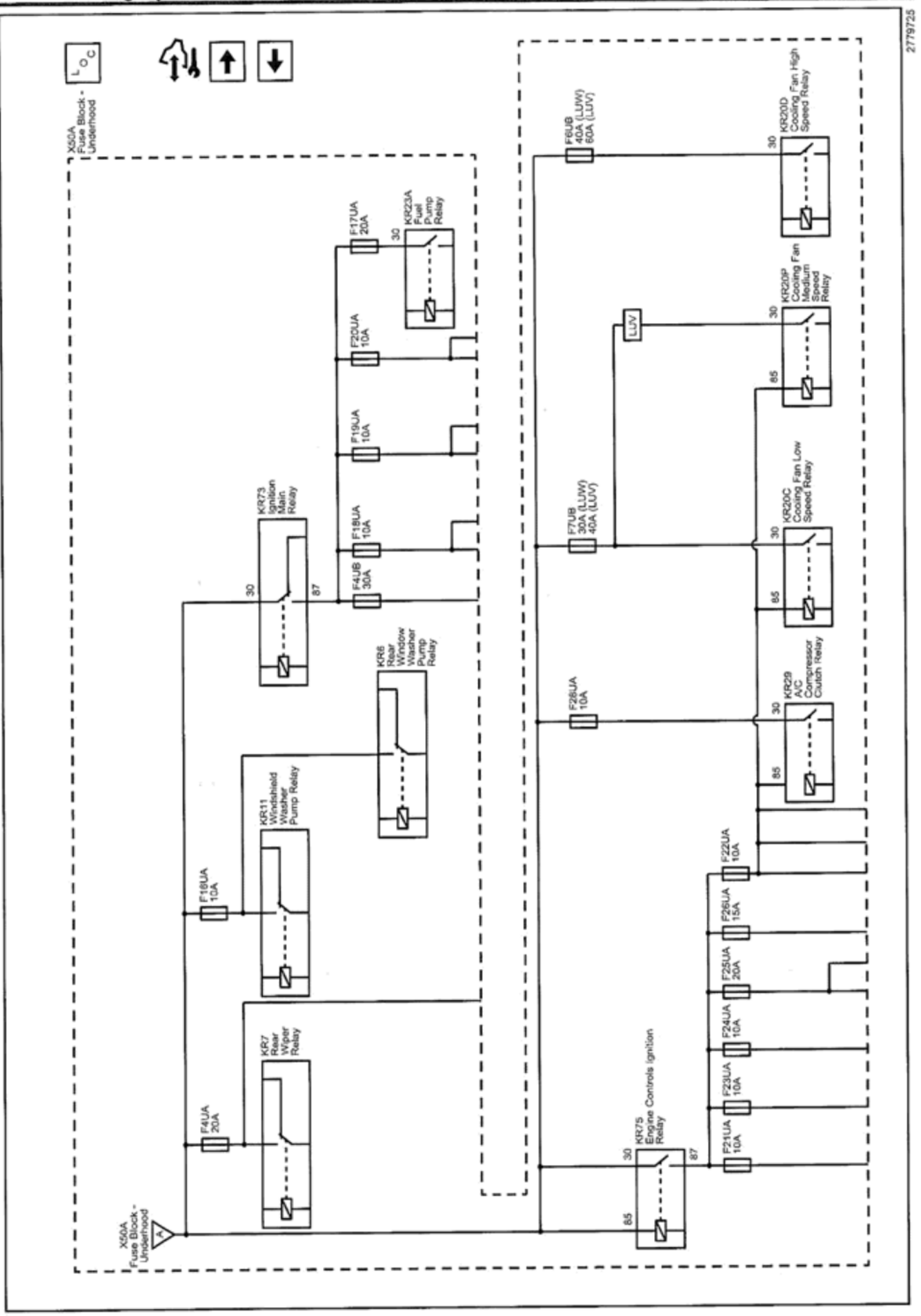
Power Distribution Schematics (B+ Bus (1 of 2) (LUV or LUW))



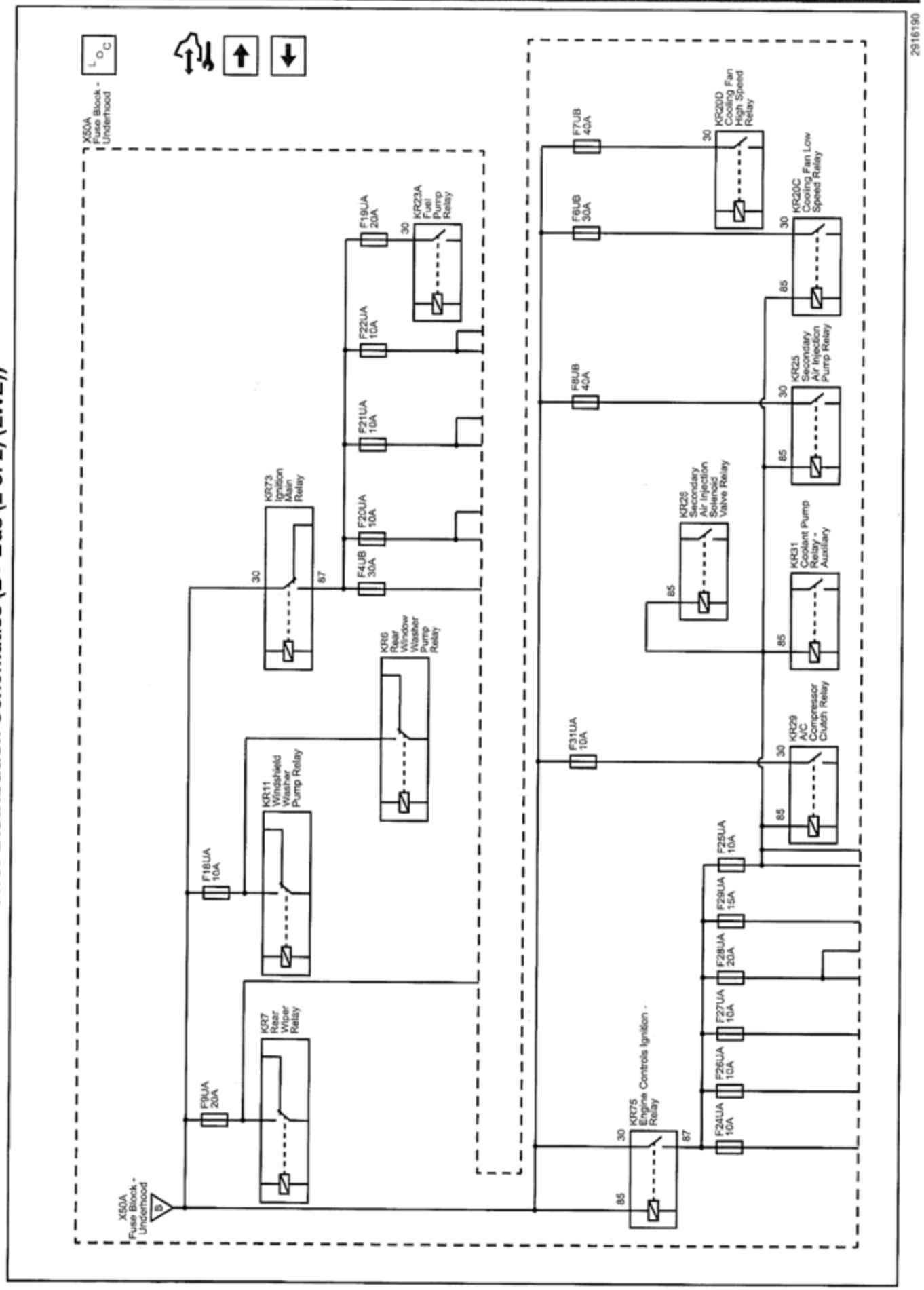
Power Distribution Schematics (B+ Bus (1 of 2) (LWE))



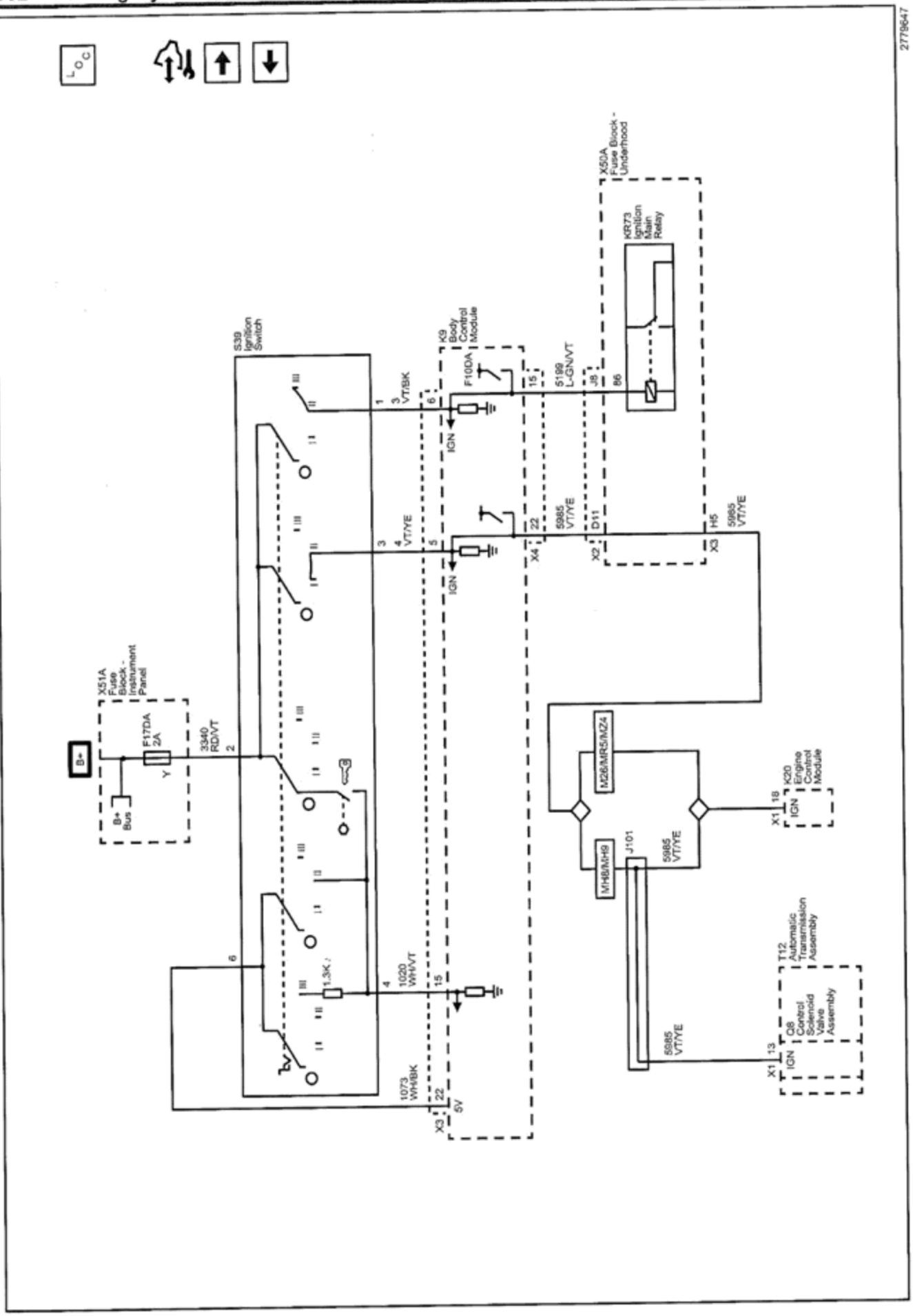
Power Distribution Schematics (B+ Bus (2 of 2) (LUV or LUW))



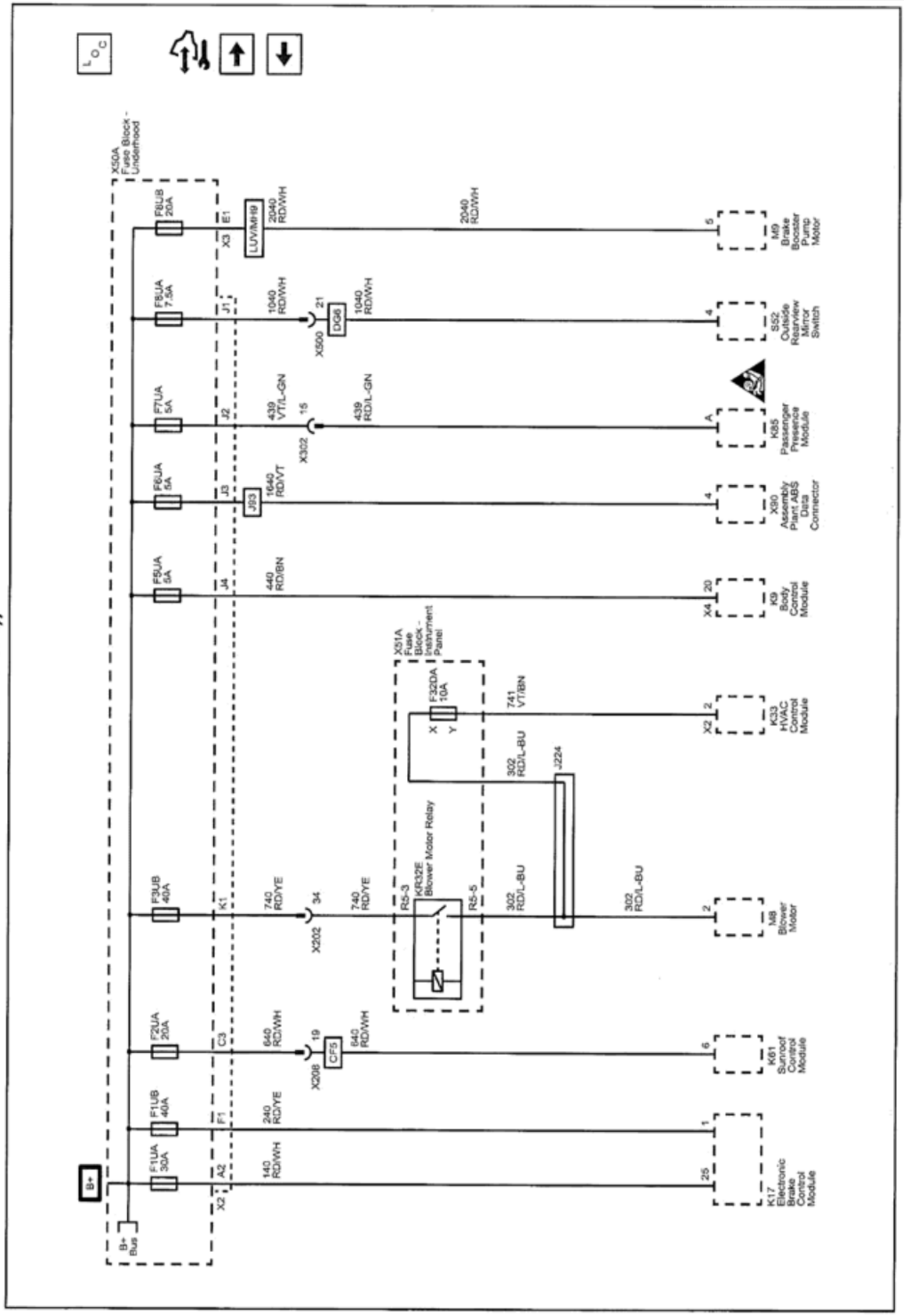
Power Distribution Schematics (B+ Bus (2 of 2) (LWE))



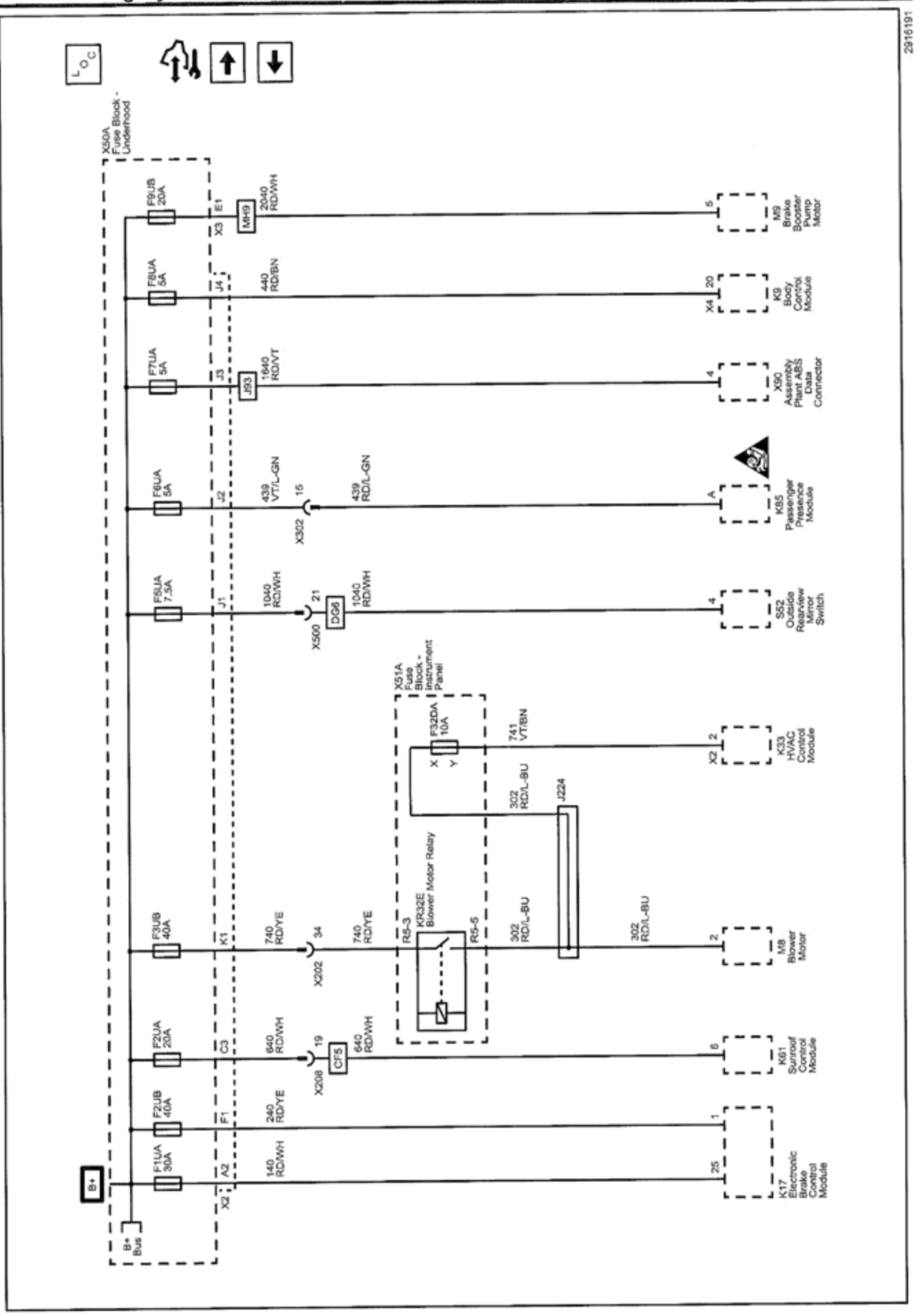
Power Distribution Schematics (Ignition Switch)



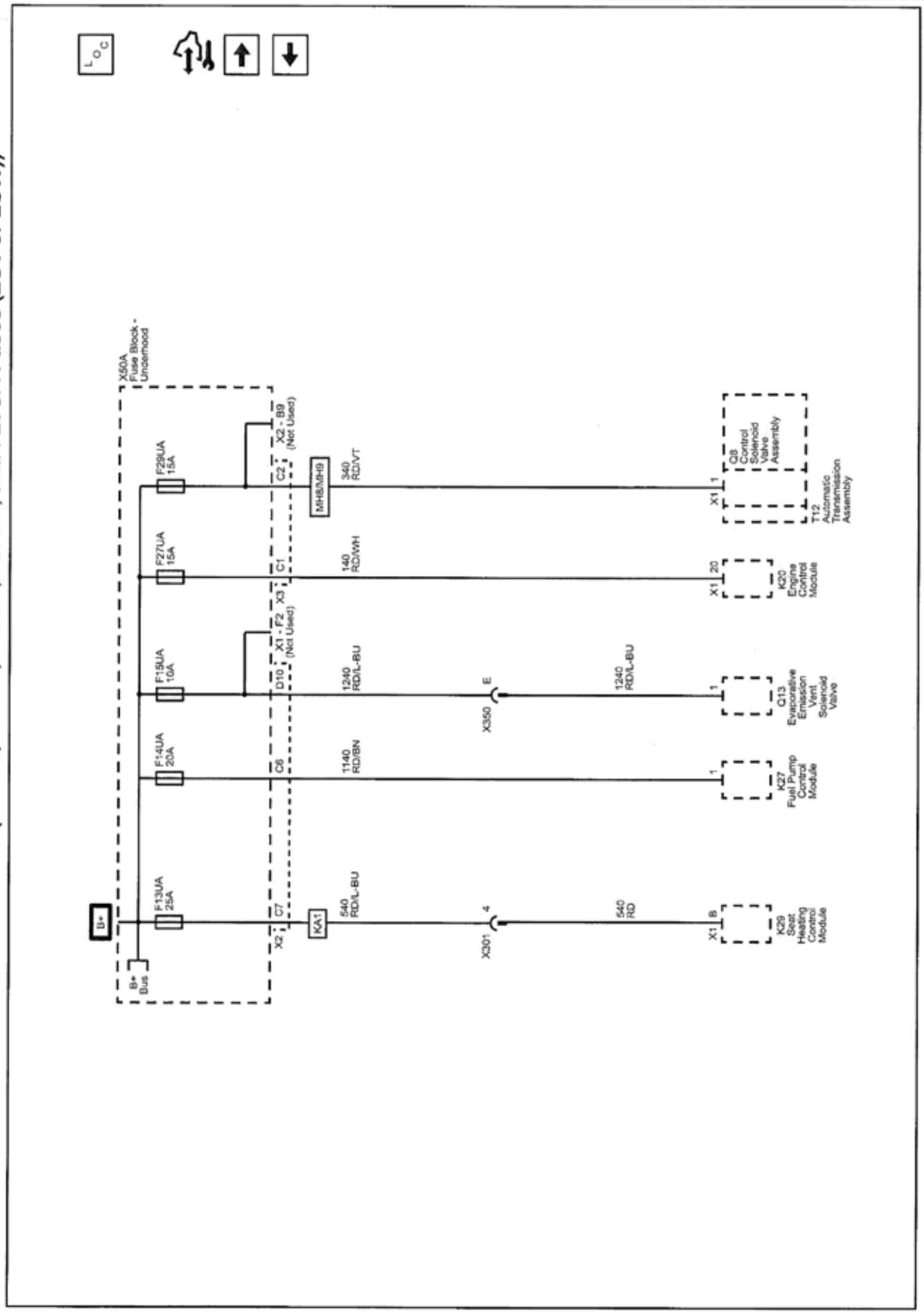
Power Distribution Schematics (F1UA, F1UB, F2UA, F3UB, F5UA, F6UA, F7UA, F8UA, F8UB, and F32DA Fuses (LUV or LUW))



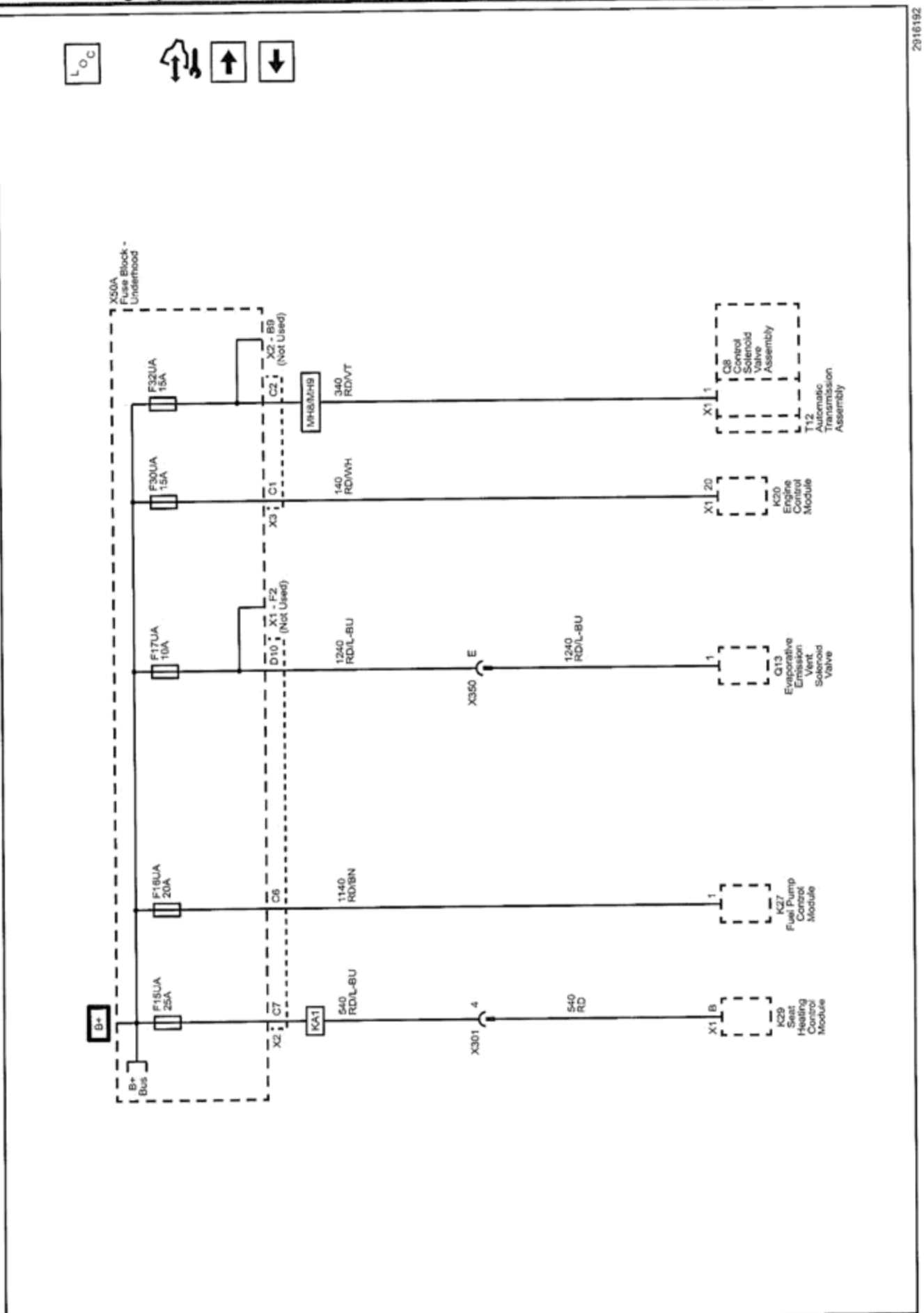
Power Distribution Schematics (F1UA, F2UA, F2UB, F3UB, F5UA, F6UA, F7UA, F8UA F9UB, and F32DA Fuses (LWE))



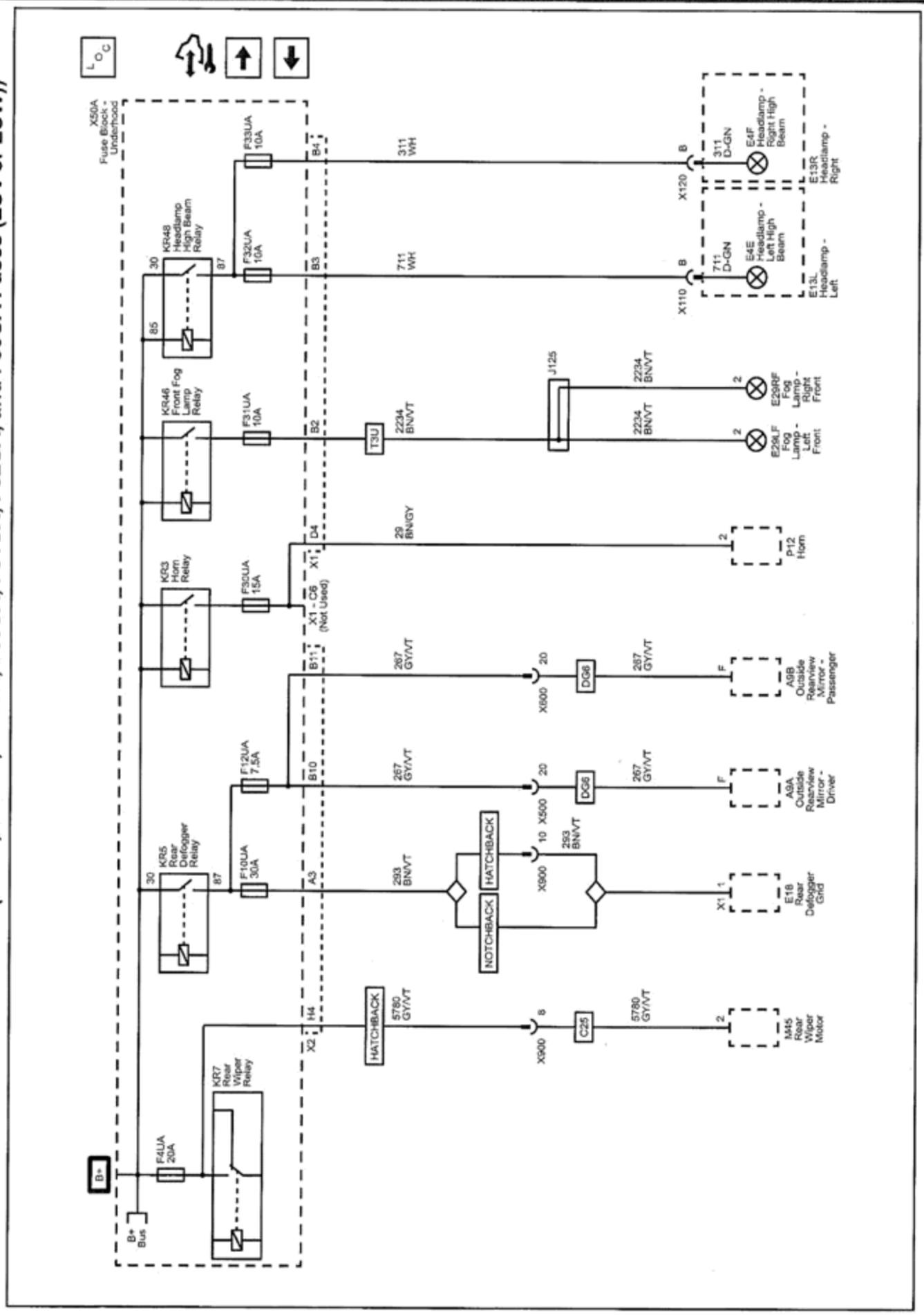
Power Distribution Schematics (F13UA, F14UA, F15UA, F27UA, and F29UA Fuses (LUV or LUW))



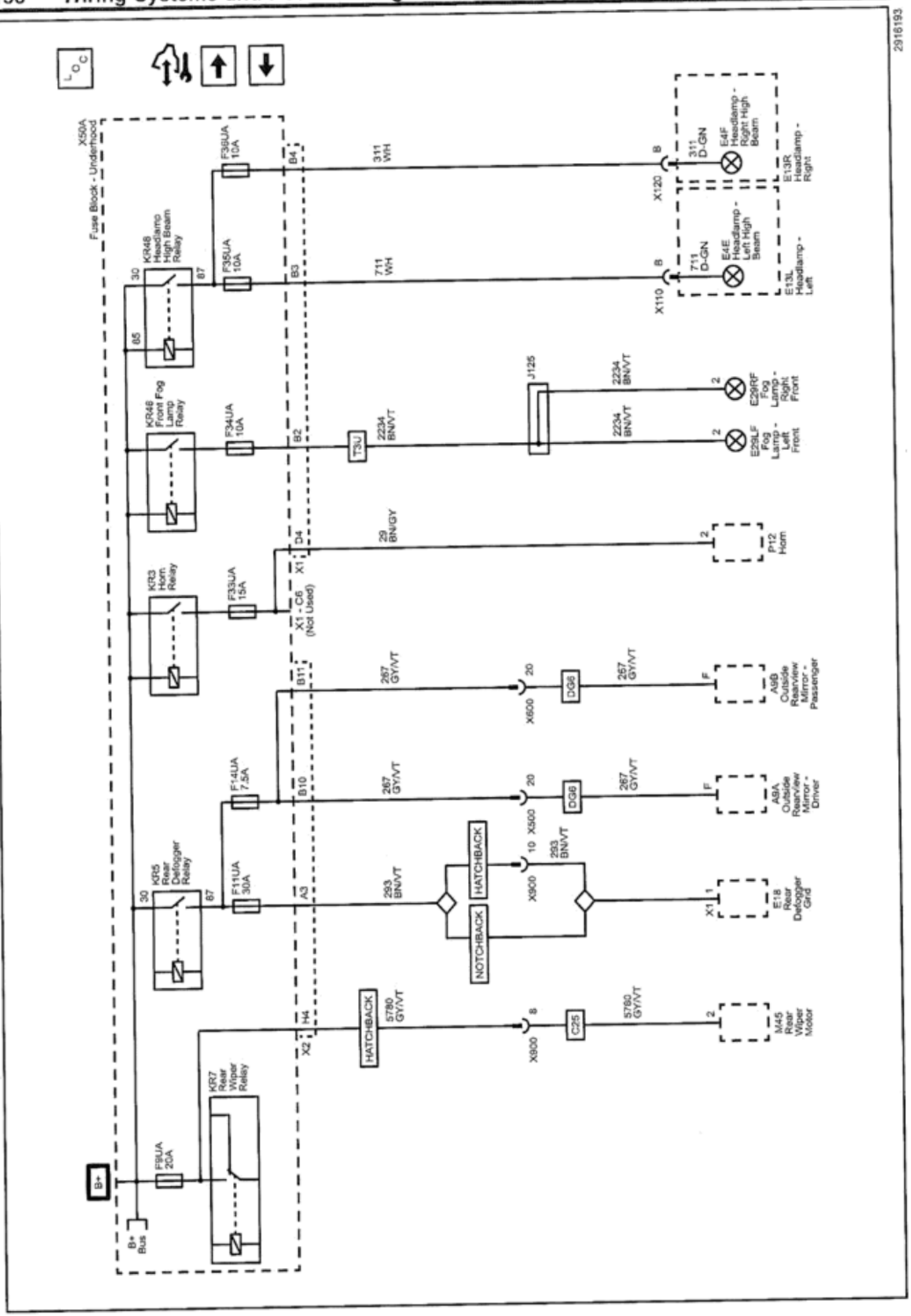
Power Distribution Schematics (F15UA, F16UA, F17UA, F30UA, and F32UA Fuses (LWE))



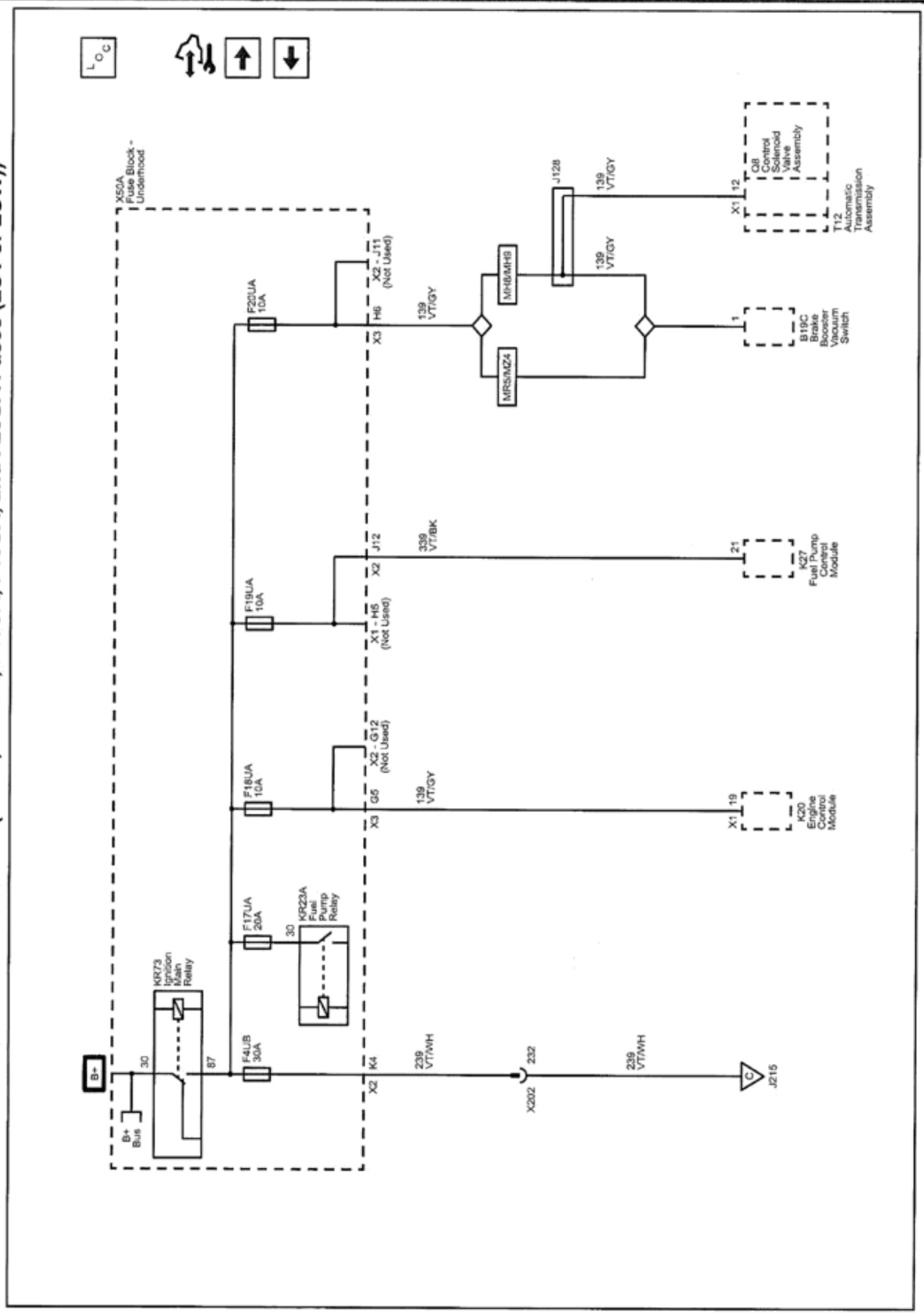
Power Distribution Schematics (F4UA, F10UA, F12UA, F30UA, F31UA, F32UA, and F33UA Fuses (LUV or LUW))



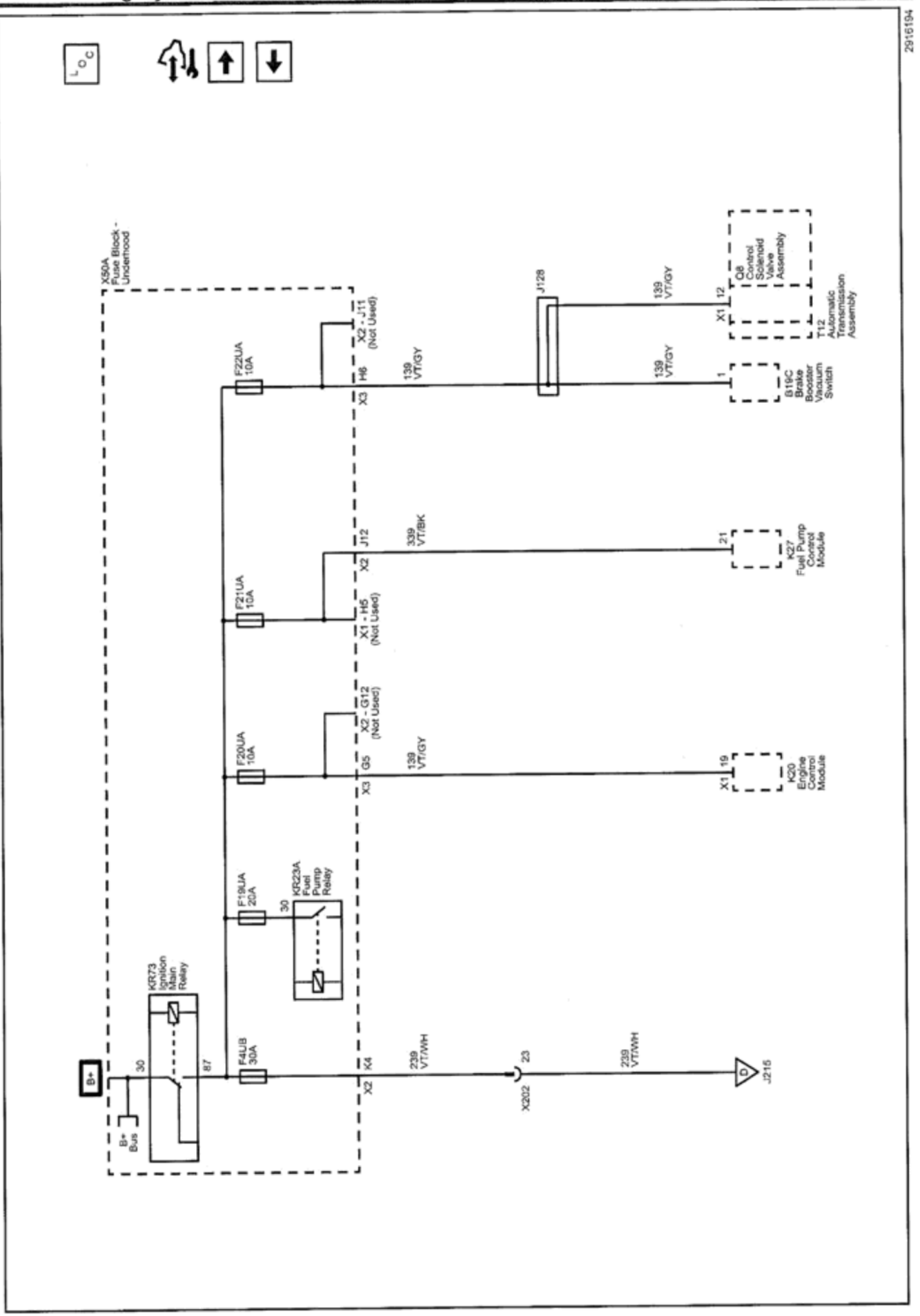
Power Distribution Schematics (F9UA, F11UA, F14UA, F33UA, F34UA, F35UA, and F36UA Fuses (LWE))



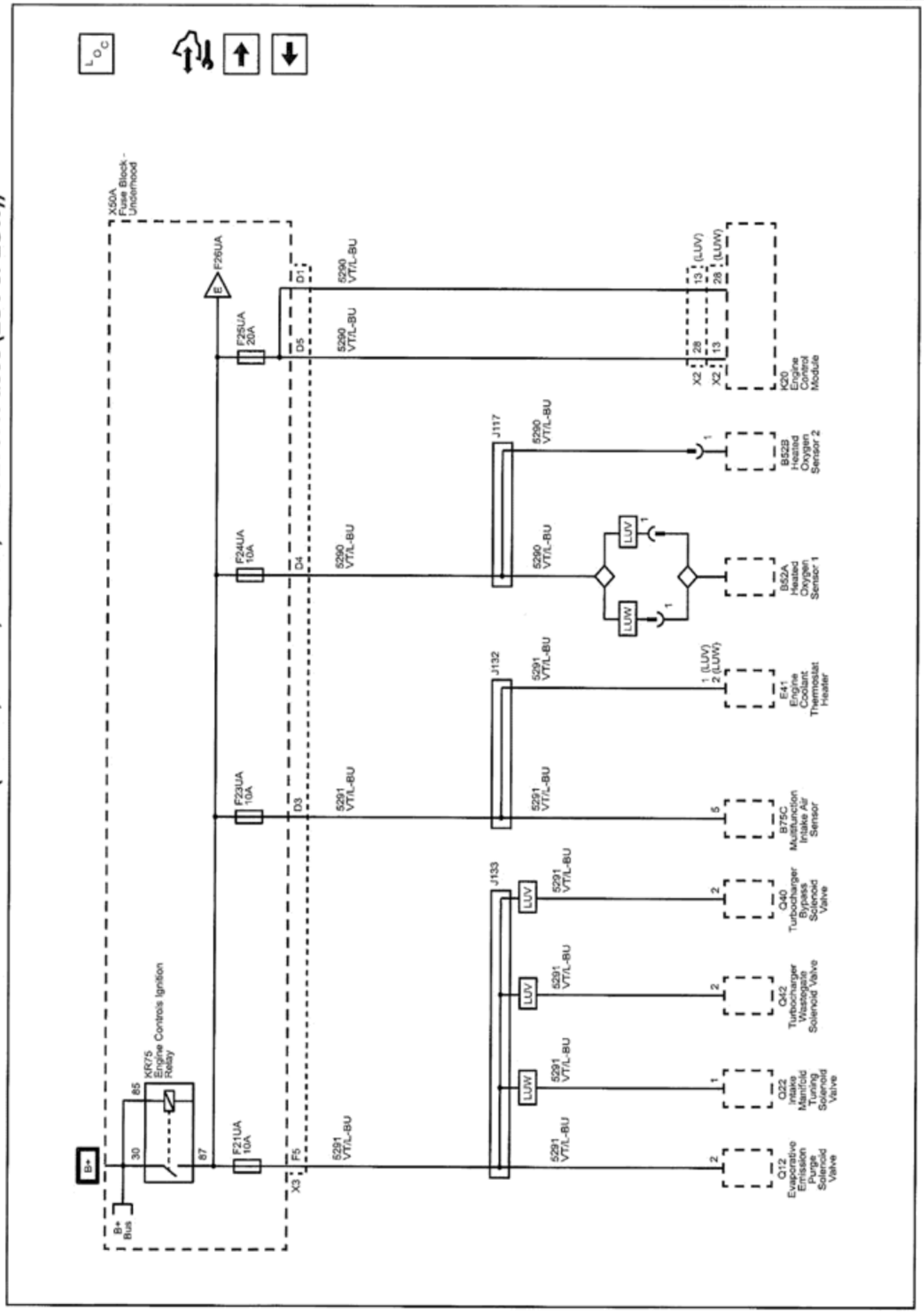
Power Distribution Schematics (F4UB, F17UA, F18UA, F19UA, and F20UA Fuses (LUV or LUW))



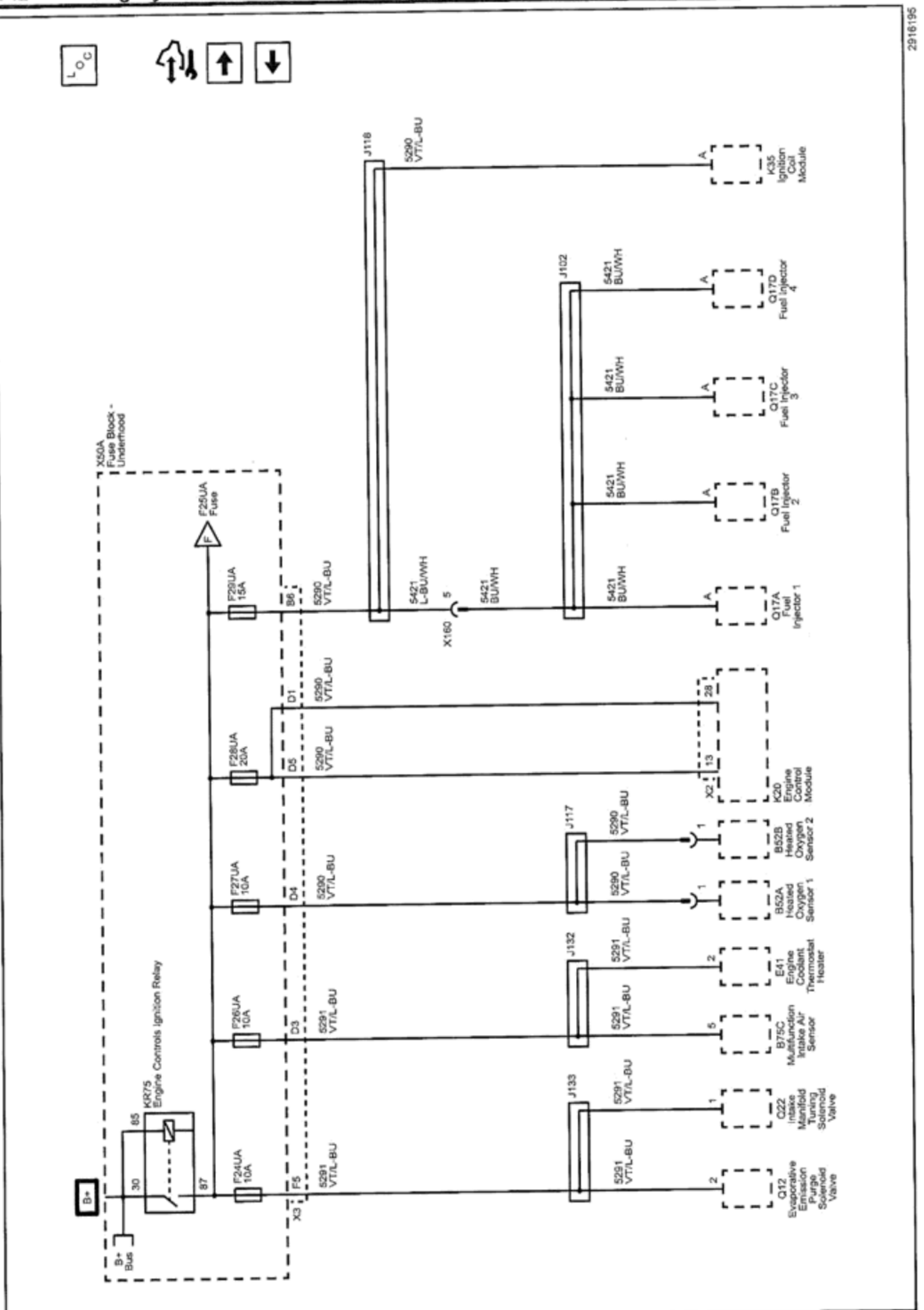
Power Distribution Schematics (F4UB, F19UA, F20UA, F21UA, and F22UA Fuses (LWE))



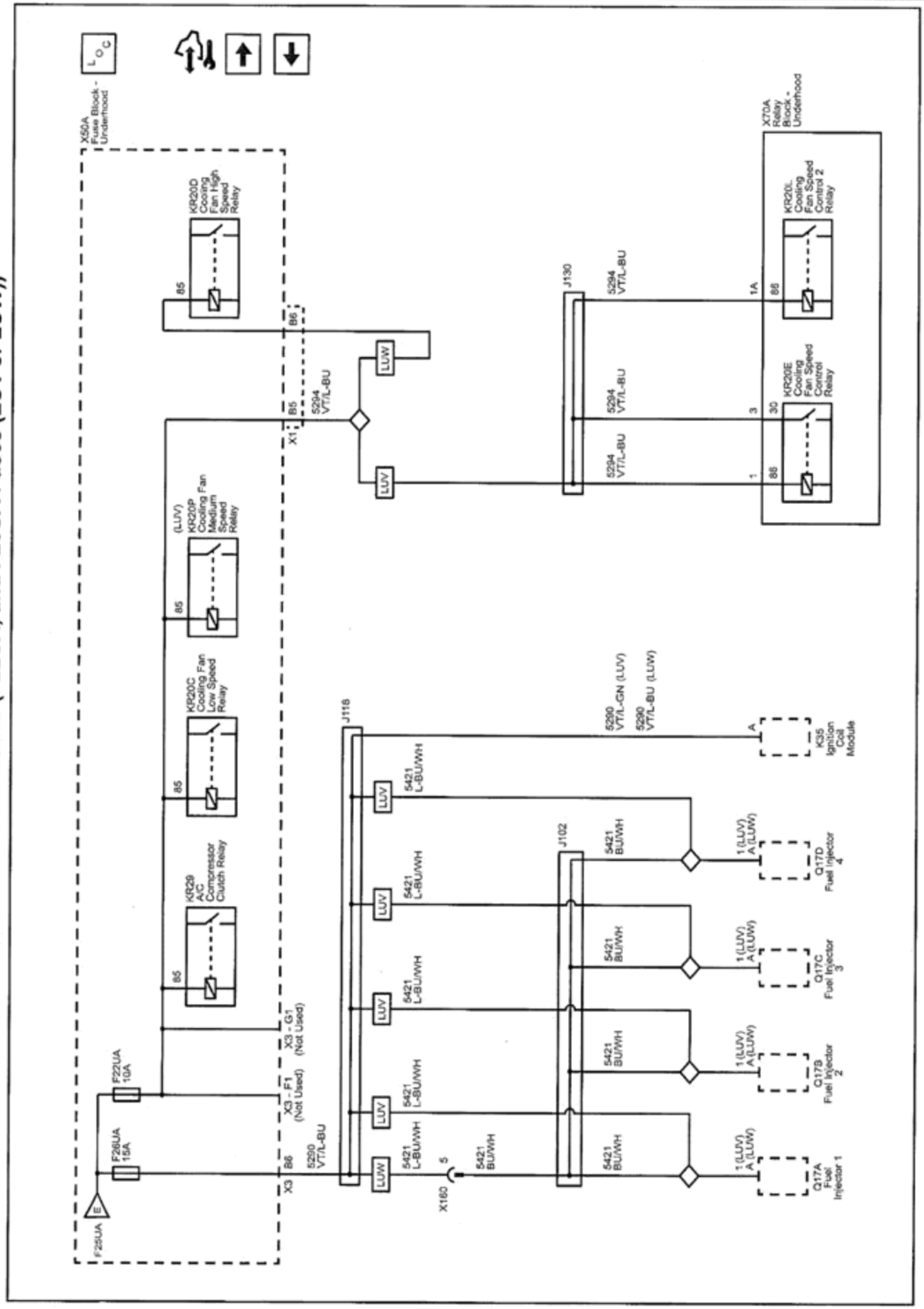
Power Distribution Schematics (F21UA, F23UA, F24UA, and F25UA Fuses (LUV or LUW))



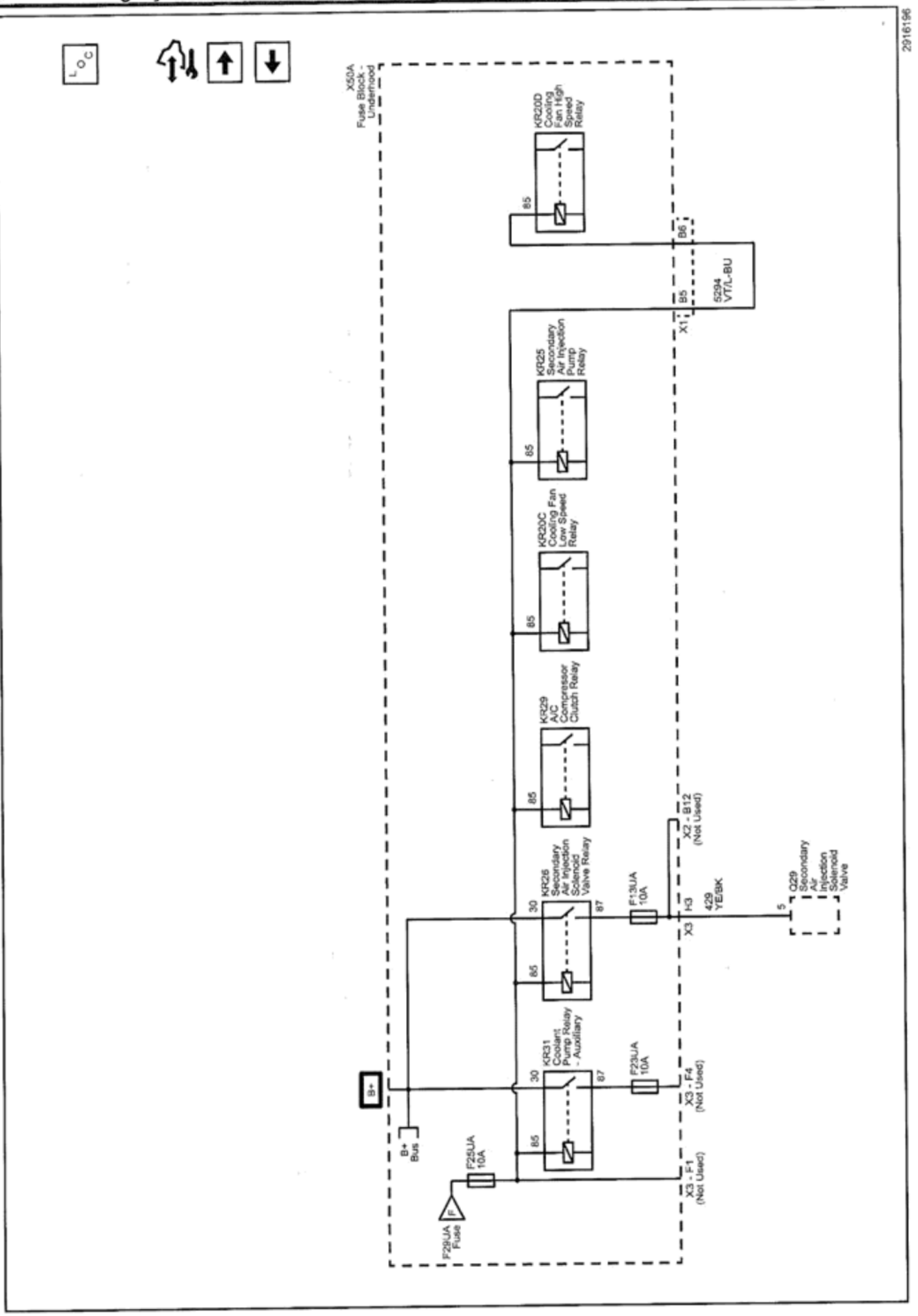
Power Distribution Schematics (F24UA, F26UA, F27UA, F28UA, and F29UA Fuses (LWE))



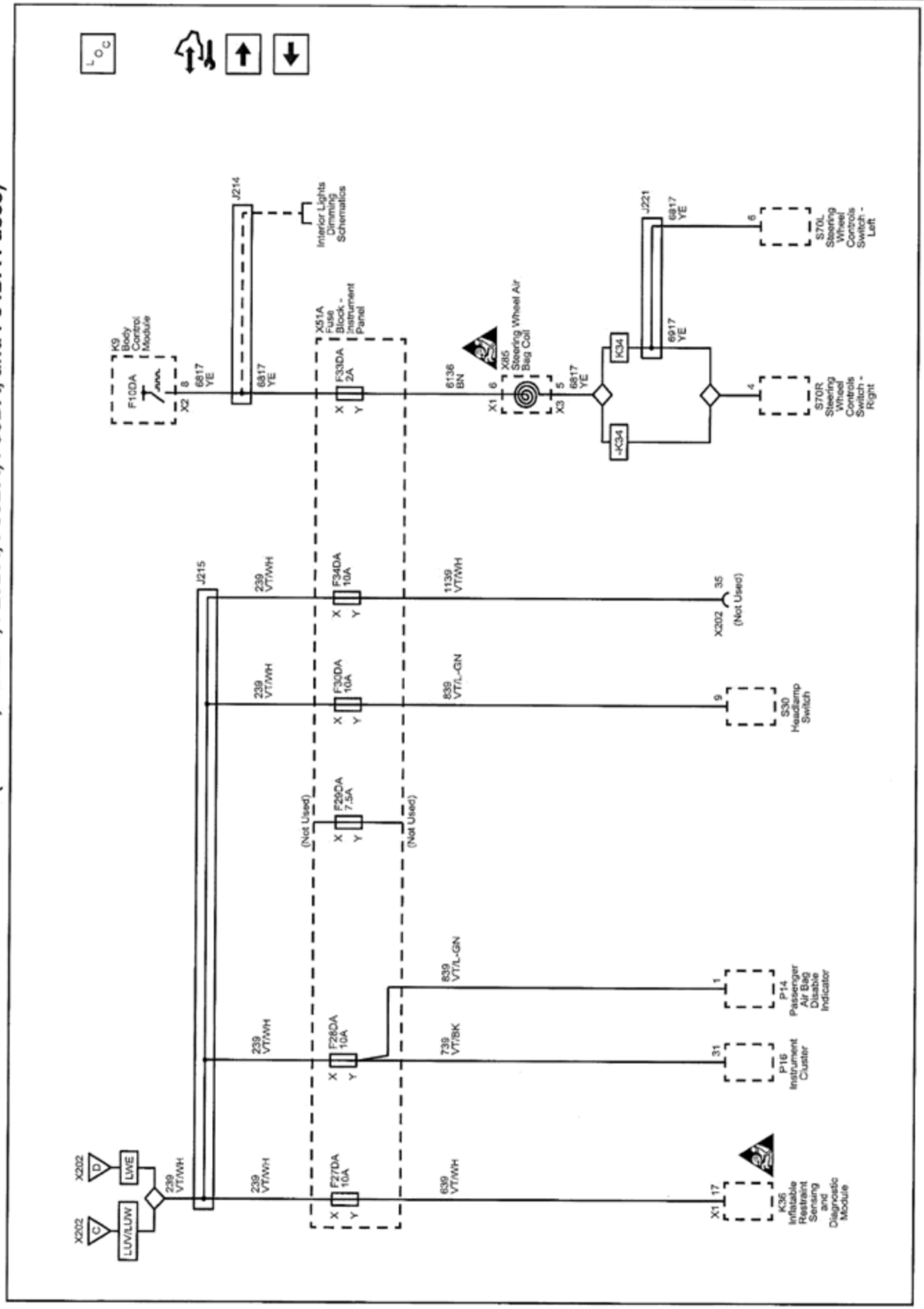
Power Distribution Schematics (F22UA, and F26UA Fuses (LUV or LUW))



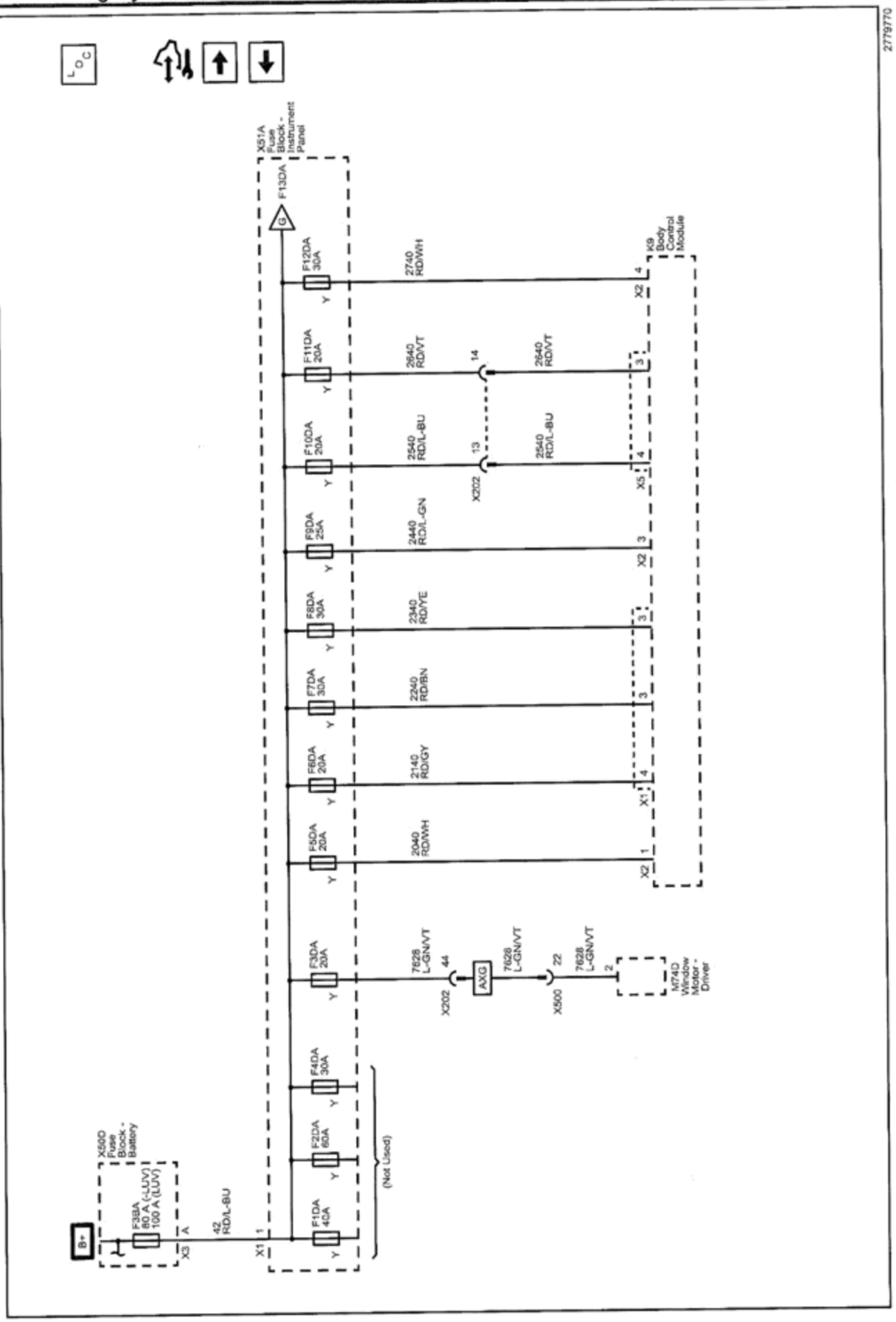
Power Distribution Schematics (F13UA, F23UA, and F25UA Fuses (LWE))



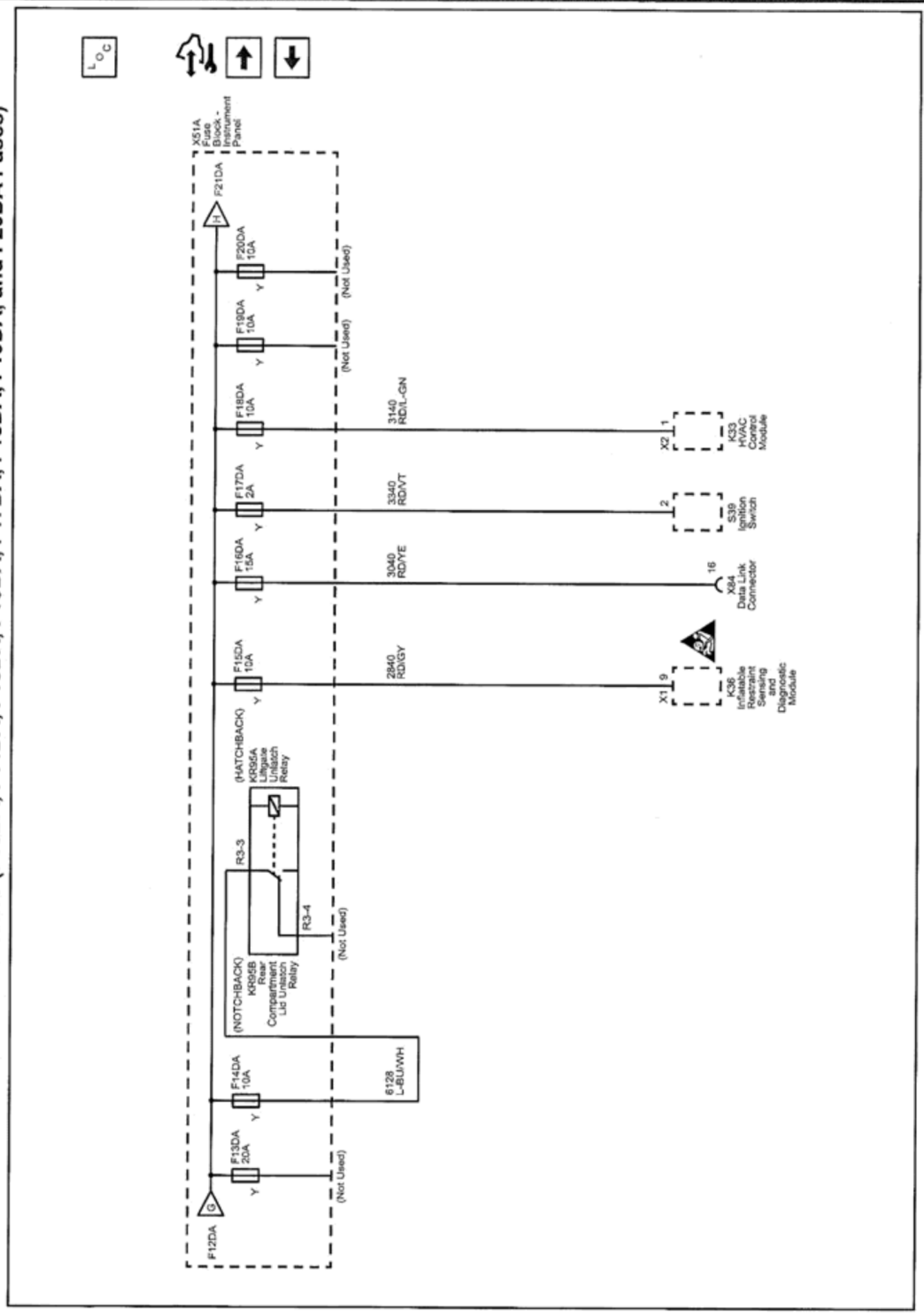
Power Distribution Schematics (F27DA, F28DA, F29DA, F30DA, F33DA, and F34DA Fuses)



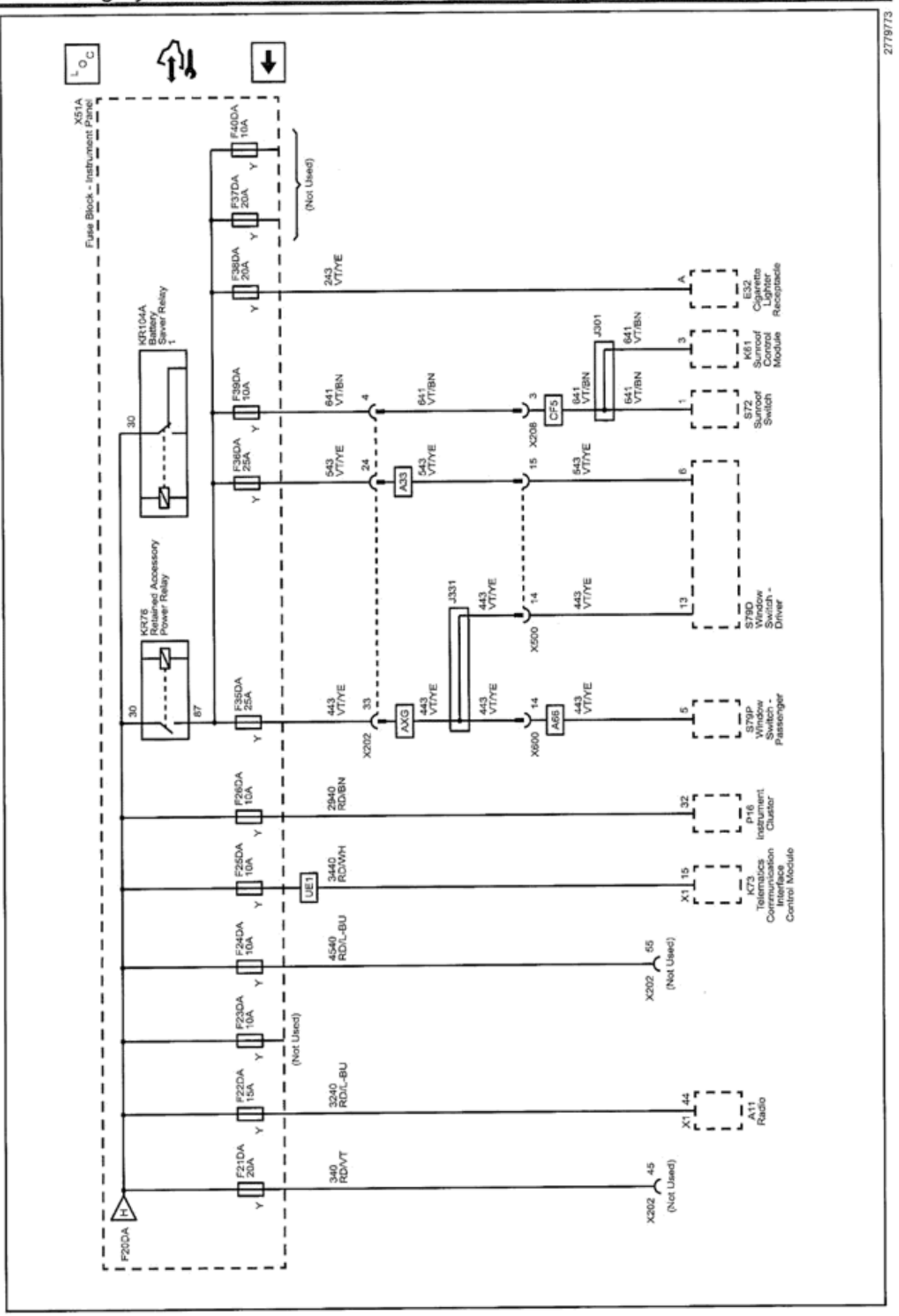
Power Distribution Schematics (F3BA, F1DA, F2DA, F3DA, F3UB, F4DA, F5DA, F6DA, F7DA, F8DA, F9DA, F10DA, F11DA and F12DA Fuses)



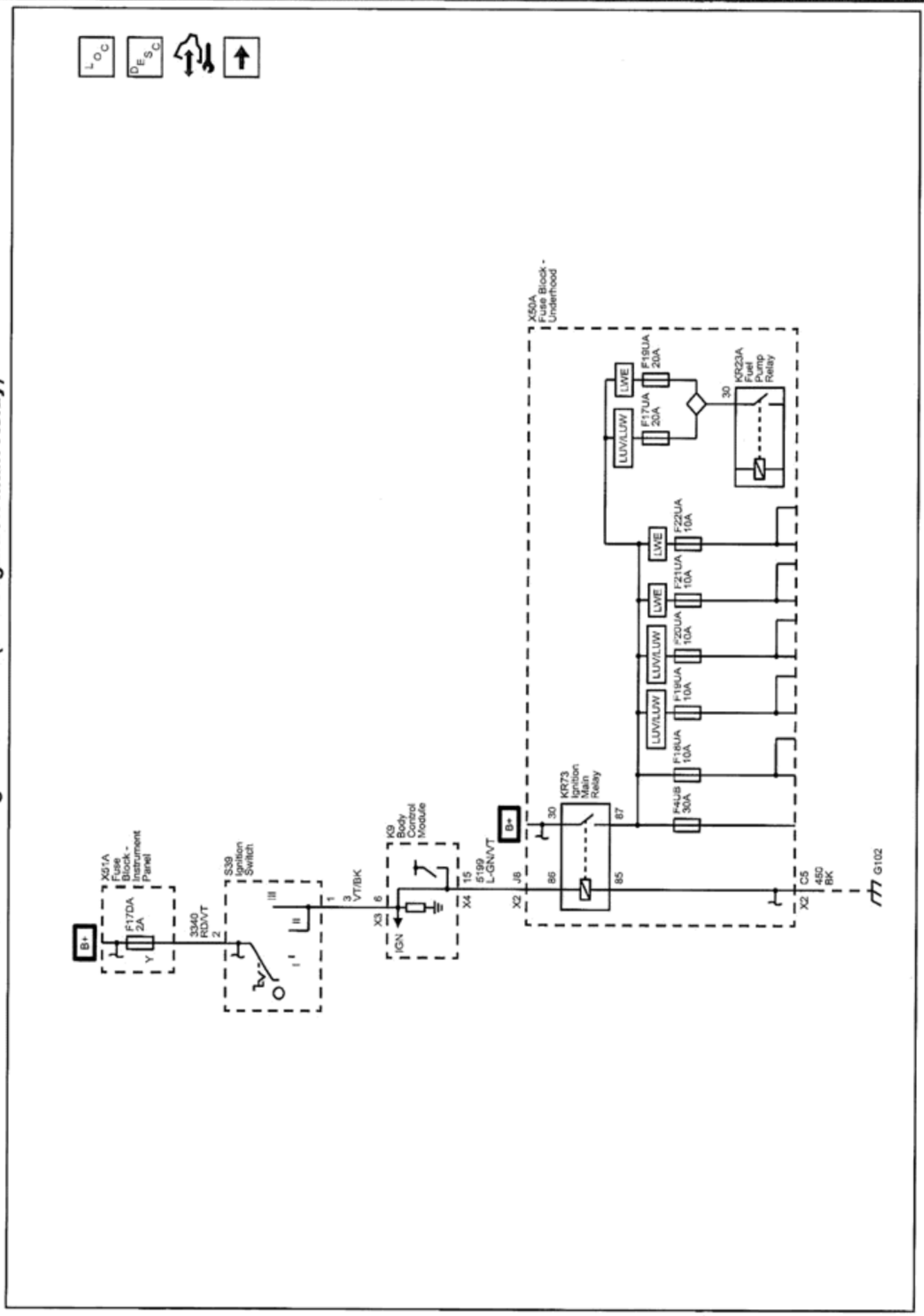
Power Distribution Schematics (F13DA, F14DA, F15DA, F16DA, F17DA, F18DA, F19DA, and F20DA Fuses)



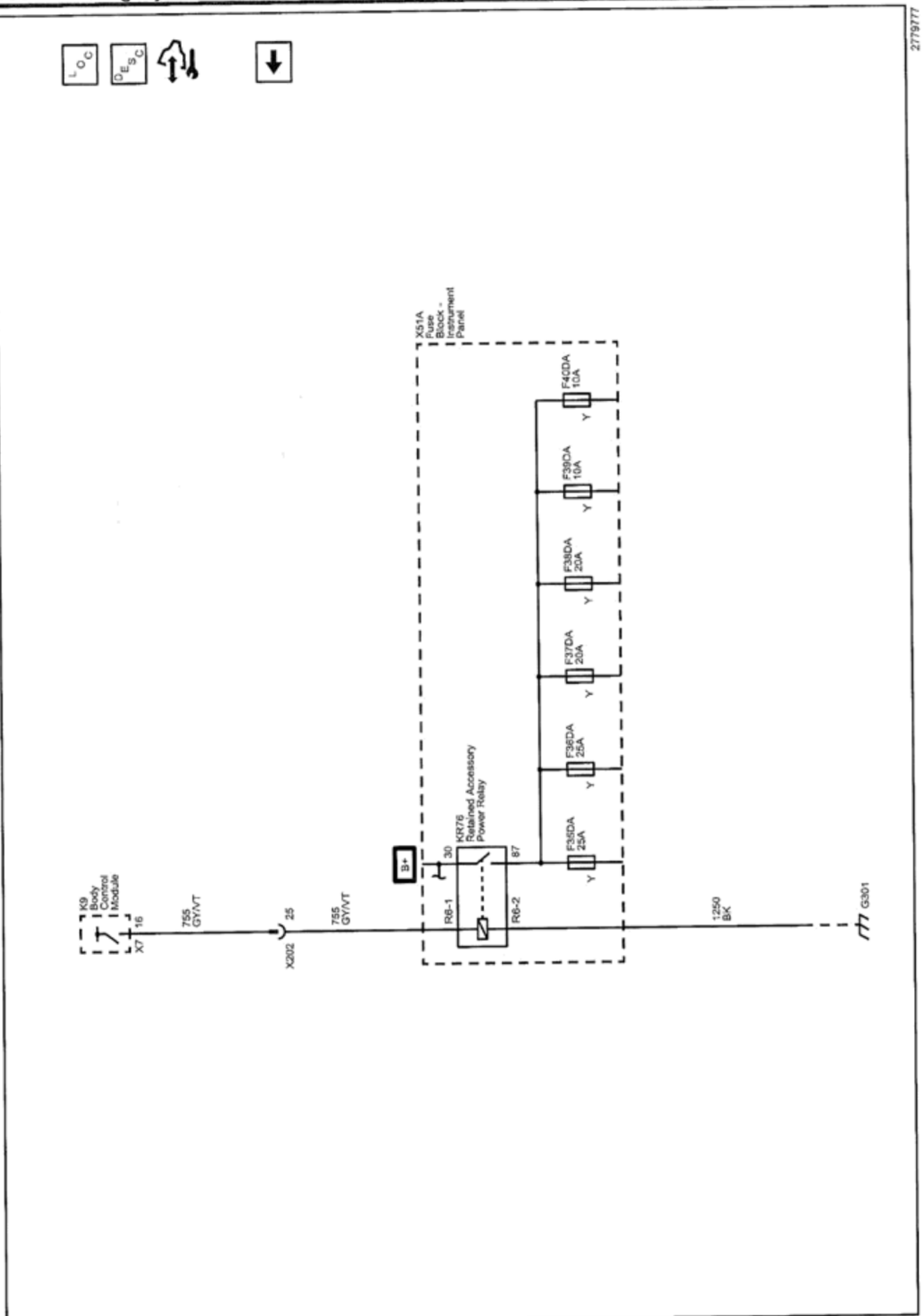
Power Distribution Schematics (F21DA, F22DA, F23DA, F24DA, F25DA, F26DA, F35DA, F36DA, F37DA, F38DA, F39DA and F40DA Fuses)



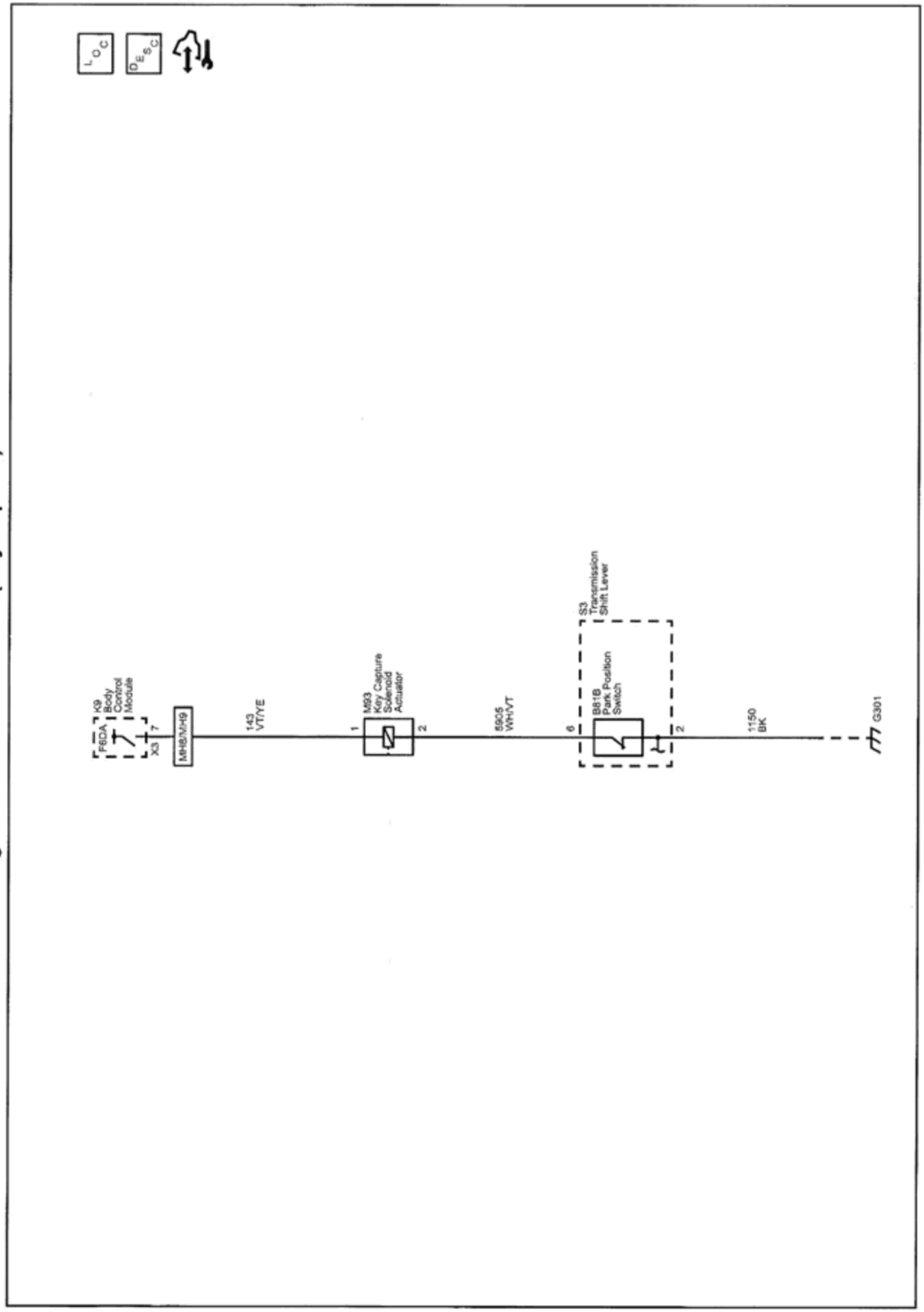
Power Moding Schematics (KR73 Ignition Main Relay)



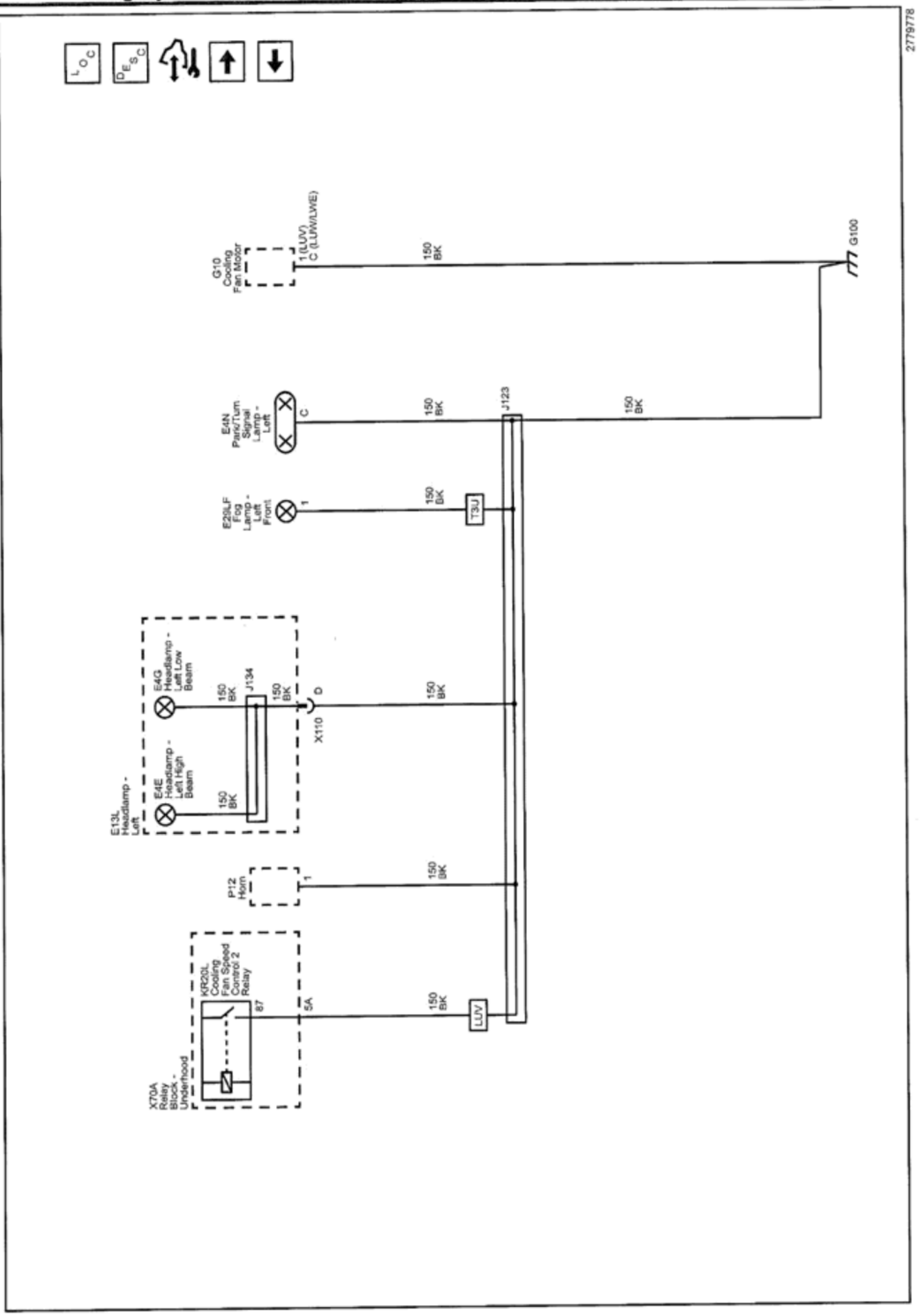
Power Moding Schematics (KR76 Retained Accessory Power Relay)



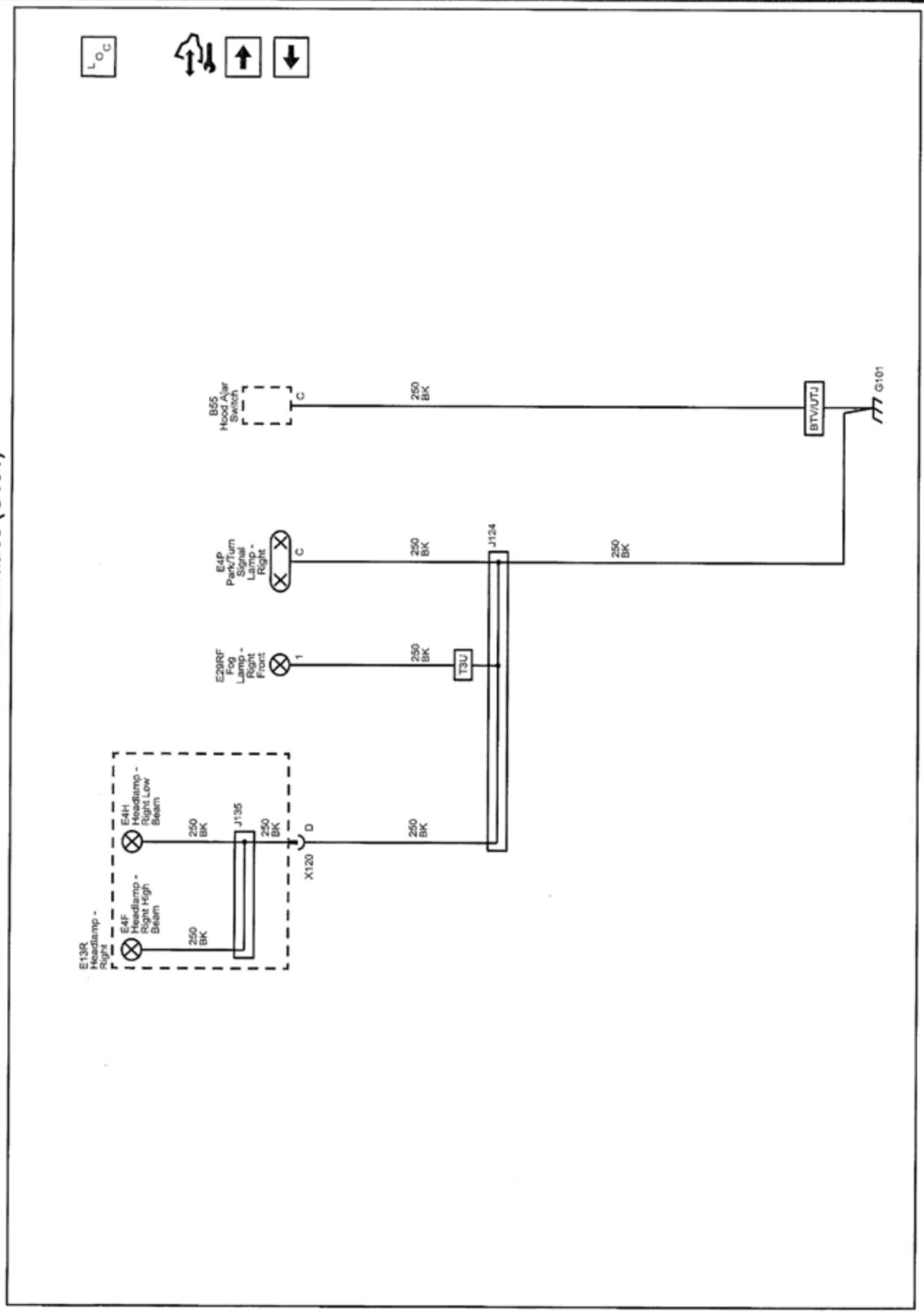
Ignition Lock Schematics (Key Capture)



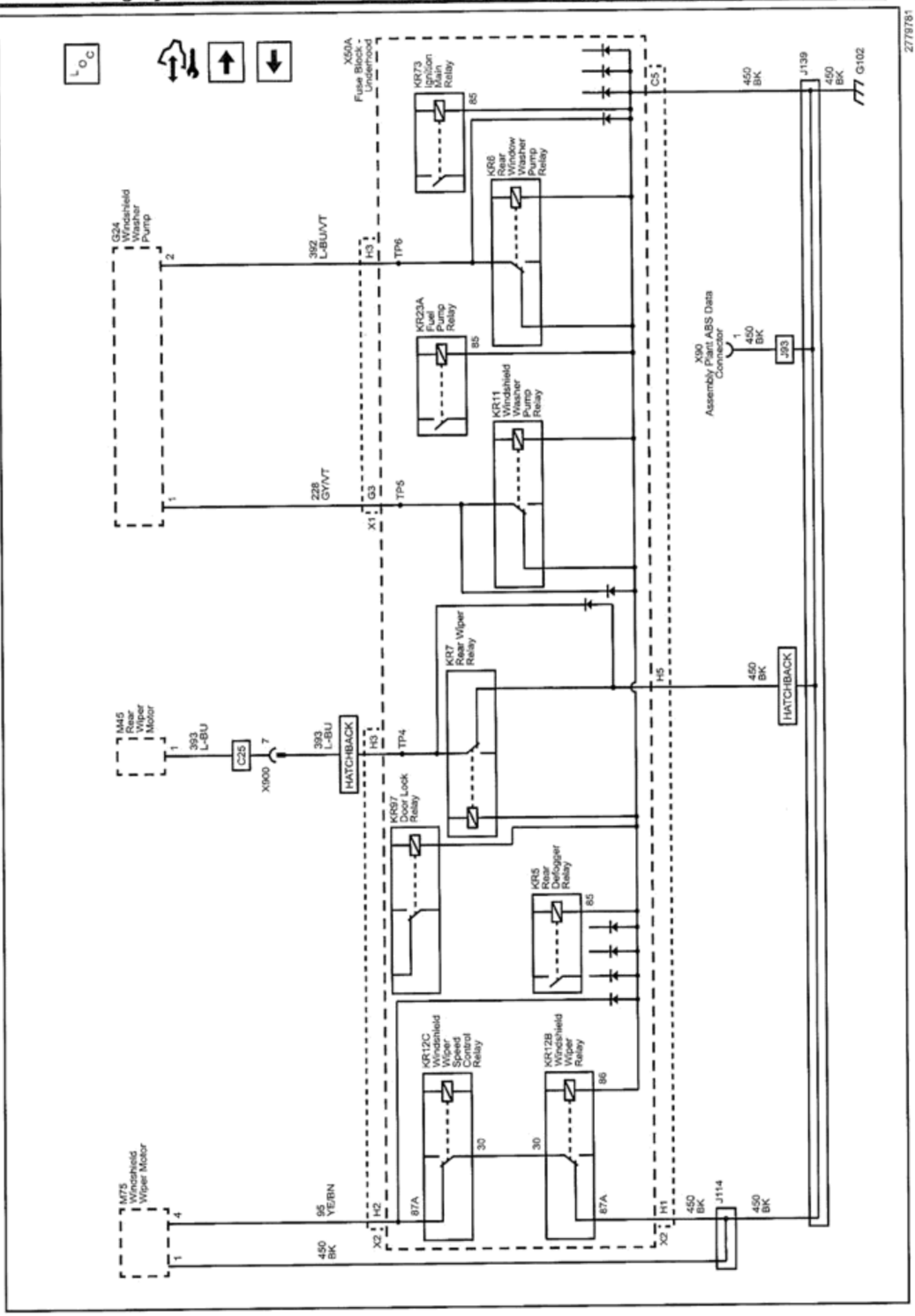
Ground Distribution Schematics (G100)



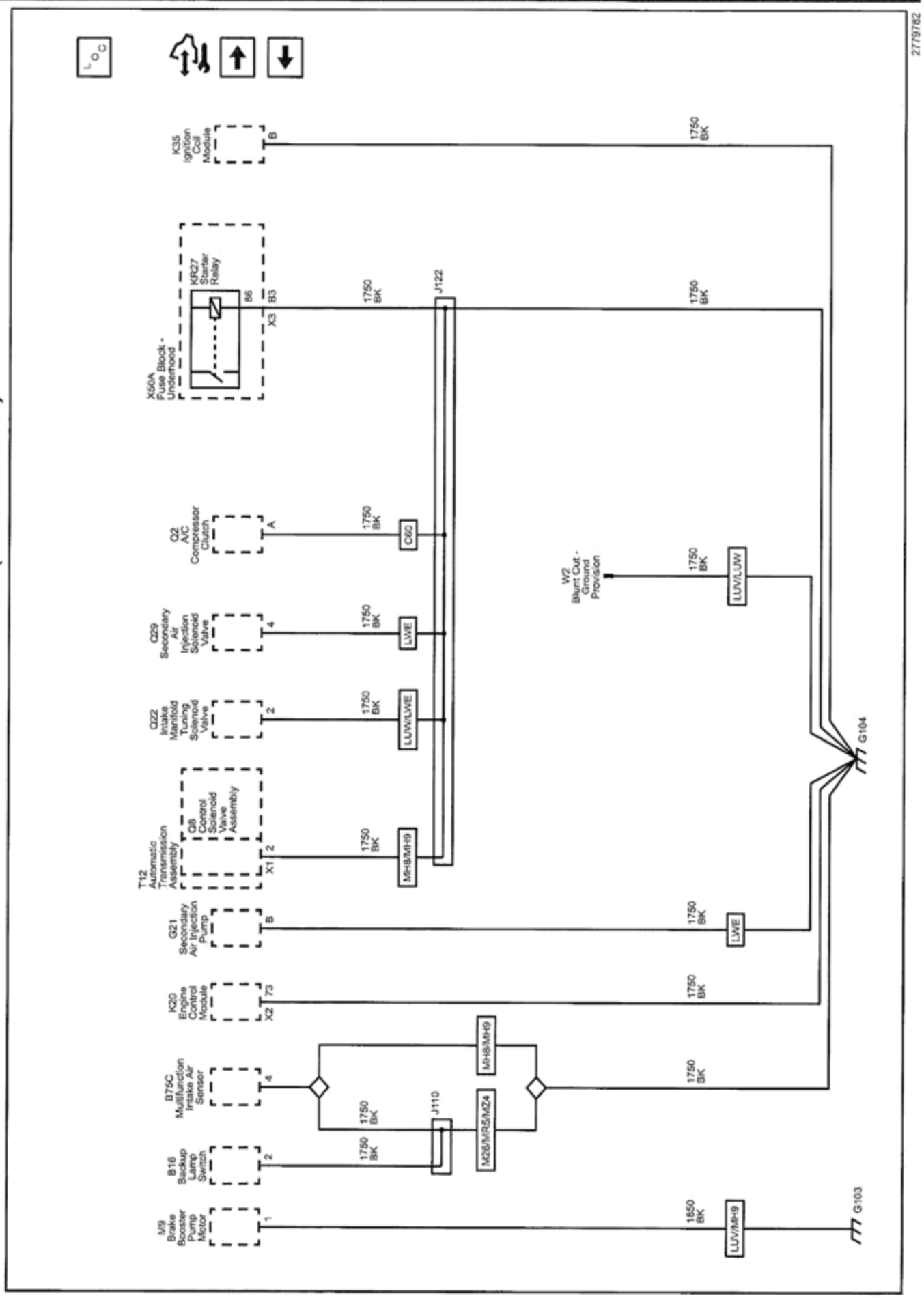
Ground Distribution Schematics (G101)



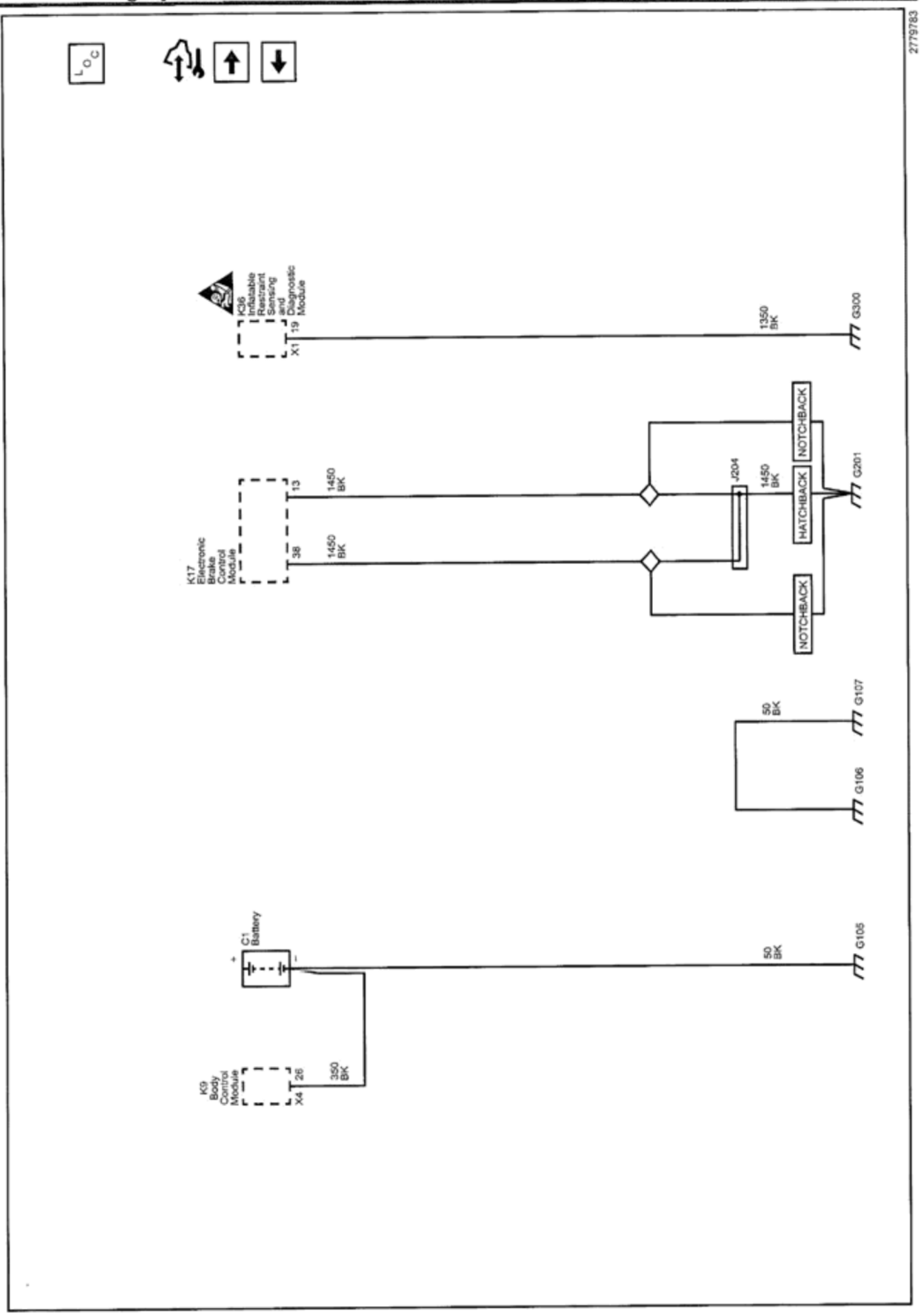
Ground Distribution Schematics (G102)



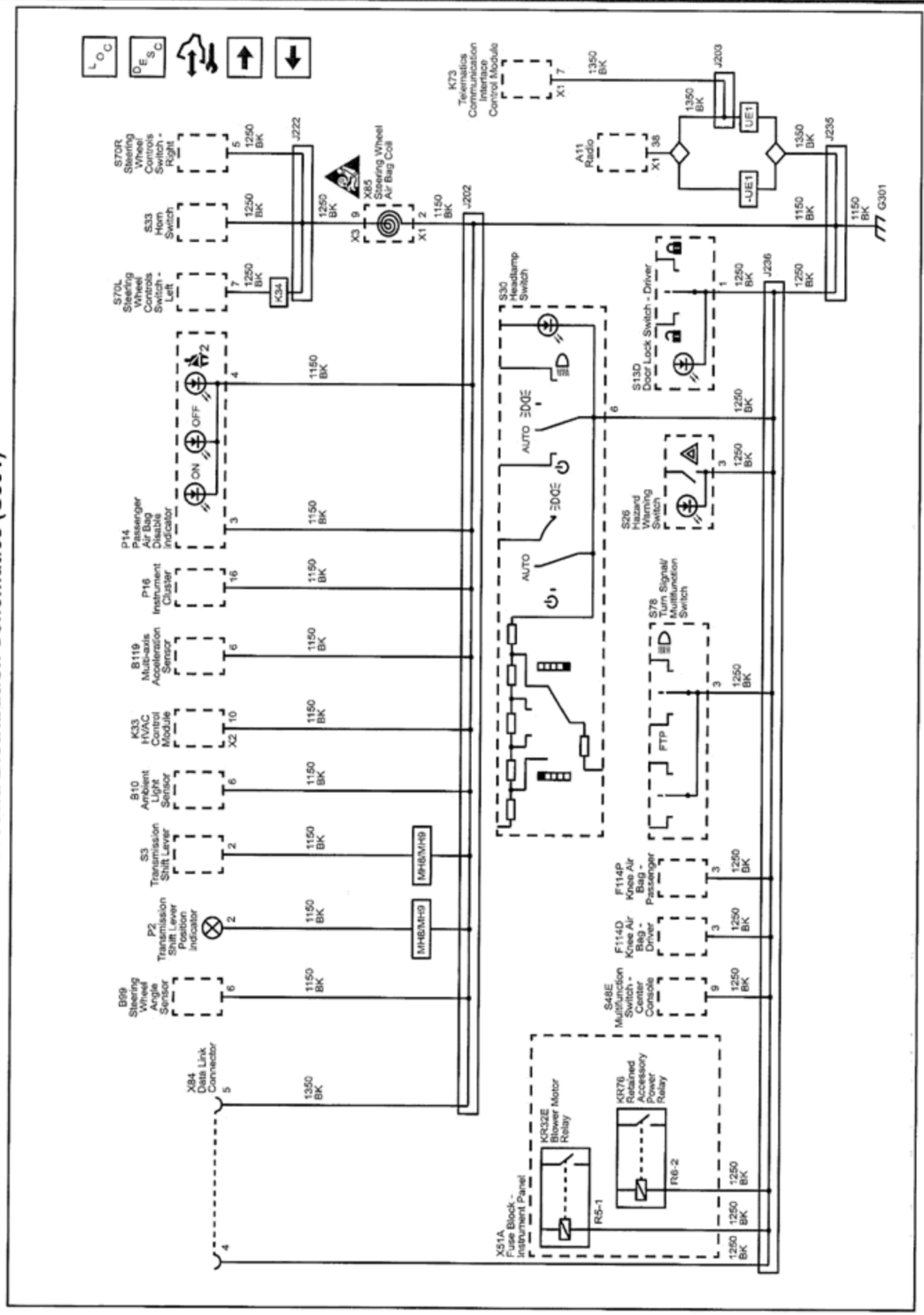
Ground Distribution Schematics (G103 and G104)



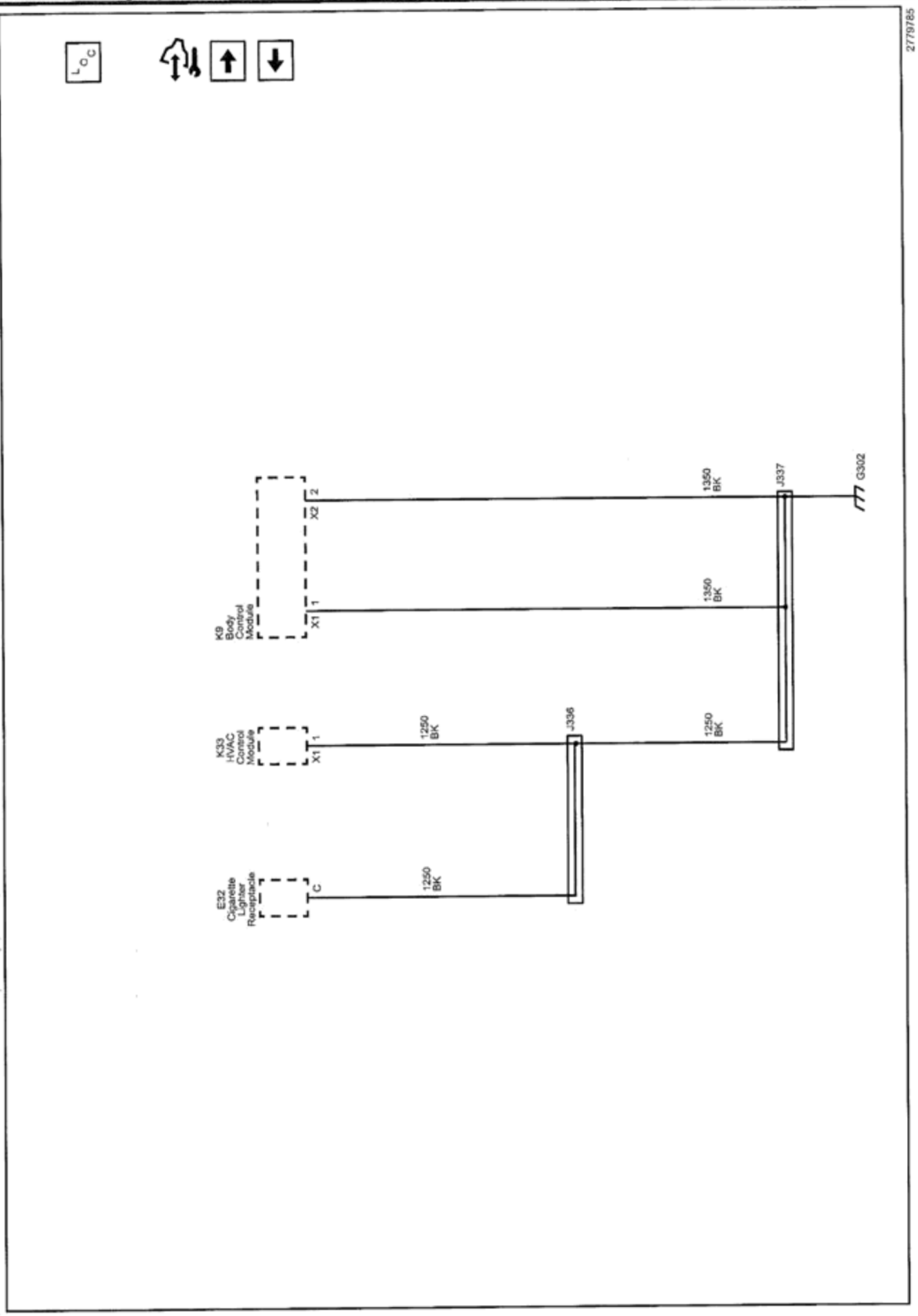
Ground Distribution Schematics (G105, G106, G107, G201, and G300)



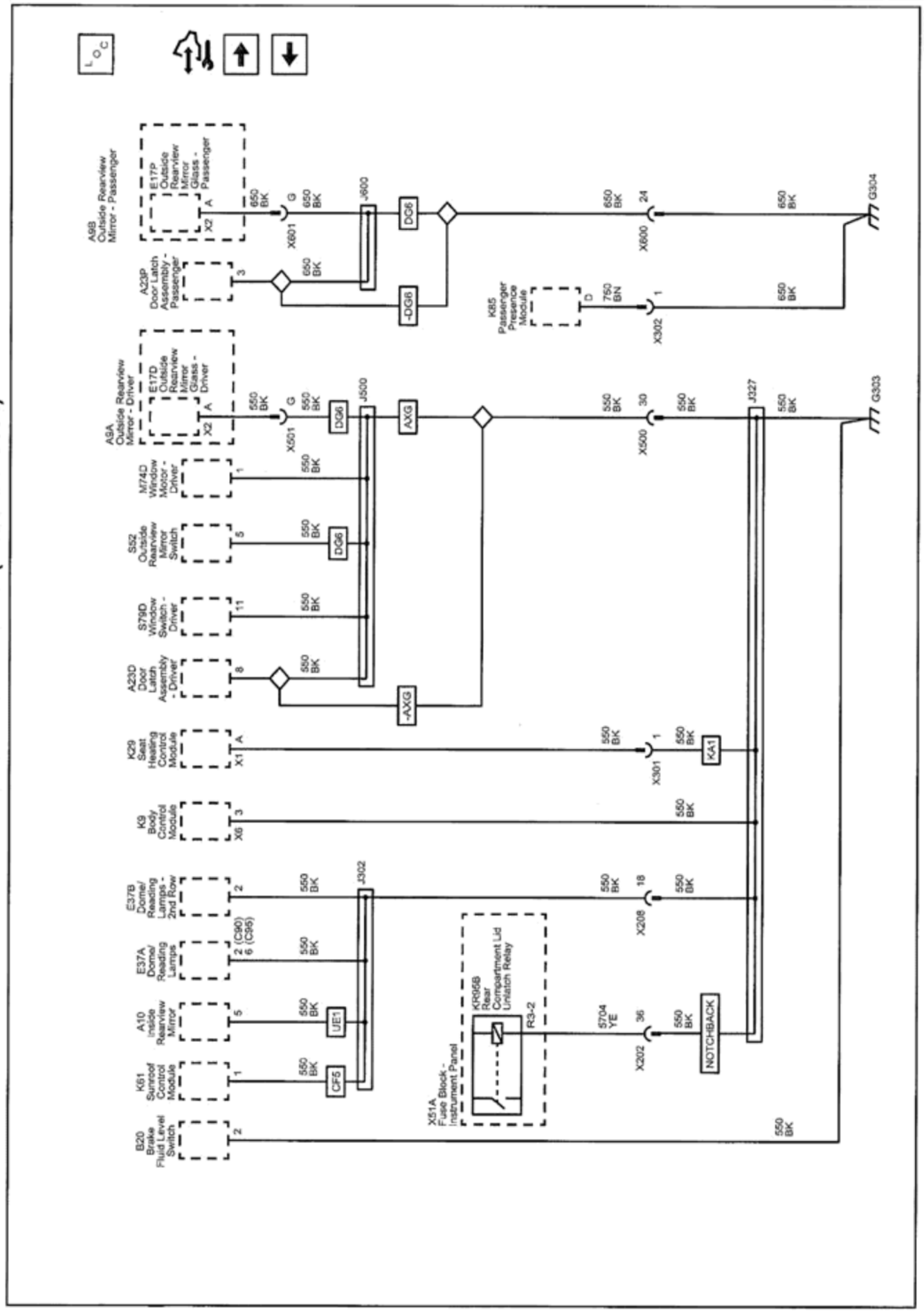
Ground Distribution Schematics (G301)



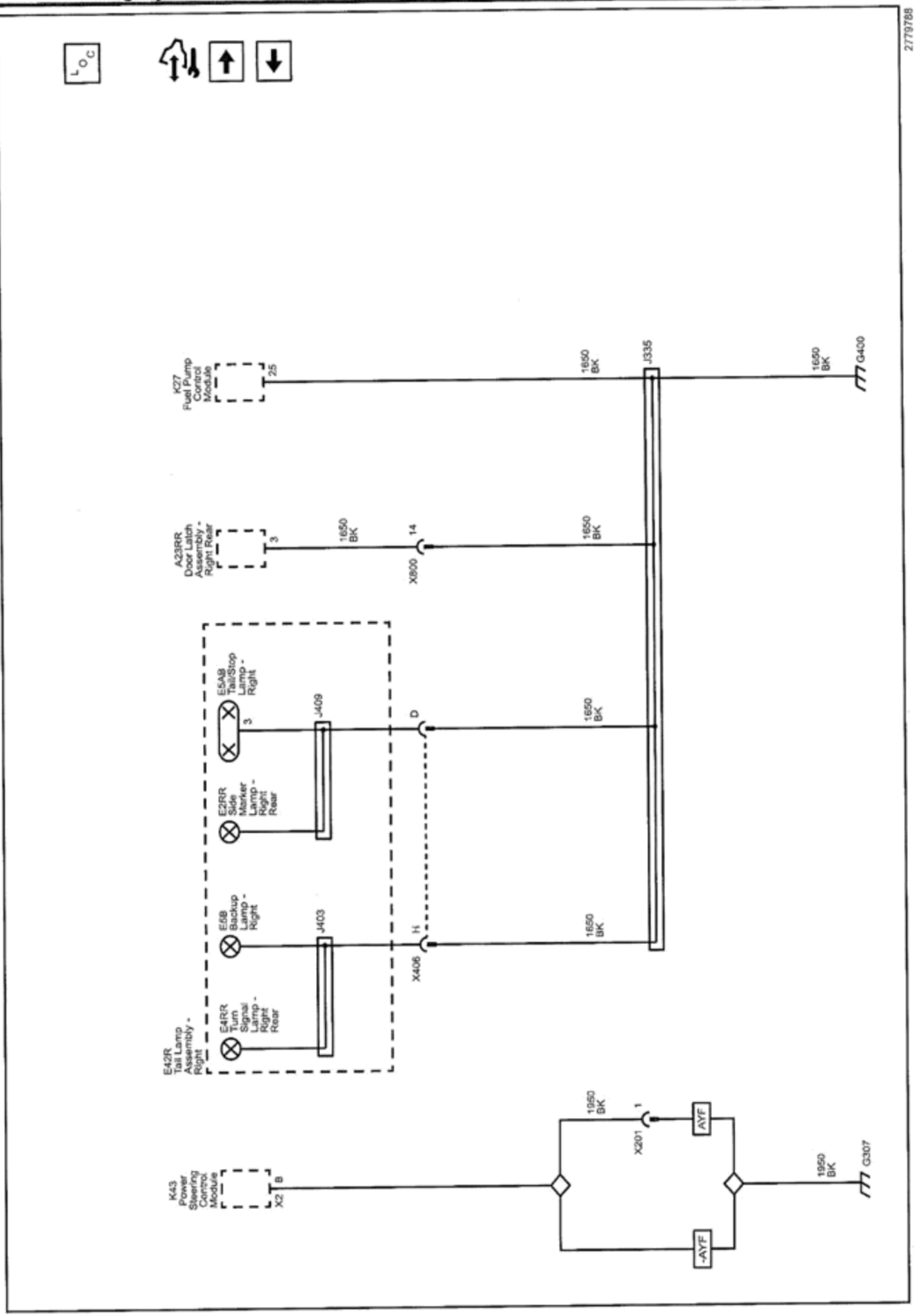
Ground Distribution Schematics (G302)



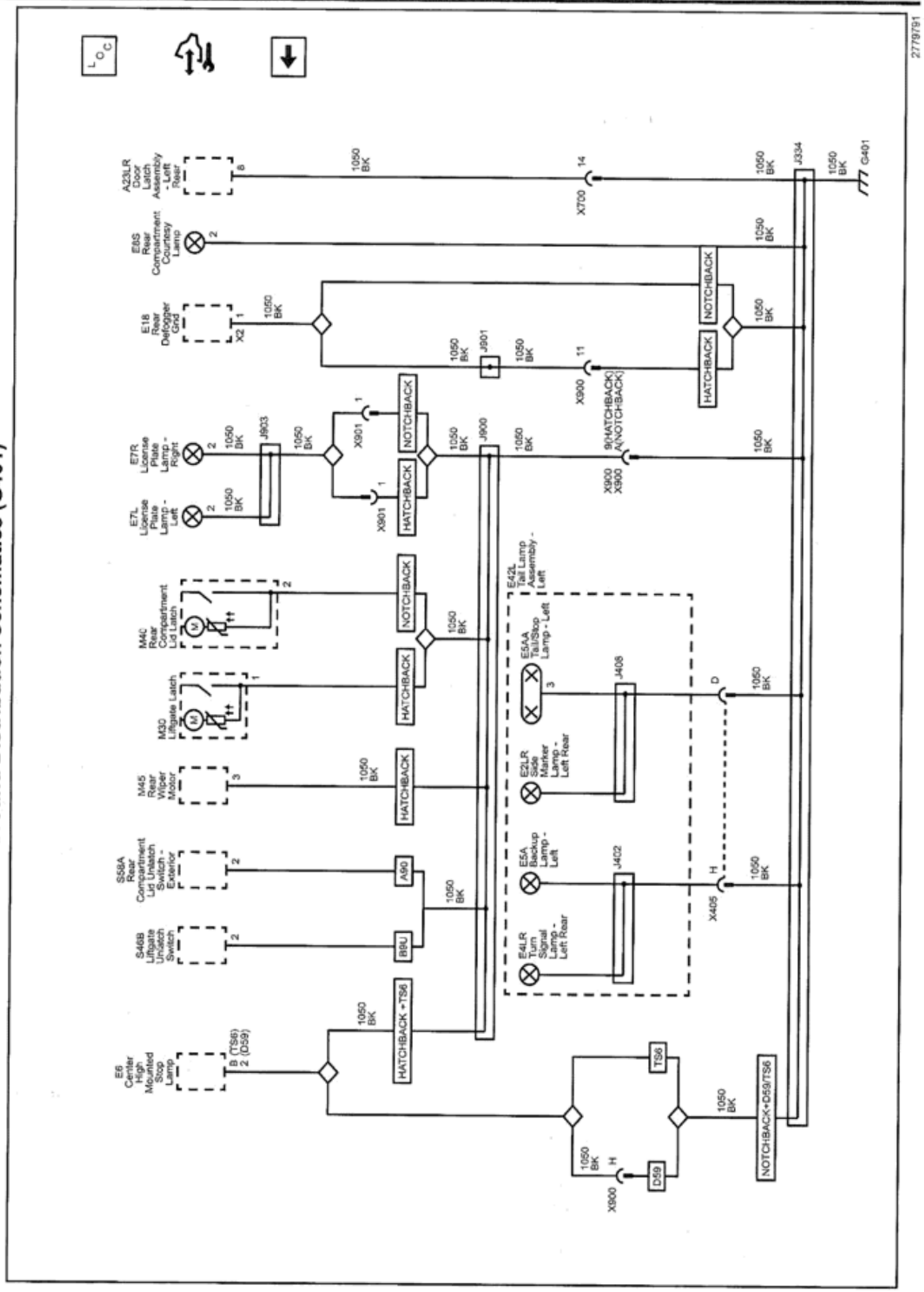
Ground Distribution Schematics (G303 and G304)



Ground Distribution Schematics (G307 and G400)



Ground Distribution Schematics (G401)



Component Locator

Master Electrical Component List

Code	Name	Option	Location	Locator View	Connector End View
A7	Fuel Pump and Level Sensor Assembly	—	Underneath the vehicle, inside the fuel tank	*Fuel Tank Components on page 11-227*	*A7 Fuel Pump and Level Sensor Assembly on page 11-269*
A9A	Outside Rearview Mirror – Driver	DG6	Outside the vehicle, at the upper front of the driver door	*Driver Door Components on page 11-215*	—
A9B	Outside Rearview Mirror – Passenger	DG6	Outside the vehicle, at the upper front of the passenger door	*Passenger Door Components on page 11-216*	—
A10	Inside Rearview Mirror	UE1	In the passenger compartment, top center of the windshield	*Headliner Components on page 11-212*	*A10 Inside Rearview Mirror (UE1) on page 11-270*
A11	Radio	—	In the passenger compartment, in the center of the instrument panel	*Front of Instrument Panel Components on page 11-204*	*A11 Radio X1 on page 11-271*
A23D	Door Latch Assembly – Driver	—	Inside the driver door, at the rear of the door	*Driver Door Components on page 11-215*	*A23D Door Latch Assembly - Driver on page 11-272*
A23LR	Door Latch Assembly – Left Rear	—	Inside the left rear door, at the rear of the door	*Left Rear Door Components on page 11-217*	*A23LR Door Latch Assembly - Left Rear on page 11-273*
A23P	Door Latch Assembly – Passenger	—	Inside the passenger door, at the rear of the door	*Passenger Door Components on page 11-216*	*A23P Door Latch Assembly - Passenger on page 11-274*
A23RR	Door Latch Assembly – Right Rear	—	Inside the right rear door, at the rear of the door	*Right Rear Door Components on page 11-218*	*A23RR Door Latch Assembly - Right Rear on page 11-275*
B1	A/C Refrigerant Pressure Sensor	C60	In the engine compartment, above the A/C compressor, in the air conditioning compressor and condenser hose, on the pressure side	• *Front of Engine Components - 1.4L (LUV) on page 11-195* • *Left Front of Engine Components - 1.8L (LUW/LWE) on page 11-198*	*B1 A/C Refrigerant Pressure Sensor (C60) on page 11-276*
B5LF	Wheel Speed Sensor – Left Front	—	Outside the vehicle, in the left front steering knuckle	*Wheel Components on page 11-226*	*B5LF Wheel Speed Sensor - Left Front on page 11-276*
B5LR	Wheel Speed Sensor – Left Rear	—	Outside the vehicle, in the left rear drum brake spacer	*Wheel Components on page 11-226*	*B5LR Wheel Speed Sensor - Left Rear on page 11-277*
B5RF	Wheel Speed Sensor – Right Front	—	Outside the vehicle, in the right front steering knuckle	*Wheel Components on page 11-226*	*B5RF Wheel Speed Sensor - Right Front on page 11-278*
B5RR	Wheel Speed Sensor – Right Rear	—	Outside the vehicle, in the right rear drum brake spacer	*Wheel Components on page 11-226*	*B5RR Wheel Speed Sensor - Right Rear on page 11-279*
B9	Ambient Air Temperature Sensor	—	Outside the vehicle, behind the lower grille insert, on the passenger side	*Front of Vehicle Components on page 11-191*	*B9 Ambient Air Temperature Sensor on page 11-280*
B10	Ambient Light Sensor	—	In the passenger compartment, on top of the instrument panel, in the center, near the base of the windshield	*Front of Instrument Panel Components on page 11-204*	*B10 Ambient Light Sensor on page 11-281*
B12A	Transmission Fluid Pressure Switch	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	—	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
B13	Transmission Fluid Temperature Sensor	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	—	—
B14A	Transmission Output Shaft Speed Sensor	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	*Automatic Transmission Components (MH8 or MH9) on page 11-203*	*B14A Transmission Output Shaft Speed Sensor (MH8 or MH9) on page 11-284*
B14A	Transmission Output Shaft Speed Sensor	M26/ MR5/MZ4	In the engine compartment, on top of the transmission	• *Manual Transmission Components - 5 Speed (M26) on page 11-201* • *Manual Transmission Components - 6 Speed (MR5/MZ4) on page 11-202*	• *B14A Transmission Output Shaft Speed Sensor (M26) on page 11-282* • *B14A Transmission Output Shaft Speed Sensor (MR5/MZ4) on page 11-283*
B14C	Transmission Input Shaft Speed Sensor	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	*Automatic Transmission Components (MH8 or MH9) on page 11-203*	*B14C Transmission Input Shaft Speed Sensor on page 11-285*
B15	Transmission Internal Mode Switch	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	*Automatic Transmission Components (MH8 or MH9) on page 11-203*	*B15 Transmission Internal Mode Switch on page 11-285*
B16	Backup Lamp Switch	M26/ MR5/MZ4	In the engine compartment, on the front of the transmission	• *Manual Transmission Components - 5 Speed (M26) on page 11-201* • *Manual Transmission Components - 6 Speed (MR5/MZ4) on page 11-202*	*B16 Backup Lamp Switch (M26/MR5/MZ4) on page 11-286*
B18	Battery Current Sensor	—	In the left front of the engine compartment, in front of the battery, on the negative battery cable	*Left of Engine Compartment Components on page 11-193*	*B18 Battery Current Sensor on page 11-287*
B19C	Brake Booster Vacuum Switch	—	At the rear of the engine compartment, driver side, on the brake booster	*Left of Engine Compartment Components on page 11-193*	*B19C Brake Booster Vacuum Switch on page 11-287*
B20	Brake Fluid Level Switch	—	At the rear of the engine compartment, driver side, on the brake master cylinder	*Left of Engine Compartment Components on page 11-193*	*B20 Brake Fluid Level Switch on page 11-288*
B22	Brake Pedal Position Sensor	—	In the passenger compartment, under the driver side of the instrument panel, above the brake pedal	*Under Instrument Panel Components on page 11-206*	• *B22 Brake Pedal Position Sensor (M26/MR5/MZ4) on page 11-289* • *B22 Brake Pedal Position Sensor (MH8 or MH9) on page 11-290*
B23E	Camshaft Position Sensor – Exhaust	LUV	In the engine compartment, on the right front corner of the cylinder head	*Front of Engine Components - 1.4L (LUV) on page 11-195*	*B23E Camshaft Position Sensor - Exhaust on page 11-291*
B23E	Camshaft Position Sensor – Exhaust	LUW/ LWE	In the engine compartment, on the left front corner of the cylinder head	*Left Front of Engine Components - 1.8L (LUW/LWE) on page 11-198*	*B23E Camshaft Position Sensor - Exhaust on page 11-291*
B23F	Camshaft Position Sensor – Intake	LUV	In the engine compartment, on the right rear corner of the cylinder head	*Rear of Engine Components - 1.4L (LUV) on page 11-197*	*B23F Camshaft Position Sensor - Intake on page 11-291*
B23F	Camshaft Position Sensor – Intake	LUW/ LWE	In the engine compartment, on the left rear corner of the cylinder head	*Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	*B23F Camshaft Position Sensor - Intake on page 11-291*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
B24	Cellular Phone Microphone	UE1 or UH7	In the front of the passenger compartment, in the front center of the headliner, at the left rear corner of the dome lamp bezel	*Headliner Components on page 11-212*	*B24 Cellular Phone Microphone (UE1 or UH7) on page 11-292*
B25B	Clutch Pedal Position Sensor	M26/ MR5/MZ4	In the passenger compartment, under the driver side of the instrument panel, above the clutch pedal	*Under Instrument Panel Components on page 11-206*	*B25B Clutch Pedal Position Sensor (M26/ MR5/MZ4) on page 11-293*
B26	Crankshaft Position Sensor	LUV	In the engine compartment, on the lower left side of the engine block, below the starter	*Rear of Engine Components - 1.4L (LUV) on page 11-197*	*B26 Crankshaft Position Sensor (LUV) on page 11-294*
B26	Crankshaft Position Sensor	LUW/ LWE	In the engine compartment, on the lower left side of the engine block, above the starter	*Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	*B26 Crankshaft Position Sensor (LUW/LWE) on page 11-295*
B34A	Engine Coolant Temperature Sensor 1	—	In the engine compartment, on the left side of the engine, in the water outlet assembly	• *Front of Engine Components - 1.4L (LUV) on page 11-195* • *Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	*B34A Engine Coolant Temperature Sensor 1 on page 11-295*
B34B	Engine Coolant Temperature Sensor 2	—	In the right front of the engine compartment, in the bottom right of the radiator	*Front of Engine Compartment Components on page 11-192*	*B34B Engine Coolant Temperature Sensor 2 on page 11-296*
B37	Engine Oil Pressure Switch	LUV	In the engine compartment, on the left front of the engine, at the base of the oil filter housing	*Front of Engine Components - 1.4L (LUV) on page 11-195*	*B37 Engine Oil Pressure Switch (LUV) on page 11-297*
B37	Engine Oil Pressure Switch	LUW/ LWE	In the engine compartment, on the right front of the engine, behind the A/C compressor	*Left Front of Engine Components - 1.8L (LUW/LWE) on page 11-198*	*B37 Engine Oil Pressure Switch (LUW/LWE) on page 11-297*
B39	A/C Evaporator Temperature Sensor	C60	In the passenger compartment, in the HVAC assembly, on the left side, near the evaporator	—	*B39 A/C Evaporator Temperature Sensor (C60) on page 11-298*
B46	Fuel Level Sensor	—	Under the vehicle, inside the fuel tank, part of the fuel pump and level sensor assembly	—	—
B47	Fuel Pressure Sensor	—	In the engine compartment, to the right of the engine, in the fuel feed line	—	*B47 Fuel Pressure Sensor on page 11-299*
B52A	Heated Oxygen Sensor 1	—	In the engine compartment, in front of the engine, in the exhaust manifold	• *Front of Engine Components - 1.4L (LUV) on page 11-195* • *Left Front of Engine Components - 1.8L (LUW/LWE) on page 11-198*	• *B52A Heated Oxygen Sensor 1 (LUV) on page 11-299* • *B52A Heated Oxygen Sensor 1 (LUW/LWE) on page 11-300*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
B52B	Heated Oxygen Sensor 2	—	In the engine compartment, behind the engine, in the exhaust pipe	• *Rear of Engine Components - 1.4L (LUV) on page 11-197* • *Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	*B52B Heated Oxygen Sensor 2 on page 11-301*
B55	Hood Ajar Switch	UTJ	In the front of the engine compartment, by the hood latch assembly	*Front of Engine Compartment Components on page 11-192*	*B55 Hood Ajar Switch (UTJ) on page 11-302*
B59L	Front Impact Sensor – Left	—	In the front of the engine compartment, on the rear side of the crossmember above left side of the radiator	*Front of Engine Compartment Components on page 11-192*	*B59L Front Impact Sensor - Left on page 11-303*
B59R	Front Impact Sensor – Right	—	In the front of the engine compartment, on the rear side of the crossmember above right side of the radiator	*Front of Engine Compartment Components on page 11-192*	*B59R Front Impact Sensor - Right on page 11-303*
B60	Passenger Presence Sensor	—	In the passenger compartment, in the passenger seat cushion, part of K85 Passenger Presence Detection Module	—	—
B63LF	Side Impact Sensor – Left Front	—	At the bottom of the inside of the driver door	*Driver Door Components on page 11-215*	*B63LF Side Impact Sensor - Left Front on page 11-304*
B63LR	Side Impact Sensor – Left Rear	—	In the passenger compartment, at the bottom front of the left B-pillar	*Left Front of Passenger Compartment Components on page 11-210*	*B63LR Side Impact Sensor - Left Rear (AYF) on page 11-305*
B63RF	Side Impact Sensor – Right Front	—	At the bottom of the inside of the front passenger door	*Passenger Door Components on page 11-216*	*B63RF Side Impact Sensor - Right Front on page 11-306*
B63RR	Side Impact Sensor – Right Rear	—	In the passenger compartment, at the bottom front of the right B-pillar	*Right Front of Passenger Compartment Components on page 11-211*	*B63RR Side Impact Sensor - Right Rear (AYF) on page 11-306*
B68	Knock Sensor	—	In the engine compartment, on the back of the engine block, below the intake manifold	• *Rear of Engine Components - 1.4L (LUV) on page 11-197* • *Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	• *B68 Knock Sensor (LUV) on page 11-307* • *B68 Knock Sensor (LUW/LWE) on page 11-308*
B74	Manifold Absolute Pressure Sensor	—	In the engine compartment, at the right rear of the engine, on top of the intake manifold.	• *Top of Engine Components - 1.4L (LUV) on page 11-196* • *Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	*B74 Manifold Absolute Pressure Sensor on page 11-309*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
B75C	Multifunction Intake Air Sensor	—	In the engine compartment, attached to the air intake tube	• *Front of Engine Components - 1.4L (LUV) on page 11-195* • *Right of Engine Compartment Components on page 11-194*	*B75C Multifunction Intake Air Sensor on page 11-309*
B80	Park Brake Switch	—	In the passenger compartment, under the center console, at the base of the park brake handle on the left side	*Center Console Components on page 11-207*	*B80 Park Brake Switch on page 11-310*
B81B	Park Position Switch	MH8 or MH9	In the passenger compartment, part of the automatic shift lever	—	—
B88D	Seat Belt Switch – Driver	—	In the passenger compartment, part of the driver seat belt buckle assembly	—	—
B88P	Seat Belt Switch – Passenger	—	In the passenger compartment, part of the passenger seat belt buckle	—	—
B99	Steering Wheel Angle Sensor	—	In the passenger compartment, on the steering column, behind the steering wheel air bag coil	*Steering Column Components on page 11-208*	*B99 Steering Wheel Angle Sensor on page 11-311*
B107	Accelerator Pedal Position Sensor	—	In the passenger compartment, under the driver side of the instrument panel, above the accelerator pedal	*Under Instrument Panel Components on page 11-206*	*B107 Accelerator Pedal Position Sensor on page 11-312*
B111B	Turbocharger Boost/Intake Air Temperature Sensor	LUV	In the engine compartment, attached to the air intake duct, inboard of the left frame rail and below X101	—	*B111B Turbocharger Boost/Intake Air Temperature Sensor (LUV) on page 11-312*
B119	Multi-axis Acceleration Sensor	—	In the passenger compartment, under the center console	*Right Front of Passenger Compartment Components on page 11-211*	*B119 Multi-Axis Acceleration Sensor on page 11-313*
B150	Fuel Tank Pressure Sensor	—	Under the vehicle, on top of the fuel pump and level sensor assembly	—	*B150 Fuel Tank Pressure Sensor (NT7) on page 11-314*
B153D	Seat Belt Buckle – Driver	—	In the passenger compartment, between the driver seat and the center console	*Driver Seat Components on page 11-213*	*B153D Seat Belt Buckle - Driver on page 11-315*
B153P	Seat Belt Buckle – Passenger	—	In the passenger compartment, between the passenger seat and the center console	*Passenger Seat Components on page 11-214*	*B153P Seat Belt Buckle - Passenger on page 11-315*
C1	Battery	—	In the front left corner of the engine compartment	*Left of Engine Compartment Components on page 11-193*	• *C1 Battery (+) (Positive Battery Cable) on page 11-316* • *C1 Battery (-) (Negative Battery Cable) on page 11-317* • *C1 Battery (-) (Body Harness) on page 11-317*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
C3	Telematics Communication Interface Control Module Battery	UE1	In the passenger compartment, behind the instrument panel, in front of the passenger seat, mounted on K73 Telematics Communication Interface Control Module	*Rear of Instrument Panel Components on page 11-205*	*C3 Telematics Communication Interface Control Module Battery (UE1) on page 11-318*
E2LR	Side Marker Lamp — Left Rear	—	Left rear of vehicle, outer lamp of left tail lamp assembly	• *Rear of Vehicle Components (Hatchback) on page 11-224* • *Rear of Vehicle Components (Notchback) on page 11-225*	*E2LR Side Marker Lamp - Left Rear on page 11-318*
E2RR	Side Marker Lamp — Right Rear	—	Right rear of vehicle, outer lamp of right tail lamp assembly	• *Rear of Vehicle Components (Hatchback) on page 11-224* • *Rear of Vehicle Components (Notchback) on page 11-225*	*E2RR Side Marker Lamp - Right Rear on page 11-319*
E4E	Headlamp – Left High Beam	—	Outside the front of the vehicle, the inner lamp of the left headlamp assembly	*Front of Vehicle Components on page 11-191*	*E4E Headlamp - Left High Beam on page 11-320*
E4F	Headlamp – Right High Beam	—	Outside the front of the vehicle, the inner lamp of the right headlamp assembly	*Front of Vehicle Components on page 11-191*	*E4F Headlamp - Right High Beam on page 11-320*
E4G	Headlamp – Left Low Beam	—	Outside the front of the vehicle, the outer lamp of the left headlamp assembly	*Front of Vehicle Components on page 11-191*	*E4G Headlamp - Left Low Beam on page 11-321*
E4H	Headlamp – Right Low Beam	—	Outside the front of the vehicle, the outer lamp of the right headlamp assembly	*Front of Vehicle Components on page 11-191*	*E4H Headlamp - Right Low Beam on page 11-322*
E4LR	Turn Signal Lamp – Left Rear	—	Outside the rear of the vehicle, center lamp of the left tail lamp assembly	• *Rear of Vehicle Components (Hatchback) on page 11-224* • *Rear of Vehicle Components (Notchback) on page 11-225*	*E4LR Turn Signal Lamp - Left Rear on page 11-323*
E4N	Park/Turn Signal Lamp – Left	—	Left front of vehicle, outer lamp of the left headlamp assembly	*Front of Vehicle Components on page 11-191*	*E4N Park/Turn Signal Lamp - Left on page 11-324*
E4P	Park/Turn Signal Lamp – Right	—	Right front of vehicle, outer lamp of the right headlamp assembly	*Front of Vehicle Components on page 11-191*	*E4P Park/Turn Signal Lamp - Right on page 11-325*
E4RR	Turn Signal Lamp – Right Rear	—	Outside the rear of the vehicle, center lamp of the right tail lamp assembly	• *Rear of Vehicle Components (Hatchback) on page 11-224* • *Rear of Vehicle Components (Notchback) on page 11-225*	*E4RR Turn Signal Lamp - Right Rear on page 11-323*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
E5A	Backup Lamp – Left	—	Outside the rear of the vehicle, lower lamp of the left tail lamp assembly	• *Rear of Vehicle Components (Hatchback) on page 11-224* • *Rear of Vehicle Components (Notchback) on page 11-225*	*E5A Backup Lamp - Left on page 11-326*
E5AA	Tail/Stop Lamp – Left	—	Outside the rear of the vehicle, upper lamp of the left tail lamp assembly	• *Rear of Vehicle Components (Hatchback) on page 11-224* • *Rear of Vehicle Components (Notchback) on page 11-225*	*E5AA Tail/Stop Lamp - Left on page 11-328*
E5AB	Tail/Stop Lamp – Right	—	Outside the rear of the vehicle, upper lamp of the right tail lamp assembly	• *Rear of Vehicle Components (Hatchback) on page 11-224* • *Rear of Vehicle Components (Notchback) on page 11-225*	*E5AB Tail/Stop Lamp - Right on page 11-329*
E5B	Backup Lamp – Right	—	Outside the rear of the vehicle, lower lamp of the right tail lamp assembly	• *Rear of Vehicle Components (Hatchback) on page 11-224* • *Rear of Vehicle Components (Notchback) on page 11-225*	*E5B Backup Lamp - Right on page 11-327*
E6	Center High Mounted Stop Lamp	Hatch back	In the passenger compartment, at the rear window, center rear of the package shelf	*Rear of Vehicle Components (Hatchback) on page 11-224*	*E6 Center High Mounted Stop Lamp on page 11-330*
E6	Center High Mounted Stop Lamp	Notch back	In the rear of the passenger compartment, at the top of the liftgate glass	—	*E6 Center High Mounted Stop Lamp on page 11-330*
E7L	License Plate Lamp – Left	Hatch back	At the rear of the vehicle, outside of the liftgate, left of center, above the license plate	*Rear of Vehicle Components (Hatchback) on page 11-224*	*E7L License Plate Lamp - Left on page 11-331*
E7L	License Plate Lamp – Left	Notch back	At the rear of the vehicle, outside the rear compartment lid, left of center, above the license plate	*Rear of Vehicle Components (Notchback) on page 11-225*	*E7L License Plate Lamp - Left on page 11-331*
E7R	License Plate Lamp – Right	Hatch back	At the rear of the vehicle, outside of the liftgate, right of center, above the license plate	*Rear of Vehicle Components (Hatchback) on page 11-224*	*E7R License Plate Lamp - Right on page 11-332*
E7R	License Plate Lamp – Right	Notch back	At the rear of the vehicle, outside the rear compartment lid, right of center, above the license plate	*Rear of Vehicle Components (Notchback) on page 11-225*	*E7R License Plate Lamp - Right on page 11-332*
E8S	Rear Compartment Courtesy Lamp	Hatch back	In the rear compartment, on the left side	*Left of Luggage Compartment Components (Hatchback) on page 11-219*	*E8S Rear Compartment Courtesy Lamp on page 11-333*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
E8S	Rear Compartment Courtesy Lamp	Notch back	Inside the rear compartment, in the center, bottom side of the package shelf	*Luggage Compartment Components (Notchback) on page 11-221*	*E8S Rear Compartment Courtesy Lamp on page 11-333*
E13L	Headlamp – Left	—	At the left front corner of the vehicle	—	—
E13R	Headlamp – Right	—	At the right front corner of the vehicle	—	—
E14A	Seat Heating Element – Driver Back	KA1	In the passenger compartment, under the driver seat back cover	*Driver Seat Components on page 11-213*	*E14A Seat Heating Element - Driver Back (KA1) on page 11-333*
E14B	Seat Heating Element – Driver Cushion	KA1	In the passenger compartment, under the driver seat cushion cover	*Driver Seat Components on page 11-213*	*E14B Seat Heating Element - Driver Cushion (KA1) on page 11-334*
E14C	Seat Heating Element – Passenger Back	KA1	In the passenger compartment, under the passenger seat back cover	*Passenger Seat Components on page 11-214*	*E14C Seat Heating Element - Passenger Back (KA1) on page 11-335*
E14D	Seat Heating Element – Passenger Cushion	KA1	In the passenger compartment, under the passenger seat cushion cover	*Passenger Seat Components on page 11-214*	*E14D Seat Heating Element - Passenger Cushion (KA1) on page 11-336*
E17D	Outside Rearview Mirror Glass - Driver	DG6	On the outside of the driver door, part of the outside rearview mirror - driver, at front	—	• *E17D Outside Rearview Mirror Glass - Driver X1 (DG6) on page 11-337* • *E17D Outside Rearview Mirror Glass - Driver X2 (DG6) on page 11-337*
E17P	Outside Rearview Mirror Glass - Passenger	DG6	On the outside of the passenger door, part of the outside rearview mirror - passenger, at front	—	• *E17P Outside Rearview Mirror Glass - Passenger X1 (DG6) on page 11-338* • *E17P Outside Rearview Mirror Glass - Passenger X2 (DG6) on page 11-338*
E18	Rear Defogger Grid	Hatch back	In the passenger compartment, on the inside of the liftgate window	*Rear of Vehicle Components (Hatchback) on page 11-224*	• *E18 Rear Defogger Grid X1 on page 11-339* • *E18 Rear Defogger Grid X2 on page 11-339*
E18	Rear Defogger Grid	Notch back	In the passenger compartment, on the inside of the rear window	*Rear of Vehicle Components (Notchback) on page 11-225*	• *E18 Rear Defogger Grid X1 on page 11-339* • *E18 Rear Defogger Grid X2 on page 11-339*
E29LF	Fog Lamp – Left Front	T3U	At the lower left front corner of the vehicle, in the front fascia	*Front of Vehicle Components on page 11-191*	*E29LF Fog Lamp - Left Front (T3U) on page 11-340*
E29RF	Fog Lamp – Right Front	T3U	At the lower right front corner of the vehicle, in the front fascia	*Front of Vehicle Components on page 11-191*	*E29RF Fog Lamp - Right Front (T3U) on page 11-341*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
E32	Cigarette Lighter Receptacle	—	In the passenger compartment, in the center console, between the shifter and the cup holder	*Center Console Components on page 11-207*	*E32 Cigarette Lighter Receptacle on page 11-342*
E37A	Dome/Reading Lamps	—	In the passenger compartment, front center of the headliner between the sunshades	*Headliner Components on page 11-212*	• *E37A Dome/Reading Lamps (C90) on page 11-343* • *E37A Dome/Reading Lamps (C95) on page 11-344*
E37B	Dome/Reading Lamps – 2nd Row	—	In the passenger compartment, center of the headliner	—	*E37B Dome/Reading Lamps - 2nd Row on page 11-342*
E41	Engine Coolant Thermostat Heater	LUV	In the engine compartment, on the front right side of the engine, in the thermostat housing	*Front of Engine Components - 1.4L (LUV) on page 11-195*	*E41 Engine Coolant Thermostat Heater (LUV) on page 11-345*
E41	Engine Coolant Thermostat Heater	LUW/ LWE	In the engine compartment, on the front left side of the engine, in the thermostat housing	*Left Front of Engine Components - 1.8L (LUW/LWE) on page 11-198*	*E41 Engine Coolant Thermostat Heater (LUW/LWE) on page 11-346*
E42L	Tail Lamp Assembly – Left	—	At the left rear corner of the vehicle	—	—
E42R	Tail Lamp Assembly – Right	—	At the right rear corner of the vehicle	—	—
F101	Passenger Instrument Panel Air Bag	—	In the passenger compartment, in the instrument panel, in front of the passenger seat	*Rear of Instrument Panel Components on page 11-205*	• *F101 Passenger Instrument Panel Air Bag X1 on page 11-347* • *F101 Passenger Instrument Panel Air Bag X2 on page 11-347*
F105L	Roof Rail Air Bag – Left	—	In the passenger compartment, on the left roof rail, above the B-pillar trim panel	*Left Front of Passenger Compartment Components on page 11-210*	*F105L Roof Rail Air Bag - Left on page 11-348*
F105R	Roof Rail Air Bag – Right	—	In the passenger compartment, on the right roof rail, above the B-pillar trim panel	*Right Front of Passenger Compartment Components on page 11-211*	*F105R Roof Rail Air Bag - Right on page 11-349*
F106D	Seat Air Bag – Driver	—	In the passenger compartment, on the left side of the driver seat back	*Driver Seat Components on page 11-213*	*F106D Seat Air Bag - Driver on page 11-349*
F106LR	Seat Air Bag – Left Rear	AYF	In the passenger compartment, on the left side of the rear seat back	—	*F106LR Seat Air Bag - Left Rear (AYF) on page 11-350*
F106P	Seat Air Bag – Passenger	—	In the passenger compartment, on the right side of the passenger seat back	*Passenger Seat Components on page 11-214*	*F106P Seat Air Bag - Passenger on page 11-351*
F106RR	Seat Air Bag – Right Rear	AYF	In the passenger compartment, on the right side of the rear seat back	—	*F106RR Seat Air Bag - Right Rear (AYF) on page 11-351*
F107	Steering Wheel Air Bag	—	In the passenger compartment, on the center of the steering wheel	—	• *F107 Steering Wheel Air Bag X1 on page 11-352* • *F107 Steering Wheel Air Bag X2 on page 11-353*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
F112D	Seat Belt Retractor Pretensioner – Driver	—	In the passenger compartment, at the base of the driver side B-pillar, part of the driver seat belt retractor	*Left Front of Passenger Compartment Components on page 11-210*	*F112D Seat Belt Retractor Pretensioner - Driver on page 11-353*
F112P	Seat Belt Retractor Pretensioner – Passenger	—	In the passenger compartment, at the base of the passenger side B-pillar, part of the passenger seat belt retractor	*Right Front of Passenger Compartment Components on page 11-211*	*F112P Seat Belt Retractor Pretensioner - Passenger on page 11-354*
F113D	Seat Belt Anchor Pretensioner – Driver	A69	In the passenger compartment, on the outboard side of the driver seat, under the seat adjuster trim cover	*Driver Seat Components on page 11-213*	*F113D Seat Belt Anchor Pretensioner - Driver (A69) on page 11-355*
F113P	Seat Belt Anchor Pretensioner – Passenger	A69	In the passenger compartment, on the outboard side of the passenger seat, under the seat adjuster trim cover	*Passenger Seat Components on page 11-214*	*F113P Seat Belt Anchor Prestensioner - Passenger (A69) on page 11-355*
F114D	Knee Air Bag – Driver	AYF	In the passenger compartment, at the bottom of the driver side of the instrument panel	*Rear of Instrument Panel Components on page 11-205*	*F114D Knee Air Bag - Driver (AYF) on page 11-356*
F114P	Knee Air Bag – Passenger	AYF	In the passenger compartment, at the bottom of the passenger side of the instrument panel	*Rear of Instrument Panel Components on page 11-205*	*F114P Knee Air Bag - Passenger (AYF) on page 11-357*
G10	Cooling Fan Motor	—	In the front center of the engine compartment, mounted to the back of the radiator	*Front of Engine Compartment Components on page 11-192*	• *G10 Cooling Fan Motor (LUW/LWE) on page 11-359* • *G10 Cooling Fan Motor (LUV) on page 11-358*
G12	Fuel Pump	—	Under the vehicle, inside the fuel tank, part of the fuel pump and level sensor assembly	—	—
G13	Generator	—	In the engine compartment, on the lower right rear side of the engine	• *Rear of Engine Components - 1.4L (LUV) on page 11-197* • *Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	• *G13 Generator X1 on page 11-360* • *G13 Generator X2 on page 11-361*
G21	Secondary Air Injection Pump	LWE	In the engine compartment, on the right front of the engine, above the water pump	*Right Front of Engine Components - 1.8L (LWE) on page 11-199*	*G21 Secondary Air Injection Pump (LWE) on page 11-362*
G24	Windshield Washer Pump	—	At the left front corner of the vehicle, behind the front fascia, in the bottom of the washer solvent reservoir	*Left of Engine Compartment Components on page 11-193*	*G24 Windshield Washer Pump on page 11-362*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
K9	Body Control Module	—	In the passenger compartment, under the driver side of the instrument panel, between the steering column and the A-pillar.	*Rear of Instrument Panel Components on page 11-205*	• *K9 Body Control Module X1 on page 11-363* • *K9 Body Control Module X2 on page 11-364* • *K9 Body Control Module X3 on page 11-366* • *K9 Body Control Module X4 on page 11-367* • *K9 Body Control Module X5 on page 11-368* • *K9 Body Control Module X6 on page 11-369* • *K9 Body Control Module X7 on page 11-371*
K17	Electronic Brake Control Module	—	At the rear of the engine compartment on the driver side, behind the battery, to the left of the brake master cylinder	*Left of Engine Compartment Components on page 11-193*	*K17 Electronic Brake Control Module on page 11-372*
K20	Engine Control Module	—	In the left front of the engine compartment, on the right side of the battery	*Left of Engine Compartment Components on page 11-193*	• *K20 Engine Control Module X1 (LUV) on page 11-373* • *K20 Engine Control Module X1 (LUW/ LWE) on page 11-375* • *K20 Engine Control Module X2 (LUV) on page 11-377* • *K20 Engine Control Module X2 (LUW/ LWE) on page 11-379* • *K20 Engine Control Module X3 (LUV) on page 11-381* • *K20 Engine Control Module X3 (LUW/ LWE) on page 11-382*
K27	Fuel Pump Control Module	—	In the right rear of the rear compartment, behind the trim panel	• *Right of Luggage Compartment Components (Hatchback) on page 11-220* • *Luggage Compartment Components (Notchback) on page 11-221*	*K27 Fuel Pump Control Module on page 11-384*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
K29	Seat Heating Control Module	KA1	In the passenger compartment, under the front of the driver seat	*Driver Seat Components on page 11-213*	• *K29 Seat Heating Control Module X1 (KA1) on page 11-385* • *K29 Seat Heating Control Module X2 (KA1) on page 11-386* • *K29 Seat Heating Control Module X3 (KA1) on page 11-387*
K33	HVAC Control Module	—	In the passenger compartment, in the center of the instrument panel, under the radio	*Front of Instrument Panel Components on page 11-204*	• *K33 HVAC Control Module X1 on page 11-388* • *K33 HVAC Control Module X2 on page 11-389* • *K33 HVAC Control Module X3 on page 11-390*
K35	Ignition Coil Module	—	In the engine compartment, on the top center of the engine	• *Top of Engine Components - 1.4L (LUV) on page 11-196* • *Left Front of Engine Components - 1.8L (LUW/LWE) on page 11-198*	*K35 Ignition Coil Module on page 11-391*
K36	Inflatable Restraint Sensing and Diagnostic Module	—	In the passenger compartment, under the instrument panel, in front of the center console	*Right Front of Passenger Compartment Components on page 11-211*	• *K36 Inflatable Restraint Sensing and Diagnostic Module X1 on page 11-392* • *K36 Inflatable Restraint Sensing and Diagnostic Module X2 on page 11-393*
K43	Power Steering Control Module	—	In the passenger compartment, under the instrument panel, part of the steering column, near the base	*Rear of Instrument Panel Components on page 11-205*	• *K43 Power Steering Control Module X1 on page 11-395* • *K43 Power Steering Control Module X2 on page 11-395*
K61	Sunroof Control Module	CF5	In the passenger compartment, above the headliner, at the front of the sunroof	*Headliner Components on page 11-212*	*K61 Sunroof Control Module (CF5) on page 11-396*
K71	Transmission Control Module	MH8 or MH9	In the engine compartment, in the automatic transmission, part of control solenoid valve assembly	—	—
K73	Telematics Communication Interface Control Module	UE1	In the passenger compartment, behind the instrument panel, on the passenger side	*Rear of Instrument Panel Components on page 11-205*	• *K73 Telematics Communication Interface Control Module X1 (UE1) on page 11-397* • *K73 Telematics Communication Interface Control Module X2 (UE1) on page 11-398*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
K77	Remote Control Door Lock Receiver	—	In the passenger compartment, above the inside rear view mirror, attached to the windshield glass	*Headliner Components on page 11-212*	*K77 Remote Control Door Lock Receiver on page 11-399*
K85	Passenger Presence Detection Module	—	In the passenger compartment, in the passenger seat cushion	*Passenger Seat Components on page 11-214*	*K85 Passenger Presence Detection Module on page 11-400*
K89	Immobilizer Control Module	—	In the passenger compartment, on the right side of the steering column, around the ignition lock cylinder	*Steering Column Components on page 11-208*	*K89 Immobilizer Control Module on page 11-400*
M4	Air Inlet Door Actuator	—	In the passenger compartment, behind the passenger side of the instrument panel, on the upper right side of the HVAC assembly	—	*M4 Air Inlet Door Actuator on page 11-401*
M7	Transmission Shift Lock Control Solenoid Actuator	MH8 or MH9	In the passenger compartment, in the center console, part of the automatic transmission shift lever	—	—
M8	Blower Motor	—	In the passenger compartment, behind the passenger side of the instrument panel, in the bottom of the HVAC assembly	—	*M8 Blower Motor on page 11-402*
M9	Brake Booster Pump Motor	—	At the rear of the engine compartment, driver side, below the master cylinder	—	*M9 Brake Booster Pump Motor on page 11-403*
M30	Liftgate Latch	Hatch back	Inside the bottom center of the liftgate	*Inside Liftgate Components (Hatchback) on page 11-222*	*M30 Liftgate Latch (Hatchback) on page 11-403*
M40	Rear Compartment Lid Latch	Notch back	Inside the lower rear center of the rear compartment lid	*Inside Decklid Components (Notchback) on page 11-223*	*M40 Rear Compartment Lid Latch (Notchback) on page 11-404*
M45	Rear Wiper Motor	Hatch back	Inside the center of the liftgate, at the bottom of the liftgate glass	*Inside Liftgate Components (Hatchback) on page 11-222*	*M45 Rear Wiper Motor (Hatchback) on page 11-405*
M64	Starter Motor	—	In the engine compartment, on the lower left rear of the engine	• *Rear of Engine Components - 1.4L (LUV) on page 11-197* • *Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	• *M64 Starter Motor X1 on page 11-406* • *M64 Starter Motor X2 on page 11-406*
M74D	Window Motor – Driver	AXG	Inside the driver door, below the window	*Driver Door Components on page 11-215*	*M74D Window Motor - Driver (AXG) on page 11-407*
M74LR	Window Motor – Left Rear	A33	Inside the left rear door, below the window	*Left Rear Door Components on page 11-217*	*M74LR Window Motor - Left Rear (A33) on page 11-408*
M74P	Window Motor – Passenger	A66	Inside the passenger door, below the window	*Passenger Door Components on page 11-216*	*M74P Window Motor - Passenger (A66) on page 11-408*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
M74RR	Window Motor – Right Rear	A33	Inside the right rear door, below the window	*Right Rear Door Components on page 11-218*	*M74RR Window Motor - Right Rear (A33) on page 11-409*
M75	Windshield Wiper Motor	—	In the left rear of the engine compartment, at the base of the windshield, under the air inlet grille	*Left of Engine Compartment Components on page 11-193*	*M75 Windshield Wiper Motor on page 11-410*
M77D	Outside Rearview Mirror Motor - Driver	DG6	On the outside of the driver door, part of the outside rearview mirror - driver, behind glass, at front	—	*M77D Outside Rearview Mirror Motor - Driver (DG6) on page 11-411*
M77P	Outside Rearview Mirror Motor - Passenger	DG6	On the outside of the passenger door, part of the outside rearview mirror - passenger, behind glass, at front	—	*M77P Outside Rearview Mirror Motor - Passenger (DG6) on page 11-412*
M93	Key Capture Solenoid Actuator	MH8 or MH9	In the passenger compartment, on the upper part of the steering column	—	*M93 Key Capture Solenoid Actuator (MH8 or MH9) on page 11-413*
P2	Transmission Shift Lever Position Indicator	MH8 or MH9	In the passenger compartment, on the center console, next to the automatic transmission shift lever	*Center Console Components on page 11-207*	*P2 Transmission Shift Lever Position Indicator (MH8 or MH9) on page 11-414*
P9	Driver Information Center Display	—	In the passenger compartment, part of the instrument cluster assembly	—	—
P12	Horn	—	At the left front corner of the vehicle, behind the front fascia	*Left of Engine Compartment Components on page 11-193*	*P12 Horn on page 11-414*
P14	Passenger Air Bag Disable Indicator	—	In the passenger compartment, on the center of the instrument panel, right of the hazard lamps switch	*Front of Instrument Panel Components on page 11-204*	*P14 Passenger Air Bag Disable Indicator on page 11-415*
P16	Instrument Cluster	—	In the passenger compartment, on the upper part of the instrument panel, in front of the driver seat	*Front of Instrument Panel Components on page 11-204*	*P16 Instrument Cluster on page 11-416*
P19AG	Speaker – Left Front Door	—	In the passenger compartment, at the lower front of the left front door	*Driver Door Components on page 11-215*	*P19AG Speaker - Left Front Door on page 11-417*
P19AH	Speaker – Right Front Door	—	In the passenger compartment, at the lower front of the right front door	*Passenger Door Components on page 11-216*	*P19AH Speaker - Right Front Door on page 11-417*
P19AL	Speaker – Left Rear Door	—	In the passenger compartment, at the lower front of the left rear door	*Left Rear Door Components on page 11-217*	*P19AL Speaker - Left Rear Door on page 11-418*
P19AM	Speaker – Right Rear Door	—	In the passenger compartment, at the lower front of the right rear door	*Right Rear Door Components on page 11-218*	*P19AM Speaker - Right Rear Door on page 11-419*
P19H	Speaker – Left Front Tweeter	UQ3	In the passenger compartment, at the base of the left A-pillar trim	*Left Front of Passenger Compartment Components on page 11-210*	*P19H Speaker - Left Front Tweeter on page 11-420*
P19V	Speaker – Right Front Tweeter	UQ3	In the passenger compartment, at the base of the right A-pillar trim	*Right Front of Passenger Compartment Components on page 11-211*	*P19V Speaker - Right Front Tweeter on page 11-420*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
Q2	A/C Compressor Clutch	C60	In the engine compartment, on the lower right front of the engine, part of the A/C compressor	• *Front of Engine Components - 1.4L (LUV) on page 11-195* • *Left Front of Engine Components - 1.8L (LUW/LWE) on page 11-198*	*Q2 A/C Compressor Clutch (C60) on page 11-421*
Q5	Brake Pressure Modulator	—	At the rear of the engine compartment, driver side, mounted to the electronic brake control module	—	—
Q6E	Camshaft Position Actuator Solenoid Valve – Exhaust	—	In the engine compartment, on the right side of the engine, right front of the cylinder head	• *Rear of Engine Components - 1.4L (LUV) on page 11-197* • *Left Front of Engine Components - 1.8L (LUW/LWE) on page 11-198*	• *Q6E Camshaft Position Actuator Solenoid Valve - Exhaust (LUV) on page 11-422* • *Q6E Camshaft Position Actuator Solenoid Valve - Exhaust (LUW/LWE) on page 11-423*
Q6F	Camshaft Position Actuator Solenoid Valve – Intake	—	In the engine compartment, on the right side of the engine, right rear of the cylinder head	• *Rear of Engine Components - 1.4L (LUV) on page 11-197* • *Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	• *Q6F Camshaft Position Actuator Solenoid Valve - Intake (LUV) on page 11-423* • *Q6F Camshaft Position Actuator Solenoid Valve - Intake (LUW/LWE) on page 11-424*
Q8	Control Solenoid Valve Assembly	MH8 or MH9	In the engine compartment, inside the automatic transmission assembly	*Automatic Transmission Components (MH8 or MH9) on page 11-203*	• *Q8 Control Solenoid Valve Assembly X1 (MH8 or MH9) on page 11-425* • *Q8 Control Solenoid Valve Assembly X2 (MH8 or MH9) on page 11-426* • *Q8 Control Solenoid Valve Assembly X3 (MH8 or MH9) on page 11-426* • *Q8 Control Solenoid Valve Assembly X4 (MH8 or MH9) on page 11-427*
Q12	Evaporative Emission Purge Solenoid Valve	—	In the engine compartment, towards the rear of the engine, on top of the intake manifold, near the fuel rail	• *Top of Engine Components - 1.4L (LUV) on page 11-196* • *Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	*Q12 Evaporative Emission Purge Solenoid Valve on page 11-428*
Q13	Evaporative Emission Vent Solenoid Valve	—	Under the vehicle, to the left of the fuel tank, on the evaporative emission canister	*Fuel Tank Components on page 11-227*	*Q13 Evaporative Emission Vent Solenoid Valve (NT7) on page 11-429*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
Q17A	Fuel Injector 1	—	In the engine compartment, on the upper rear of the engine, above cylinder 1	• *Top of Engine Components - 1.4L (LUV) on page 11-196* • *Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	• *Q17A Fuel Injector 1 (LUV) on page 11-429* • *Q17A Fuel Injector 1 (LUW/LWE) on page 11-430*
Q17B	Fuel Injector 2	—	In the engine compartment, on the upper rear of the engine, above cylinder 2	• *Top of Engine Components - 1.4L (LUV) on page 11-196* • *Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	• *Q17B Fuel Injector 2 (LUV) on page 11-431* • *Q17B Fuel Injector 2 (LUW/LWE) on page 11-431*
Q17C	Fuel Injector 3	—	In the engine compartment, on the upper rear of the engine, above cylinder 3	• *Top of Engine Components - 1.4L (LUV) on page 11-196* • *Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	• *Q17C Fuel Injector 3 (LUV) on page 11-432* • *Q17C Fuel Injector 3 (LUW/LWE) on page 11-433*
Q17D	Fuel Injector 4	—	In the engine compartment, on the upper rear of the engine, above cylinder 4	• *Top of Engine Components - 1.4L (LUV) on page 11-196* • *Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	• *Q17D Fuel Injector 4 (LUV) on page 11-433* • *Q17D Fuel Injector 4 (LUW/LWE) on page 11-434*
Q22	Intake Manifold Tuning Solenoid Valve	LUW/ LWE	In the engine compartment, rear of the engine, on the left side of the intake manifold	*Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	*Q22 Intake Manifold Tuning Solenoid Valve (LUW/LWE) on page 11-435*
Q27A	Pressure Control Solenoid Valve 1	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	—	—
Q27B	Pressure Control Solenoid Valve 2	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	—	—
Q27C	Pressure Control Solenoid Valve 3	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	—	—
Q27D	Pressure Control Solenoid Valve 4	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	—	—
Q27E	Pressure Control Solenoid Valve 5	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	—	—
Q29	Secondary Air Injection Solenoid Valve	LWE	In the engine compartment, on the left side of the engine, on the left front corner of the cylinder head.	*Right Front of Engine Components - 1.8L (LWE) on page 11-199*	*Q29 Secondary Air Injection Solenoid Valve on page 11-435*
Q32A	Shift Solenoid Valve 1	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	—	—
Q32B	Shift Solenoid Valve 2	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	—	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
Q38	Throttle Body	LUV	In the engine compartment, on the left rear of the engine, on the intake manifold	*Top of Engine Components - 1.4L (LUV) on page 11-196*	*Q38 Throttle Body on page 11-436*
Q38	Throttle Body	LUW/ LWE	In the engine compartment, on the right rear of the engine, on the intake manifold	*Left Rear of Engine Components - 1.8L (LUW/LWE) on page 11-200*	*Q38 Throttle Body on page 11-436*
Q39A	Torque Converter Clutch Pressure Control Solenoid Valve	MH8 or MH9	In the engine compartment, internal to the automatic transmission assembly	—	—
Q40	Turbocharger Bypass Solenoid Valve	LUV	In the engine compartment, on the rear of the engine, on the right side of the intake manifold	*Rear of Engine Components - 1.4L (LUV) on page 11-197*	*Q40 Turbocharger Bypass Solenoid Valve on page 11-437*
Q42	Turbocharger Wastegate Solenoid Valve	LUV	In the engine compartment, at the upper right front of engine	*Front of Engine Components - 1.4L (LUV) on page 11-195*	*Q42 Turbocharger Wastegate Solenoid Valve (LUV) on page 11-438*
R3	Blower Motor Resistor	—	In the passenger compartment, behind the instrument panel, passenger side, in the bottom of the HVAC assembly, near the blower motor	—	*R3 Blower Motor Resistor on page 11-438*
S2	Transmission Manual Shift Switch	MH8 or MH9	In the passenger compartment, in the center console, part of the automatic transmission shift lever	*Center Console Components on page 11-207*	—
S3	Transmission Shift Lever	MH8 or MH9	In the passenger compartment, at the front of the center console	*Center Console Components on page 11-207*	*S3 Transmission Shift Lever (MH8 or MH9) on page 11-439*
S13D	Door Lock Switch – Driver	—	In the passenger compartment, on the left center of the instrument panel, between the radio, and HVAC controls	*Front of Instrument Panel Components on page 11-204*	*S13D Door Lock Switch - Driver on page 11-440*
S26	Hazard Warning Switch	—	In the passenger compartment, on the center of the instrument panel, above the blower speed control switch	*Front of Instrument Panel Components on page 11-204*	*S26 Hazard Warning Switch on page 11-441*
S30	Headlamp Switch	—	In the passenger compartment, on the left side of the instrument panel, between the steering column, and the driver door	*Front of Instrument Panel Components on page 11-204*	*S30 Headlamp Switch on page 11-441*
S33	Horn Switch	—	In the passenger compartment, on the center of the steering wheel	*Steering Wheel Components on page 11-209*	—
S39	Ignition Switch	—	In the passenger compartment, on the right side of the steering column	*Steering Column Components on page 11-208*	*S39 Ignition Switch on page 11-443*
S46B	Liftgate Unlatch Switch	Hatch back	Outside the rear of the vehicle, on the center of the liftgate, between the license plate lamps	*Rear of Vehicle Components (Hatchback) on page 11-224*	*S46B Liftgate Unlatch Switch on page 11-444*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
S48E	Multifunction Switch – Center Console	—	In the passenger compartment, on the center console, behind the automatic transmission shift lever	*Center Console Components on page 11-207*	*S48E Multifunction Switch - Center Console on page 11-444*
S51	Telematics Button Assembly	UE1	In the passenger compartment, in the inside rearview mirror assembly	*Headliner Components on page 11-212*	—
S52	Outside Rearview Mirror Switch	DG6	In the passenger compartment, on the front of the driver door arm rest, in front of the window switch	*Driver Door Components on page 11-215*	*S52 Outside Rearview Mirror Switch (DG6) on page 11-445*
S58A	Rear Compartment Lid Unlatch Switch – Exterior	Notch back	Outside the rear of the vehicle, on the center of the rear compartment lid, between the license plate lamps	*Rear of Vehicle Components (Notchback) on page 11-225*	*S58A Rear Compartment Lid Unlatch Switch - Exterior (Notchback) on page 11-446*
S70L	Steering Wheel Controls Switch – Left	K34	In the passenger compartment, on the steering wheel, on the left side	*Steering Wheel Components on page 11-209*	*S70L Steering Wheel Controls Switch - Left (K34) on page 11-447*
S70R	Steering Wheel Controls Switch – Right	—	In the passenger compartment, on the front of the steering wheel, right of center	*Steering Wheel Components on page 11-209*	*S70R Steering Wheel Controls Switch - Right on page 11-448*
S72	Sunroof Switch	CF5	In the passenger compartment, in the front center of the headliner, in the dome lamp bezel	*Headliner Components on page 11-212*	*S72 Sunroof Switch (CF5) on page 11-449*
S78	Turn Signal/ Multifunction Switch	—	In the passenger compartment, mounted to the left side of the steering column	*Steering Column Components on page 11-208*	*S78 Turn Signal/ Multifunction Switch on page 11-449*
S79D	Window Switch – Driver	AXG	In the passenger compartment, on the driver door arm rest	*Driver Door Components on page 11-215*	*S79D Window Switch - Driver (AXG) on page 11-450*
S79LR	Window Switch – Left Rear	A33	In the passenger compartment, on the left rear door arm rest	*Left Rear Door Components on page 11-217*	*S79LR Window Switch - Left Rear (A33) on page 11-451*
S79P	Window Switch – Passenger	A66	In the passenger compartment, on the passenger door arm rest	*Passenger Door Components on page 11-216*	*S79P Window Switch - Passenger (A66) on page 11-452*
S79RR	Window Switch – Right Rear	A33	In the passenger compartment, on the right rear door arm rest	*Right Rear Door Components on page 11-218*	*S79RR Window Switch - Right Rear (A33) on page 11-453*
S82	Windshield Wiper/ Washer Switch	—	In the passenger compartment, mounted to the right side of the steering column	*Steering Column Components on page 11-208*	*S82 Windshield Wiper/ Washer Switch on page 11-454*
T4D	Cellular Phone and Digital Radio Antenna	UPF with U2K	Outside the vehicle, at the center rear of the roof	—	—
T4E	Cellular Phone and Navigation Antenna	UE1 without U2K	Outside the vehicle, at the center rear of the roof	—	*T4E Cellular Phone and Navigation Antenna (UE1-U2K) on page 11-454*
T4G	Cellular Phone, Navigation, and Digital Radio Antenna	UE1 with U2K	Outside the vehicle, at the center rear of the roof	—	*T4G Cellular Phone, Navigation, and Digital Radio Antenna (UE1 +U2K) on page 11-455*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
T4H	Digital Radio Antenna	U2K	Outside the vehicle, at the center rear of the roof	—	—
T4M	Radio Antenna	—	Outside the vehicle, at the center rear of the roof	• *Rear of Vehicle Components (Hatchback) on page 11-224* • *Rear of Vehicle Components (Notchback) on page 11-225*	*T4M Radio Antenna on page 11-456*
T4S	Wireless Communication Antenna – Bluetooth	UE1	In the passenger compartment, attached to the telematics control module	—	—
T12	Automatic Transmission Assembly	MH8 or MH9	In the engine compartment, mounted to the left side of the engine	—	—
X50A	Fuse Block – Underhood	—	In the left front corner of the engine compartment, left of the battery	*Left of Engine Compartment Components on page 11-193*	*Electrical Center Identification Views on page 11-240*
X50D	Fuse Block – Battery	—	In the engine compartment, on top of the battery, attached to the positive battery post	*Left of Engine Compartment Components on page 11-193*	*Electrical Center Identification Views on page 11-240*
X51A	Fuse Block – Instrument Panel	—	In the passenger compartment, under the left side of the instrument panel	*Rear of Instrument Panel Components on page 11-205*	*Electrical Center Identification Views on page 11-240*
X70A	Relay Block - Underhood	LUV	In the front of the engine compartment, near the left front impact sensor	—	*Electrical Center Identification Views on page 11-240*
X83	Auxiliary Audio Input	UH7	In the passenger compartment, on the passenger side of the instrument panel, inside the upper storage compartment	*Front of Instrument Panel Components on page 11-204*	• *X83 Auxiliary Audio Input X1 (UH7) on page 11-456* • *X83 Auxiliary Audio Input X2 (UH7) on page 11-457*
X84	Data Link Connector	—	In the passenger compartment, under the driver side of the instrument panel	*Front of Instrument Panel Components on page 11-204*	*X84 Data Link Connector on page 11-458*
X85	Steering Wheel Air Bag Coil	—	In the passenger compartment, on the steering column, under the steering wheel	*Steering Column Components on page 11-208*	• *X85 Steering Wheel Air Bag Coil X1 on page 11-459* • *X85 Steering Wheel Air Bag Coil X2 on page 11-460* • *X85 Steering Wheel Air Bag Coil X3 on page 11-461*
X100	Forward Lamp Harness to Body Harness (10 cavities)	—	In the left front corner of the engine compartment, under the left headlamp assembly	*Left Front of Engine Compartment Harness Routing on page 11-79*	*X100 Forward Lamp Harness to Body Harness on page 11-465*
X101	Engine Harness to Body Harness (18 cavities)	—	In the engine compartment, on the left side, on top of the frame rail, in front of the battery	*Left Front of Engine Compartment Harness Routing on page 11-79*	*X101 Engine Harness to Body Harness on page 11-466*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
X105	Forward Lamp Harness to Ambient Air Temperature Sensor Jumper Harness	—	In the right front corner of the vehicle, behind the front fascia, near the ambient temperature sensor	—	*X105 Forward Lamp Harness to Ambient Air Temperature Sensor Jumper Harness on page 11-468*
X110	Forward Lamp Harness to Left Headlamp Harness (4 cavities)	—	In the left front corner of the engine compartment, behind the left headlamp assembly	*Left Front of Engine Compartment Harness Routing on page 11-79*	*X110 Forward Lamp Harness to Left Headlamp Harness on page 11-469*
X120	Forward Lamp Harness to Right Headlamp Harness (4 cavities)	—	In the right front corner of the engine compartment, behind the right headlamp assembly	*Right Front of Engine Compartment Harness Routing on page 11-80*	*X120 Forward Lamp Harness to Right Headlamp Harness on page 11-470*
X160	Engine Harness to Fuel Injector Harness (7 cavities)	LUW/ LWE	In the engine compartment, on the left rear top of the engine	*Engine Harness Routing - 1.8L Rear (LUW/LWE) on page 11-85*	*X160 Engine Harness to Fuel Injector Harness (LUW/LWE) on page 11-471*
X200	Instrument Panel Harness to Body Harness (18 cavities)	—	In the right front of the passenger compartment, below the instrument panel, behind the passenger kick panel	*Right Front of Passenger Compartment Harness Routing on page 11-89*	*X200 Instrument Panel Harness to Body Harness on page 11-472*
X201	Body Harness to EPS Jumper Harness	AYF	In the passenger compartment, behind the driver side of the instrument panel, approximately 5 cm (2 in) from breakout to the body control module	—	*X201 Body Harness to EPS Jumper Harness (AYF) on page 11-473*
X202	Instrument Panel Harness to Body Harness (58 cavities)	—	In the left front of the passenger compartment, below the instrument panel, behind the driver kick panel	*Left Front of Passenger Compartment Harness Routing on page 11-87*	*X202 Instrument Panel Harness to Body Harness on page 11-474*
X205	Instrument Panel Harness to Body Harness (COAX)	UE1	In the right front of the passenger compartment, below the instrument panel, behind the passenger kick panel	*Right Front of Passenger Compartment Harness Routing on page 11-89*	*X205 Body Harness to Instrument Panel Harness (UE1) on page 11-478*
X206	Instrument Panel Harness to Body Harness (COAX)	—	In the right front of the passenger compartment, below the instrument panel, behind the passenger kick panel	*Right Front of Passenger Compartment Harness Routing on page 11-89*	*X206 Instrument Panel Harness to Body Harness on page 11-478*
X207	Instrument Panel Harness to Passenger Air Bag Jumper Harness (4 cavities)	—	Behind the passenger side of the instrument panel, near the passenger air bag	*Instrument Panel Harness Routing on page 11-86*	*X207 Instrument Panel Harness to Passenger Air Bag Jumper Harness on page 11-479*
X208	Headliner Harness to Body Harness (22 cavities)	—	In the left front of the passenger compartment, inside the left side of the instrument panel	*Left Front of Passenger Compartment Harness Routing on page 11-87*	*X208 Headliner Harness to Body Harness on page 11-480*
X301	Body Harness to Driver Seat Harness (20 cavities)	—	In the passenger compartment, under the front of the driver seat	*Center of Passenger Compartment Harness Routing on page 11-88*	*X301 Body Harness to Driver Seat Harness on page 11-481*
X302	Body Harness to Passenger Seat Harness (20 cavities)	—	In the passenger compartment, under the front of the passenger seat	*Center of Passenger Compartment Harness Routing on page 11-88*	*X302 Body Harness to Passenger Seat Harness on page 11-483*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
X350	Body Harness to Fuel Tank Harness (16 cavities)	—	Under the vehicle, in the right rear wheel well, behind the splash guard	*Fuel Tank Harness Routing on page 11-103*	*X350 Body Harness to Fuel Tank Harness on page 11-484*
X405	Left Tail Lamp Harness to Body Harness (6 cavities)	—	Inside the left rear corner of the rear compartment	• *Left Luggage Compartment Harness Routing (Hatchback) on page 11-97* • *Luggage Compartment Harness Routing (Notchback) on page 11-99*	*X405 Left Tail Lamp Harness to Body Harness on page 11-485*
X406	Right Tail Lamp Harness to Body Harness (6 cavities)	—	Inside the right rear corner of the rear compartment	• *Right Luggage Compartment Harness Routing (Hatchback) on page 11-98* • *Luggage Compartment Harness Routing (Notchback) on page 11-99*	*X406 Right Tail Lamp Harness to Body Harness on page 11-486*
X500	Driver Door Harness to Body Harness (30 cavities)	—	At the front of the driver door, between the door and the body	*Driver Door Harness Routing on page 11-92*	*X500 Driver Door Harness to Body Harness on page 11-487*
X501	Driver Door Harness to Outside Rearview Mirror - Driver Harness (8 cavities)	DG6	At the upper front of the inside of the driver door	—	*X501 Driver Door Harness to Outside Rearview Mirror - Driver Harness (DG6) on page 11-489*
X600	Passenger Door Harness to Body Harness (30 cavities)	—	At the front of the passenger door, between the door and the body	*Passenger Door Harness Routing on page 11-93*	*X600 Passenger Door Harness to Body Harness on page 11-490*
X601	Passenger Door Harness to Outside Rearview Mirror - Passenger Harness (8 cavities)	DG6	At the upper front of the inside of the passenger door	—	*X601 Passenger Door Harness to Outside Rearview Mirror - Passenger Harness (DG6) on page 11-492*
X700	Left Rear Door Harness to Body Harness (18 cavities)	—	At the front of the left rear door, between the door and the body	*Left Rear Door Harness Routing on page 11-94*	*X700 Left Rear Door Harness to Body Harness on page 11-493*
X800	Right Rear Door Harness to Body Harness (18 cavities)	—	At the front of the right rear door, between the door and the body	*Right Rear Door Harness Routing on page 11-95*	*X800 Right Rear Door Harness to Body Harness on page 11-494*
X900	Liftgate Harness to Body Harness (11 cavities)	Hatch back	In the upper left rear corner of the luggage compartment, near the top of the C-pillar	*Left Luggage Compartment Harness Routing (Hatchback) on page 11-97*	*X900 Liftgate Harness to Body Harness (Hatchback) on page 11-496*
X900	Rear Compartment Lid Harness to Body Harness (8 cavities)	Notch back	In the upper left front corner of the luggage compartment	*Luggage Compartment Harness Routing (Notchback) on page 11-99*	*X900 Rear Compartment Lid Harness to Body Harness (Notchback) on page 11-497*
X901	Liftgate Harness to License Lamp Harness (2 cavities)	Hatch back	In the liftgate, left of center, behind the liftgate trim	*Liftgate Harness Routing (Hatchback) on page 11-100*	*X901 Liftgate Harness to License Lamp Harness (Hatchback) on page 11-498*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
X901	License Lamp Harness to Rear Compartment Lid Harness (2 cavities)	Notch back	On the inside of the decklid, on the left side	*Decklid Harness Routing (Notchback) on page 11-101*	*X901 License Lamp Harness to Rear Compartment Lid Harness (Notchback) on page 11-499*
G100	Forward Lamp Harness	—	In the engine compartment, on the left side, on the frame rail	*G100, G103 on page 11-228*	—
G101	Forward Lamp Harness	—	In the engine compartment, on the right side, on top of the frame rail	*G101 on page 11-229*	—
G102	Body Harness	—	In the left side of the engine compartment, on the inner fender well, under the fuse block	*G102, G105, G106 on page 11-230*	—
G103	Engine Harness	—	In the left side of the engine compartment, on top of the frame rail, behind X101	*G100, G103 on page 11-228*	—
G104	Engine Harness	—	In the engine compartment, on the left side, attached to left side of cylinder head	*G104 on page 11-231*	—
G105	Negative Battery Cable	—	In the left front of the engine compartment, below the battery, forward of G106, mounted vertically to battery tray support forward of engine mount	*G102, G105, G106 on page 11-230*	—
G106	Negative Battery Cable	—	In the left front of the engine compartment, just forward of engine mount, in back of G105, mounted horizontally, under battery tray	*G102, G105, G106 on page 11-230*	—
G107	Negative Battery Cable	—	In the engine compartment, on the lower left rear of the engine block, on the rear starter bolt	*G107 on page 11-232*	—
G201	Body Harness	—	In the left front of the passenger compartment, under the instrument panel, behind the driver kick panel, just above the base of the left A-pillar	*G201, G303, G307 on page 11-233*	—
G300	Instrument Panel Harness	—	In the passenger compartment, under the center console, behind G301 and G302	*G300, G301, G302 on page 11-234*	—
G301	Instrument Panel Harness	—	In the passenger compartment, under the center console, in front of G300 and G302	*G300, G301, G302 on page 11-234*	—
G302	Instrument Panel Harness	—	In the passenger compartment, under the center console, between G300 and G301	*G300, G301, G302 on page 11-234*	—
G303	Body Harness	—	In the left front of the passenger compartment, at the base of the left A-pillar, below G307	*G201, G303, G307 on page 11-233*	—
G304	Body Harness	—	In the right front of the passenger compartment, near the base of the right A-pillar	*G304 on page 11-235*	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
G307	Body Harness	—	In the left front of the passenger compartment, at the base of the left A-pillar, above G303	*G201, G303, G307 on page 11-233*	—
G400	Body Harness	—	In the right of the luggage compartment, on top of the right rear wheel well	• *G400 (Hatchback) on page 11-236* • *G400 (Notchback) on page 11-237*	—
G401	Body Harness	—	In the left of the luggage compartment, on top of the left rear wheel well	• *G401 (Hatchback) on page 11-238* • *G401 (Notchback) on page 11-239*	—
J100	Engine Harness	LUV	Above the transmission, approximately 5 cm (1.97 in) to the right of the breakout for X101	*Engine Harness Routing - 1.4L Front (LUV) on page 11-82*	—
J100	Engine Harness	LUW or LWE	At the upper right rear of the engine, approximately 4 cm (1.57 in) from the breakout to the purge solenoid valve, towards the intake camshaft position actuator	*Engine Harness Routing - 1.8L Rear (LUW/LWE) on page 11-85*	—
J101	Engine Harness	LUV	Above the transmission, approximately 5 cm (1.97 in) to the left of the breakout for X101	*Engine Harness Routing - 1.4L Front (LUV) on page 11-82*	—
J101	Engine Harness	LUW or LWE	At the top rear of the engine, approximately 10.5 cm (4.13 in) to the left of the breakout for the intake cam position sensor	*Engine Harness Routing - 1.8L Rear (LUW/LWE) on page 11-85*	—
J102	Fuel Injector Harness	LUW or LWE	On the rear of the engine, approximately 15 cm (5.91 in) to the right of X160	—	—
J104	Engine Harness	LUV	Above the transmission, approximately 5 cm (1.97 in) to the left of the breakout for engine control module X1	*Engine Harness Routing - 1.4L Front (LUV) on page 11-82*	—
J110	Engine Harness	LUV with MZ4	At the top rear center of the engine, at the breakout to the rear of the engine	*Engine Harness Routing - 1.4L Rear (LUV) on page 11-83*	—
J110	Engine Harness	LUW or LWE	At the top rear of the engine, approximately 2.5 cm (0.98 in) left of the breakout to the manifold absolute pressure sensor	*Engine Harness Routing - 1.8L Rear (LUW/LWE) on page 11-85*	—
J114	Body Harness	—	In the left rear of the engine compartment, approximately 14.5 cm (5.71 in) left of the breakout to the brake fluid level switch	*Rear of Engine Compartment Harness Routing on page 11-81*	—
J117	Engine Harness	LUV	On the rear of the engine, above the alternator, approximately 13.5 cm (5.31 in) above the breakout to the alternator connector	*Engine Harness Routing - 1.4L Rear (LUV) on page 11-83*	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J117	Engine Harness	LUW/ LWE	On the left rear of the engine, approximately 11 cm (4.33 in) above the breakout to the starter motor	*Engine Harness Routing - 1.8L Rear (LUW/LWE) on page 11-85*	—
J118	Engine Harness	LUV	On the upper left rear of the engine, approximately 5 cm (1.97 in) into the plastic harness protector	*Engine Harness Routing - 1.4L Rear (LUV) on page 11-83*	—
J118	Engine Harness	LUW or LWE	On the rear left side of the engine, approximately 4.5 cm (1.77 in) into the breakout leading to the engine control module connectors	*Engine Harness Routing - 1.8L Front (LUW/LWE) on page 11-84*	—
J122	Engine Harness	LUW or LWE	On the left rear of the engine, approximately 7 cm (2.76 in) into the plastic harness protector	*Engine Harness Routing - 1.8L Rear (LUW/LWE) on page 11-85*	—
J123	Forward Lamp Harness	—	In the front of the engine compartment, behind the left headlamp, approximately 5 cm (1.97 in) left of the breakout to G100	*Left Front of Engine Compartment Harness Routing on page 11-79*	—
J124	Forward Lamp Harness	—	In the front of the engine compartment, behind the right headlamp, approximately 12 cm (4.72 in) left of the breakout to X120	*Right Front of Engine Compartment Harness Routing on page 11-80*	—
J125	Forward Lamp Harness	T3U	In the front of the engine compartment, behind the left headlamp, approximately 2 cm (0.79 in) before the breakout to X110	*Left Front of Engine Compartment Harness Routing on page 11-79*	—
J127	Engine Harness	LUV	On the upper rear of the engine, approximately 10 cm (3.94 in) right of the breakout to the fuel injectors	*Engine Harness Routing - 1.4L Rear (LUV) on page 11-83*	—
J128	Engine Harness	LUV with MH8	On the upper rear of the engine, approximately 5 cm (1.97 in) right of the breakout to the fuel injectors	*Engine Harness Routing - 1.4L Rear (LUV) on page 11-83*	—
J128	Engine Harness	LUW or LWE	On the left side of the engine, in front of the battery, approximately 5 cm (1.97 in) into the breakout to the underhood fuse block	*Engine Harness Routing - 1.8L Rear (LUW/LWE) on page 11-85*	—
J132	Engine Harness	LUV	On the top right side of the engine, approximately 12 cm (4.72 in) before the breakout to the mass air flow sensor	*Engine Harness Routing - 1.4L Rear (LUV) on page 11-83*	—
J132	Engine Harness	LUW or LWE	At the top rear of the engine, approximately 15.5 cm (6.10 in) to the left of the breakout for the intake cam position sensor	*Engine Harness Routing - 1.8L Rear (LUW/LWE) on page 11-85*	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J133	Engine Harness	LUV	On the rear of the engine, approximately 7.5 cm (2.95 in) below the split to the fuel injectors	*Engine Harness Routing - 1.4L Rear (LUV) on page 11-83*	—
J133	Engine Harness	LUW/ LWE	On the left rear of the engine, 14 cm (5.51 in) from the intake manifold tuning solenoid	*Engine Harness Routing - 1.8L Rear (LUW/LWE) on page 11-85*	—
J134	Left Headlamp Harness	—	Inside the left headlamp assembly	—	—
J135	Right Headlamp Harness	—	Inside the right headlamp assembly	—	—
J139	Body Harness	—	In the left rear of the engine compartment, approximately 26.3 cm (10.35 in) from the pass through to the passenger compartment, in the breakout to the battery current sensor	*Rear of Engine Compartment Harness Routing on page 11-81*	—
J141	Body Harness	—	In the left rear of the engine compartment, approximately 10 cm (3.94 in) before the breakout to the electronic brake control module	*Rear of Engine Compartment Harness Routing on page 11-81*	—
J200	Instrument Panel Harness	—	Behind the right side of the instrument panel, approximately 28 cm (11.02 in) right of the breakout to the passenger air bag disable switch	*Instrument Panel Harness Routing on page 11-86*	—
J201	Instrument Panel Harness	UE1	On the far right side of the instrument panel, approximately 11.5 cm (4.53 in) into the breakout to the telematics control module	*Instrument Panel Harness Routing on page 11-86*	—
J202	Instrument Panel Harness	—	Behind the instrument panel, left of center, approximately 6 cm (2.36 in) above the breakout to the hazard and lock switches	*Instrument Panel Harness Routing on page 11-86*	—
J203	Instrument Panel Harness	UE1	Behind the instrument panel, left of center, approximately 22.5 cm (8.86 in) above the breakout to the hazard and lock switches	*Instrument Panel Harness Routing on page 11-86*	—
J207	Instrument Panel Harness	UE1 or UH7	On the left side of the instrument panel, approximately 6 cm (2.36 in) from X202	*Instrument Panel Harness Routing on page 11-86*	—
J209	Body Harness	UE1 or UH7	On the left side of the instrument panel, approximately 4.5 cm (1.77 in) into the breakout to X208	*Left Front of Passenger Compartment Harness Routing on page 11-87*	—
J211	Instrument Panel Harness	UH7	Behind the instrument panel, right of center, approximately 7 cm (2.76 in) into the breakout to the radio	*Instrument Panel Harness Routing on page 11-86*	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J212	Instrument Panel Harness	—	Behind the instrument panel, left side of the vehicle, approximately 2.5 cm (0.98 in) right of the breakout to the body control module	*Instrument Panel Harness Routing on page 11-86*	—
J214	Instrument Panel Harness	—	Behind the instrument panel, left of center, approximately 16.5 cm (6.50 in) above the breakout to the hazard and lock switches	*Instrument Panel Harness Routing on page 11-86*	—
J215	Instrument Panel Harness	—	On the left side of the instrument panel, approximately 9 cm (3.54 in) from X202	*Instrument Panel Harness Routing on page 11-86*	—
J216	Instrument Panel Harness	UE1	Behind the instrument panel, on the right side, approximately 6.5 cm (2.36 in) right of the breakout to the passenger air bag	*Instrument Panel Harness Routing on page 11-86*	—
J217	Headliner Harness	C90 or C95	In the front of the passenger compartment, above the headliner, approximately 13.0 cm (5.12 in) from the breakout to dome/reading lamps – 2nd row	—	—
J218	Headliner Harness	C90 or C95	In the front of the passenger compartment, above the headliner, approximately 8.0 cm (3.15 in) from the breakout to dome/reading lamps – 2nd row	—	—
J221	Steering Wheel Harness	—	Inside the steering wheel	—	—
J222	Steering Wheel Harness	—	Inside the steering wheel	—	—
J223	Steering Wheel Harness	K34	Inside the steering wheel	—	—
J224	Instrument Panel Harness	—	Behind the instrument panel, on the left side, approximately 6 cm (2.36 in) left of the breakout to the accelerator and brake pedal position sensors	*Instrument Panel Harness Routing on page 11-86*	—
J225	Body Harness	—	On the left side of the instrument panel, approximately 3 cm (1.18 in) above the breakout to X500	*Left Front of Passenger Compartment Harness Routing on page 11-87*	—
J228	Instrument Panel Harness	UE1	On the right side of the instrument panel, approximately 10.5 cm (4.13 in) below the breakout to the telematics control module	—	—
J229	Instrument Panel Harness	UH7	Behind the center of the instrument panel, approximately 6 cm (2.36 in) from the radio X1	*Instrument Panel Harness Routing on page 11-86*	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J230	Body Harness	—	On the left side of the instrument panel, approximately 19.5 cm (7.68 in) below X500	*Left Front of Passenger Compartment Harness Routing on page 11-87*	—
J231	Body Harness	—	On the right side of the instrument panel, approximately 11.2 cm (4.41 in) below the breakout to X600	*Right Front of Passenger Compartment Harness Routing on page 11-89*	—
J232	Body Harness	—	On the right side of the instrument panel, approximately 16.2 cm (6.38 in) below the breakout to X600	*Right Front of Passenger Compartment Harness Routing on page 11-89*	—
J233	Headliner Harness	UE1 or UH7	In the font of the passenger compartment, under the left A-pillar trim, approximately 5 cm (1.97 in) above the breakout to the left front tweeter	*Headliner Harness Routing on page 11-91*	—
J234	Body Harness	UE1 or UH7	On the left side of the instrument panel, approximately 10.5 cm (4.13 in) below X300	*Left Front of Passenger Compartment Harness Routing on page 11-87*	—
J236	Instrument Panel Harness	—	Behind the left side of the instrument panel, approximately 20 cm (7.87 in) left of the breakout to the accelerator and brake pedal position sensors	*Instrument Panel Harness Routing on page 11-86*	—
J301	Headliner Harness	CF5	In the passenger compartment, above the headliner, approximately 8 cm (3.15 in) from the sunroof switch	—	—
J302	Headliner Harness	CF5	In the front of the passenger compartment, above the headliner, approximately 7 cm (2.76 in) left of the breakout to the sunroof switch or cellular phone microphone	*Headliner Harness Routing on page 11-91*	—
J310	Headliner Harness	UE1 or UH7	In the front of the passenger compartment, above the headliner, approximately 7.5 cm (2.95 in) into the breakout to the cellular phone microphone	*Headliner Harness Routing on page 11-91*	—
J313	Body Harness	—	On the left side of the passenger compartment, approximately 3 cm (1.18 in) before the breakout to the seats	—	—
J314	Body Harness	—	On the right side of the passenger compartment, approximately 5.8 cm (2.4 in) from the breakout to the right rear side impact sensor towards the passenger seat belt retractor pretensioner	—	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J317	Body Harness	—	On the left side of the passenger compartment, approximately 11 cm (4.33 in) behind the breakout to the seats	*Left Front of Passenger Compartment Harness Routing on page 11-87*	—
J324	Passenger Seat Harness	AL0	In the passenger seat	—	—
J325	Body Harness	KA1	On the left side of the passenger compartment, approximately 5.1 cm (2.01 in) behind the breakout to the left seat belt retractor pretensioner	—	—
J326	Body Harness	—	On the left side of the passenger compartment, approximately 16.2 cm (6.38 in) before the breakout to the front seats	*Left Front of Passenger Compartment Harness Routing on page 11-87*	—
J327	Body Harness	—	On the left side of the passenger compartment, approximately 11.1 cm (4.37 in) behind the breakout to G303	*Left Front of Passenger Compartment Harness Routing on page 11-87*	—
J328	Body Harness	—	In the passenger compartment, under the center console, approximately 15 cm (5.91 in) left of the breakout to the park brake switch	*Center of Passenger Compartment Harness Routing on page 11-88*	—
J329	Body Harness	—	In the passenger compartment, under the center console, approximately 10 cm (3.94 in) left of the breakout to the park brake switch	*Center of Passenger Compartment Harness Routing on page 11-88*	—
J331	Body Harness	AXG	On the left side of the passenger compartment, approximately 6 cm (2.36 in) behind the breakout to the seats	*Left Front of Passenger Compartment Harness Routing on page 11-87*	—
J332	Body Harness	A33	On the left side of the passenger compartment, approximately 5.5 cm (2.17 in) behind the breakout to the left side impact sensor	*Left Front of Passenger Compartment Harness Routing on page 11-87*	—
J334	Body Harness	—	In the passenger compartment, under the driver seat, approximately 11.9 cm (4.69 in) left of the breakout to X301	*Center of Passenger Compartment Harness Routing on page 11-88*	—
J335	Body Harness	—	In the right rear of the passenger compartment, approximately 10 cm (3.94 in) before the breakout to the underbody pass-through	• *Right Rear of Passenger Compartment Harness Routing (Notchback) on page 11-96* • *Right Luggage Compartment Harness Routing (Hatchback) on page 11-98*	—

Master Electrical Component List (cont'd)

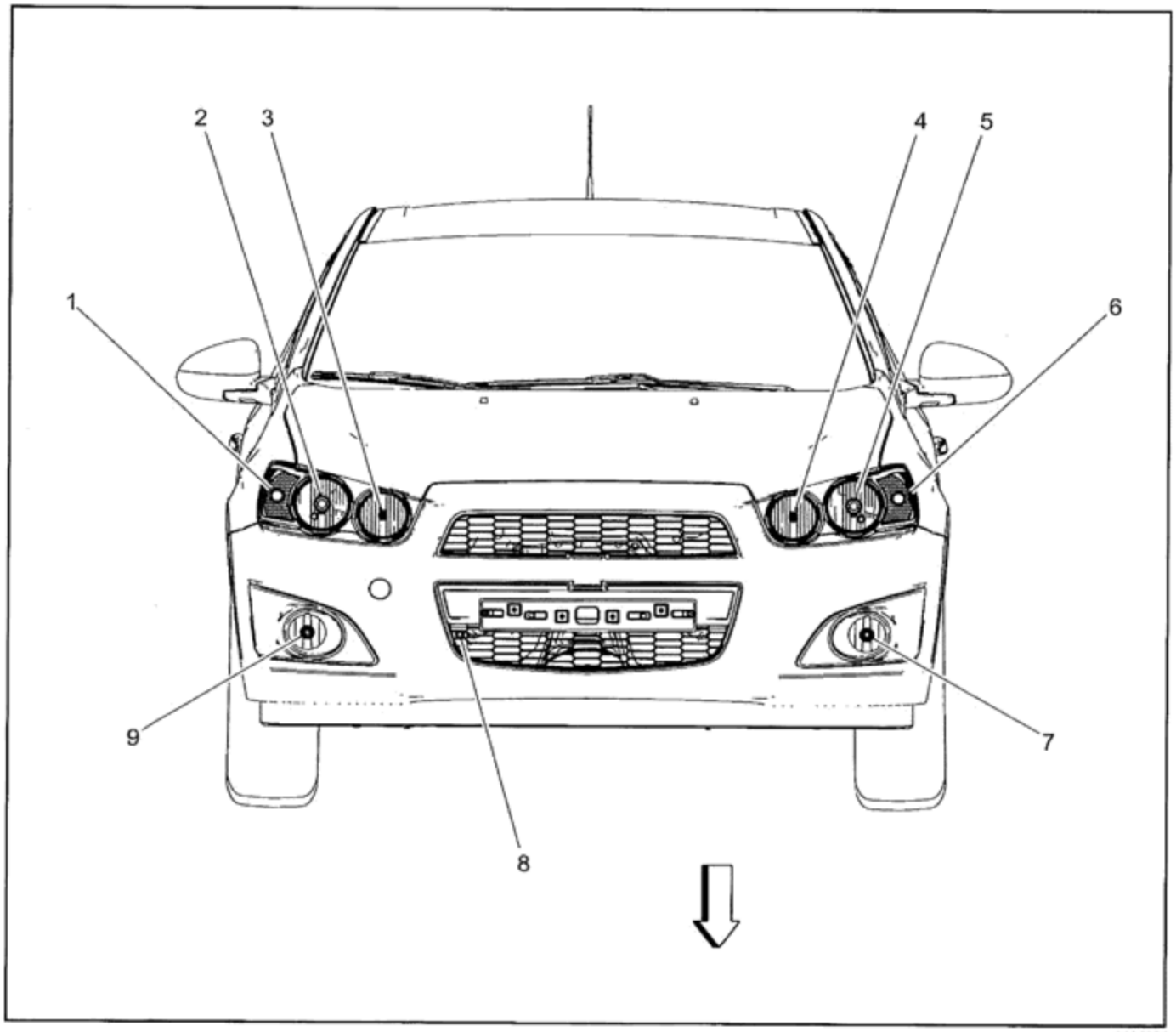
Code	Name	Option	Location	Locator View	Connector End View
J336	Instrument Panel Harness	—	In the front of the passenger compartment, under the center console, approximately 7.5 cm (2.95 in) before the breakout to G301	*Center Console Harness Routing on page 11-90*	—
J402	Left Tail Lamp Harness	—	Inside the left tail lamp assembly	—	—
J403	Right Tail Lamp Harness	—	Inside the right tail lamp assembly	—	—
J408	Left Tail Lamp Harness	—	Inside the left tail lamp assembly	—	—
J409	Right Tail Lamp Harness	—	Inside the right tail lamp assembly	—	—
J500	Driver Door	AXG or DG6	Behind the driver door trim panel, approximately 5 cm (1.97 in) into the breakout to the window switch	*Driver Door Harness Routing on page 11-92*	—
J503	Driver Door	AXG	Behind the driver door trim panel, approximately 5 cm (1.97 in) before the breakout to the driver window motor	—	—
J600	Passenger Door	DG6	Behind the passenger door trim panel, approximately 14 cm (5.51 in) before the breakout to the passenger window motor	*Passenger Door Harness Routing on page 11-93*	—
J900	Liftgate	Hatch back	Inside the liftgate, approximately 4 cm (1.57 in) left of the breakout to X901	*Liftgate Harness Routing (Hatchback) on page 11-100*	—
J900	Rear Compartment Lid	Notch back	Inside the rear compartment lid, approximately 6 cm (2.36 in) from the breakout to the rear compartment lid latch	*Decklid Harness Routing (Notchback) on page 11-101*	—
J902	License Plate Lamp	Hatch back	On the outside of the liftgate, under the license lamp trim cover, approximately 24 cm (9.45 in) from the right license plate lamp	*License Lamp Harness Routing (Hatchback) on page 11-102*	—
J902	License Plate Lamp	Notch back	On the outside of the rear compartment lid, under the license lamp trim cover, approximately 21 cm (8.27 in) from the right license plate lamp	*Decklid Harness Routing (Notchback) on page 11-101*	—
J903	License Plate Lamp	Hatch back	On the outside of the liftgate, under the license lamp trim cover, approximately 29 cm (11.4 in) from the right license plate lamp	*License Lamp Harness Routing (Hatchback) on page 11-102*	—
J903	License Plate Lamp	Notch back	On the outside of the rear compartment lid, under the license lamp trim cover, approximately 26 cm (10.24 in) from the right license lamp	*Decklid Harness Routing (Notchback) on page 11-101*	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
JX200	Instrument Panel Harness	—	Behind the instrument panel, right of center, just below the right center air vent	*Instrument Panel Harness Routing on page 11-86*	*JX200 on page 11-462*
JX201	Body	—	On the left side of the instrument panel, below X300	*Left Front of Passenger Compartment Harness Routing on page 11-87*	*JX201 on page 11-463*
JX202	Instrument Panel Harness	—	Behind the instrument panel, left of center, just below the left center air vent	*Instrument Panel Harness Routing on page 11-86*	*JX202 on page 11-464*
JX203	Instrument Panel Harness	—	On the left side of the instrument panel, above X202	*Instrument Panel Harness Routing on page 11-86*	*JX203 on page 11-464*

Front of Vehicle/Engine Compartment Component Views

Front of Vehicle Components

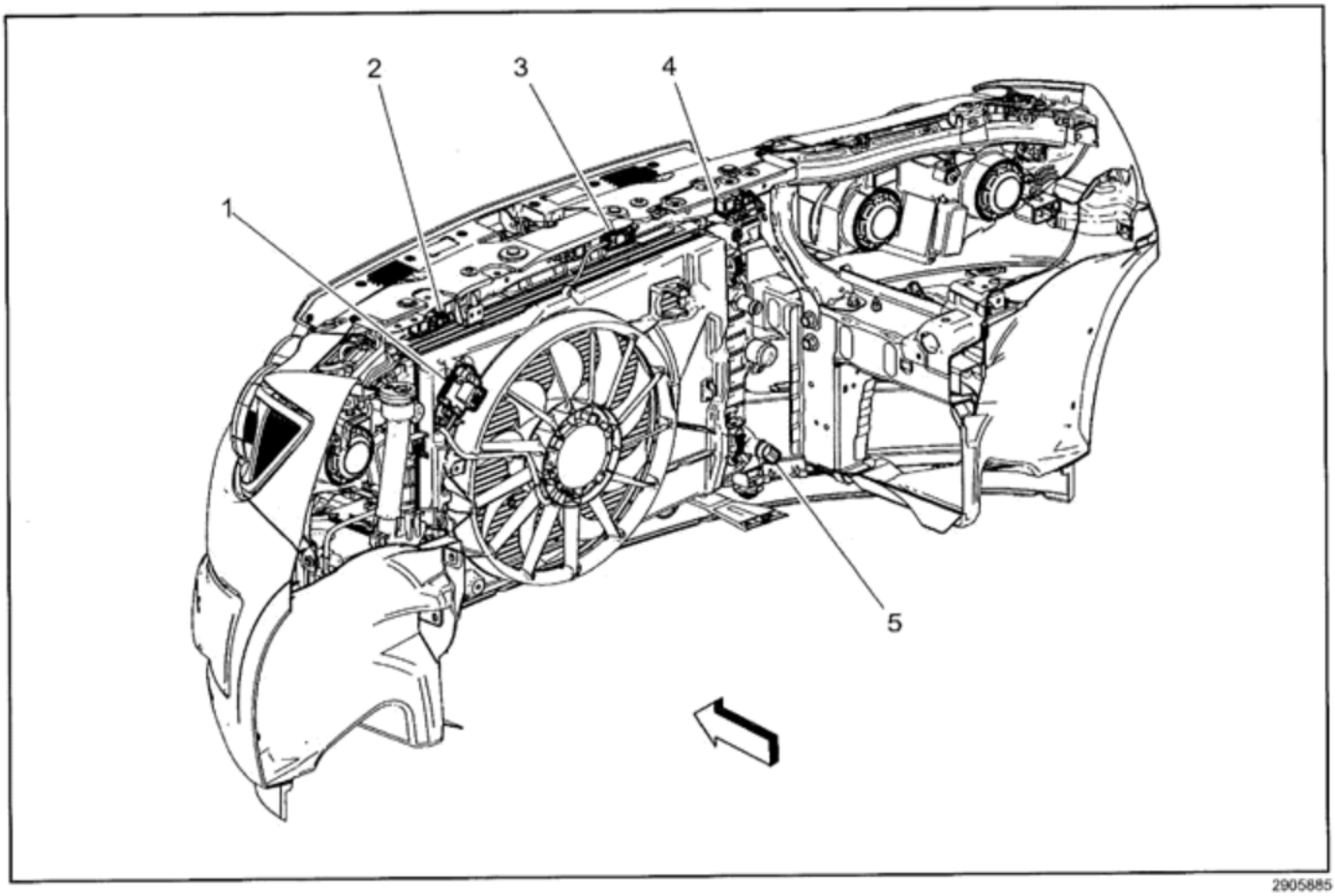


2654776

Items

(1) E4P Park/Turn Signal Lamp – Right
(2) E4H Headlamp – Right Low Beam
(3) E4F Headlamp – Right High Beam
(4) E4E Headlamp – Left High Beam
(5) E4G Headlamp – Left Low Beam
(6) E4N Park/Turn Signal Lamp – Left
(7) E29LF Fog Lamp – Left Front (T3U)
(8) B9 Ambient Air Temperature Sensor
(9) E29RF Fog Lamp – Right Front (T3U)

Front of Engine Compartment Components

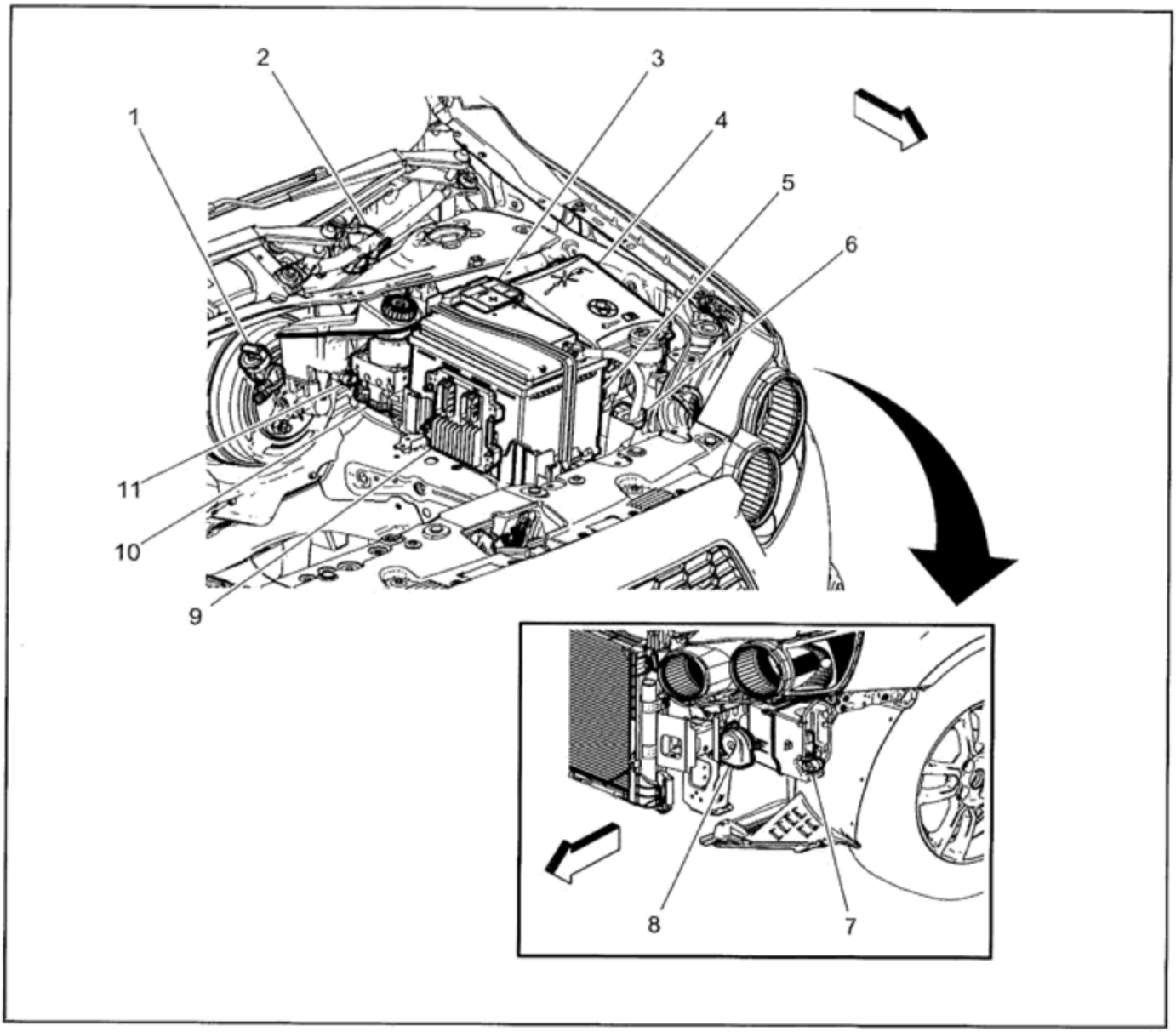


2905885

Items

(1) G10 Cooling Fan Motor
(2) B59L Front Impact Sensor – Left
(3) B55 Hood Ajar Switch (UTJ)
(4) B59R Front Impact Sensor – Right
(5) B34B Engine Coolant Temperature Sensor 2

Left of Engine Compartment Components

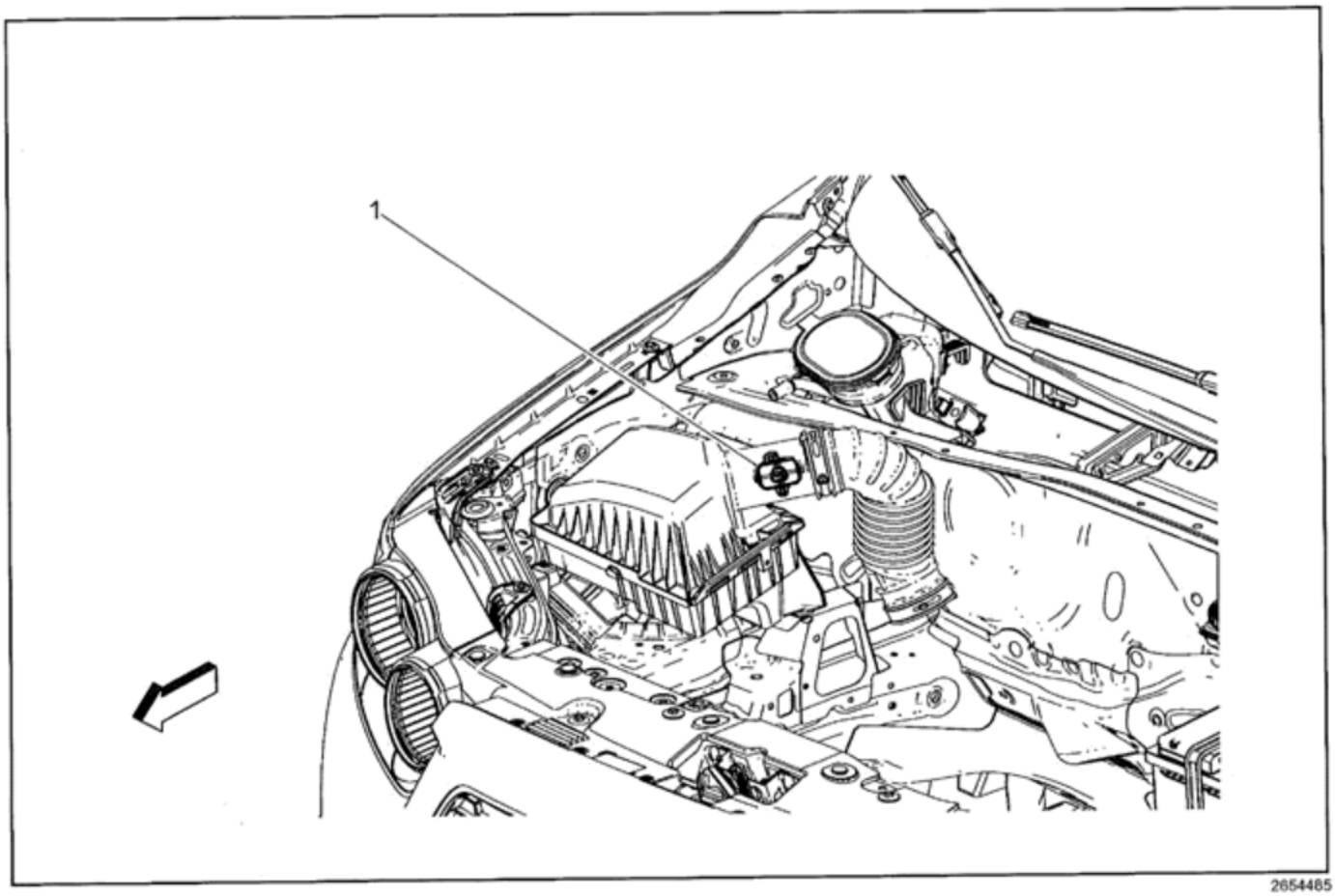


3216929

Items

(1) B19C Brake Booster Vacuum Switch
(2) M75 Windshield Wiper Motor
(3) X50D Fuse Block – Battery
(4) X50A Fuse Block – Underhood
(5) C1 Battery
(6) B18 Battery Current Sensor
(7) G24 Windshield Washer Pump
(8) P12 Horn
(9) K20 Engine Control Module
(10) K17 Electronic Brake Control Module
(11) B20 Brake Fluid Level Switch

Right of Engine Compartment Components

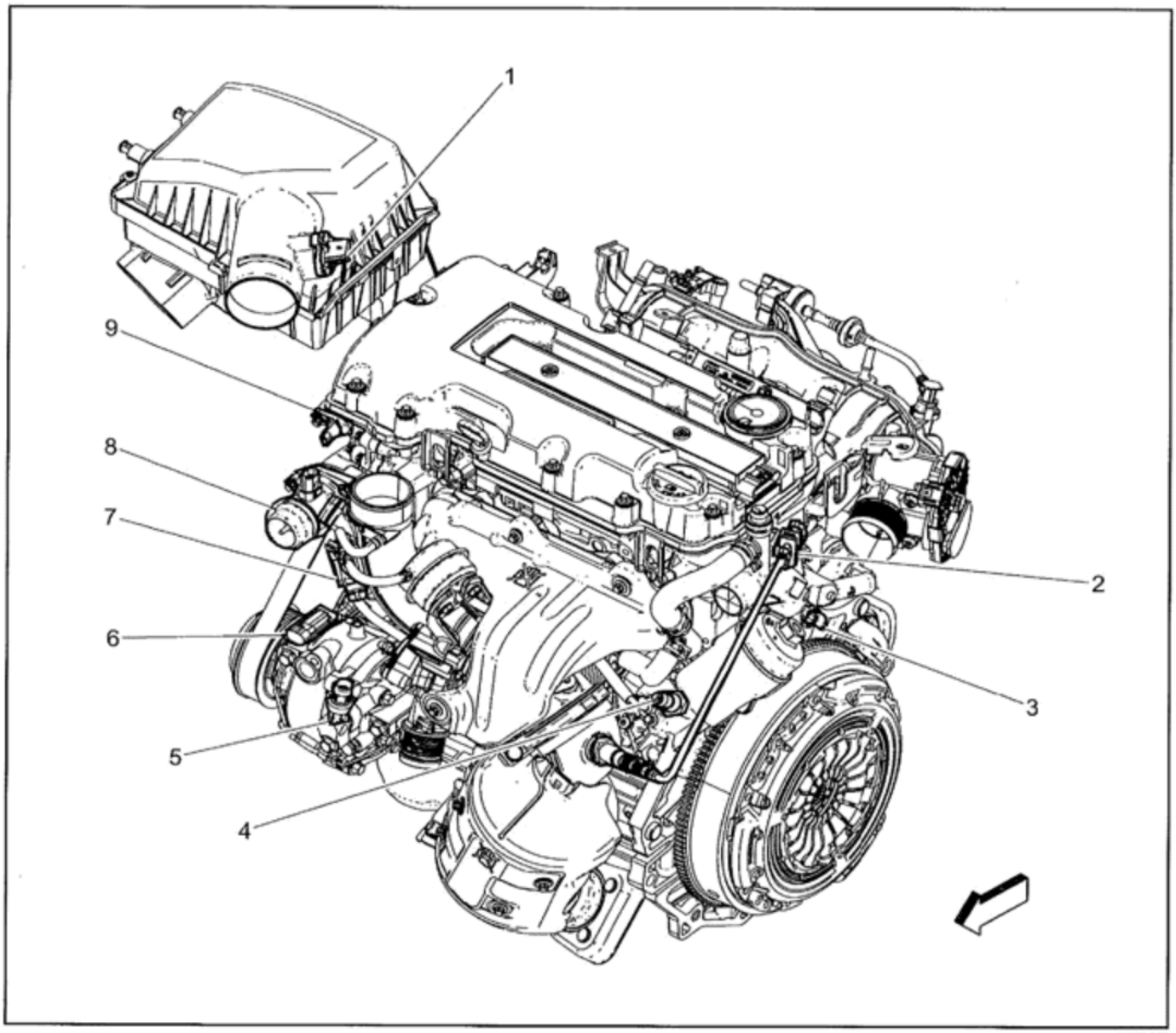


Items

(1) B75C Multifunction Intake Air Sensor

Powertrain Component Views

Front of Engine Components - 1.4L (LUV)

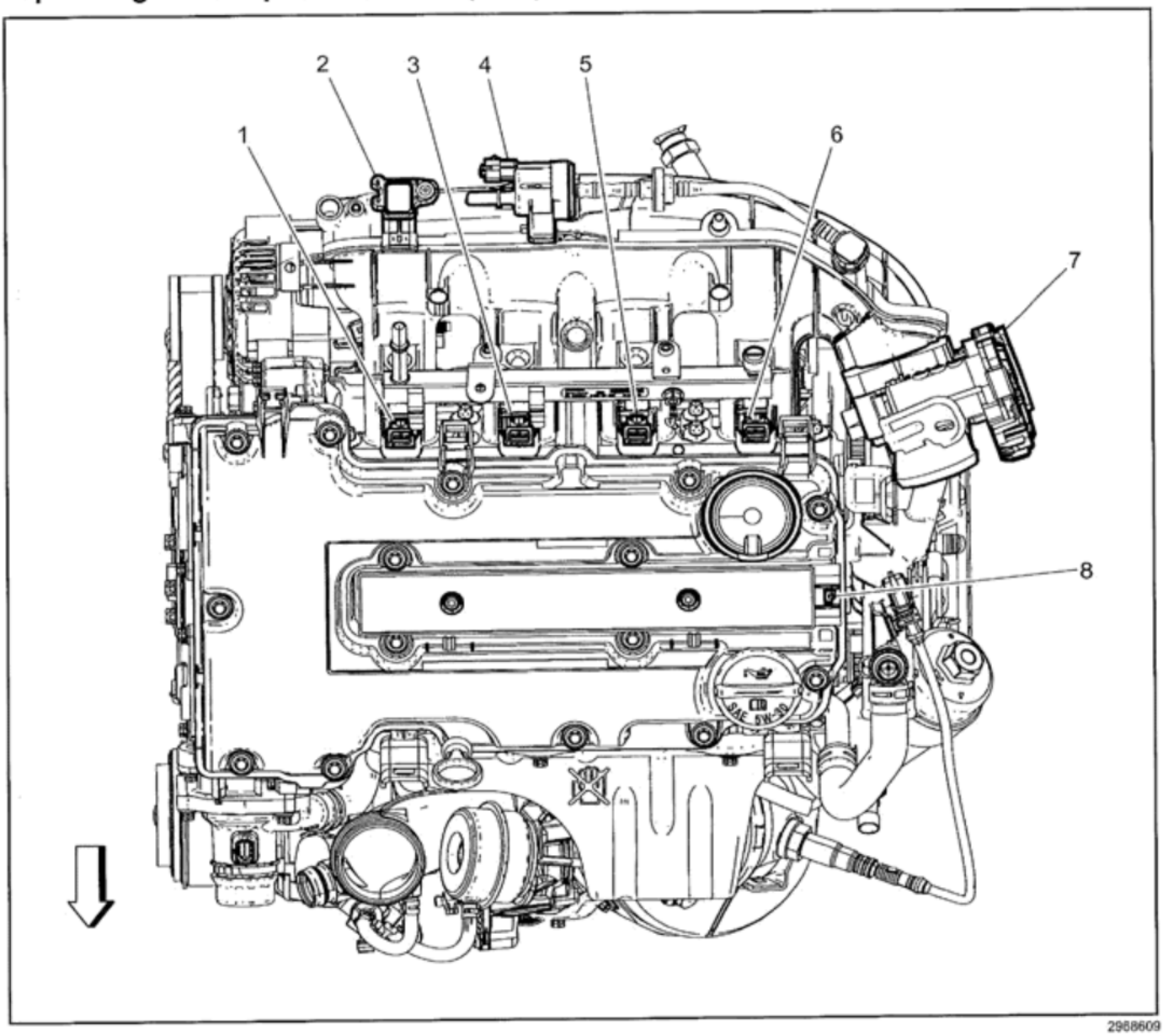


2968606

Items

(1) B75C Multifunction Intake Air Sensor
(2) B52A Heated Oxygen Sensor 1
(3) B34A Engine Coolant Temperature Sensor 1
(4) B37 Engine Oil Pressure Switch
(5) B1 A/C Refrigerant Pressure Sensor (C60)
(6) Q2 A/C Compressor Clutch (C60)
(7) Q42 Turbocharger Wastegate Solenoid Valve (LUV)
(8) E41 Engine Coolant Thermostat Heater
(9) B23E Camshaft Position Sensor – Exhaust

Top of Engine Components - 1.4L (LUV)

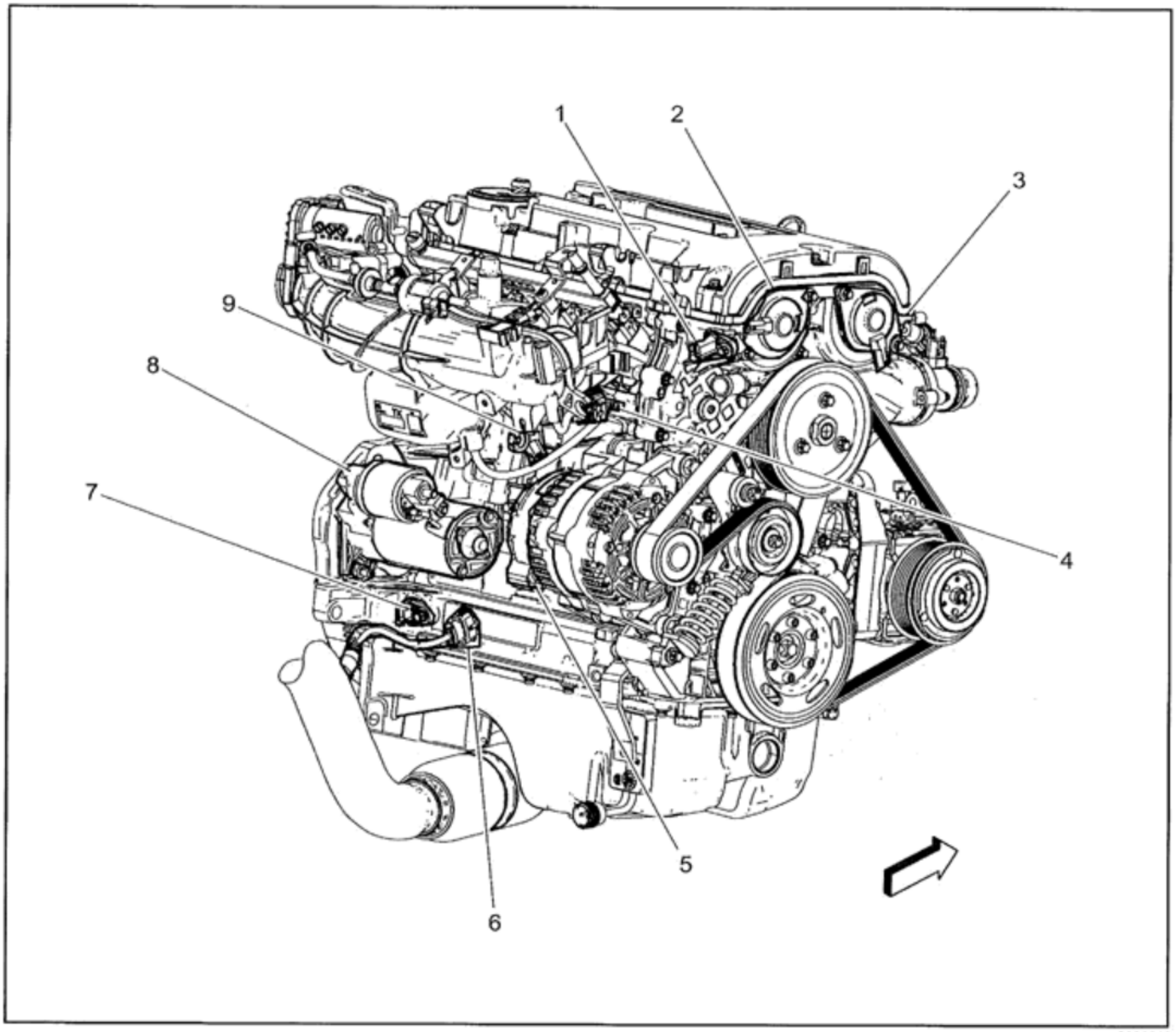


2988609

Items

(1) Q17A Fuel Injector 1
(2) B74 Manifold Absolute Pressure Sensor
(3) Q17B Fuel Injector 2
(4) Q12 Evaporative Emission Purge Solenoid Valve
(5) Q17C Fuel Injector 3
(6) Q17D Fuel Injector 4
(7) Q38 Throttle Body
(8) K35 Ignition Coil Module

Rear of Engine Components - 1.4L (LUV)

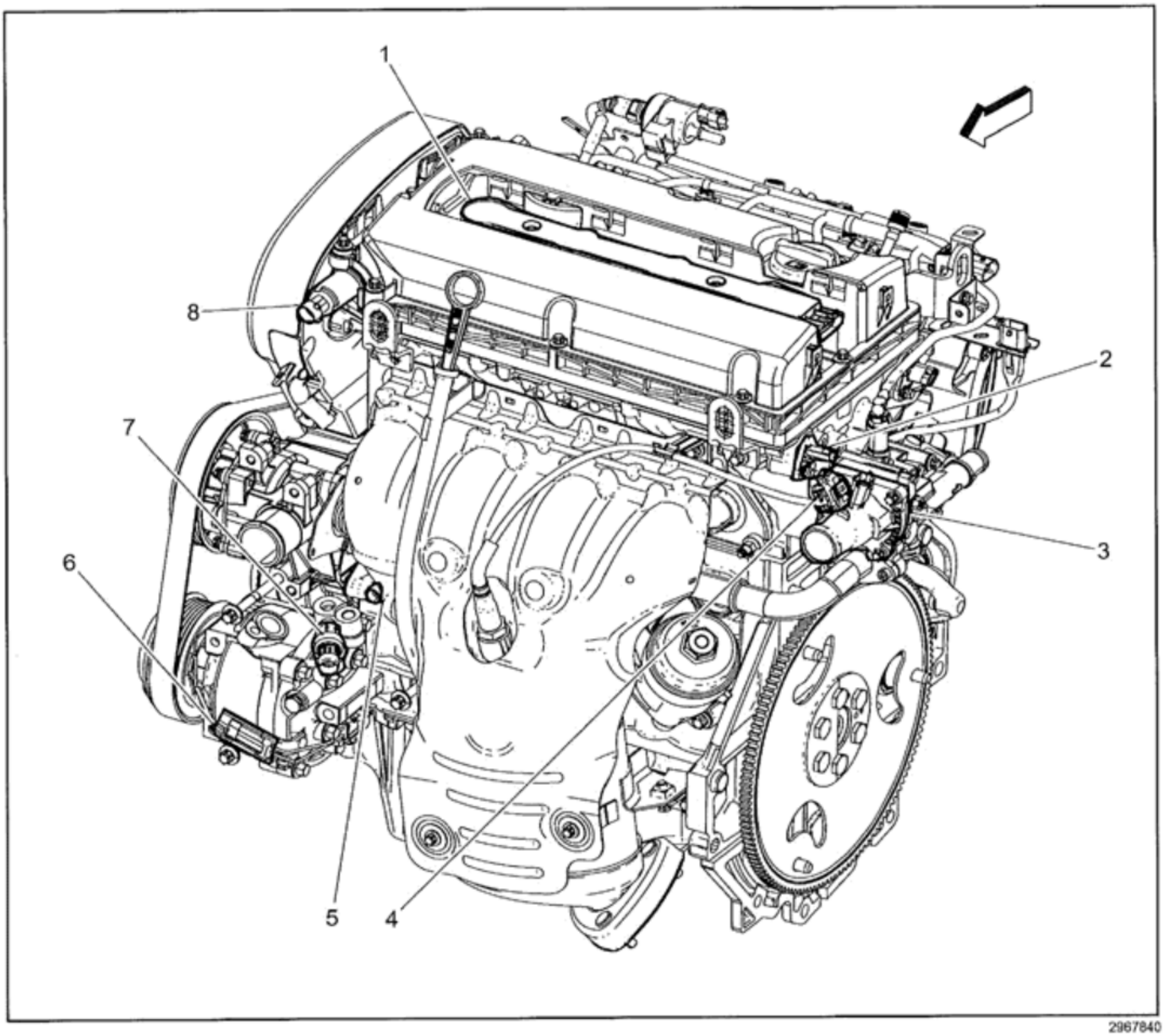


2968610

Items

(1) B23F Camshaft Position Sensor – Intake
(2) Q6F Camshaft Position Actuator Solenoid Valve – Intake
(3) Q6E Camshaft Position Actuator Solenoid Valve – Exhaust
(4) Q40 Turbocharger Bypass Solenoid Valve (LUV)
(5) G13 Generator
(6) B52B Heated Oxygen Sensor 2
(7) B26 Crankshaft Position Sensor
(8) M64 Starter Motor
(9) B68 Knock Sensor

Left Front of Engine Components - 1.8L (LUW/LWE)

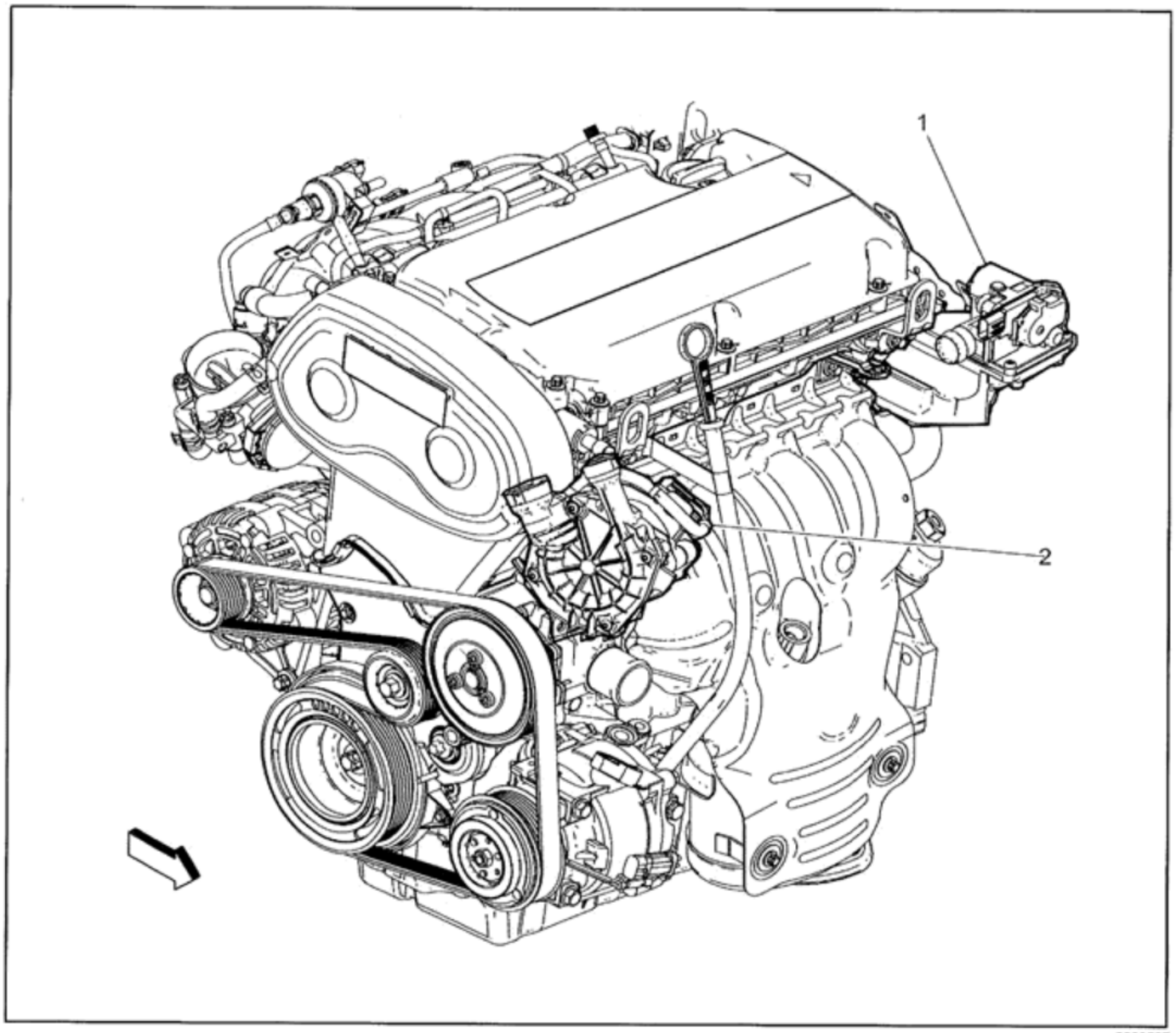


2967840

Items

(1) K35 Ignition Coil Module
(2) B23E Camshaft Position Sensor – Exhaust
(3) E41 Engine Coolant Thermostat Heater
(4) B52A Heated Oxygen Sensor 1
(5) B37 Engine Oil Pressure Switch
(6) Q2 A/C Compressor Clutch (C60)
(7) B1 A/C Refrigerant Pressure Sensor (C60)
(8) Q6E Camshaft Position Actuator Solenoid Valve – Exhaust

Right Front of Engine Components - 1.8L (LWE)



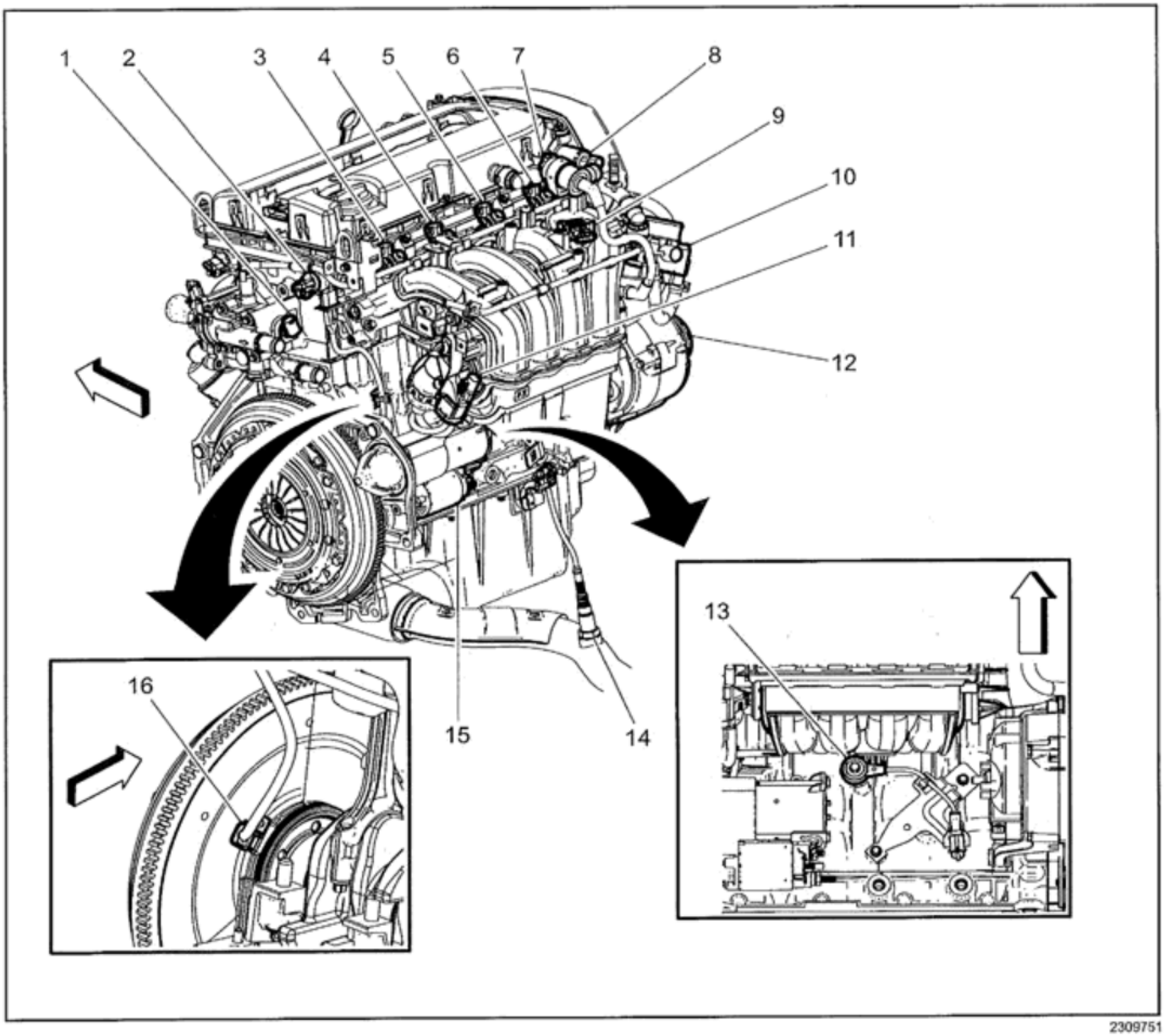
2966587

Items

(1) Q29 Secondary Air Injection Solenoid Valve (LWE)

(2) G21 Secondary Air Injection Pump (LWE)

Left Rear of Engine Components - 1.8L (LUW/LWE)

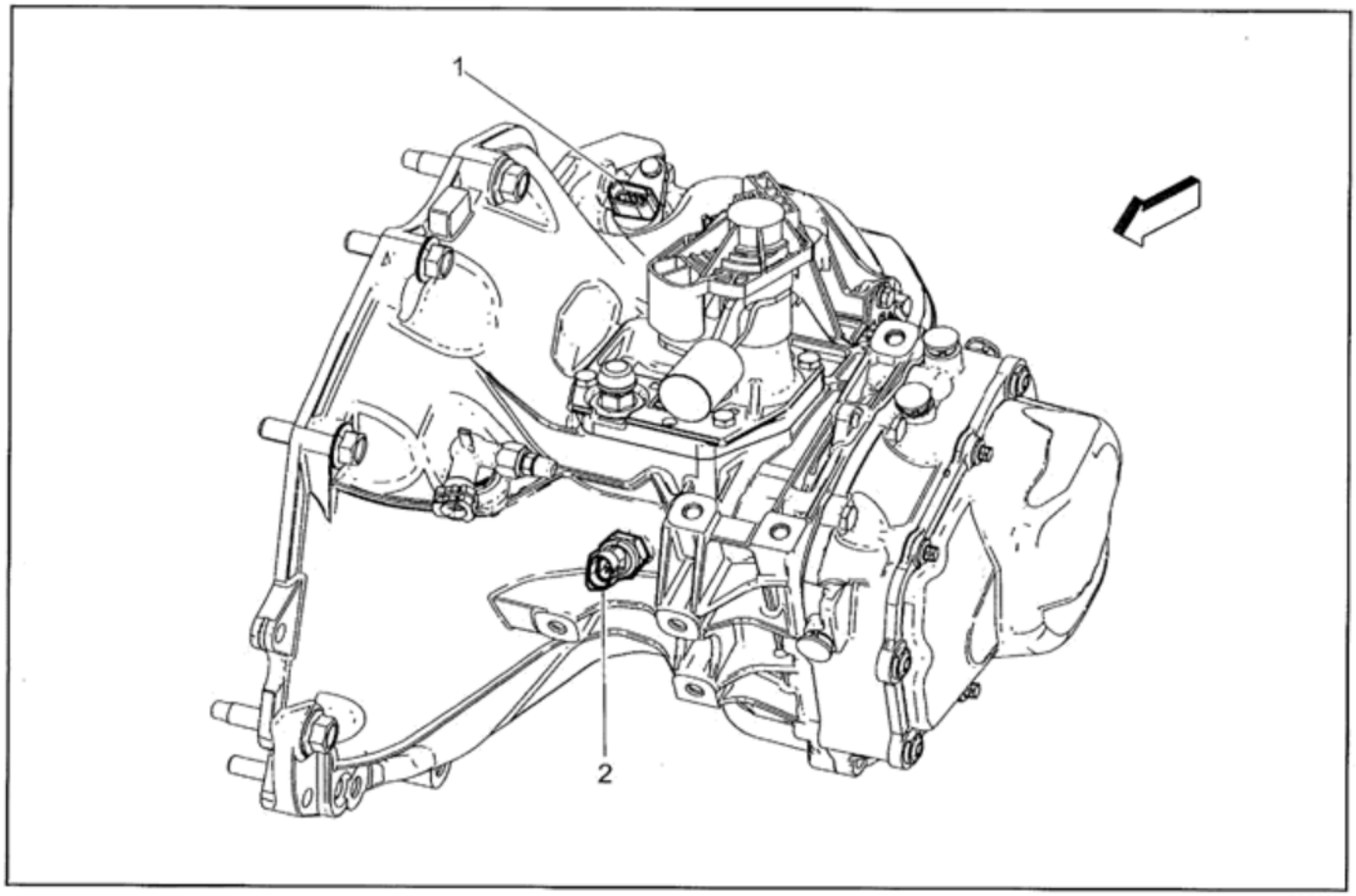


2309751

Items

(1) B34A Engine Coolant Temperature Sensor 1
(2) B23F Camshaft Position Sensor – Intake
(3) Q17D Fuel Injector 4
(4) Q17C Fuel Injector 3
(5) Q17B Fuel Injector 2
(6) Q17A Fuel Injector 1
(7) Q12 Evaporative Emission Purge Solenoid Valve
(8) Q6F Camshaft Position Actuator Solenoid Valve – Intake
(9) B74 Manifold Absolute Pressure Sensor
(10) Q38 Throttle Body
(11) Q22 Intake Manifold Tuning Solenoid Valve (LUW/LWE)
(12) G13 Generator
(13) B68 Knock Sensor
(14) B52B Heated Oxygen Sensor 2
(15) M64 Starter Motor
(16) B26 Crankshaft Position Sensor

Manual Transmission Components - 5 Speed (M26)

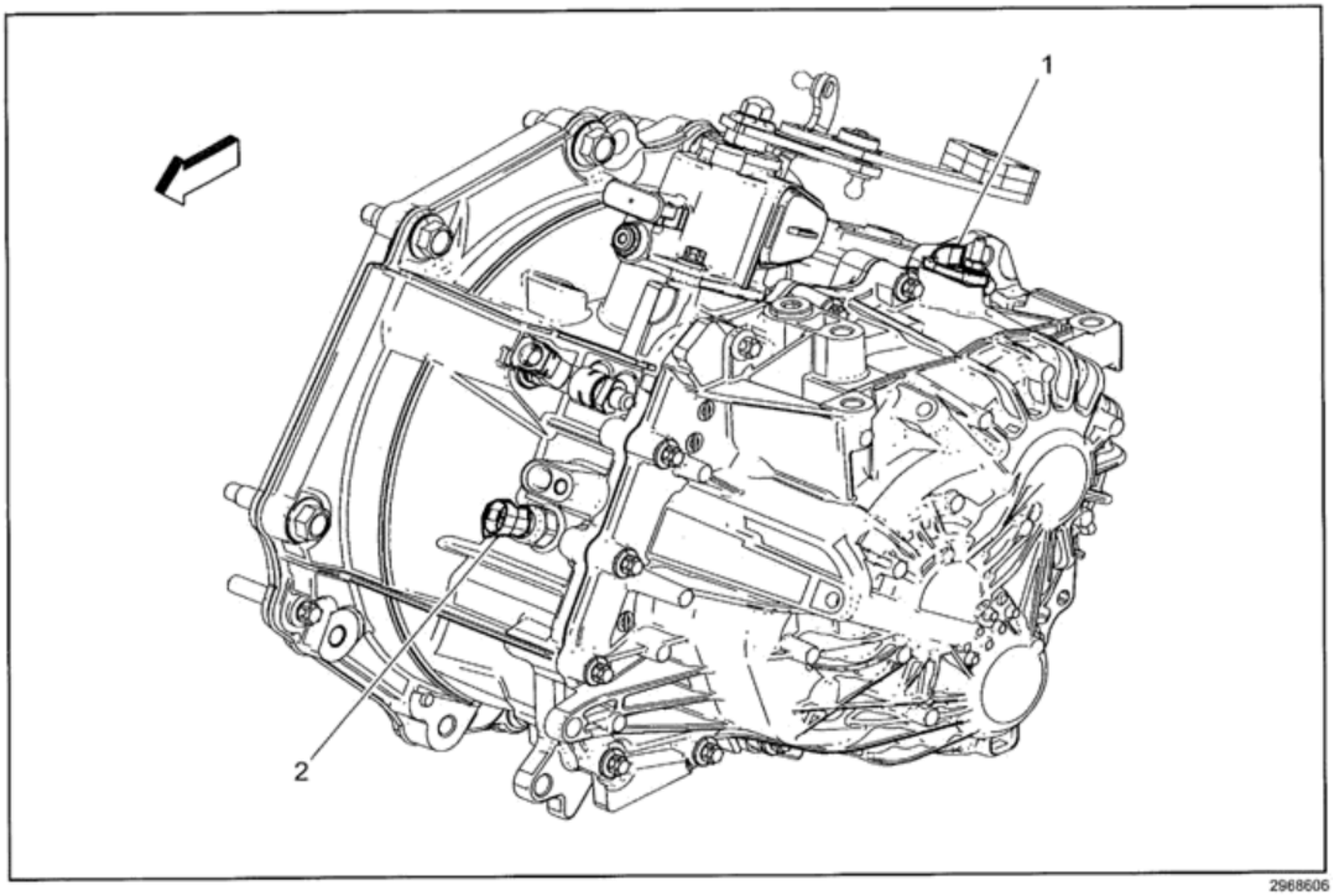


2968600

Items

(1) B14A Transmission Output Shaft Speed Sensor
(2) B16 Backup Lamp Switch (M26/MR5/MZ4)

Manual Transmission Components - 6 Speed (MR5/MZ4)

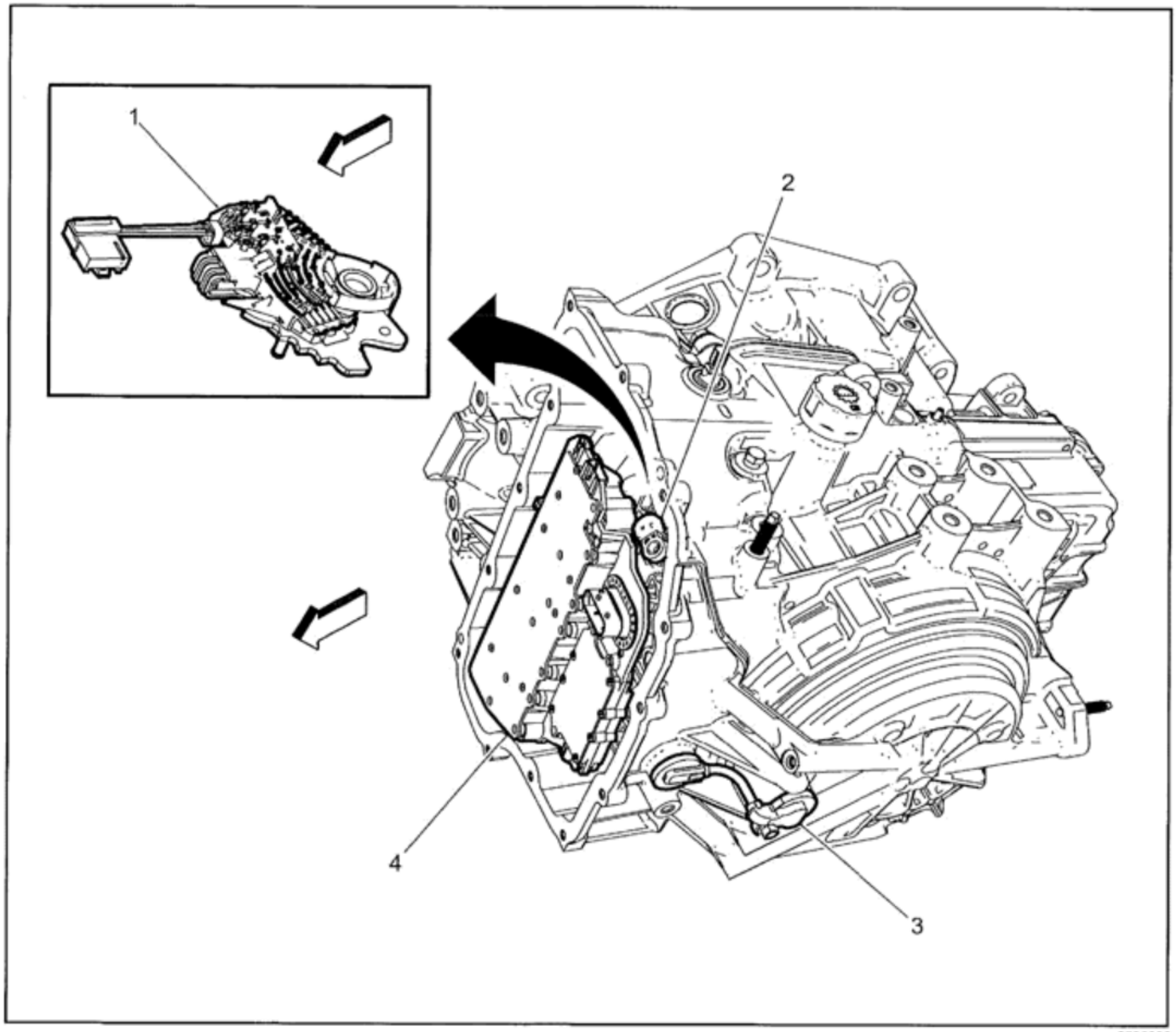


2968606

Items

(1) B14A Transmission Output Shaft Speed Sensor
(2) B16 Backup Lamp Switch (M26/MR5/MZ4)

Automatic Transmission Components (MH8 or MH9)



2526306

Items

(1) B15 Transmission Internal Mode Switch (MH8 or MH9)

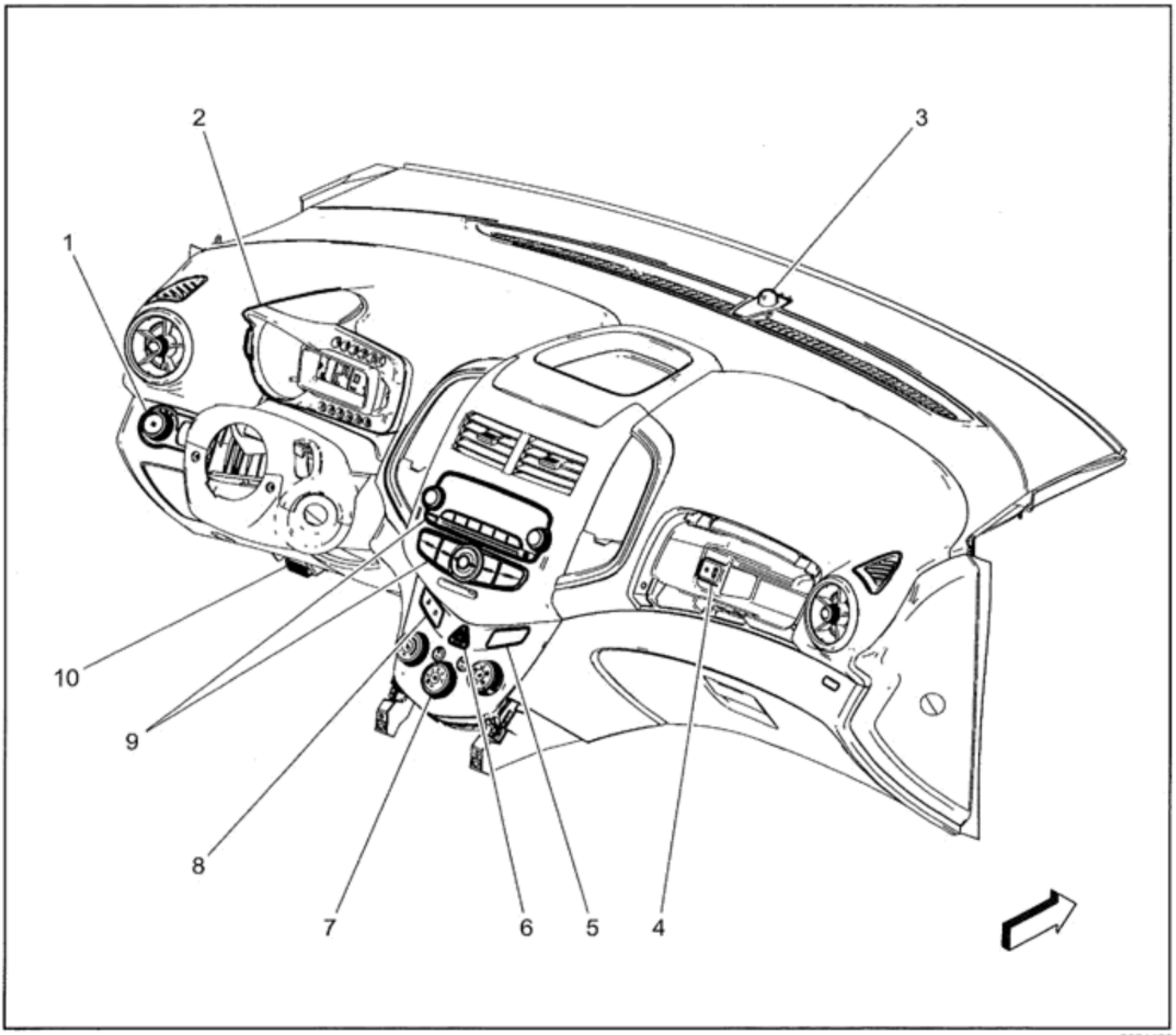
(2) B14A Transmission Output Shaft Speed Sensor

(3) B14C Transmission Input Shaft Speed Sensor (MH8 or MH9)

(4) Q8 Control Solenoid Valve Assembly (MH8 or MH9)

Instrument Panel/Center Console Component Views

Front of Instrument Panel Components

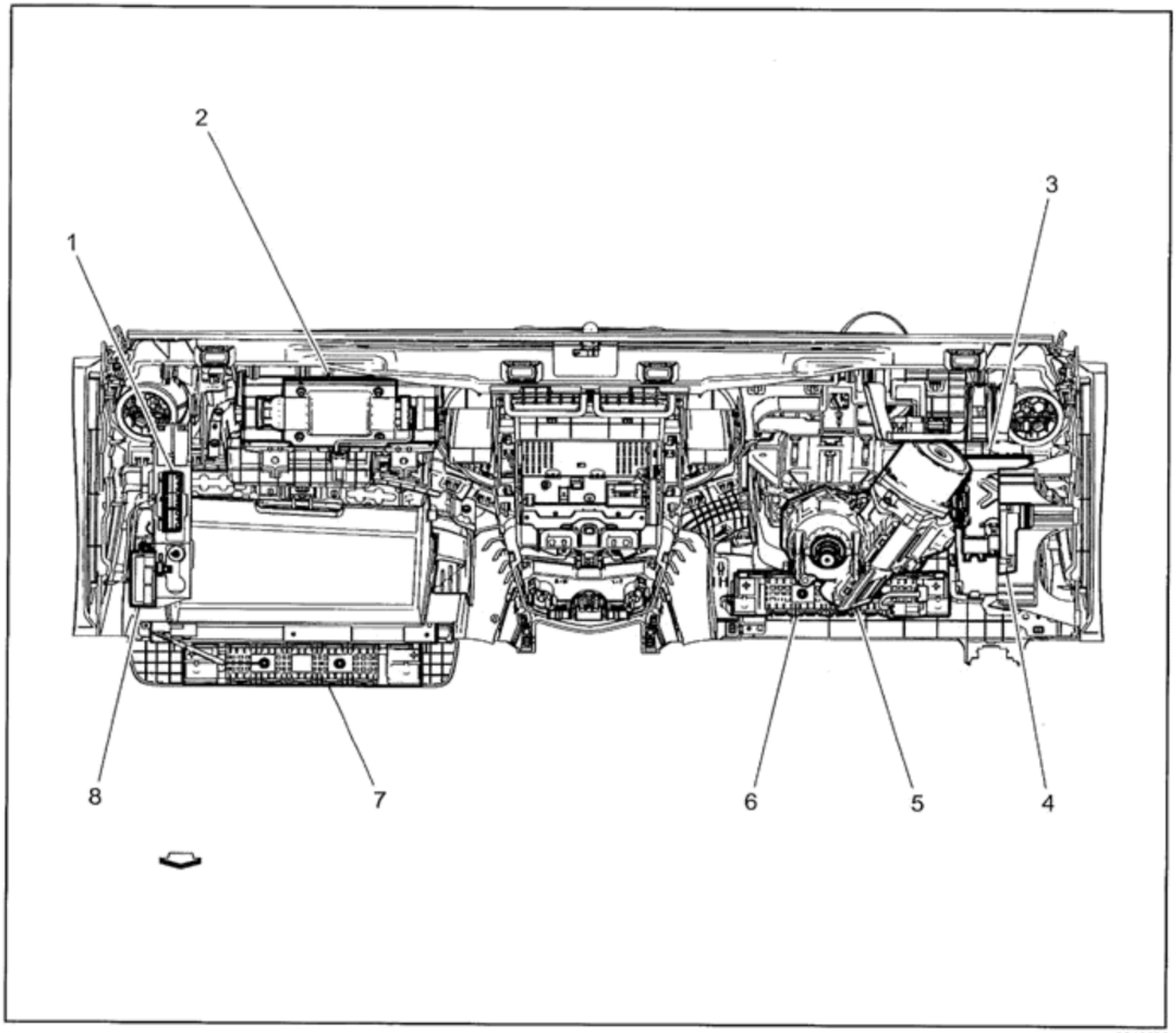


2654493

Items

(1) S30 Headlamp Switch
(2) P16 Instrument Cluster
(3) B10 Ambient Light Sensor
(4) X83 Auxiliary Audio Input (UH7)
(5) P14 Passenger Air Bag Disable Indicator
(6) S26 Hazard Warning Switch
(7) K33 HVAC Control Module
(8) S13D Door Lock Switch – Driver
(9) A11 Radio
(10) X84 Data Link Connector

Rear of Instrument Panel Components

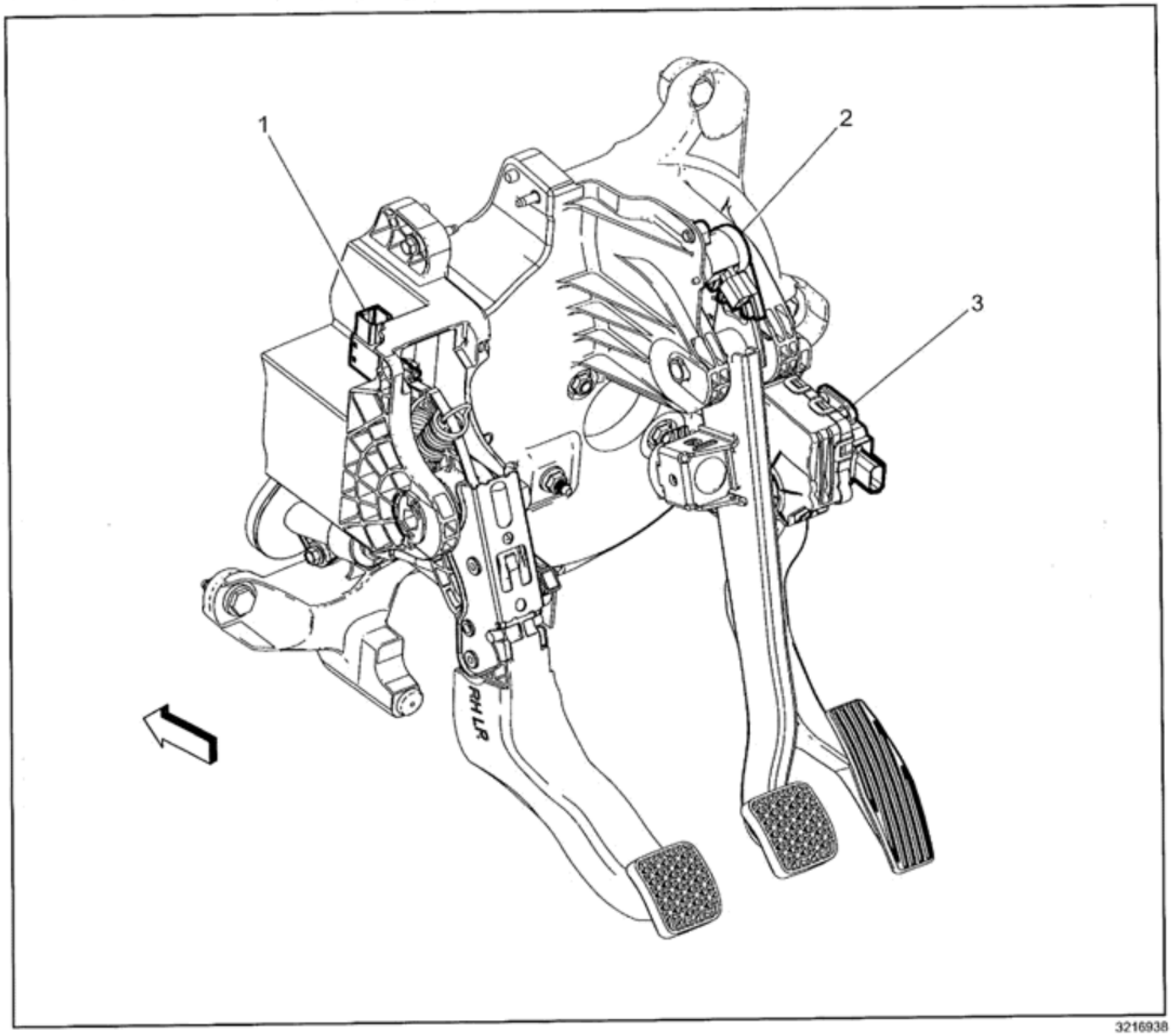


3216932

Items

(1) K73 Telematics Communication Interface Control Module (UE1)
(2) F101 Passenger Instrument Panel Air Bag
(3) X51A Fuse Block – Instrument Panel
(4) K9 Body Control Module
(5) K43 Power Steering Control Module
(6) F114D Knee Air Bag – Driver (AYF)
(7) F114P Knee Air Bag – Passenger (AYF)
(8) C3 Telematics Communication Interface Control Module Battery (UE1)

Under Instrument Panel Components



3216938

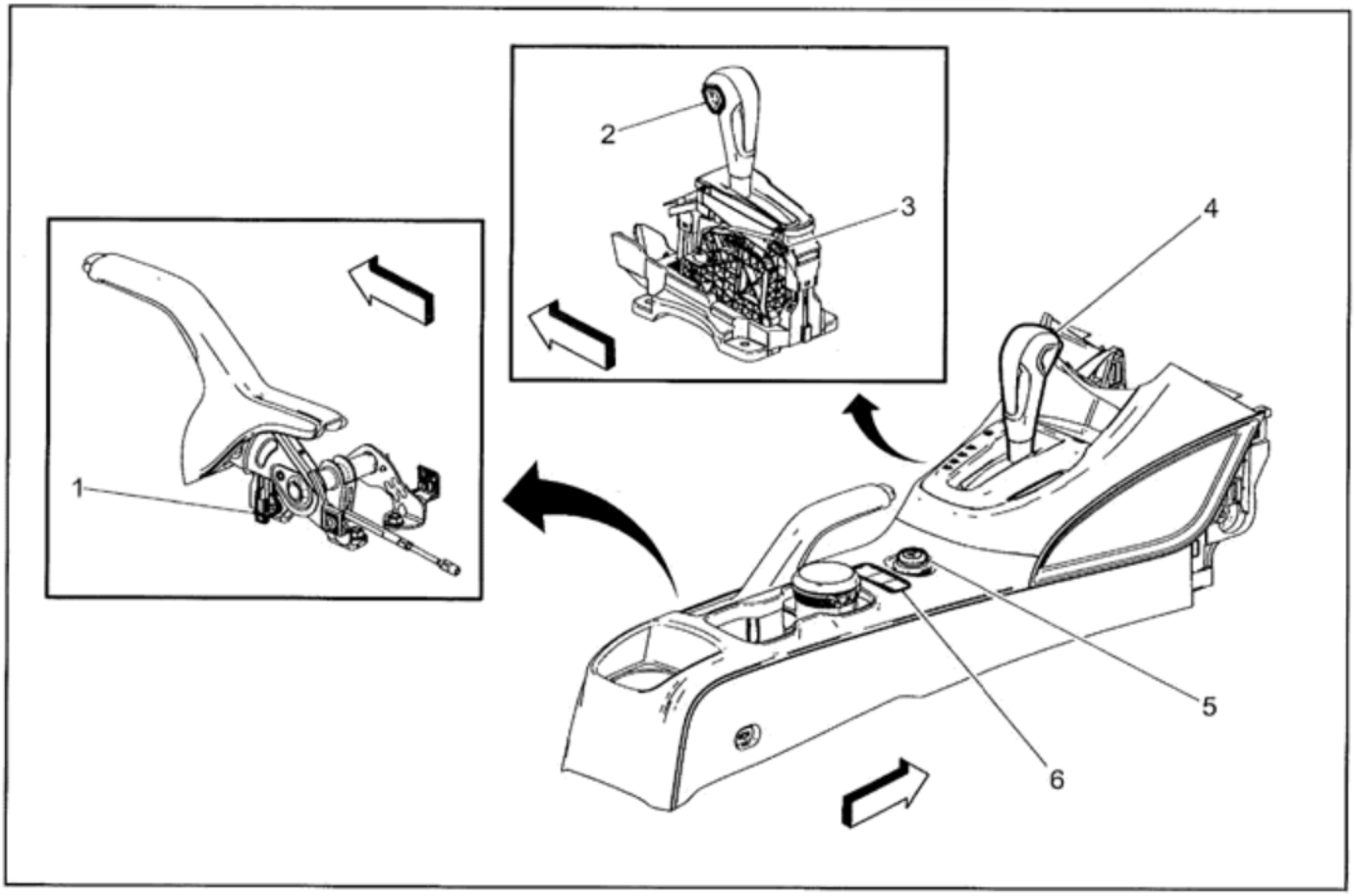
Items

(1) B25B Clutch Pedal Position Sensor (M26/MR5/MZ4)

(2) B22 Brake Pedal Position Sensor

(3) B107 Accelerator Pedal Position Sensor

Center Console Components

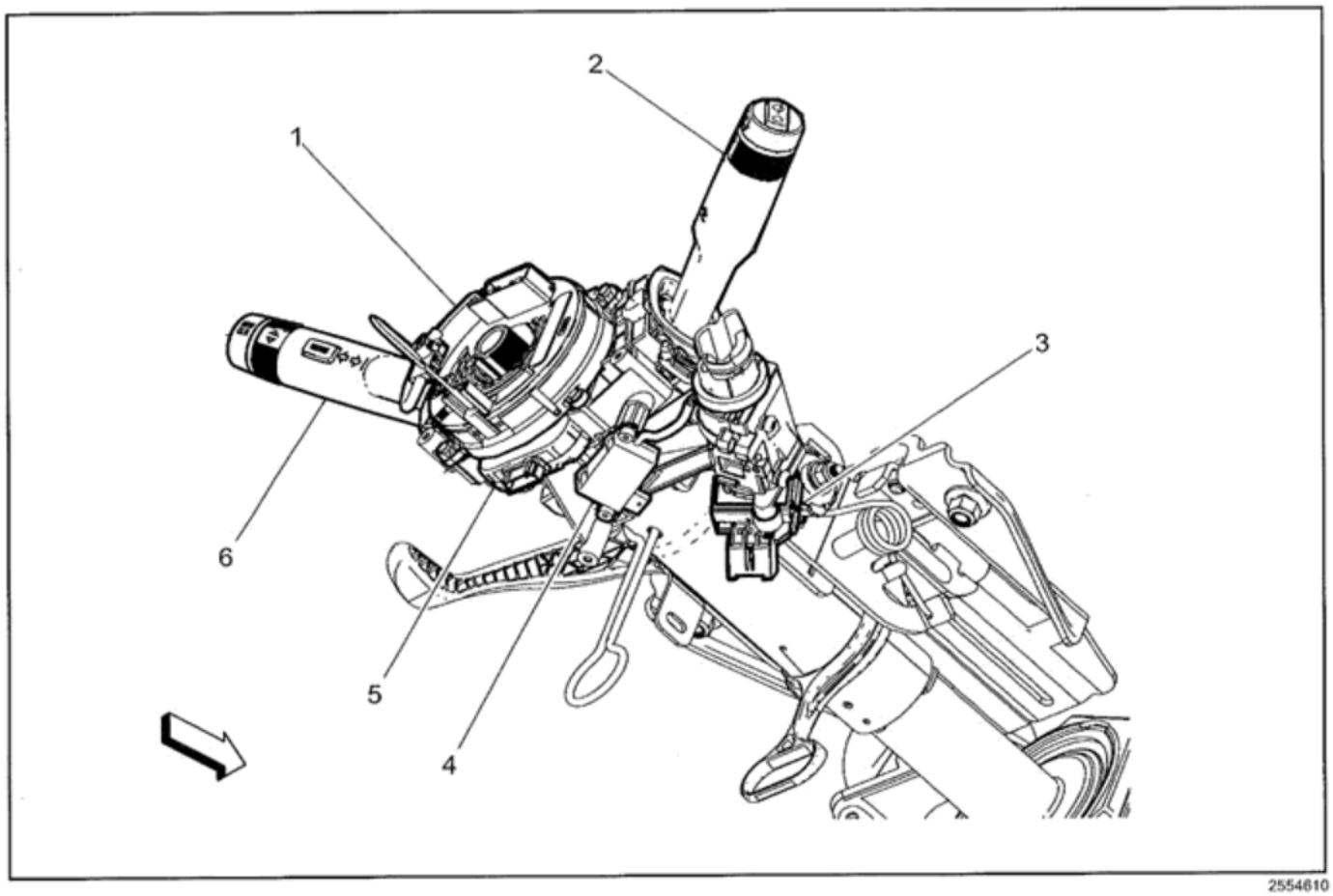


2554607

Items

(1) B80 Park Brake Switch
(2) S2 Transmission Manual Shift Switch (MH8 or MH9)
(3) P2 Transmission Shift Lever Position Indicator (MH8 or MH9)
(4) S3 Transmission Shift Lever (MH8 or MH9)
(5) E32 Cigarette Lighter Receptacle
(6) S48E Multifunction Switch – Center Console

Steering Column Components

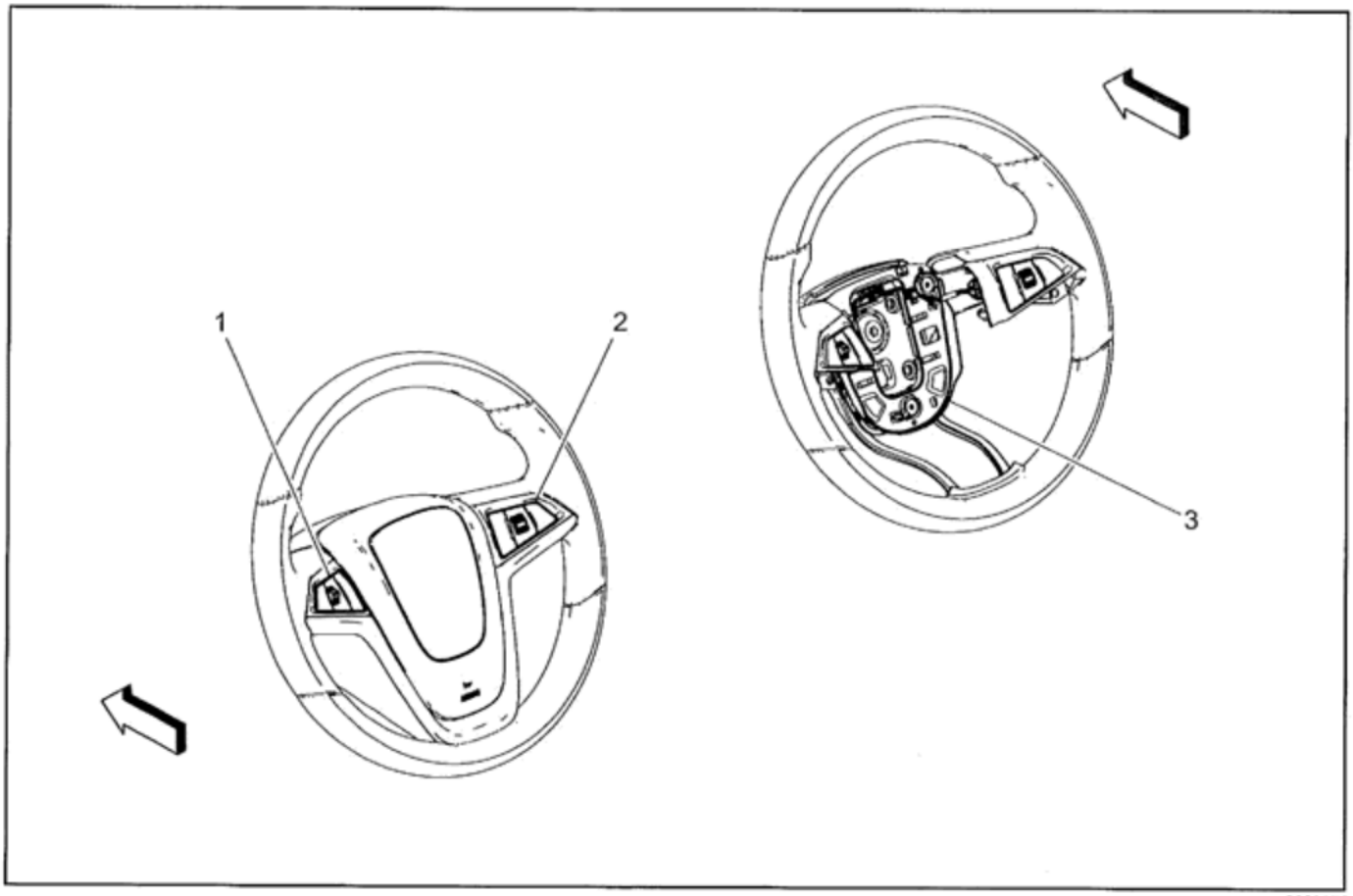


2554610

Items

(1) X85 Steering Wheel Air Bag Coil
(2) S82 Windshield Wiper/Washer Switch
(3) S39 Ignition Switch
(4) K89 Immobilizer Control Module
(5) B99 Steering Wheel Angle Sensor
(6) S78 Turn Signal/Multifunction Switch

Steering Wheel Components



2839971

Items

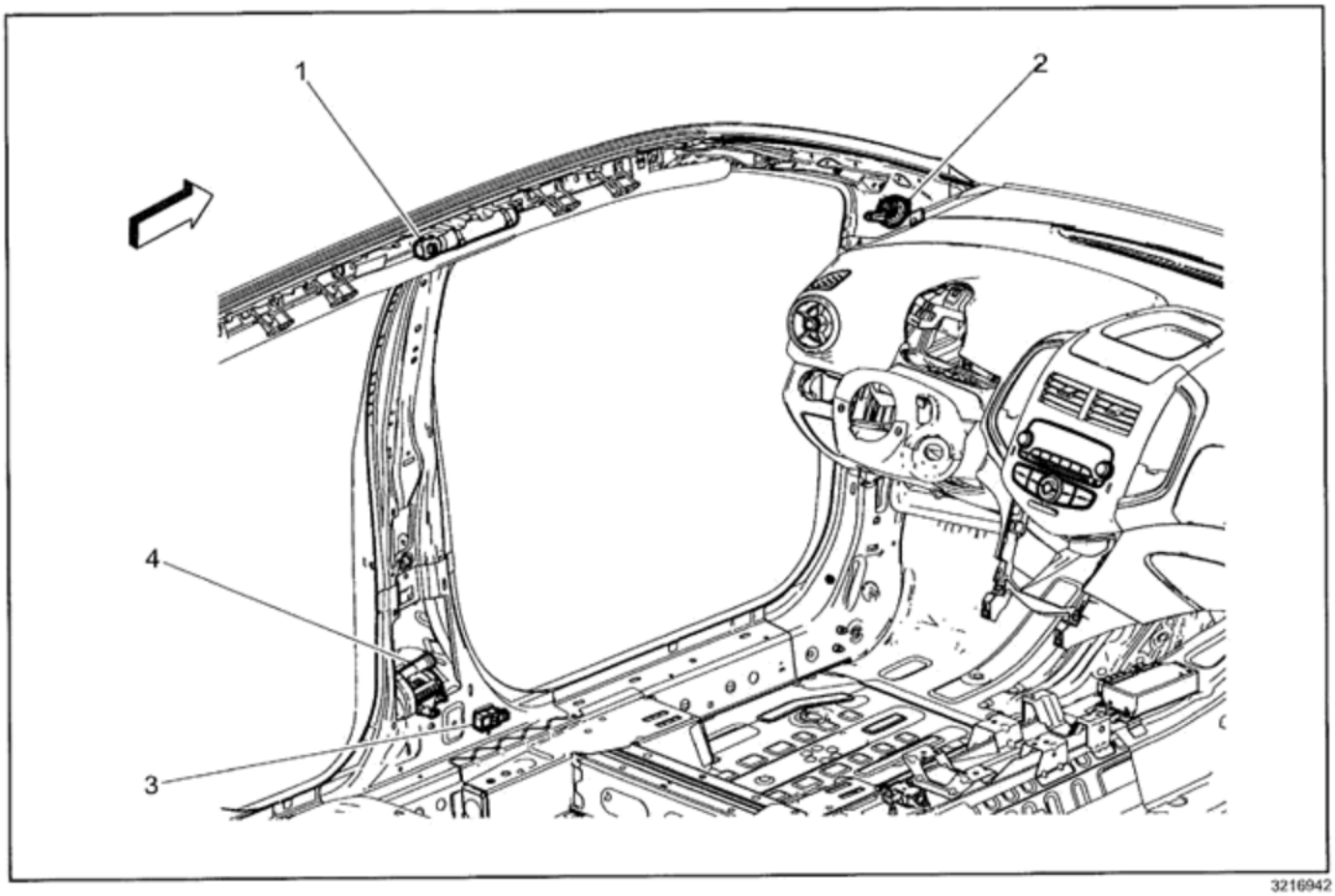
(1) S70L Steering Wheel Controls Switch – Left (K34)

(2) S70R Steering Wheel Controls Switch – Right

(3) S33 Horn Switch

Passenger Compartment/Roof Component Views

Left Front of Passenger Compartment Components

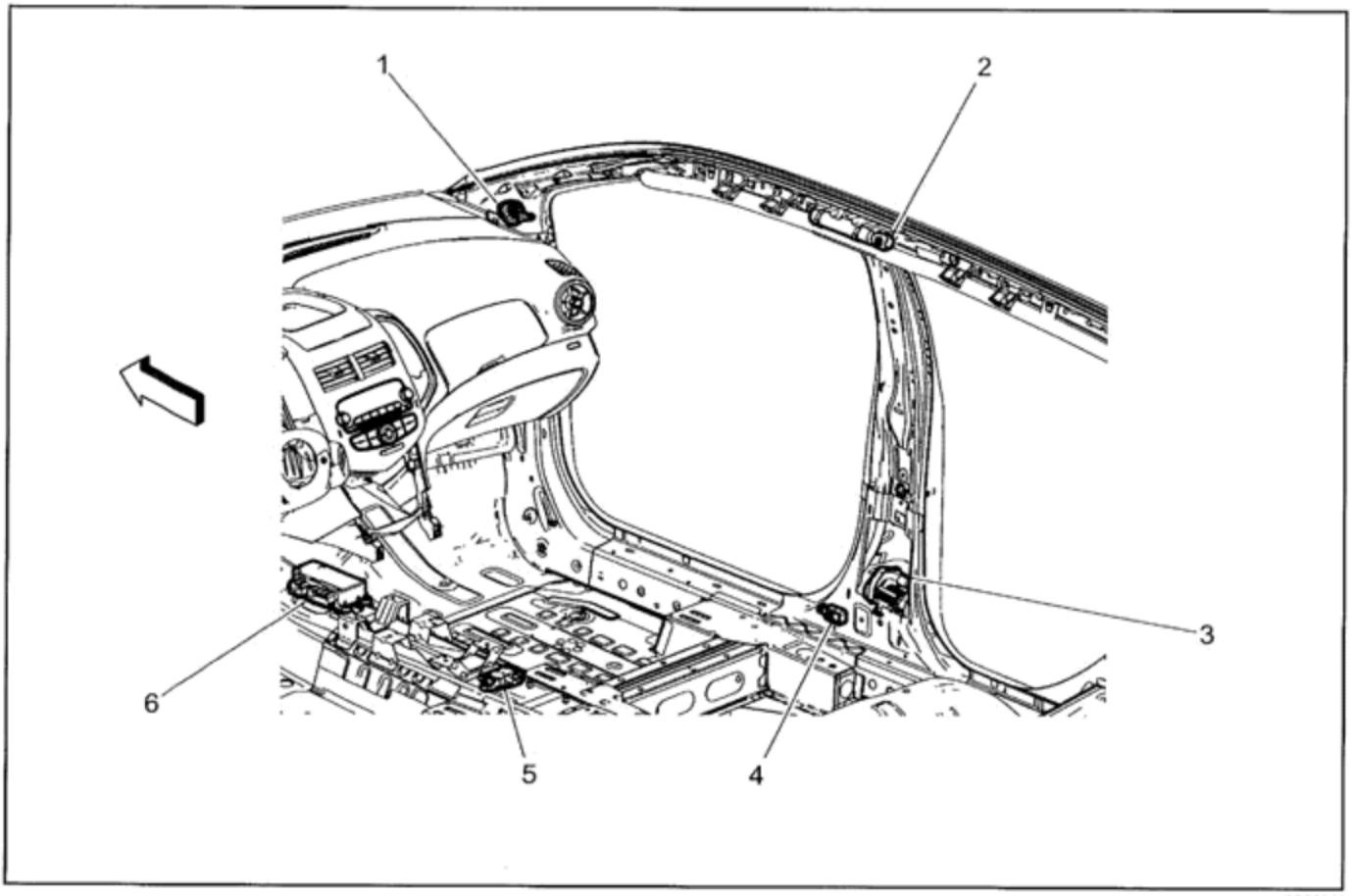


3216942

Items

(1) F105L Roof Rail Air Bag – Left
(2) P19H Speaker – Left Front Tweeter (UQ3)
(3) B63LR Side Impact Sensor – Left Rear
(4) F112D Seat Belt Retractor Pretensioner – Driver

Right Front of Passenger Compartment Components

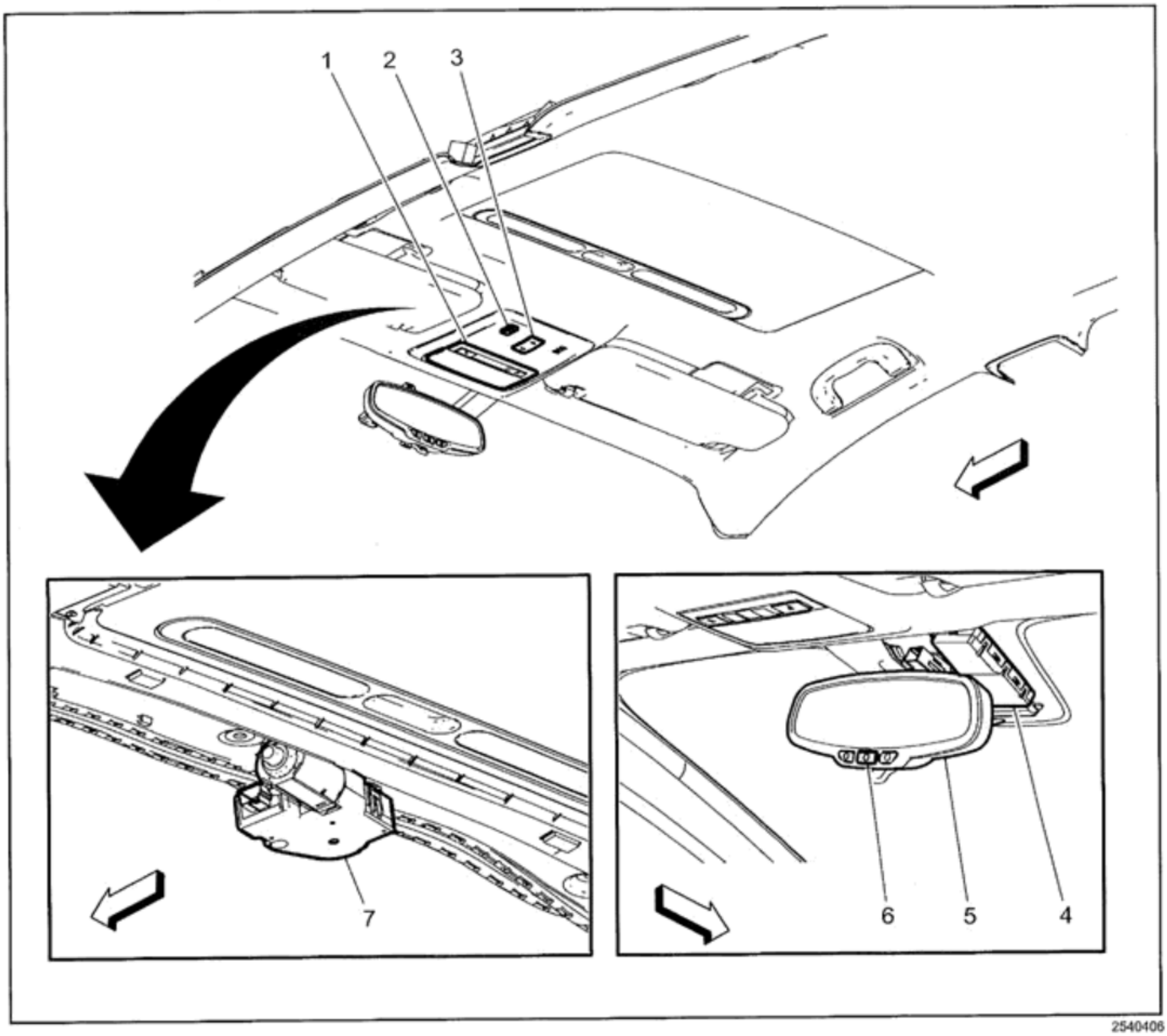


3216940

Items

(1) P19V Speaker – Right Front Tweeter (UQ3)
(2) F105R Roof Rail Air Bag – Right
(3) F112P Seat Belt Retractor Pretensioner – Passenger
(4) B63RR Side Impact Sensor – Right Rear
(5) B119 Multi-axis Acceleration Sensor
(6) K36 Inflatable Restraint Sensing and Diagnostic Module

Headliner Components

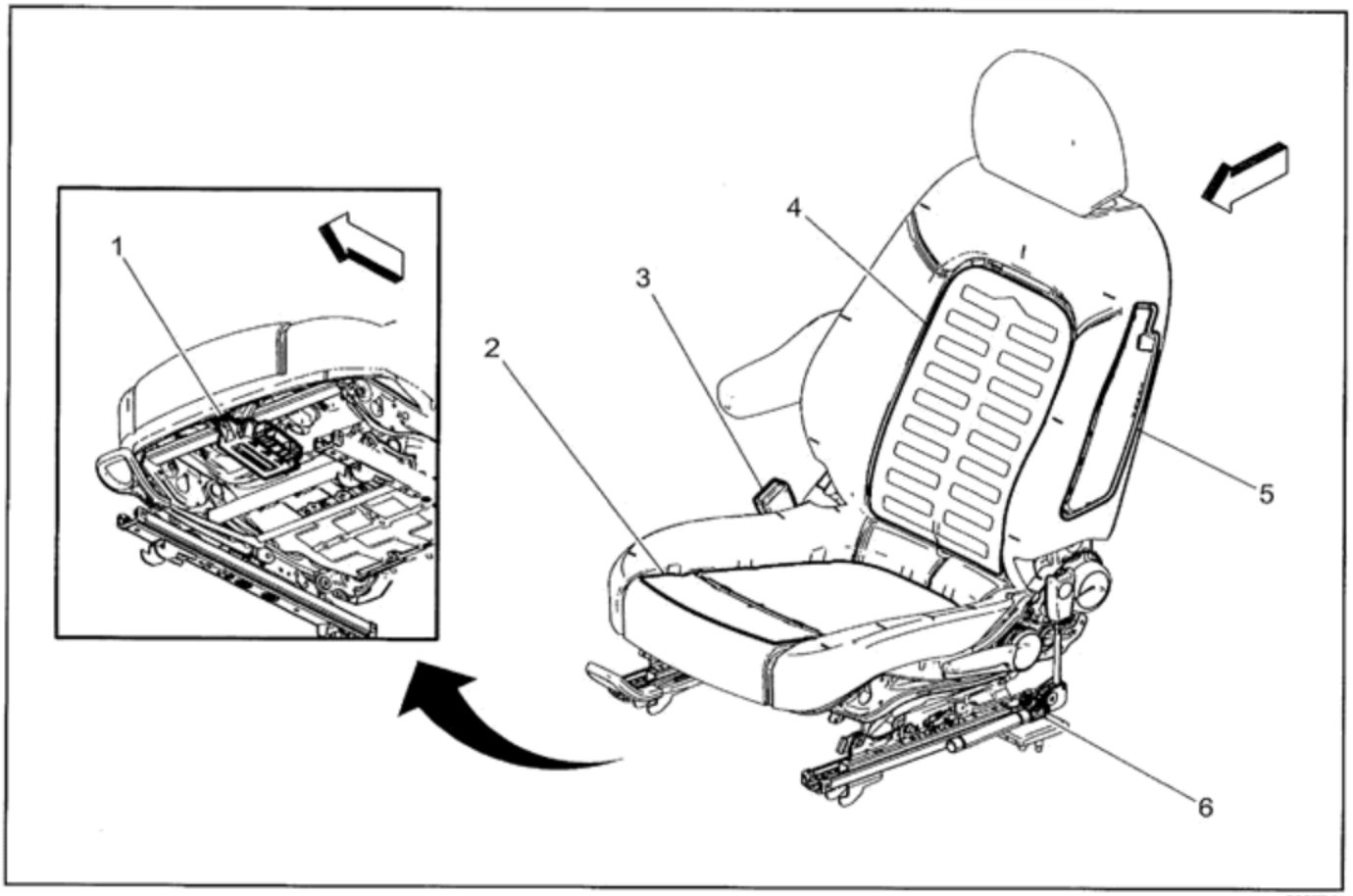


2540406

Items

(1) E37A Dome/Reading Lamps
(2) B24 Cellular Phone Microphone (UE1 or UH7)
(3) S72 Sunroof Switch (CF5)
(4) K77 Remote Control Door Lock Receiver
(5) A10 Inside Rearview Mirror (UE1)
(6) S51 Telematics Button Assembly (UE1)
(7) K61 Sunroof Control Module (CF5)

Driver Seat Components



2907945

Items

(1) K29 Seat Heating Control Module (KA1)

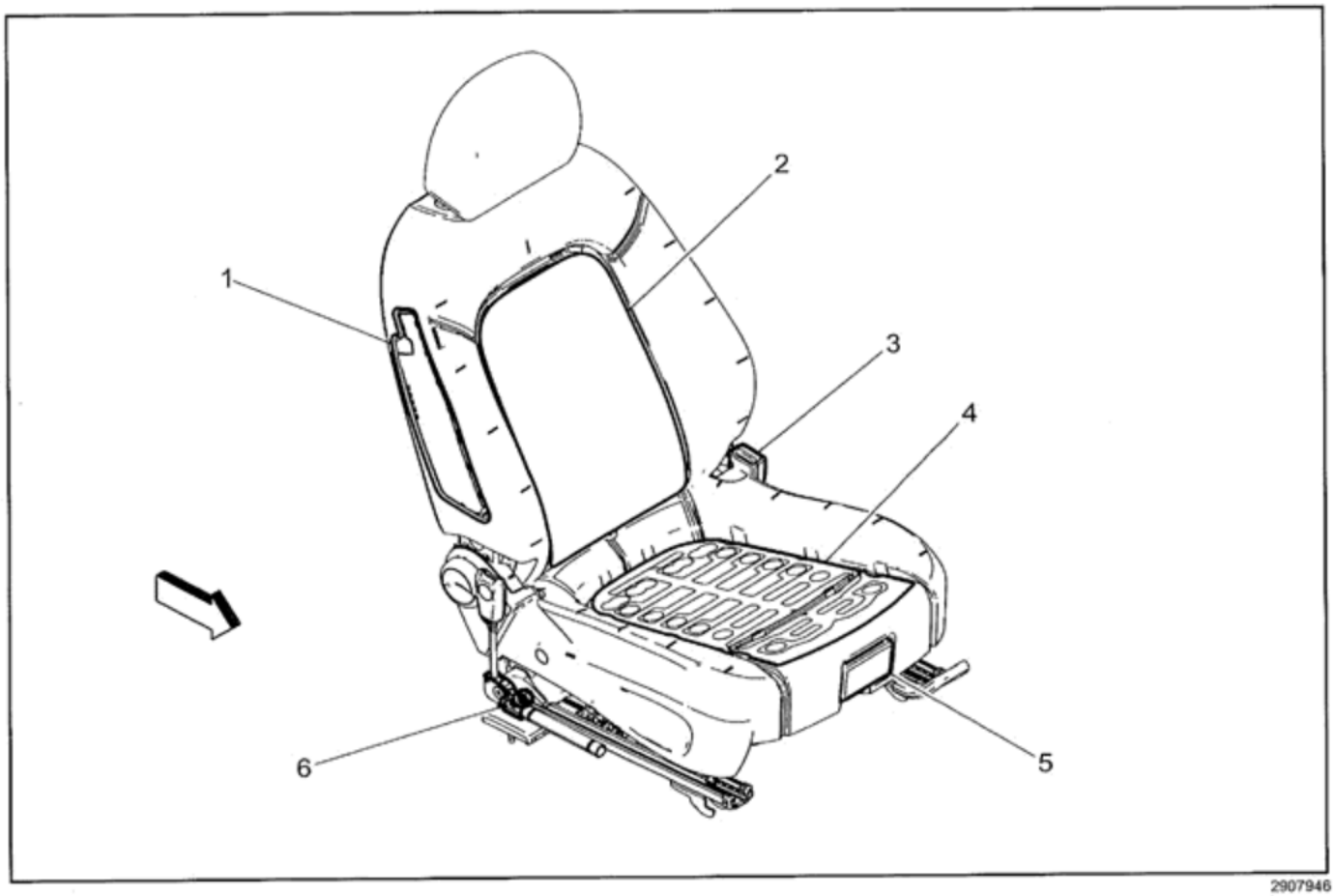
(2) E14B Seat Heating Element – Driver Cushion (KA1)

(3) B153D Seat Belt Buckle – Driver

(5) F106D Seat Side Air Bag - Driver

(6) F113D Seat Belt Anchor Pretensioner – Driver (A69)

Passenger Seat Components



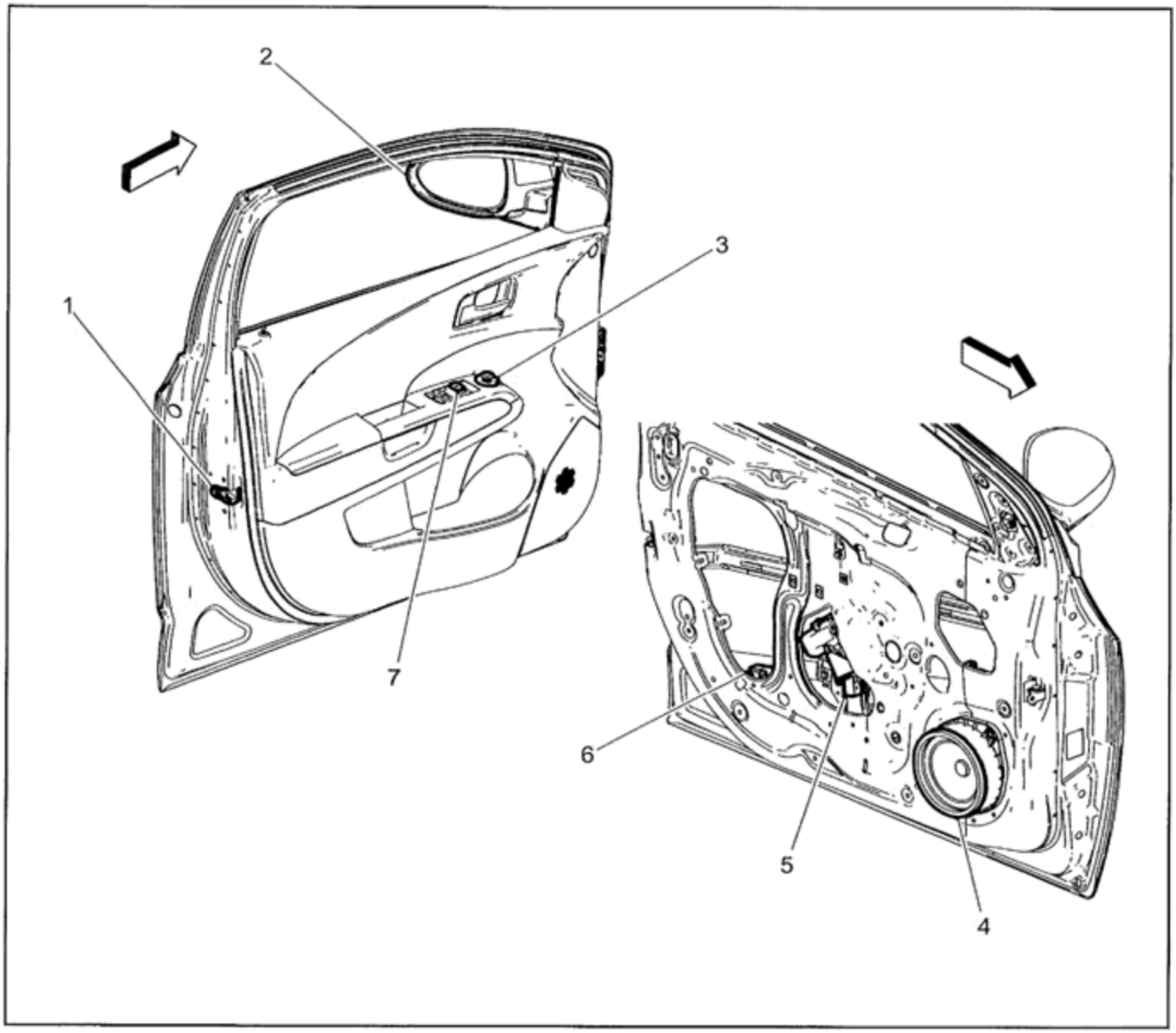
2907946

Items

(1) F106P Seat Side Air Bag - Passenger
(2) E14C Seat Heating Element – Passenger Back (KA1)
(3) B153P Seat Belt Buckle – Passenger
(4) E14D Seat Heating Element – Passenger Cushion (KA1)
(5) K85 Passenger Presence Module
(6) F113P Seat Belt Anchor Pretensioner – Passenger (A69)

Door Component Views

Driver Door Components

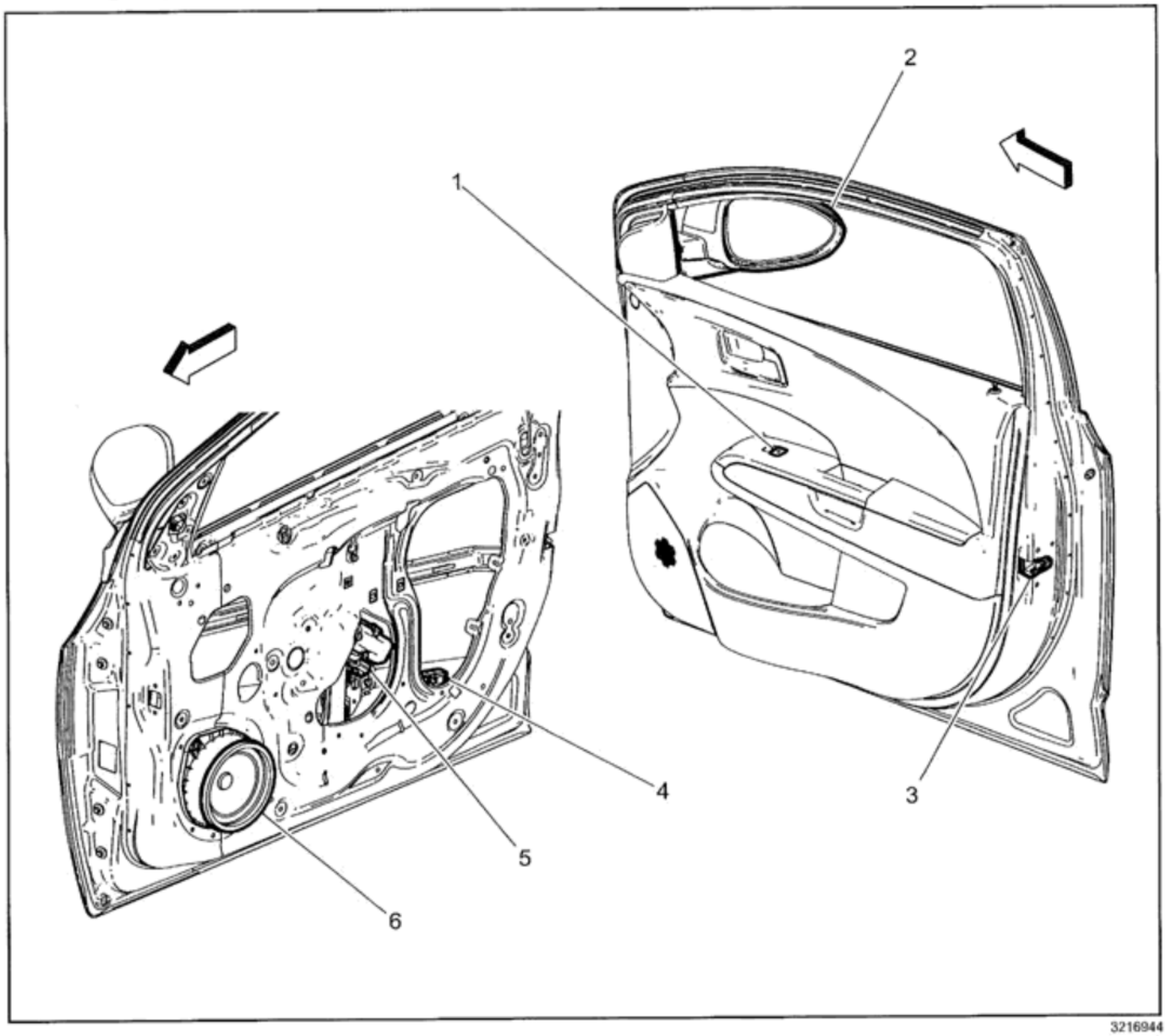


3216943

Items

(1) A23D Door Latch Assembly – Driver
(2) A9A Outside Rearview Mirror – Driver (DG6)
(3) S52 Outside Rearview Mirror Switch (DG6)
(4) P19AG Speaker – Left Front Door
(5) M74D Window Motor – Driver (AXG)
(6) B63LF Side Impact Sensor – Left Front
(7) S79D Window Switch – Driver (AXG)

Passenger Door Components

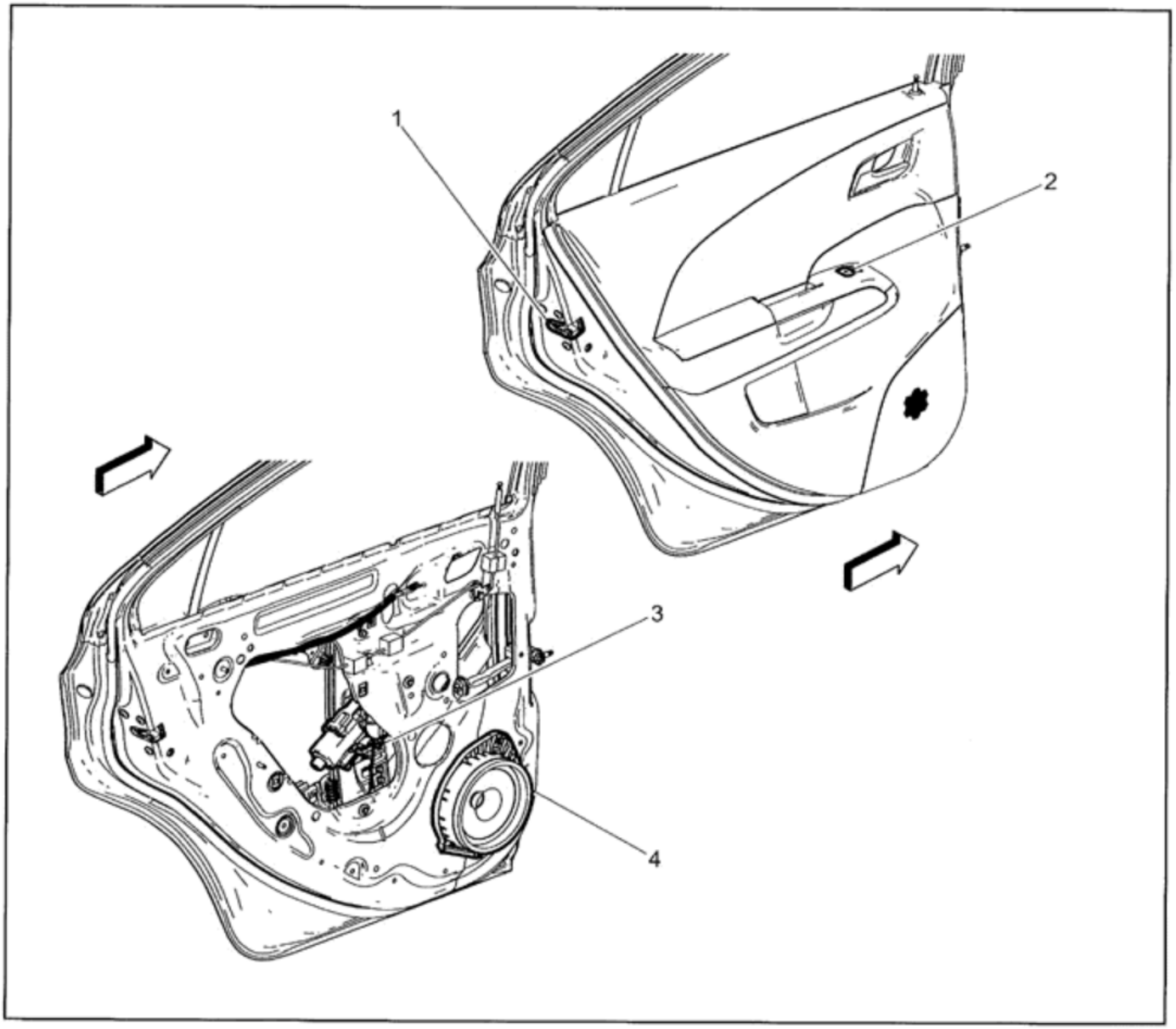


3216944

Items

(1) S79P Window Switch – Passenger (A66)
(2) A9B Outside Rearview Mirror – Passenger (DG6)
(3) A23P Door Latch Assembly – Passenger
(4) B63RF Side Impact Sensor – Right Front
(5) M74P Window Motor – Passenger (A66)
(6) P19AH Speaker – Right Front Door

Left Rear Door Components

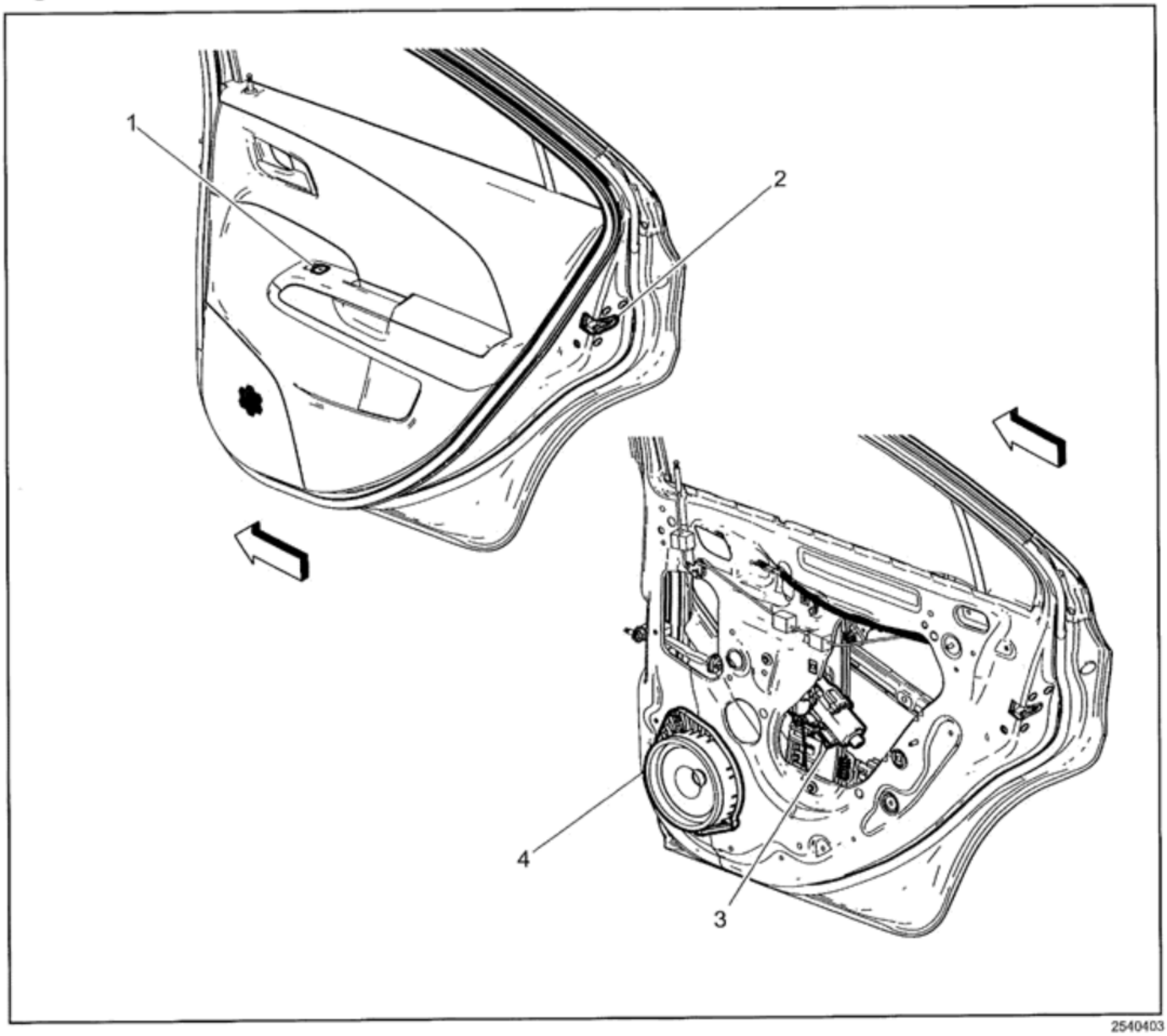


2540402

Items

(1) A23LR Door Latch Assembly – Left Rear
(2) S79LR Window Switch – Left Rear (A33)
(3) M74LR Window Motor – Left Rear (A33)
(4) P19AL Speaker – Left Rear Door

Right Rear Door Components



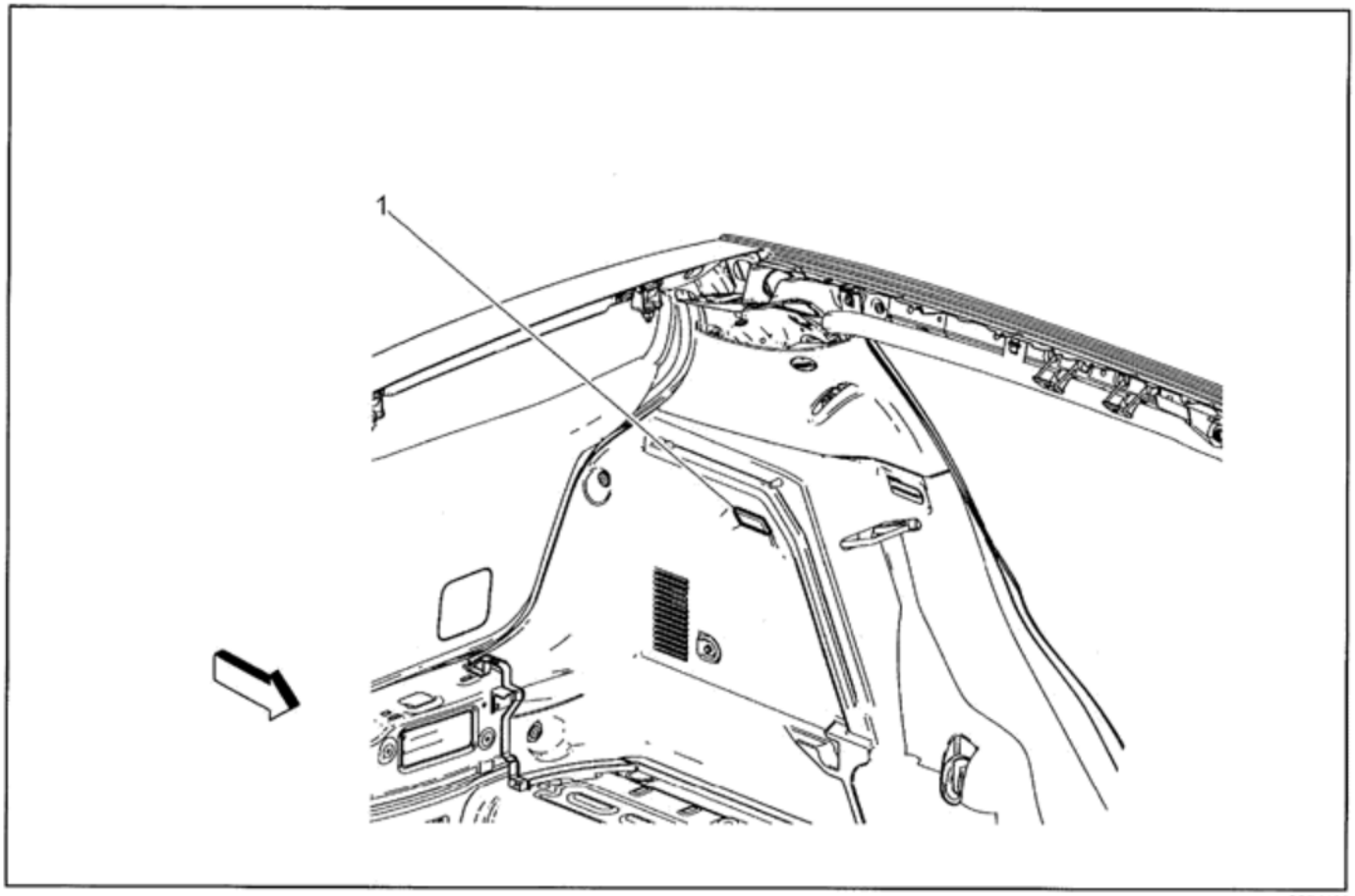
2540403

Items

(1) S79RR Window Switch – Right Rear (A33)
(2) A23RR Door Latch Assembly – Right Rear
(3) M74RR Window Motor – Right Rear (A33)
(4) P19AM Speaker – Right Rear Door

Luggage Compartment/Rear of Vehicle Component Views

Left of Luggage Compartment Components (Hatchback)

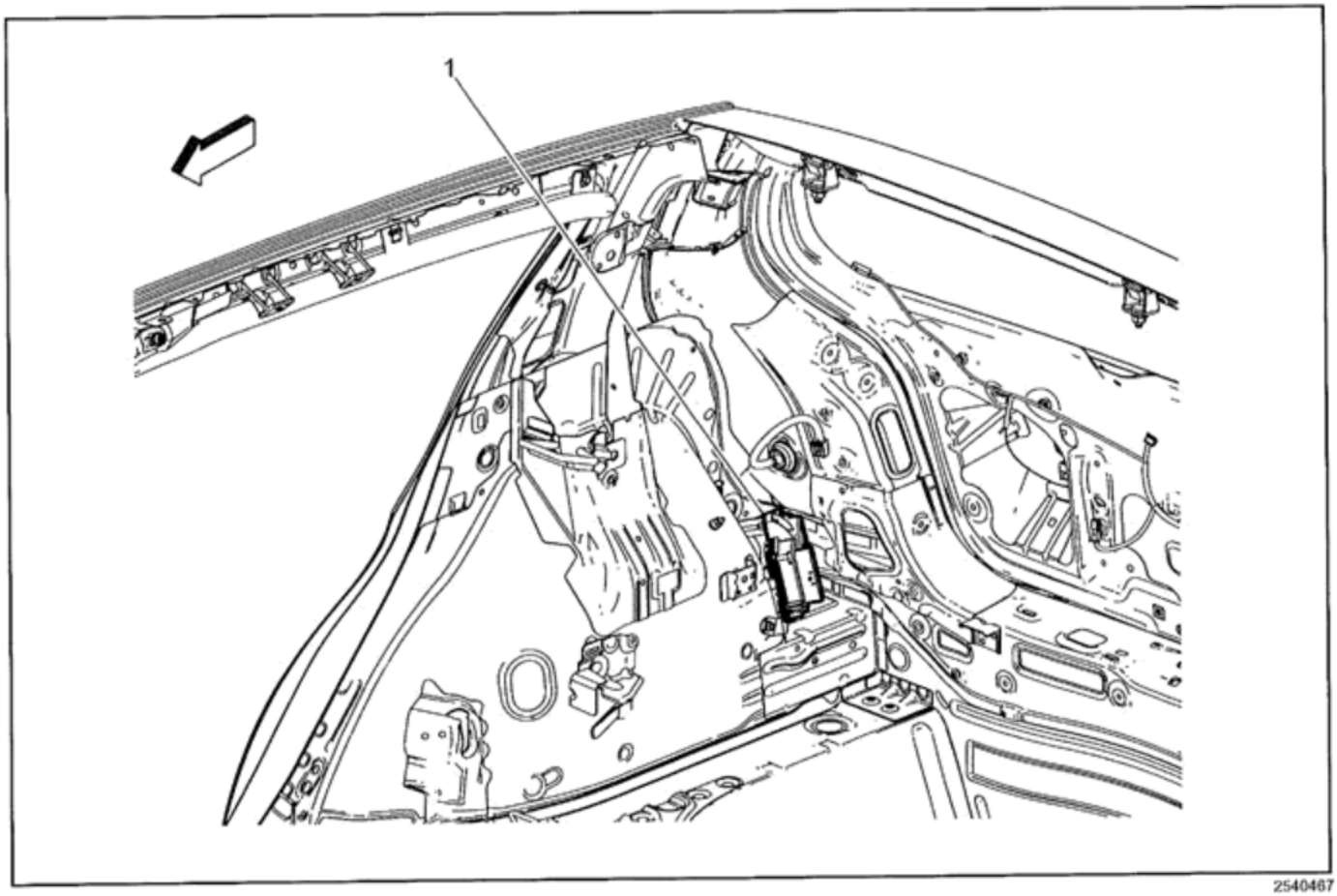


2654498

Items

(1) E8S Rear Compartment Courtesy Lamp

Right of Luggage Compartment Components (Hatchback)

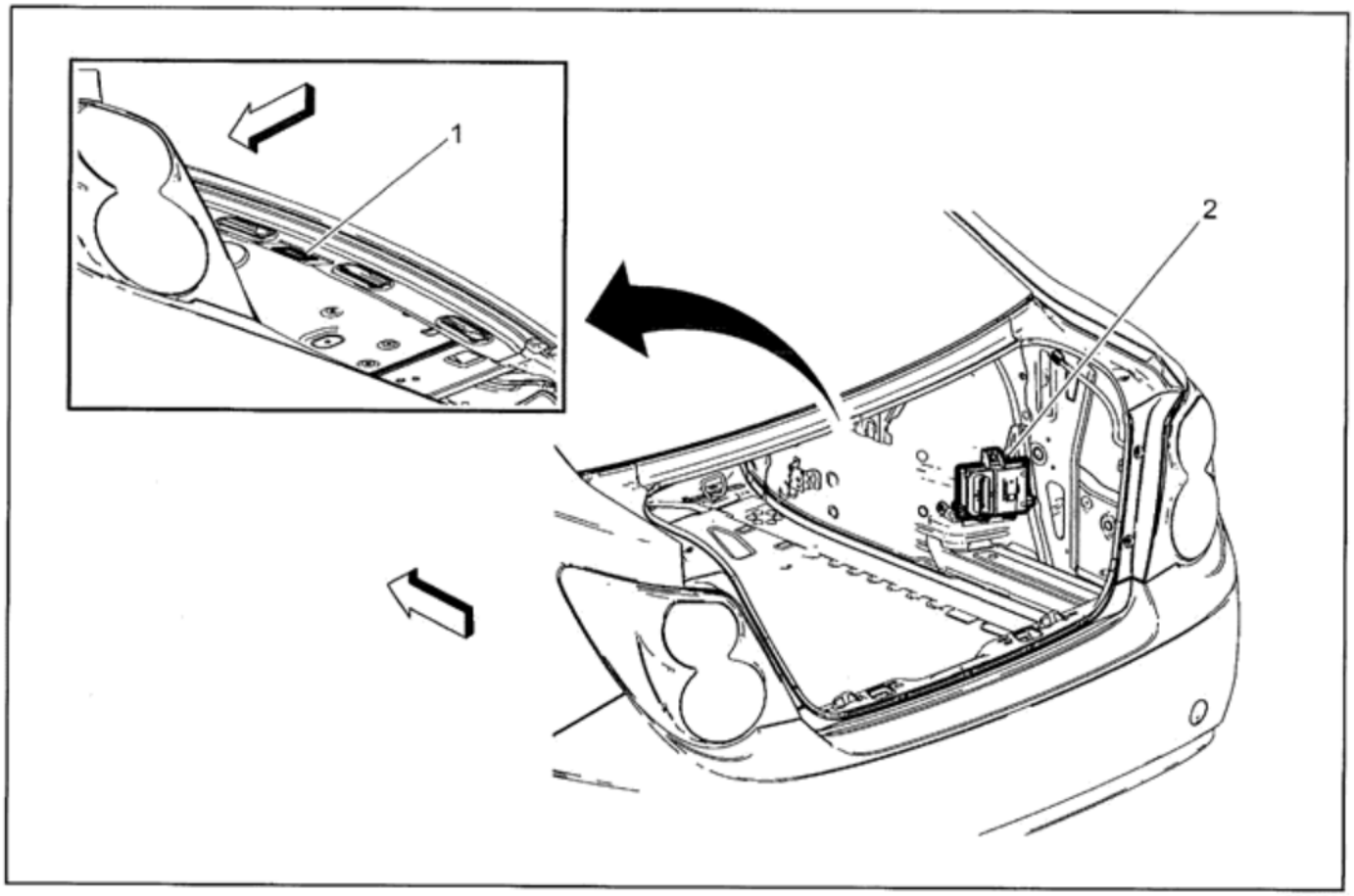


2540467

Items

(1) K27 Fuel Pump Control Module

Luggage Compartment Components (Notchback)

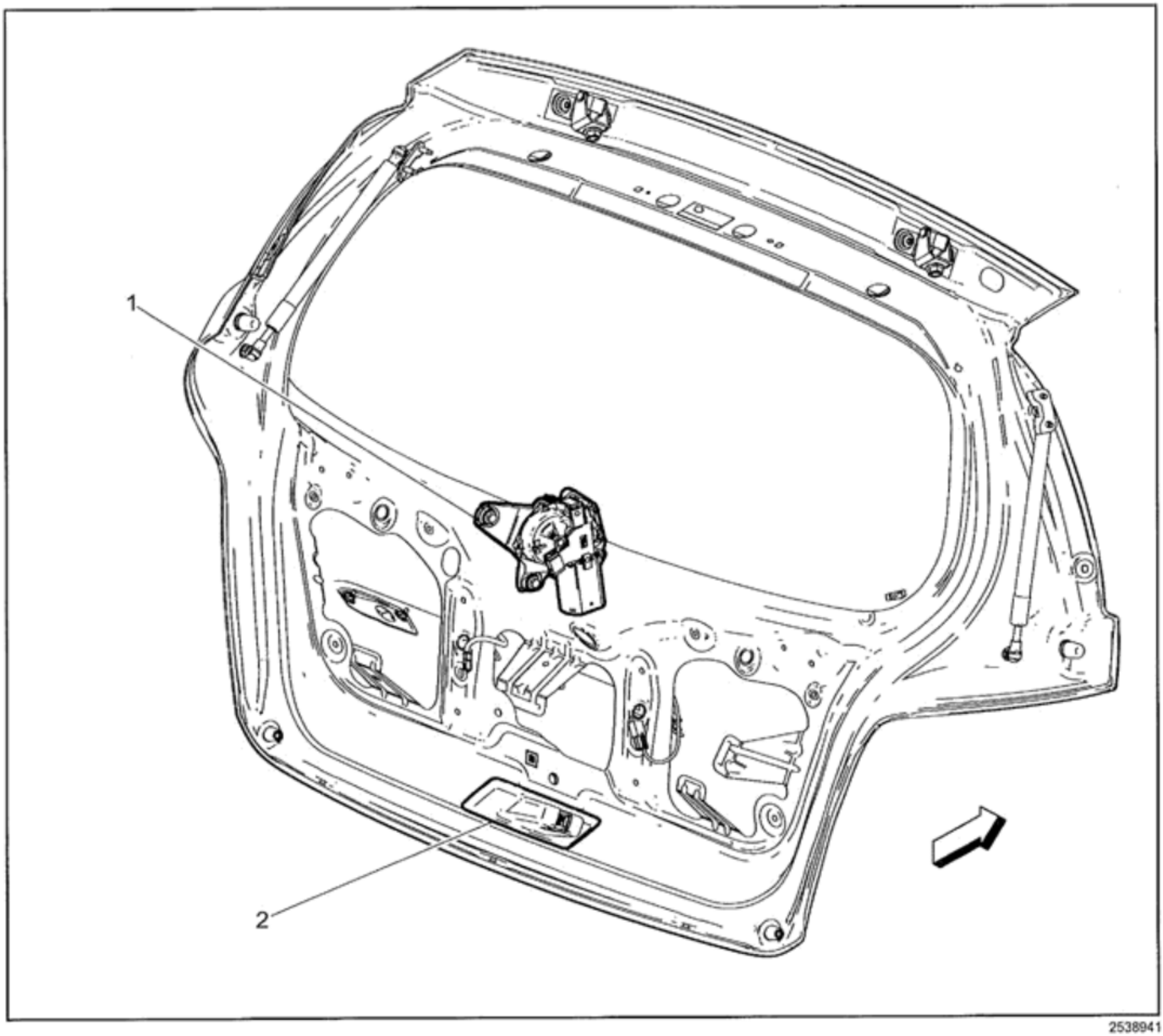


2541094

Items

(1) E8S Rear Compartment Courtesy Lamp
(2) K27 Fuel Pump Control Module

Inside Liftgate Components (Hatchback)



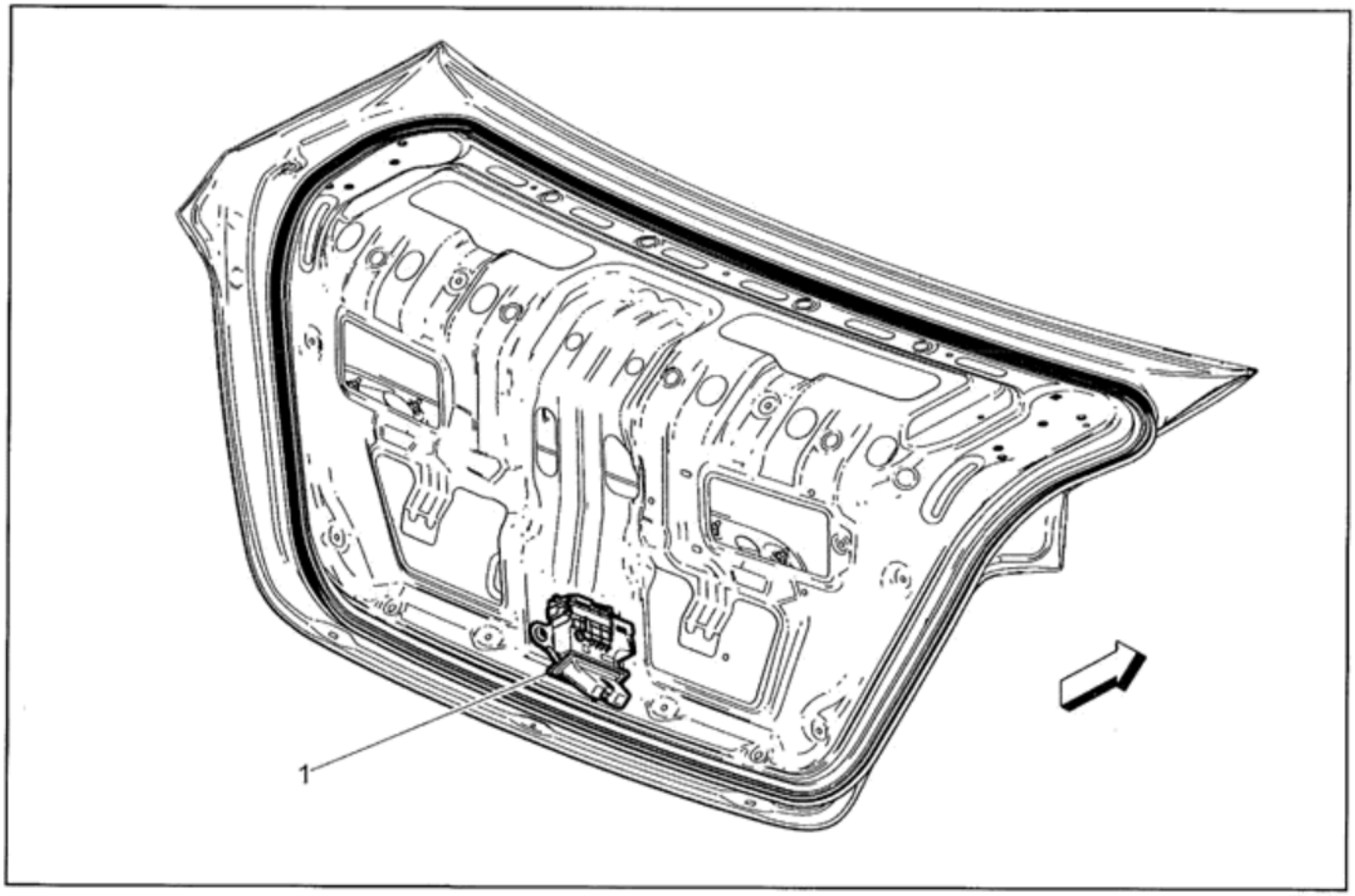
2538941

Items

(1) M45 Rear Wiper Motor (Hatchback)

(2) M30 Liftgate Latch (Hatchback)

Inside Decklid Components (Notchback)

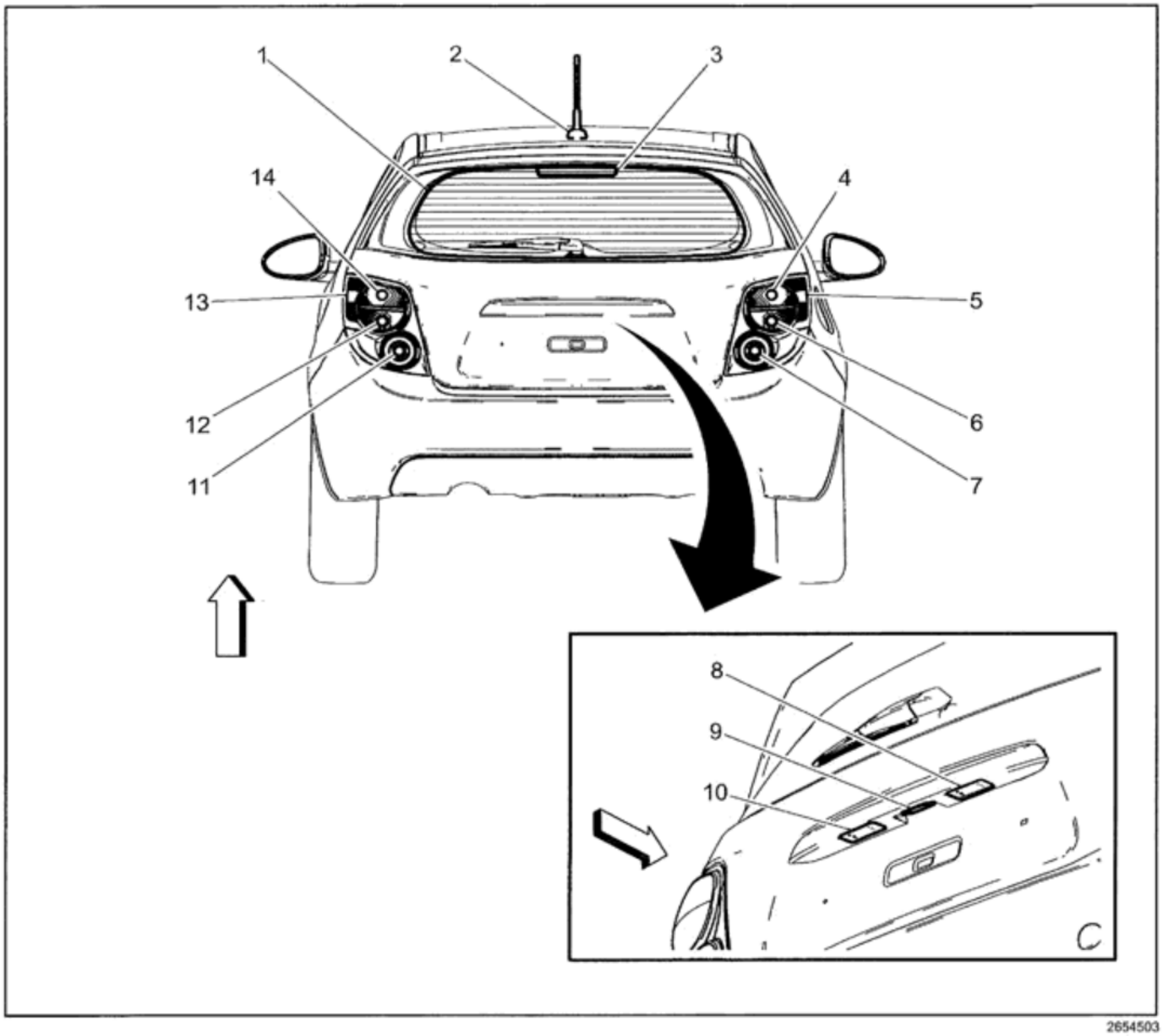


2540401

Items

(1) M40 Rear Compartment Lid Latch (Notchback)

Rear of Vehicle Components (Hatchback)

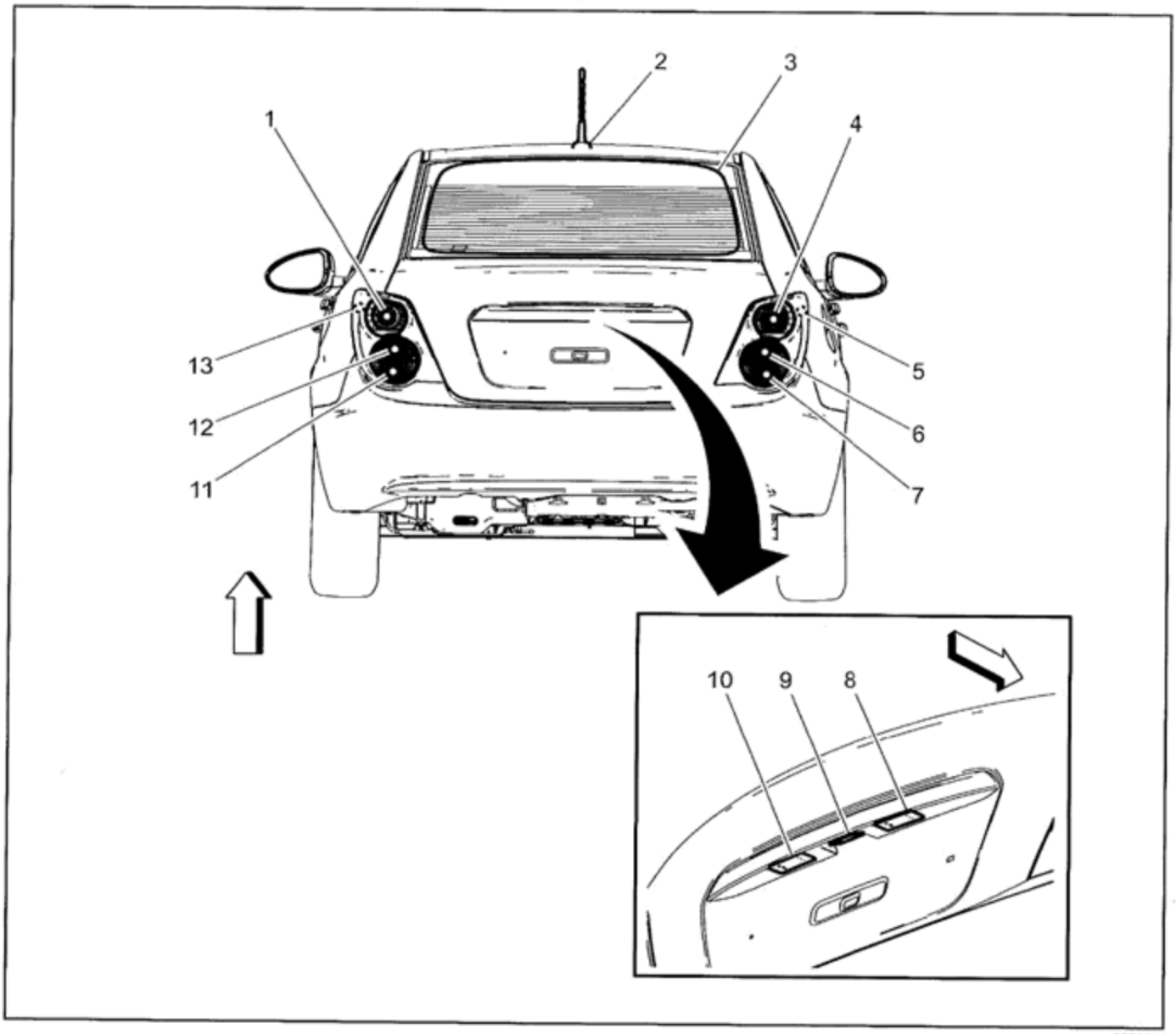


2654503

Items

(1) E18 Rear Defogger Grid
(2) T4M Radio Antenna
(3) E6 Center High Mounted Stop Lamp
(4) E5AB Tail/Stop Lamp – Right
(5) E2RR Side Marker Lamp – Right Rear
(6) E4RR Turn Signal Lamp – Right Rear
(7) E5B Backup Lamp – Right
(8) E7R License Plate Lamp – Right
(9) S46B Liftgate Unlatch Switch (Hatchback)
(10) E7L License Plate Lamp – Left
(11) E5A Backup Lamp – Left
(12) E4LR Turn Signal Lamp – Left Rear
(13) E2LR Side Marker Lamp – Left Rear
(14) E5AA Tail/Stop Lamp – Left

Rear of Vehicle Components (Notchback)



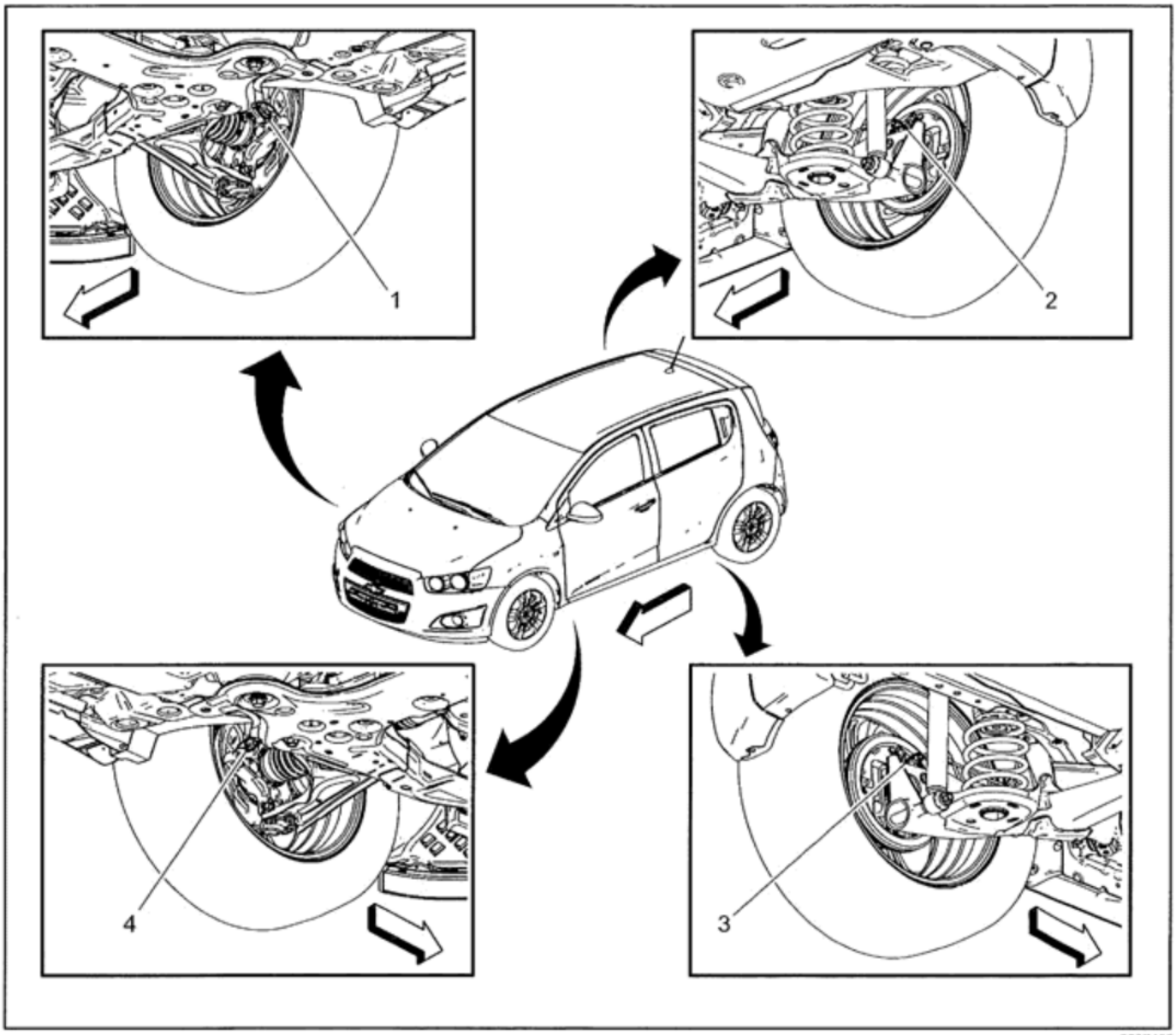
2654506

Items

(1) E5AA Tail/Stop Lamp – Left
(2) T4M Radio Antenna
(3) E18 Rear Defogger Grid
(4) E5AB Tail/Stop Lamp – Right
(5) E2RR Side Marker Lamp – Right Rear
(6) E4RR Turn Signal Lamp – Right Rear
(7) E5B Backup Lamp – Right
(8) E7R License Plate Lamp – Right
(9) S58A Rear Compartment Lid Unlatch Switch – Exterior (Notchback)
(10) E7L License Plate Lamp – Left
(11) E5A Backup Lamp – Left
(12) E4LR Turn Signal Lamp – Left Rear
(13) E2LR Side Marker Lamp – Left Rear

Wheels/Vehicle Underbody Component Views

Wheel Components

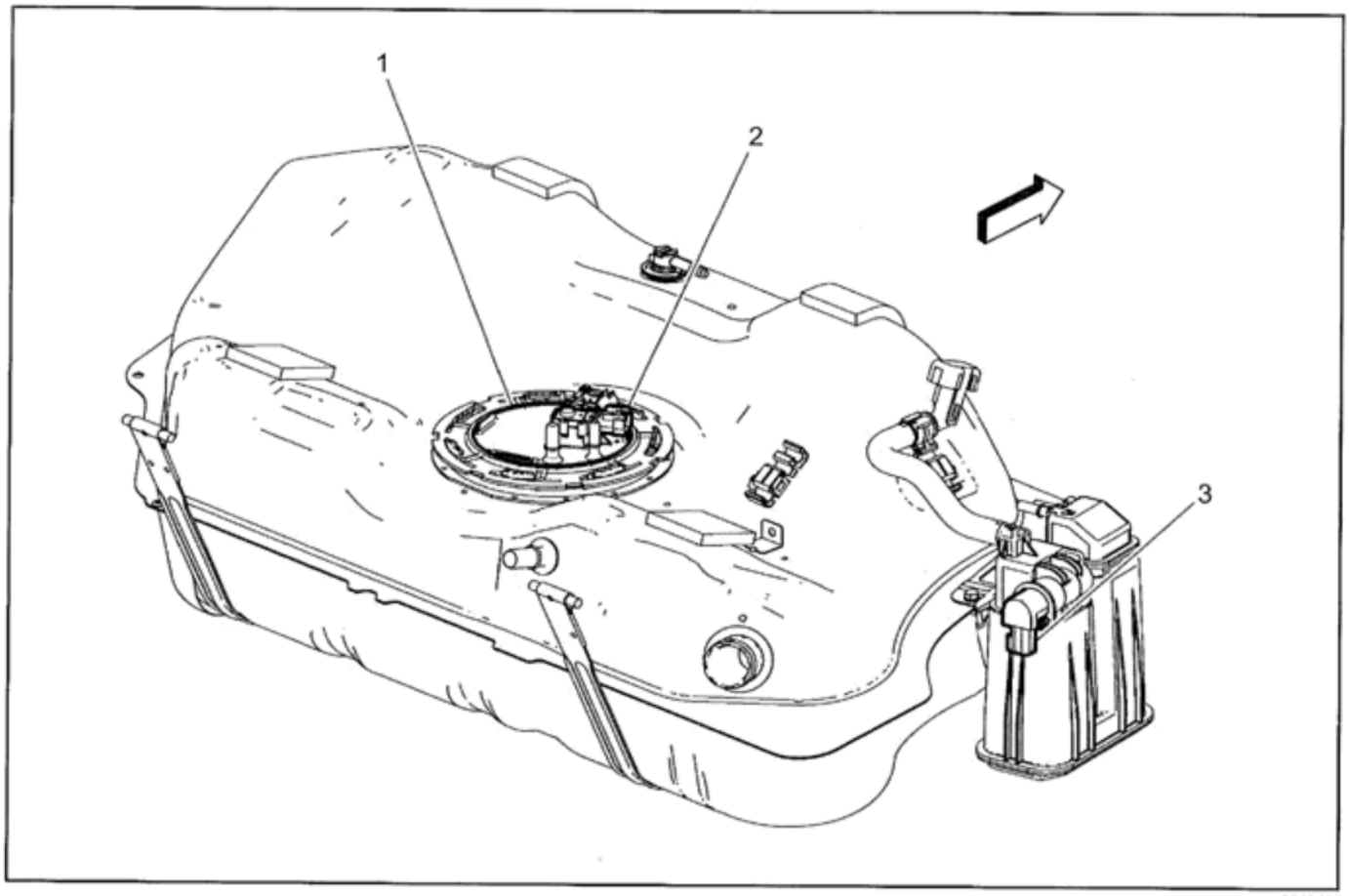


2537408

Items

(1) B5RF Wheel Speed Sensor – Right Front
(2) B5RR Wheel Speed Sensor – Right Rear
(3) B5LR Wheel Speed Sensor – Left Rear
(4) B5LF Wheel Speed Sensor – Left Front

Fuel Tank Components



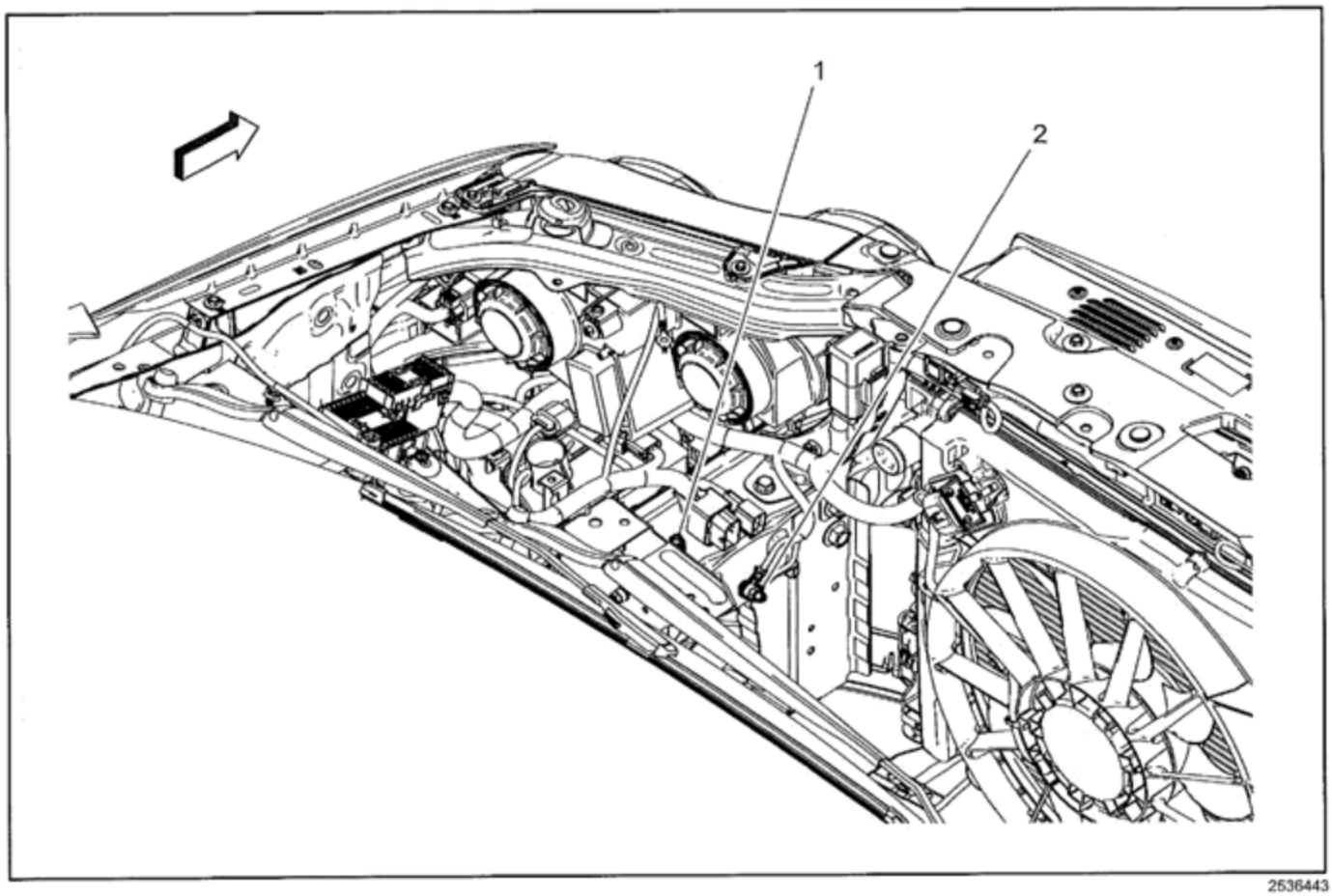
2540408

Items

(1) A7 Fuel Pump and Level Sensor Assembly
(2) B150 Fuel Tank Pressure Sensor
(3) Q13 Evaporative Emission Vent Solenoid Valve

Ground Views

G100, G103

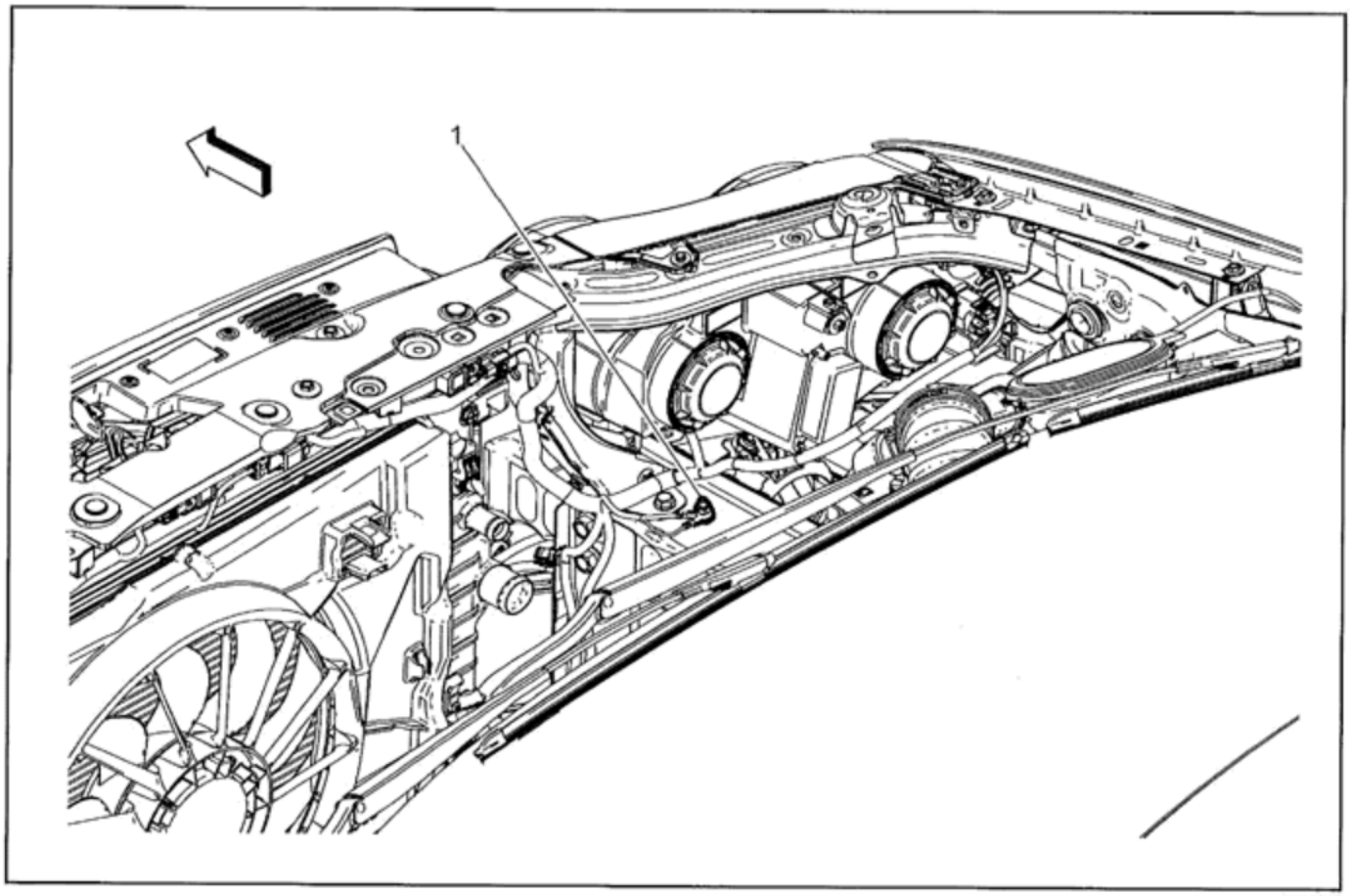


2536443

Items

(1) G103
(2) G100

G101

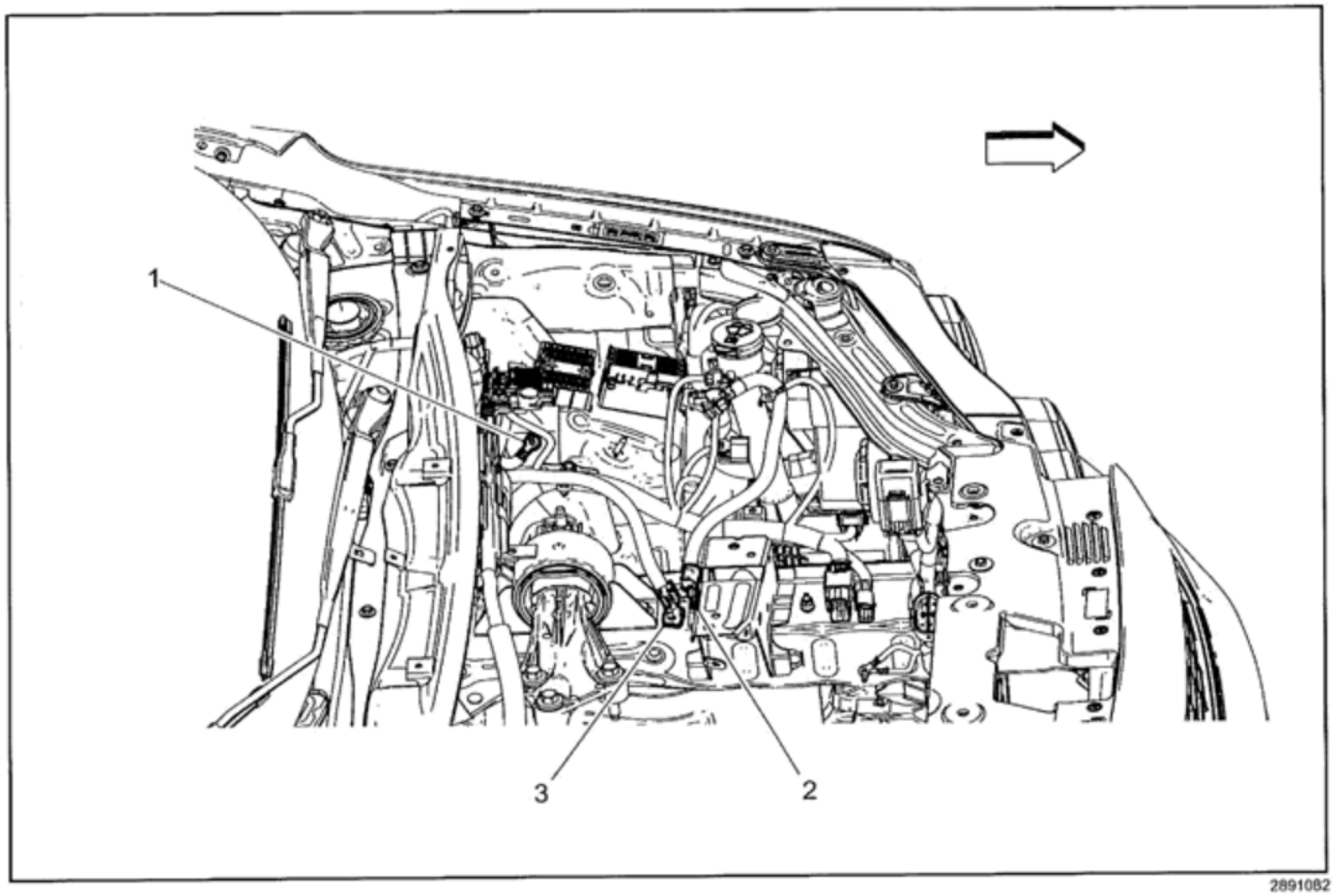


2536453

Items

(1) G101

G102, G105, G106

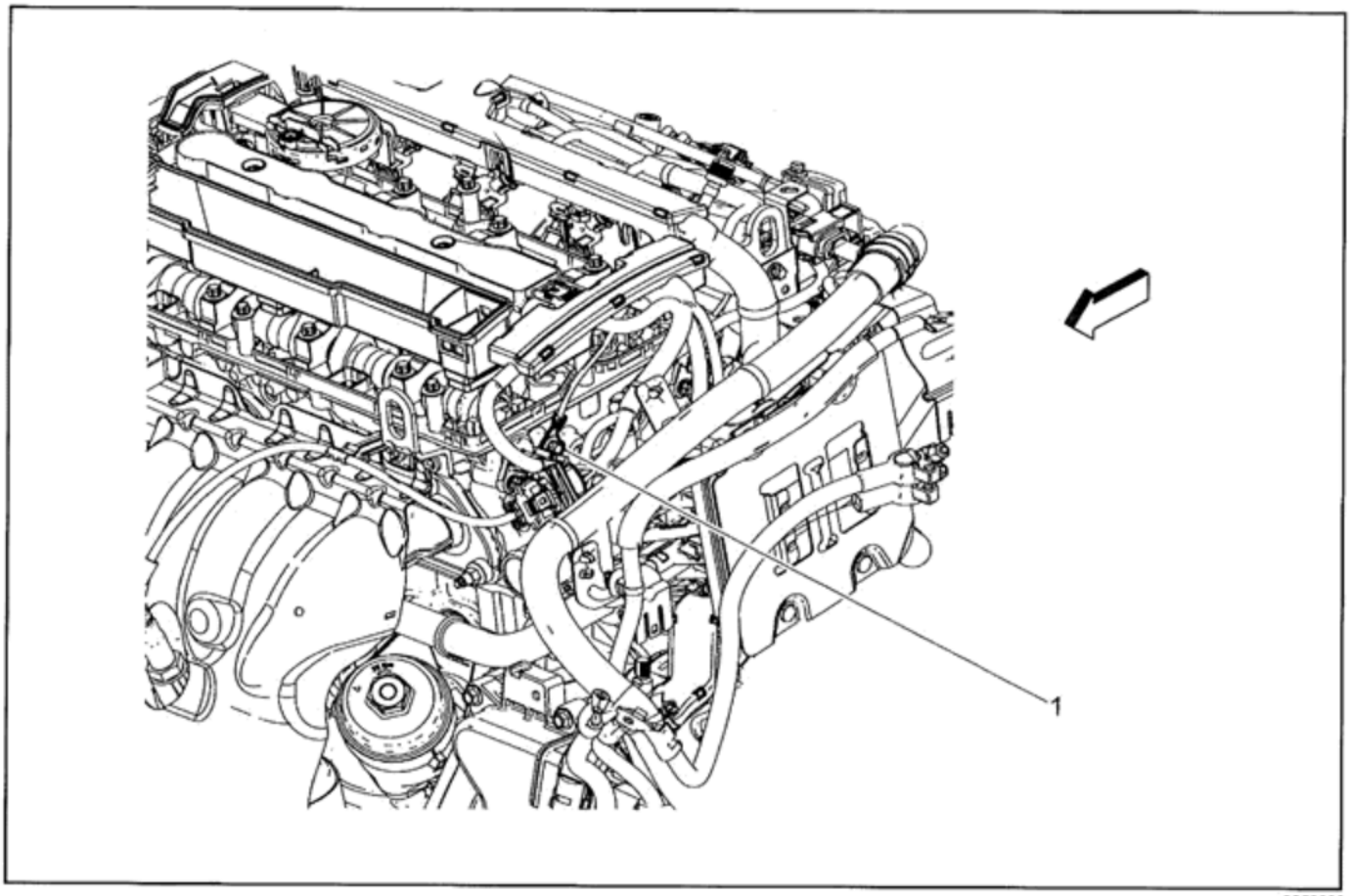


2891082

Items

(1) G102
(2) G105
(3) G107

G104

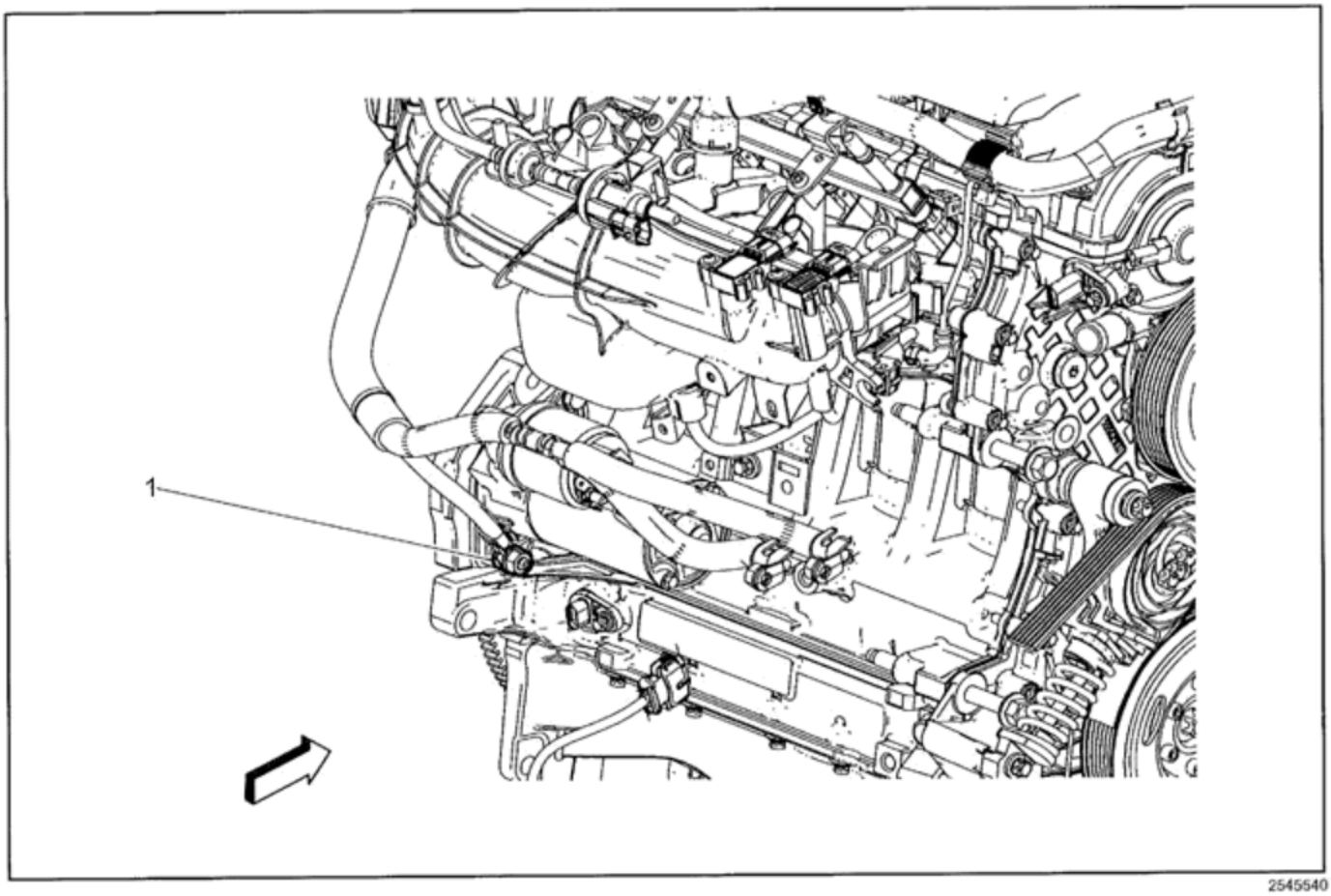


3259088

Items

(1) G104

G107

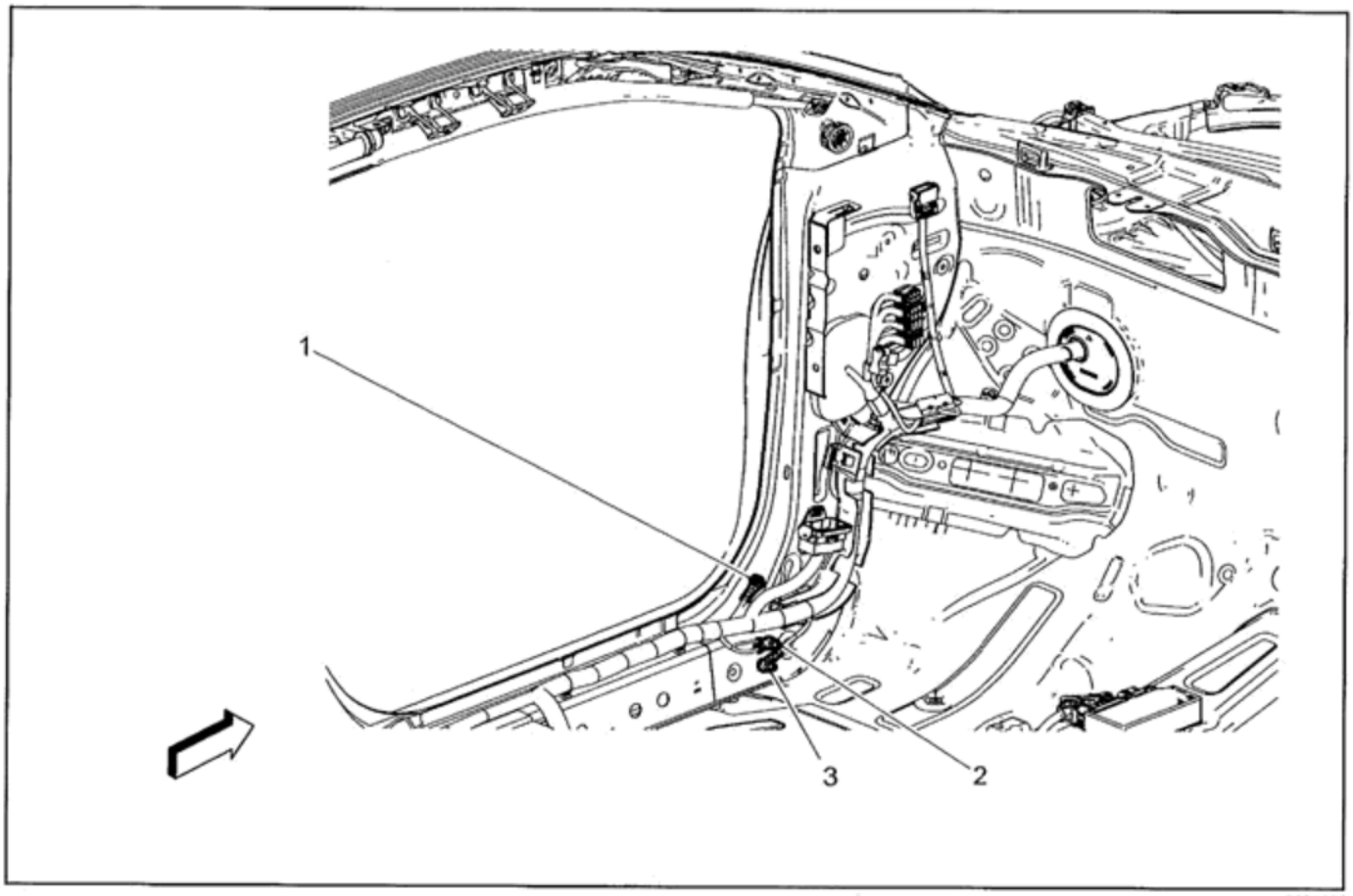


2545540

Items

(1) G102

G201, G303, G307

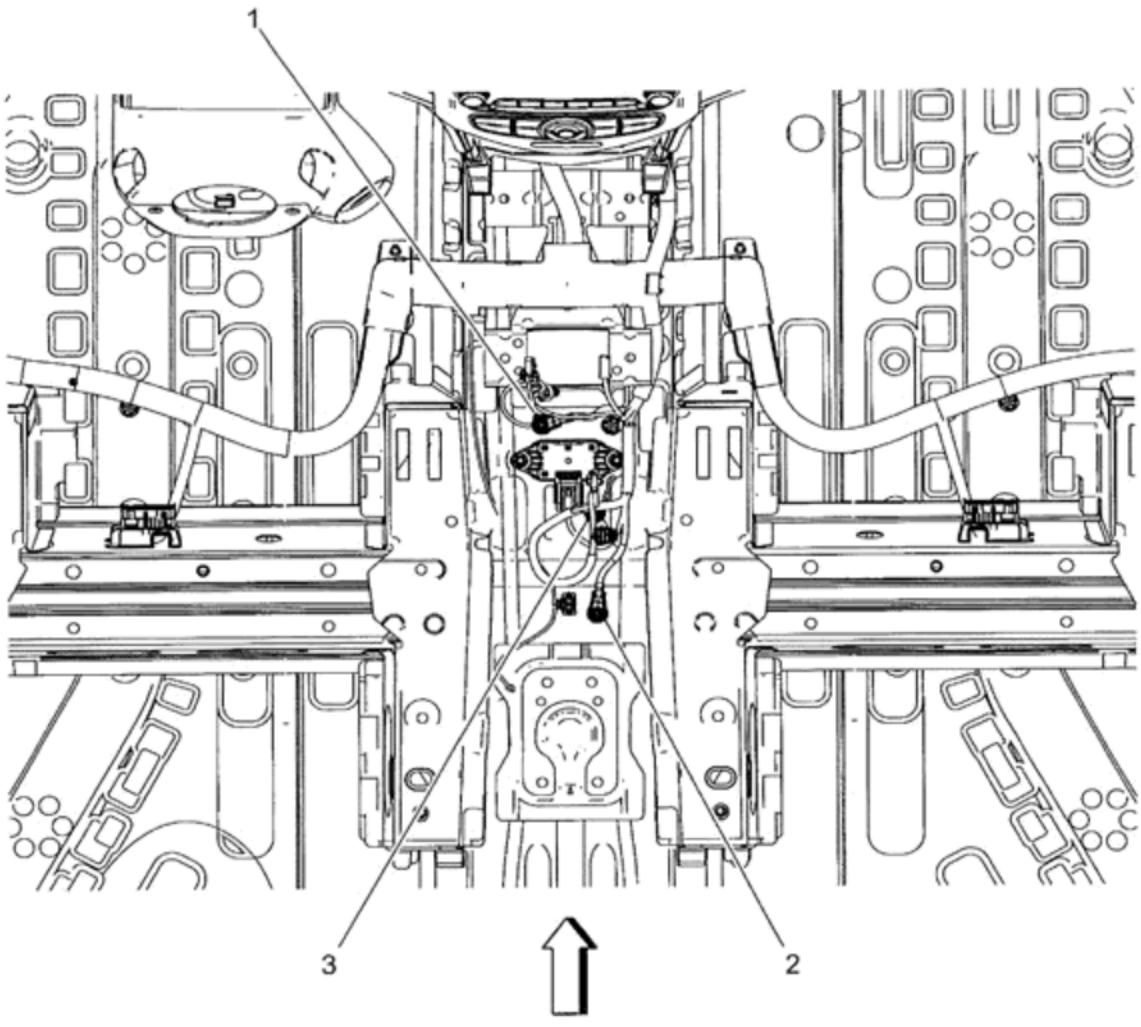


2571302

Items

(1) G307
(2) G303
(3) G201

G300, G301, G302

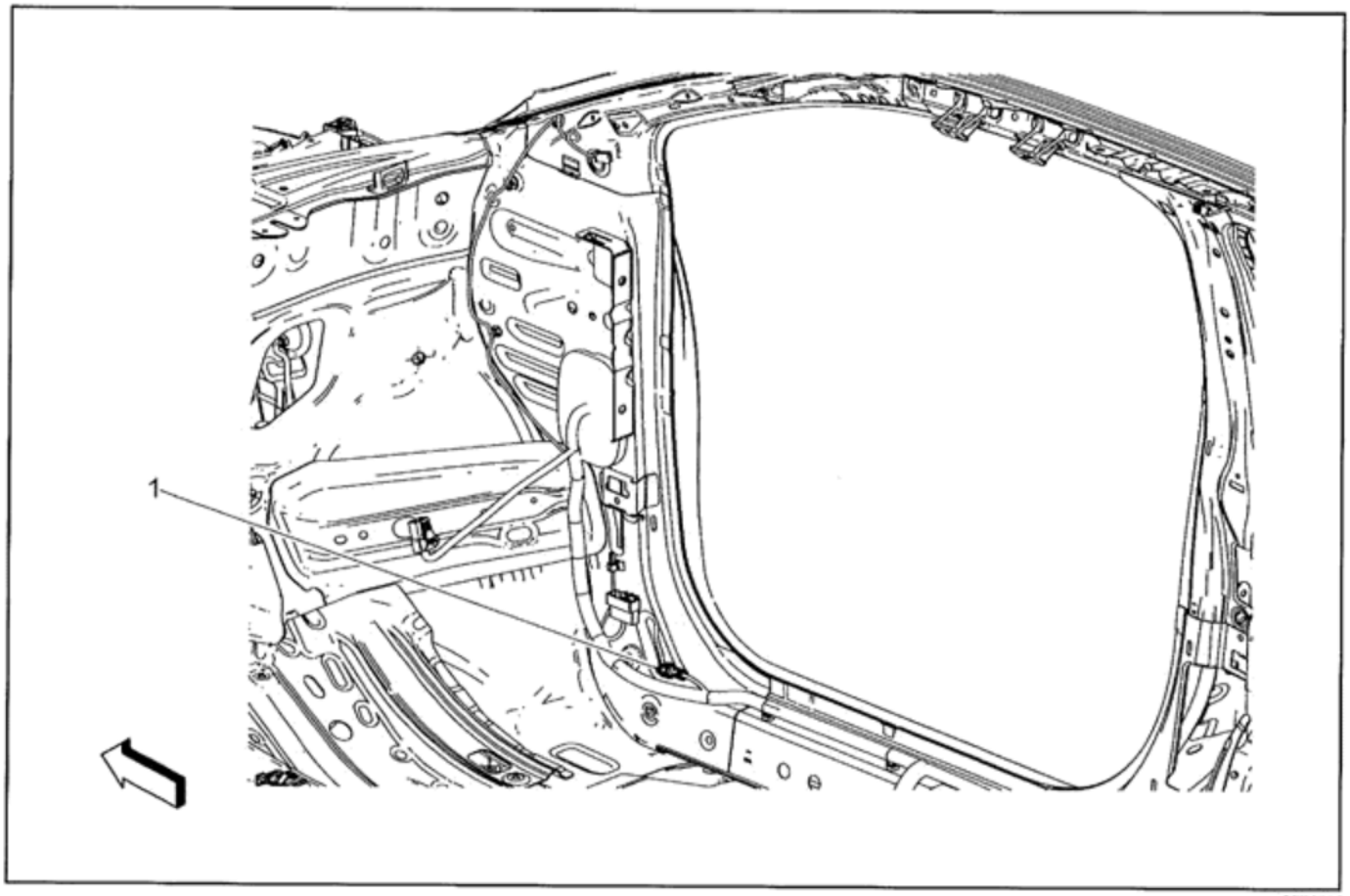


2540487

Items

(1) G301
(2) G300
(3) G302

G304

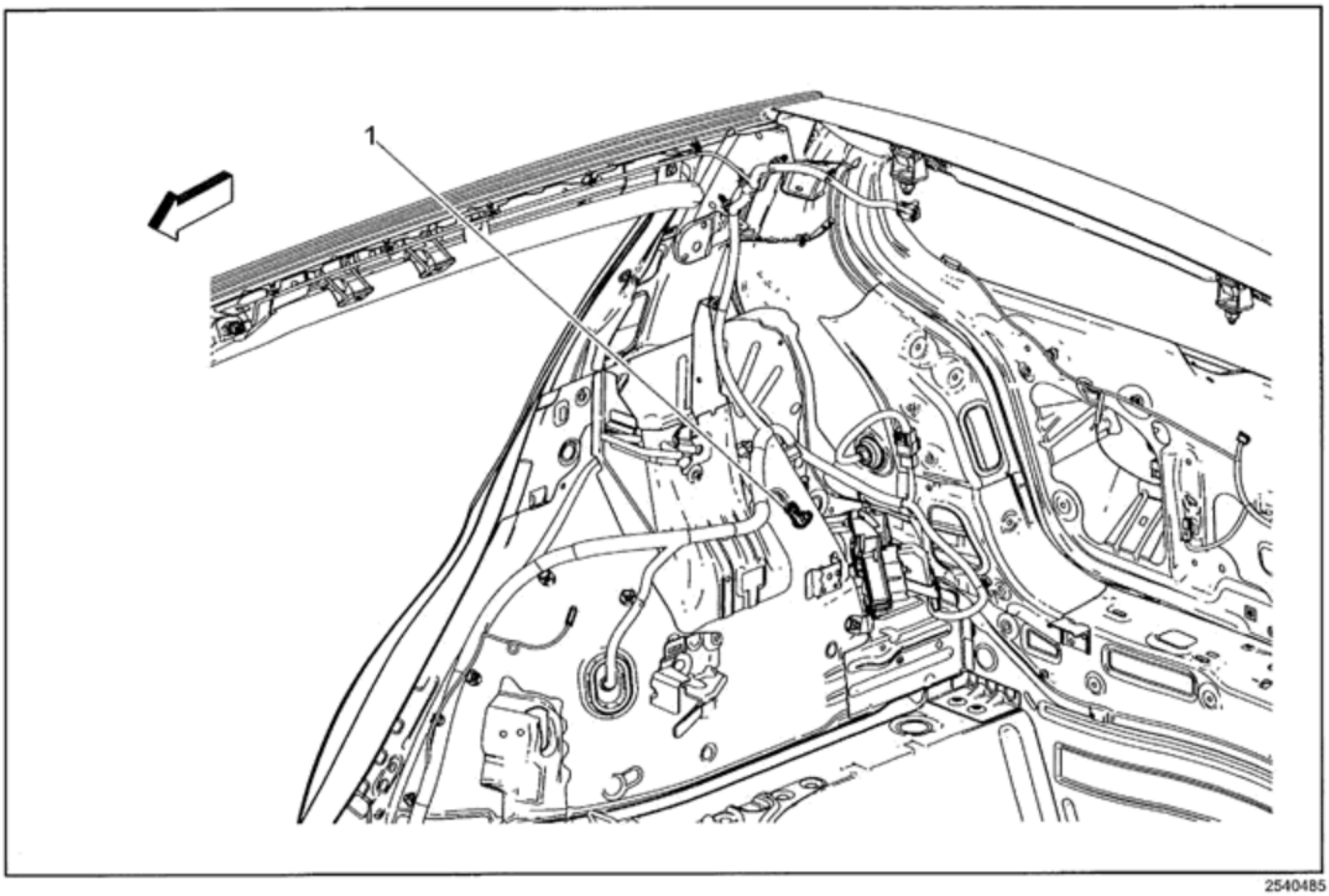


2571305

Items

(1) G304

G400 (Hatchback)

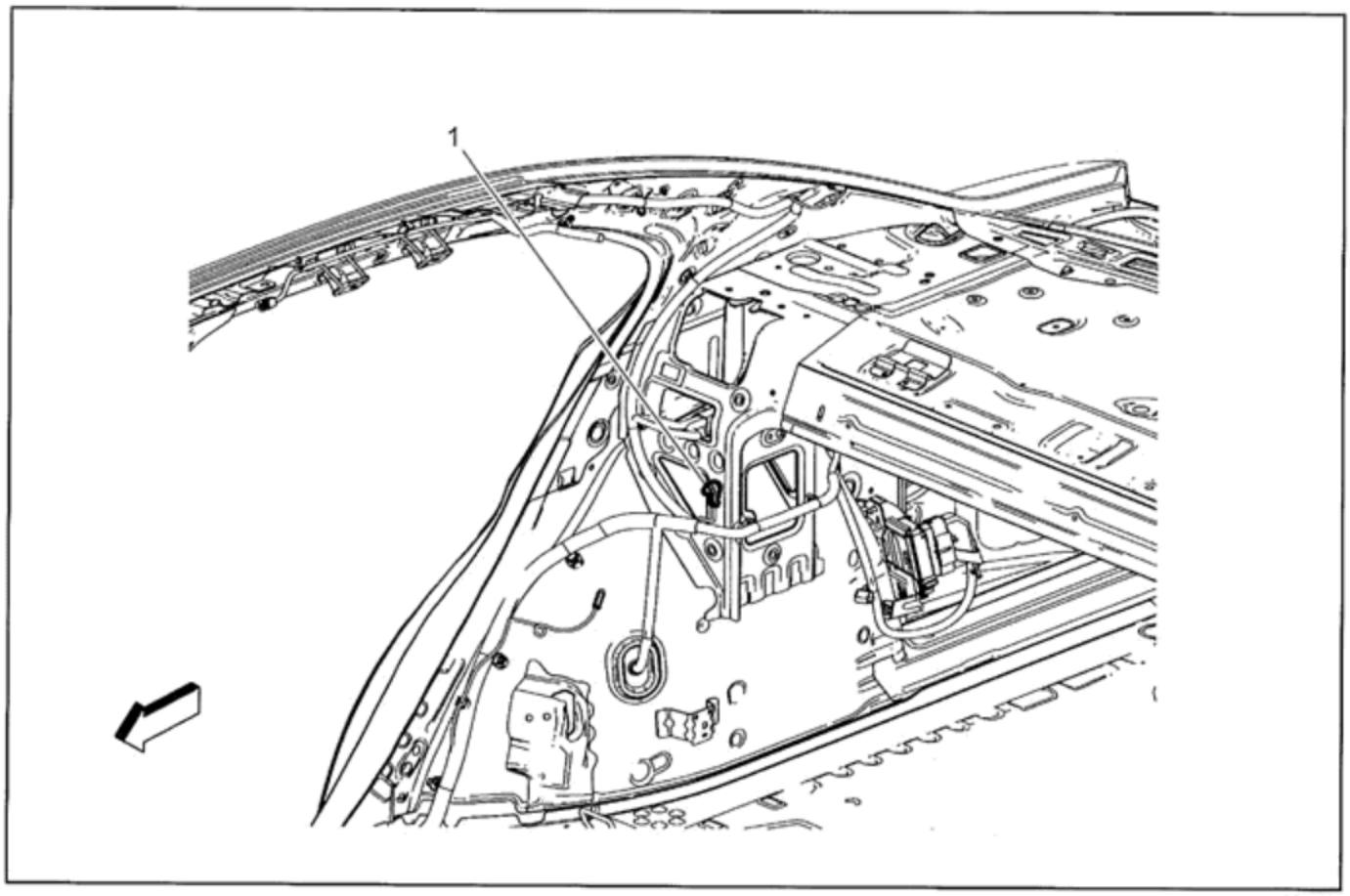


2540485

Items

(1) G400

G400 (Notchback)

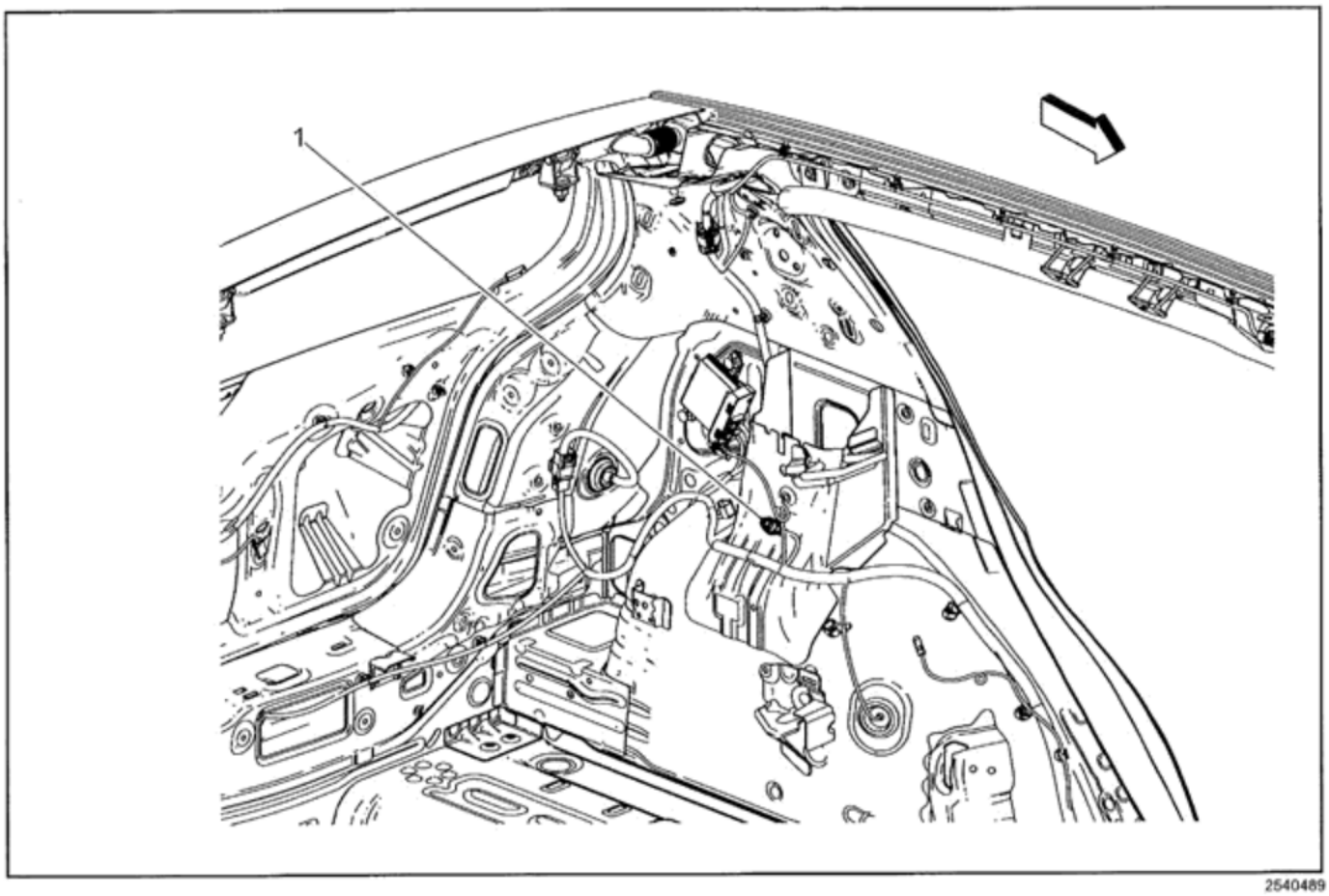


2541096

Items

(1) G400

G401 (Hatchback)

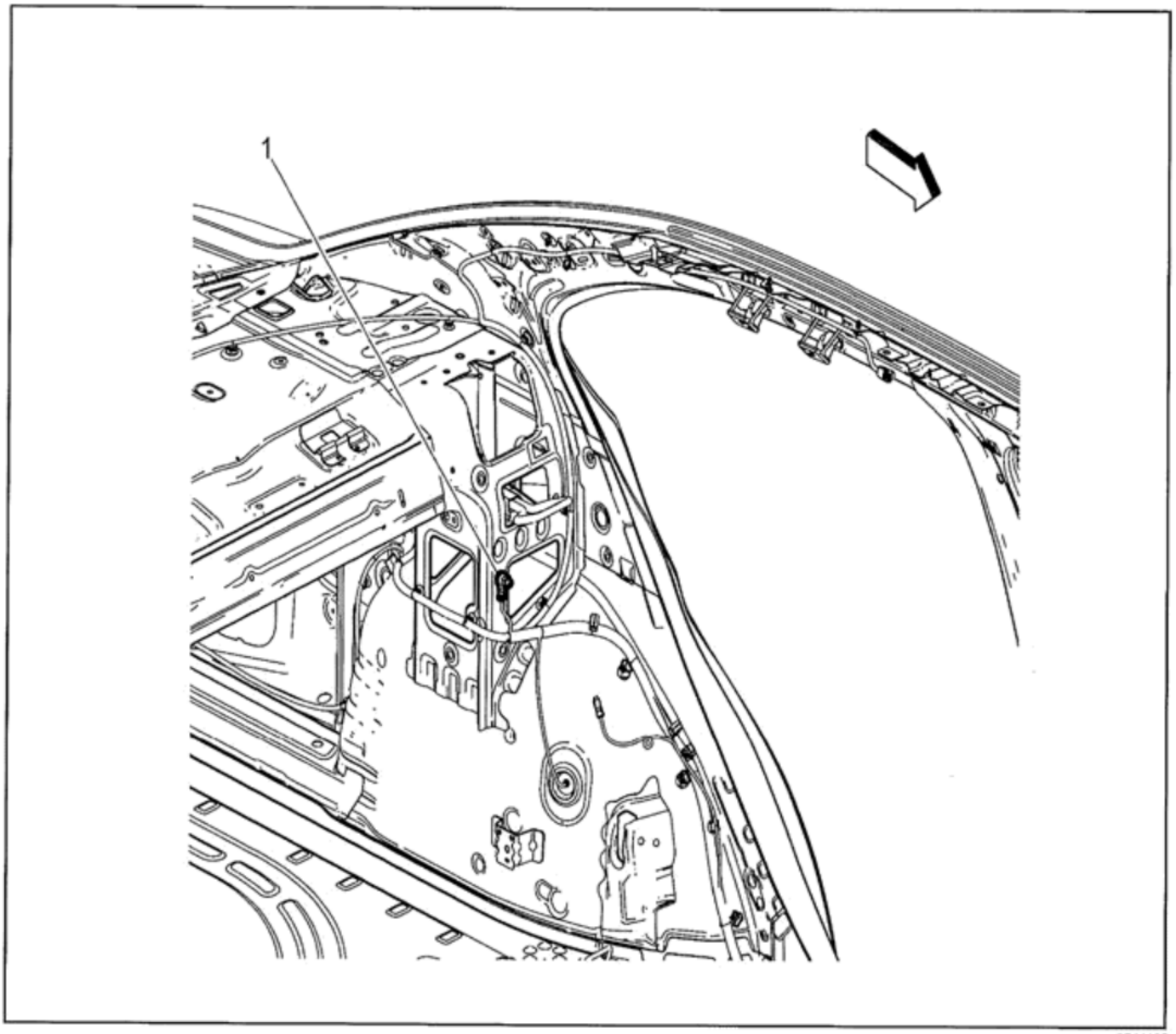


2540489

Items

(1) G401

G401 (Notchback)



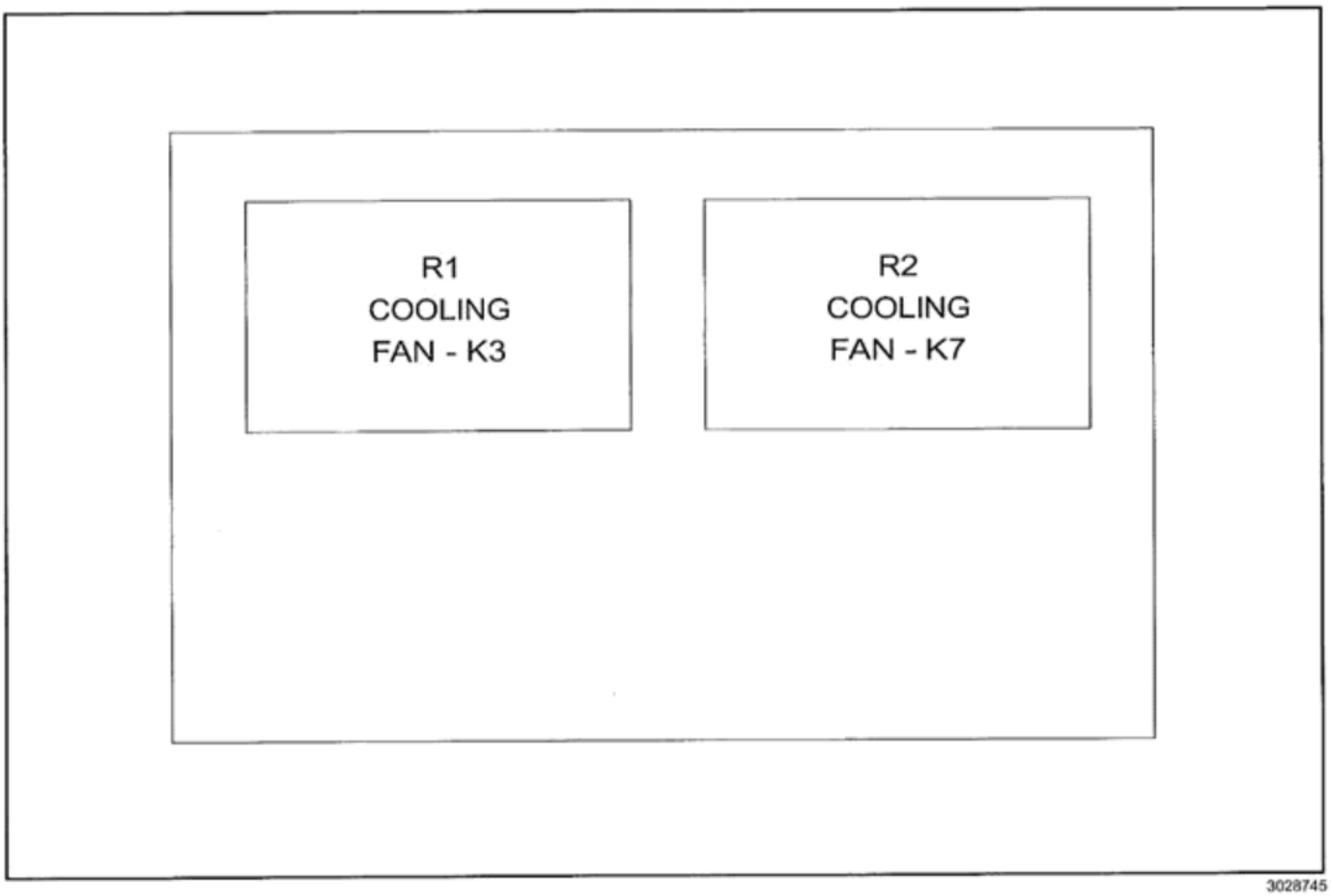
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Items

(1) G401

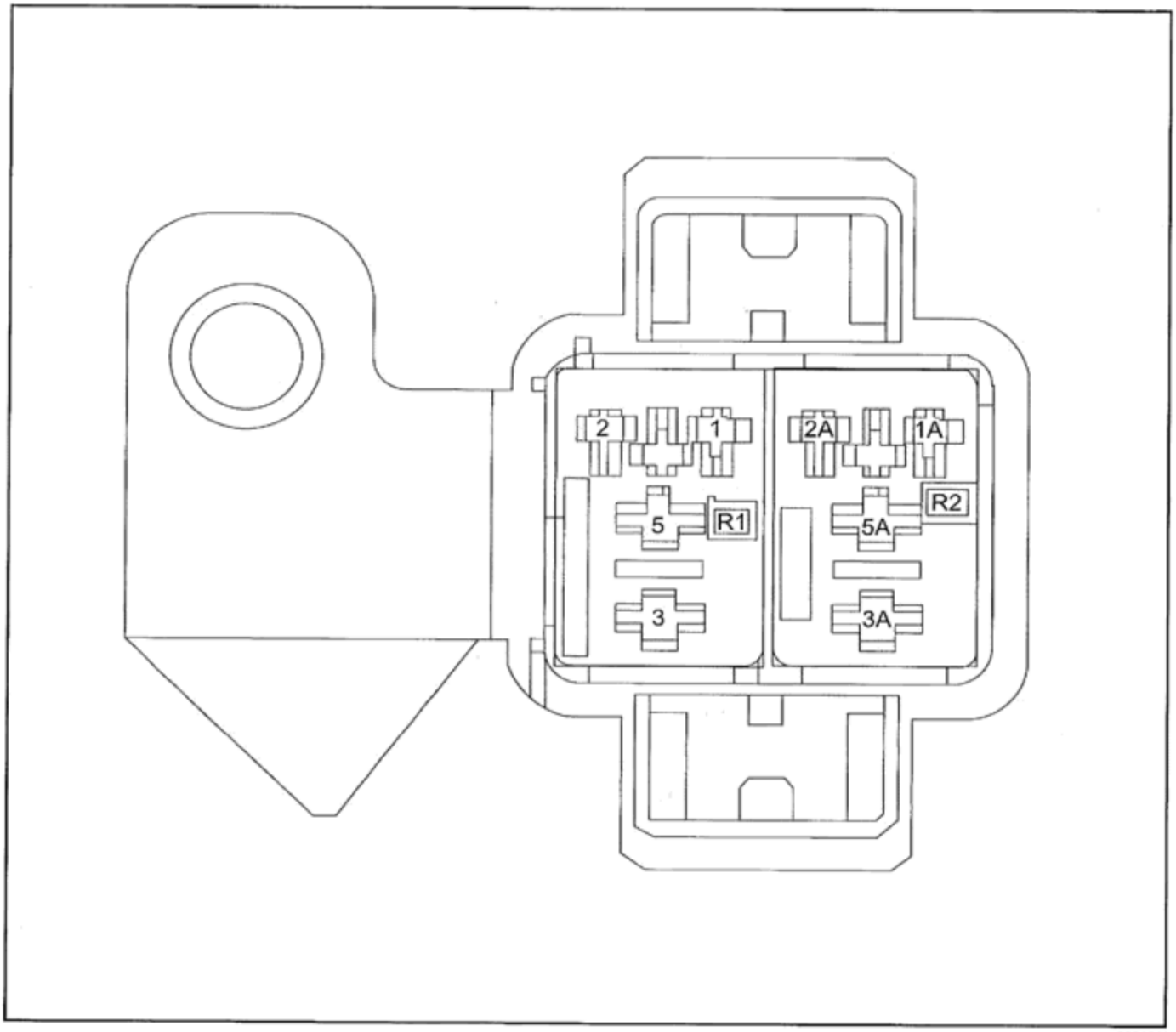
Electrical Center Identification Views

X70A Relay Block - Underhood Label (LUV)



3028745

X70A Relay Block - Underhood, Top View (LUV)

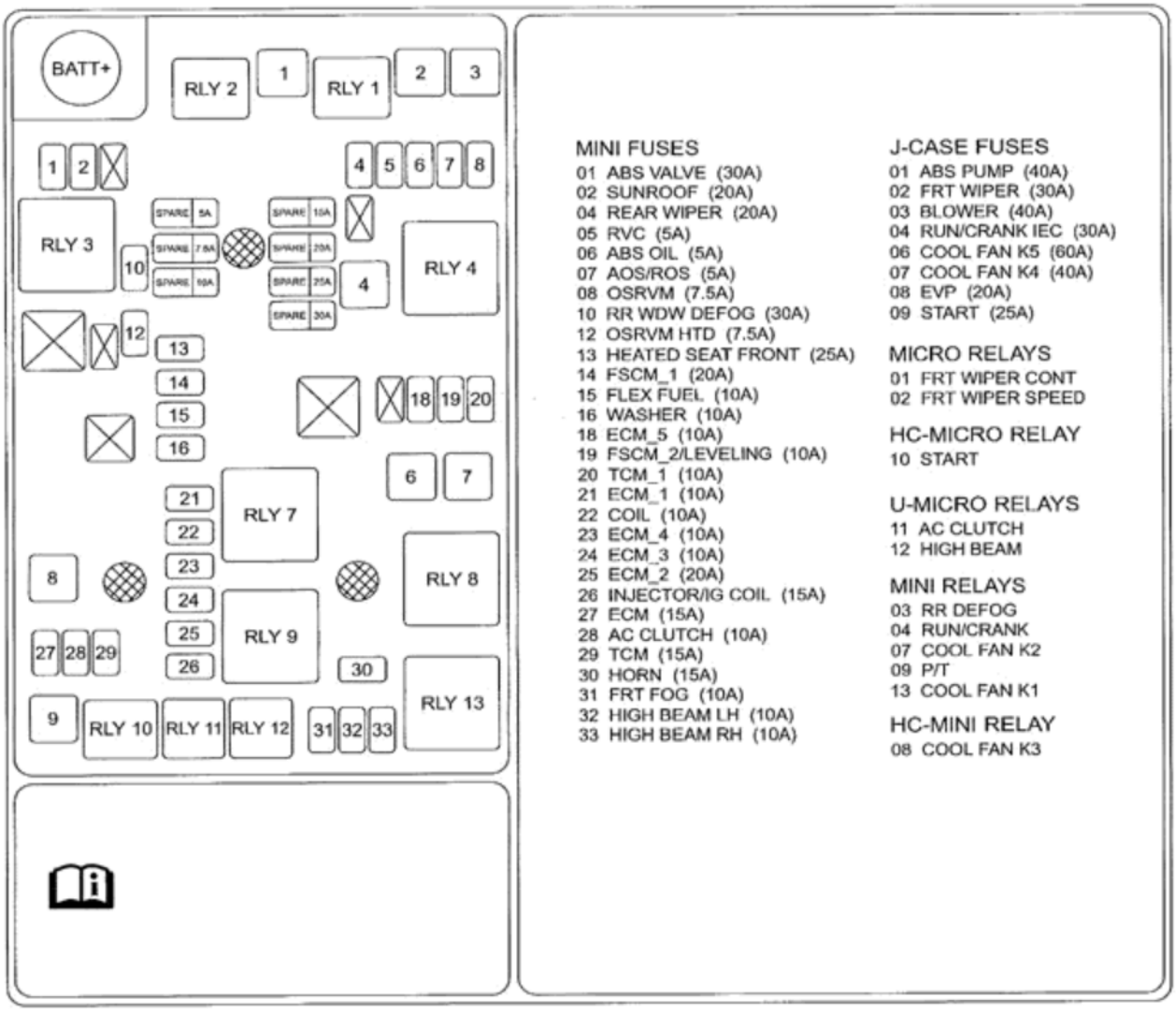


2661811

X70A Relay Block - Underhood, Top View (LUV)

No.	Device Label Name	Device Assigned Name	Rating	Description
R1	COOLING FAN – K3	KR20E Cooling Fan Speed Control Relay	—	G10 Cooling Fan Motor
R2	COOLING FAN – K7	KR20F Cooling Fan Relay	—	G10 Cooling Fan Motor

X50A Fuse Block - Underhood Label (LUV)



MINI FUSES
01 ABS VALVE (30A)
02 SUNROOF (20A)
04 REAR WIPER (20A)
05 RVC (5A)
06 ABS OIL (5A)
07 AOS/ROS (5A)
08 OSRVM (7.5A)
10 RR WDW DEFOG (30A)
12 OSRVM HTD (7.5A)
13 HEATED SEAT FRONT (25A)
14 FSCM_1 (20A)
15 FLEX FUEL (10A)
16 WASHER (10A)
18 ECM_5 (10A)
19 FSCM_2/LEVELING (10A)
20 TCM_1 (10A)
21 ECM_1 (10A)
22 COIL (10A)
23 ECM_4 (10A)
24 ECM_3 (10A)
25 ECM_2 (20A)
26 INJECTOR/IG COIL (15A)
27 ECM (15A)
28 AC CLUTCH (10A)
29 TCM (15A)
30 HORN (15A)
31 FRT FOG (10A)
32 HIGH BEAM LH (10A)
33 HIGH BEAM RH (10A)

J-CASE FUSES
01 ABS PUMP (40A)
02 FRT WIPER (30A)
03 BLOWER (40A)
04 RUN/CRANK IEC (30A)
06 COOL FAN K5 (60A)
07 COOL FAN K4 (40A)
08 EVP (20A)
09 START (25A)

MICRO RELAYS
01 FRT WIPER CONT
02 FRT WIPER SPEED

HC-MICRO RELAY
10 START

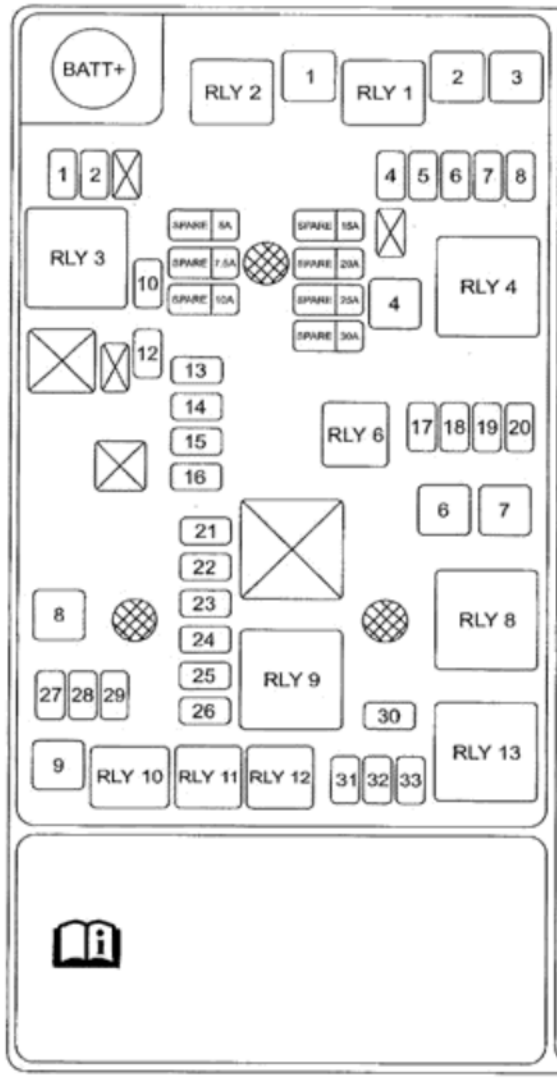
U-MICRO RELAYS
11 AC CLUTCH
12 HIGH BEAM

MINI RELAYS
03 RR DEFOG
04 RUN/CRANK
07 COOL FAN K2
09 P/T
13 COOL FAN K1

HC-MINI RELAY
08 COOL FAN K3

2914660

X50A Fuse Block - Underhood Label (LUW)



MINI FUSES
01 ABS VALVE (30A)
02 SUNROOF (20A)
04 REAR WIPER (20A)
05 RVC (5A)
06 ABS OIL (5A)
07 AOS/ROS (5A)
08 OSRVM (7.5A)
10 RR WDW DEFOG (30A)
12 OSRVM HTD (7.5A)
13 HEATED SEAT FRONT (25A)
14 FSCM_1 (20A)
15 FLEX FUEL (10A)
16 WASHER (10A)
17 FUEL PUMP (20A)
18 ECM_5 (10A)
19 FSCM_2/LEVELING (10A)
20 TCM_1 (10A)
21 ECM_1 (10A)
22 COIL (10A)
23 ECM_4 (10A)
24 ECM_3 (10A)
25 ECM_2 (20A)
26 INJECTOR/IG COIL (15A)
27 ECM (15A)
28 AC CLUTCH (10A)
29 TCM (15A)
30 HORN (15A)
31 FRT FOG (10A)
32 HIGH BEAM LH (10A)
33 HIGH BEAM RH (10A)

J-CASE FUSES
01 ABS PUMP (40A)
02 FRT WIPER (30A)
03 BLOWER (40A)
04 RUN/CRANK IEC (30A)
06 COOL FAN K5 (40A)
07 COOL FAN K4 (30A)
08 EVP (20A)
09 START (25A)

MICRO RELAYS
01 FRT WIPER CONT
02 FRT WIPER SPEED

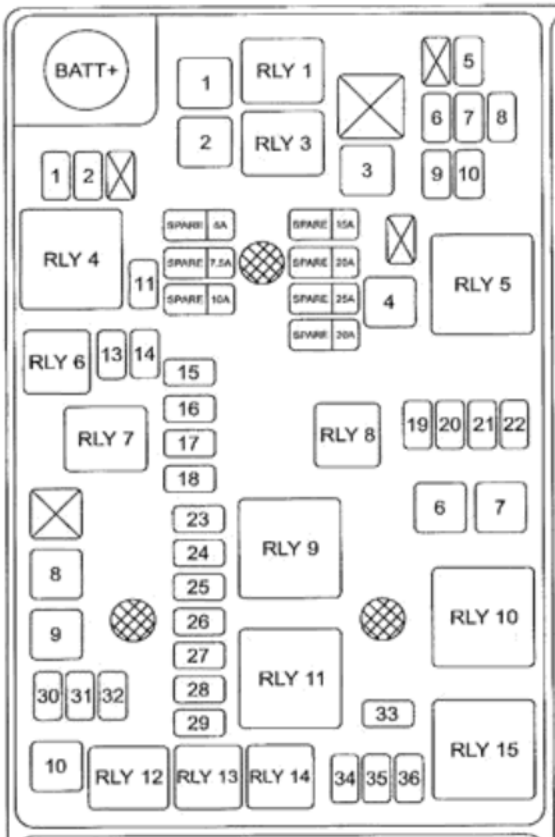
HC-MICRO RELAY
10 START

U-MICRO RELAYS
06 FUEL PUMP
11 AC CLUTCH
12 HIGH BEAM

MINI RELAYS
03 RR DEFOG
04 RUN/CRANK
08 COOL FAN K3
09 P/T
13 COOL FAN K1

2914659

X50A Fuse Block - Underhood Label (LWE)



MINI FUSES
01 ABS VALVE (30A)
02 SUNROOF (20A)
05 OSRVM (7.5A)
06 AOS/ROS (5A)
07 ABS OIL (5A)
08 RVC (5A)
09 REAR WIPER (20A)
10 NOT USED/ IBS (5A)
11 RR WDW DEFOG (30A)
13 NOT USED/ SAI VALVE (10A)
14 OSRVM HTD (7.5A)
15 HEATED SEAT FRONT (25A)
16 FSCM_1 (20A)
17 CANISTER VENT (10A)
18 WASHER (10A)
19 FUEL PUMP (20A)
20 ECM_5 (10A)
21 FSCM_2/LEVELING (10A)
22 TCM_1/DC-DC CONVERTER (10A)
23 AUX WATER PUMP POWER (10A)
24 ECM_1 (10A)
25 COIL (10A)
26 ECM_4 (10A)
27 ECM_3 (10A)
28 ECM_2 (20A)
29 INJECTOR/IG COIL (15A)
30 ECM (15A)
31 AC CLUTCH (10A)
32 TCM (15A)
33 HORN (15A)
34 FRT FOG (10A)
35 HIGH BEAM LH (10A)
36 HIGH BEAM RH (10A)

J-CASE FUSES
01 FRT WIPER (30A)
02 ABS PUMP (40A)
03 BLOWER (40A)
04 RUN/CRANK IEC (30A)
06 COOL FAN K4 (30A)
07 COOL FAN K5 (40A)
08 SAI PUMP (40A)
09 EVP (20A)
10 START (25A)

MICRO RELAYS
01 FRT WIPER CONT
03 FRT WIPER SPEED

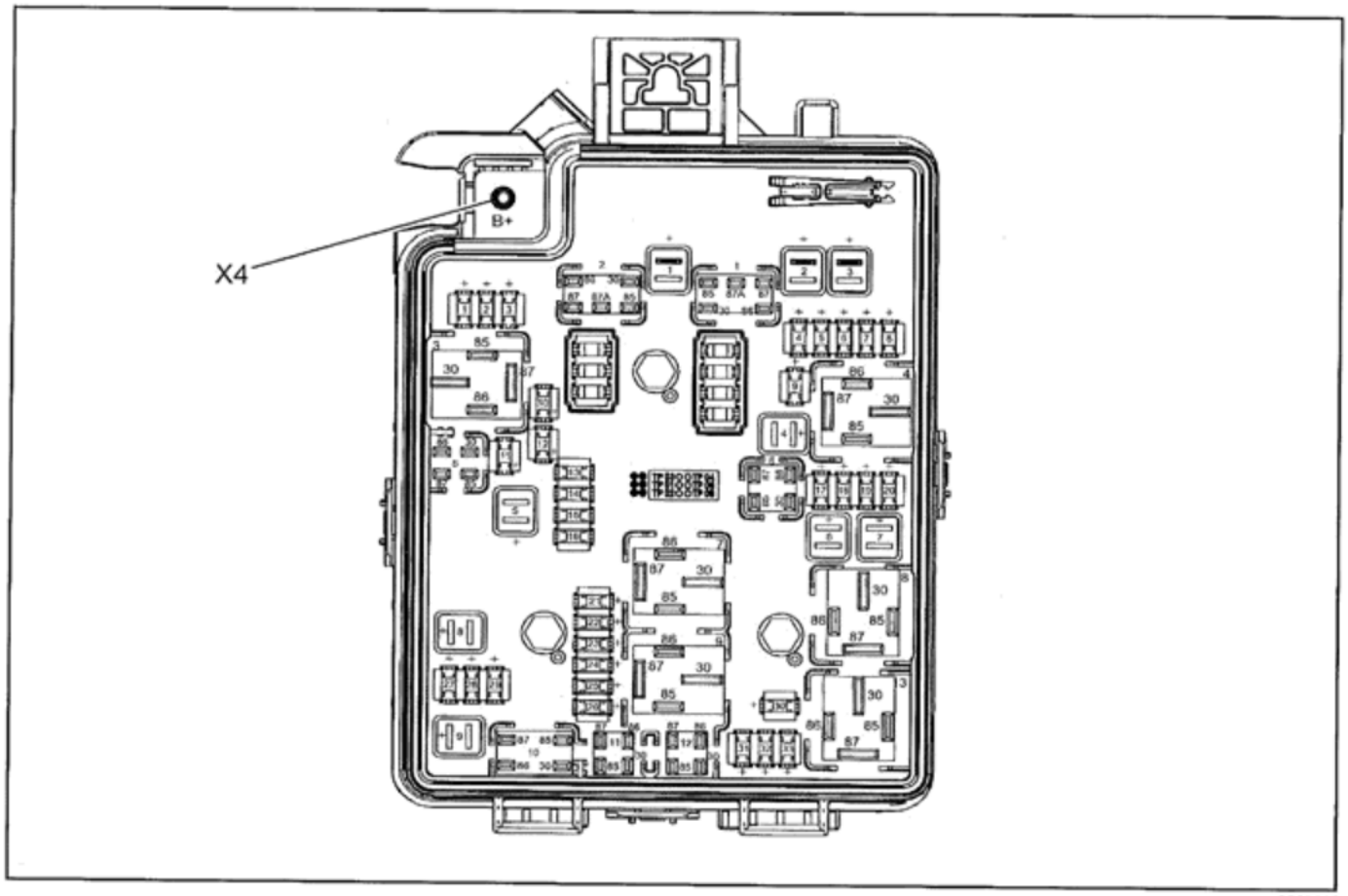
HC-MICRO RELAYS
07 AUX WATER PUMP POWER
12 START

U-MICRO RELAYS
06 NOT USED/ SAI VALVE
08 FUEL PUMP
13 AC CLUTCH
14 HIGH BEAM

MINI RELAYS
04 RR DEFOG
05 RUN/CRANK
09 SAI PUMP
10 COOL FAN K3
11 P/T
15 COOL FAN K1

2914662

X50A Fuse Block - Underhood, Top View (LUV or LUW)



3259035

X50A Fuse Block - Underhood, Top View (LUV or LUW)

No.	Device Label Name	Device Assigned Name	Rating	Description
Mini Fuses				
01	ABS VALVE	F1UA	30 A	K17 Electronic Brake Control Module
02	SUNROOF	F2UA	20 A	K61 Sunroof Control Module (CF5)
03	NOT USED	F3UA	25 A	Not Used
04	REAR WIPER	F4UA	20 A	KR7 Rear Wiper Relay, M45 Rear Wiper Motor (Hatchback)
05	RVC	F5UA	5 A	K9 Body Control Module
06	ABS OIL	F6UA	5 A	X90 Assembly Plant ABS Data Connector (J93)
07	AOS/ROS	F7UA	5 A	K85 Passenger Presence Module
08	OSRVM	F8UA	7.5 A	S52 Outside Rearview Mirror Switch (DG6)
09	NOT USED	F9UA	—	Not Used
10	RR WDW DEFOG	F10UA	30 A	E18 Rear Defogger Grid
11	NOT USED	F11UA	—	Not Used
12	OSRVM HTD	F12UA	7.5 A	A9A Outside Rearview Mirror – Driver (DG6), A9B Outside Rearview Mirror – Passenger (DG6)
13	HEATED SEAT FRONT	F13UA	25 A	K29 Seat Heating Control Module (KA1)
14	FSCM_1	F14UA	20 A	K27 Fuel Pump Control Module
15	FLEX FUEL	F15UA	10 A	Q13 Evaporative Emission Vent Solenoid Valve
16	WASHER	F16UA	10 A	KR6 Rear Window Washer Pump Relay, KR11 Windshield Washer Pump Relay

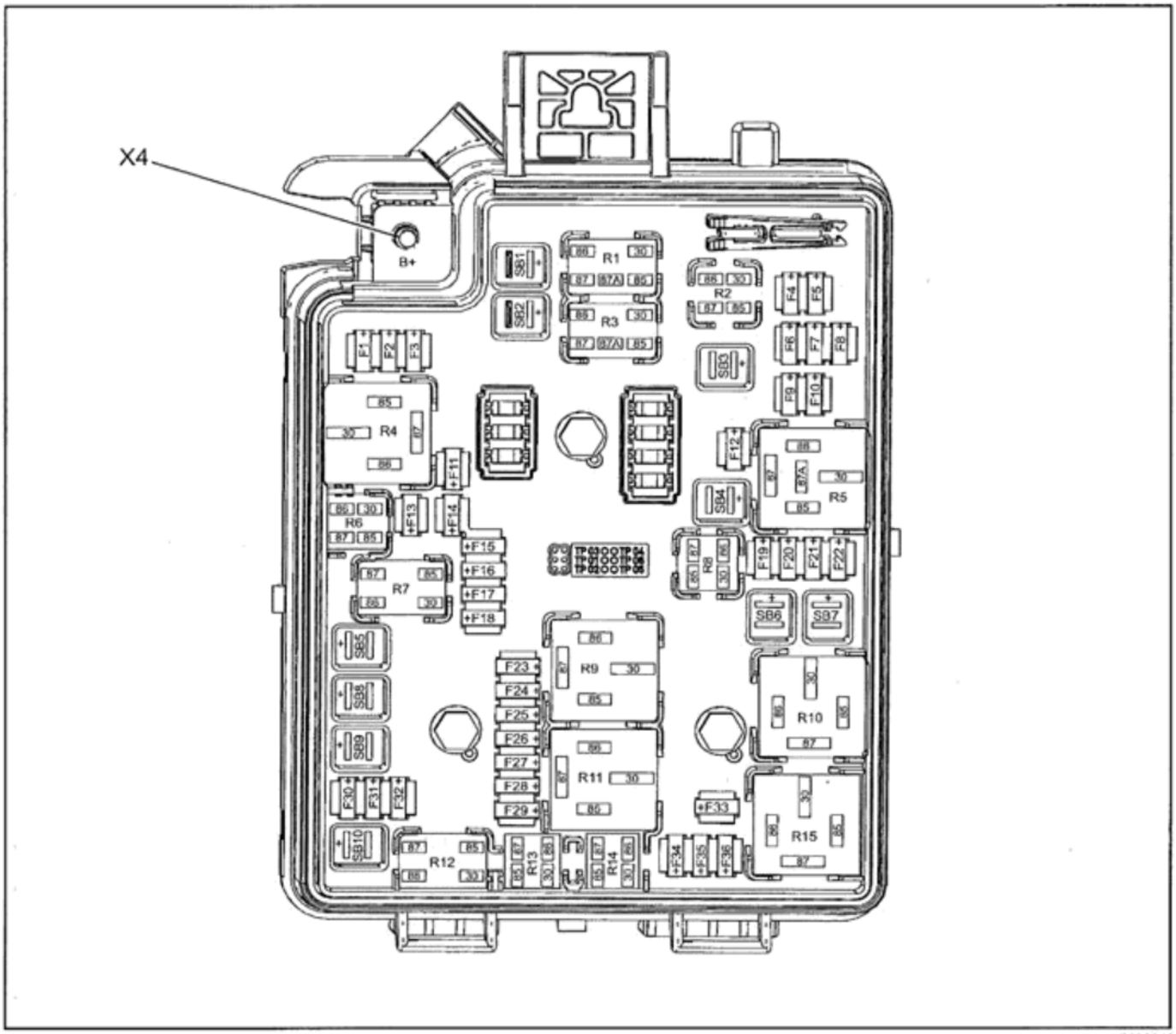
X50A Fuse Block - Underhood, Top View (LUV or LUW) (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
17	NOT USED	F17UA	—	Not Used
18	ECM_5	F18UA	10 A	K20 Engine Control Module
19	FSCM_2/ LEVELING	F19UA	10 A	K27 Fuel Pump Control Module
20	TCM_1	F20UA	10 A	B19C Brake Booster Vacuum Switch, Q8 Control Solenoid Valve Assembly (MH8 or MH9)
21	ECM_1	F21UA	10 A	Q12 Evaporative Emission Purge Solenoid Valve, Q22 Intake Manifold Tuning Solenoid Valve (LUW), Q40 Turbocharger Bypass Solenoid Valve (LUV), Q42 Turbocharger Wastegate Solenoid Valve
22	COIL	F22UA	10 A	KR20C Cooling Fan Low Speed Relay, KR20D Cooling Fan High Speed Relay (LUW), KR20E Cooling Fan Speed Control Relay (LUV), KR20L Cooling Fan Speed Control 2 Relay (LUV), KR20P Cooling Fan Medium Speed Relay (LUV), KR29 A/C Compressor Clutch Relay
23	ECM_4	F23UA	10 A	B75C Multifunction Intake Air Sensor, E41 Engine Coolant Thermostat Heater
24	ECM_3	F24UA	10 A	B52A Heated Oxygen Sensor 1, B52B Heated Oxygen Sensor 2
25	ECM_2	F25UA	20 A	K20 Engine Control Module
26	INJECTOR/ IG COIL	F26UA	15 A	K35 Ignition Coil Module, Q17A Fuel Injector 1, Q17B Fuel Injector 2, Q17C Fuel Injector 3, Q17D Fuel Injector 4
27	ECM	F27UA	15 A	K20 Engine Control Module
28	AC CLUTCH	F28UA	10 A	KR29 A/C Compressor Clutch Relay
29	TCM	F29UA	15 A	Q8 Control Solenoid Valve Assembly (MH8 or MH9)
30	HORN	F30UA	15 A	P12 Horn
31	FRT FOG	F31UA	10 A	E29LF Fog Lamp – Left Front (T3U), E29RF Fog Lamp – Right Front (T3U)
32	HIGH BEAM LH	F32UA	10 A	E4E Headlamp – Left High Beam
33	HIGH BEAM RH	F33UA	10 A	E4F Headlamp – Right High Beam
J-Case Fuses				
01	ABS PUMP	F1UB	40 A	K17 Electronic Brake Control Module
02	FRT WIPER	F2UB	30 A	KR12B Windshield Wiper Relay
03	BLOWER	F3UB	40 A	KR32E Blower Motor Relay
04	RUN/CRANK IEC	F4UB	30 A	F27DA, F28DA, F30DA, and F34DA Fuses
05	NOT USED	F5UB	—	Not Used
06	COOL FAN K5	F6UB	40 A (LUW) 60 A (LUV)	KR20D Cooling Fan High Speed Relay
07	COOL FAN K4	F7UB	30 A (LUW) 40 A (LUV)	KR20C Cooling Fan Low Speed Relay, KR20P Cooling Fan Medium Speed Relay
08	EVP	F8UB	20 A	M9 Brake Booster Pump Motor (LUV or MH9)
09	START	F9UB	25 A	KR27 Starter Relay
Micro Relays				
01	FRT WIPER CONT	KR12B Windshield Wiper Relay	—	KR12C Windshield Wiper Speed Control Relay, M75 Windshield Wiper Motor
02	FRT WIPER SPEED	KR12C Windshield Wiper Speed Control Relay	—	M75 Windshield Wiper Motor
HC-Micro Relays				
10	START	KR27 Starter Relay	—	M64 Starter Motor

X50A Fuse Block - Underhood, Top View (LUV or LUW) (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
U-Micro Relays				
11	AC CLUTCH	KR29 A/C Compressor Clutch Relay	—	Q2 A/C Compressor Clutch
12	HIGH BEAM	KR48 Headlamp High Beam Relay	—	F32UA, and F33UA Fuses
MINI Relays				
03	RR DEFOG	KR5 Rear Defogger Relay	—	F10UA Fuse
04	RUN/CRANK	KR73 Ignition Main Relay	—	F4UB, F17UA, F18UA, F19UA, and F20UA Fuses
07	COOL FAN K2	KR20P Cooling Fan Medium Speed Relay	—	G10 Cooling Fan Motor
08	COOL FAN K3	KR20D Cooling Fan High Speed Relay	—	G10 Cooling Fan Motor
09	P/T	KR75 Engine Controls Ignition Relay	—	F21UA, F22UA, F23UA, F24UA, F25UA, and F26UA Fuses
13	COOL FAN K1	KR20C Cooling Fan Low Speed Relay	—	G10 Cooling Fan Motor
Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block.				
—	—	KR3 Horn Relay	—	F30UA Fuse
—	—	KR6 Rear Window Washer Pump Relay	—	G24 Windshield Washer Pump
—	—	KR7 Rear Wiper Relay	—	M45 Rear Wiper Motor
—	—	KR11 Windshield Washer Pump Relay	—	G24 Windshield Washer Pump
—	—	KR46 Front Fog Lamp Relay	—	F31UA Fuse
Note: Items listed below are diagnostic test points for PCB relays				
TP01	—	TP01	—	Not Used
TP02	—	TP02	—	Not Used
TP03	—	TP03	—	Not Used
TP04	—	TP04	—	KR7 Rear Wiper Relay
TP05	—	TP05	—	KR11 Windshield Washer Pump Relay
TP06	—	TP06	—	KR6 Rear Window Washer Pump Relay

X50A Fuse Block - Underhood, Top View (LWE)



3020843

X50A Fuse Block - Underhood, Top View (LWE)

No.	Device Label Name	Device Assigned Name	Rating	Description
Mini Fuses				
01	ABS VALVE	F1UA	30 A	K17 Electronic Brake Control Module
02	SUNROOF	F2UA	20 A	K61 Sunroof Control Module (CF5)
03	NOT USED	F3UA	—	Not Used
04	NOT USED	F4UA	—	Not Used
05	OSRVM	F5UA	7.5 A	S52 Outside Rearview Mirror Switch (DG6)
06	AOS/ROS	F6UA	5 A	K85 Passenger Presence Module
07	ABS OIL	F7UA	5 A	X90 Assembly Plant ABS Data Connector (J93)
08	RVC	F8UA	5 A	K9 Body Control Module
09	REAR WIPER	F9UA	20 A	KR7 Rear Wiper Relay, M45 Rear Wiper Motor (Hatchback)
10	NOT USED/ IBS	F10UA	20 A	Not Used

X50A Fuse Block - Underhood, Top View (LWE) (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
11	RR WDW DEFOG	F11UA	30 A	E18 Rear Defogger Grid
12	NOT USED	F12UA	—	Not Used
13	NOT USED/ SAI VALVE	F13UA	10 A	Q29 Secondary Air Injection Solenoid Valve
14	OSRVM HTD	F14UA	7.5 A	A9A Outside Rearview Mirror – Driver (DG6), A9B Outside Rearview Mirror – Passenger (DG6)
15	HEATED SEAT FRONT	F15UA	25 A	K29 Seat Heating Control Module (KA1)
16	FSCM_1	F16UA	20 A	K27 Fuel Pump Control Module
17	CANISTER VENT	F17UA	10 A	Q13 Evaporative Emission Vent Solenoid Valve
18	WASHER	F18UA	10 A	KR6 Rear Window Washer Pump Relay, KR11 Windshield Washer Pump Relay
19	FUEL PUMP	F19UA	20 A	KR23A Fuel Pump Relay
20	ECM_5	F20UA	10 A	K20 Engine Control Module
21	FSCM_2/ LEVELING	F21UA	10 A	K27 Fuel Pump Control Module
22	TCM_1 /DC-DC CONVERTER	F22UA	10 A	B19C Brake Booster Vacuum Switch, Q8 Control Solenoid Valve Assembly
23	AUX WATER PUMP POWER	F23UA	10 A	Not Used
24	ECM_1	F24UA	10 A	Q12 Evaporative Emission Purge Solenoid Valve, and Q22 Intake Manifold Tuning Solenoid Valve
25	COIL	F25UA	10 A	KR20C Cooling Fan Low Speed Relay, KR20D Cooling Fan High Speed Relay, KR25 Secondary Air Injection Pump Relay, KR26 Secondary Air Injection Solenoid Valve Relay, KR29 A/C Compressor Clutch Relay, and KR31 Coolant Pump Relay - Auxiliary
26	ECM_4	F26UA	10 A	B75C Multifunction Intake Air Sensor, E41 Engine Coolant Thermostat Heater
27	ECM_3	F27UA	10 A	B52A Heated Oxygen Sensor 1, B52B Heated Oxygen Sensor 2
28	ECM_2	F28UA	20 A	K20 Engine Control Module
29	INJECTOR/ IG COIL	F29UA	15 A	K35 Ignition Coil Module, Q17A Fuel Injector 1, Q17B Fuel Injector 2, Q17C Fuel Injector 3, Q17D Fuel Injector 4
30	ECM	F30UA	15 A	K20 Engine Control Module
31	AC CLUTCH	F31UA	10 A	KR29 A/C Compressor Clutch Relay
32	TCM	F32UA	15 A	Q8 Control Solenoid Valve Assembly (MH8 or MH9)
33	HORN	F33UA	15 A	P12 Horn
34	FRT FOG	F34UA	10 A	E29LF Fog Lamp – Left Front (T3U), E29RF Fog Lamp – Right Front (T3U)
35	HIGH BEAM LH	F35UA	10 A	E4E Headlamp – Left High Beam
36	HIGH BEAM RH	F36UA	10 A	E4F Headlamp – Right High Beam
J-Case Fuses				
01	FRT WIPER	F1UB	30 A	KR12B Windshield Wiper Relay
02	ABS PUMP	F2UB	40 A	K17 Electronic Brake Control Module
03	BLOWER	F3UB	40 A	KR32E Blower Motor Relay
04	RUN/CRANK IEC	F4UB	30 A	F27DA, F28DA, F30DA, and F34DA Fuses
05	NOT USED	F5UB	—	Not Used
06	COOL FAN K4	F6UB	30 A	KR20C Cooling Fan Low Speed Relay
07	COOL FAN K5	F7UB	40 A	KR20D Cooling Fan High Speed Relay

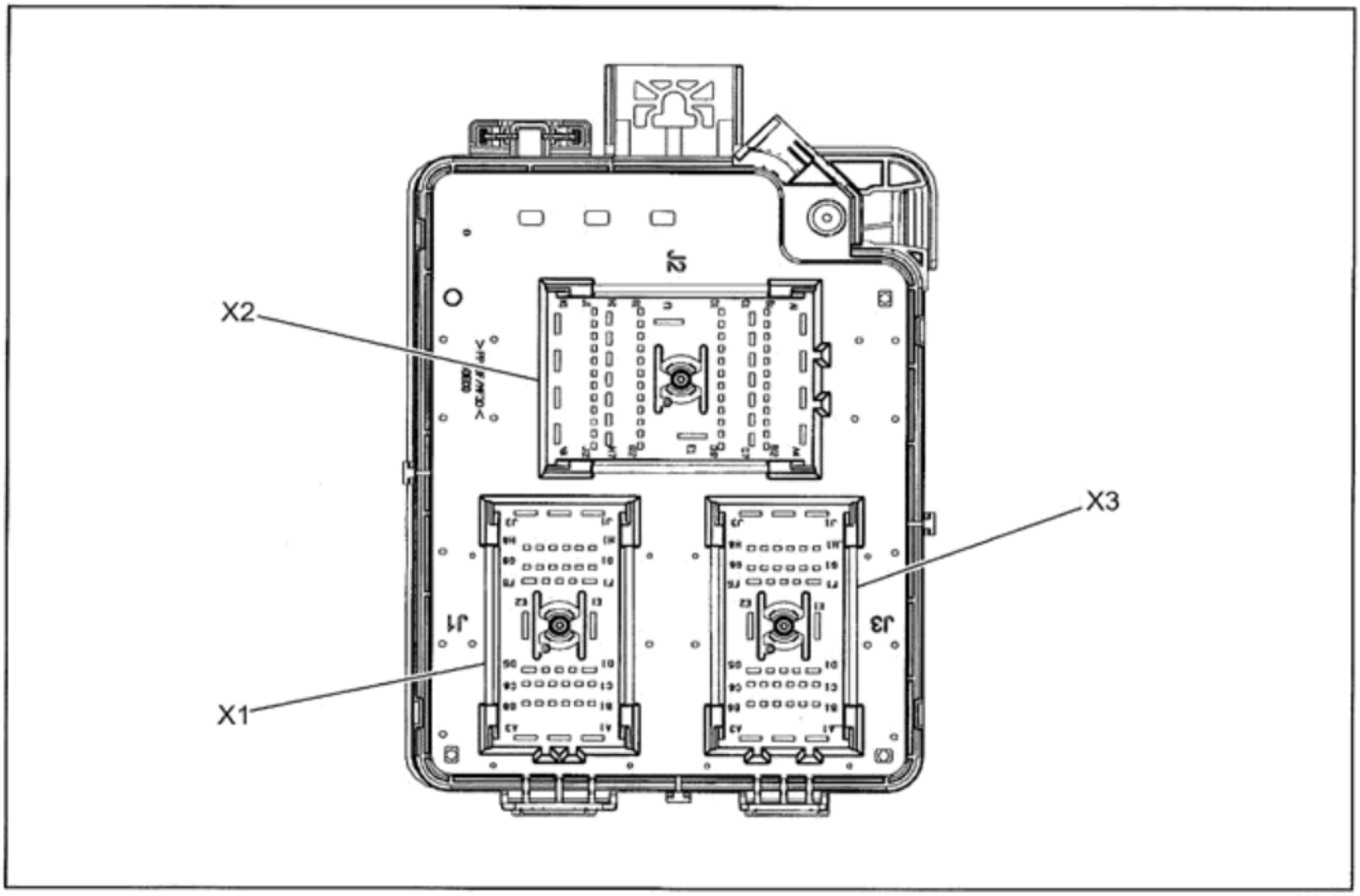
X50A Fuse Block - Underhood, Top View (LWE) (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
08	SAI PUMP	F8UB	40 A	KR25 Secondary Air Injection Pump Relay
09	EVP	F9UB	20 A	M9 Brake Booster Pump Motor (MH9)
10	START	F10UB	25 A	KR27 Starter Relay
Micro Relays				
01	FRT WIPER CONT	KR12B Windshield Wiper Relay	—	KR12C Windshield Wiper Speed Control Relay, M75 Windshield Wiper Motor
03	FRT WIPER SPEED	KR12C Windshield Wiper Speed Control Relay	—	M75 Windshield Wiper Motor
HC-Micro Relays				
07	AUX WATER PUMP POWER	KR31 Coolant Pump Relay - Auxiliary	—	F23UA Fuse
12	START	KR27 Starter Relay	—	M64 Starter Motor
U-Micro Relays				
06	NOT USED/ SAI VALVE	KR26 Secondary Air Injection Solenoid Valve Relay	—	F13UA Fuse
08	FUEL PUMP	KR23A Fuel Pump Relay	—	Not Used
13	AC CLUTCH	KR29 A/C Compressor Clutch Relay	—	Q2 A/C Compressor Clutch
14	HIGH BEAM	KR48 Headlamp High Beam Relay	—	F35UA, and F36UA Fuses
MINI Relays				
04	RR DEFOG	KR5 Rear Defogger Relay	—	F11UA Fuse
05	RUN/CRANK	KR73 Ignition Main Relay	—	F4UB, F19UA, F20UA, F21UA, and F22UA Fuses
09	SAI PUMP	KR25 Secondary Air Injection Pump Relay	—	G21 Secondary Air Injection Pump
10	COOL FAN K3	KR20D Cooling Fan High Speed Relay	—	G10 Cooling Fan Motor
11	P/T	KR75 Engine Controls Ignition Relay	—	F24UA, F25UA, F26UA, F27UA, F28UA, and F29UA Fuses
15	COOL FAN K1	KR20C Cooling Fan Low Speed Relay	—	G10 Cooling Fan Motor
Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block.				
—	—	KR3 Horn Relay	—	F33UA Fuse
—	—	KR6 Rear Window Washer Pump Relay	—	G24 Windshield Washer Pump
—	—	KR7 Rear Wiper Relay	—	M45 Rear Wiper Motor
—	—	KR11 Windshield Washer Pump Relay	—	G24 Windshield Washer Pump
—	—	KR46 Front Fog Lamp Relay	—	F34UA Fuse

X50A Fuse Block - Underhood, Top View (LWE) (cont'd)

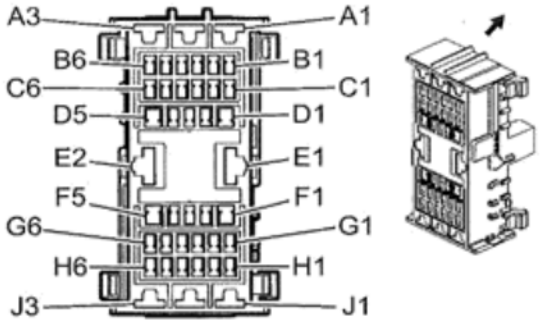
No.	Device Label Name	Device Assigned Name	Rating	Description
Note: Items listed below are diagnostic test points for PCB relays				
TP01	—	TP01	—	Not Used
TP02	—	TP02	—	Not Used
TP03	—	TP03	—	Not Used
TP04	—	TP04	—	KR7 Rear Wiper Relay
TP05	—	TP05	—	KR11 Windshield Washer Pump Relay
TP06	—	TP06	—	KR6 Rear Window Washer Pump Relay

X50A Fuse Block - Underhood, Bottom View



2539450

X50A Fuse Block - Underhood X1



2537253

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 96947011
Service Connector: 13587779
Description: 42 F 150/280 GT, 630/800 Metri Pack Series L-GY

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13582226	J-35616-42 (RD)	J-38125-11A	12084590	3	Not Available	Not Available
II	13582225	J-35616-42 (RD)	J-38125-11A	12084590	3	Not Available	Not Available
III	Not Available	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
IV	12451912	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
V	12451913	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
VI	12451914	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

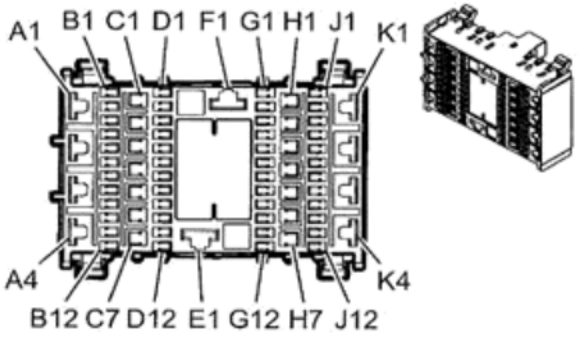
X50A Fuse Block - Underhood X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1–A2	—	—	—	Not Occupied	—	—
A3	3	WH/L-BU	409	Cooling Fan Motor Supply Voltage (1)	I	—
B1	—	—	—	Not Occupied	—	—
B2	0.5	BN/VT	2234	Front Fog Lamp Supply Voltage	II	T3U
B3	1	WH	711	Left Headlamp High Beam Supply Voltage	II	—
B4	1	WH	311	Right Headlamp High Beam Supply Voltage	II	—
B5	0.5	VT/L-BU	5294	Powertrain Main Relay Fused Supply (5)	II	—
B6	0.5 0.5	VT/L-BU BN/YE	5294 473	Powertrain Main Relay Fused Supply (5) High Speed Cooling Fan Relay Control	II	LUW/LWE LUV
C1	—	—	—	Not Occupied	—	—
C2	0.5	VT/L-BU	5294	Powertrain Main Relay Fused Supply (5)	II	LUV
C3–D1	—	—	—	Not Occupied	—	—

X50A Fuse Block - Underhood X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
D2	0.5	L-BU/WH	1314	Left Front Turn Signal Lamp Supply Voltage	II	—
D3	0.5	GY/BN	309	Right Park Lamp Supply Voltage	II	—
D4	0.75	BN/GY	29	Horn Control	II	—
D5–E1	—	—	—	Not Occupied	—	—
E2	5 4	YE GY	5358 532	Cooling Fan Motor Supply Voltage (3) Cooling Fan Motor Supply Voltage (2)	III	LUV LUW/LWE
F1–F3	—	—	—	Not Occupied	—	—
F4	0.5	L-GN/VT	335	Low Speed Cooling Fan Relay Control	II	LUV
F5–G2	—	—	—	Not Occupied	—	—
G3	0.5	GY/VT	228	Windshield Washer Pump Control	II	—
G4	1	YE	312	Right Headlamp Low Beam Supply Voltage	II	—
G5	0.75	L-GN/VT	1315	Right Front Turn Signal Lamp Supply Voltage	II	—
G6	0.75	VT/GY	709	Left Park Lamp Supply Voltage	II	—
H1–H2	—	—	—	Not Occupied	—	—
H3	0.5	L-BU/VT	392	Rear Window Washer Pump Control	II II	—
H4	1	YE	712	Left Headlamp Low Beam Supply Voltage	II II	—
H5–H6	—	—	—	Not Occupied	—	—
J1	4	GY	532	Cooling Fan Motor Supply Voltage (2)	IV	LUV
J2–J3	—	—	—	Not Occupied	—	—

X50A Fuse Block - Underhood X2



2677274

Connector Part Information

Harness Type: Body
OEM Connector: 96947009
Service Connector: 13587777
Description: 72-Way F GT 150/280 Metri-Pack 630/800 Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13582225	J-35616-42 (RD)	J-38125-11A	12084590	3	Not Available	Not Available
II	Not Available	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
III	12451915	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
IV	12451916	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
V	12451912	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
VI	13582226	J-35616-42 (RD)	J-38125-11A	12084590	3	Not Available	Not Available

X50A Fuse Block - Underhood X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	—	—	—	Not Occupied	—	—
A2	2.5	RD/WH	140	Battery Positive Voltage	I	—
A3	2.5	BN/VT	293	Rear Defog Element Supply Voltage	I	—
A4	—	—	—	Not Occupied	—	—
B1	0.5	BN/VT	193	Rear Defog Relay Control	II II	—
B2	0.5	BN/WH	419	Check Engine Indicator Control	II II	—
B3	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	II II	—
B4	0.75	GY	295	Door Lock Actuator Lock Control	II II	—
B5	0.5	WH	1310	EVAP Canister Vent Solenoid Control	II II	—
B6	0.5	WH/L-BU	3266	Child Security Lock Motor Unlock Control	II II	—
B7	0.5	GY	295	Door Lock Actuator Lock Control	II II	—
B8–B9	—	—	—	Not Occupied	—	—
B10	0.5	GY/VT	267	Mirror Heater Element Voltage	II II	DG6
B11	0.5	GY/VT	267	Mirror Heater Element Voltage	II II	DG6
B12	—	—	—	Not Occupied	—	—
C1	2	WH	92	Windshield Wiper Motor High Speed Control	I III	—
C2	—	—	—	Not Occupied	—	—
C3	1.5	RD/WH	640	Battery Positive Voltage	I I	—
C4	—	—	—	Not Occupied	—	—
C5	2.5	BK	450	Ground	I III	—

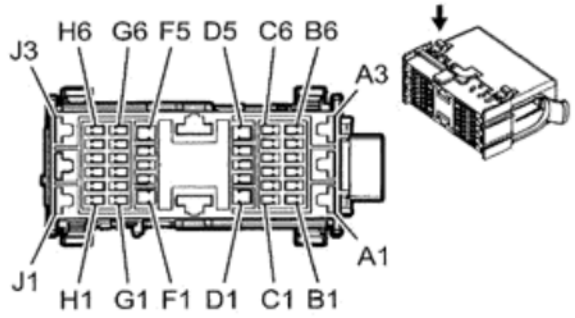
X50A Fuse Block - Underhood X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
C6	1.5	RD/BN	1140	Battery Positive Voltage	I	—
C7	1.5	RD/L-BU	540	Battery Positive Voltage	I	KA1
D1	—	—	—	Not Occupied	—	—
D2	0.35	WH/VT	860	Front Windshield Wiper Switch High Signal	II II	—
D3	0.35	GY	91	Windshield Wiper Motor Relay Coil Supply Voltage	II II	—
D4	—	—	—	Not Occupied	—	—
D5	0.5	VT/YE	3267	Child Security Lock Relay Control	II II	—
D6	0.35	YE	5420	Rear Wiper Motor Relay Coil Control	II II	Hatchback
D7–D9	—	—	—	Not Occupied	—	—
D10	0.5	RD/L-BU	1240	Battery Positive Voltage	II II	—
D11	0.35	VT/YE	5985	Accessory Wakeup Serial Data	II II	—
D12–E1	—	—	—	Not Occupied	—	—
F1	4	RD/YE	240	Battery Positive Voltage	IV	—
G1	—	—	—	Not Occupied	—	—
G2	0.35	L-GN/WH	2270	Rear Window Washer Relay Control	II II	Hatchback
G3–G4	—	—	—	Not Occupied	—	—
G5	0.75	L-GN/VT	1315	Right Front Turn Signal Lamp Supply Voltage	II II	—
G6	0.75	L-BU/WH	1314	Left Front Turn Signal Lamp Supply Voltage	II II	—
G7	0.5	BN/WH	1317	Fog Lamp Relay Control	II II	—
G8	0.5	WH/L-BU	6311	Cruise/ETC/TCC Brake Signal	II II	—
G9	0.35	BN/GY	2268	Windshield Washer Relay Control	II II	—
G10	0.35	BN/WH	28	Horn Relay Control	II II	—
G11	0.35	BN/VT	1969	Headlamp High Beam Relay Control	II II	—
G12	—	—	—	Not Occupied	—	—
H1	2	BK	450	Ground	III V	—
H2	2	YE/BN	95	Windshield Wiper Motor Low Speed Control	III V	—
H3	1	L-BU	393	Rear Window Wiper Motor Control	III V	Hatchback
H4	1	GY/VT	5780	Windshield Wiper Motor Park Switch Fused Signal	III V	Hatchback

X50A Fuse Block - Underhood X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
H5	0.35	BK	450	Ground	III V	Hatchback
H6–H7	—	—	—	Not Occupied	—	—
J1	0.5	RD/WH	1040	Battery Positive Voltage	II II	—
J2	0.35	VT/L-GN	439	Run/Crank Ignition 1 Voltage	II II	—
J3	—	—	—	Not Occupied	—	—
J4	0.35	RD/BN	440	Battery Positive Voltage	II II	—
J5	0.5	GY/BN	309	Right Park Lamp Supply Voltage	II II	—
J6	0.5	VT/GY	709	Left Park Lamp Supply Voltage	II II	—
J7	—	—	—	Not Occupied	—	—
J8	0.35	L-GN/VT	5199	Run/Crank Relay Coil Control	II II	—
J9	0.75	YE	312	Right Headlamp Low Beam Supply Voltage	II II	—
J10	0.75	YE	712	Left Headlamp Low Beam Supply Voltage	II II	—
J11	—	—	—	Not Occupied	—	—
J12	0.5	VT/BK	339	Run/Crank Ignition 1 Voltage	II II	—
K1	4	RD/YE	740	Battery Positive Voltage	VI	—
K2–K3	—	—	—	Not Occupied	—	—
K4	2.5	VT/WH	239	Run/Crank Ignition 1 Voltage	I	—

X50A Fuse Block - Underhood X3



2677039

Connector Part Information

Harness Type: Engine
OEM Connector: 96947010
Service Connector: 13587778
Description: 42-Way F GT 150/280 Metri-Pack 630/800 Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13582223	J-35616-42 (RD)	J-38125-11A	12015870	2	A	D
II	13327109	J-35616-2A (GY)	J-38125-553	12191812	19	E	C
III	13575735	J-35616-2A (GY)	J-38125-553	12191812	19	C	A
IV	13575479	J-35616-2A (GY)	J-38125-553	12191812	19	C	A
V	13327130	J-35616-4A (PU)	J-38125-553	15304711	8	2	A
VI	13575465	J-35616-44 (YE)	J-38125-558	12065915	5	A	D
VII	13327105	J-35616-44 (YE)	J-38125-558	12110127	19	F	G
VIII	13575503	J-35616-4A (PU)	J-38125-553	15304711	8	E	A

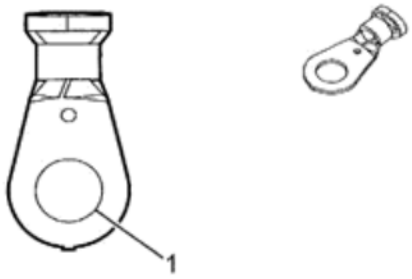
X50A Fuse Block - Underhood X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	—	—	—	Not Occupied	—	—
A2	1.5	YE	6	Starter Solenoid Crank Voltage	I	—
A3–B1	—	—	—	Not Occupied	—	—
B2	0.5	YE	447	Starter Relay Coil Control	II	—
B3	0.5	BK	1750	Ground	II	—
B4	0.5	WH/GY	459	A/C Compressor Clutch Relay Control	II	C60
B5	0.5	BN/L-GN	59	A/C Compressor Clutch Supply Voltage	II	C60
B6	1	VT/L-BU	5290	Powertrain Main Relay Fused Supply (1)	II	—
C1	0.75	RD/WH	140	Battery Positive Voltage	II	—
C2	0.75	RD/VT	340	Battery Positive Voltage	II	MH8/MH9
C3	0.5	L-GN/VT	335	Low Speed Cooling Fan Relay Control	II	LUW/LWE
C4	0.5	BN/YE	473	High Speed Cooling Fan Relay Control	II	—
C5	0.5	VT/L-BU	5294	Powertrain Main Relay Fused Supply (5)	II	LUV
C6	—	—	—	Not Occupied	—	—
D1	0.75	VT/L-BU	5290	Powertrain Main Relay Fused Supply (1)	II	—
D2	0.5	YE	5991	Powertrain Relay Coil Control	II	—
D3	0.5	VT/L-BU	5291	Powertrain Main Relay Fused Supply (2)	II	—
D4	0.5	VT/L-BU	5290	Powertrain Main Relay Fused Supply (1)	II	—
D5	0.75	VT/L-BU	5290	Powertrain Main Relay Fused Supply (1)	II III	—
E1	1.5	RD/WH	2040	Battery Positive Voltage	IV	—
E2	4	BN/YE	78	Air Injection Reaction Pump Supply Voltage	-	LWE
F1–F2	—	—	—	Not Occupied	—	—
F3	0.5 0.5	BN/YE L-GN/L-BU	473 436	High Speed Cooling Fan Relay Control Air Injection Reaction Pump Relay Coil Control	-	LUV LWE
F4	—	—	—	Not Occupied	—	—
F5	0.5	VT/L-BU	5291	Powertrain Main Relay Fused Supply (2)	III	—

X50A Fuse Block - Underhood X3 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
G1	0.5	L-BU/BN	421	Air Injection Reaction Solenoid Relay Coil Control	II	LWE
G2	0.5	BN/WH	419	Check Engine Indicator Control	II	—
G3	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	II	—
G4	0.5	WH/L-BU	6311	Cruise/ETC/TCC Brake Signal	II	—
G5	0.5	VT/GY	139	Run/Crank Ignition 1 Voltage	II	—
G6–H2	—	—	—	Not Occupied	—	—
H3	0.5	YE/BK	429	Air Injection Reaction Solenoid Control	II	LWE
H4	0.5	WH	1310	EVAP Canister Vent Solenoid Control	II	—
H5	0.5	VT/YE	5985	Accessory Wakeup Serial Data	II	—
H6	0.5	VT/GY	139	Run/Crank Ignition 1 Voltage	II	—
J1–J3	—	—	—	Not Occupied	—	—

X50A Fuse Block - Underhood X4



2791579

Connector Part Information

Harness Type: Positive Battery Cable
OEM Connector: CBR68-012
Service Connector: Service by Harness – See Part Catalog
Description: 1-Way Ring Terminal

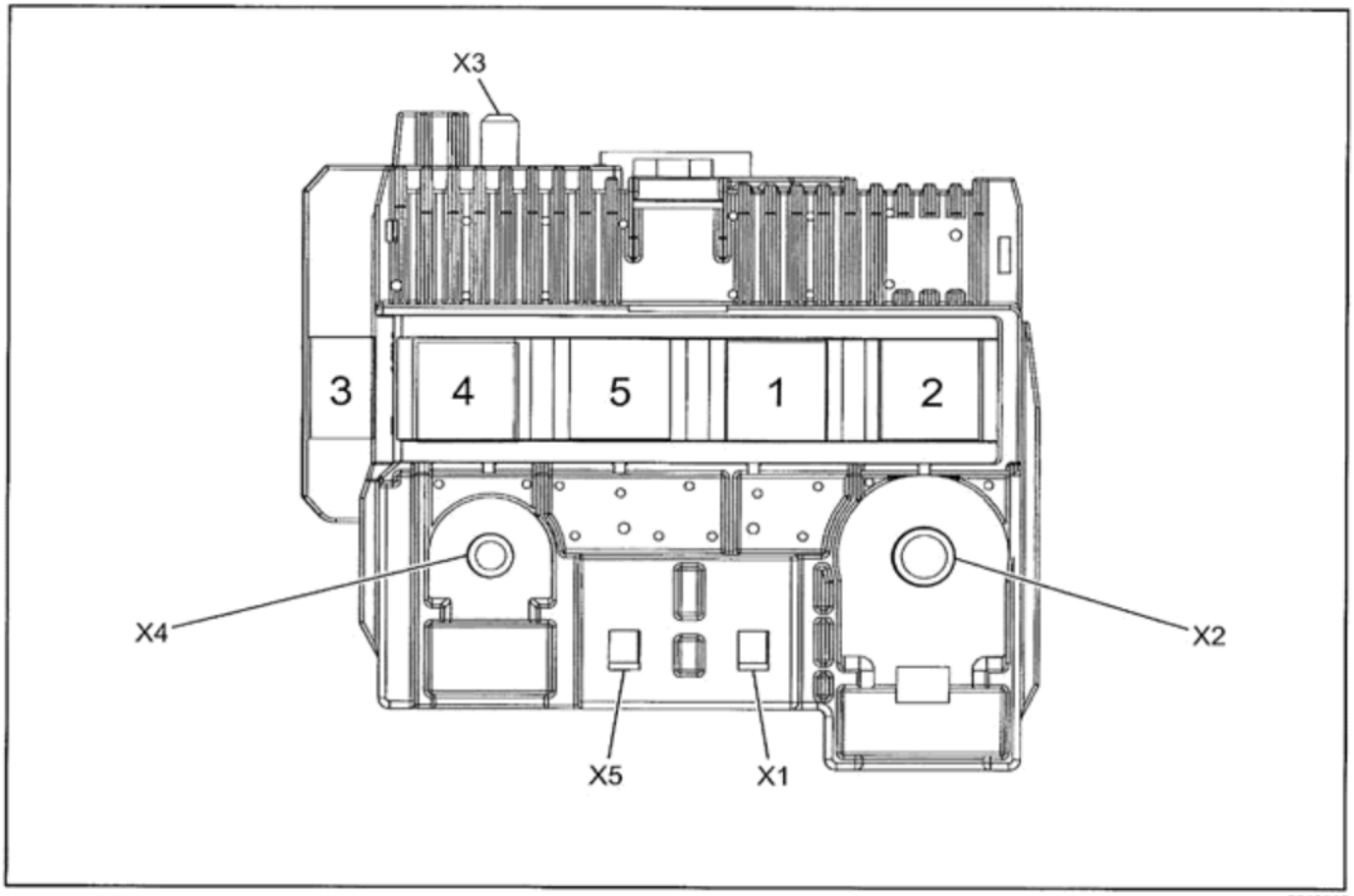
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not Available	No Tool Required	No Tool Required

X50A Fuse Block - Underhood X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	16	RD/WH	4042	Battery Positive Voltage	I	—

X50D Fuse Block - Battery, Top View

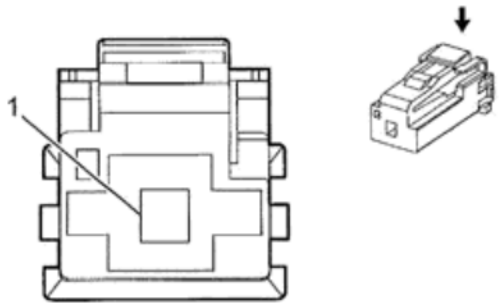


2918265

X50D Fuse Block - Battery Usage

No.	Device Name	Device Assigned Name	Rating	Description
1	—	F1BA	80A	K43 Power Steering Control Module
2	—	F2BA	400A (-LUV) 430A (LUV)	G13 Generator and M64 Starter Motor
3	—	F3BA	80A (-LUV) 100A (LUV)	X51A Fuse Block – Instrument Panel
4	—	F4BA	150A	X50A Fuse Block – Underhood
5	—	F5BA	80A	Not Used

X50D Fuse Block - Battery X1



2537281

Connector Part Information

Harness Type: Body
OEM Connector: MG613689-5
Service Connector: SEE NOTE
Description: 1 F 375 Series BK

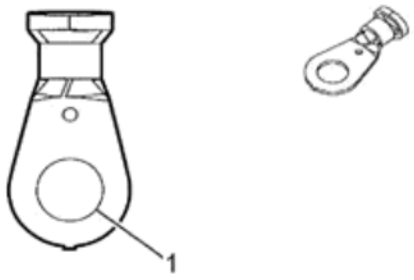
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

X50D Fuse Block - Battery X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	8	RD/L-GN	40	Battery Positive Voltage	I	-

X50D Fuse Block - Battery X2



2791579

Connector Part Information

Harness Type: Positive Battery Cable
OEM Connector: CBR68-012
Service Connector: Service by Harness – See Part Catalog
Description: 1-Way Ring Terminal

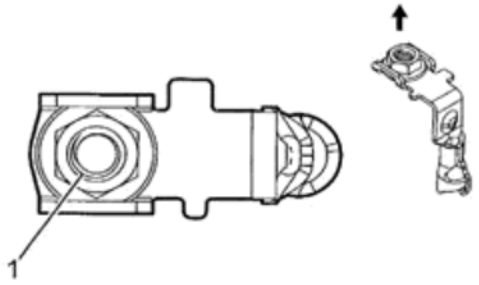
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not Available	No Tool Required	No Tool Required

X50D Fuse Block - Battery X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	20	RD/YE	2	Battery Positive Voltage	I	—

X50D Fuse Block - Battery X3



2789808

Connector Part Information

Harness Type: Body
OEM Connector: 13278092
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way Ring Terminal

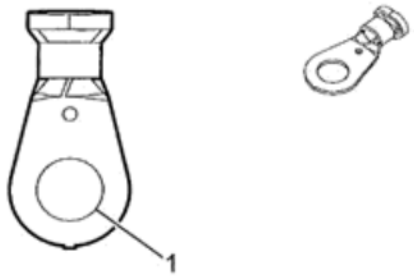
Terminal Part Information

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

X50D Fuse Block - Battery X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	10	RD/L-BU	42	Battery Positive Voltage	I	-

X50D Fuse Block - Battery X4



2791579

Connector Part Information

Harness Type: Positive Battery Cable
OEM Connector: CBR68-012
Service Connector: Service by Harness – See Part Catalog
Description: 1-Way Ring Terminal

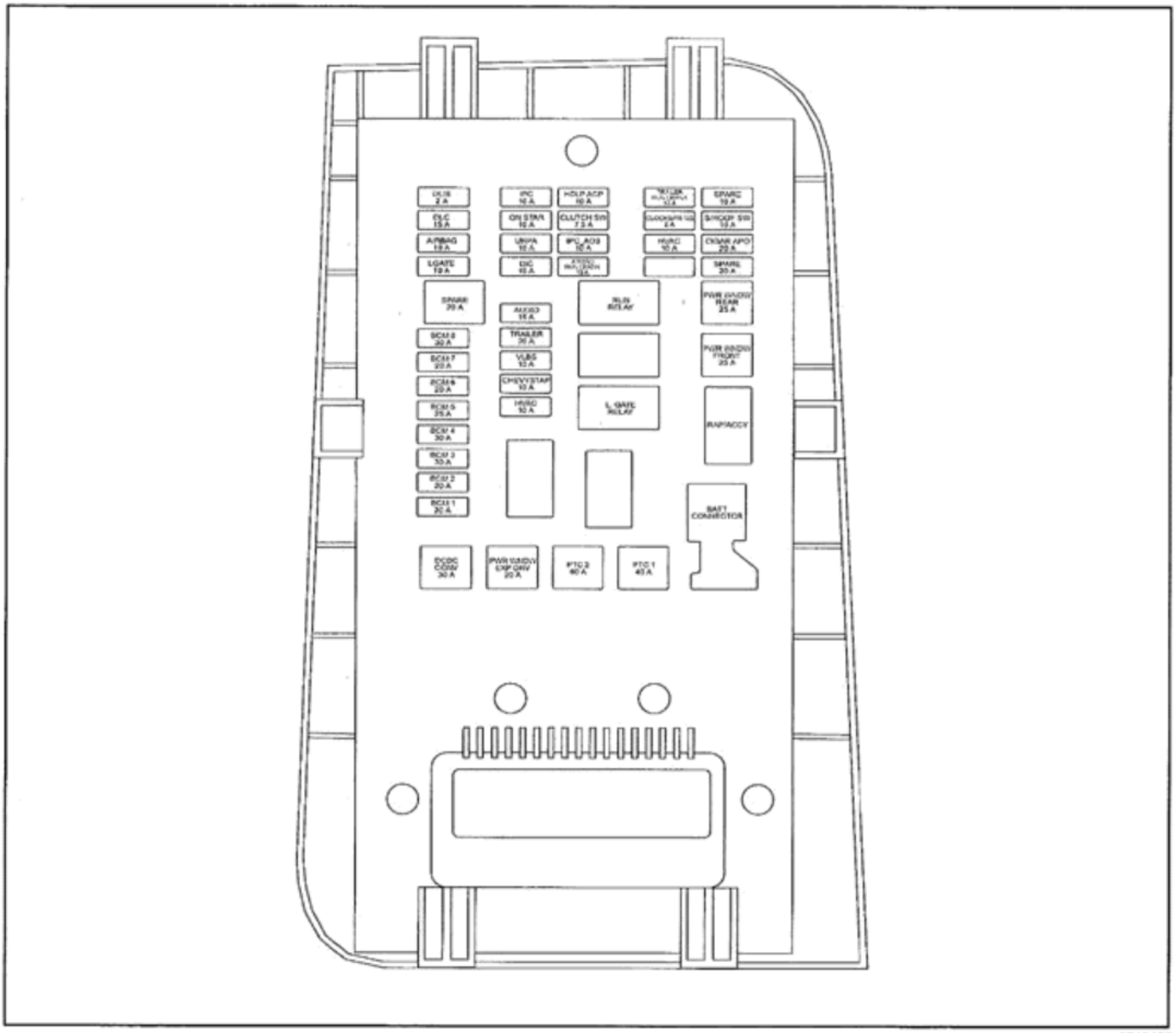
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not Available	No Tool Required	No Tool Required

X50D Fuse Block - Battery X4

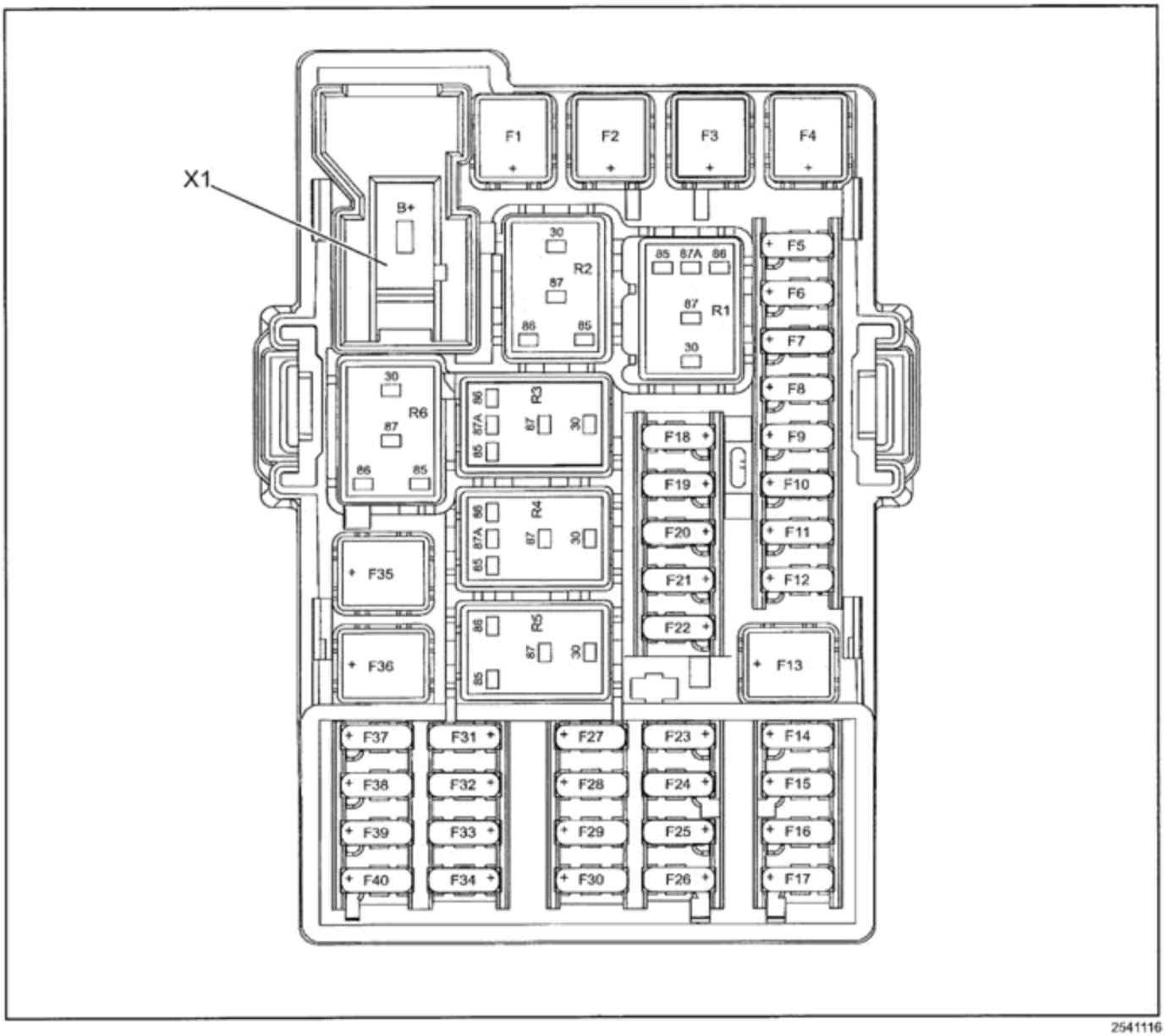
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	16	RD/WH	4042	Battery Positive Voltage	I	—

X51A Fuse Block - Instrument Panel Label



2713457

X51A Fuse Block - Instrument Panel, Top View



2541116

X51A Fuse Block - Instrument Panel Usage

No.	Device Label Name	Device Assigned Name	Rating	Description
F1	PTC1 Fuse	F1DA	40 A	Not Used
F2	PTC2 Fuse	F2DA	60 A	Not Used
F3	PWR WNDW EXP DRV Fuse	F3DA	20 A	M74D Window Motor – Driver
F4	DCDC CONV Fuse	F4DA	30 A	Not Used
F5	BCM1 Fuse	F5DA	20 A	K9 Body Control Module
F6	BCM2 Fuse	F6DA	20 A	K9 Body Control Module
F7	BCM3 Fuse	F7DA	30 A	K9 Body Control Module
F8	BCM4 Fuse	F8DA	30 A	K9 Body Control Module
F9	BCM5 Fuse	F9DA	25 A	K9 Body Control Module
F10	BCM6 Fuse	F10DA	20 A	K9 Body Control Module
F11	BCM7 Fuse	F11DA	20 A	K9 Body Control Module

X51A Fuse Block - Instrument Panel Usage (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
F12	BCM8 Fuse	F12DA	30 A	K9 Body Control Module
F13	SPARE Fuse	F13DA	20 A	Not Used
F14	L/GATE Fuse	F14DA	10 A	KR95A Liftgate Release Relay (Hatchback), KR95B Rear Compartment Lid Release Relay (Notchback)
F15	AIRBAG Fuse	F15DA	10 A	K36 Inflatable Restraint Sensing and Diagnostic Module
F16	DLC Fuse	F16DA	15 A	X84 Data Link Connector
F17	DLIS Fuse	F17DA	2 A	S39 Ignition Switch
F18	HVAC Fuse	F18DA	10 A	K33 HVAC Control Module
F19	CHEVYSTAR Fuse	F19DA	4 A	Not Used
F20	VLBS Fuse	F20DA	10 A	Not Used
F21	TRAILER Fuse	F21DA	20 A	Not Used
F22	AUDIO Fuse	F22DA	15 A	A11 Radio
F23	DIC Fuse	F23DA	10 A	Not Used
F24	URPA Fuse	F24DA	10 A	Not Used
F25	ONSTAR Fuse	F25DA	10 A	K73 Telematics Communication Interface Control Module
F26	IPC Fuse	F26DA	10 A	P16 Instrument Cluster
F27	AIRBAG RUN CRANK Fuse	F27DA	10 A	K36 Inflatable Restraint Sensing and Diagnostic Module
F28	IPC_AOS Fuse	F28DA	10 A	P14 Passenger Air Bag Disable Indicator, P16 Instrument Cluster
F29	CLUTCH SW Fuse	F29DA	7.5 A	Not Used
F30	HDLP ALC Fuse	F30DA	10 A	S30 Headlamp Switch
F31	SPARE Fuse	F31DA	10A	Not Used
F32	HVAC Fuse	F32DA	10 A	K33 HVAC Control Module
F33	CLOCKSPRING Fuse	F33DA	2 A	S70L Steering Wheel Controls Switch - Left (K34), S70R Steering Wheel Controls Switch - Right, and X85 Steering Wheel Air Bag Coil
F34	TRAILER RUNCRANK Fuse	F34DA	10 A	Not Used
F35	PWR WNDW FRONT Fuse	F35DA	25 A	S79D Window Switch – Driver, S79P Window Switch – Passenger
F36	PWR WNDW REAR Fuse	F36DA	25 A	S79D Window Switch – Driver (A33)
F37	SPARE Fuse	F37DA	20 A	Not Used
F38	CIGAR APO Fuse	F38DA	20 A	E32 Cigarette Lighter Receptacle
F39	S/ROOF SW Fuse	F39DA	10 A	K61 Sunroof Control Module (CF5), and S72 Sunroof Switch (CF5)
F40	SPARE Fuse	F40DA	10 A	Not Used
Relays				
R1	—	—	—	Not Used
R2	—	—	—	Not Used
R3	L/GATE RELAY	KR95A Liftgate Release Relay KR95B Rear Compartment Lid Release Relay	—	M30 Liftgate Latch (Hatchback) M40 Rear Compartment Lid Latch (Notchback)
R4	—	—	—	Not Used

X51A Fuse Block - Instrument Panel Usage (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
R5	RUN RELAY	KR32E Blower Motor Relay	—	F32DA Fuse, and M8 Blower Motor
R6	RAP/ACCY	KR76 Retained Accessory Power Relay	—	F35DA, F36DA, F37DA, F38DA, F39DA, and F40DA Fuses

X51A Fuse Block - Instrument Panel, Wire Entry

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 2B128010F
Service Connector: Service by Harness Assembly – See Parts Catalog
Description: 75-Way F

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not Available	J-35616-35 (VT)	J-38125-36
II	Not Available	J-35616-35 (VT)	J-38125-36
III	Not Available	J-35616-35 (VT)	J-38125-36
IV	Not Available	J-35616-42 (RD)	J-38125-36

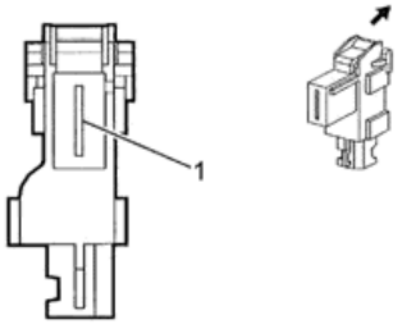
X51A Fuse Block - Instrument Panel, Wire Entry

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
F1Y–F2Y	—	—	—	Not Occupied	—	—
F3Y	1	L-GN/VT	7628	Power Window Motor Left Front Express Control	IV	—
F4Y	—	—	—	Not Occupied	—	—
F5Y	1	RD/WH	2040	Battery Positive Voltage	-	—
F6Y	1	RD/GY	2140	Battery Positive Voltage	-	—
F7Y	2.5	RD/BN	2240	Battery Positive Voltage	-	—
F8Y	2.5	RD/YE	2340	Battery Positive Voltage	-	—
F9Y	1.5	RD/L-GN	2440	Battery Positive Voltage	-	—
F10Y	1	RD/L-BU	2540	Battery Positive Voltage	-	—
F11Y	1	RD/VT	2640	Battery Positive Voltage	-	—
F12Y	2.5	RD/WH	2740	Battery Positive Voltage	-	—
F13Y	—	—	—	Not Occupied	—	—
F14Y	0.5	L-BU/WH	6128	Rear Closure Unlatch Motor Unlatch Control	-	—
F15Y	0.5	RD/GY	2840	Battery Positive Voltage	-	—
F16Y	0.5	RD/YE	3040	Battery Positive Voltage	-	—
F17Y	0.35	RD/VT	3340	Battery Positive Voltage	III	—
F18Y	0.5	RD/L-GN	3140	Battery Positive Voltage	II	—
F19Y	—	—	—	Not Occupied	—	—
F20Y	—	—	—	Not Occupied	—	—
F21Y	2.5	RD/VT	340	Battery Positive Voltage	I	—
F22Y	1.5	RD/L-BU	3240	Battery Positive Voltage	I	—

X51A Fuse Block - Instrument Panel, Wire Entry (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
F23Y	—	—	—	Not Occupied	—	—
F24Y	0.5	RD/L-BU	4540	Battery Positive Voltage	-	—
F25Y	0.5	RD/WH	3440	Battery Positive Voltage	-	UE1
F26Y	0.5	RD/BN	2940	Battery Positive Voltage	-	—
F27X	2.5	VT/WH	239	Run/Crank Ignition 1 Voltage	I	—
F27Y	0.5	VT/WH	639	Run/Crank Ignition 1 Voltage	II	—
F28X	2.5	VT/WH	239	Run/Crank Ignition 1 Voltage	-	—
F28Y	0.35 0.35	VT/BK VT/L-GN	739 839	Run/Crank Ignition 1 Voltage Run/Crank Ignition 1 Voltage	I	— —
F29X	2.5	VT/WH	239	Run/Crank Ignition 1 Voltage	-	M26/MZ4/MR5
F29Y	0.5	RD/L-GN	539	Run/Crank Ignition 1 Voltage	II	M26/MZ4/MR5
F30X	2.5	VT/WH	239	Run/Crank Ignition 1 Voltage	I	—
F30Y	0.5	VT/L-GN	839	Run/Crank Ignition 1 Voltage	-	—
F31X	—	—	—	Not Occupied	—	—
F31Y	—	—	—	Not Occupied	—	—
F32X	2.5	RD/L-BU	302	Battery Positive Voltage	I	—
F32Y	0.5	VT/BN	741	Run Ignition 3 Voltage	II	—
F33X	0.35	YE	6817	LED Backlight Dimming Control	III	—
F33Y	0.35	BN	6136	Supply Voltage	III	—
F34X	2.5	VT/WH	239	Run/Crank Ignition 1 Voltage	I	—
F34Y	0.75	VT/WH	1139	Run/Crank Ignition 1 Voltage	II	—
F35Y	2.5	VT/YE	443	Accessory Voltage	IV	—
F36Y	2.5	VT/YE	543	Accessory Voltage	IV	—
F37Y	—	—	—	Not Occupied	—	—
F38Y	1	VT/YE	243	Accessory Voltage	I	—
F39Y	0.35	VT/BN	641	Run Ignition 3 Voltage	III	—
F40Y	—	—	—	Not Occupied	—	—
R1_x	—	—	—	Not Occupied	—	—
R2_x	—	—	—	Not Occupied	—	—
R3_1	0.35	L-GN/BN	5706	Endgate Latch Relay Supply Voltage	-	—
R3_2	0.35	YE	5704	Endgate Latch Relay Coil Control	-	—
R3_3	0.5	L-BU/WH	6128	Rear Closure Unlatch Motor Unlatch Control	-	—
R3_4	—	—	—	Not Occupied	—	—
R3 5	0.5	L-BU/WH	6128	Rear Closure Unlatch Motor Unlatch Control	IV	—
R4_x	—	—	—	Not Occupied	—	—
R5_1	0.35	BK	1250	Ground	-	—
R5_2	0.35	BN/VT	5486	Run Relay Coil Control	-	—
R5_3	4.0	RD/YE	740	Battery Positive Voltage	-	—
R5_4	—	—	—	Not Occupied	—	—
R5_5	3	RD/L-BU	302	Battery Positive Voltage	-	—
R6_1	0.35	GY/VT	755	RAP Relay Coil Control	-	—
R6_2	0.35	BK	1250	Ground	-	—
BUS3	—	—	—	Not Occupied	—	—

X51A Fuse Block - Instrument Panel X1



2537257

Connector Part Information

Harness Type: Body
OEM Connector: 21083000001
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way 12.0 Series (BK)

Terminal Part Information

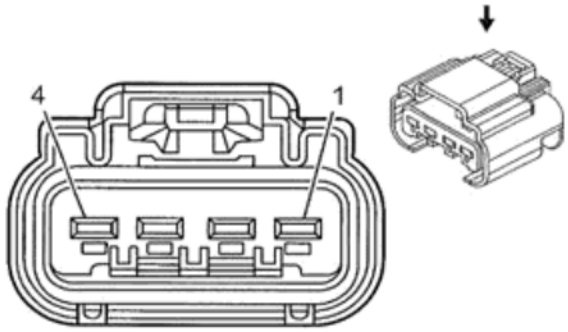
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

X51A Fuse Block - Instrument Panel X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	8	RD/L-BU	42	Battery Positive Voltage	I	—

Component Connector End Views

A7 Fuel Pump and Level Sensor Assembly



1962075

Connector Part Information

Harness Type: Fuel Tank
OEM Connector: 13527865
Service Connector: 19257373
Description: 4-Way F GT 280 Series, Sealed (NA)

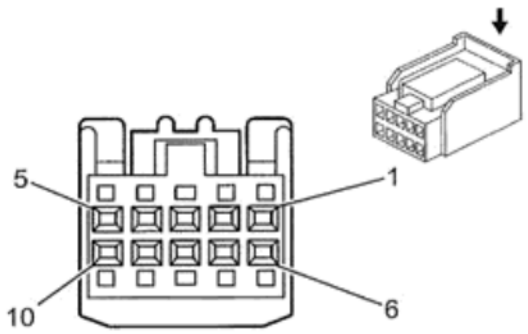
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575392	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
II	13575406	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available

A7 Fuel Pump and Level Sensor Assembly

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GY	120	Fuel Pump Supply Voltage	I	—
2	1.5	BK	1650	Ground	I	—
3	0.35	BK/L-GN	6281	Low Reference	II	—
4	0.35	L-BU/VT	1589	Primary Fuel Level Sensor Signal	II	—

A10 Inside Rearview Mirror (UE1)



2180211

Connector Part Information

Harness Type: Headliner
OEM Connector: AIT2PB-10A-2AK
Service Connector: 19177676
Description: 10-Way F Kaizen 0.64 Series (BK)

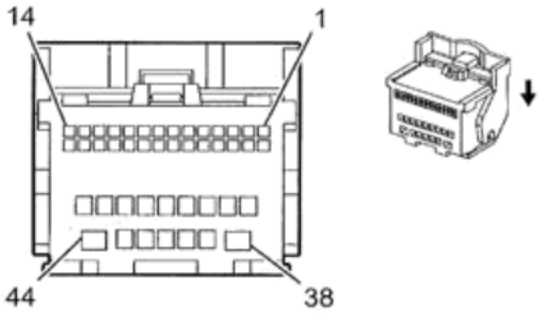
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

A10 Inside Rearview Mirror (UE1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1–2	-	-	-	Not Occupied	-	-
3	0.35	L-GN/WH	2514	Keypad Signal	I	—
4	0.35	L-GN/BK	2515	Keypad Supply Voltage	I	—
5	0.5	BK	550	Ground	I	—
6	0.35	YE/VT	2516	Keypad Green LED	I	—
7	0.35	BN/WH	2517	Keypad Red LED	I	—
8–10	-	-	-	Not Occupied	-	-

A11 Radio X1



1974986

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: RADPB-44-1AK
Service Connector: 88988902
Description: 44-Way F GT 64 Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
II	13575735	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available
III	13575753	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
IV	13575754	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available

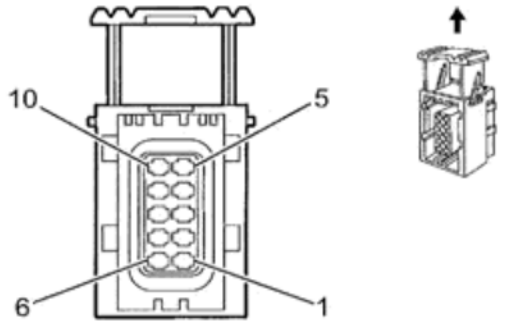
A11 Radio X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1–3	—	—	—	Not Occupied	—	—
4	0.5	BK/GY	654	Low Reference	I	UH7 Without UE1
5	—	—	—	Not Occupied	—	—
6	0.35	BK/YE	659	Cellular Telephone Voice Low Reference	I	UE1
7–9	—	—	—	Not Occupied	—	—
10	0.35	L-GN	5841	Right Auxiliary Audio Signal (2)	I	UH7
11	0.35	L-BU	2060	Auxiliary Detection Signal	I	UH7
12–16	—	—	—	Not Occupied	—	—
17	0.5	BK	2450	Ground	I	UH7
18	0.5	GY/YE	655	Cellular Telephone Microphone Signal	I	UH7 Without UE1
19	—	—	—	Not Occupied	—	—
20	0.35	YE	658	Cellular Telephone Voice Signal	I	UE1
21	0.35	YE	2056	Auxiliary Video High Signal	-	UF7
22	0.5	BK	1450	Ground	-	UF7

A11 Radio X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
23	0.35	BN	3374	Auxiliary Audio Common Signal (2)	I	UH7
24	0.35	GY	5839	Left Auxiliary Audio Signal (2)	I	UH7
25–27	—	—	—	Not Occupied	—	—
28	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
29–30	—	—	—	Not Occupied	—	—
31	0.75	YE/BK	117	Right Front Speaker Signal (-) (1)	II	—
32	0.75	BN/L-BU	118	Left Front Speaker Signal (-) (1)	II	—
33	0.75	L-BU/BK	115	Right Rear Speaker Signal (-)	II	UW6
34	0.75	L-GN/BK	116	Left Rear Speaker Signal (-)	II	UW6
35–37	—	—	—	Not Occupied	—	—
38	1	BK	1350	Ground	III	—
39	0.75	YE	200	Right Front Speaker (+) (1)	II	—
40	0.75	L-BU	201	Left Front Speaker (+) (1)	II	—
41	0.75	WH	46	Right Rear Speaker (+)	II	UW6
42	0.75	L-GN	199	Left Rear Speaker (+)	II	UW6
43	—	—	—	Not Occupied	—	—
44	1.5	RD/L-BU	3240	Battery Positive Voltage	IV	—

A23D Door Latch Assembly - Driver



845631

Connector Part Information

Harness Type: Driver Door
OEM Connector: 6-1355688-1
Service Connector: 88952463
Description: 10-Way F (BK)

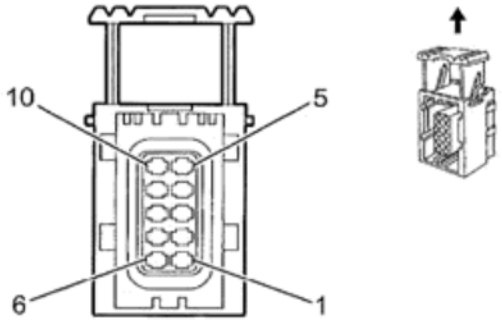
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575366	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	Service by Harness – See Part Catalog	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

A23D Door Latch Assembly - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	-	-	-	Not Occupied	-	-
2	0.5	BN/YE	294	Door Lock Actuator Unlock Control	I	—
3	0.5	GY	5911	Door Lock Actuator Lock Control 2	I	—
4	0.35	VT/GY	5965	Driver Door Lock Status Indicator Supply Voltage	II	—
5	-	-	-	Not Occupied	-	-
6	0.35 0.5	GY GY	745 745	Left Front Door Ajar Switch Signal Left Front Door Ajar Switch Signal	II	AXG Without AXG
7	-	-	-	Not Occupied	-	-
8	0.5	BK	550	Ground	I	—
9–10	-	-	-	Not Occupied	-	-

A23LR Door Latch Assembly - Left Rear



845631

Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 6-1355688-1
Service Connector: 88952463
Description: 10-Way F (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575366	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	Service by Harness – See Part Catalog	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

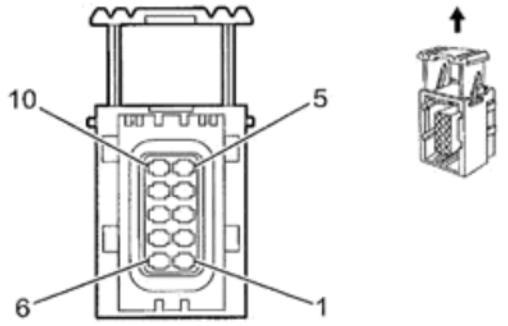
A23LR Door Latch Assembly - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN	5910	Door Double Lock Actuator Lock Control	I	UTK
2	0.5	BN/YE	294	Door Lock Actuator Unlock Control	I	—
3	0.5	GY	295	Door Lock Actuator Lock Control	I	—

A23LR Door Latch Assembly - Left Rear (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
4	0.5	BN/YE	294	Door Lock Actuator Unlock Control	I	—
5	-	-	-	Not Occupied	-	-
6	0.35	GY	747	Left Rear Door Ajar Switch Signal	II	—
7	0.5	WH/L-BU	3266	Child Security Lock Motor Unlock Control	I	—
8	0.5	BK	1050	Ground	I	—
9	0..35	BN/WH	3269	Child Security Lock Motor Status Signal Left Rear	II	—
10	-	-	-	Not Occupied	-	-

A23P Door Latch Assembly - Passenger



845631

Connector Part Information

Harness Type: Passenger Door
OEM Connector: 6-1355688-1
Service Connector: 88952463
Description: 10-Way F (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	13575366	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

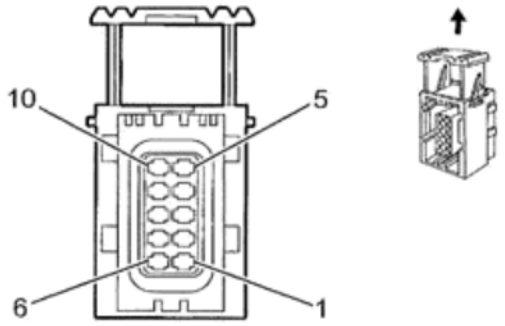
A23P Door Latch Assembly - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	746	Right Front Door Ajar Switch Signal	I	—
2	-	-	-	Not Occupied	-	-
3	0.5	BK	650	Ground	II	—
4–6	-	-	-	Not Occupied	-	-

A23P Door Latch Assembly - Passenger (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
7	0.5	BN/YE	294	Door Lock Actuator Unlock Control	II	—
8	0.5	GY	295	Door Lock Actuator Lock Control	II	—
9–10	-	-	-	Not Occupied	-	-

A23RR Door Latch Assembly - Right Rear



845631

Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 6-1355688-1
Service Connector: 88952463
Description: 10-Way F (BK)

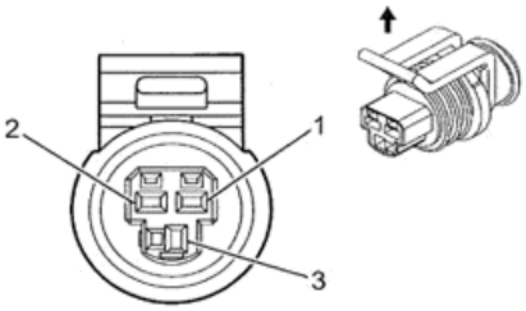
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	13575366	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

A23RR Door Latch Assembly - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	748	Right Rear Door Ajar Switch Signal	I	—
2	0.5	WH/L-BU	3266	Child Security Lock Motor Unlock Control	II	—
3	0.5	BK	1650	Ground	II	—
4	0.35	GY/BK	3268	Child Security Lock Motor Status Signal Right Rear	I	—
5	-	-	-	Not Occupied	-	-
6	0.5	BN	5910	Door Double Lock Actuator Lock Control	II	UTK
7	0.5	BN/YE	294	Door Lock Actuator Unlock Control	II	—
8	0.5	GY	295	Door Lock Actuator Lock Control	II	—
9	0.5	BN/YE	294	Door Lock Actuator Unlock Control	II	—
10	-	-	-	Not Occupied	-	-

B1 A/C Refrigerant Pressure Sensor (C60)



1567085

Connector Part Information

Harness Type: Engine
OEM Connector: 15397275
Service Connector: 88988301
Description: 3-Way F 150 Series, Sealed (BK)

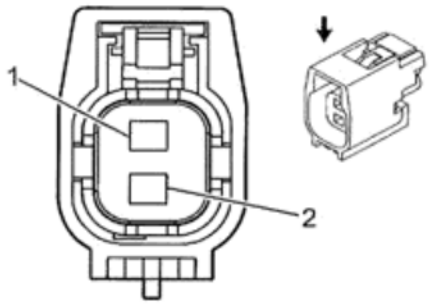
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575433	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

B1 A/C Refrigerant Pressure Sensor (C60)

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

B5LF Wheel Speed Sensor - Left Front



2152684

Connector Part Information

Harness Type: Body
OEM Connector: 7287-0973-30
Service Connector: 19178097
Description: 2-Way F GT 1.5 Series Sealed (BK)

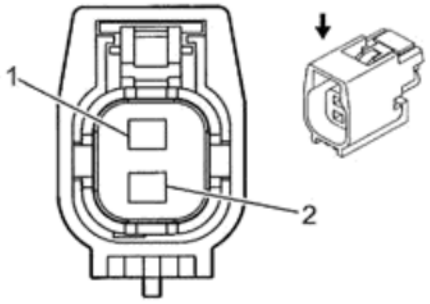
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 19178097	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

B5LF Wheel Speed Sensor - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	830	Wheel Speed Sensor Signal Left Front	I	—
2	0.5	BK/GY	873	Low Reference	I	—

B5LR Wheel Speed Sensor - Left Rear



2152684

Connector Part Information

Harness Type: Body
OEM Connector: 7287-0973-30
Service Connector: 19178097
Description: 2-Way F GT 1.5 Series Sealed (BK)

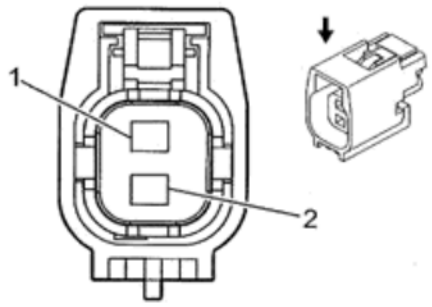
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 19178097	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

B5LR Wheel Speed Sensor - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-BU	884	Wheel Speed Sensor Signal Left Rear	I	—
2	0.5	BK/L-BU	885	Low Reference	I	—

B5RF Wheel Speed Sensor - Right Front



2152684

Connector Part Information

Harness Type: Body
OEM Connector: 7287-0973-30
Service Connector: 19178097
Description: 2-Way F GT 1.5 Series Sealed (BK)

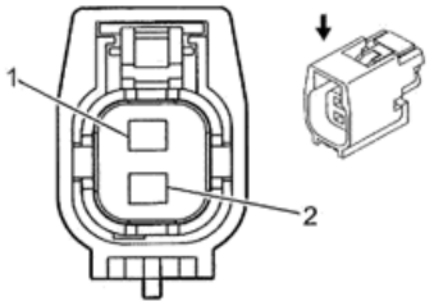
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 19178097	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

B5RF Wheel Speed Sensor - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	872	Wheel Speed Sensor Signal Right Front	I	—
2	0.5	BK/YE	833	Low Reference	I	—

B5RR Wheel Speed Sensor - Right Rear



2152684

Connector Part Information

Harness Type: Body
OEM Connector: 7287-0973-30
Service Connector: 19178097
Description: 2-Way F GT 1.5 Series Sealed (BK)

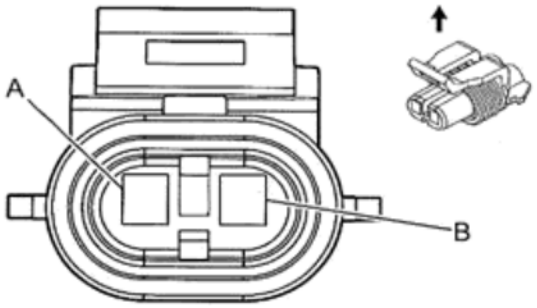
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 19178097	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

B5RR Wheel Speed Sensor - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT	882	Wheel Speed Sensor Signal Right Rear	I	—
2	0.5	BK/VT	883	Low Reference	I	—

B9 Ambient Air Temperature Sensor



684793

Connector Part Information

Harness Type: Air Temperature Sensor Jumper
OEM Connector: 13543521
Service Connector: 12101856
Description: 2-Way F Metri-Pack 150 Series, Sealed (BK)

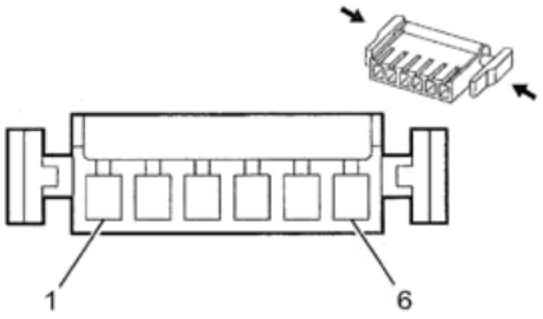
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575419	J-35616-14 (GN)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

B9 Ambient Air Temperature Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-BU/GY	636	Outside Ambient Air Temperature Sensor Signal	I	—
B	0.5	BK/L-BU	61	Outside Ambient Temperature Sensor Low Reference	I	—

B10 Ambient Light Sensor



2173602

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15344190
Service Connector: 13576539
Description: 6-Way F 0.64 Micro Quadlok Series (BK)

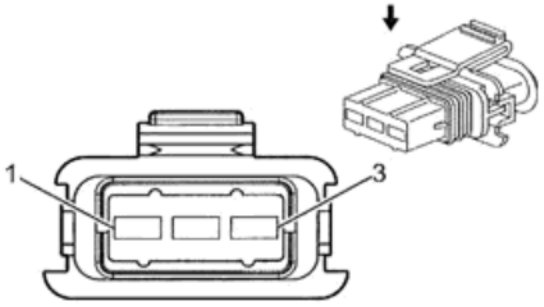
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575782	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

B10 Ambient Light Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	728	Security Indicator Control	I	—
2–4	-	-	-	Not Occupied	-	-
5	0.35	WH/L-BU	278	Ambient Light Sensor Signal	I	—
6	0.35	BK	1150	Ground	I	—

B14A Transmission Output Shaft Speed Sensor (M26)



2335307

Connector Part Information

Harness Type: Engine
OEM Connector: 90508602
Service Connector: 13355796
Description: 3-Way F 2.8 Junior Power Timer Series, Sealed (BK)

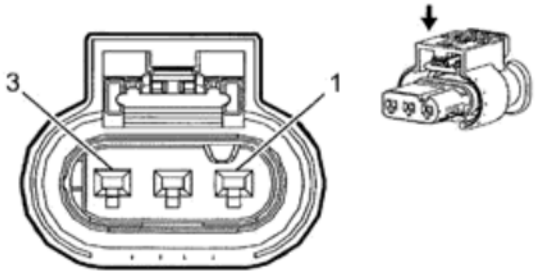
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

B14A Transmission Output Shaft Speed Sensor (M26)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/YE	401	Vehicle Speed Sensor Low Reference	I	-
2	0.5	YE	400	Vehicle Speed Sensor Signal	I	-
3	0.5	YE/BN	3604	Transmission Output Speed Sensor Supply	I	-

B14A Transmission Output Shaft Speed Sensor (MR5/MZ4)



2394093

Connector Part Information

Harness Type: Engine
OEM Connector: 55564249
Service Connector: 13574937
Description: 3-Way F MLK 1.2 Series, Sealed (BK)

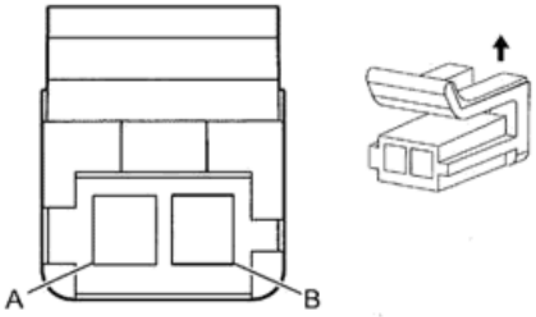
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-3 (GY)	Not Available	Not Available	Not Available	Not Available	Not Available

B14A Transmission Output Shaft Speed Sensor (MR5/MZ4)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BN	3604	Transmission Output Speed Sensor Supply	I	-
2	0.5	BK/YE	401	Vehicle Speed Sensor Low Reference	I	-
3	0.5	YE	400	Vehicle Speed Sensor Signal	I	-

B14A Transmission Output Shaft Speed Sensor (MH8 or MH9)



168428

Connector Part Information

Harness Type: Internal Transmission
OEM connector: 15473845
Service connector: Service by Harness – See Part Catalog
Description: 2-Way F Metri-Pack 150.2 P2S Series (BU)

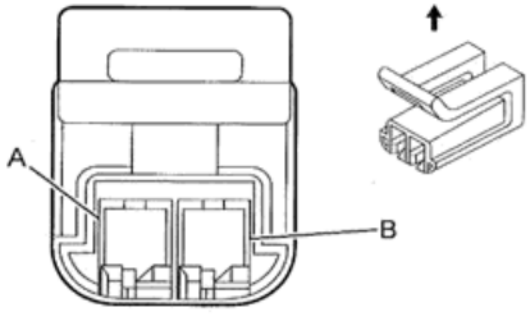
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

B14A Transmission Output Shaft Speed Sensor (MH8 or MH9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BKYE	401	Low Reference	I	—
B	0.5	YE	400	Vehicle Speed Sensor Signal	I	—

B14C Transmission Input Shaft Speed Sensor



1910666

Connector Part Information

Harness Type: Internal Transmission
OEM connector: 15473843
Service connector: Service by Harness – See Part Catalog
Description: 2-Way F Metri-Pack 150.2 Series (CR)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

B14C Transmission Input Shaft Speed Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BK/YE	1231	Transmission Speed Sensor Low Reference	I	—
B	0.5	YE/VT	1230	Transmission Speed Sensor Signal	I	—

B15 Transmission Internal Mode Switch

Connector Part Information

Harness Type: Internal Transmission
OEM Connector: Not Available
Service Connector: Service by Harness – See Part Catalog
Description: 6-way

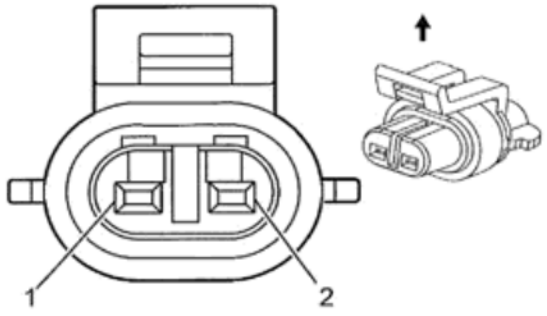
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

B15 Transmission Internal Mode Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	GN	275	Park Neutral Position Switch Park Signal	I	—
B	0.5	BN/WH	771	Transmission Position Switch Bit 1 Signal	I	—
C	0.5	YE	772	Transmission Position Switch Bit 2 Signal	I	—
D	0.5	GY	773	Transmission Position Switch Bit 3 Signal	I	—
E	0.5	WH	776	Transmission Position Switch Parity Bit Signal	I	—
F	0.5	BK	50	Ground	I	—

B16 Backup Lamp Switch (M26/MR5/MZ4)



1243632

Connector Part Information

Harness Type: Engine
OEM Connector: 15336195
Service Connector: 88988136
Description: 2-Way F GT 150 Series, Sealed (BK)

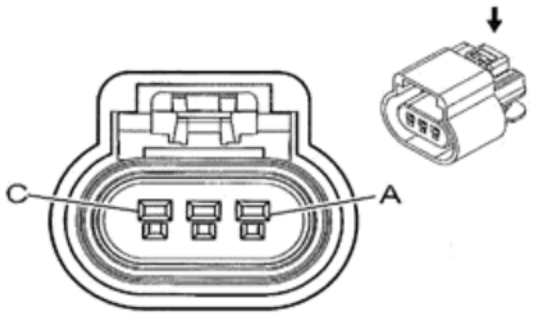
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 88988136	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

B16 Backup Lamp Switch (M26/MR5/MZ4)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/WH	5007	Reverse Switch Signal	I	—
2	0.5	BK	1750	Ground	I	—

B18 Battery Current Sensor



646415

Connector Part Information

Harness Type: Body
OEM Connector: 15326808
Service Connector: 13580871
Description: 3-Way F GT 150 Series, Sealed (BK)

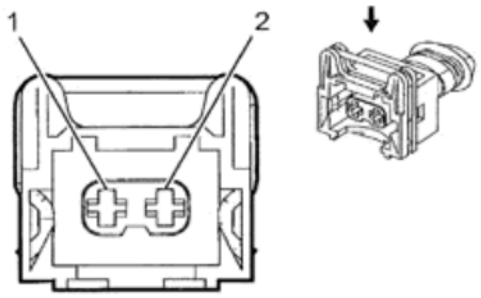
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

B18 Battery Current Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-BU/VT	5076	Current Sensor Supply Voltage	I	—
B	0.5	BK/VT	5077	Low Reference	I	—
C	0.5	WH/YE	5075	Current Sensor Signal	I	—

B19C Brake Booster Vacuum Switch



2220403

Connector Part Information

Harness Type: Engine
OEM Connector: 963344-1
Service Connector: 13314081
Description: 2-Way F 2.8 Junior Power Timer Series (BN)

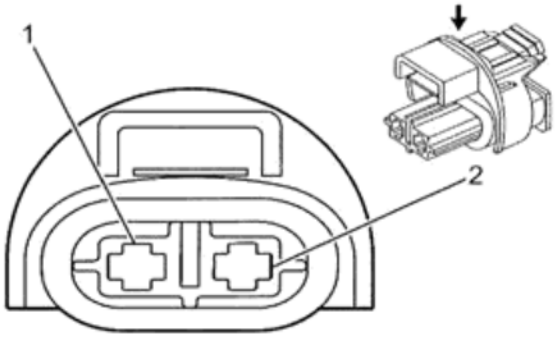
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 13314081	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available

B19C Brake Booster Vacuum Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/GY	139	Run/Crank Ignition 1 Voltage	I	—
2	0.5	BN	6305	Brake Vacuum Switch Signal	I	—

B20 Brake Fluid Level Switch



2039635

Connector Part Information

Harness Type: Body
OEM Connector: 1452680-2
Service Connector: 13314082
Description: 2-Way F 1.2 Timer Series, Sealed (BK)

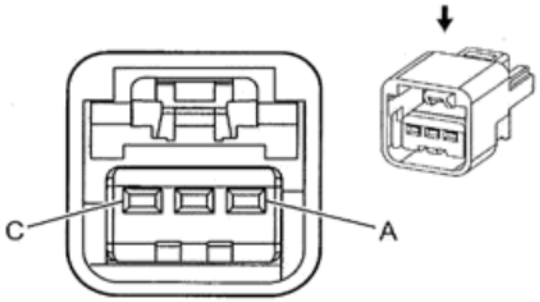
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13579760	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

B20 Brake Fluid Level Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/GY	333	Brake Fluid Level Sensor Signal	I	—
2	0.5	BK	550	Ground	I	—

B22 Brake Pedal Position Sensor (M26/MR5/MZ4)



1243663

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15332132
Service Connector: 88953364
Description: 3-Way F GT 150 Series (BK)

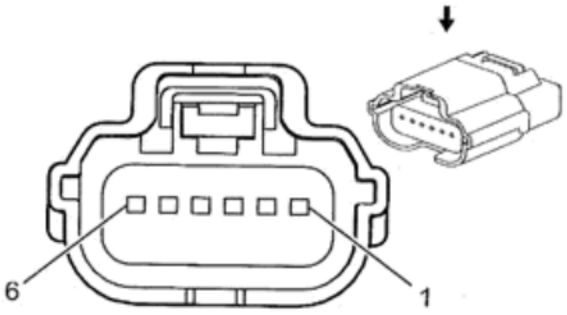
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575735	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

B22 Brake Pedal Position Sensor (M26/MR5/MZ4)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	BK/BN	5360	Low Reference	I	—
B	0.35	L-BU/YE	5361	Brake Apply Sensor Signal	I	—
C	0.35	WH	5359	Brake Apply Sensor Supply Voltage	I	—

B22 Brake Pedal Position Sensor (MH8 or MH9)



1974974

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13584064
Service Connector: 13577043
Description: 6-Way F 64 Series, Sealed (BK)

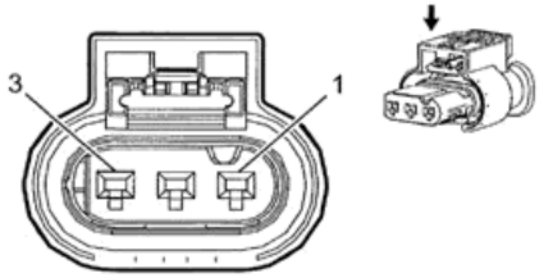
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

B22 Brake Pedal Position Sensor (MH8 or MH9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	5359	Brake Apply Sensor Supply Voltage	I	—
2	0.5	BK/BN	5360	Low Reference	I	—
3	0.5	L-BU/YE	5361	Brake Apply Sensor Signal	I	—
4	0.5	L-BU/YE	5380	Brake Position Sensor Signal	I	—
5	0.5	WH	5359	Brake Position Sensor 5 Volt Reference	I	—
6	0.5	BK/BN	5360	Low Reference	I	—

B23E Camshaft Position Sensor - Exhaust



2394093

Connector Part Information

Harness Type: Engine
OEM Connector: 13276381
Service Connector: 13337975
Description: 3-Way F MLK 1.2 Series, Sealed (BK)

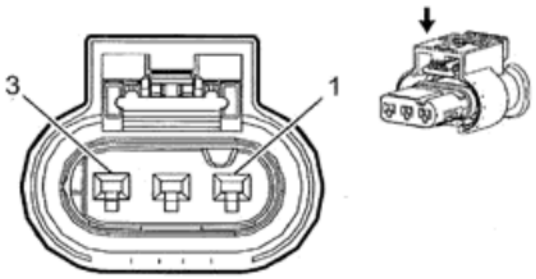
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-3 (GY)	Not Available	Not Available	Not Available	Not Available	Not Available

B23E Camshaft Position Sensor - Exhaust

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/YE	6457	Camshaft CAM X Supply Voltage	I	—
2	0.5	GY/BK	6267	Camshaft CAM X Ground	I	—
3	0.5	VT/BK	6264	Camshaft CAM X Signal	I	—

B23F Camshaft Position Sensor - Intake



2394093

Connector Part Information

Harness Type: Engine
OEM Connector: 13276381
Service Connector: 13337975
Description: 3 F MLK 1.2 Series, Sealed BK

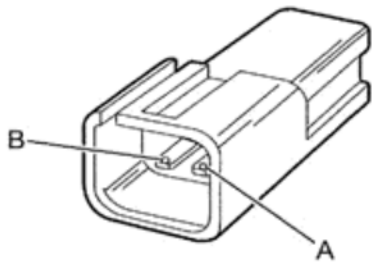
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-3 (GY)	Not Available	Not Available	Not Available	Not Available	Not Available

B23F Camshaft Position Sensor - Intake

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/L-BU	6259	Camshaft CAM W Supply Voltage	I	—
2	0.5	L-GN/BK	6266	Camshaft CAM W Ground	I	—
3	0.5	YE/VT	6265	Camshaft CAM W Signal	I	—

B24 Cellular Phone Microphone (UE1 or UH7)



35441

Connector Part Information

Harness Type: Headliner
OEM Connector: 13649649
Service Connector: 13395383
Description: 2 M 150 Metri Pack Series BK

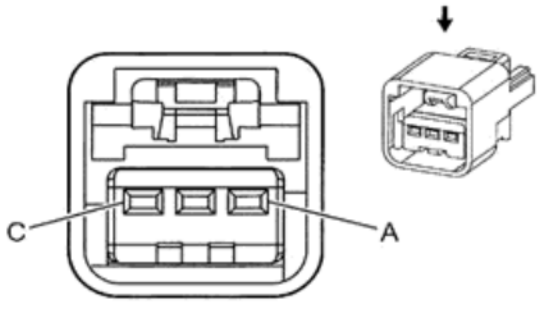
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575463	J-35616-3 (GY)	J-38125-12A	12047581	2	E	C

B24 Cellular Phone Microphone (UE1 or UH7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BK/BN	654	Microphone Low Signal	I	—
B	0.5	L-BU	655	Microphone High Signal	I	—

B25B Clutch Pedal Position Sensor (M26/MR5/MZ4)



1243663

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15332132
Service Connector: 88953364
Description: 3-Way F GT 150 Series (BK)

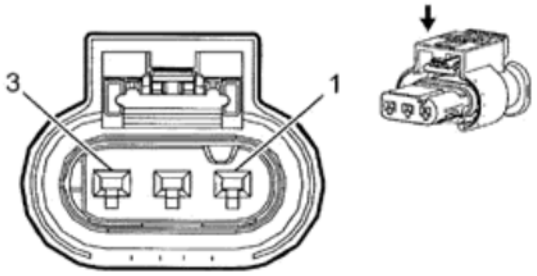
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

B25B Clutch Pedal Position Sensor (M26/MR5/MZ4)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	GY/RD	6109	Clutch Apply Sensor Voltage Reference	I	—
B	0.35	YE	6111	Clutch Apply Sensor Signal	I	—
C	0.35	BK/GY	6110	Clutch Apply Sensor Low Reference	I	—

B26 Crankshaft Position Sensor (LUV)



2394093

Connector Part Information

Harness Type: Engine
OEM Connector: 55564249
Service Connector: 13574937
Description: 3 F MLK 1.2 Series, Sealed BK

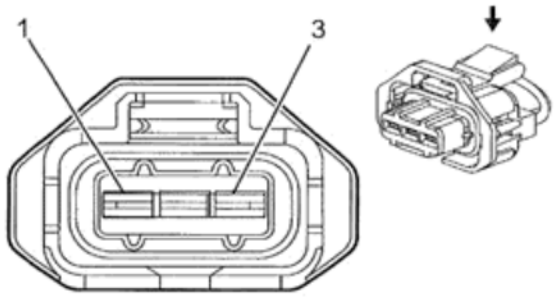
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-3 (GY)	Not Available	Not Available	Not Available	Not Available	Not Available

B26 Crankshaft Position Sensor (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/L-BU	6270	Crankshaft 60X Sensor Voltage	I	—
2	0.5	BK/VT	6272	Low Reference	I	—
3	0.5	L-GN	6271	Crankshaft 60X Sensor Signal	I	—

B26 Crankshaft Position Sensor (LUW/LWE)



816171

Connector Part Information

Harness Type: Engine
OEM Connector: 1928403870
Service Connector: 88953312
Description: 3-Way F Junior Power Timer Series, Sealed (BK)

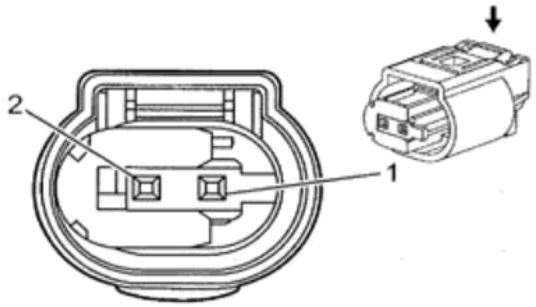
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 88953312	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available

B26 Crankshaft Position Sensor (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/YE	6271	Crankshaft 60X Sensor Signal	I	—
2	0.5	BK/L-GN	6272	Low Reference	I	—
3	0.5	VT/L-BU	6270	Crankshaft 60X Sensor Voltage	I	—

B34A Engine Coolant Temperature Sensor 1



1869767

Connector Part Information

Harness Type: Engine
OEM Connector: 1-967644-1
Service Connector: 13576533
Description: 2-Way F 0.64 MQS Series, Sealed (BK)

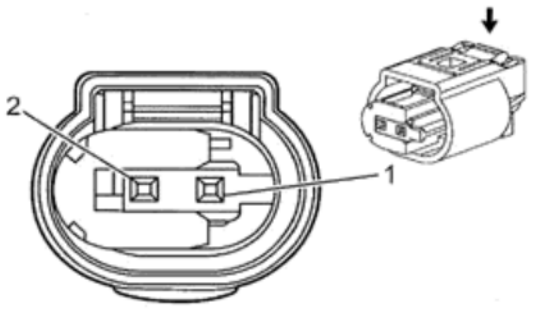
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 13576533	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

B34A Engine Coolant Temperature Sensor 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/VT	2032	Coolant Temperature Sensor Signal	I	—
2	0.5	BK/BN	2761	Low Reference	I	—

B34B Engine Coolant Temperature Sensor 2



1869767

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 1-967644-1
Service Connector: 13576533
Description: 2-Way F 0.64 MQS Series, Sealed (BK)

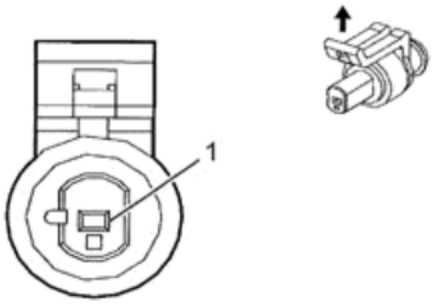
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13576394	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

B34B Engine Coolant Temperature Sensor 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BK	3000	Coolant Temperature Sensor #2 Signal	I	—
2	0.5	BK/L-BU	6813	Low Reference	I	—

B37 Engine Oil Pressure Switch (LUV)



2179746

Connector Part Information

Harness Type: Engine
OEM Connector: 15344028
Service Connector: 13584256
Description: 1 F 150 GT Series, Sealed BK

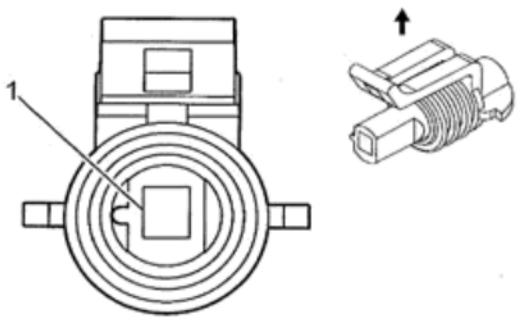
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-2A (GY)	J-38125-553	15326267	19	E	4

B37 Engine Oil Pressure Switch (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/L-BU	231	Oil Pressure Switch Signal	I	—

B37 Engine Oil Pressure Switch (LUW/LWE)



696956

Connector Part Information

Harness Type: Engine
OEM Connector: 15355362
Service Connector: 15306376
Description: 1 F Metri Pack 150 Series, Sealed NA

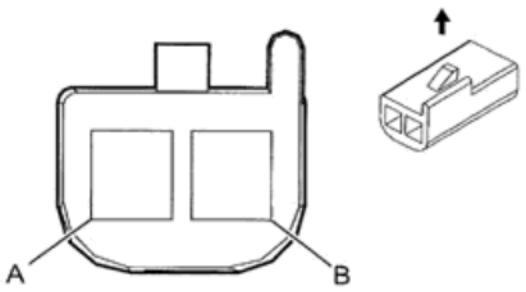
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-14 (GN)	J-38125-12A	12160223	3	E	1

B37 Engine Oil Pressure Switch (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/L-BU	231	Oil Pressure Switch Signal	I	—

B39 A/C Evaporator Temperature Sensor (C60)



82383

Connector Part Information

Harness Type: HVAC
OEM Connector: 12047662
Service Connector: 12085535
Description: 2-Way F Metri-Pack 150 Series (BK)

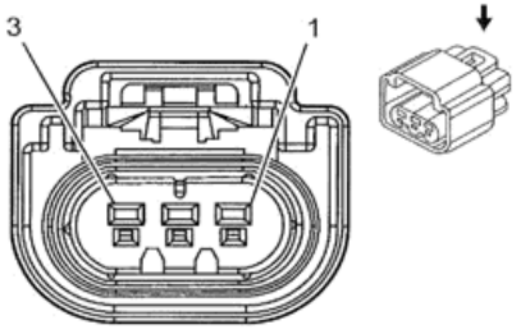
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Not Available	Not Available	Not Available	Not Available

B39 A/C Evaporator Temperature Sensor (C60)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	WH/RD	6137	EVAP Core Temperature Sensor Signal	I	—
B	0.35	BK	6138	EVAP Core Temperature Sensor Low Reference	I	—

B47 Fuel Pressure Sensor



1860942

Connector Part Information

Harness Type: Body
OEM Connector: 13511131
Service Connector: 19168035
Description: 3-Way F GT 150 Series, Sealed (BK)

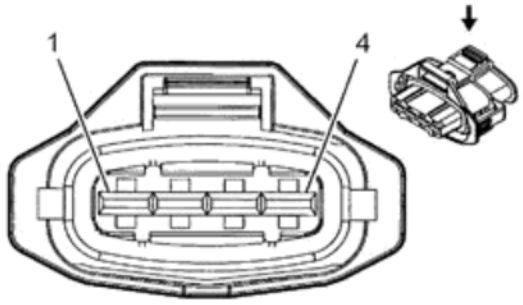
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13578895	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

B47 Fuel Pressure Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-BU/WH	7446	Fuel Line Pressure Sensor Signal	I	—
2	0.5	BK/YE	7447	Low Reference	I	—
3	0.5	BN/RD	7445	5 Volt Reference	I	—

B52A Heated Oxygen Sensor 1 (LUV)



2780414

Connector Part Information

Harness Type: Engine
OEM Connector: 13203442
Service Connector: 13577523
Description: 4-Way F 2.8 Timer Series, Sealed (BK)

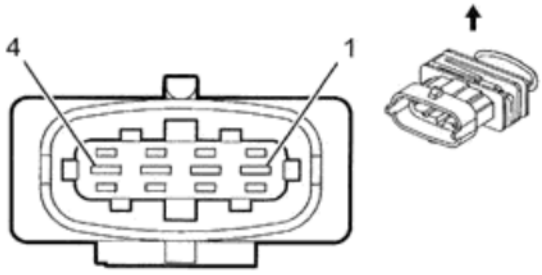
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

B52A Heated Oxygen Sensor 1 (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/L-BU	5290	Powertrain Main Relay Fused Supply (1)	I	—
2	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor (1)	I	—
3	0.5	YE/BN	1664	Heated Oxygen Sensor Low Signal Bank 1 Sensor (1)	I	—
4	0.5	L-GN	1665	Heated Oxygen Sensor High Signal Bank 1 Sensor (1)	I	—

B52A Heated Oxygen Sensor 1 (LUW/LWE)



816173

Connector Part Information

Harness Type: Engine
OEM Connector: 1928403453
Service Connector: 88952839
Description: 4-Way M 2.8 Series, Sealed (BK)

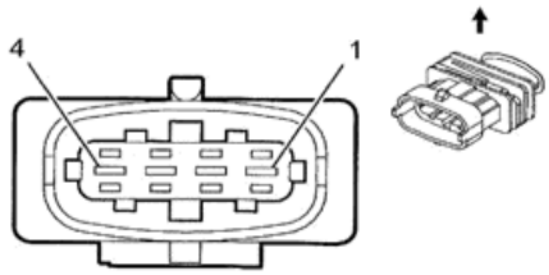
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575350	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available

B52A Heated Oxygen Sensor 1 (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/L-BU	5290	Powertrain Main Relay Fused Supply (1)	I	—
2	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor (1)	I	—
3	0.5	YE/BN	1664	Heated Oxygen Sensor Low Signal Bank 1 Sensor (1)	I	—
4	0.5	L-GN	1665	Heated Oxygen Sensor High Signal Bank 1 Sensor (1)	I	—

B52B Heated Oxygen Sensor 2



816173

Connector Part Information

Harness Type: Engine
OEM Connector: 1928403453
Service Connector: 88952839
Description: 4-Way M 2.8 Series, Sealed (BK)

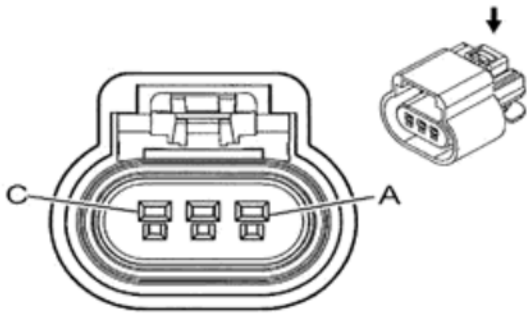
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575350	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available

B52B Heated Oxygen Sensor 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/L-BU	5290	Powertrain Main Relay Fused Supply (1)	I	—
2	0.5	L-GN/VT BN/GY	1423 5035	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor (2)	I	LUW/LWE LUV
3	0.5	YE/WH	1669	Heated Oxygen Sensor Low Signal Bank 1 Sensor (2)	I	—
4	0.5	L-GN	1668	Heated Oxygen Sensor High Signal Bank 1 Sensor (2)	I	—

B55 Hood Ajar Switch (UTJ)



646415

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 19153104
Service Connector: 13580871
Description: 3 F 150 GT Series, Sealed BK

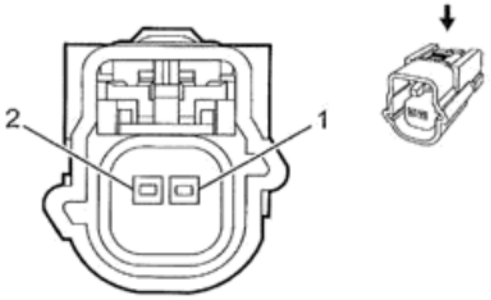
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

B55 Hood Ajar Switch (UTJ)

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	0.5	BK	250	Ground	I	—

B59L Front Impact Sensor - Left



2179777

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 54390242
Service Connector: 13314084
Description: 2-Way F Kaizen 0.64 Series, Sealed (D-GY)

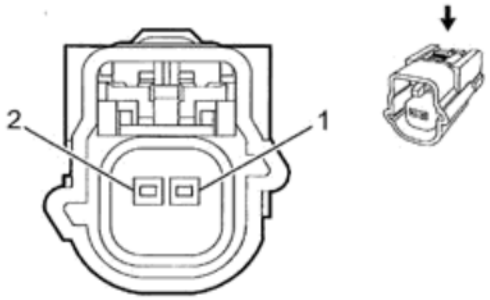
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575845	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

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



2179777

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 54390242
Service Connector: 13314084
Description: 2-Way F Kaizen 0.64 Series, Sealed (D-GY)

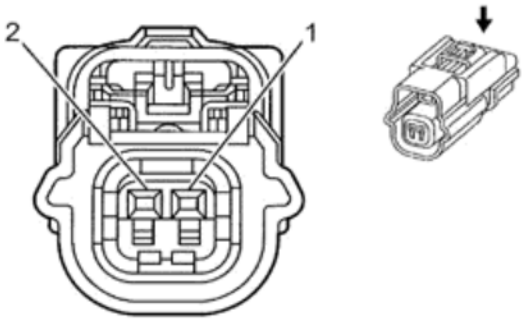
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575845	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

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	—

B63LF Side Impact Sensor - Left Front



1664592

Connector Part Information

Harness Type: Driver Door
OEM Connector: 54390239
Service Connector: 19178174
Description: 2-Way F Kaizen 64 Series (GY)

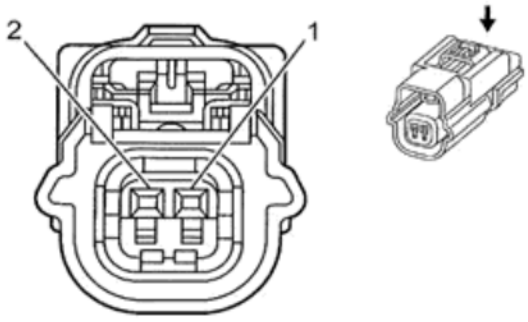
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575845	J-35616-64B (L-BU)	J-38125-215A

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	Low Reference	I	—

B63LR Side Impact Sensor - Left Rear (AYF)



1664592

Connector Part Information

Harness Type: Body
OEM Connector: 54390239
Service Connector: 19178174
Description: 2-Way F Kaizen 64 Series (BK)

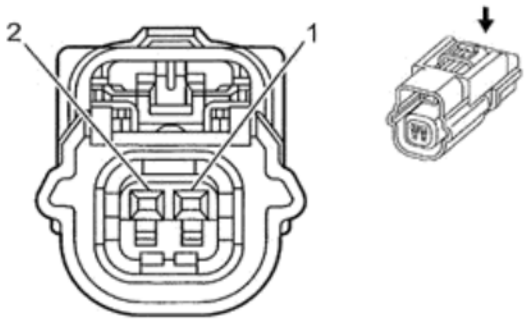
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575845	J-35616-64B (L-BU)	J-38125-215A

B63LR Side Impact Sensor - Left Rear (AYF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/L-BU	6620	Left Rear Side Impact Sensing Module Signal	I	—
2	0.5	BK/OG	6621	Low Reference	I	—

B63RF Side Impact Sensor - Right Front



1664592

Connector Part Information

Harness Type: Right Front Door
OEM Connector: 54390239
Service Connector: 19178174
Description: 2-Way F Kaizen 64 Series (GY)

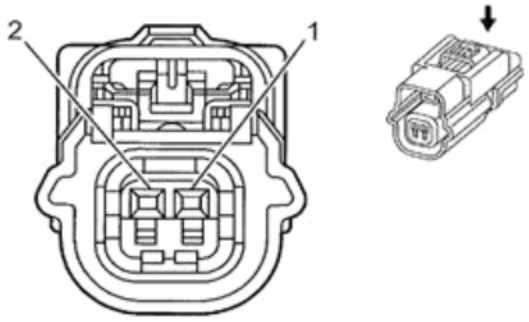
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575845	J-35616-64B (L-BU)	J-38125-215A

B63RF Side Impact Sensor - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/OG	2134	Right Front Side Impact Sensing Module Signal	I	—
2	0.5	BK/OG	6629	Low Reference	I	—

B63RR Side Impact Sensor - Right Rear (AYF)



1664592

Connector Part Information

Harness Type: Body
OEM Connector: 54390239
Service Connector: 19178174
Description: 2-Way F Kaizen 64 Series (BK)

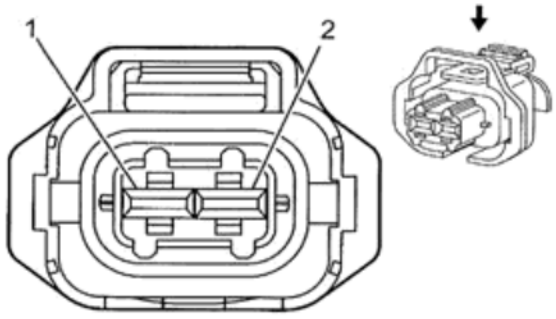
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575845	J-35616-64B (L-BU)	J-38125-215A

B63RR Side Impact Sensor - Right Rear (AYF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/VT	6624	Right Rear Side Impact Sensing Module Signal	I	—
2	0.5	BK/OG	6625	Low Reference	I	—

B68 Knock Sensor (LUV)



1403270

Connector Part Information

Harness Type: Engine
OEM Connector: 1928403698
Service Connector: 88953309
Description: 2-Way F Kompakt Series (BK)

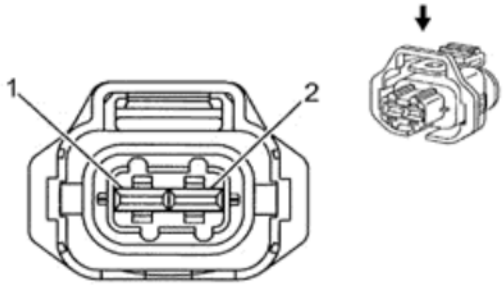
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 88953309	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available

B68 Knock Sensor (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/GY	496	Knock Sensor Signal (1)	I	—
2	0.5	BK/YE	1716	Low Reference	I	—

B68 Knock Sensor (LUW/LWE)



2220534

Connector Part Information

Harness Type: Engine
OEM Connector: 24456972
Service Connector: 13580950
Description: 2 F 2.8 Junior Power Timer Series, Sealed NA

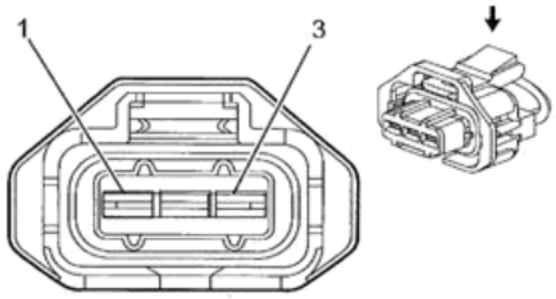
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available

B68 Knock Sensor (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/GY	496	Knock Sensor Signal (1)	I	—
2	0.5	BK/YE	1716	Low Reference	I	—

B74 Manifold Absolute Pressure Sensor



816171

Connector Part Information

Harness Type: Engine
OEM Connector: 1928403870
Service Connector: 88953312
Description: 3-Way F Junior Power Timer Series, Sealed (BK)

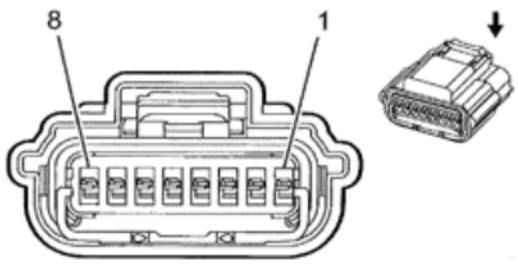
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 88953312	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available

B74 Manifold Absolute Pressure Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/RD	2704	5 Volt Reference	I	—
2	0.5	BK/L-GN	469	Low Reference	I	—
3	0.5	L-GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—

B75C Multifunction Intake Air Sensor



2581486

Connector Part Information

Harness Type: Engine
OEM Connector: 13504800
Service Connector: 13583440
Description: 8-Way F 064 Series, Sealed (BK)

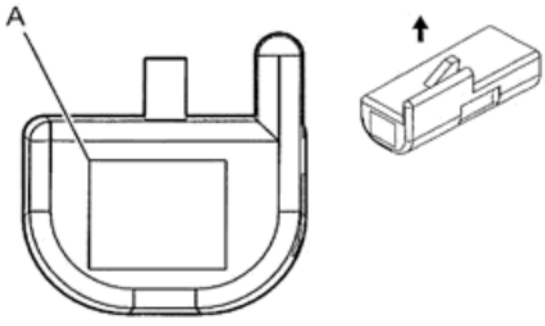
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available
II	12451866	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

B75C Multifunction Intake Air Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/YE	6014	Barometric Pressure Sensor Low Reference	I	—
2	0.5	WH/RD	2932	Barometric Pressure Sensor (5) Volt Reference	I	—
3	0.5	L-GN/WH	492	Mass Air Flow Sensor Signal	I	—
4	0.5	BK	1750	Ground	I	—
5	0.5	VT/L-BU	5291	Powertrain Main Relay Fused Supply (2)	I	—
6	0.5	L-BU/GY	433	Barometric Pressure Sensor Signal	I	—
7	0.5	BK/VT	2760	Intake Air Temperature Sensor Low Reference	I	—
8	0.5	BN/VT	472	Intake Air Temperature Sensor Signal	I	—

B80 Park Brake Switch



439818

Connector Part Information

Harness Type: Body
OEM Connector: 12047682
Service Connector: 12101850
Description: 1-Way F Metri-Pack 150 Series (BK)

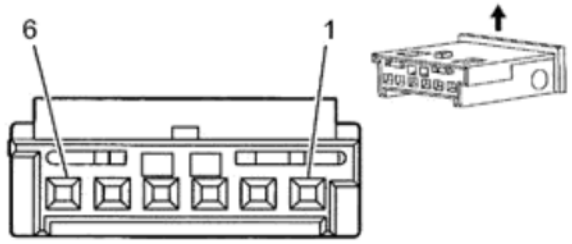
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575464	J-35616-14 (GN)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

B80 Park Brake Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-BU/VT	1134	Park Brake Switch Signal	I	—

B99 Steering Wheel Angle Sensor



1862024

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 1-1241370-3
Service Connector: 13505903
Description: 6-Way F MQS Series (BK)

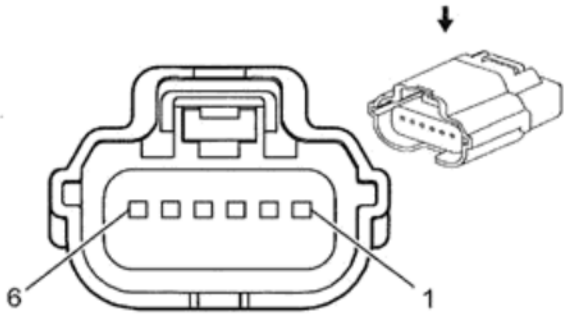
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575585	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

B99 Steering Wheel Angle Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	6106	High Speed GMLAN Serial Data (-) (2)	I	—
2	0.5	WH	6106	High Speed GMLAN Serial Data (-) (2)	I	—
3	0.5	L-BU/YE	6105	High Speed GMLAN Serial Data (+) (2)	I	—
4	0.5	L-BU/YE	6105	High Speed GMLAN Serial Data (+) (2)	I	—
5	0.35	L-GN/BN	2087	Combined Vehicle Inertial Sensor Supply Voltage	I	—
6	0.35	BK	1150	Ground	I	—

B107 Accelerator Pedal Position Sensor



1974974

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 88988771
Service Connector: 13577043
Description: 6 F 64 Series, Sealed BK

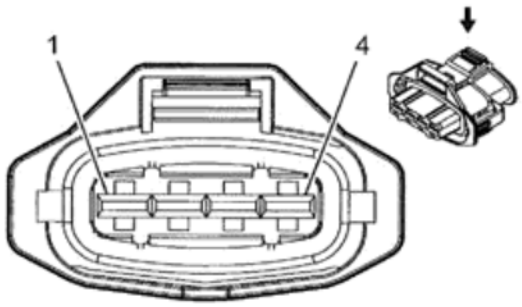
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451867	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

B107 Accelerator Pedal Position Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/RD	1274	Accelerator Pedal Position 5 Volt Reference (2)	I	—
2	0.5	L-GN/WH	1162	Accelerator Pedal Position Signal (2)	I	—
3	0.5	BK/VT	1272	Accelerator Pedal Position Low Reference (2)	I	—
4	0.5	BK/L-BU	1271	Accelerator Pedal Position Low Reference (1)	I	—
5	0.5	YE/WH	1161	Accelerator Pedal Position Signal (1)	I	—
6	0.5	WH/RD	1164	Accelerator Pedal Position 5 Volt Reference (1)	I	—

B111B Turbocharger Boost/Intake Air Temperature Sensor (LUV)



2780414

Connector Part Information

Harness Type: Engine
OEM Connector: 13203442
Service Connector: 13577523
Description: 4 F 2.8 Timer Series, Sealed BK

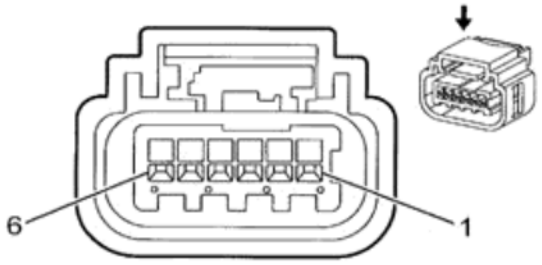
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

B111B Turbocharger Boost/Intake Air Temperature Sensor (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/L-GN	5638	Turbo Boost Pressure Sensor Low Reference	I	—
2	0.5	GY	5641	Turbo Boost Pressure Sensor Temperature Signal	I	—
3	0.5	BN/RD	5639	Turbo Boost Pressure Sensor 5 Volt Reference	I	—
4	0.5	L-GN	1533	Turbo Boost Pressure Sensor Signal	I	—

B119 Multi-Axis Acceleration Sensor



2231630

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 47715-6102
Service Connector: 13314079
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	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

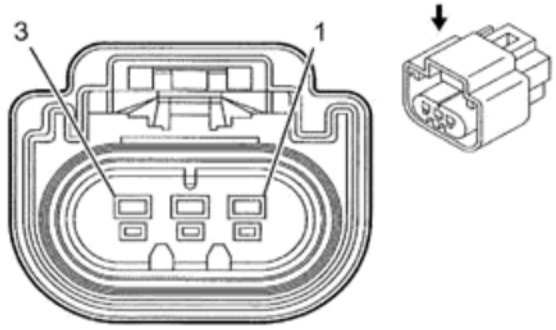
B119 Multi-Axis Acceleration Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	6106	High Speed GMLAN Serial Data (-) (2)	I	—

B119 Multi-Axis Acceleration Sensor (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
2	—	—	—	Not Occupied	—	—
3	0.5	L-BU/YE	6105	High Speed GMLAN Serial Data (+) (2)	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	L-GN/BN	2087	Combined Vehicle Inertial Sensor Supply Voltage	I	—
6	0.35	BK	1150	Ground	I	—

B150 Fuel Tank Pressure Sensor (NT7)



1962078

Connector Part Information

Harness Type: Fuel Tank
OEM Connector: 13511996
Service Connector: 19149288
Description: 3-Way F GT 150 Series, Sealed (GY)

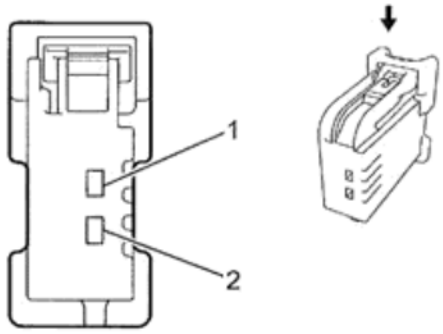
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13578895	J-35616-2A (GY)	J-38125-553

B150 Fuel Tank Pressure Sensor (NT7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/BN	6284	Low Reference	I	—
2	0.35	BK/GY	6285	Low Reference	I	—
3	0.35	BN/WH	6283	Fuel Tank Vapor Pressure Sensor Supply Voltage	I	—

B153D Seat Belt Buckle - Driver



2173586

Connector Part Information

Harness Type: Driver Seat
OEM Connector: 19115613
Service Connector: 19179373
Description: 2-Way F 1.5/0.64 Series (BK)

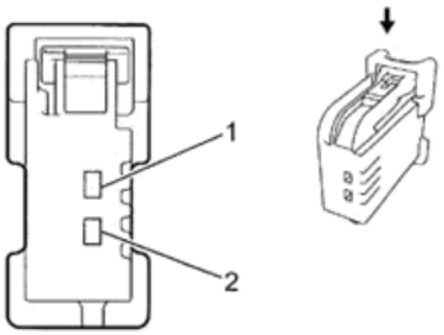
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

B153D Seat Belt Buckle - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/L-GN	238	Driver Seat Belt Switch Signal	I	—
2	0.5	BK/RD	550	Ground	I	—

B153P Seat Belt Buckle - Passenger



2173586

Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 19115613
Service Connector: 19179373
Description: 2-Way F 1.5/0.64 Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

B153P Seat Belt Buckle - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD	1362	Passenger Seat Belt Switch Signal	I	—
2	0.5	BK	1361	Passenger Seat Belt Switch Low Reference	I	—

C1 Battery (+) (Positive Battery Cable)

Connector Part Information

Harness Type: Positive Battery Cable
OEM Connector: 96954328
Service Connector: Service by Cable - See Parts Catalog
Description: Battery Terminal

Terminal Part Information

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

C1 Battery (+) (Positive Battery Cable)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	—	—	Battery Positive Voltage	I	—

C1 Battery (-) (Negative Battery Cable)

Connector Part Information

Harness Type: Negative Battery Cable
OEM Connector: CBT141-018
Service Connector: Service by Cable - See Parts Catalog
Description: Battery Terminal

Terminal Part Information

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

C1 Battery (-) (Negative Battery Cable)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	20	BK	50	Ground	I	—

C1 Battery (-) (Body Harness)

Connector Part Information

Harness Type: Body
OEM Connector: 711059-3
Service Connector: Service by Cable – See Parts Catalog
Description: Ring Terminal

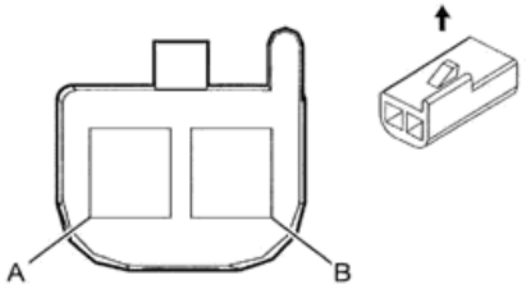
Terminal Part Information

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

C1 Battery (-) (Body Harness)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	0.5	BK	350	Ground	I	—

C3 Telematics Communication Interface Control Module Battery (UE1)



82383

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12047662
Service Connector: 12085535
Description: 2-Way F Metri-Pack 150 Series (BK)

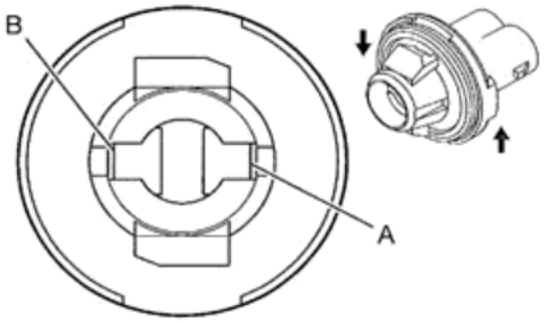
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575464	J-35616-14 (GN)	J-38125-12A	15326030	2	E	C

C3 Telematics Communication Interface Control Module Battery (UE1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	YE/VT	5235	Battery Backup Supply Voltage	I	—
B	0.5	BK/VT	5167	Low Reference	I	—

E2LR Side Marker Lamp - Left Rear



744036

Connector Part Information

Harness Type: Left Rear Lamp
OEM Connector: 15324946
Service Connector: 88986416
Description: 2-Way F Lamp Socket Base W2 Sealed (BK)

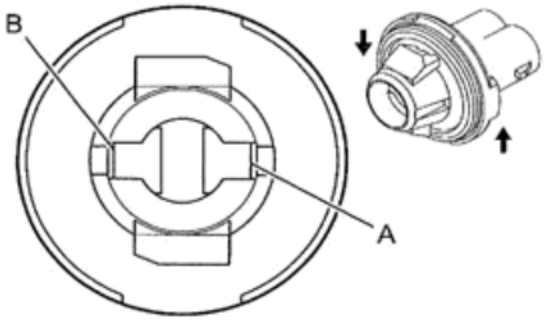
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

E2LR Side Marker Lamp - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.8	D-GN	709	Left Rear Park Lamps Control	I	—
B	0.8	BK/WH	1050	Ground	I	—

E2RR Side Marker Lamp - Right Rear



744036

Connector Part Information

Harness Type: Right Rear Lamp
OEM Connector: 15324946
Service Connector: 88986416
Description: 2-Way F Lamp Socket Base W2 Sealed (BK)

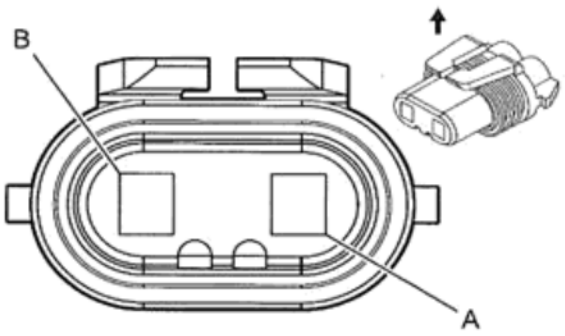
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

E2RR Side Marker Lamp - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.8	D-GN	309	Right Rear Park Lamps Control	I	—
B	0.8	BK/WH	1650	Ground	I	—

E4E Headlamp - Left High Beam



684797

Connector Part Information

Harness Left Headlamp
OEM: 12059183
Service: 12101898
Description: 2-Way F Metri-Pack 280 Series Sealed (BK)

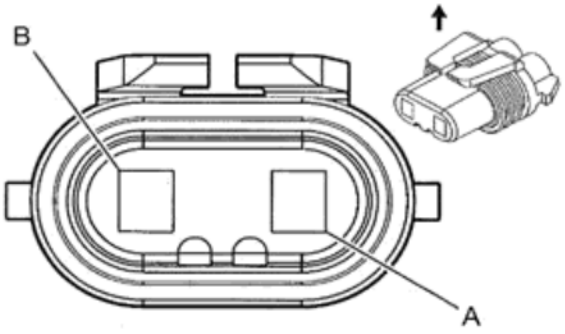
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575418	J-35616-4A (PU)	J-38125-11A	12077411	2	2	5

E4E Headlamp - Left High Beam

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	BK	640	Headlamp Control	I	—
B	0.35	D-GN	1650	High Beam Switched Ground	I	—

E4F Headlamp - Right High Beam



684797

Connector Part Information

Harness Type: Right Headlamp
OEM Connector: 12059183
Service Connector: 12101898
Description: 2-Way F Metri-Pack 280 Series Sealed (BK)

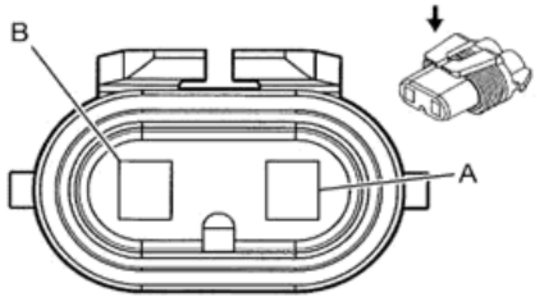
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575418	J-35616-4A (PU)	J-38125-11A	12077411	2	2	5

E4F Headlamp - Right High Beam

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	BK	250	Ground	I	—
B	0.35	D-GN	311	Right Headlamp High Beam Supply Voltage	I	—

E4G Headlamp - Left Low Beam



684796

Connector Part Information

Harness Type: Left Headlamp
OEM Connector: 12059181
Service Connector: 12101897
Description: 2-Way F Metri-Pack 280 Series Sealed (GY)

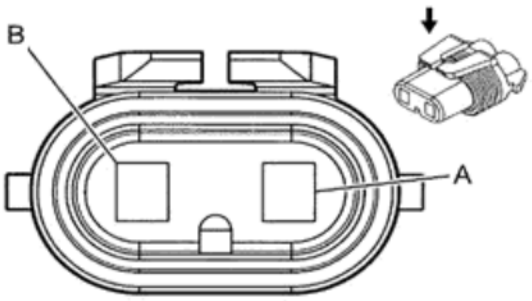
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575418	J-35616-4A (PU)	J-38125-11A	12077411	2	2	5

E4G Headlamp - Left Low Beam

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	BK	150	Ground	I	—
B	0.35	YE	712	Left Headlamp Low Beam Supply Voltage	I	—

E4H Headlamp - Right Low Beam



684796

Connector Part Information

Harness Type: Right Headlamp
OEM Connector: 12059181
Service Connector: 12101897
Description: 2-Way F Metri-Pack 280 Series Sealed (GY)

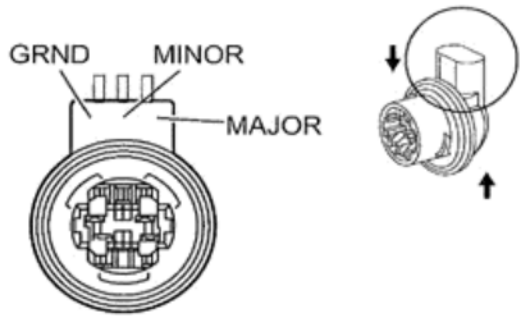
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575418	J-35616-4A (PU)	J-38125-11A	12077411	2	2	5

E4H Headlamp - Right Low Beam

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	BK	250	Ground	I	—
B	0.35	YE	312	Right Headlamp Low Beam Supply Voltage	I	—

E4LR Turn Signal Lamp - Left Rear



1860839

Connector Part Information

Harness Type: Left Tail Lamp
OEM Connector: 7822-2540-A44
Service Connector: Service by Harness – See Part Catalog
Description: 3-Way F S8 Right Angle 2 Wire Lamp Socket (NA)

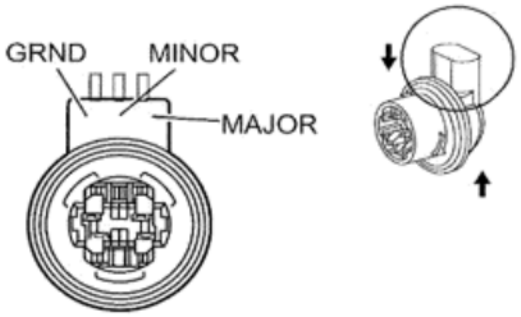
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

E4LR Turn Signal Lamp - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
MAJOR	0.8	YE	1334	Left Rear Turn Signal Lamp Supply Voltage	I	—
MINOR	-	-	-	Not Occupied	-	-
GRND	0.8	BK	1050	Ground	I	—

E4RR Turn Signal Lamp - Right Rear



1860839

Connector Part Information

Harness Type: Right Tail Lamp
OEM Connector: 7822-2540-A44
Service Connector: Service by Harness – See Part Catalog
Description: 3-Way F S8 Right Angle 2 Wire Lamp Socket (NA)

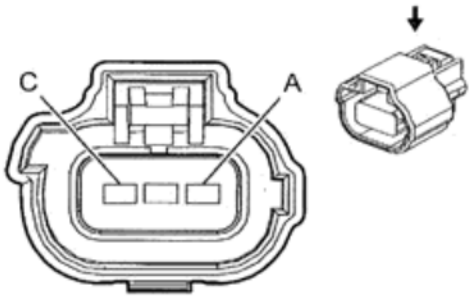
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

E4RR Turn Signal Lamp - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
MAJOR	0.8	YE	1335	Right Rear Turn Signal Lamp Supply Voltage	I	—
MINOR	-	-	-	Not Occupied	-	-
GRND	0.8	BK	1650	Ground	I	—

E4N Park/Turn Signal Lamp - Left



2537279

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: EEM3047
Service Connector: 13581090
Description: 3-Way F Sealed (GY)

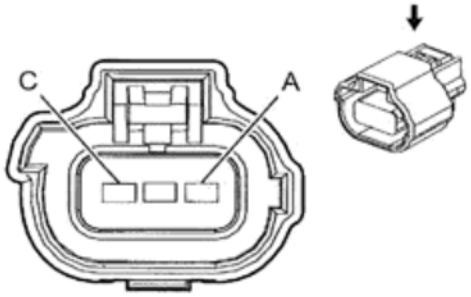
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

E4N Park/Turn Signal Lamp - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	VT/GY	709	Left Park Lamp Supply Voltage	I	—
B	0.75	L-BU/WH	1314	Left Front Turn Signal Lamp Supply Voltage	I	—
C	0.75	BK	150	Ground	I	—

E4P Park/Turn Signal Lamp - Right



2537279

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: EEM3047
Service Connector: 13581090
Description: 3-Way F Sealed (GY)

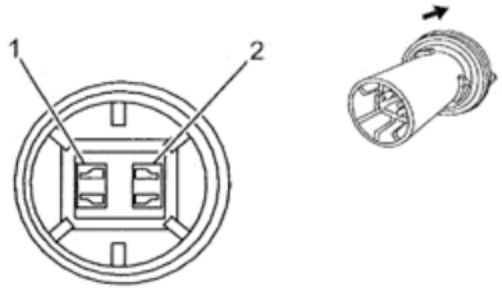
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

E4P Park/Turn Signal Lamp - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	GY/BN	309	Right Park Lamp Supply Voltage	I	—
B	0.75	L-GN/VT	1315	Right Front Turn Signal Lamp Supply Voltage	I	—
C	0.75	BK	250	Ground	I	—

E5A Backup Lamp - Left



2220535

Connector Part Information

Harness Type: Tail Lamp
OEM Connector: 2608
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Bulb Socket (GY)

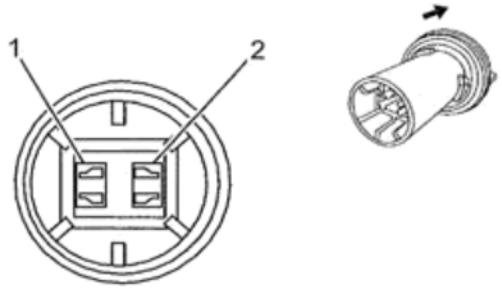
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	Not Available	Not Available	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog	Not Available	Not Available

E5A Backup Lamp - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	24	Backup Lamp Supply Voltage	I	-
2	0.5	BK	1050	Ground	I	-

E5B Backup Lamp - Right



2220535

Connector Part Information

Harness Type: Tail Lamp
OEM Connector: 2608
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Bulb Socket (GY)

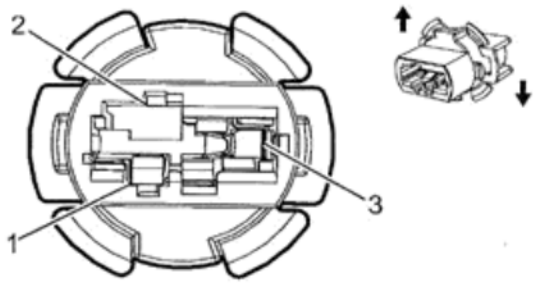
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	Not Available	Not Available	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog	Not Available	Not Available

E5B Backup Lamp - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	24	Backup Lamp Supply Voltage	I	-
2	0.5	BK	1650	Ground	I	-

E5AA Tail/Stop Lamp - Left



2844184

Connector Part Information

Harness Type: Tail Lamp
OEM Connector: 5098–5100
Service Connector: Service by Harness – See Part Catalog
Description: 3-Way F Lamp Socket (BK), Sealed

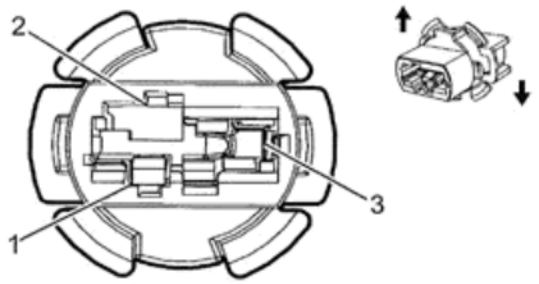
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	Not Available	Not Available	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog	Not Available	Not Available

E5AA Tail/Stop Lamp - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-BU	–	Not Used	I	—
2	0.5	RD	2509	Left Rear Park Lamp Supply Voltage	I	—
3	0.5	BK/WH	1050	Ground	I	—

E5AB Tail/Stop Lamp - Right



2844184

Connector Part Information

Harness Type: Tail Lamp
OEM Connector: 5098–5100
Service Connector: Service by Harness – See Part Catalog
Description: 3-Way F Lamp Socket (BK), Sealed

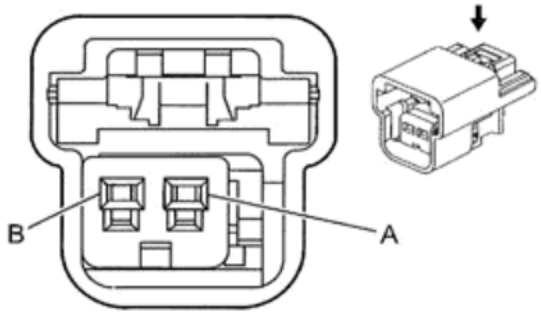
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	Not Available	Not Available	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog	Not Available	Not Available

E5AB Tail/Stop Lamp - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-BU	–	Not Used	I	—
2	0.5	RD	2609	Right Rear Park Lamp Supply Voltage	I	—
3	0.5	BK/WH	1650	Ground	I	—

E6 Center High Mounted Stop Lamp



1385747

Connector Part Information

Harness Type: Liftgate (Hatchback)
Harness Type: Body (Notchback)
OEM Connector: 15332129
Service Connector: 15306425
Description: 2-Way F GT 150 Series (BK)

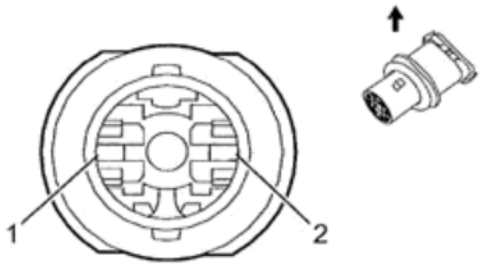
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575735	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

E6 Center High Mounted Stop Lamp

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BN/YE	820	CHMSL Supply Voltage	I	—
B	0.5	BK	1050	Ground	I	—

E7L License Plate Lamp - Left



2352565

Connector Part Information

Harness Type: License Lamp
OEM Connector: 13698133
Service Connector: Service by Harness – See Part Catalog
Description: 2-Way F Lamp Socket Wedge, Sealed (BK)

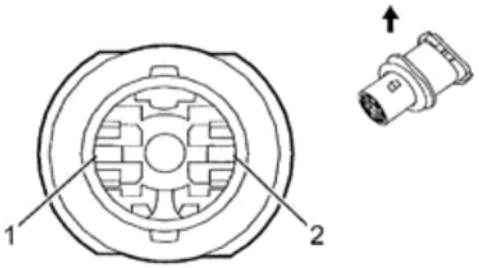
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

E7L License Plate Lamp - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-GN/YE	6846	Rear License Lamp Supply Voltage	I	—
2	0.5	BK	1050	Ground	I	—

E7R License Plate Lamp - Right



2352565

Connector Part Information

Harness Type: License Lamp
OEM Connector: 13698133
Service Connector: Service by Harness – See Part Catalog
Description: 2-Way F Lamp Socket Wedge, Sealed (BK)

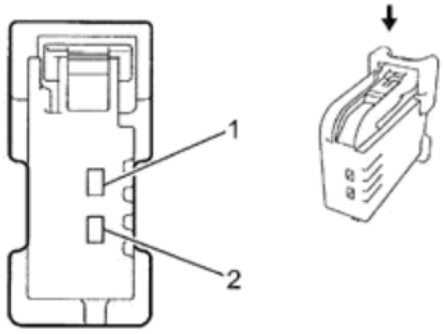
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

E7R License Plate Lamp - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-GN/YE	6846	Rear License Lamp Supply Voltage	I	—
2	0.5	BK	1050	Ground	I	—

E8S Rear Compartment Courtesy Lamp



2173586

Connector Part Information

Harness Type: Body
OEM Connector: 9976-6418
Service Connector: 13584097
Description: 2-Way F 0.64 Series (BK)

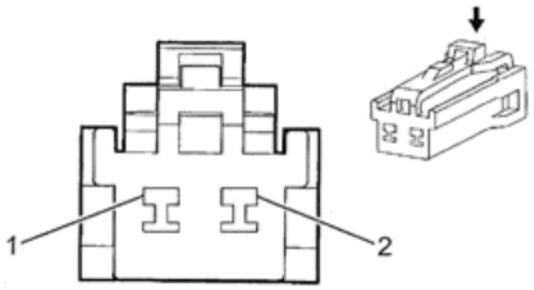
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 19179373	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

E8S Rear Compartment Courtesy Lamp

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/GY	737	Trunk Lamp Control	I	—
2	0.5	BK	1050	Ground	I	—

E14A Seat Heating Element - Driver Back (KA1)



2268758

Connector Part Information

Harness Type: Driver Seat
OEM Connector: MG610392
Service Connector: 13577006
Description: 2-Way F (WH)

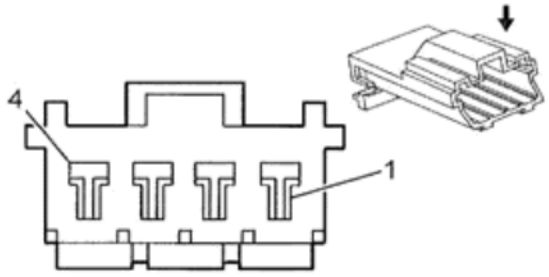
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Not Available	Not Available	Not Available	Not Available

E14A Seat Heating Element - Driver Back (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.0	BK	2078	Driver Heated Seat Cushion Element Return	I	—
2	1.0	BK	2424	Driver Heated Seat Back Element Return	I	—

E14B Seat Heating Element - Driver Cushion (KA1)



2178164

Connector Part Information

Harness Type: Driver Seat
OEM Connector: MG620397
Service Connector: Service by Harness– See Part Catalog
Description: 4-Way M 090-II Series (NA)

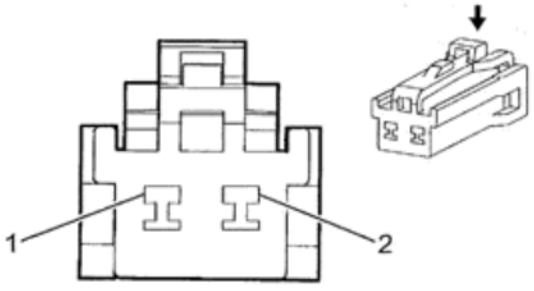
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

E14B Seat Heating Element - Driver Cushion (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.0	BK/YE	2078	Driver Heated Seat Element Return	I	—
2	1.5	BK/OG	2080	Driver Heated Seat NTC Low Reference	I	—
3	1.5	RD/OG	2079	Driver Heated Seat NTC Signal	I	—
4	1.0	YE	2077	Driver Heated Seat Element Supply Voltage	I	—

E14C Seat Heating Element - Passenger Back (KA1)



2268758

Connector Part Information

Harness Type: Passenger Seat
OEM Connector: MG610392
Service Connector: 13577006
Description: 2-Way F (WH)

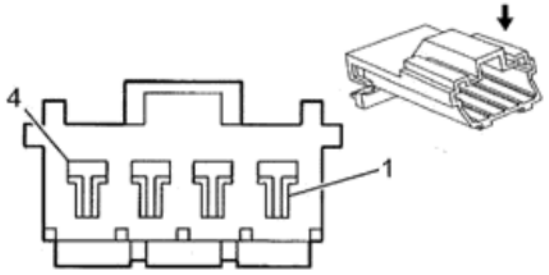
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Not Available	Not Available	Not Available	Not Available

E14C Seat Heating Element - Passenger Back (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.0	BK	2480	Passenger Heated Seat Cushion Element Return	I	—
2	1.0	BK	2433	Passenger Heated Seat Back Element Return	I	—

E14D Seat Heating Element - Passenger Cushion (KA1)



2178164

Connector Part Information

Harness Type: Passenger Seat
OEM Connector: MG620397
Service Connector: Service by Harness – See Part Catalog
Description: 4-Way M 090-II Series (NA)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

E14D Seat Heating Element - Passenger Cushion (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.0	BK/YE	2480	Passenger Heated Seat Element Return	I	—
2	1.5	BK/OG	2435	Passenger Heated Seat NTC Low Reference	I	—
3	1.5	RD/OG	7018	Passenger Heated Seat NTC Signal	I	—
4	1.0	YE	2479	Passenger Heated Seat Element Supply Voltage	I	—

E17D Outside Rearview Mirror Glass - Driver X1 (DG6)

Connector Part Information

Harness Type: Outside Rearview Mirror – Driver
OEM Connector: Not Available
Service Connector: Service by Component – See Part Catalog
Description: 1-Way F Spade Terminal

Terminal Part Information

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

E17D Outside Rearview Mirror Glass - Driver X1 (DG6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	BK	267	Mirror Heater Element Voltage	I	—

E17D Outside Rearview Mirror Glass - Driver X2 (DG6)

Connector Part Information

Harness Type: Outside Rearview Mirror – Driver
OEM Connector: Not Available
Service Connector: Service by Component – See Part Catalog
Description: 1-Way F Spade Terminal

Terminal Part Information

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

E17D Outside Rearview Mirror Glass - Driver X2 (DG6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	BK	—	Ground	I	—

E17P Outside Rearview Mirror Glass - Passenger X1 (DG6)

Connector Part Information

Harness Type: Outside Rearview Mirror – Passenger
OEM Connector: Not Available
Service Connector: Service by Component – See Part Catalog
Description: 1-Way F Spade Terminal

Terminal Part Information

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

E17P Outside Rearview Mirror Glass - Passenger X1 (DG6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	BK	—	Mirror Heater Element Voltage	I	—

E17P Outside Rearview Mirror Glass - Passenger X2 (DG6)

Connector Part Information

Harness Type: Outside Rearview Mirror – Passenger
OEM Connector: Not Available
Service Connector: Service by Component – See Part Catalog
Description: 1-Way F Spade Terminal

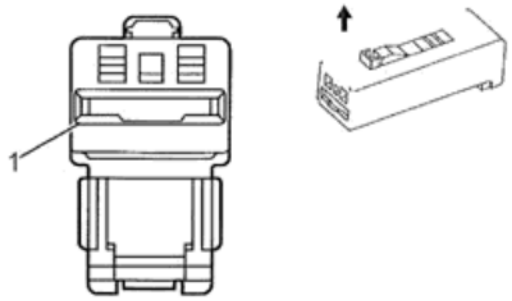
Terminal Part Information

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

E17P Outside Rearview Mirror Glass - Passenger X2 (DG6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	BK	—	Ground	I	—

E18 Rear Defogger Grid X1



2178166

Connector Part Information

Harness Type: Liftgate (Hatchback)
Harness Type: Body (Notchback)
OEM Connector: 174090-2
Service Connector: 13395393
Description: 1-Way F 250 Series (BK)

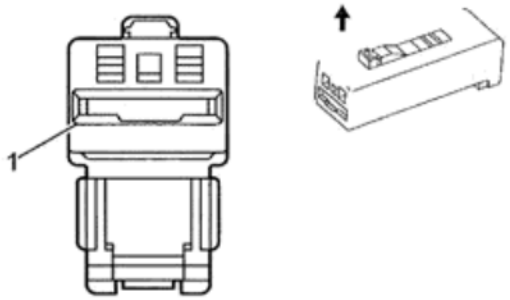
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-42 (RD)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

E18 Rear Defogger Grid X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BN/VT	293	Rear Defog Element Supply Voltage	I	—

E18 Rear Defogger Grid X2



2178166

Connector Part Information

Harness Type: Liftgate (Hatchback)
Harness Type: Body (Notchback)
OEM Connector: 174090-2
Service Connector: 13395393
Description: 1-Way F 250 Series (BK)

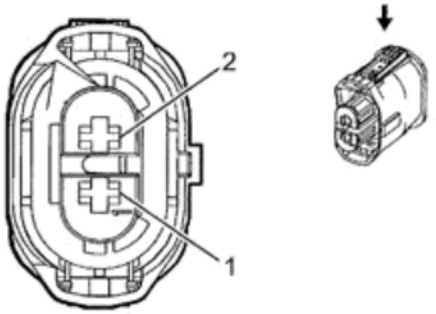
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-42 (RD)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

E18 Rear Defogger Grid X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BK	1050	Ground	I	—

E29LF Fog Lamp - Left Front (T3U)



2537259

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 1-1355668-2
Service Connector: 13584328
Description: 2-Way F Timer Series, Sealed (BK)

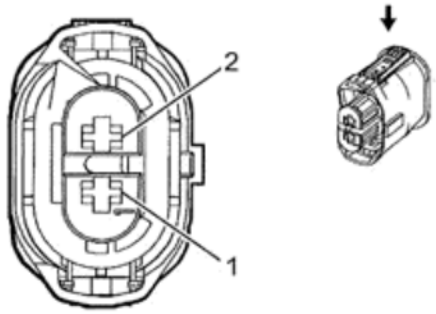
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575362	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available

E29LF Fog Lamp - Left Front (T3U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	250	Ground	I	—
2	0.5	BN/VT	2234	Front Fog Lamp Supply Voltage	I	—

E29RF Fog Lamp - Right Front (T3U)



2537259

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 1-1355668-2
Service Connector: 13584328
Description: 2-Way F Timer Series, Sealed (BK)

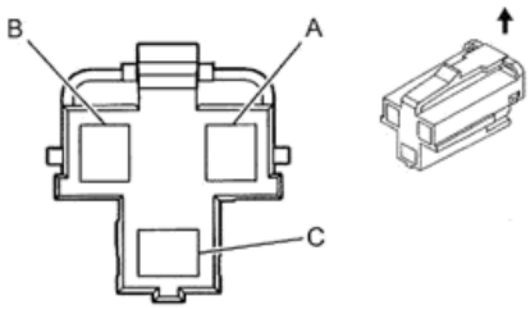
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575362	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available

E29RF Fog Lamp - Right Front (T3U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	150	Ground	I	—
2	0.5	BN/VT	2234	Front Fog Lamp Supply Voltage	I	—

E32 Cigarette Lighter Receptacle



362748

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12176836
Service Connector: 19257374
Description: 3-Way F Metri-Pack 280 Series (GY)

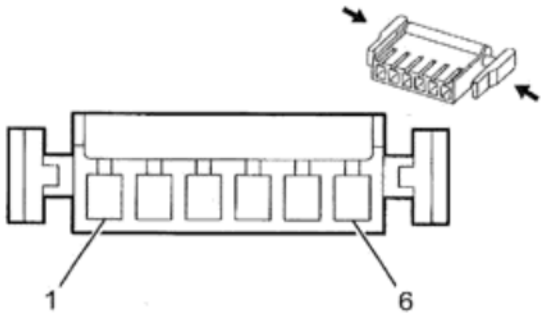
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575721	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available

E32 Cigarette Lighter Receptacle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1	VT/YE	243	Accessory Voltage	I	—
B	-	-	-	Not Occupied	-	-
C	1	BK	1250	Ground	I	—

E37B Dome/Reading Lamps - 2nd Row



2173602

Connector Part Information

Harness Type: Headliner
OEM Connector: 15344190
Service Connector: 13576539
Description: 6-Way F 0.64 Micro Quadlok Series (BK)

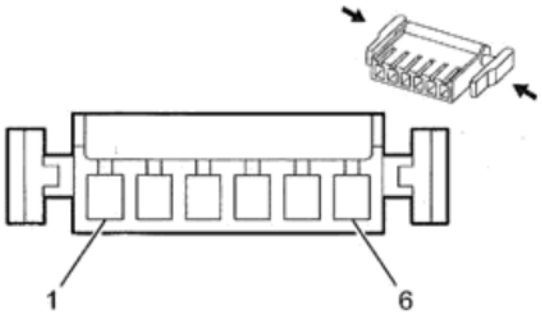
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575782	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

E37B Dome/Reading Lamps - 2nd Row

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	-	-	-	Not Occupied	-	-
2	0.5	BK	550	Ground	I	—
3	0.5	GY	157	Interior Lamp Control	I	—
4	0.5	WH/BN	6815	Inadvertent Power Control	I	—
5–6	-	-	-	Not Occupied	-	-

E37A Dome/Reading Lamps (C90)



2173602

Connector Part Information

Harness Type: Headliner
OEM Connector: 15344190
Service Connector: 13576539
Description: 6-Way F 0.64 Micro Quadlok Series (BK)

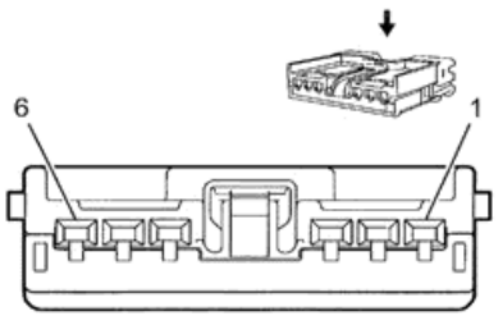
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575782	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

E37A Dome/Reading Lamps (C90)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	-	-	-	Not Occupied	-	-
2	0.5	BK	550	Ground	I	—
3	0.5	GY	157	Interior Lamp Control	I	—
4	0.5	WH/BN	6815	Inadvertent Power Control	I	—
5–6	-	-	-	Not Occupied	-	-

E37A Dome/Reading Lamps (C95)



2180199

Connector Part Information

Harness Type: Headliner
OEM Connector: 19115647
Service Connector: 13576538
Description: 6 F 1.5 Series BK

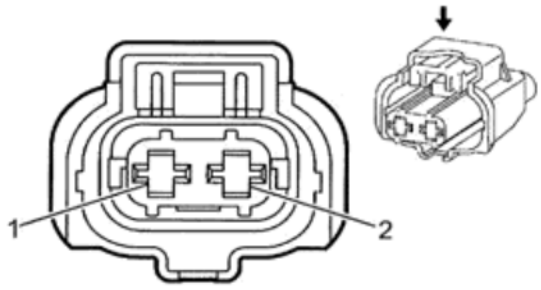
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

E37A Dome/Reading Lamps (C95)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/BN	6815	Inadvertent Power Control	I	—
2	0.5	GY	157	Interior Lamp Control	I	—
3–5	-	-	-	Not Occupied	-	-
6	0.5	BK	550	Ground	I	—

E41 Engine Coolant Thermostat Heater (LUV)



2231657

Connector Part Information

Harness Type: Engine
OEM Connector: 55565696
Service Connector: 13577526
Description: 2 F 2.8 DCS Series, Sealed BK

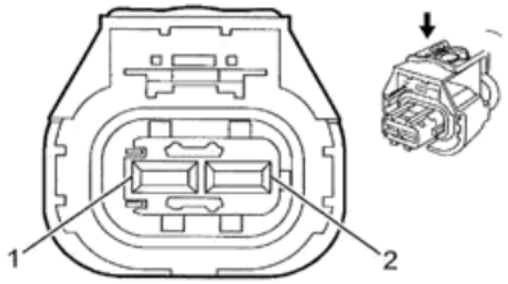
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	J-38125-557	60012931	21	Not Available	Not Available

E41 Engine Coolant Thermostat Heater (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/L-BU	5291	Powertrain Main Relay Fused Supply (2)	I	—
2	0.5	L-BU	6814	Thermostat Engine Cool Control	I	—

E41 Engine Coolant Thermostat Heater (LUW/LWE)



2231619

Connector Part Information

Harness Type: Engine
OEM Connector: 1928403920
Service Connector: 13577023
Description: 2-Way F Junior Power Timer Series, Sealed (GY)

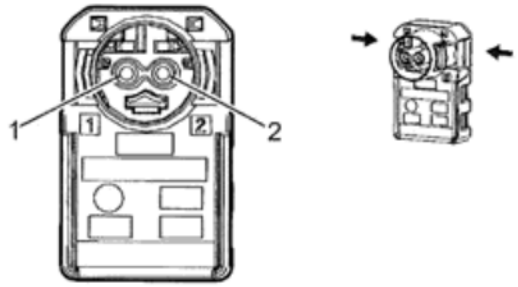
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available

E41 Engine Coolant Thermostat Heater (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-BU	6814	Thermostat Engine Cool Control	I	—
2	0.5	VT/L-BU	5291	Powertrain Main Relay Fused Supply (2)	I	—

F101 Passenger Instrument Panel Air Bag X1



2484234

Connector Part Information

Harness Type: Passenger Instrument Panel Air Bag
OEM Connector: 13262035
Service Connector: 19118659
Description: 2-Way F (L-BU With YE Case)

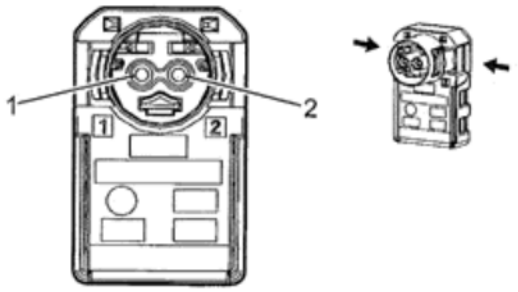
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly - 19118659	Not Available	Not Available	Service by Harness - See Part Catalog	Service by Harness - See Part Catalog	Not Available	Not Available

F101 Passenger Instrument Panel Air Bag X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/BK	3025	Passenger Instrument Panel Module Stage 1 High Control	I	—
2	0.5	D-BU	3024	Passenger Instrument Panel Module Stage 1 Low Control	I	—

F101 Passenger Instrument Panel Air Bag X2



2484237

Connector Part Information

Harness Type: Passenger Instrument Panel Air Bag
OEM Connector: 13262036
Service Connector: Service by Harness – See Part Catalog
Description: 2-Way F (YE with YE case)

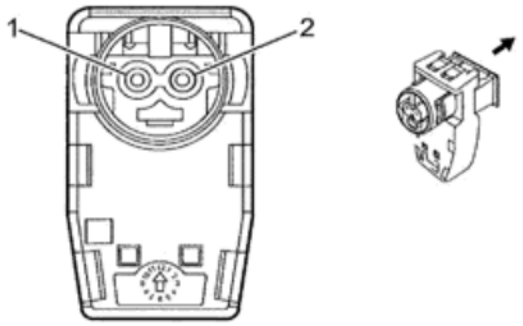
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	Not Available	Not Available	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog	Not Available	Not Available

F101 Passenger Instrument Panel Air Bag X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	3027	Passenger IP Module Stage 2 High Control	I	—
2	0.5	D-GN	3026	Passenger IP Module Stage 2 Low Control	I	—

F105L Roof Rail Air Bag - Left



2009065

Connector Part Information

Harness Type: Body
OEM Connector: PPI0001460
Service Connector: 19180245
Description: 2-Way F FPB90-1 Series (BK with YE Cover)

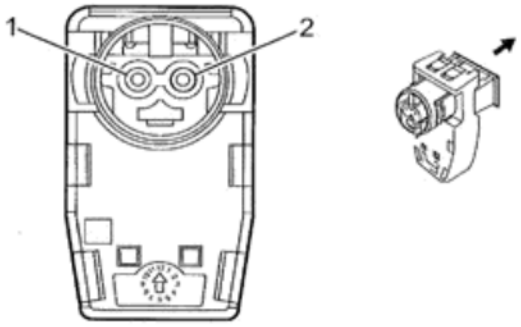
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not Available	Not Available	Not Available

F105L Roof Rail Air Bag - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/L-GN	5019	Left Front Head Curtain Module High Control	I	—
2	0.5	VT/OG	5020	Left Front Head Curtain Module Low Control	I	—

F105R Roof Rail Air Bag - Right



2009065

Connector Part Information

Harness Type: Body
OEM Connector: PPI0001460
Service Connector: 19180245
Description: 2-Way F FPB90-1 Series (BK with YE Cover)

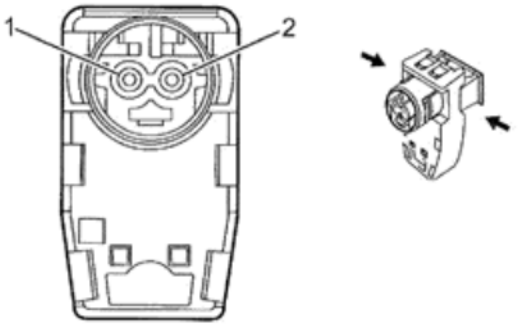
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not Available	Not Available	Not Available

F105R Roof Rail Air Bag - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/GY	5021	Right Front Head Curtain Module High Control	I	—
2	0.5	WH/OG	5022	Right Front Head Curtain Module Low Control	I	—

F106D Seat Air Bag - Driver



2368877

Connector Part Information

Harness Type: Driver Seat
OEM Connector: PPI0001721
Service Connector: 13355778
Description: 2-Way F 0.64 Series, Sealed (BK with YE cover)

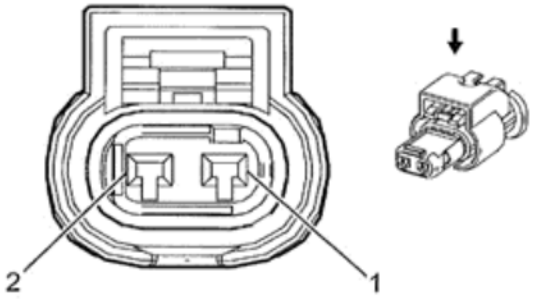
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

F106D Seat Air Bag - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BK	3068	Driver Side Impact Module High Control	I	—
2	0.5	BN	3069	Driver Side Impact Module Low Control	I	—

F106LR Seat Air Bag - Left Rear (AYF)



2474752

Connector Part Information

Harness Type: Body
OEM Connector: 1-1823608-4
Service Connector: 13587886
Description: 2-Way F 1.2 MCP Series, Sealed (YE with BK Inner Connector)

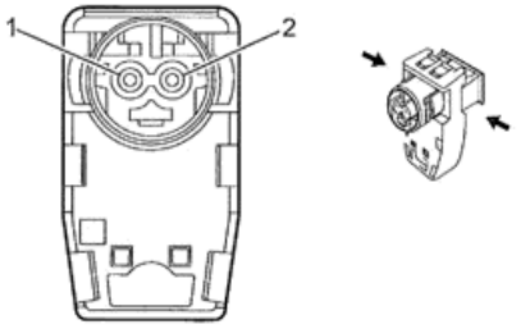
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575865	J-35616-64B (L-BU)	J-38125-215A	SAIT - A03GF - M064	27	P	P

F106LR Seat Air Bag - Left Rear (AYF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/BN	5223	Left Rear Side Impact SIR Inflator Supply Voltage	I	—
2	0.5	WH/BN	5224	Left Rear Side Impact SIR Inflator Control	I	—

F106P Seat Air Bag - Passenger



2368877

Connector Part Information

Harness Type: Passenger Seat
OEM Connector: PPI0001721
Service Connector: 13355778
Description: 2-Way F 0.64 Series, Sealed (BK with YE cover)

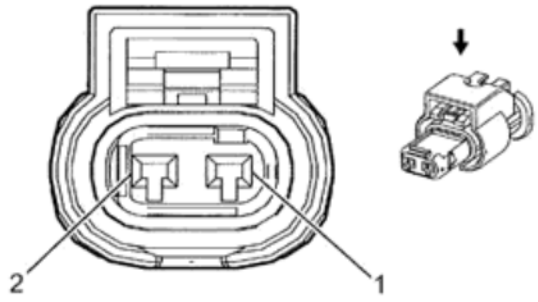
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

F106P Seat Air Bag - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BK	3066	Passenger Side Impact Module High Control	I	—
2	0.5	BN	3067	Passenger Side Impact Module Low Control	I	—

F106RR Seat Air Bag - Right Rear (AYF)



2474752

Connector Part Information

Harness Type: Body
OEM Connector: 1-1823608-4
Service Connector: 13587886
Description: 2-Way F 1.2 MCP Series, Sealed (YE with BK Inner Connector)

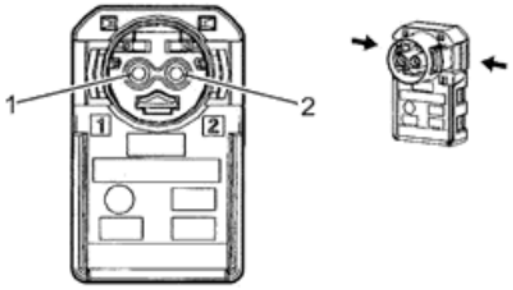
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575865	J-35616-64B (L-BU)	J-38125-215A	SAIT - A03GF - M064	27	P	P

F106RR Seat Air Bag - Right Rear (AYF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN	5225	Right Rear Side Impact SIR Inflator Supply Voltage	I	—
2	0.5	VT/YE	5226	Right Rear Side Impact SIR Inflator Control	I	—

F107 Steering Wheel Air Bag X1



2484237

Connector Part Information

Harness Type: SIR Coil
OEM Connector: 13262035
Service Connector: 19118659
Description: 2-Way F (L-GN with YE Case)

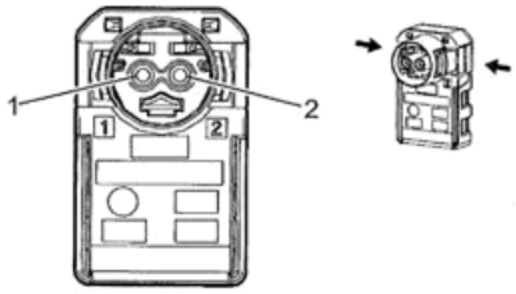
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

F107 Steering Wheel Air Bag X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	TN	3021	Steering Wheel Module Stage 1 High Control	I	—
2	0.5	BN	3020	Steering Wheel Module Stage 1 Low Control	I	—

F107 Steering Wheel Air Bag X2



2484237

Connector Part Information

Harness Type: SIR Coil
OEM Connector: 13262036
Service Connector: Service by Harness – See Part Catalog
Description: 2-Way F (YE with YE case)

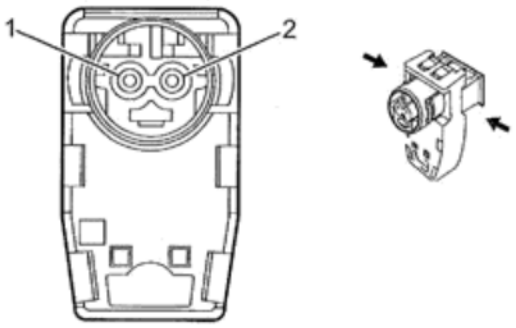
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

F107 Steering Wheel Air Bag X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	3023	Steering Wheel Module Stage 2 High Control	I	—
2	0.5	PK	3022	Steering Wheel Module Stage 2 Low Control	I	—

F112D Seat Belt Retractor Pretensioner - Driver



2368877

Connector Part Information

Harness Type: Body
OEM Connector: PPI0001461
Service Connector: 13395423
Description: 2-Way F FBP90-1 Series (BK with YE cover)

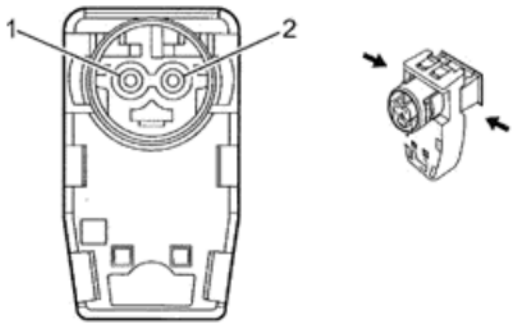
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

F112D Seat Belt Retractor Pretensioner - Driver

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

F112P Seat Belt Retractor Pretensioner - Passenger



2368877

Connector Part Information

Harness Type: Body
OEM Connector: PPI0001461
Service Connector: 13395423
Description: 2-Way F FBP90-1 Series (BK with YE cover)

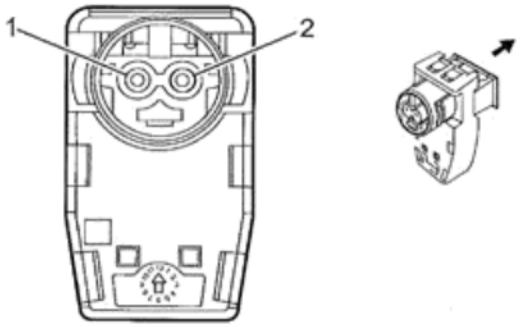
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

F112P Seat Belt Retractor Pretensioner - Passenger

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

F113D Seat Belt Anchor Pretensioner - Driver (A69)



2009065

Connector Part Information

Harness Type: Driver Seat
OEM Connector: E00030965
Service Connector: Service by Harness – See Part Catalog
Description: 2-Way F (BK with YE Cover)

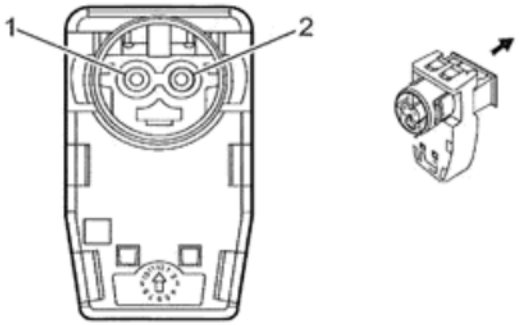
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

F113D Seat Belt Anchor Pretensioner - Driver (A69)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN	3481	Driver Seat Belt Anchor Pretensioner High Control	I	—
2	0.5	D-BU	3482	Driver Seat Belt Anchor Pretensioner Low Control	I	—

F113P Seat Belt Anchor Prestensioner - Passenger (A69)



2009065

Connector Part Information

Harness Type: Driver Seat
OEM Connector: E00030965
Service Connector: Service by Harness – See Part Catalog
Description: 2-Way F (BK with YE Cover)

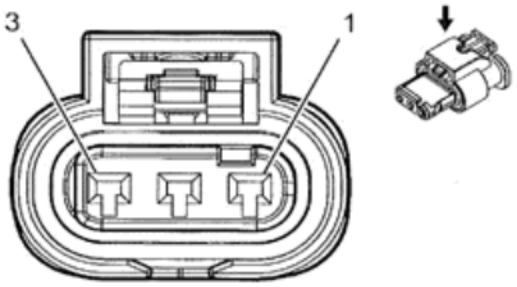
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

F113P Seat Belt Anchor Prestensioner - Passenger (A69)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU	3479	Passenger Seat Belt Anchor Pretensioner High Control	I	—
2	0.5	BN	3480	Passenger Seat Belt Anchor Pretensioner Low Control	I	—

F114D Knee Air Bag - Driver (AYF)



2750649

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 1-2141523-4
Service Connector: 19300220
Description: 3-Way F 1.2 MCON Series, Sealed (YE)

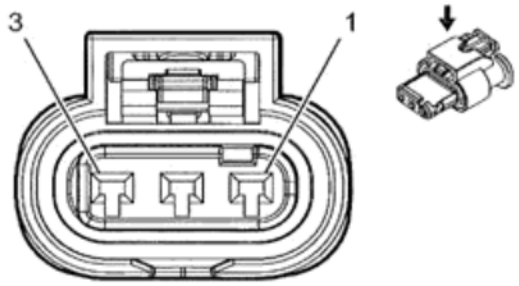
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575865	J-35616-64B (L-BU)	J-38125-215A	SAIT - A03GF - M064	27	P	P

F114D Knee Air Bag - Driver (AYF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/L-BU	3078	Driver Knee Module High Control	I	—
2	0.5	GY/OG	3079	Driver Knee Module Low Control	I	—
3	0.5	BK	1250	Ground	I	—

F114P Knee Air Bag - Passenger (AYF)



2750649

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 1-2141523-4
Service Connector: 19300220
Description: 3-Way F 1.2 MCON Series, Sealed (YE)

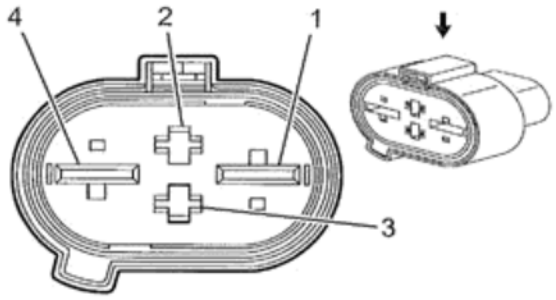
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575865	J-35616-64B (L-BU)	J-38125-215A	SAIT - A03GF - M064	27	P	P

F114P Knee Air Bag - Passenger (AYF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/L-BU	3076	Passenger Knee Module High Control	I	—
2	0.5	WH/OG	3077	Passenger Knee Module Low Control	I	—
3	0.5	BK	1250	Ground	I	—

G10 Cooling Fan Motor (LUV)



2002691

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 60431601
Service Connector: 19181240
Description: 4-Way F 5.8 Timer 9.5 Series, Sealed (BK)

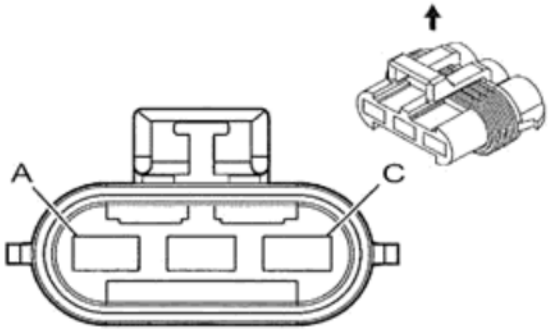
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13505804	J-35616-22 (RD)	J-38125-11A
II	Service by Connector Assembly – 19181240	J-35616-40 (BU)	J-38125-556

G10 Cooling Fan Motor (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	5	BK	150	Ground	I	—
2	3	WH/L-BU	409	Cooling Fan Motor Supply Voltage (1)	II	—
3	4	GY	532	Cooling Fan Motor Supply Voltage (2)	II	—
4	5	YE	5358	Cooling Fan Motor Supply Voltage (3)	I	—

G10 Cooling Fan Motor (LUW/LWE)



668832

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 12124685
Service Connector: 12116243
Description: 3-Way F Metri-Pack 630 Series, Sealed (BK)

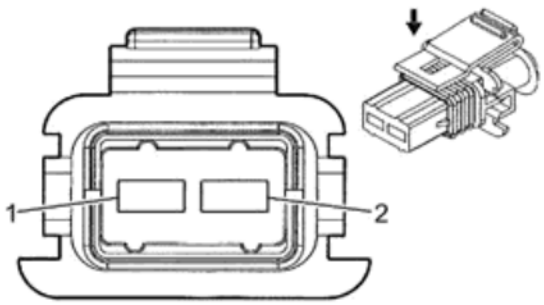
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 12116243	J-35616-42 (RD)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

G10 Cooling Fan Motor (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	3	GY	532	Cooling Fan Motor Supply Voltage (2)	I	—
B	2.5	WH/L-BU	409	Cooling Fan Motor Supply Voltage (1)	I	—
C	3	BK	150	Ground	I	—

G13 Generator X1



1522871

Connector Part Information

Harness Type: Engine
OEM Connector: 1928403137
Service Connector: 89046837
Description: 2-Way F Junior Power Timer Series, Sealed (BK)

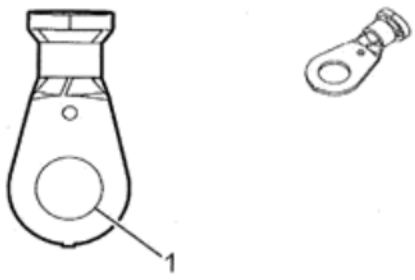
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 89046837	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available

G13 Generator X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-BU/WH	225	Generator Turn On Signal	I	—
2	0.5	GY	23	Generator Field Duty Cycle Signal	I	—

G13 Generator X2



2791579

Connector Part Information

Harness Type: Positive Battery Cable
OEM Connector: CBR68-012
Service Connector: Not Available
Description: Ring Terminal

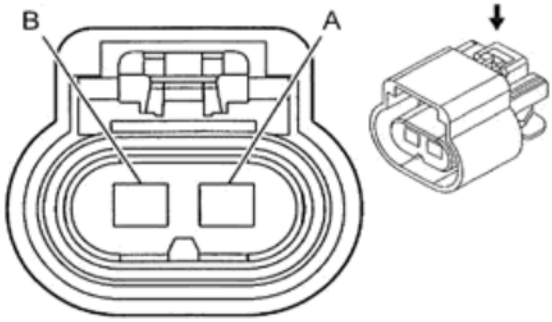
Terminal Part Information

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

G13 Generator X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	20	RD/YE	2	Battery Positive Voltage	I	—

G21 Secondary Air Injection Pump (LWE)



603213

Connector Part Information

Harness Type: Engine
OEM Connector: 13518845
Service Connector: 88988942
Description: 2-Way F GT 280 Series, Sealed (BK)

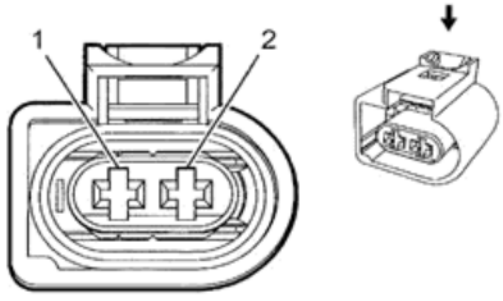
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	J-38125-553	15392777	6	B	5

G21 Secondary Air Injection Pump (LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	4	BN/YE	78	Air Injection Reaction Pump Supply Voltage	I	-
B	4	BK	1750	Ground	I	-

G24 Windshield Washer Pump



2474738

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 1-1355200-1
Service Connector: 13576532
Description: 2-Way F MCP 2.8 Series (BK)

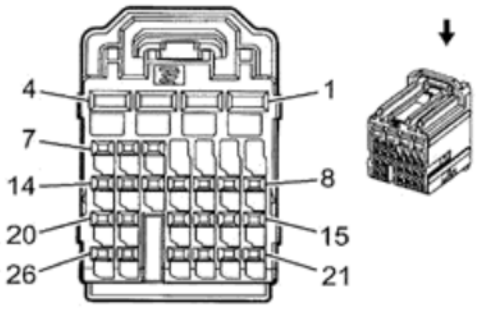
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 13576532	J-35616-35 (VT)	J-38125-557	Not Available	Not Available	Not Available	Not Available

G24 Windshield Washer Pump

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/VT	228	Windshield Washer Pump Control	I	—
2	0.5	L-BU/VT	392	Rear Window Washer Pump Control	I	Hatchback
	0.5	L-BU/VT	392	Windshield Washer Pump Return		Notchback

K9 Body Control Module X1



2537268

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 2098067-1
Service Connector: 19151262
Description: 26-Way F 0.64, 2.8 Series (NA)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451870	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451882	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
III	12451869	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

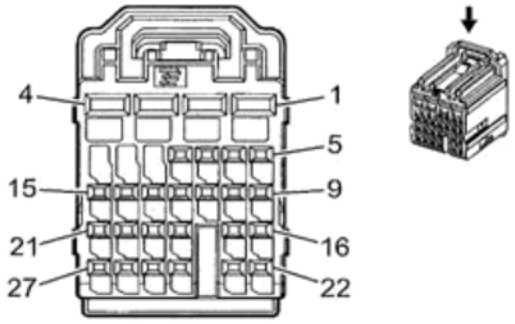
K9 Body Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	BK	1350	Ground	I	—
2	2.5	RD/YE	2340	Battery Positive Voltage	I	—

K9 Body Control Module X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
3	2.5	RD/BN	2240	Battery Positive Voltage	I	—
4	1	RD/GY	2140	Battery Positive Voltage	II	—
5	0.35	WH	6816	Indicator Dimming Control	III	—
6	0.35	L-GN/WH	2270	Rear Window Washer Relay Control	III	—
7–8	-	-	-	Not Occupied	-	-
9	0.35	WH/BN	7555	Lighting Control Switch Signal	III	—
10	0.5	BN/YE	762	A/C Request Signal	III	—
11	0.35	L-GN/BN	306	Headlamp Switch Headlamps Off Signal Control	III	UTJ
12–13	-	-	-	Not Occupied	-	-
14	0.5	YE/BK	713	Defrost/Heater Mode Valve Position Sensor Signal	III	—
15	-	-	-	Not Occupied	-	-
16	0.35	WH/VT	103	Headlamp Switch On Signal	III	—
17	0.35	GY/YE	7543	Hazard LED Dimming Signal	III	—
18	0.35	YE/BN	3265	Child Security Lock Switch Signal	III	—
19	0.35	BK/BN	5360	Low Reference	III	—
20	-	-	-	Not Occupied	-	-
21	0.35	GY	728	Security Indicator Control	III	UTJ
22	0.35	L-GN/GY	13	Headlamp Switch Park Lamp Signal	III	—
23	0.5	BN/L-BU	683	Rear Defog Indicator Supply Voltage	III	—
24	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	III	—
25	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	III	—
26	0.35	L-BU/WH	3275	Remote Function Actuator Receive Signal	III	—

K9 Body Control Module X2



2537269

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 2098067-2
Service Connector: 19151266
Description: 27-Way F 0.64, 2.8 Series (BU)

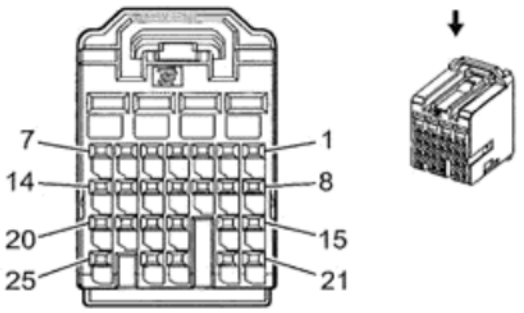
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451869	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451882	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
III	12451870	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

K9 Body Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	RD/WH	2040	Battery Positive Voltage	I	—
2	2	BK	1350	Ground	II	—
3	1.5	RD/L-GN	2440	Battery Positive Voltage	III	—
4	2.5	RD/WH	2740	Battery Positive Voltage	II	—
5–6	-	-	-	Not Occupied	-	-
7	0.35	L-BU/YE	5361	Brake Apply Sensor Signal	III	—
8	0.35	YE	6817	LED Backlight Dimming Control	III	—
9	-	-	-	Not Occupied	-	-
10	0.35	WH/L-BU	278	Ambient Light Sensor Signal	III	UTJ
11	0.5	VT/YE	5526	Tap Up/Tap Down Switch Signal	III	MH8 or MH9
12	0.35	BN/L-BU	391	Rear Window Wiper Switch Signal	III	—
13	0.35	WH	5359	Brake Apply Sensor Supply Voltage	III	—
14	0.35	L-BU/VT	1788	Traction Control Switch Signal (1)	III	—
15	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	III	—
16	0.35	GY	3273	Remote Function Actuator Return	III	—
17	-	-	-	Not Occupied	-	-
18	0.5	L-GN/L-BU	761	Blower Speed Feedback Signal	III	—
19	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	III	—
20–21	-	-	-	Not Occupied	-	-
22	0.35	L-GN	5060	Low Speed GMLAN Serial Data	III	—
23	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	III	—
24	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	III	—
25	0.35	GY/WH	3272	Remote Function Actuator Supply Voltage	III	—
26	0.35	L-GN/WH	111	Hazard Switch Signal	III	—
27	0.35	YE/L-GN	3274	Remote Function Actuator Transmit Signal	III	—

K9 Body Control Module X3



2537274

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 2098067-7
Service Connector: 13576037
Description: 25-Way F 0.64/2.8 Series (GN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13582297	J-35616-35 (VT)	J38125-215A	Not Available	Not Available	Not Available	Not Available

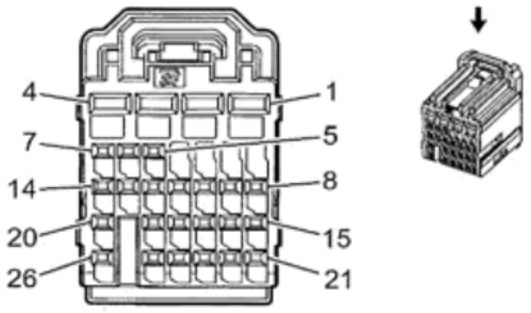
K9 Body Control Module X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	L-GN/GY	3277	Vehicle Anti-Theft System Immobilizer Return	I	—
2	0.35	L-GN/VT	7533	Linear Interconnect Network Bus 11	I	—
3	0.35	GY/BK	3276	Vehicle Anti-Theft System Immobilizer Supply Voltage	I	—
4	0.35	YE	7556	Lighting Control Switch Reference	I	—
5	0.35	VT/YE	4	Accessory Voltage	I	—
6	0.35	VT/BK	3	Run/Crank Ignition 1 Voltage	I	—
7	0.5	VT/YE	143	Accessory Voltage	I	MH8 or MH9
8	0.35	L-GN	6818	Steering Wheel Resistor Ladder Signal #1	I	—
9	0.35	BN/L-GN	1884	Cruise Control Set/Coast/Resume/Accelerate Switch Signal	I	—
10	0.35	BK/GY	6009	Low Reference	I	—
11	0.35	WH	524	Headlamp Dimmer Switch High Beam Signal	I	—
12	0.35	WH/L-GN	663	Hazard Switch Left Turn Signal	I	—
13	0.35	YE/L-BU	1714	Windshield Wiper Switch Low Signal	I	—
14	-	-	-	Not Occupied	-	-
15	0.35	WH/VT	1020	Off/Run/Crank Voltage	I	—
16	-	-	-	Not Occupied	-	-
17	0.35	YE/BN	307	Headlamp Switch Flash To Pass Signal	I	—
18	0.35	L-GN/WH	3287	Horn Switch Signal	I	—
19	0.35	GY	5697	Child Lockout Indicator	I	—

K9 Body Control Module X3 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	0.35	GY	1715	Windshield Wiper Switch High Signal	I	—
21	-	-	-	Not Occupied	-	-
22	0.35	WH/BK	1073	Ignition Key Resistor Signal	I	—
23	-	-	-	Not Occupied	-	-
24	0.35	VT/L-BU	664	Hazard Switch Right Turn Signal	I	—
25	0.35	WH/BK	94	Windshield Washer Switch Signal	I	—

K9 Body Control Module X4



2537270

Connector Part Information

Harness Type: Body
OEM Connector: 2098067-3
Service Connector: 19151261
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	Core Crimp	Insulation Crimp
I	12451869	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451882	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
III	12451883	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

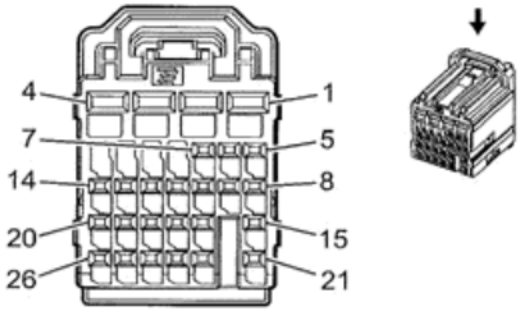
K9 Body Control Module X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE	312	Right Headlamp Low Beam Supply Voltage	I	—
2	0.75	YE	712	Left Headlamp Low Beam Supply Voltage	I	—
3	0.75	L-GN/VT	1315	Right Front Turn Signal Lamp Supply Voltage	I	—
4	0.75	L-BU/VT	1335	Right Rear Turn Signal Lamp Supply Voltage	I	—
5	0.5	GY/BN	309	Right Park Lamp Supply Voltage	II	—
6	0.5	VT/GY	709	Left Park Lamp Supply Voltage	II	—
7	0.75	BN/L-BU	2509	Left Rear Park Lamp Supply Voltage	II	—

K9 Body Control Module X4 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
8	0.75	VT/YE	3267	Child Security Lock Relay Control	II	—
9	0.35	BN/VT	193	Rear Defog Relay Control	II	—
10	0.35	YE	5420	Rear Wiper Motor Relay Coil Control	II	Hatchback
11	0.5	BN/YE	820	CHMSL Supply Voltage	II	—
12	0.35 0.35	L-GN/BN L-GN/BN	5706 6188	Endgate Latch Relay Supply Voltage Lift Glass/Trunk Motor Release Control	II	Hatchback Notchback
13	0.5	L-GN/YE	6846	Rear License Lamp Supply Voltage	II	—
14	0.35	BN/GY	2268	Windshield Washer Relay Control	II	—
15	0.35	L-GN/VT	5486	Run Relay Coil Control	II	—
16	0.35	GY	91	Windshield Wiper Motor Relay Coil Supply Voltage	II	—
17	0.35	BN/L-GN	196	Windshield Wiper Motor Park Switch Signal	II	—
18	0.5	WH/YE	5075	Current Sensor Signal	II	—
19	-	-	-	Not Occupied	-	-
20	0.35	RD/BN	440	Battery Positive Voltage	II	—
21	0.5	L-BU/VT	5076	Current Sensor Supply Voltage	II	—
22	0.35	VT/YE	5985	Accessory Wakeup Serial Data	II	—
23	0.35	WH/L-BU	5986	Serial Data Communication Enable	II	—
24	0.5	BN/L-GN	109	Hood Ajar Switch Signal	II	—
25	-	-	-	Not Occupied	-	-
26	0.5	BK	350	Ground	II	—

K9 Body Control Module X5



2537271

Connector Part Information

Harness Type: Body
OEM Connector: 2098067-4
Service Connector: 19151263
Description: 26-Way F 0.64, 2.8 Series (BN)

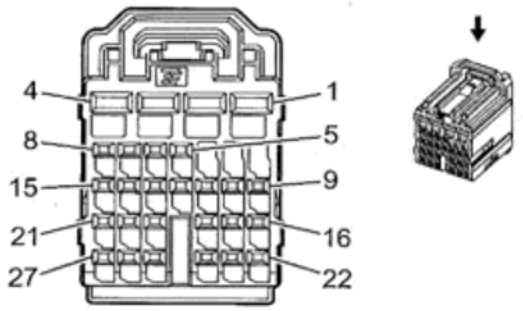
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451869	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451882	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
III	12451884	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
IV	12451883	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

K9 Body Control Module X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	L-BU/WH	1334	Left Rear Turn Signal Lamp Supply Voltage	I	—
2	0.75	L-BU/WH	1314	Left Front Turn Signal Lamp Supply Voltage	I	—
3	1	RD/VT	2640	Battery Positive Voltage	I	—
4	1	RD/L-BU	2540	Battery Positive Voltage	I	—
5	-	-	-	Not Occupied	-	-
6	0.5	BK/VT	5077	Low Reference	II	—
7	0.75	BN/GY	2609	Right Rear Park Lamp Supply Voltage	II	—
8–11	-	-	-	Not Occupied	-	-
12	0.5	WH/L-BU	6311	Cruise/ETC/TCC Brake Signal	II	—
13	0.5	BN/WH	1317	Fog Lamp Relay Control	II	—
14	0.35	BN/VT	5486	Run Relay Coil Control	II	—
15–17	-	-	-	Not Occupied	-	-
18	0.35	BN/VT	1969	Headlamp High Beam Relay Control	II	—
19	0.35	BN/WH	28	Horn Relay Control	II	—
20	0.35	YE	5704	Endgate Latch Relay Coil Control	II	Hatchback
21–23	-	-	-	Not Occupied	-	-
24	0.35	WH/VT	860	Front Windshield Wiper Switch High Signal	II	—
25–26	-	-	-	Not Occupied	-	-

K9 Body Control Module X6



2537272

Connector Part Information

Harness Type: Body
OEM Connector: 2098067-5
Service Connector: 19151264
Description: 27-Way F 0.64, 2.8 Series (PK)

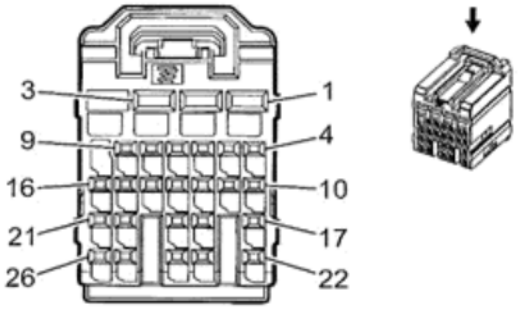
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451869	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451882	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
III	12451870	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

K9 Body Control Module X6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY	5911	Door Lock Actuator Lock Control 2	I	—
2	0.75	GY	295	Door Lock Actuator Lock Control	I	—
3	2	BK	550	Ground	II	—
4	0.75	BN/YE	294	Door Lock Actuator Unlock Control	I	—
5	0.35	VT/GY	1303	Lift Gate Ajar Switch Signal (1)	III	Hatchback
6	0.35	VT/GY	5965	Driver Door Lock Status Indicator Supply Voltage	III	—
7	0.5	YE/GY	230	Instrument Panel Lamp Dimming Control	III	—
8–9	-	-	-	Not Occupied	-	-
10	0.35	L-GN/YE	6134	Linear Interconnect Network Bus 3	III	AXG
11-12	-	-	-	Not Occupied	-	-
13	0.5	GY	746	Right Front Door Ajar Switch Signal	III	—
14	0.35	GY/L-GN	5053	Winter Mode Switch Signal	III	NT7
15	0.35	YE/L-BU	5797	Rear Closure Handle Switch Open Signal	III	Hatchback
16–17	-	-	-	Not Occupied	-	-
18	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	III	—
19	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	III	—
20–21	-	-	-	Not Occupied	-	-
22	0.5	GY	745	Left Front Door Ajar Switch Signal	III	—
23	0.35	BK/GY	6138	Low Reference	III	—
24	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	III	—
25	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	III	—
26	-	-	-	Not Occupied	-	-
27	0.5	GY	747	Left Rear Door Ajar Switch Signal	III	—

K9 Body Control Module X7



2537273

Connector Part Information

Harness Type: Body
OEM Connector: 2098067-6
Service Connector: 19151267
Description: 26-Way F 0.64, 2.8 Series (GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451869	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451882	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

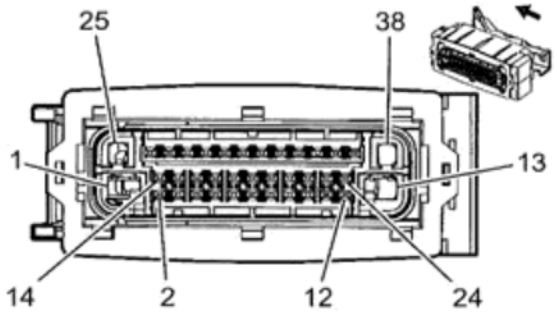
K9 Body Control Module X7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY	157	Interior Lamp Control	I	—
2	0.75	WH/BN	6815	Inadvertent Power Control	I	—
3	0.75	L-GN/WH	24	Backup Lamp Supply Voltage	I	—
4	0.5	VT/YE	3267	Child Security Lock Relay Control	II	—
5	-	-	-	Not Occupied	-	-
6	0.5	VT/BK	7553	Park Lock Solenoid Control	II	—
7	0.5	L-GN/GY	737	Trunk Lamp Control	II	—
8–10	-	-	-	Not Occupied	-	-
11	0.5	GY	748	Right Rear Door Ajar Switch Signal	II	—
12	0.35	BN/WH	3269	Child Security Lock Motor Status Signal Left Rear	II	—
13–14	-	-	-	Not Occupied	-	-
15	0.5	L-BU/VT	1134	Park Brake Switch Signal	II	—
16	0.35	GY/VT	755	RAP Relay Coil Control	II	—
17	-	-	-	Not Occupied	-	-
18	0.35	GY/BK	3268	Child Security Lock Motor Status Signal Right Rear	II	—
19–21	-	-	-	Not Occupied	-	-
22	0.5	WH/BN	2212	Auxiliary A/C Request Indicator Signal	II	—
23	0.35	L-GN	5060	Low Speed GMLAN Serial Data	II	AY0

K9 Body Control Module X7 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
24	0.5	L-BU/WH	292	Rear Defog Switch Signal	II	—
25	-	-	-	Not Occupied	-	-
26	0.35	GY	6137	EVAP Core Temperature Sensor Signal	II	—

K17 Electronic Brake Control Module



2268704

Connector Part Information

Harness Type: Body
OEM Connector: 0-1670119-1
Service Connector: 13581097
Description: 38-Way F 0.64, 2.8, 5.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451924	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451871	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
III	12451925	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

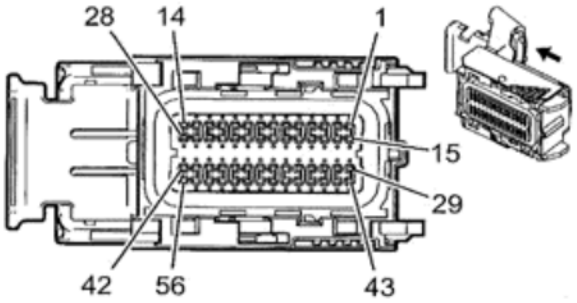
K17 Electronic Brake Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4	RD/YE	240	Battery Positive Voltage	I	—
2–3	—	—	—	Not Occupied	—	—
4	0.5	L-GN/BN	2087	Combined Vehicle Inertial Sensor Supply Voltage	II	—
5–11	—	—	—	Not Occupied	—	—
12	0.5	L-BU/YE	6105	High Speed GMLAN Serial Data (+) (2)	II	—
13	4	BK	1450	Ground	I	—
14	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	II	—
15–17	—	—	—	Not Occupied	—	—
18	0.5	YE	872	Wheel Speed Sensor Signal Right Front	II	—
19	0.5	VT	882	Wheel Speed Sensor Signal Right Rear	II	—

K17 Electronic Brake Control Module (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	0.5	BK/L-BU	885	Low Reference	II	—
21	0.5	BK/GY	873	Low Reference	II	—
22	0.5	L-GN/GY	333	Brake Fluid Level Sensor Signal	II	—
23	—	—	—	Not Occupied	—	—
24	0.5	WH	6106	High Speed GMLAN Serial Data (-) (2)	II	—
25	2.5	RD/WH	140	Battery Positive Voltage	III	—
26	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	II	—
27–28	—	—	—	Not Occupied	—	—
29	0.35	WH/L-BU	5986	Serial Data Communication Enable	II	—
30	—	—	—	Not Occupied	—	—
31	0.5	BK/YE	833	Low Reference	II	—
32	0.5	BK/VT	883	Low Reference	II	—
33	0.5	L-BU	884	Wheel Speed Sensor Signal Left Rear	II	—
34	0.5	GY	830	Wheel Speed Sensor Signal Left Front	II	—
35–37	—	—	—	Not Occupied	—	—
38	2.5	BK	1450	Ground	III	—

K20 Engine Control Module X1 (LUV)



2845590

Connector Part Information

Harness Type: Engine
OEM Connector: 34576-1903
Service Connector: 13395411
Description: 56-Way F 0.64 Series, Sealed (BU)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451872	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

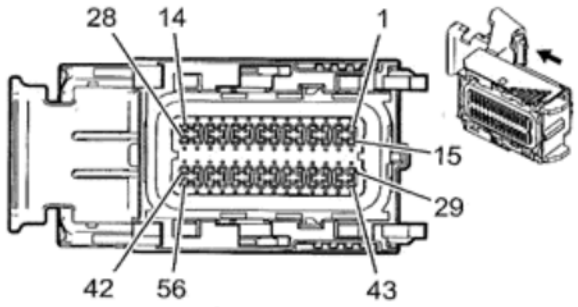
K20 Engine Control Module X1 (LUV)

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	—
4–7	—	—	—	Not Occupied	—	—
8	0.5	BK/YE	6014	Barometric Pressure Sensor Low Reference	I	—
9	0.5	L-BU/GY	433	Barometric Pressure Sensor Signal	I	—
10	0.5	YE/WH	1161	Accelerator Pedal Position Signal (1)	I	—
11	0.5	L-GN	1533	Turbo Boost Pressure Sensor Signal	I	—
12	0.5	L-GN	380	A/C Refrigerant Pressure Sensor Signal	I	C60
13	0.5	BK/BN	5514	A/C Refrigerant Pressure Sensor Low Reference	I	C60
14–15	—	—	—	Not Occupied	—	—
16	0.5	BN/RD	1274	Accelerator Pedal Position 5 Volt Reference (2)	I	—
17	—	—	—	Not Occupied	—	—
18	0.5	VT/YE	5985	Accessory Wakeup Serial Data	I	—
19	0.5	VT/GY	139	Run/Crank Ignition 1 Voltage	I	—
20	0.75	RD/WH	140	Battery Positive Voltage	I	—
21–22	—	—	—	Not Occupied	—	—
23	0.5	WH/RD	2932	Barometric Pressure Sensor (5) Volt Reference	I	—
24	0.5	WH/RD	1164	Accelerator Pedal Position 5 Volt Reference (1)	I	—
25	0.5	BN/RD	5639	Turbo Boost Pressure Sensor 5 Volt Reference	I	—
26	0.5	BN/RD	2700	A/C Pressure Sensor 5 Volt Reference	I	C60
27	0.5	YE	447	Starter Relay Coil Control	I	—
28	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	I	—
29	0.5	L-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	0.5	BK/L-BU	6813	Coolant Temperature Sensor #2 Low Reference	I	—
33	0.5	WH/L-BU	6311	Cruise/ETC/TCC Brake Signal	I	—
34	0.5	WH/GY	1786	Transmission Park/Neutral Signal (1)	I	MH8
35–37	—	—	—	Not Occupied	—	—
38	0.5	BK/L-BU	1271	Accelerator Pedal Position Low Reference (1)	I	—
39	0.5	BK/L-GN	5638	Turbo Boost Pressure Sensor Low Reference	I	—
40	0.5	YE	5991	Powertrain Relay Coil Control	I	—
41	0.5	VT/L-BU	5294	Powertrain Main Relay Fused Supply (5)	I	—
42	—	—	—	Not Occupied	—	—
43	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	I	—
44	—	—	—	Not Occupied	—	—
45	0.5	BN/VT	472	Intake Air Temperature Sensor Signal	I	—
46	0.5	YE/BK	3000	Coolant Temperature Sensor #2 Signal	I	—
47	0.5	L-BU/WH	225	Generator Turn On Signal	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	C60

K20 Engine Control Module X1 (LUV) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
54	0.5	BN/YE	473	High Speed Cooling Fan Relay Control	I	—
55	—	—	—	Not Occupied	—	—
56	0.5	WH	1310	EVAP Canister Vent Solenoid Control	I	—

K20 Engine Control Module X1 (LUW/LWE)



2845590

Connector Part Information

Harness Type: Engine
OEM Connector: 34576-1903
Service Connector: 13395411
Description: 56-Way F 0.64 Series, Sealed (BU)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451872	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

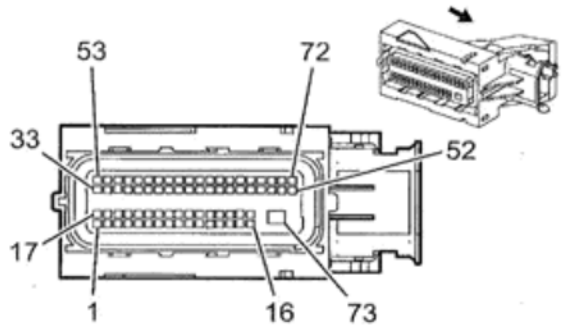
K20 Engine Control Module X1 (LUW/LWE)

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	—
4–7	—	—	—	Not Occupied	—	—
8	0.5	BK/YE	6014	Barometric Pressure Sensor Low Reference	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	YE/WH	1161	Accelerator Pedal Position Signal (1)	I	—
11	0.5	L-BU/GY	433	Barometric Pressure Sensor Signal	I	—
12	0.5	L-GN	380	Wheel Speed Sensor Signal Left Front	I	C60
13	0.5	BK/BN	5514	A/C Refrigerant Pressure Sensor Low Reference	I	C60
14–15	—	—	—	Not Occupied	—	—
16	0.5	BN/RD	1274	Accelerator Pedal Position 5 Volt Reference (2)	I	—
17	—	—	—	Not Occupied	—	—

K20 Engine Control Module X1 (LUW/LWE) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
18	0.5	VT/YE	5985	Accessory Wakeup Serial Data	I	—
19	0.5	VT/GY	139	Run/Crank Ignition 1 Voltage	I	—
20	0.75	RD/WH	140	Battery Positive Voltage	I	—
21–23	—	—	—	Not Occupied	—	—
24	0.5	WH/RD	1164	Accelerator Pedal Position 5 Volt Reference (1)	I	—
25	0.5	WH/RD	2932	Barometric Pressure Sensor (5) Volt Reference	I	—
26	0.5	BN/RD	2700	A/C Pressure Sensor 5 Volt Reference	I	C60
27	0.5	YE	447	Starter Relay Coil Control	I	—
28	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	I	—
29	0.5	L-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	0.5	BK/L-BU	6813	Coolant Temperature Sensor #2 Low Reference	I	—
33	0.5	WH/L-BU	6311	Cruise/ETC/TCC Brake Signal	I	—
34	0.5	WH/GY	1786	Transmission Park/Neutral Signal (1)	I	MH8
35–37	—	—	—	Not Occupied	—	—
38	0.5	BK/L-BU	1271	Accelerator Pedal Position Low Reference (1)	I	—
39	—	—	—	Not Occupied	—	—
40	0.5	YE	5991	Powertrain Relay Coil Control	I	—
41	0.5	L-GN/VT	335	Low Speed Cooling Fan Relay Control	I	—
42	—	—	—	Not Occupied	—	—
43	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	I	—
44	—	—	—	Not Occupied	—	—
45	0.5	BN/VT	472	Intake Air Temperature Sensor Signal	I	—
46	0.5	YE/BK	3000	Coolant Temperature Sensor #2 Signal	I	—
47	0.5	L-BU/WH	225	Generator Turn On Signal	I	—
48–50	—	—	—	Not Occupied	—	—
51	0.5	L-BU/BN	421	Air Injection Reaction Solenoid Relay Coil Control	I	LWE
52	0.5	BN/WH	419	Check Engine Indicator Control	I	—
53	0.5	WH/GY	459	A/C Compressor Clutch Relay Control	I	C60
54	0.5	BN/YE	473	High Speed Cooling Fan Relay Control	I	—
55	0.5	L-GN/L-BU	436	Air Injection Reaction Pump Relay Coil Control	I	LWE
56	0.5	WH	1310	EVAP Canister Vent Solenoid Control	I	—

K20 Engine Control Module X2 (LUV)



1968294

Connector Part Information

Harness Type: Engine
OEM Connector: 34566-1303
Service Connector: 13574947
Description: 73-Way F 0.64.2.8 Series, Sealed (BK with BK Terminal Position Assurance Lock)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451872	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451926	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

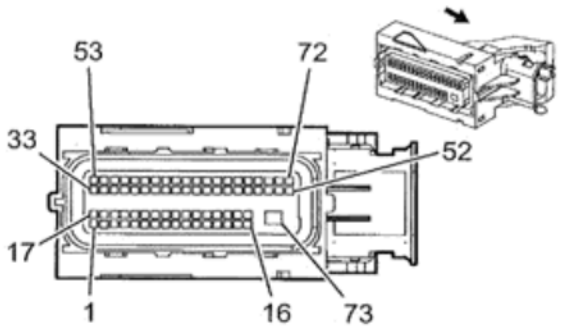
K20 Engine Control Module X2 (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-BU/VT	2121	Ignition Control (1)	I	—
2	0.75	L-GN/YE	1744	Fuel Injector Control (1)	I	—
3	0.75	L-GN/YE	1746	Fuel Injector Control (3)	I	—
4	0.75	BN/YE	844	Fuel Injector Control (4)	I	—
5	0.75	YE/WH	1745	Fuel Injector Control (2)	I	—
6–9	—	—	—	Not Occupied	—	—
10	0.5	GY/L-BU	5282	Camshaft Phaser Exhaust Solenoid (1)	I	—
11	0.5	VT/BN	5284	Camshaft Phaser Intake Solenoid (1)	I	—
12	—	—	—	Not Occupied	—	—
13	0.75	VT/L-BU	5290	Powertrain Main Relay Fused Supply (1)	I	—
14	0.5	L-BU	6814	Thermostat Engine Cool Control	I	—
15	0.75	YE	581	Throttle Actuator Control Open	I	—
16	0.75	BN/WH	582	Throttle Actuator Control Close	I	—
17	0.5	L-GN/L-BU	2123	Ignition Control (3)	I	—
18–19	—	—	—	Not Occupied	—	—
20	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	I	—
21	0.5	GY/BK	6267	Camshaft CAM X Ground	I	—
22–23	—	—	—	Not Occupied	—	—

K20 Engine Control Module X2 (LUV) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
24	0.5	L-GN/BK	6266	Camshaft CAM W Ground	I	—
25–27	—	—	—	Not Occupied	—	—
28	0.75	VT/L-BU	5290	Powertrain Main Relay Fused Supply (1)	I	—
29	0.5	BK/L-BU	6783	Exhaust Gas Temperature Sensor 2 Low Reference	I	—
30	0.5	BK/VT	6754	Cam Phaser X Return Low Reference	I	—
31	0.5	YE/L-BU	231	Oil Pressure Switch Signal	I	—
32	—	—	—	Not Occupied	—	—
33	0.5	YE/L-BU	2124	Ignition Control (4)	I	—
34	—	—	—	Not Occupied	—	—
35	0.5	BK/L-BU	2129	Ignition Control Low Reference Bank 1	I	—
36	0.5	VT/L-BU	6270	Crankshaft 60X Sensor Voltage	I	—
37	0.5	GY/YE	6457	Camshaft CAM X Supply Voltage	I	—
38–39	—	—	—	Not Occupied	—	—
40	0.5	GY/L-BU	6259	Camshaft CAM W Supply Voltage	I	—
41–42	—	—	—	Not Occupied	—	—
43	0.5	GY/RD	416	Throttle Position Sensor 5 Volt Reference	I	—
44	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	I	—
45	—	—	—	Not Occupied	—	—
46	0.5	GY	5641	Turbo Boost Pressure Sensor Temperature Signal	I	—
47	0.5	YE/BN	1664	Heated Oxygen Sensor Low Signal Bank 1 Sensor (1)	I	—
48	—	—	—	Not Occupied	—	—
49	0.5	BK/YE	1716	Knock Sensor Low Reference (1)	I	—
50–52	—	—	—	Not Occupied	—	—
53	0.5	L-BU/WH	2122	Ignition Control (2)	I	—
54–55	—	—	—	Not Occupied	—	—
56	0.5	L-GN	6271	Crankshaft 60X Sensor Signal	I	—
57	0.5	VT/BK	6264	Camshaft CAM X Signal	I	—
58–59	—	—	—	Not Occupied	—	—
60	0.5	YE/VT	6265	Camshaft CAM W Signal	I	—
61–62	—	—	—	Not Occupied	—	—
63	0.5	BN/L-GN	485	Throttle Position Sensor Signal (1)	I	—
64	—	—	—	Not Occupied	—	—
65	0.5	BN/L-BU	486	Throttle Position Sensor Signal (2)	I	—
66	—	—	—	Not Occupied	—	—
67	0.5	L-GN	1665	Heated Oxygen Sensor High Signal Bank 1 Sensor (1)	I	—
68	—	—	—	Not Occupied	—	—
69	0.5	VT/GY	496	Knock Sensor Signal (1)	I	—
70–71	—	—	—	Not Occupied	—	—
72	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor (1)	I	—
73	2.5	BK	1750	Ground	I	—

K20 Engine Control Module X2 (LUW/LWE)



1968294

Connector Part Information

Harness Type: Engine
OEM Connector: 34566-1303
Service Connector: 13574947
Description: 73-Way F 0.64.2.8 Series, Sealed (BK with BK Terminal Position Assurance Lock)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451872	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451926	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

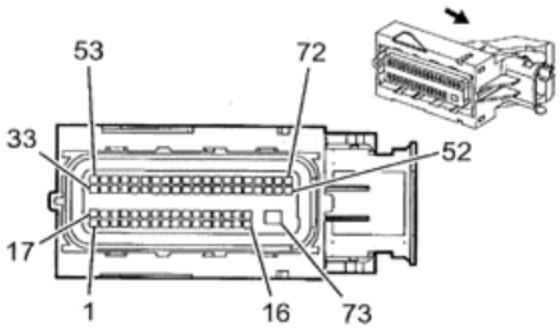
K20 Engine Control Module X2 (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-BU/VT	2121	Ignition Control (1)	I	—
2	0.75	L-GN/YE	1744	Fuel Injector Control (1)	I	—
3	0.75	BN/VT	1746	Fuel Injector Control (3)	I	—
4	0.75	BN/YE	844	Fuel Injector Control (4)	I	—
5	0.75	YE/WH	1745	Fuel Injector Control (2)	I	—
6–9	—	—	—	Not Occupied	—	—
10	0.5	GY/L-BU	5282	Camshaft Phaser Exhaust Solenoid (1)	I	—
11	0.5	BN/VT	5284	Camshaft Phaser Intake Solenoid (1)	I	—
12	—	—	—	Not Occupied	—	—
13	0.75	VT/L-BU	5290	Powertrain Main Relay Fused Supply (1)	I	—
14	0.5	L-BU	6814	Thermostat Engine Cool Control	I	—
15	0.75	YE	581	Throttle Actuator Control Open	I	—
16	0.75	BN/WH	582	Throttle Actuator Control Close	I	—
17	0.5	L-GN/L-BU	2123	Ignition Control (3)	I	—
18–19	—	—	—	Not Occupied	—	—
20	0.5	BK/L-GN	6272	Crankshaft Position Sensor Low Reference	I	—
21	0.5	GY/BK	6267	Camshaft Position Sensor–Exhaust Low Reference	I	—
22–23	—	—	—	Not Occupied	—	—

K20 Engine Control Module X2 (LUW/LWE) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
24	0.5	L-GN/BK	6266	Camshaft Position Sensor–Intake Low Reference	I	—
25–27	—	—	—	Not Occupied	—	—
28	0.75	VT/L-BU	5290	Powertrain Main Relay Fused Supply (1)	I	—
29	0.5	BK/BN	6753	Camshaft Phaser Intake Solenoid Low	I	—
30	0.5	BK/VT	6754	Camshaft Phaser Exhaust Solenoid Low	I	—
31	0.5	YE/L-BU	231	Oil Pressure Switch Signal	I	—
32	—	—	—	Not Occupied	—	—
33	0.5	YE/L-BU	2124	Ignition Control (4)	I	—
34	—	—	—	Not Occupied	—	—
35	0.5	BK/GY	453	Ignition Control Low Reference Bank 1	I	—
36	0.5	VT/L-BU	6270	Crankshaft Position Sensor 5 Volt Reference	I	—
37	0.5	GY/YE	6457	Camshaft Position Sensor–Exhaust 5 Volt Reference	I	—
38–39	—	—	—	Not Occupied	—	—
40	0.5	GY/L-BU	6259	Camshaft Position Sensor–Intake 5 Volt Reference	I	—
41–42	—	—	—	Not Occupied	—	—
43	0.5	GY/RD	416	Throttle Position Sensor 5 Volt Reference	I	—
44	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	I	—
45–46	—	—	—	Not Occupied	—	—
47	0.5	YE/BN	1664	Heated Oxygen Sensor Low Signal Bank 1 Sensor (1)	I	—
48	—	—	—	Not Occupied	—	—
49	0.5	BK/YE	1716	Knock Sensor Low Reference (1)	I	—
50–52	—	—	—	Not Occupied	—	—
53	0.5	L-BU/WH	2122	Ignition Control (2)	I	—
54–55	—	—	—	Not Occupied	—	—
56	0.5	L-GN/YE	6271	Crankshaft Position Sensor Signal	I	—
57	0.5	VT/BK	6264	Camshaft Position Sensor–Exhaust Signal	I	—
58–59	—	—	—	Not Occupied	—	—
60	0.5	YE/VT	6265	Camshaft Position Sensor–Intake Signal	I	—
61–62	—	—	—	Not Occupied	—	—
63	0.5	BN/L-GN	485	Throttle Position Sensor Signal (1)	I	—
64	—	—	—	Not Occupied	—	—
65	0.5	BN/L-BU	486	Throttle Position Sensor Signal (2)	I	—
66	—	—	—	Not Occupied	—	—
67	0.5	L-GN	1665	Heated Oxygen Sensor High Signal Bank 1 Sensor (1)	I	—
68	—	—	—	Not Occupied	—	—
69	0.5	VT/GY	496	Knock Sensor Signal (1)	I	—
70–71	—	—	—	Not Occupied	—	—
72	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor (1)	I	—
73	2.5	BK	1750	Ground	I	—

K20 Engine Control Module X3 (LUV)



1968294

Connector Part Information

Harness Type: Engine
OEM Connector: 34566-1403
Service Connector: 13574948
Description: 73-Way F 0.64.2.8 Series, Sealed (BK with GY Terminal Position Assurance Lock)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451872	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

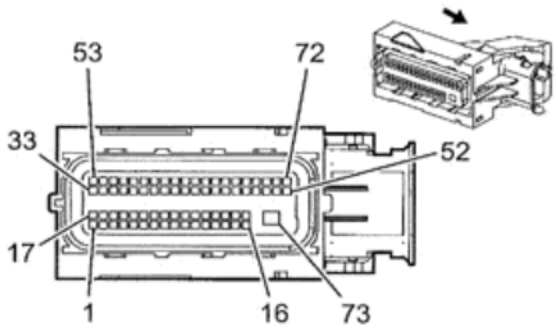
K20 Engine Control Module X3 (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/WH	5007	Reverse Switch Signal	I	MR5/MZ4
2–9	—	—	—	Not Occupied	—	—
10	0.5	L-GN/L-BU	428	EVAP Canister Purge Solenoid Control	I	—
11–12	—	—	—	Not Occupied	—	—
13	0.5	BN/YE	5268	Overrun Air Valve Solenoid	I	—
14	—	—	—	Not Occupied	—	—
15	0.5	BN/YE	258	Waste Gate Solenoid Control	I	—
16	—	—	—	Not Occupied	—	—
17	0.5	GY	23	Generator Field Duty Cycle Signal	I	—
18	—	—	—	Not Occupied	—	—
19	0.5	BK/YE	401	Vehicle Speed Sensor Low Reference	I	MR5/MZ4
20–21	—	—	—	Not Occupied	—	—
22	0.5 0.5	BK/GY BK/YL	6110 5382	Clutch Apply Sensor Low Reference Brake Position Sensor Low Reference	I	MR5/MZ4 MH8
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 5 Volt 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	—

K20 Engine Control Module X3 (LUV) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
31	—	—	—	Not Occupied	—	—
32	0.5	BN/GY	5035	Heated Oxygen Sensor Heater High Control Bank 1 Sensor (2)	I	—
33–34	—	—	—	Not Occupied	—	—
35	0.5	YE/BN	3604	Transmission Output Speed Sensor Supply	I	MR5/MZ4
36–37	—	—	—	Not Occupied	—	—
38	0.5 0.5	GY/RD WH/RD	6109 5381	Clutch Apply Sensor Voltage Reference Brake Position Sensor 5 Volt Reference	I	MR5/MZ4 MH8
39–42	—	—	—	Not Occupied	—	—
43	0.5	BN/WH	6283	Fuel Tank Vapor Pressure Sensor Supply Voltage	I	—
44	—	—	—	Not Occupied	—	—
45	0.5	L-GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—
46	0.5	L-GN/VT	2032	Coolant Temperature Sensor Signal	I	—
47–54	—	—	—	Not Occupied	—	—
55	0.5	YE	400	Vehicle Speed Sensor Signal	I	MR5/MZ4
56–57	—	—	—	Not Occupied	—	—
58	0.5 0.5	YE WH/L-GN	6111 5380	Clutch Apply Sensor Signal Brake Position Sensor Signal	I	MR5/MZ4 MH8
59–62	—	—	—	Not Occupied	—	—
63	0.5	BK/BN	6284	Fuel Tank Vapor Pressure Sensor Low Reference	I	—
64	0.5	L-BU/VT	1589	Primary Fuel Level Sensor Signal	I	—
65–66	—	—	—	Not Occupied	—	—
67	0.5	L-GN	1668	Heated Oxygen Sensor High Signal Bank 1 Sensor (2)	I	—
68	0.5	YE/WH	1669	Heated Oxygen Sensor Low Signal Bank 1 Sensor (2)	I	—
69–73	—	—	—	Not Occupied	—	—

K20 Engine Control Module X3 (LUW/LWE)



1968294

Connector Part Information

Harness Type: Engine
OEM Connector: 34566-1403
Service Connector: 13574948
Description: 73-Way F 0.64.2.8 Series, Sealed (BK with GY Terminal Position Assurance Lock)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451872	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

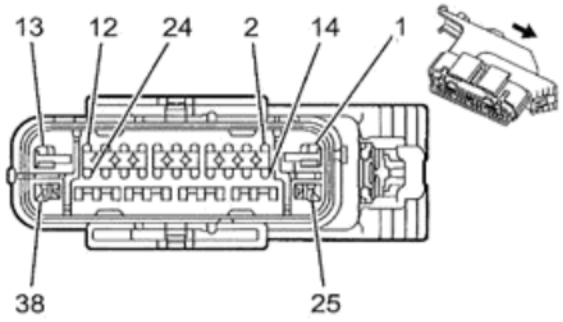
K20 Engine Control Module X3 (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/WH	5007	Reverse Switch Signal	I	M26
2–9	—	—	—	Not Occupied	—	—
10	0.5	L-GN/L-BU	428	EVAP Canister Purge Solenoid Control	I	—
11	—	—	—	Not Occupied	—	—
12	0.5	BN/L-GN	5041	Intake Manifold Control (1)	I	—
13–16	—	—	—	Not Occupied	—	—
17	0.5	GY	23	Generator Field Duty Cycle Signal	I	—
18	—	—	—	Not Occupied	—	—
19	0.5	BK/YE	401	Vehicle Speed Sensor Low Reference	I	M26
20	—	—	—	Not Occupied	—	—
21	0.5	BK/L-BU	6785	Air Injection Reaction Pump Low Reference	I	LWE
22	0.5 0.5	BK/GY BK/YL	6110 5382	Clutch Apply Sensor Low Reference Brake Position Sensor Low Reference	I	M26 MH9
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 5 Volt 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	L-GN/VT	1423	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor (2)	I	—
33–34	—	—	—	Not Occupied	—	—
35	0.5	YE/BN	3604	Transmission Output Speed Sensor Supply	I	M26
36	—	—	—	Not Occupied	—	—
37	0.5	WH/BN	6452	Air Injection Reaction Pump Sensor Supply Voltage	I	LWE
38	0.5 0.5	GY/RD WH/RD	6109 5381	Clutch Apply Sensor Voltage Reference Brake Position Sensor 5 Volt Reference	I	M26 MH9
39–42	—	—	—	Not Occupied	—	—
43	0.5	BN/WH	6283	Fuel Tank Vapor Pressure Sensor Supply Voltage	I	—
44	—	—	—	Not Occupied	—	—
45	0.5	L-GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—
46	0.5	L-GN/VT	2032	Coolant Temperature Sensor Signal	I	—
47–52	—	—	—	Not Occupied	—	—
53	0.5	GY/L-GN	7303	Intake Manifold Tuning Valve (IMTV) Position - Signal	I	—
54	—	—	—	Not Occupied	—	—
55	0.5	YE	400	Vehicle Speed Sensor Signal	I	M26
56	—	—	—	Not Occupied	—	—
57	0.5	WH	6453	Air Injection Reaction Pump Sensor Signal	I	LWE

K20 Engine Control Module X3 (LUW/LWE) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
58	0.5 0.5	YE WH/L-GN	6111 5380	Clutch Apply Sensor Signal Brake Position Sensor Signal	I	M26 MH9
59–62	—	—	—	Not Occupied	—	—
63	0.5	BK/BN	6284	Fuel Tank Vapor Pressure Sensor Low Reference	I	—
64	0.5	L-BU/VT	1589	Primary Fuel Level Sensor Signal	I	—
65–66	—	—	—	Not Occupied	—	—
67	0.5	L-GN	1668	Heated Oxygen Sensor High Signal Bank 1 Sensor (2)	I	—
68	0.5	YE/WH	1669	Heated Oxygen Sensor Low Signal Bank 1 Sensor (2)	I	—
69–73	—	—	—	Not Occupied	—	—

K27 Fuel Pump Control Module



1862109

Connector Part Information

Harness Type: Body
OEM Connector: 31381-1000
Service Connector: 19178089
Description: 38-Way F 2.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575392	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
II	13576387	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

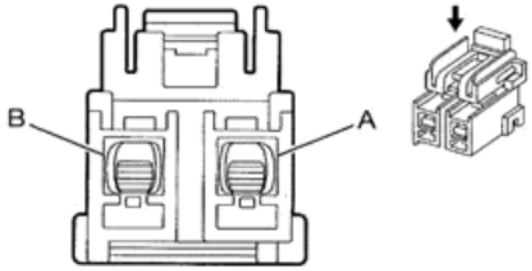
K27 Fuel Pump Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	RD/BN	1140	Battery Positive Voltage	I	—
2–4	—	—	—	Not Occupied	—	—
5	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	II	—
6	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	II	—
7	—	—	—	Not Occupied	—	—

K27 Fuel Pump Control Module (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
8	0.35	WH/L-BU	5986	Serial Data Communication Enable	II	—
9	—	—	—	Not Occupied	—	—
10	0.5	L-BU/WH	7446	Fuel Line Pressure Sensor Signal	II	—
11–12	—	—	—	Not Occupied	—	—
13	1.5	GY	120	Fuel Pump Supply Voltage	I	—
14–16	—	—	—	Not Occupied	—	—
17	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	II	—
18	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	II	—
19	—	—	—	Not Occupied	—	—
20	0.5	L-GN/GY	465	Fuel Pump Primary Relay Control	II	—
21	0.5	VT/BK	339	Run/Crank Ignition 1 Voltage	II	—
22	0.5	BN/RD	7445	5 Volt Reference	II	—
23	0.5	BK/YE	7447	Low Reference	II	—
24	0.5	L-BU	7443	Fuel System Control Module Shield Extension	II	—
25	1.5	BK	1650	Ground	I	—
26–37	—	—	—	Not Occupied	—	—
38	1.5	BK/L-GN	1580	Low Reference	I	—

K29 Seat Heating Control Module X1 (KA1)



2231659

Connector Part Information

Harness Type: Driver Seat
OEM Connector: 88988990
Service Connector: Service by Harness – See Part Catalog
Description: 2-Way F Metri-Pack 280 Series (BK)

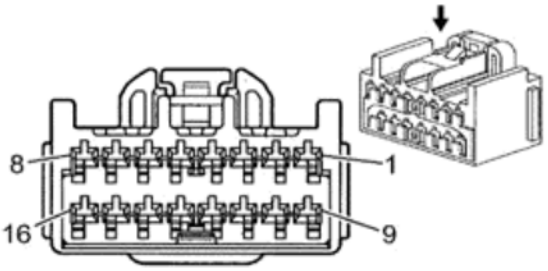
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Not Available	Not Available	Not Available	Not Available

K29 Seat Heating Control Module X1 (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	BK	550	Ground	I	—
B	1.5	RD	540	Battery Positive Voltage	I	—

K29 Seat Heating Control Module X2 (KA1)



1566781

Connector Part Information

Harness Type: Driver Seat
OEM Connector: 15134091
Service Connector: 15134091
Description: 16-Way F 1.5 Series (BK)

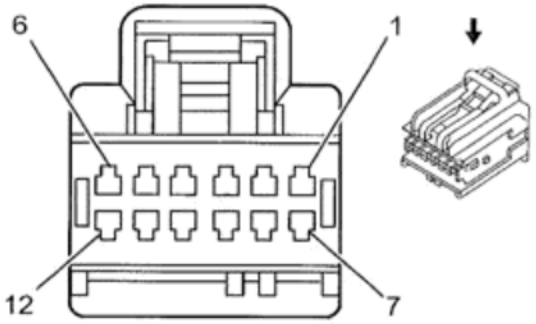
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Not Available	Not Available	Not Available	Not Available

K29 Seat Heating Control Module X2 (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.0	BK/YE	2424	Driver Heated Back Element Return	I	—
2	1.0	BK/YE	2433	Passenger Heated Back Element Return	I	—
3	1.0	YE/L-BU	2077	Driver Heated Seat Element Supply Voltage	I	—
4	-	-	-	Not Occupied	-	-
5	1.0	YE	2479	Passenger Heated Seat Element Supply Voltage	I	—
6–12	-	-	-	Not Occupied	-	-
13	0.5	BK/L-GN	2080	Driver Heated Seat NTC Low Reference	I	—
14	0.5	BK/OG	2435	Passenger Heated Seat NTC Low Reference	I	—
15–16	-	-	-	Not Occupied	-	-

K29 Seat Heating Control Module X3 (KA1)



1664569

Connector Part Information

Harness Type: Driver Seat
OEM Connector: 89047364
Service Connector: 89047364
Description: 12-Way F 64 Series (BK)

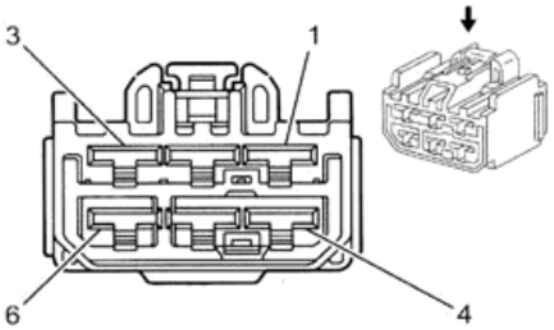
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Not Available	Not Available	Not Available	Not Available

K29 Seat Heating Control Module X3 (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1–2	-	-	-	Not Occupied	-	-
3	0.5	RD/YE	2079	Driver Heated Seat NTC Signal	I	—
4	0.5	RD/OG	7018	Cushion NTC Signal	I	—
5–10	-	-	-	Not Occupied	-	-
11	0.35	L-BU	5060	Low Speed GMLAN Serial Data	I	—
12	-	-	-	Not Occupied	-	-

K33 HVAC Control Module X1



1282957

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 7283-5591-40
Service Connector: 88988410
Description: 6-Way F YESC/USCAR Class III Series (L-GY)

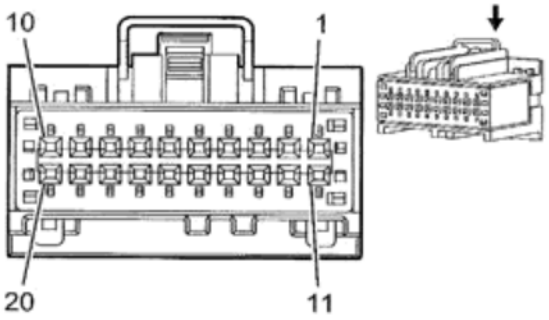
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575835	J-35616-42 (RD)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	13578928	J-35616-42 (RD)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	13575833	J-35616-42 (RD)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

K33 HVAC Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4	BK	1250	Ground	I	—
2	2.5	L-BU/YE	72	Medium 2 Blower Motor Control	I	—
3	1.5	YE/BN	63	Medium Blower Motor Control	II	—
4	4	WH/BK	52	High Blower Motor Control	I	—
5	0.5	L-GN/L-BU	761	Blower Speed Feedback Signal	III	—
6	1	YE	60	Low Blower Motor Control	III	—

K33 HVAC Control Module X2



1664553

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 31410-1202
Service Connector: 15126709
Description: 20-Way F 64 Series, Sealed (BN)

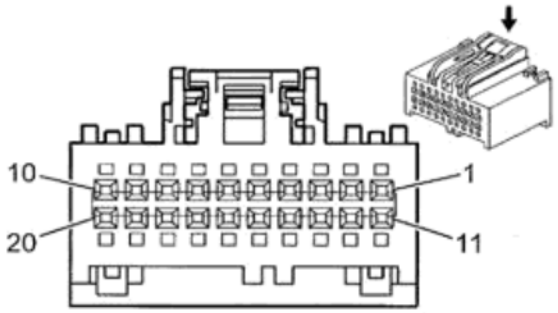
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575845	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

K33 HVAC Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/L-GN	3140	Battery Positive Voltage	I	—
2	0.5	VT/BN	741	Run Ignition 3 Voltage	I	—
3	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	L-GN/L-BU	761	Blower Speed Feedback Signal	I	—
6	0.5	BN/YE	762	A/C Request Signal	I	—
7	0.5	WH/BN	2212	Auxiliary A/C Request Indicator Signal	I	—
8	0.35	YE	6817	LED Backlight Dimming Control	I	—
9	0.35	WH	6816	Indicator Dimming Control	I	—
10	0.5	BK	1150	Ground	I	—
11	0.5	L-GN/L-BU	761	Blower Speed Feedback Signal	I	—
12	0.5	YE/BK	713	Defrost/Heater Mode Valve Position Sensor Signal	I	—
13–14	—	—	—	Not Occupied	—	—
15	0.5	L-BU/WH	292	Rear Defog Switch Signal	I	—
16	0.35	BN/VT	193	Rear Defog Relay Control	I	—
17	0.5	BN/L-BU	683	Rear Defog Indicator Supply Voltage	I	—
18	0.35	GY	6137	EVAP Core Temperature Sensor Signal	I	—
19	0.35	BK/GY	6138	Low Reference	I	—
20	—	—	—	Not Occupied	—	—

K33 HVAC Control Module X3



1715223

Connector Part Information

Harness Type: HVAC
OEM Connector: 15126711
Service Connector: 15126711
Description: 20-Way F 0.64 Series (BK)

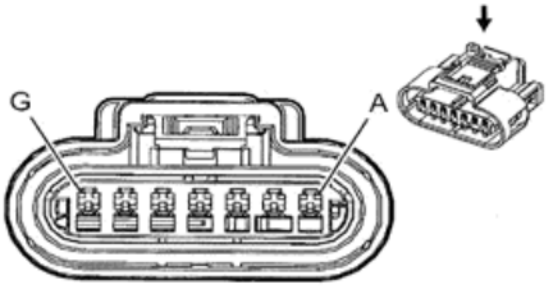
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness - See Parts Catalog	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

K33 HVAC Control Module X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1–3	-	-	-	Not Occupied	-	-
4	0.5	L-GN	1648	Close Recirculation Door Control	I	—
5	0.5	YE	1647	Open Recirculation Door Control	I	—
6–14	-	-	-	Not Occupied	-	-
15	0.35	WH/RD	6137	EVAP Core Temperature Sensor Signal	I	—
16	0.35	BK	6138	EVAP Core Temperature Sensor Low Reference	I	—
17–20	-	-	-	Not Occupied	-	-

K35 Ignition Coil Module



2474734

Connector Part Information

Harness Type: Engine
OEM Connector: PPI0000888
Service Connector: 13355825
Description: 7-Way F (BK)

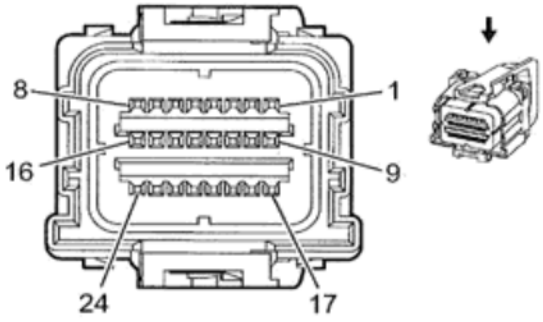
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-14 (GN)	J-38125-560	964274-2	16	E	1

K35 Ignition Coil Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1	VT/L-BU	5290	Powertrain Main Relay Fused Supply (1)	I	—
B	1	BK	1750	Ground	I	—
C	0.5	BK/L-BU	2129	Ignition Control Low Reference Bank 1	I	—
D	0.5	L-BU/VT	2121	Ignition Control (1)	I	—
E	0.5	L-BU/WH	2122	Ignition Control (2)	I	—
F	0.5	L-GN/L-BU	2123	Ignition Control (3)	I	—
G	0.5	YE/L-BU	2124	Ignition Control (4)	I	—

K36 Inflatable Restraint Sensing and Diagnostic Module X1



2180230

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 776773-1
Service Connector: 13576558
Description: 24-Way F Kaizen 0.64 Series, Sealed (YE)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575865	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
II	13575865	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

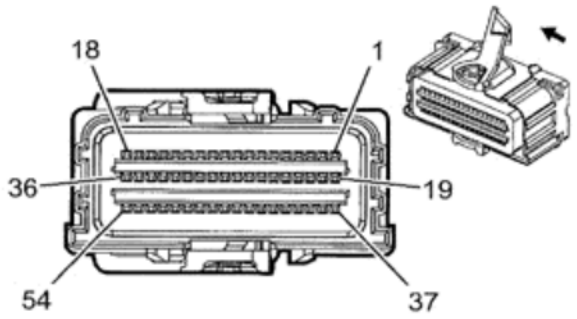
K36 Inflatable Restraint Sensing and Diagnostic Module X1

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	0.5	YE/OG	3025	Passenger IP Module Stage 1 High Control	I	—
6	0.5	OG/WH	3024	Passenger IP Module Stage 1 Low Control	I	—
7	0.5	OG/VT	3026	Passenger IP Module Stage 2 Low Control	I	—
8	0.5	GY/OG	3027	Passenger IP Module Stage 2 High Control	I	—
9	0.5	RD/GY	2840	Battery Positive Voltage	I	—
10	0.35	VT/WH	5234	Passenger Seat Belt Indicator	I	—
11	0.35	L-BU	2307	Passenger Air Bag On Indicator Control	I	—
12	0.35	L-GN	2308	Passenger Air Bag Off Indicator Control	I	—
13–14	—	—	—	Not Occupied	—	—
15	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
16	—	—	—	Not Occupied	—	—
17	0.5	VT/WH	639	Run/Crank Ignition 1 Voltage	-	—
18	—	—	—	Not Occupied	—	—
19	0.75	BK	1350	Ground	II	—
20	—	—	—	Not Occupied	—	—

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

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
21	0.5	OG/L-BU	3078	Driver Knee Module High Control	I	AYF
22	0.5	GY/OG	3079	Driver Knee Module Low Control	I	AYF
23	0.5	WH/OG	3077	Passenger Knee Module Low Control	I	AYF
24	0.5	OG/L-BU	3076	Passenger Knee Module High Control	I	AYF

K36 Inflatable Restraint Sensing and Diagnostic Module X2



2180251

Connector Part Information

Harness Type: Body
OEM Connector: 2035023-4
Service Connector: 13580845
Description: 54-Way F 0.64 Series, Sealed (BK w/ YE cover)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575865	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

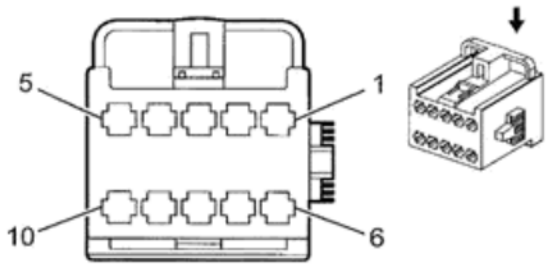
K36 Inflatable Restraint Sensing and Diagnostic Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1–2	—	—	—	Not Occupied	—	—
3	0.5	VT/YE	5526	Tap Up/Tap Down Switch Signal	I	AYF
4	0.5	L-GN	5525	Tap Up/Tap Down Enable Signal	I	AYF
5–6	—	—	—	Not Occupied	—	—
7	0.5	WH/BN	5524	Inflator Switch Indicator	I	AYF
8	0.5	VT/BN	5523	Inflator Switch Signal	I	AYF
9	0.5	OG/YE	3481	Driver Seat Belt Anchor Pretensioner High Control	I	A69
10	0.5	YE/OG	3482	Driver Seat Belt Anchor Pretensioner Low Control	I	A69
11	0.5	GY/OG	3480	Passenger Seat Belt Anchor Pretensioner Low Control	I	A69
12	0.5	OG/BN	3479	Passenger Seat Belt Anchor Pretensioner High Control	I	A69
13	0.5	OG/L-BU	3068	Driver Side Impact Module High Control	I	—
14	0.5	L-GN/OG	3069	Driver Side Impact Module Low Control	I	—

K36 Inflatable Restraint Sensing and Diagnostic Module X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
15	0.5	BN/OG	3067	Passenger Side Impact Module Low Control	I	—
16	0.5	OG/GY	3066	Passenger Side Impact Module High Control	I	—
17	0.5	OG/L-GN	5019	Left Front Head Curtain Module High Control	I	—
18	0.5	VT/OG	5020	Left Front Head Curtain Module Low Control	I	—
19	0.5	OG/L-GN	2132	Left Front Side Impact Sensing Module Signal	I	—
20	0.5	BK/OG	6628	Low Reference	I	—
21	0.5	BK/OG	6629	Low Reference	I	—
22	0.5	BN/OG	2134	Right Front Side Impact Sensing Module Signal	I	—
23	0.5	OG/YE	354	Left Front Discriminating Sensor Signal	I	—
24	0.5	BK/OG	5045	Left Front Discriminating Sensor Low Reference	I	—
25	0.5	BK/OG	5600	Right Front Discriminating Sensor Low Reference	I	—
26	0.5	OG/L-GN	1409	Right Front Discriminating Sensor Signal	I	—
27	0.5	OG/L-BU	6620	Left Middle Side Impact Sensing Module Signal	I	—
28	0.5	BK/OG	6621	Left Middle Side Impact Sensing Module Low Reference	I	—
29	0.5	BK/OG	6625	Right Middle Side Impact Sensing Module Low Reference	I	—
30	0.5	OG/VT	6624	Right Middle Side Impact Sensing Module Signal	I	—
31–36	—	—	—	Not Occupied	—	—
37	0.5	OG/WH	3477	Driver Seat Belt Retractor Pretensioner High Control	I	—
38	0.5	GY/OG	3478	Driver Seat Belt Retractor Pretensioner Low Control	I	—
39	0.5	WH/OG	3476	Passenger Seat Belt Retractor Pretensioner Low Control	I	—
40	0.5	OG/L-GN	3475	Passenger Seat Belt Retractor Pretensioner High Control	I	—
41	0.5	OG/BN	238	Driver Seat Belt Switch Signal	I	—
42	—	—	—	Not Occupied	—	—
43	0.5	BK/OG	1363	Low Reference	I	—
44	0.5	BK/OG	1361	Low Reference	I	—
45	0.5	OG/VT	1362	Passenger Seat Belt Switch Signal	I	—
46	—	—	—	Not Occupied	—	—
47	0.5	OG/BN	7571	Passenger Seat Belt Reminder Signal	I	—
48–52	—	—	—	Not Occupied	—	—
53	0.5	OG/GY	5021	Right Front Head Curtain Module High Control	I	—
54	0.5	WH/OG	5022	Right Front Head Curtain Module Low Control	I	—

K43 Power Steering Control Module X1



2537250

Connector Part Information

Harness Type: Body
OEM Connector: 13527907
Service Connector: 13395397
Description: 10-Way F 1.5 Micro Timer Series (BK)

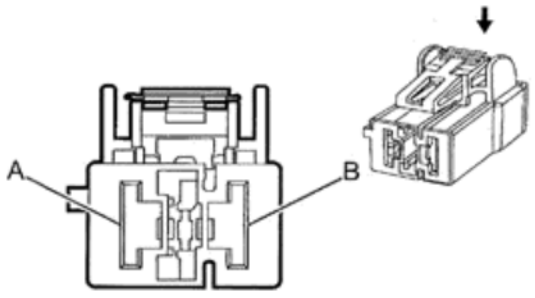
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575773	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

K43 Power Steering Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/L-BU	5986	Serial Data Communication Enable	I	—
2	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	I	—
3	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	I	—
4–10	-	-	-	Not Occupied	-	-

K43 Power Steering Control Module X2



2451357

Connector Part Information

Harness Type: Body (without AYF)
Harness Type: EPS Jumper (with AYF)
OEM Connector: 45.40310
Service Connector: 19300959
Description: 2-Way F 8.0 Series (BU)

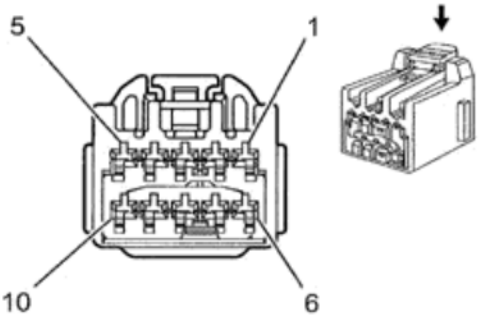
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

K43 Power Steering Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	8	RD/L-GN	40	Battery Positive Voltage	I	—
B	8	BK	1950	Ground	I	—

K61 Sunroof Control Module (CF5)



825441

Connector Part Information

Harness Type: Headliner
OEM Connector: 7283-5533-40
Service Connector: 22708788
Description: 10-Way F YESC/USCAR Class II Series (L-GY)

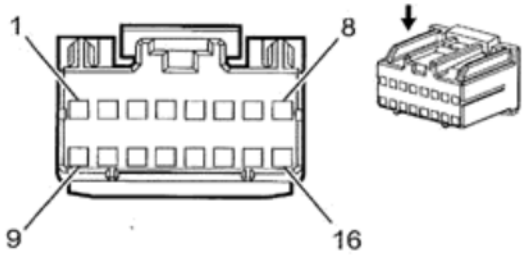
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13578892	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	13578891	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

K61 Sunroof Control Module (CF5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	BK	550	Ground	I	—
2	-	-	-	Not Occupied	-	-
3	0.35	VT/BN	641	Run Ignition 3 Voltage	II	—
4	-	-	-	Not Occupied	-	-
5	0.35	L-GN/WH	100	Sunroof Switch Open Signal	II	—
6	1.5	RD/WH	640	Battery Positive Voltage	I	—
7–9	-	-	-	Not Occupied	-	-
10	0.35	L-BU/WH	110	Sunroof Switch Close Signal	II	—

K73 Telematics Communication Interface Control Module X1 (UE1)



2404967

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 19153138
Service Connector: 19153138
Description: 16-Way F Multilock 040 II Series (WH)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451881	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

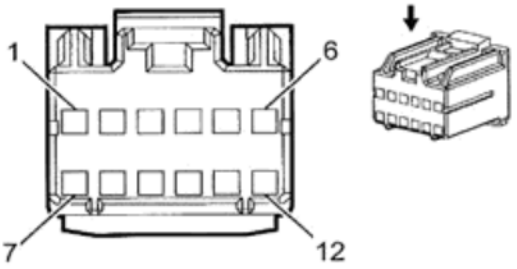
K73 Telematics Communication Interface Control Module X1 (UE1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
2	0.35	BN/WH	2517	Keypad Red LED	I	—
3	0.35	YE/VT	2516	Keypad Green LED	I	—
4–5	-	-	-	Not Occupied	-	-
6	0.35	L-GN/BK	2515	Keypad Supply Voltage	I	—
7	0.5	BK	1350	Ground	I	—
8–9	-	-	-	Not Occupied	-	-
10	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	I	—

K73 Telematics Communication Interface Control Module X1 (UE1) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
11	0.35	L-GN/WH	2514	Keypad Signal	I	—
12	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	I	—
13	0.35	BK/VT	5167	Battery Backup Low Reference	I	—
14	0.35	YL/VT	5235	Battery Backup Supply Voltage	I	—
15	0.5	RD/WH	3440	Battery Positive Voltage	I	—
16	-	-	-	Not Occupied	-	-

K73 Telematics Communication Interface Control Module X2 (UE1)



2405015

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 19153139
Service Connector: 88952886
Description: 12-Way F Multilock 040 II Series (WH)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575548	J-35616-16 (L-GN)	J38125-215A	15445905	23	J	J

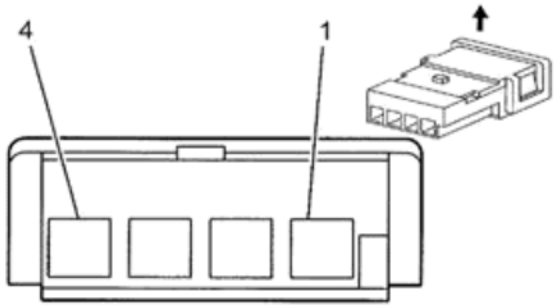
K73 Telematics Communication Interface Control Module X2 (UE1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	658	Cellular Telephone Voice Signal	I	—
2	0.35	BK/YE	659	Low Reference	I	—
3-4	-	-	-	Not Occupied	-	-
5	0.5	BK	2550	Ground	I	—
6	0.35	GY/YE	5149	Voice Recognition Audio Signal	I	—
7	0.35	WH/L-BU	5986	Serial Data Communication Enable	I	—
8	0.5	BK	2550	Ground	I	—
9	0.5	L-BU	655	Cellular Telephone Microphone Signal	I	—

K73 Telematics Communication Interface Control Module X2 (UE1) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
10	0.5	BK/BN	654	Low Reference	I	—
11	-	-	-	Not Occupied	-	-
12	0.35	BK/GY	5152	Low Reference	I	—

K77 Remote Control Door Lock Receiver



872587

Connector Part Information

Harness Type: Headliner
OEM Connector: 968943-1
Service Connector: 13576534
Description: 4-Way F 0.64 MQS Series (BK)

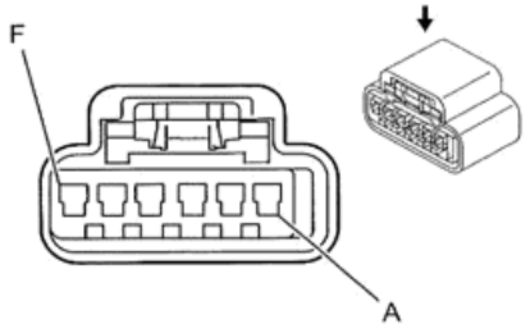
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575585	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

K77 Remote Control Door Lock Receiver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	3273	Remote Function Actuator Return	I	—
2	0.35	YE/L-GN	3274	Remote Function Actuator Transmit Signal	I	—
3	0.35	L-BU/WH	3275	Remote Function Actuator Receive Signal	I	—
4	0.35	GY/WH	3272	Remote Function Actuator Supply Voltage	I	—

K85 Passenger Presence Detection Module



831380

Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 19177558
Service Connector: 88986249
Description: 6-Way F 150 GT Series (BK)

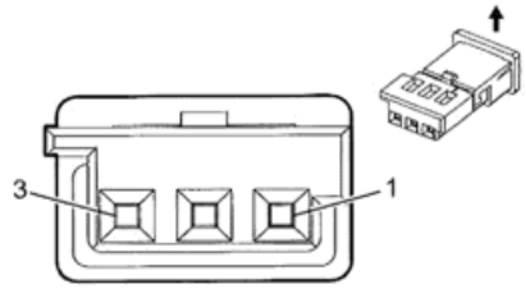
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

K85 Passenger Presence Detection Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	RD/L-GN	439	Run/Crank Ignition 1 Voltage	I	—
B	0.5	L-BU	5060	Low Speed GMLAN Serial Data	I	—
C	-	-	-	Not Occupied	-	-
D	1.5	BN	650	Ground	I	—
E–F	-	-	-	Not Occupied	-	-

K89 Immobilizer Control Module



2537278

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 968705-4
Service Connector: 13395419
Description: 3-Way F Micro-Quadlock Series (VT)

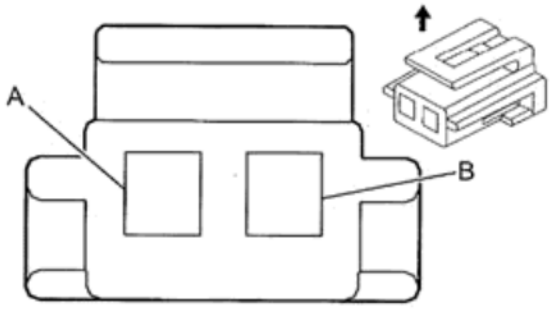
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575585	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

K89 Immobilizer Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	L-GN/GY	3277	Vehicle Anti-Theft System Immobilizer Return	I	—
2	0.35	L-GN/VT	7533	Linear Interconnect Network Bus 11	I	—
3	0.35	GY/BK	3276	Vehicle Anti-Theft System Immobilizer Supply Voltage	I	—

M4 Air Inlet Door Actuator



704047

Connector Part Information

Harness Type: HVAC
OEM Connector: 12059110
Service Connector: 88953271
Description: 2–Way F (BK)

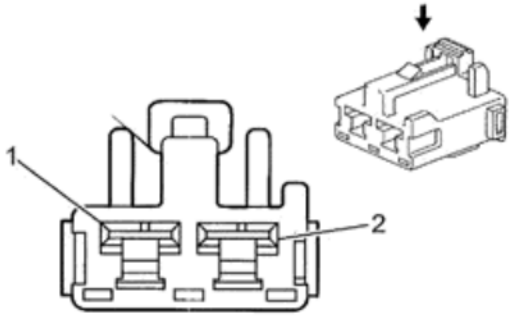
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

M4 Air Inlet Door Actuator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-GN	1647	Open Recirculation Door Control	I	—
B	0.5	YE	1648	Close Recirculation Door Control	I	—

M8 Blower Motor



1411605

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 6098-0325
Service Connector: 89046848
Description: 2-Way F TS 187 Series (WH)

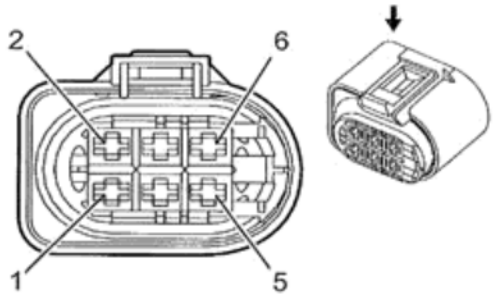
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

M8 Blower Motor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	3	WH/BK	52	High Blower Motor Control	I	—
2	3	RD/L-BU	302	Battery Positive Voltage	I	—

M9 Brake Booster Pump Motor



2409301

Connector Part Information

Harness Type: Engine
OEM Connector: 13578488
Service Connector: 19258185
Description: 6-Way F 2.8 SLK Series, Sealed (BK)

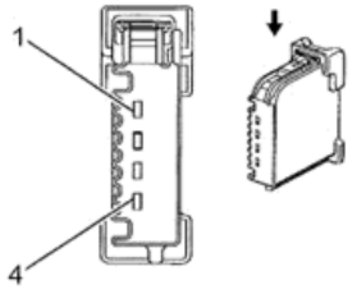
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	Not Available	Not Available	Not Available	Not Available	Not Available
II	Not Available	J-35616-4A (PU)	J-38125-556	Not Available	Not Available	Not Available	Not Available

M9 Brake Booster Pump Motor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	BK	1850	Ground	I	—
2	0.5	BN	6305	Brake Vacuum Switch Signal	I	—
3–4	-	-	-	Not Occupied	-	-
5	1.5	RD/WH	2040	Battery Positive Voltage	I	—
6	-	-	-	Not Occupied	-	-

M30 Liftgate Latch (Hatchback)



2408185

Connector Part Information

Harness Type: Liftgate
OEM Connector: 6098-5516
Service Connector: 13316141
Description: 4-Way F 1.5 Series (BK)

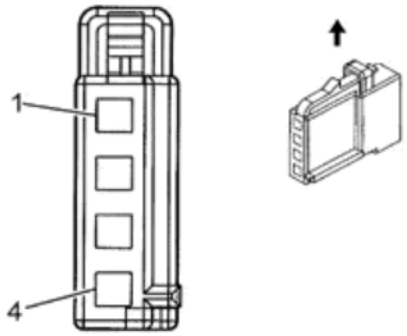
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

M30 Liftgate Latch (Hatchback)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1050	Ground	I	—
2	0.35	VT/GY	1303	Lift Gate Ajar Switch Signal (1)	I	—
3	0.5	L-BU/WH	6128	Rear Closure Unlatch Motor Unlatch Control	I	—
4	-	-	-	Not Occupied	-	-

M40 Rear Compartment Lid Latch (Notchback)



894390

Connector Part Information

Harness Type: Decklid
OEM Connector: 15324229
Service Connector: 15306167
Description: 4-Way F Timer Micro-Pack Series (BK)

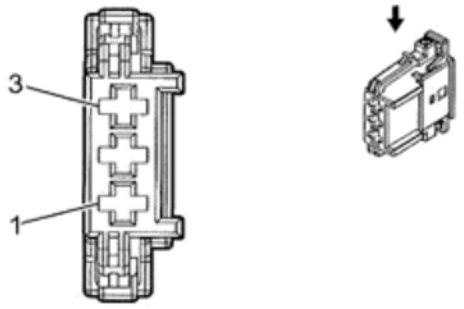
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575538	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

M40 Rear Compartment Lid Latch (Notchback)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-BU/WH	6128	Rear Closure Unlatch Motor Unlatch Control	I	A90
2	0.5	BK	1050	Ground	I	—
3	-	-	-	Not Occupied	-	-
4	0.35	VT/GY	1303	Lift Gate Ajar Switch Signal (1)	I	—

M45 Rear Wiper Motor (Hatchback)



2845583

Connector Part Information

Harness Type: Liftgate
OEM Connector: 2109032-2
Service Connector: Service by Harness – See Part Catalog
Description: 3-Way F 2.8 MCP Series (BK)

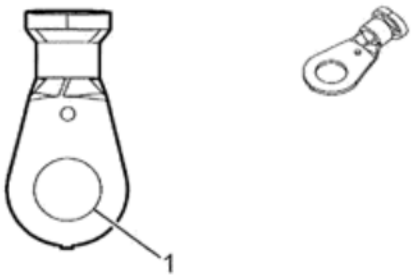
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	J-35616-35 (VT)	J-38125-557	Not Available	Not Available	Not Available	Not Available

M45 Rear Wiper Motor (Hatchback)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	L-BU	393	Rear Window Wiper Motor Control	I	—
2	1	GY/VT	5780	Windshield Wiper Motor Park Switch Fused Signal	I	—
3	1	BK	1050	Ground	I	—

M64 Starter Motor X1



2791579

Connector Part Information

Harness Type: Engine
OEM Connector: 101428-A02
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	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	No Tool Required	Not Available	Not Available	Not Available	Not Available

M64 Starter Motor X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	YE	6	Starter Solenoid Crank Voltage	I	—

M64 Starter Motor X2

Connector Part Information

Harness Type: Positive Battery Cable
OEM Connector: CBR414-1-012
Service Connector: Service by Cable Assembly - See Part Catalog
Description: Ring Terminal

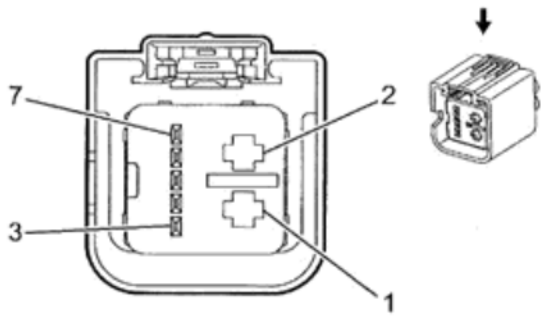
Terminal Part Information

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

M64 Starter Motor X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	20	RD/YE	2	Battery Positive Voltage	I	—
	20	RD/YE	2	Battery Positive Voltage		—

M74D Window Motor - Driver (AXG)



2282932

Connector Part Information

Harness Type: Driver Door
OEM Connector: 1732115-1
Service Connector: Service by Harness – See Part Catalog
Description: 7-Way F Kaizen 0.64 2.8 Timer Series, Sealed (BK)

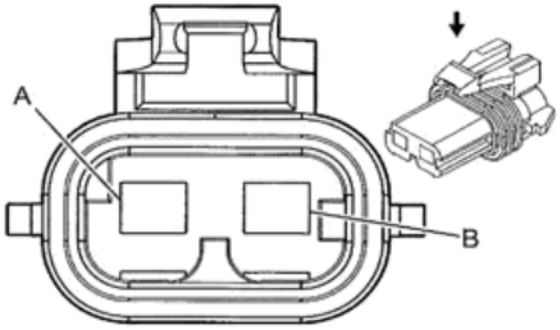
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
II	Service by Harness – See Part Catalog	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
III	13575845	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

M74D Window Motor - Driver (AXG)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	BK	550	Ground	I	—
2	1	L-GN/VT	7628	Power Window Motor Left Front Express Control	II	—
3	0.35	L-GN/WH	3379	Power Window Switch Driver Up Signal	III	—
4	0.35	L-GN/YE	6134	Linear Interconnect Network Bus 3	III	—
5	0.35	L-GN	3381	Power Window Switch Driver Express Signal	III	—
6	0.35	GY	745	Left Front Door Ajar Switch Signal	III	—
7	0.35	GY	3380	Power Window Switch Driver Down Signal	III	—

M74LR Window Motor - Left Rear (A33)



684837

Connector Part Information

Harness Type: Left Rear Door
OEM Connector: 12129487
Service Connector: 88988609
Description: 2-Way F Metri-Pack 280 Series, Flexlock, Sealed (GY)

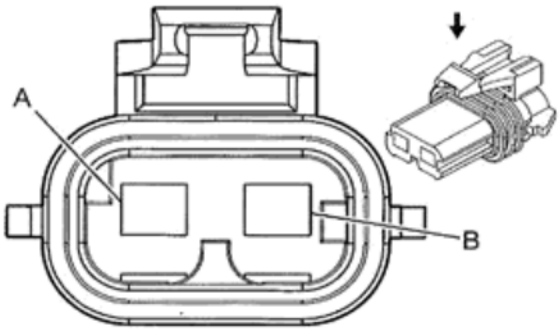
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available

M74LR Window Motor - Left Rear (A33)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	L-BU/VT	668	Power Window Motor Left Rear Up Control	I	—
B	1.5	YE/L-BU	669	Power Window Motor Left Rear Down Control	I	—

M74P Window Motor - Passenger (A66)



684837

Connector Part Information

Harness Type: Passenger Door
OEM Connector: 12129487
Service Connector: 88988609
Description: 2-Way F Metri-Pack 280 Series, Flexlock, Sealed (GY)

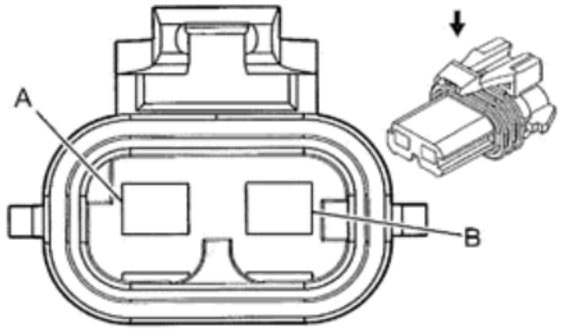
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 88988609	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available

M74P Window Motor - Passenger (A66)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	L-GN/GY	3387	Power Window Motor Co-Driver Up Control	I	—
B	1.5	YE/L-BU	3388	Power Window Motor Co-Driver Down Control	I	—

M74RR Window Motor - Right Rear (A33)



684837

Connector Part Information

Harness Type: Right Rear Door
OEM Connector: 12129487
Service Connector: 88988609
Description: 2-Way F Metri-Pack 280 Series, Flexlock, Sealed (GY)

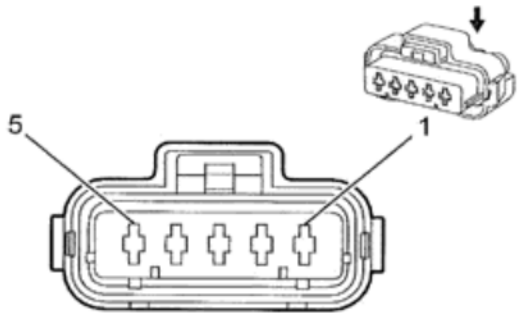
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available

M74RR Window Motor - Right Rear (A33)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	L-BU/GY	670	Power Window Motor Right Rear Up Control	I	—
B	1.5	L-GN/BK	671	Power Window Motor Right Rear Down Control	I	—

M75 Windshield Wiper Motor



2451972

Connector Part Information

Harness Type: Body
OEM Connector: 211PC053S4030
Service Connector: 13395394
Description: 5-Way F 2.8 Series, Sealed (BK)

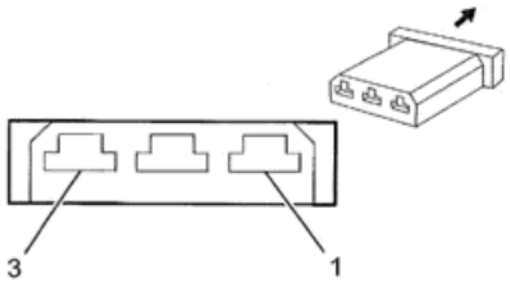
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

M75 Windshield Wiper Motor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	BK	450	Ground	I	—
2	0.35	BN/L-GN	196	Windshield Wiper Motor Park Switch Signal	I	—
3	-	-	-	Not Occupied	-	-
4	2	YE/BN	95	Windshield Wiper Motor Low Speed Control	I	—
5	2	WH	92	Windshield Wiper Motor High Speed Control	I	—

M77D Outside Rearview Mirror Motor - Driver (DG6)



2484228

Connector Part Information

Harness Type: Outside Rearview Mirror – Driver
OEM Connector: 925-015
Service Connector: Service by Component Assembly
Description: 3-way F (BK)

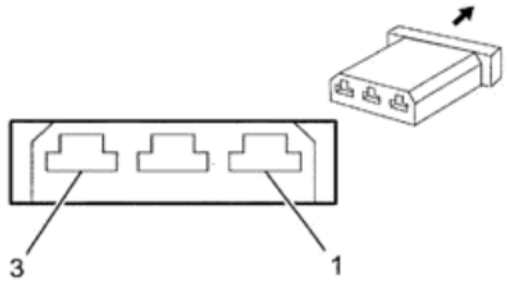
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Component Assembly	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

M77D Outside Rearview Mirror Motor - Driver (DG6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	3389	Driver Mirror Motor Right (+) Left (-) Control	I	—
2	—	BK	3391	Left Mirror Motor Supply Voltage	I	—
3	—	BK	3390	Driver Mirror Motor Up (+) Down (-) Control	I	—

M77P Outside Rearview Mirror Motor - Passenger (DG6)



2484228

Connector Part Information

Harness Type: Outside Rearview Mirror – Passenger
OEM Connector: 925-015
Service Connector: Service by Component Assembly
Description: 3-way F (BK)

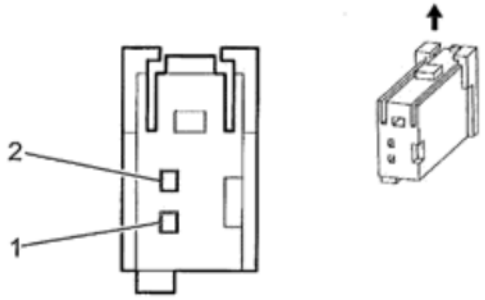
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Component Assembly	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

M77P Outside Rearview Mirror Motor - Passenger (DG6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	3396	Co-Driver Mirror Motor Right (+) Left (-) Control	I	—
2	—	BK	3398	Co-Driver Mirror Motor Common Control	I	—
3	—	BK	3397	Co-Driver Mirror Motor Up (+) Down (-) Control	I	—

M93 Key Capture Solenoid Actuator (MH8 or MH9)



2173598

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: AIT2PB-02A-1AK
Service Connector: 13314093
Description: 2-Way F 0.64 Series (BK)

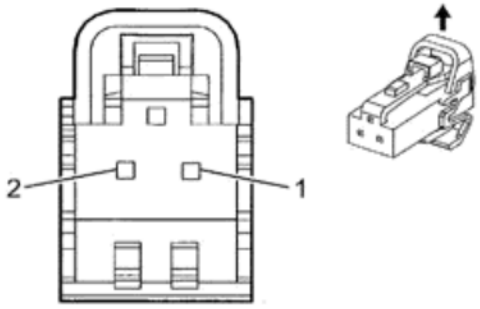
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

M93 Key Capture Solenoid Actuator (MH8 or MH9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/YE	143	Accessory Voltage	I	—
2	0.5	WH/VT	5905	Key Capture/Column Lock Shift Position Signal	I	—

P2 Transmission Shift Lever Position Indicator (MH8 or MH9)



2537280

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: MG611273
Service Connector: 13395420
Description: 2 F 060 Series NA

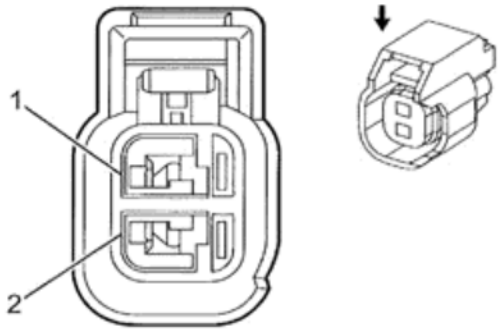
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

P2 Transmission Shift Lever Position Indicator (MH8 or MH9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/GY	230	Instrument Panel Lamp Dimming Control	I	—
2	0.5	BK	1150	Ground	I	—

P12 Horn



2179765

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: E-6171-001
Service Connector: 13314096
Description: 2-Way F GT 150 Series, Sealed (BK)

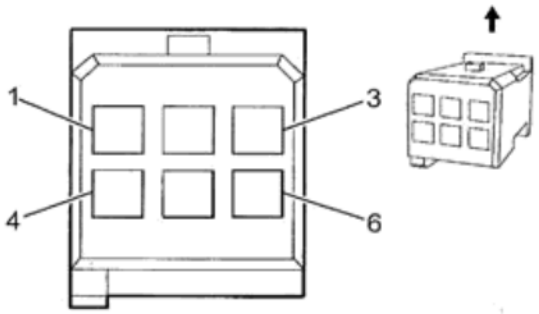
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13327113	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

P12 Horn

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	150	Ground	I	—
2	0.75	BN/GY	29	Horn Control	I	—

P14 Passenger Air Bag Disable Indicator



2173864

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13650066
Service Connector: 13355765
Description: 6 F MTS 0.64 Series

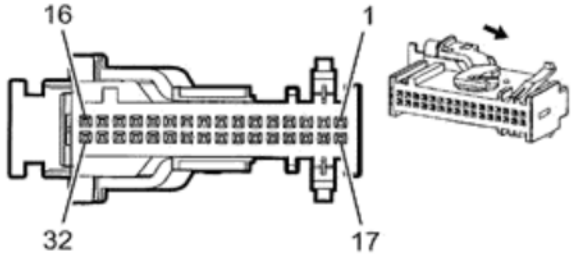
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

P14 Passenger Air Bag Disable Indicator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/L-GN	839	Run/Crank Ignition 1 Voltage	I	—
2	0.35	L-BU	2307	Passenger Air Bag On Indicator Control	I	—
3	0.35	BK	1150	Ground	I	—
4	0.35	BK	1150	Ground	I	—
5	0.35	L-GN	2308	Passenger Air Bag Off Indicator Control	I	—
6	0.35	VT/WH	5234	Passenger Seat Belt Indicator	I	—

P16 Instrument Cluster



627214

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 90587345
Service Connector: 88988405
Description: 32-Way F 0.64 MTS Series (BK)

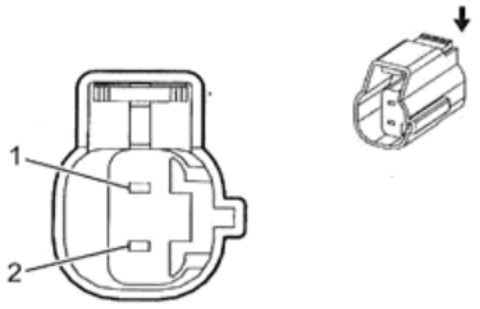
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575585	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

P16 Instrument Cluster

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1–8	-	-	-	Not Occupied	-	-
9	0.35	BK/BN	897	Low Reference	I	—
10	0.35	L-GN/WH	1358	Driver Information Center Switch Signal	I	—
11	0.5	BK/L-BU	61	Outside Ambient Temperature Sensor Low Reference	I	—
12	0.5	L-BU/GY	636	Outside Ambient Air Temperature Sensor Signal	I	—
13–15	-	-	-	Not Occupied	-	-
16	0.5	BK	1150	Ground	I	—
17–24	-	-	-	Not Occupied	-	-
25	0.5	BN/WH	419	Check Engine Indicator Control	I	—
26	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
27	-	-	-	Not Occupied	-	-
28	0.35	GY/L-BU	893	Driver Information Center Select Menu Switch Signal	I	—
29–30	-	-	-	Not Occupied	-	-
31	0.35	VT/BK	739	Run/Crank Ignition 1 Voltage	I	—
32	0.5	RD/BN	2940	Battery Positive Voltage	I	—

P19AG Speaker - Left Front Door



2537287

Connector Part Information

Harness Type: Driver Door
OEM Connector: R63461-006
Service Connector: Service by Harness – See Part Catalog
Description: 2-Way F GT 150 Series (BK)

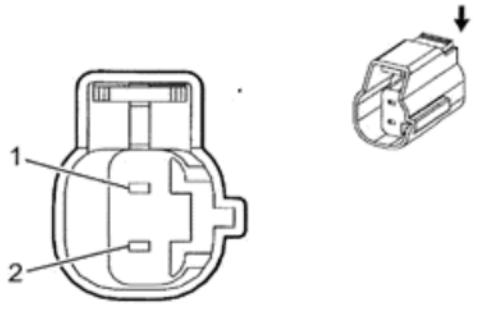
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575735	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

P19AG Speaker - Left Front Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN/L-BU	118	Left Front Speaker Signal (-) (1)	I	—
2	0.75	L-BU	201	Left Front Speaker (+) (1)	I	—

P19AH Speaker - Right Front Door



2537287

Connector Part Information

Harness Type: Passenger Door
OEM Connector: R63461-006
Service Connector: Service by Harness – See Part Catalog
Description: 2-Way F GT 150 Series (BK)

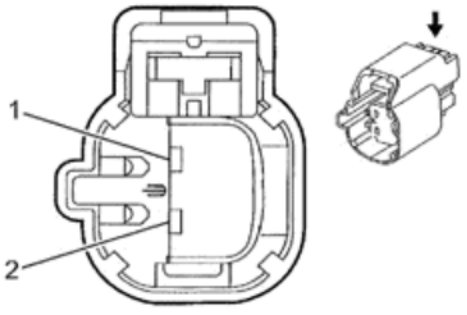
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575735	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

P19AH Speaker - Right Front Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE/BK	117	Right Front Speaker Signal (-) (1)	I	—
2	0.75	YE	200	Right Front Speaker (+) (1)	I	—

P19AL Speaker - Left Rear Door



2179780

Connector Part Information

Harness Type: Left Rear Door
OEM Connector: R63461-003
Service Connector: 19179953
Description: 2-Way F GT 150 Series (BK)

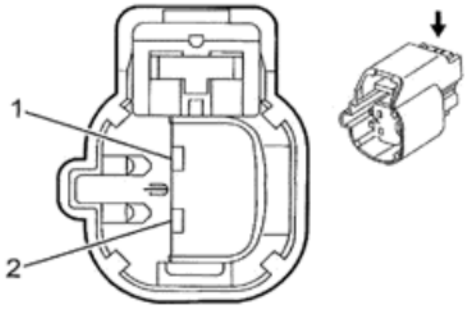
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575735	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

P19AL Speaker - Left Rear Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	D-GN/BK	116	Left Rear Speaker Signal (-)	I	—
2	0.75	D-GN	199	Left Rear Speaker (+)	I	—

P19AM Speaker - Right Rear Door



2179780

Connector Part Information

Harness Type: Right Rear Door
OEM Connector: R63461-003
Service Connector: 19179953
Description: 2-Way F GT 150 Series (BK)

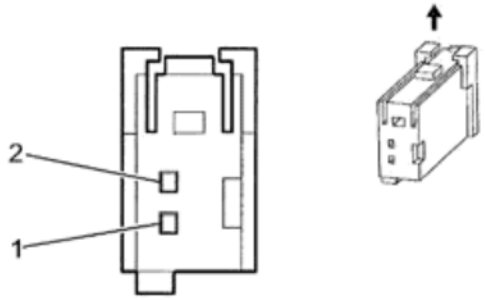
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575735	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

P19AM Speaker - Right Rear Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	L-BU/BK	115	Right Rear Speaker Signal (-)	I	—
2	0.75	WH	46	Right Rear Speaker (+)	I	—

P19H Speaker - Left Front Tweeter



2173598

Connector Part Information

Harness Type: Headliner
OEM Connector: AIT2PB-02A-1AK
Service Connector: 13314093
Description: 2-Way F 0.64 Series (BK)

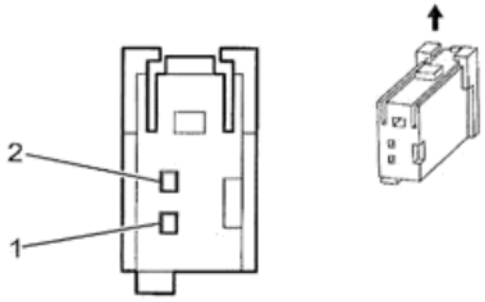
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

P19H Speaker - Left Front Tweeter

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

P19V Speaker - Right Front Tweeter



2173596

Connector Part Information

Harness Type: Body
OEM Connector: AIT2PB-02A-1AK
Service Connector: 13314093
Description: 2-Way F 0.64 Series (BK)

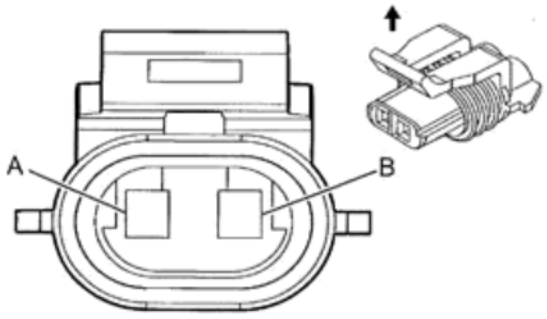
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

P19V Speaker - Right Front Tweeter

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE/BK	117	Right Front Speaker Signal (-) (1)	I	—
2	0.5	YE	200	Right Front Speaker (+) (1)	I	—

Q2 A/C Compressor Clutch (C60)



537107

Connector Part Information

Harness Type: Engine
OEM Connector: 12052644
Service Connector: 10340314
Description: 2-Way F Metri-Pack 150 Series, Sealed (GY)

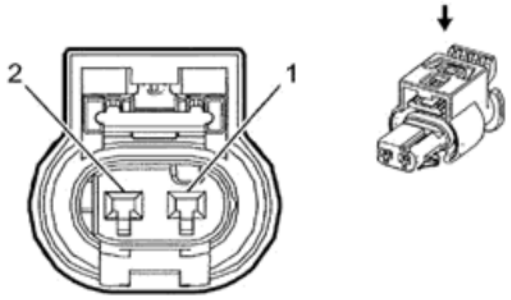
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575419	J-35616-14 (GN)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

Q2 A/C Compressor Clutch (C60)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BK	1750	Ground	I	—
B	0.5	BN/L-GN	59	A/C Compressor Clutch Supply Voltage	I	—

Q6E Camshaft Position Actuator Solenoid Valve - Exhaust (LUV)



2474775

Connector Part Information

Harness Type: Engine
OEM Connector: 55564248
Service Connector: 13577537
Description: 2 F 1.2 MLK Series, Sealed BK

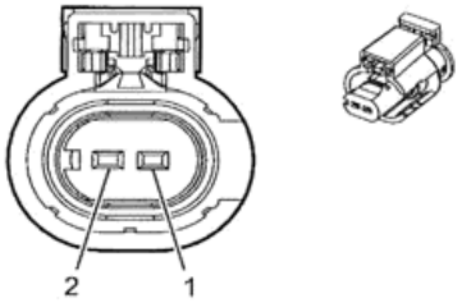
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-16 (L-GN)	J-38125-21	Not Available	Not Available	Not Available	Not Available

Q6E Camshaft Position Actuator Solenoid Valve - Exhaust (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/VT	6754	Cam Phaser X Return Low Reference	I	—
2	0.5	GY/L-BU	5282	Camshaft Phaser Exhaust Solenoid (1)	I	—

Q6E Camshaft Position Actuator Solenoid Valve - Exhaust (LUW/LWE)



2791580

Connector Part Information

Harness Type: Engine
OEM Connector: 284556-1
Service Connector: 13580954
Description: 2-Way F 1.5 Series, Sealed (BK)

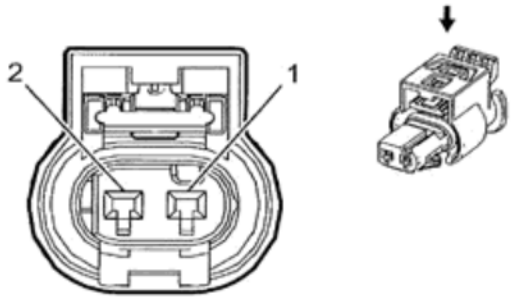
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575586	J-35616-2A (GY)	J-38125-212	Not Available	Not Available	Not Available	Not Available

Q6E Camshaft Position Actuator Solenoid Valve - Exhaust (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/VT	6754	Cam Phaser X Return Low Reference	I	—
2	0.5	GY/L-BU	5282	Camshaft Phaser Exhaust Solenoid (1)	I	—

Q6F Camshaft Position Actuator Solenoid Valve - Intake (LUV)



2474775

Connector Part Information

Harness Type: Engine
OEM Connector: 55564248
Service Connector: 13577537
Description: 2-Way F 1.2 MLK Series, Sealed (BK)

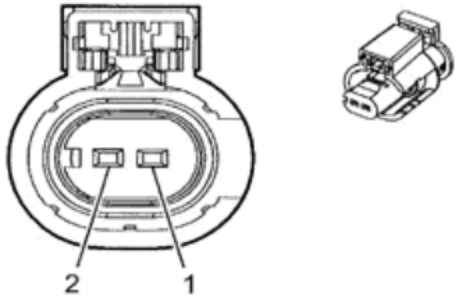
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-16 (L-GN)	J-38125-21	Not Available	Not Available	Not Available	Not Available

Q6F Camshaft Position Actuator Solenoid Valve - Intake (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/L-BU	6783	Cam Phaser X Return Low Reference	I	—
2	0.5	VT/BN	5284	Camshaft Phaser Intake Solenoid (1)	I	—

Q6F Camshaft Position Actuator Solenoid Valve - Intake (LUW/LWE)



2791580

Connector Part Information

Harness Type: Engine
OEM Connector: 284556-1
Service Connector: 13580954
Description: 2-Way F 1.5 Series, Sealed (BK)

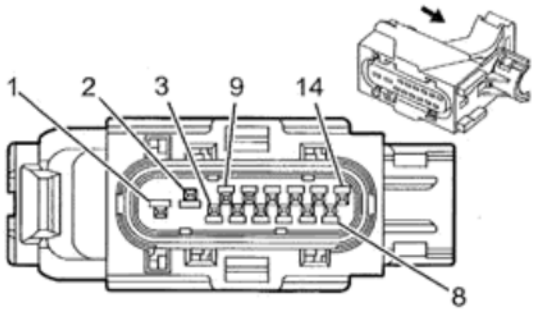
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575586	J-35616-2A (GY)	J-38125-212	Not Available	Not Available	Not Available	Not Available

Q6F Camshaft Position Actuator Solenoid Valve - Intake (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/BN	6753	Cam Phaser W Return Low Reference	I	—
2	0.5	VT/BN	5284	Camshaft Phaser Intake Solenoid (1)	I	—

Q8 Control Solenoid Valve Assembly X1 (MH8 or MH9)



2033504

Connector Part Information

Harness Type: Engine
OEM Connector: 13522378
Service Connector: 13503939
Description: 14-Way F GT 150 280 Series, Sealed (L-GY)

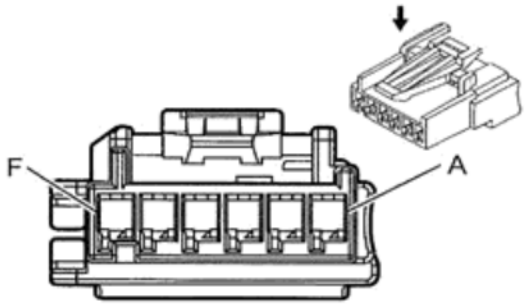
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575405	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
II	13575433	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

Q8 Control Solenoid Valve Assembly X1 (MH8 or MH9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/VT	340	Battery Positive Voltage	I	—
2	0.75	BK	1750	Ground	I	—
3	0.5	WH/GY	1786	Transmission Park/Neutral Signal (1)	II	—
4–5	-	-	-	Not Occupied	-	-
6	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	II	—
7	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	II	—
8	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	II	—
9	-	-	-	Not Occupied	-	-
10	0.5	WH/L-BU	6311	Cruise/ETC/TCC Brake Signal	II	—
11	-	-	-	Not Occupied	-	-
12	0.5	VT/GY	139	Run/Crank Ignition 1 Voltage	II	—
13	0.5	VT/YE	5985	Accessory Wakeup Serial Data	II	—
14	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	II	—

Q8 Control Solenoid Valve Assembly X2 (MH8 or MH9)



2127938

Connector Part Information

Harness Type: Automatic Transmission
OEM Connector: 13540209
Service Connector: Non-Serviceable
Description: 6-Way F Micro-Pack 150.2 Series Sealed (BU)

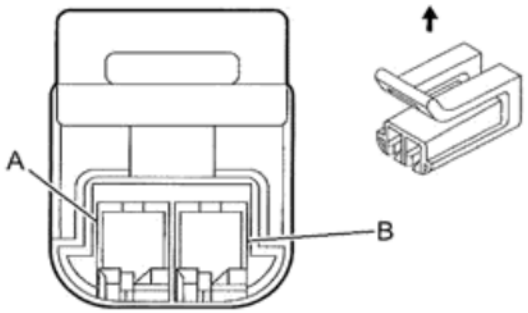
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Component Assembly	J-35616-14 (GN)	Not Available	Not Available	Not Available	Not Available	Not Available

Q8 Control Solenoid Valve Assembly X2 (MH8 or MH9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BU	—	Park/Neutral Switch Signal	I	—
B	0.5	GN	—	Transmission Range Switch Signal A	I	—
C	0.5	GY	—	Transmission Range Switch Signal B	I	—
D	0.5	YE	—	Transmission Range Switch Signal C	I	—
E	0.5	RD	—	Transmission Range Switch Signal P	I	—
F	0.5	BK	—	Low Reference	I	—

Q8 Control Solenoid Valve Assembly X3 (MH8 or MH9)



1910666

Connector Part Information

Harness Type: Automatic Transmission
OEM Connector: 13586529
Service Connector: Non-Serviceable
Description: 2-Way F Metri-Pack 150.2 Series (L-GY)

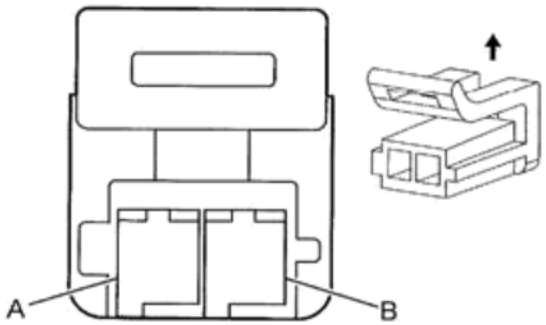
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Component Assembly	J-35616-14 (GN)	Not Available	Not Available	Not Available	Not Available	Not Available

Q8 Control Solenoid Valve Assembly X3 (MH8 or MH9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	WH	—	ISS High Signal	I	—
B	0.5	BK	—	ISS Low Signal	I	—

Q8 Control Solenoid Valve Assembly X4 (MH8 or MH9)



95784

Connector Part Information

Harness Type: Automatic Transmission
OEM Connector: 13543034
Service Connector: Non-Serviceable
Description: 2-Way F Metri-Pack 150.2 Series (L-GY)

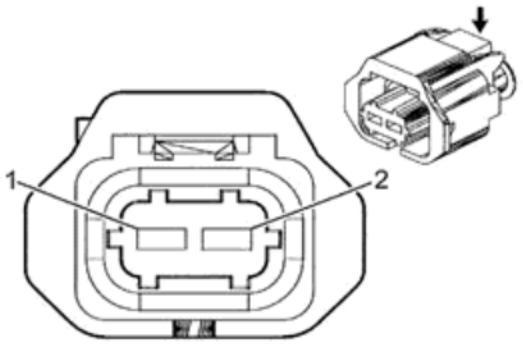
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Component Assembly	J-35616-14 (GN)	Not Available	Not Available	Not Available	Not Available	Not Available

Q8 Control Solenoid Valve Assembly X4 (MH8 or MH9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	WH	—	OSS High Signal	I	—
B	0.5	BK	—	OSS Low Signal	I	—

Q12 Evaporative Emission Purge Solenoid Valve



1855214

Connector Part Information

Harness Type: Engine
OEM Connector: 13125727
Service Connector: 13355748
Description: 2 F 2.8 Timer Series, Sealed BK

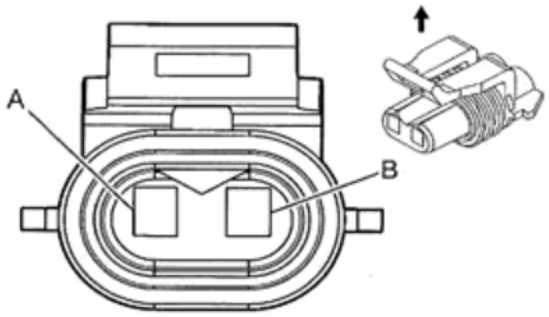
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

Q12 Evaporative Emission Purge Solenoid Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	L-GN/L-BU	428	EVAP Canister Purge Solenoid Control	I	—
2	0.5	VT/L-BU	5291	Powertrain Main Relay Fused Supply (2)	I	—

Q13 Evaporative Emission Vent Solenoid Valve (NT7)



684795

Connector Part Information

Harness Type: Fuel Tank
OEM Connector: 12052643
Service Connector: 12101858
Description: 2-Way F Metri-Pack 150 Series, Sealed (RD)

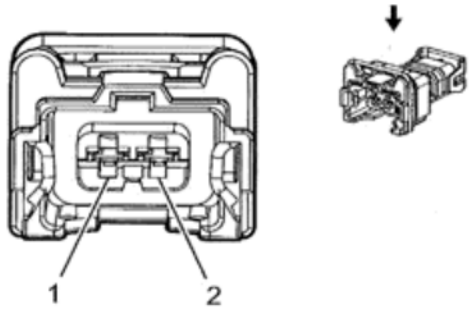
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575419	J-35616-14 (GN)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

Q13 Evaporative Emission Vent Solenoid Valve (NT7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	RD/L-BU	1240	Battery Positive Voltage	I	—
B	0.5	WH	1310	EVAP Canister Vent Solenoid Control	I	—

Q17A Fuel Injector 1 (LUV)



2358956

Connector Part Information

Harness Type: Engine
OEM Connector: 55565698
Service Connector: 13577536
Description: 2-Way F 2.8 DCS Series, Sealed (BK)

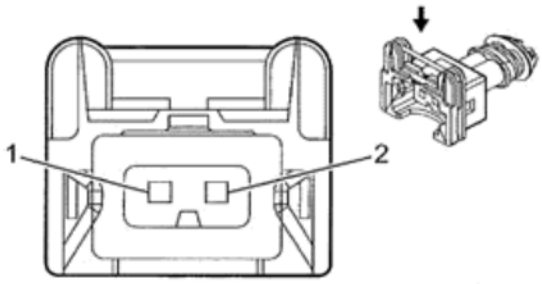
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	J-38125-557	60012931	21	C	1

Q17A Fuel Injector 1 (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	L-BU/WH	5421	Fuel Injector Supply Voltage (1)	I	—
2	0.75	L-GN/YE	1744	Fuel Injector Control (1)	I	—

Q17A Fuel Injector 1 (LUW/LWE)



2447141

Connector Part Information

Harness Type: Fuel Injector
OEM Connector: 24466116
Service Connector: 24466116
Description: 2-Way F 2.8 Timer Series, Sealed (BK)

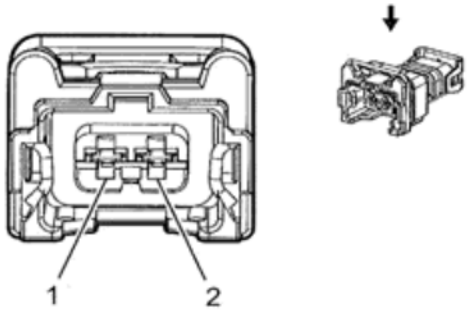
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	J-38125-557	60012931	21	C	1

Q17A Fuel Injector 1 (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	PK/BK	5421	Fuel Injector Supply Voltage (1)	I	—
2	0.75	BN	1744	Fuel Injector Control (1)	I	—

Q17B Fuel Injector 2 (LUV)



2358956

Connector Part Information

Harness Type: Engine
OEM Connector: 55565698
Service Connector: 13577536
Description: 2-Way F 2.8 DCS Series, Sealed (BK)

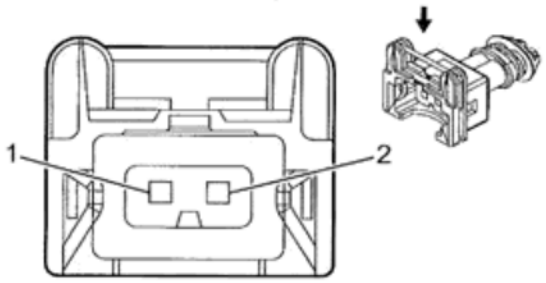
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	J-38125-557	60012931	21	C	1

Q17B Fuel Injector 2 (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	L-BU/WH	5421	Fuel Injector Supply Voltage	I	—
2	0.75	YE/WH	1745	Fuel Injector Control (2)	I	—

Q17B Fuel Injector 2 (LUW/LWE)



2447141

Connector Part Information

Harness Type: Fuel Injector
OEM Connector: 24466116
Service Connector: 24466116
Description: 2-Way F 2.8 Timer Series, Sealed (BK)

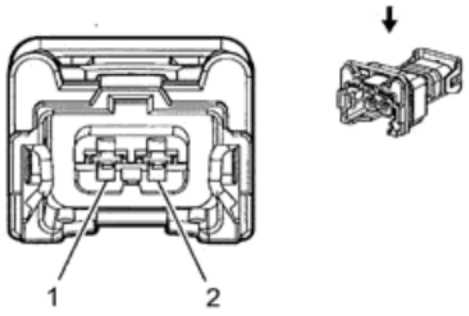
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	J-38125-557	60012931	21	C	1

Q17B Fuel Injector 2 (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	PK/BK	5421	Fuel Injector Supply Voltage (1)	I	—
2	0.75	YE/BK	1745	Fuel Injector Control (2)	I	—

Q17C Fuel Injector 3 (LUV)



2358956

Connector Part Information

Harness Type: Engine
OEM Connector: 55565698
Service Connector: 13577536
Description: 2-Way F 2.8 DCS Series, Sealed (BK)

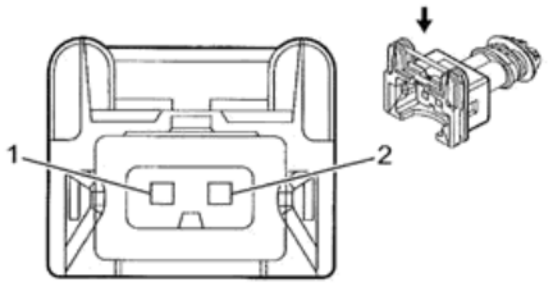
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	J-38125-557	60012931	21	C	1

Q17C Fuel Injector 3 (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	L-BU/WH	5421	Fuel Injector Supply Voltage	I	—
2	0.75	L-GN/YE	1746	Fuel Injector Control (3)	I	—

Q17C Fuel Injector 3 (LUW/LWE)



2447141

Connector Part Information

Harness Type: Fuel Injector
OEM Connector: 24466116
Service Connector: 24466116
Description: 2-Way F 2.8 Timer Series, Sealed (BK)

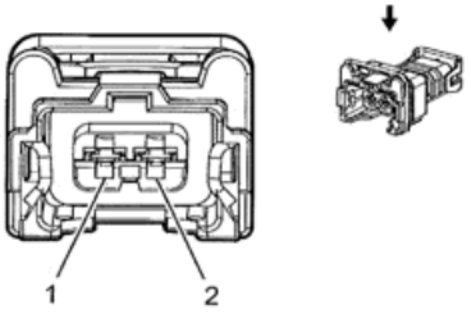
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	J-38125-557	60012931	21	C	1

Q17C Fuel Injector 3 (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	PK/BK	5421	Fuel Injector Supply Voltage (1)	I	—
2	0.75	WH/BK	1746	Fuel Injector Control (3)	I	—

Q17D Fuel Injector 4 (LUV)



2358956

Connector Part Information

Harness Type: Engine
OEM Connector: 55565698
Service Connector: 13577536
Description: 2-Way F 2.8 DCS Series, Sealed (BK)

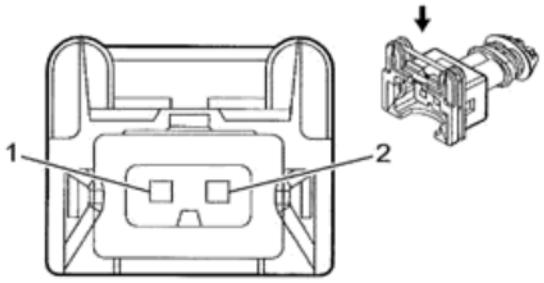
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	J-38125-557	60012931	21	C	1

Q17D Fuel Injector 4 (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	L-BU/WH	5421	Fuel Injector Supply Voltage	I	—
2	0.75	BN/YE	844	Fuel Injector Control (4)	I	—

Q17D Fuel Injector 4 (LUW/LWE)



2447141

Connector Part Information

Harness Type: Fuel Injector
OEM Connector: 24466116
Service Connector: 24466116
Description: 2-Way F 2.8 Timer Series, Sealed (BK)

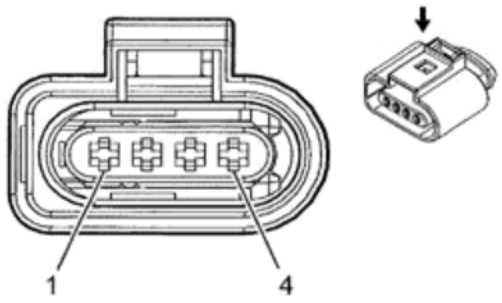
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	J-38125-557	60012931	21	C	1

Q17D Fuel Injector 4 (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	PK/BK	5421	Fuel Injector Supply Voltage (1)	I	—
2	0.75	L-BU/BK	844	Fuel Injector Control (4)	I	—

Q22 Intake Manifold Tuning Solenoid Valve (LUW/LWE)



1835110

Connector Part Information

Harness Type: Engine
OEM Connector: 42121400
Service Connector: 13355783
Description: 4-Way F 1.5 Mini-Timer Series, Sealed (BK)

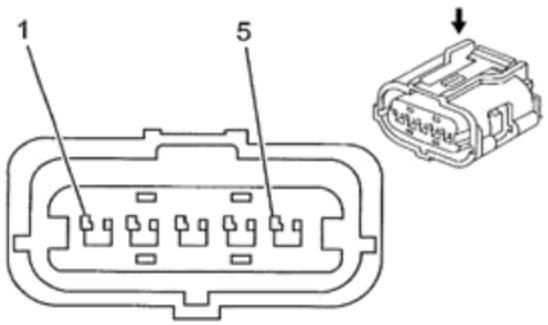
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13576394	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

Q22 Intake Manifold Tuning Solenoid Valve (LUW/LWE)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/L-BU	5291	Powertrain Main Relay Fused Supply (2)	I	—
2	0.5	BK	1750	Ground	I	—
3	0.5	BN/L-GN	5041	Intake Manifold Control (1)	I	—
4	0.5	GY/L-GN	7303	Intake Manifold Tuning Valve (IMTV) Position - Signal	I	—

Q29 Secondary Air Injection Solenoid Valve



1399241

Connector Part Information

Harness Type: Engine
OEM Connector: 19153036
Service Connector: 19151506
Description: 5-Way F TS Series, Sealed (BK)

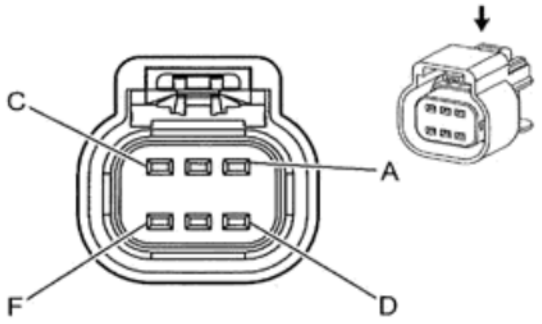
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

Q29 Secondary Air Injection Solenoid Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/BN	6452	Air Injection Reaction Pump Sensor Supply Voltage	I	-
2	0.5	WH	6453	Air Injection Reaction Pump Sensor Signal	I	-
3	0.5	BK/L-BU	6785	Air Injection Reaction Control Valve #1 Low Reference	I	-
4	0.5	BK	1750	Ground	I	-
5	0.5	YE/BK	429	Air Injection Reaction Solenoid Control	I	-

Q38 Throttle Body



1468494

Connector Part Information

Harness Type: Engine
OEM Connector: 15355297
Service Connector: 13504128
Description: 6-Way F GT 150 Series, Sealed (BK)

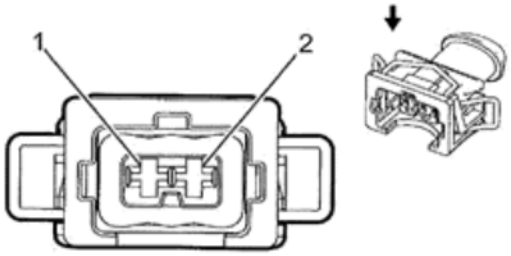
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-2A (GY)	J-38125-553	15326427	5	Pins A-B: 2	1

Q38 Throttle Body

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	BN/WH	582	Throttle Actuator Control Close	I	—
B	0.75	YE	581	Throttle Actuator Control Open	I	—
C	0.5	BK/BN	2752	Low Reference	I	—
D	0.5	BN/L-GN	485	Throttle Position Sensor Signal (1)	I	—
E	0.5	GY/RD	416	5 Volt Reference	I	—
F	0.5	BN/L-BU	486	Throttle Position Sensor Signal (2)	I	—

Q40 Turbocharger Bypass Solenoid Valve



2499323

Connector Part Information

Harness Type: Engine
OEM Connector: 90347618
Service Connector: 89046833
Description: 2-Way F 2.8 Junior Power Timer Series, Sealed (BK)

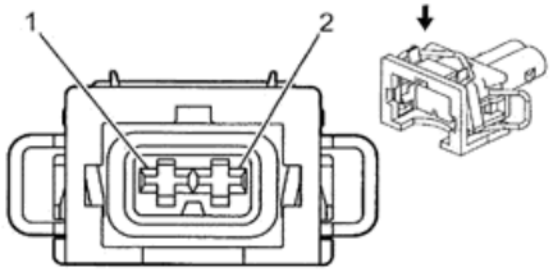
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	J-38125-557	60012941	7	C	1

Q40 Turbocharger Bypass Solenoid Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN/YE	5268	Overrun Air Valve Solenoid	I	-
2	0.75	VT/L-BU	5291	Powertrain Main Relay Fused Supply (2)	I	-

Q42 Turbocharger Wastegate Solenoid Valve (LUV)



1405759

Connector Part Information

Harness Type: Engine
OEM Connector: 12131678
Service Connector: 89046833
Description: 2-Way F Mini Timer Series, Sealed (BK)

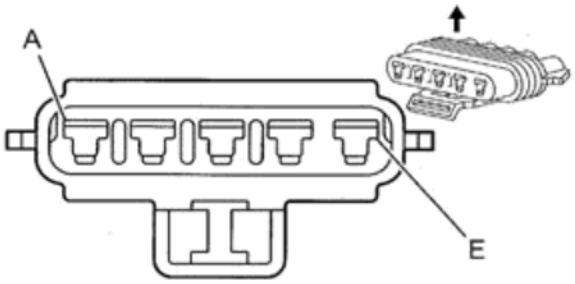
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-4A (PU)	J-38125-557	60012941	21	C	1

Q42 Turbocharger Wastegate Solenoid Valve (LUV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/YE	258	Waste Gate Solenoid Control	I	—
2	0.5	VT/L-BU	5291	Powertrain Main Relay Fused Supply (1)	I	—

R3 Blower Motor Resistor



805442

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12084890
Service Connector: 15305921
Description: 5-Way F Metri-Pack 280 Series, Sealed (GY)

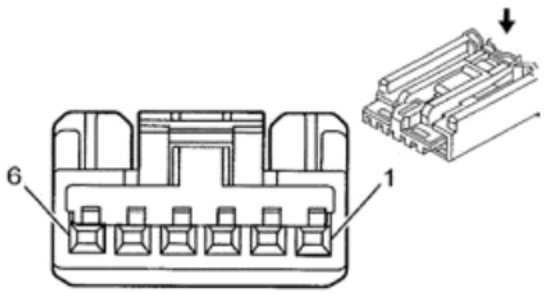
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 15305921	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

R3 Blower Motor Resistor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	YE/BN	63	Medium Blower Motor Control (1)	I	—
B	2.5	L-BU/YE	72	Medium 2 Blower Motor Control	I	—
C	3	WH/BK	52	High Blower Motor Control	I	—
D	3	WH/BK	52	High Blower Motor Control	I	—
E	1	YE	60	Low Blower Motor Control	I	—

S3 Transmission Shift Lever (MH8 or MH9)



1862240

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: AIT2PB-06-1AK
Service Connector: 19167753
Description: 6-Way F AIT II Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

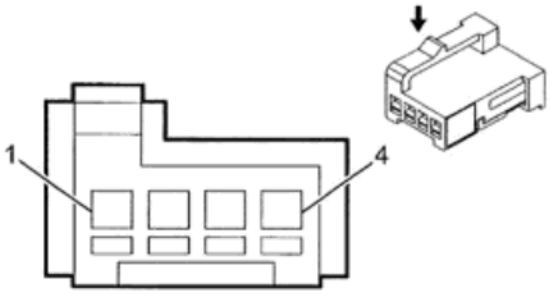
S3 Transmission Shift Lever (MH8 or MH9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	-	-	-	Not Occupied	-	-
2	0.35	BK	1150	Ground	I	—
3	0.5	VT/YE	5526	Tap Up/Tap Down Switch Signal	I	—
4	0.5	VT/BK	7553	Park Lock Solenoid Control	I	—

S3 Transmission Shift Lever (MH8 or MH9) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
5	—	—	—	Not Occupied	—	—
6	0.5	WH/VT	5905	Key Capture/Column Lock Shift Position Signal	I	—

S13D Door Lock Switch - Driver



2173569

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 24414895
Service Connector: 13580967
Description: 4-Way F 0.64 MTS Series (BK)

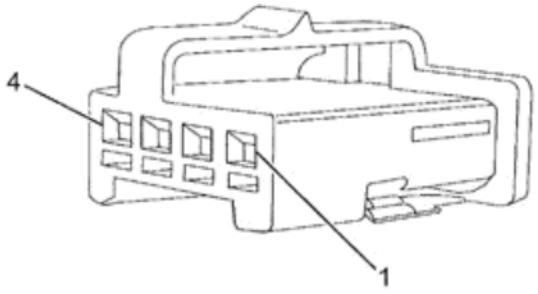
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575782	J-35616-64B (L-BU)	J-38125-12A	928999-5	15	J	J

S13D Door Lock Switch - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1250	Ground	I	—
2	0.35	YE	6817	LED Backlight Dimming Control	I	—
3	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	I	—
4	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	I	—

S26 Hazard Warning Switch



2173567

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 24414897
Service Connector: 13580968
Description: 4-Way F MTS 0.64 Series (BU)

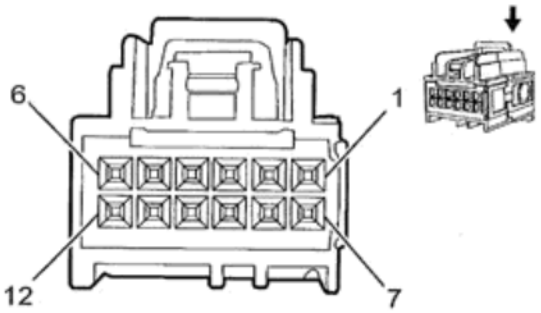
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575522	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

S26 Hazard Warning Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	L-GN/WH	111	Hazard Switch Signal	I	—
2	0.35	GY/YE	7543	Hazard LED Dimming Signal	I	—
3	0.35	BK	1250	Ground	I	—
4	-	-	-	Not Occupied	-	-

S30 Headlamp Switch



2180216

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 94552-9012
Service Connector: 13576636
Description: 12-Way F 0.64 Micro Quadlok Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451886	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451887	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

S30 Headlamp Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	7556	Lighting Control Switch Reference	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	L-GN/GY	13	Headlamp Switch Park Lamp Signal	I	—
4	0.35	WH/VT	103	Headlamp Switch On Signal	I	—
5	0.35	L-GN/BN	306	Headlamp Switch Headlamps Off Signal Control	I	UTJ
6	0.35	BK	1250	Ground	I	—
7	0.35	YE	6817	LED Backlight Dimming Control	I	—
8	—	—	—	Not Occupied	—	—
9	0.5	VT/L-GN	839	Run/Crank Ignition 1 Voltage	I	—
10	0.5	BN/YE	189	Headlamp Leveling Motor Supply Voltage	I	—
11	—	—	—	Not Occupied	—	—
12	0.35	WH/BN	7555	Lighting Control Switch Signal	I	—

S33 Horn Switch

Connector Part Information

Harness Type: Steering Wheel
OEM Connector: Not Available
Service Connector: Service by Harness – See Part Catalog
Description: 1-Way Spade Terminal

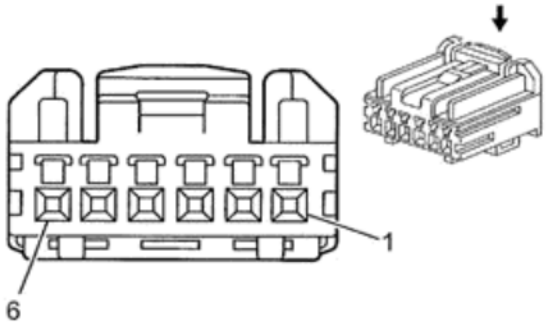
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

S33 Horn Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	28	Horn Relay Control	I	—

S39 Ignition Switch



1664548

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: HCMPB-C06-S
Service Connector: 19153174
Description: 6-Way F HCM Series (WH)

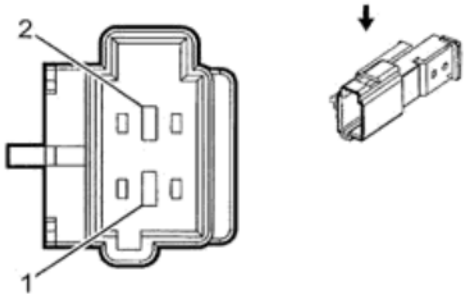
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575868	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

S39 Ignition Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/BK	3	Run/Crank Ignition 1 Voltage	I	—
2	0.35	RD/VT	3340	Battery Positive Voltage	I	—
3	0.35	VT/YE	4	Accessory Voltage	I	—
4	0.35	WH/VT	1020	Off/Run/Crank Voltage	I	—
5	-	-	-	Not Occupied	-	-
6	0.35	WH/BK	1073	Ignition Key Resistor Signal	I	—

S46B Liftgate Unlatch Switch



2339581

Connector Part Information

Harness Type: Liftgate
OEM Connector: 1563190-1
Service Connector: 13574780
Description: 2-Way M 1.6 Timer Series (BK)

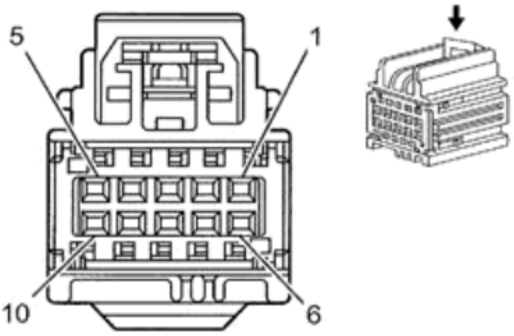
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575591	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

S46B Liftgate Unlatch Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE/L-BU	5797	Rear Closure Handle Switch Open Signal	I	—
2	0.35	BK	1050	Ground	I	—

S48E Multifunction Switch - Center Console



1664581

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 7283-9040-30
Service Connector: 15127042
Description: 10-Way F 0.64 YESC Kaizen Series (BK)

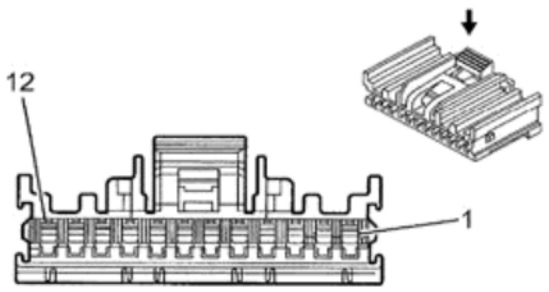
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575846	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

S48E Multifunction Switch - Center Console

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY/L-GN	5053	Winter Mode Switch Signal	I	—
2–4	—	—	—	Not Occupied	—	—
5	0.35	L-BU/VT	1788	Traction Control Switch Signal (1)	I	—
6	0.35	GY	5697	Child Lockout Indicator	I	—
7	0.35	YE/BN	3265	Child Security Lock Switch Signal	I	—
8	0.35	WH	6816	Indicator Dimming Control	I	—
9	0.35	BK	1250	Ground	I	—
10	0.35	YE	6817	LED Backlight Dimming Control	I	—

S52 Outside Rearview Mirror Switch (DG6)



1710983

Connector Part Information

Harness Type: Driver Door
OEM Connector: 15499371
Service Connector: 19115105
Description: 12-Way F Kaizen 64 Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575845	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

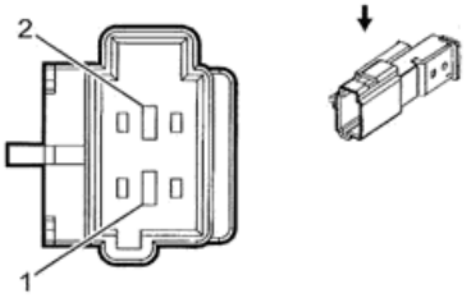
S52 Outside Rearview Mirror Switch (DG6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/L-BU	3390	Driver Mirror Motor Up (+) Down (-) Control	I	—
2	0.35	YE/BN	3391	Driver Mirror Motor Common Control	I	—
3	0.35	BN/BK	3389	Driver Mirror Motor Right (+) Left (-) Control	I	—

S52 Outside Rearview Mirror Switch (DG6) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
4	0.5	RD/WH	1040	Battery Positive Voltage	I	—
5	0.5	BK	550	Ground	I	—
6	—	—	—	Not Occupied	—	—
7	0.35	YE/VT	3397	Co-Driver Mirror Motor Up (+) Down (-) Control	I	—
8	0.35	WH	3398	Co-Driver Mirror Motor Common Control	I	—
9	0.35	L-GN/BK	3396	Co-Driver Mirror Motor Right (+) Left (-) Control	I	—
10	—	—	—	Not Occupied	—	—
11	0.35	VT/YE	3409	Mirror Motor Fold Out Control	I	DL7
12	0.35	WH/BN	3410	Mirror Motor Fold In Control	I	DL7

S58A Rear Compartment Lid Unlatch Switch - Exterior (Notchback)



2339581

Connector Part Information

Harness Type: Decklid
OEM Connector: 1563190-1
Service Connector: 13574780
Description: 2-Way M 1.6 Timer Series (BK)

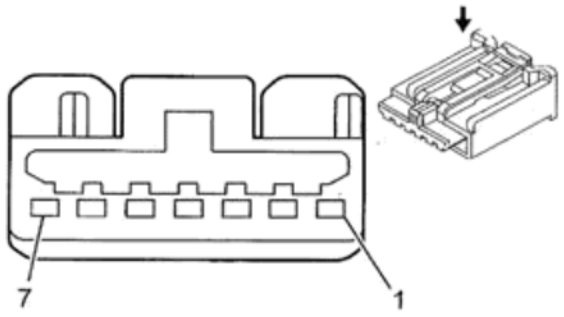
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575591	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

S58A Rear Compartment Lid Unlatch Switch - Exterior (Notchback)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE/L-BU	5797	Rear Closure Handle Switch Open Signal	I	—
2	0.35	BK	1050	Ground	I	—

S70L Steering Wheel Controls Switch - Left (K34)



1847927

Connector Part Information

Harness Type: Steering Wheel
OEM Connector: AIT2PB-07-1FS
Service Connector: Service by Harness – See Part Catalog
Description: 7-Way F AIT II Series (NA)

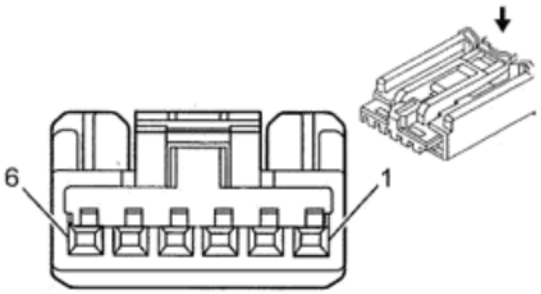
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

S70L Steering Wheel Controls Switch - Left (K34)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/RD	1444	12 Volt Reference	I	—
2	-	-	-	Not Occupied	-	-
3	0.35	BN/L-GN	1884	Cruise Control Set/Coast/Resume/Accelerate Switch Signal	I	—
4–5	-	-	-	Not Occupied	-	-
6	0.35	YE	6817	LED Backlight Dimming Control	I	—
7	0.35	BK	1250	Ground	I	—

S70R Steering Wheel Controls Switch - Right



1862240

Connector Part Information

Harness Type: Steering Wheel
OEM Connector: 15269798
Service Connector: 19167753
Description: 6-Way F AIT II Series (BK)

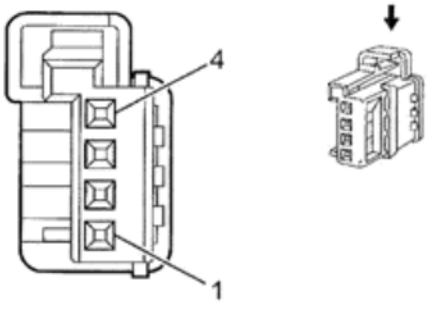
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Parts Catalog	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

S70R Steering Wheel Controls Switch - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/RD	1444	12 Volt Reference	I	—
2	0.35	D-GN	6818	Steering Wheel Resistor Ladder Signal #1	I	—
3	-	-	-	Not Occupied	-	-
4	0.35	YE	6817	LED Backlight Dimming Control	I	—
5	0.35 0.35	BK BK	1250 1250	Ground Ground	I	— —
6	-	-	-	Not Occupied	-	-

S72 Sunroof Switch (CF5)



2179793

Connector Part Information

Harness Type: Headliner
OEM Connector: 1379029-1
Service Connector: 13576535
Description: 4-Way F 0.64 Micro Quadlok Series (BK)

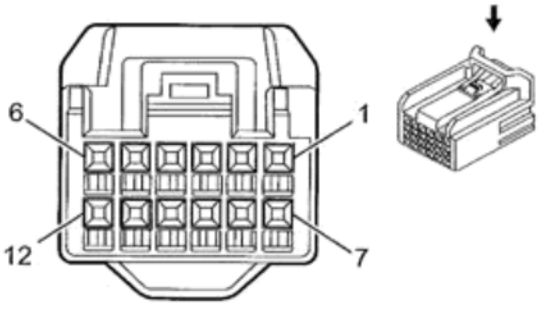
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575585	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

S72 Sunroof Switch (CF5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT	641	Run Ignition 3 Voltage	I	—
2	0.35	L-GN/WH	100	Sunroof Switch Open Signal	I	—
3	0.35	L-BU/WH	110	Sunroof Switch Close Signal	I	—
4	-	-	-	Not Occupied	-	-

S78 Turn Signal/Multifunction Switch



2180217

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: SHC2PB-12-2AK
Service Connector: 13576635
Description: 12-Way F 0.64 Series (BK)

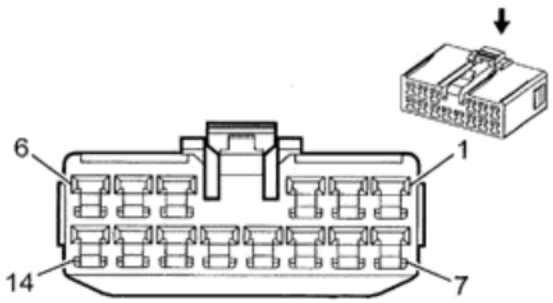
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575870	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

S78 Turn Signal/Multifunction Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/L-GN	663	Hazard Switch Left Turn Signal	I	—
2	0.35	WH	524	Headlamp Dimmer Switch High Beam Signal	I	—
3	0.35	BK	1250	Ground	I	—
4	0.35	YE/BN	307	Headlamp Switch Flash To Pass Signal	I	—
5	0.35	GY/L-BU	893	Driver Information Center Select Menu Switch Signal	I	—
6	0.35	BK/BN	897	Low Reference	I	—
7	0.35	VT/L-BU	664	Hazard Switch Right Turn Signal	I	—
8–11	-	-	-	Not Occupied	-	-
12	0.35	L-GN/WH	1358	Driver Information Center Switch Signal	I	—

S79D Window Switch - Driver (AXG)



2268778

Connector Part Information

Harness Type: Driver Door
OEM Connector: MG651110
Service Connector: Service by Harness – See Part Catalog
Description: 14-Way F 090 II Series (WH)

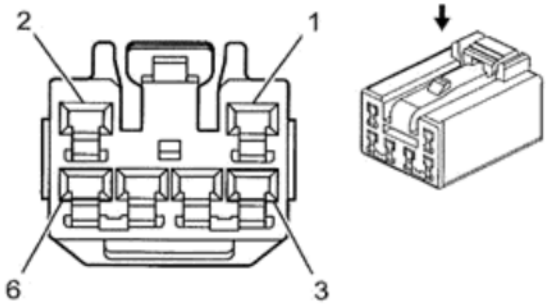
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Pins 7 – 13580050	J-35616-18 (BK)	J-38125-553	Not Available	Not Available	Not Available	Not Available
II	Service by Harness – See Part Catalog	J-35616-18 (BK)	J-38125-553	Not Available	Not Available	Not Available	Not Available

S79D Window Switch - Driver (AXG)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	L-BU/WH	1307	Power Window Master Switch Lockout Signal	I	—
2	1.5	BN/L-BU	1187	Power Window Switch Left Rear Down Signal	I	—
3	1.5	L-GN/GY	1185	Power Window Switch Left Rear Up Signal	I	—
4	1.5	BN/L-BU	1188	Power Window Switch Right Rear Down Signal	I	—
5	1.5	L-GN/GY	1186	Power Window Switch Right Rear Up Signal	I	—
6	1.5	VT/YE	543	Accessory Voltage	I	—
7	0.35	L-GN	3381	Power Window Switch Driver Express Signal	I	—
8	0.35	GY	3380	Power Window Switch Driver Down Signal	II	—
9	0.35	L-GN/WH	3379	Power Window Switch Driver Up Signal	II	—
10	0.35	L-GN	3381	Power Window Switch Driver Express Signal	II	—
11	1.5	BK	550	Ground	I	—
12	1.5	BN/YE	3385	Power Window Switch Co-Driver Down Signal	I	—
13	1.5	VT/YE	443	Accessory Voltage	I	—
14	1.5	YE/BK	3384	Power Window Switch Co-Driver Up Signal	I	—

S79LR Window Switch - Left Rear (A33)



1957538

Connector Part Information

Harness Type: Left Rear Door
OEM Connector: MG651044
Service Connector: 13584407
Description: 6-Way F 090 II Series (NA)

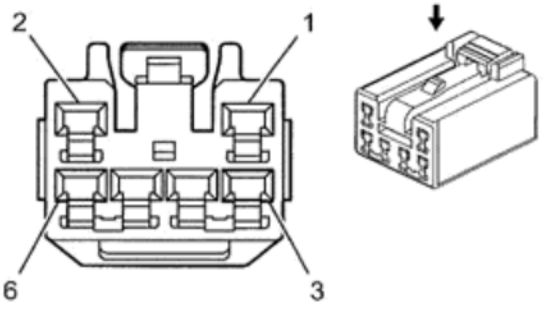
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	J-35616-18 (BK)	J-38125-553	Not Available	Not Available	Not Available	Not Available

S79LR Window Switch - Left Rear (A33)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	L-BU/VT	668	Power Window Motor Left Rear Up Control	I	—
2	-	-	-	Not Occupied	-	-
3	1.5	L-GN/GY	1185	Power Window Switch Left Rear Up Signal	I	—
4	1.5	YE/L-BU	669	Power Window Motor Left Rear Down Control	I	—
5	1.5	L-BU/WH	1307	Power Window Master Switch Lockout Signal	I	—
6	1.5	BN/L-BU	1187	Power Window Switch Left Rear Down Signal	I	—

S79P Window Switch - Passenger (A66)



1957538

Connector Part Information

Harness Type: Passenger Door
OEM Connector: MG651044
Service Connector: 13584407
Description: 6-Way F 090 II Series (NA)

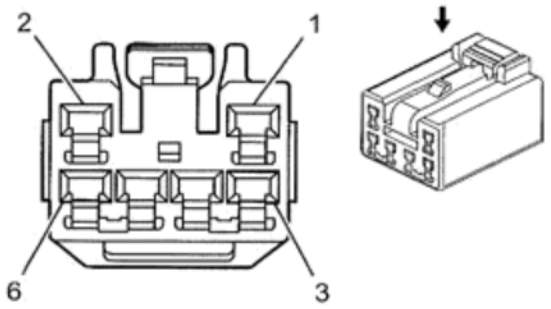
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	J-35616-18 (BK)	J-38125-553	Not Available	Not Available	Not Available	Not Available

S79P Window Switch - Passenger (A66)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	L-GN/GY	3387	Power Window Motor Co-Driver Up Control	I	—
2	-	-	-	Not Occupied	-	-
3	1.5	YE/BK	3384	Power Window Switch Co-Driver Up Signal	I	—
4	1.5	YE/L-BU	3388	Power Window Motor Co-Driver Down Control	I	—
5	1.5	VT/YE	443	Accessory Voltage	I	—
6	1.5	BN/YE	3385	Power Window Switch Co-Driver Down Signal	I	—

S79RR Window Switch - Right Rear (A33)



1957538

Connector Part Information

Harness Type: Right Rear Door
OEM Connector: MG651044
Service Connector: 13584407
Description: 6-Way F 090 II Series (NA)

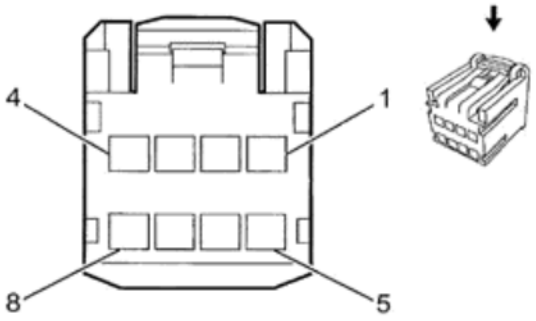
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	J-35616-18 (BK)	J-38125-553	Not Available	Not Available	Not Available	Not Available

S79RR Window Switch - Right Rear (A33)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	L-BU/GY	670	Power Window Motor Right Rear Up Control	I	—
2	-	-	-	Not Occupied	-	-
3	1.5	L-GN/GY	1186	Power Window Switch Right Rear Up Signal	I	—
4	1.5	L-GN/BK	671	Power Window Motor Right Rear Down Control	I	—
5	1.5	L-BU/WH	1307	Power Window Master Switch Lockout Signal	I	—
6	1.5	BN/L-BU	1188	Power Window Switch Right Rear Down Signal	I	—

S82 Windshield Wiper/Washer Switch



2180203

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 19153437
Service Connector: 13576541
Description: 8-Way F 1.2 HCM Series (BK)

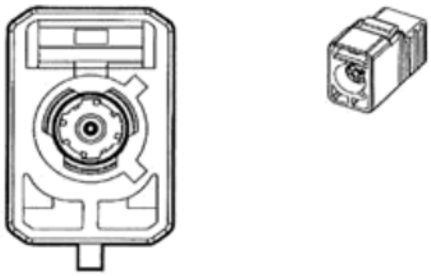
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575868	J-35616-64B (L-BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

S82 Windshield Wiper/Washer Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	1715	Windshield Wiper Switch High Signal	I	—
2	0.35	BK/GY	6009	Windshield Wiper Switch Low Reference	I	—
3	0.35	YE/L-BU	1714	Windshield Wiper Switch Low Signal	I	—
4	0.35	BN/L-BU	391	Rear Window Wiper Switch Signal	I	—
5	0.35	WH/BK	94	Windshield Washer Switch Signal	I	—
6–8	-	-	-	Not Occupied	-	-

T4E Cellular Phone and Navigation Antenna (UE1-U2K)



2912303

Connector Part Information

Harness Type: Body
OEM Connector: 3FA1-NDSJ-C04W6
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way F Coax Type (BK)

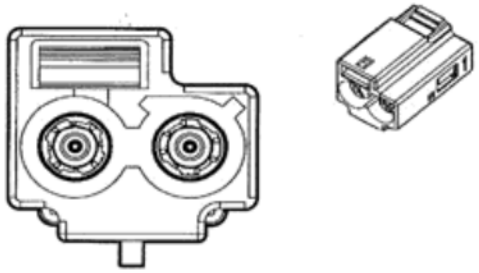
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

T4E Cellular Phone and Navigation Antenna (UE1-U2K)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	WH	6449	Coaxial Antenna Cell Phone Signal	I	—

T4G Cellular Phone, Navigation, and Digital Radio Antenna (UE1+U2K)



2912306

Connector Part Information

Harness Type: Body
OEM Connector: 3FAH-NASJ-C00W6
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 2-Way F Coax Type (BK)

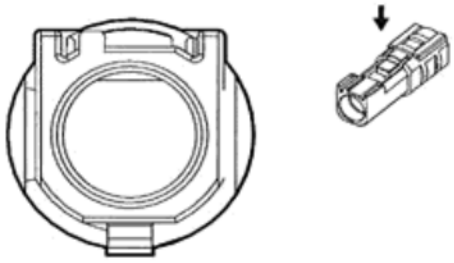
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

T4G Cellular Phone, Navigation, and Digital Radio Antenna (UE1+U2K)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	WH	6449	Coaxial Antenna Cell Phone Signal	I	—
2	1.5	WH	6130	Coaxial Antenna XM Signal	I	—

T4M Radio Antenna



2791479

Connector Part Information

Harness Type: Body
OEM Connector: 1897374-2
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way M Coax Type (BK)

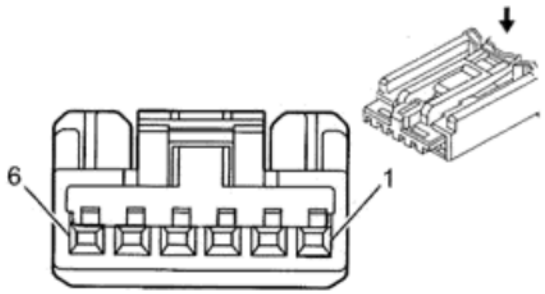
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Cable Assembly - See Part Catalog	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

T4M Radio Antenna

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH	6001	Antenna RF Signal	I	—

X83 Auxiliary Audio Input X1 (UH7)



1862240

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15269798
Service Connector: 19167753
Description: 6-Way F AIT II Series (BK)

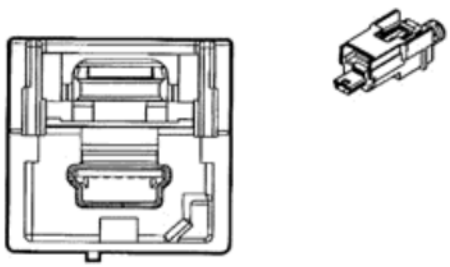
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

X83 Auxiliary Audio Input X1 (UH7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	5839	Left Auxiliary Audio Signal (2)	I	—
2	0.35	L-GN	5841	Right Auxiliary Audio Signal (2)	I	—
3	0.35	BN	3374	Auxiliary Audio Common Signal (2)	I	—
4	0.50	BK	1550	Ground	I	UF7
5	0.35	L-BU	2060	Auxiliary Detection Signal	I	—
6	0.35	YE	2056	Auxiliary Video High Signal	I	UF7

X83 Auxiliary Audio Input X2 (UH7)



2807715

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13578152
Service Connector: Service by Cable Assembly – See Parts Catalog
Description: 5-Way M 2.0 Mini-B USB Type (NA)

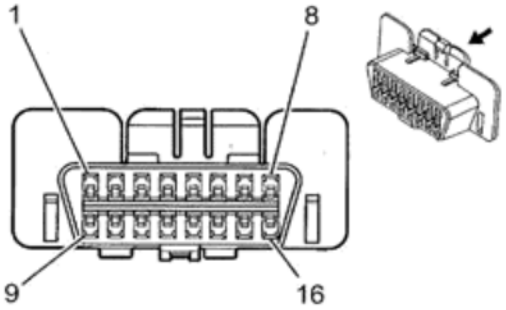
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Cable Assembly – See Parts Catalog	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

X83 Auxiliary Audio Input X2 (UH7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.08	RD	3149	USB Serial Data Supply Voltage	I	—
2	0.08	WH	3147	USB D (-) Serial Data	I	—
3	0.08	L-GN	3146	USB D (+) Serial Data	I	—
4	0.08	BK	3148	Low Reference	I	—
5	0.5	BARE	3145	USB Serial Data Drain Wire	I	—

X84 Data Link Connector



808656

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15317575
Service Connector: 15317575
Description: 16-Way F Metri-Pack/150 Series (BK)

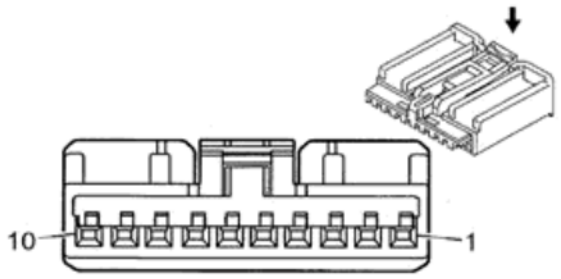
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575725	J-35616-14 (GN)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

X84 Data Link Connector

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
2–3	-	-	-	Not Occupied	-	-
4	0.5	BK	1250	Ground	I	—
5	0.35	BK	1350	Ground	I	—
6	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	I	—
7–11	-	-	-	Not Occupied	-	-
12	0.5	L-BU/YE	6105	High Speed GMLAN Serial Data (+) (2)	I	—
13	0.5	WH	6106	High Speed GMLAN Serial Data (-) (2)	I	—
14	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	I	—
15	-	-	-	Not Occupied	-	-
16	0.5	RD/YE	3040	Battery Positive Voltage	I	—

X85 Steering Wheel Air Bag Coil X1



1862241

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: AIT2PB-10-1AK
Service Connector: 13576634
Description: 10-Way F AIT II Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (L-BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

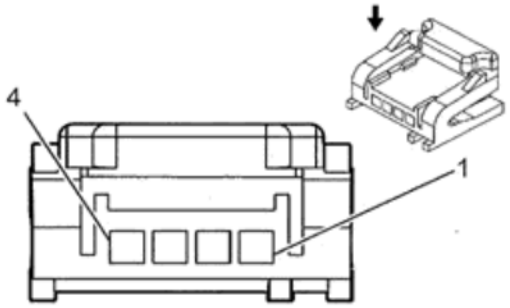
X85 Steering Wheel Air Bag Coil X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	L-GN/WH	3287	Horn Switch Signal	I	—
2	0.35	BK	1150	Ground	I	—
3	0.35	BN/L-GN	1884	Cruise Control Set/Coast/Resume/Accelerate Switch Signal	I	—
4	0.35	L-GN	6818	Steering Wheel Resistor Ladder Signal #1	I	—
5	0.35	WH/RD	1444	12 Volt Reference	I	—

X85 Steering Wheel Air Bag Coil X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
6	0.5	BN	6136	Supply Voltage	I	—
7–10	—	—	—	Not Occupied	—	—

X85 Steering Wheel Air Bag Coil X2



1399226

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15393421
Service Connector: 13580115
Description: 4-Way F Micro-Pack 064 Series (YE)

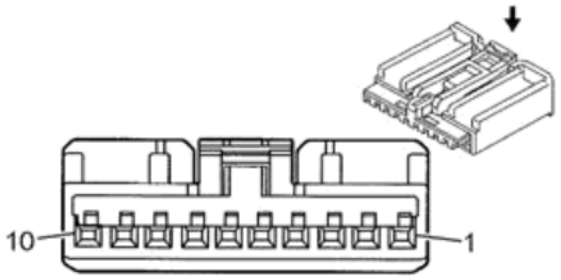
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 13580115	J-35616-64B (L-BU)	J-38125-559	Not Available	Not Available	Not Available	Not Available

X85 Steering Wheel Air Bag Coil X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	OG/VT	3021	Steering Wheel Module Stage 1 High Control	I	—
2	0.35	BN/OG	3020	Steering Wheel Module Stage 1 Low Control	I	—
3	0.35	OG/L-GN	3023	Steering Wheel Module Stage 2 High Control	I	—
4	0.35	WH/OG	3022	Steering Wheel Module Stage 2 Low Control	I	—

X85 Steering Wheel Air Bag Coil X3



1862241

Connector Part Information

Harness Type: Steering Wheel
OEM Connector: 15269795
Service Connector: 13576634
Description: 10-Way F AIT II Series (BK)

Terminal Part Information

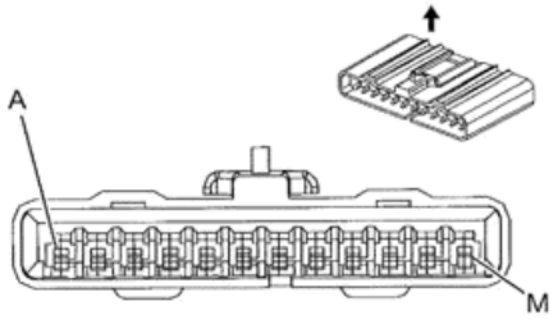
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Harness – See Part Catalog	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

X85 Steering Wheel Air Bag Coil X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1–4	-	-	-	Not Occupied	-	-
5	0.35 0.35	YE YE	6817 6817	LED Backlight Dimming Control LED Backlight Dimming Control	I	— —
6	0.35 0.35	WH/RD WH/RD	1444 1444	12 Volt Reference 12 Volt Reference	I	— —
7	0.35	D-GN	6818	Steering Wheel Resistor Ladder Signal #1	I	—
8	0.35	BN/D-GN	1884	Cruise Control Set/Coast/Resume/Accelerate Switch Signal	I	—
9	0.35 0.35	BK BK	1250 1250	Ground Ground	I	— —
10	0.5	BN/WH	3287	Horn Switch Signal	I	—

Splice Pack Connector End Views

JX200



791098

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12176460
Service Connector: 12167607
Description: 12-Way F GT 150 Series (BK)

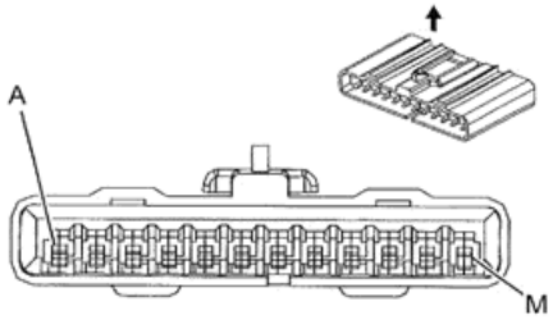
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575735	J-35616-2A (GY)	J-38125-553

JX200

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	I	—
B	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	I	—
C	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	I	UE1
D	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	I	—
E–F	—	—	—	Not Occupied	—	—
G	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	I	—
H	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	I	—
J	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	I	UE1
K	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	I	—
L–M	—	—	—	Not Occupied	—	—

JX201



791096

Connector Part Information

Harness Type: Body
OEM Connector: 12176460
Service Connector: 12167607
Description: 12-Way F GT 150 Series (BK)

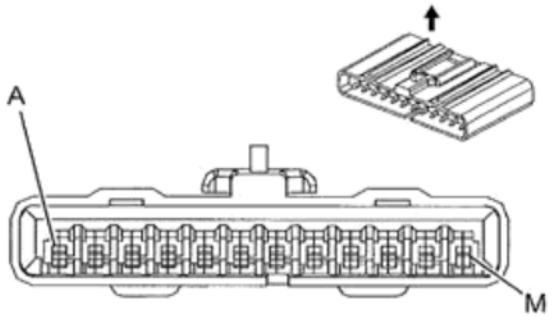
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575735	J-35616-2A (GY)	J-38125-553

JX201

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	I	—
B	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	I	—
C	—	—	—	Not Occupied	—	—
D	0.5	L-BU	2500	High Speed GMLAN Serial Data (+) (1)	I	—
E–F	—	—	—	Not Occupied	—	—
G	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	I	—
H	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	I	—
J	—	—	—	Not Occupied	—	—
K	0.5	WH	2501	High Speed GMLAN Serial Data (-) (1)	I	—
L–M	—	—	—	Not Occupied	—	—

JX202



791096

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12176460
Service Connector: 12167607
Description: 12-Way F GT 150 Series (BK)

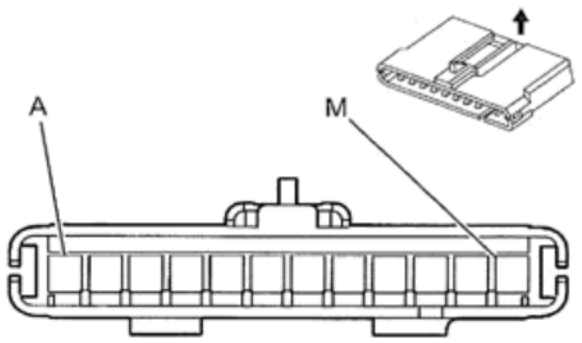
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575735	J-35616-2A (GY)	J-38125-553

JX202

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	L-BU/YE	6105	High Speed GMLAN Serial Data (+) (2)	I	—
B	0.5	L-BU/YE	6105	High Speed GMLAN Serial Data (+) (2)	I	—
C	0.5	L-BU/YE	6105	High Speed GMLAN Serial Data (+) (2)	I	—
D–F	—	—	—	Not Occupied	—	—
G	0.5	WH	6106	High Speed GMLAN Serial Data (-) (2)	I	—
H	0.5	WH	6106	High Speed GMLAN Serial Data (-) (2)	I	—
J	0.5	WH	6106	High Speed GMLAN Serial Data (-) (2)	I	—
K–M	—	—	—	Not Occupied	—	—

JX203



338576

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 12191216
Service Connector: 15305914
Description: 12-Way F GT 150 Series (L-GY)

Terminal Part Information

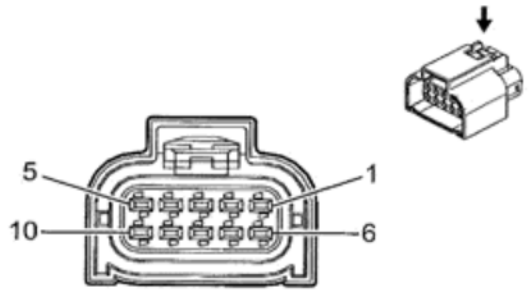
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575735	J-35616-2A (GY)	J-38125-553

JX203

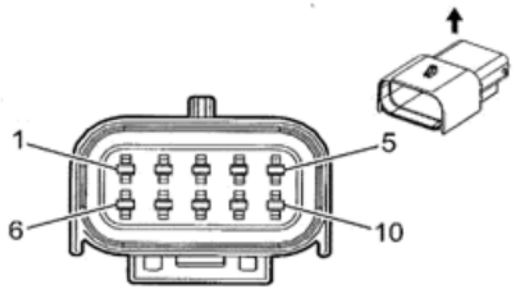
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
B	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
C	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
D	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
E	—	—	—	Not Occupied	—	—
F	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
G	—	—	—	Not Occupied	—	—
H	—	—	—	Not Occupied	—	—
J	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	—
K	0.35	L-GN	5060	Low Speed GMLAN Serial Data	I	UE1
L–M	—	—	—	Not Occupied	—	—

Inline Harness Connector End Views

X100 Forward Lamp Harness to Body Harness



2537264



2537263

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 1897726-2
Service Connector: 13395408
Description: 10-Way F 1.5 MCP Series, Sealed (BK)

Connector Part Information

Harness Type: Body
OEM Connector: 1897725-2
Service Connector: 13395407
Description: 10-Way M 1.5 MCP Series, Sealed (BK)

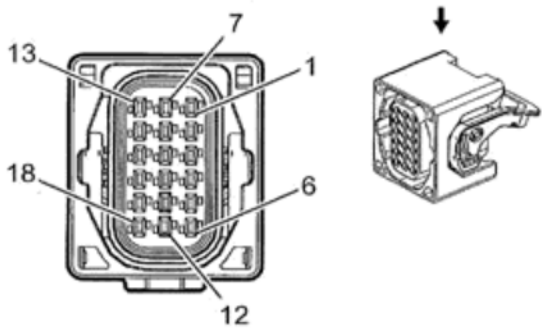
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not Available	J-35616-14 (GN)	J-38125-560
II	13576397	J-35616-3 (GY)	J-38125-560

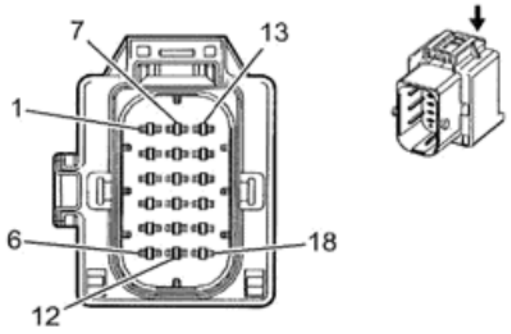
X100 Forward Lamp Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BK/ L-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	1	0.5	BK/ L-BU	61	II	—
2	0.5	L-BU/ GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	2	0.5	L-BU/ GY	636	II	—
3	—	—	—	—	—	Not Occupied	3	—	—	—	—	—
4	0.5	OG/ YL	354	I	—	Left Front Discriminating Sensor Signal	4	0.5	OG/ YL	354	II	—
5	0.5	BK/ OG	5045	I	—	Left Front Discriminating Sensor Low Reference	5	0.5	BK/ OG	5045	II	—
6	0.5	OG/ L-GN	1409	I	—	Right Front Discriminating Sensor Signal	6	0.5	OG/ L-GN	1409	II	—
7	0.5	BK/ OG	5600	I	—	Right Front Discriminating Sensor Low Reference	7	0.5	BK/ OG	5600	II	—
8	0.5	BN/ L-GN	109	I	UTJ	Hood Ajar Switch Signal	8	0.5	BN/ L-GN	109	II	UTJ
9	0.5	YE/ BK	3000	I	—	Coolant Temperature Sensor #2 Signal	9	0.5	YE/ BK	3000	II	—
10	0.5	BK/ L-BU	6813	I	—	Low Reference	10	0.5	BK/ L-BU	6813	II	—

X101 Engine Harness to Body Harness



2537261



2537260

Connector Part Information

Harness Type: Engine
OEM Connector: 1897688-2
Service Connector: 13395406
Description: 18-Way F MCP 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Body
OEM Connector: 1897686-2
Service Connector: 13395405
Description: 18-Way M 1.5 MCP Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not Available	J-35616-14 (GN)	J-38125-560
II	13576397	J-35616-3 (GY)	J-38125-560

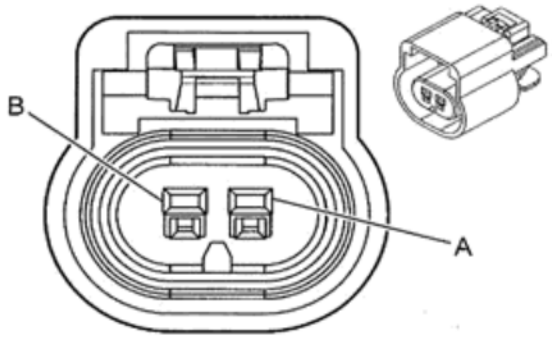
X101 Engine Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	L-BU	2500	I	—	High Speed GMLAN Serial Data (+) (1)	1	0.5	L-BU	2500	II	—
2	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) (1)	2	0.5	WH	2501	II	—
3	0.5	BK/ L-BU	1271	I	—	Low Reference	3	0.5	BK/ L-BU	1271	II	—
4	0.5	YE/ WH	1161	I	—	Accelerator Pedal Position Signal (1)	4	0.5	YE/ WH	1161	II	—
5	0.5	WH/ RD	1164	I	—	5 Volt Reference	5	0.5	WH/ RD	1164	II	—
6	0.5	BK/VT	1272	I	—	Low Reference	6	0.5	BK/VT	1272	II	—
7	0.5	L-GN/ WH	1162	I	—	Accelerator Pedal Position Signal (2)	7	0.5	L-GN/ WH	1162	II	—
8	0.5	BN/ RD	1274	I	—	5 Volt Reference	8	0.5	BN/ RD	1274	II	—
9	—	—	—	—	—	Not Occupied	9	—	—	—	—	—
10	0.5	BK/ L-GN	6281	I	—	Low Reference	10	0.35	BK/ L-GN	6281	II	—
11	0.5	L-BU/ VT	1589	I	—	Primary Fuel Level Sensor Signal	11	0.35	L-BU/ VT	1589	II	—

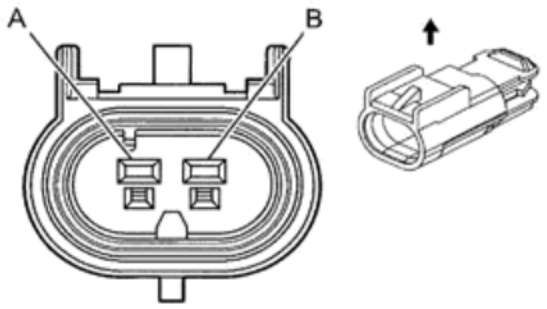
X101 Engine Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
12	0.5 0.5	WH/ L-GN YE	5380 6111	I	MH8 or MH9 M26/ MZ4/ MR5	Brake Position Sensor Signal Clutch Apply Sensor Signal	12	0.5 0.5	YE YE	5380 6111	II	MH8 or MH9 M26/ MZ4/ MR5
13	0.5 0.5	WH/ RD GY/ RD	5381 6109	I	MH8 or MH9 M26/ MZ4/ MR5	Brake Position Sensor 5 Volt Reference Clutch Apply Sensor Voltage Reference	13	0.5 0.5	GY/ RD GY/ RD	5381 6109	II	MH8 or MH9 M26/ MZ4/ MR5
14	0.5	BK/ L-BU	6813	I	—	Low Reference	14	0.5	BK/ L-BU	6813	II	—
15	0.5 0.5	BK/ YE BK/ GY	5382 6110	I	MH8 or MH9 M26/ MZ4/ MR5	Brake Position Sensor Low Reference Clutch Apply Sensor Low Reference	15	0.5 0.5	BK/ GY BK/ GY	5382 6110	II	MH8 or MH9 M26/ MZ4/ MR5
16	0.5	YE/ BK	3000	I	—	Coolant Temperature Sensor #2 Signal	16	0.5	YE/ BK	3000	II	—
17	0.5	BN/ WH	6283	I	—	Fuel Tank Vapor Pressure Sensor Supply Voltage	17	0.5	BN/ WH	6283	II	—
18	0.5	BK/ BN	6284	I	—	Fuel Tank Vapor Pressure Sensor Low Reference	18	0.5	BK/ BN	6284	II	—

X105 Forward Lamp Harness to Ambient Air Temperature Sensor Jumper Harness



523630



681875

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13510085
Service Connector: 13580114
Description: 2-Way F GT 150 Series (BK)

Connector Part Information

Harness Type: Ambient Air Temperature Sensor Jumper
OEM Connector: 13510099
Service Connector: 13580103
Description: 2-Way M GT 150 Series, Sealed (BK)

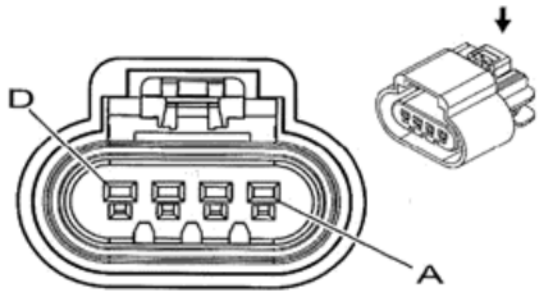
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Service by Harness – See Part Catalog	J-35616-14 (GN)	J-38125-12A
II	Service by Harness - See Parts Catalog	Not Available	Service by Harness - See Parts Catalog

X105 Forward Lamp Harness to Ambient Air Temperature Sensor Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.5	L-BU/ GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	A	0.5	L-BU/ GY	636	II	—
B	0.5	BK/ L-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	B	0.5	BK/ L-BU	61	II	—

X110 Forward Lamp Harness to Left Headlamp Harness



646430

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 15326815
Service Connector: 19180287
Description: 4-Way F GT 150 Series, Sealed (BK)

Connector Part Information

Harness Type: Left Headlamp
OEM Connector: Not Available
Service Connector: Service by Harness – See Part Catalog
Description: 4-Way M

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Service by Connector Assembly – 19180287	J-35616-2A (GY)	J-38125-553
II	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog

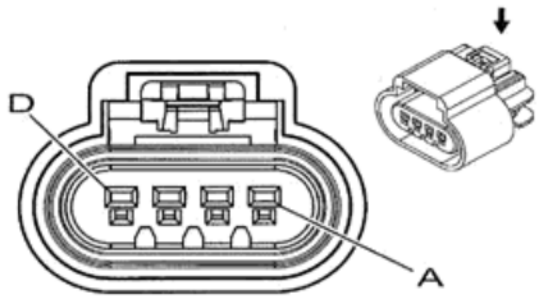
X110 Forward Lamp Harness to Left Headlamp Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	1	YE	712	I	—	Left Headlamp Low Beam Supply Voltage	A	—	YE	712	II	—

X110 Forward Lamp Harness to Left Headlamp Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
B	0.5	WH	711	I	—	Left Headlamp High Beam Supply Voltage	B	—	D-GN	711	II	—
C	—	—	—	—	—	Not Occupied	C	—	—	—	—	—
D	0.5	BK	250	I	—	Ground	D	—	BK	250	II	—

X120 Forward Lamp Harness to Right Headlamp Harness



646430

Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 15326815
Service Connector: 19180287
Description: 4-Way F GT 150 Series, Sealed (BK)

Connector Part Information

Harness Type: Right Headlamp
OEM Connector: Not Available
Service Connector: Service by Harness – See Part Catalog
Description: 4-Way M

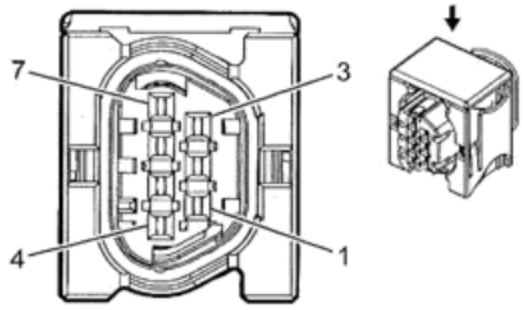
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Service by Connector Assembly – 19180287	J-35616-2A (GY)	J-38125-553
II	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog

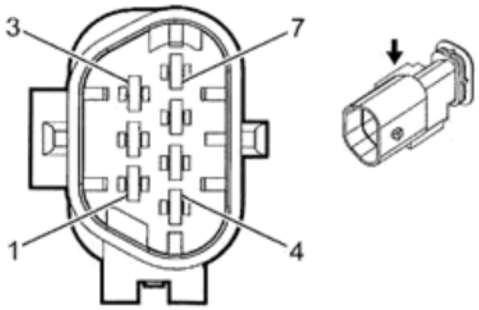
X120 Forward Lamp Harness to Right Headlamp Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	1	YE	312	I	—	Right Headlamp Low Beam Supply Voltage	A	—	YE	312	II	—
B	0.5	WH	311	I	—	Right Headlamp High Beam Supply Voltage	B	—	D-GN	311	II	—
C	—	—	—	—	—	Not Occupied	C	—	—	—	—	—
D	0.5	BK	150	I	—	Ground	D	—	BK	150	II	—

X160 Engine Harness to Fuel Injector Harness (LUW/LWE)



2231639



2231641

Connector Part Information

Harness Type: Engine
OEM Connector: 1928404771
Service Connector: 13580984
Description: 7-Way F 1.6 Series, Sealed (BK)

Connector Part Information

Harness Type: Fuel Injector
OEM Connector: 13123957
Service Connector: Service by Harness – See Part Catalog
Description: 7-Way M 1.6 Series, Sealed (BK)

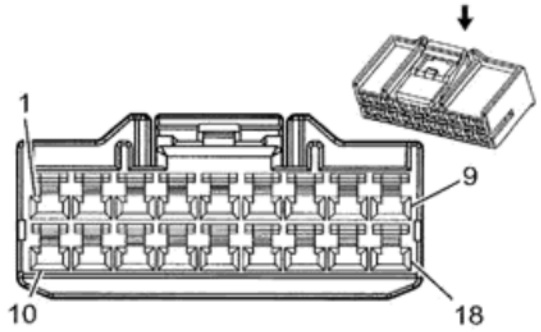
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575359	J-35616-14 (GN)	J-38125-560
II	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog

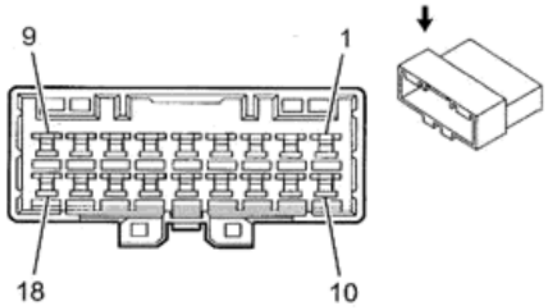
X160 Engine Harness to Fuel Injector Harness (LUW/LWE)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	L-GN/ YE	1744	I	—	Fuel Injector Control (1)	1	0.5	BN	1744	II	—
2	0.5	YE/ WH	1745	I	—	Fuel Injector Control (2)	2	0.5	YE/ BK	1745	II	—
3	0.5	BN/VT	1746	I	—	Fuel Injector Control (3)	3	0.5	WH/ BK	1746	II	—
4	0.5	BN/ YE	844	I	—	Fuel Injector Control (4)	4	0.5	L-BU/ BK	844	II	—
5	0.5	L-BU/ WH	5421	I	—	Fuel Injector Supply Voltage (1)	5	0.5	PK/ BK	5421	II	—
6–7	—	—	—	—	—	Not Occupied	6–7	—	—	—	—	—

X200 Instrument Panel Harness to Body Harness



2008955



2008857

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 936204-1
Service Connector: 13395412
Description: 18-Way F 090 III Series (NA)

Connector Part Information

Harness Type: Body
OEM Connector: 936213-1
Service Connector: 13581278
Description: 18-Way M 090 III Series (NA)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13580004	J-35616-18 (BK)	J-38125-553
II	13580017	J-35616-19 (BK)	J-38125-553

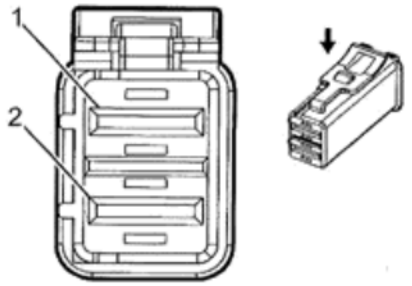
X200 Instrument Panel Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	GY/ L-GN	5053	I	—	Winter Mode Switch Signal	1	0.35	GY/ L-GN	5053	II	—
2–3	—	—	—	—	—	Not Occupied	2–3	—	—	—	—	—
4	0.35	L-GN/ WH	2514	I	UE1	Keypad Signal	4	0.35	L-GN/ WH	2514	II	UE1
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	0.35	L-GN/ BK	2515	I	UE1	Keypad Supply Voltage	6	0.35	L-GN/ BK	2515	II	UE1
7–11	—	—	—	—	—	Not Occupied	7–11	—	—	—	—	—
12	0.35	L-BU/ WH	3275	I	—	Remote Function Actuator Receive Signal	12	0.35	L-BU/ WH	3275	II	—
13	0.35	YE/ L-GN	3274	I	—	Remote Function Actuator Transmit Signal	13	0.35	YE/ L-GN	3274	II	—
14	0.35	GY	3273	I	—	Remote Function Actuator Return	14	0.35	GY	3273	II	—
15	0.35	GY/ WH	3272	I	—	Remote Function Actuator Supply Voltage	15	0.35	GY/ WH	3272	II	—
16	0.35	BN/ WH	2517	I	UE1	Keypad Red LED	16	0.35	BN/ WH	2517	II	UE1

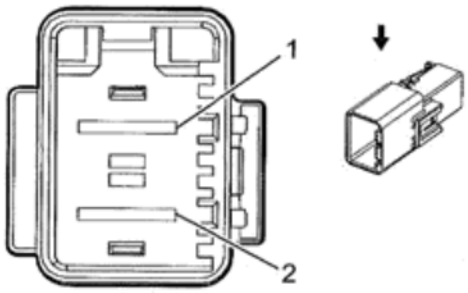
X200 Instrument Panel Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
17	0.35	YE/VT	2516	I	UE1	Keypad Green LED	17	0.35	YE/VT	2516	II	UE1
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—

X201 Body Harness to EPS Jumper Harness (AYF)



2684403



2537249

Connector Part Information

Harness Type: EPS Jumper
OEM Connector: 936619-2
Service Connector: Service by Harness – See Part Catalog
Description: 2-Way F MCP 9.5 Series (BK)

Connector Part Information

Harness Type: Body
OEM Connector: 1897198-2
Service Connector: 13584418
Description: 2-Way M MCP 9.5 Series (BK)

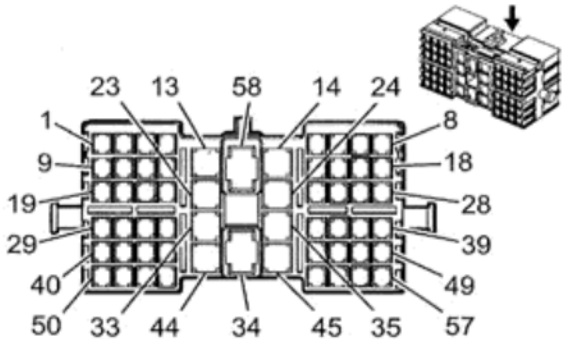
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
II	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

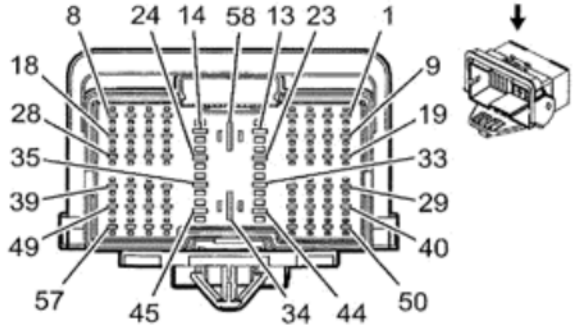
X201 Body Harness to EPS Jumper Harness (AYF)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	8.0	BK	1950	I	—	Ground	1	8.0	BK	1950	II	—
2	8.0	RD/ L-GN	40	I	—	Battery Positive Voltage	2	8.0	RD/ L-GN	40	II	—

X202 Instrument Panel Harness to Body Harness



2537267



2537266

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 2005281-3
Service Connector: 13395410
Description: 58-Way F 1.6, 2.8, 4.8 Timer Series (GY)

Connector Part Information

Harness Type: Body
OEM Connector: 2005275-3
Service Connector: 13395409
Description: 58-Way M 1.6, 2.8, 5.8 Timer Series (GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451878	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451896	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
III	12451895	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
IV	12451897	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
V	12451898	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
VI	12451891	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
VII	12451884	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
VIII	12451893	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
IX	12451892	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
X	12451894	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

X202 Instrument Panel Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BK/ L-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	1	0.5	BK/ L-BU	61	V	—
2	0.5	BN/ WH	419	I	—	Check Engine Indicator Control	2	0.5	BN/ WH	419	V	—
3	—	—	—	—	—	Not Occupied	3	—	—	—	—	—
4	0.35	VT/BN	641	I	—	Run Ignition 3 Voltage	4	0.35	VT/BN	641	V	—
5	0.35	BN/VT	193	I	—	Rear Defog Relay Control	5	0.35	BN/VT	193	V	—
6	0.5	L-BU/ WH	292	I	—	Rear Defog Switch Signal	6	0.5	L-BU/ WH	292	V	—
7	0.75	YE/ BK	117	I	—	Right Front Speaker Signal (-) (1)	7	0.75	YE/ BK	117	V	—
8	0.75	YE	200	I	—	Right Front Speaker (+) (1)	8	0.75	YE	200	V	—
9	0.5	WH/ RD	1164	I	—	5 Volt Reference	9	0.5	WH/ RD	1164	V	—
10	0.5	L-BU/ GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	10	0.5	L-BU/ GY	636	V	—
11	—	—	—	—	—	Not Occupied	11	—	—	—	—	—
12	0.5	YE/ GY	230	I	MH9	Instrument Panel Lamp Dimming Control	12	0.5	YE/ GY	230	V	—
13	1	RD/ L-BU	2540	II	—	Battery Positive Voltage	13	1	RD/ L-BU	2540	VI	—
14	1	RD/ VT	2640	II	—	Battery Positive Voltage	14	1	RD/ VT	2640	VI	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	0.5	WH/ BN	2212	I	—	Auxiliary A/C Request Indicator Signal	16	0.5	WH/ BN	2212	V	—
17	0.75	L-GN/ BK	116	I	UQ3	Left Rear Speaker Signal (-)	17	0.75	L-GN/ BK	116	V	UQ3
18	0.75	L-GN	199	I	UQ3	Left Rear Speaker (+)	18	0.75	L-GN	199	V	UQ3
19	0.75	L-BU/ BK	115	I	UQ3	Right Rear Speaker Signal (-)	19	0.75	L-BU/ BK	115	V	UQ3
20	0.75	WH	46	I	UQ3	Right Rear Speaker (+)	20	0.75	WH	46	V	UQ3
21	0.5	VT/BK	7553	I	MH9	Park Lock Solenoid Control	21	0.5	VT/BK	7553	V	—
22	0.5	VT/ WH	5065	I	—	Stop Lamp Relay Coil Supply Voltage	22	—	—	—	-	—
23	2.5	VT/ WH	239	III	—	Run/Crank Ignition 1 Voltage	23	2.5	VT/ WH	239	VI	—

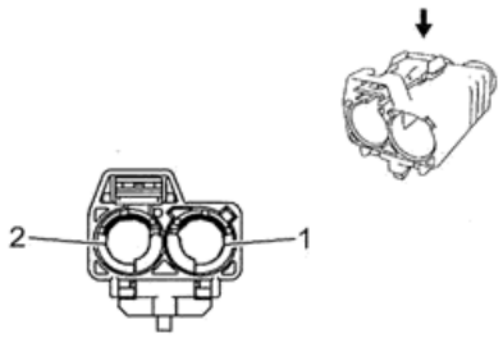
X202 Instrument Panel Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
24	2.5	VT/YE	543	III	—	Accessory Voltage	24	2.5	VT/YE	543	VI	A33
25	0.35	GY/VT	755	I	—	RAP Relay Coil Control	25	0.35	GY/VT	755	V	—
26	0.35 0.75	GY/RD WH/RD	6109 5381	I	M26/MR5/MZ4 MH8/MH9	Clutch Apply Sensor Voltage Reference 5 Volt Reference	26	0.35 0.35	GY/RD GY/RD	6109 5381	V	M26/MR5/MZ4 MH8/MH9
27	0.35 0.75	BK/GY BK/YE	6110 5382	I	M26/MR5/MZ4 MH8/MH9	Low Reference Low Reference	27	0.35 0.35	BK/GY BK/GY	6110 5382	V	M26/MR5/MZ4 MH8/MH9
28	0.35 0.75	YE WH/L-GN	6111 5380	I	M26/MR5/MZ4 MH8/MH9	Clutch Apply Sensor Signal Brake Position Sensor Signal	28	0.35 0.35	YE YE	6111 5380	V	M26/MR5/MZ4 MH8/MH9
29	0.75	BN/L-BU	118	I	—	Left Front Speaker Signal (-) (1)	29	0.75	BN/L-BU	118	V	—
30	0.75	L-BU	201	I	—	Left Front Speaker (+) (1)	30	0.75	L-BU	201	V	—
31	0.5	L-GN/WH	1162	I	—	Accelerator Pedal Position Signal (2)	31	0.5	L-GN/WH	1162	V	—
32	0.5	BN/RD	1274	I	—	5 Volt Reference	32	0.5	BN/RD	1274	V	—
33	2.5	VT/YE	443	III	—	Accessory Voltage	33	2.5	VT/YE	443	VI	AXG
34	4	RD/YE	740	IV	—	Battery Positive Voltage	34	4	RD/YE	740	VII	—
35	0.75	VT/WH	1139	II	—	Run/Crank Ignition 1 Voltage	35	—	—	—	-	—
36	0.35 0.35	YE YE	5704 5704	I	Hatch back Notch back	Endgate Latch Relay Coil Control Endgate Latch Relay Coil Control	36	0.35 0.5	YE BK	5704 550	V	Hatch back Notch back
37	0.35 0.35	L-GN/BN L-GN/BN	5706 6188	I	Hatch back Notch back	Endgate Latch Relay Supply Voltage Lift Glass/Trunk Motor Release Control	37	0.35 0.35	L-GN/BN GY/YE	5706 6188	V	Hatch back Notch back
38	0.5	BK/L-BU	1271	I	—	Low Reference	38	0.5	BK/L-BU	1271	V	—
39	0.5	BK/VT	1272	I	—	Low Reference	39	0.5	BK/VT	1272	V	—
40	0.5	L-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) (2)	40	0.5	L-BU/YE	6105	V	—
41	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) (2)	41	0.5	WH	6106	V	—

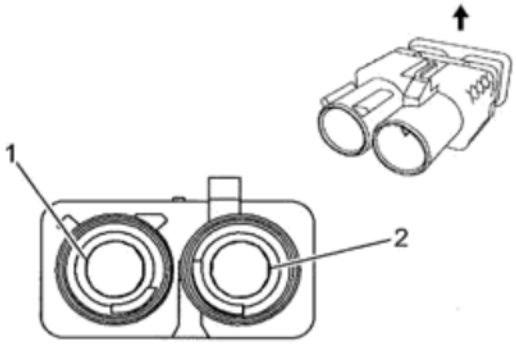
X202 Instrument Panel Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
42	0.5	YE/ WH	1161	I	—	Accelerator Pedal Position Signal (1)	42	0.5	YE/ WH	1161	V	—
43	0.35	BN/VT	5486	I	—	Run Relay Coil Control	43	0.35	BN/VT	5486	V	—
44	1	L-GN/ VT	7628	II	AXG	Power Window Motor Left Front Express Control	44	1	L-GN/ VT	7628	VI	AXG
45	2.5	RD/ VT	340	III	—	Battery Positive Voltage	45	—	—	—	-	—
46	0.5	L-BU/ WH	6128	I	—	Rear Closure Unlatch Motor Unlatch Control	46	0.5	L-BU/ WH	6128	V	—
47	0.35	L-GN/ WH	2270	I	—	Rear Window Washer Relay Control	47	0.35	L-GN/ WH	2270	V	—
48	0.5	L-BU	2500	I	—	High Speed GMLAN Serial Data (+) (1)	48	0.5	L-BU	2500	V	—
49	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) (1)	49	0.5	WH	2501	V	—
50	0.35	GY	6137	I	—	EVAP Core Temperature Sensor Signal	50	0.35	GY	6137	V	—
51	0.35	BK/ GY	6138	I	—	Low Reference	51	0.35	BK/ GY	6138	V	—
52	0.5	L-GN/ BN	2087	I	—	Combined Vehicle Inertial Sensor Supply Voltage	52	0.5	L-GN/ BN	2087	V	—
53	—	—	—	—	—	Not Occupied	53	—	—	—	—	—
54	0.35	WH/ L-BU	5986	I	—	Serial Data Communication Enable	54	0.35	WH/ L-BU	5986	V	—
55	—	—	—	—	—	Not Occupied	55	—	—	—	—	—
56	0.5	BK/ BN	654	I	UE1 or UH7	Microphone Low Signal	56	0.5	BK/ BN	654	-	UE1 or UH7
57	0.5	L-BU	655	-	UE1 or UH7	Microphone High Signal	57	0.5	L-BU	655	-	UE1 or UH7
58	—	—	—	—	—	Not Occupied	58	—	—	—	—	—

X205 Body Harness to Instrument Panel Harness (UE1)



2179767



2179766

Connector Part Information

Harness: Body
OEM Connector: 2-1452483-1
Service Connector: Service by Cable Assembly - See Part Catalog
Description: Coax

Connector Part Information

Harness: Instrument Panel
OEM Connector: 13662461
Service Connector: Service by Cable Assembly - See Part Catalog
Description: Coax

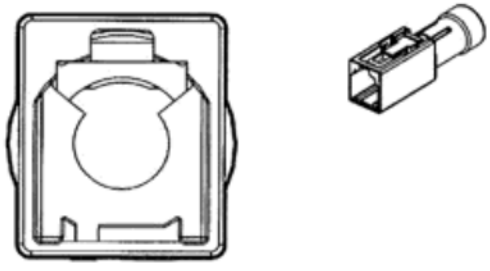
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not Available	Not Available	Not Available
II	Not Available	Not Available	Not Available

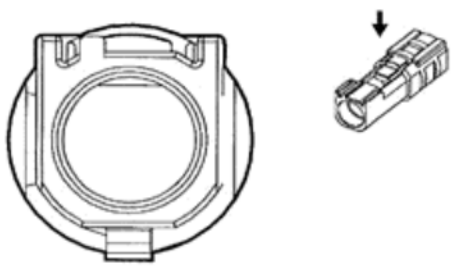
X205 Body Harness to Instrument Panel Harness (UE1)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	Coax	Coax	—	I	-	Coax	—	Coax	Coax	—	II	-

X206 Instrument Panel Harness to Body Harness



2791484



2791479

Connector Part Information

Harness: Instrument Panel
OEM Connector: 1897373–2
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way F Coax Type (BK)

Connector Part Information

Harness Type: Body
OEM Connector: 1897374-2
Service Connector: Service by Cable Assembly - See Part Catalog
Description: 1-Way M Coax Type (BK)

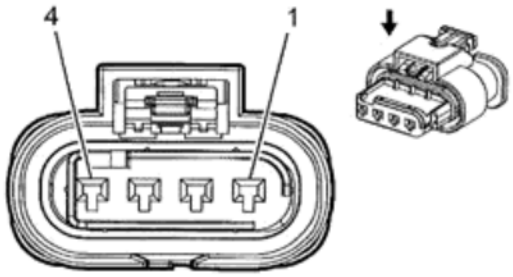
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not Available	Not Available	Not Available
II	Not Available	Not Available	Not Available

X206 Instrument Panel Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	Coax	Coax	—	I	-	Coax	—	Coax	Coax	—	II	-

X207 Instrument Panel Harness to Passenger Air Bag Jumper Harness



2684560

Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 13580150
Service Connector: 13586137
Description: 4-Way F 1.2 Series, Sealed (YE)

Connector Part Information

Harness Type: Passenger Air Bag Jumper
OEM Connector: Not Available
Service Connector: Service by Harness – See Part Catalog
Description :4-Way M 0.64 Series (YE)

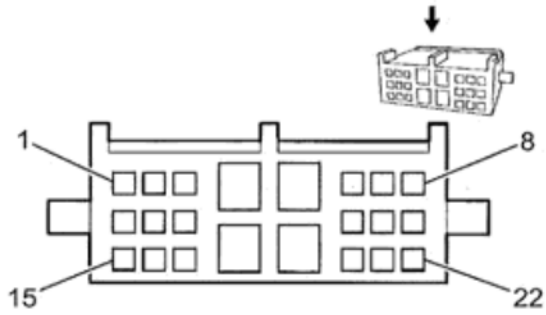
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575867	J-35616-64B (L-BU)	J-38125-215A
II	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog

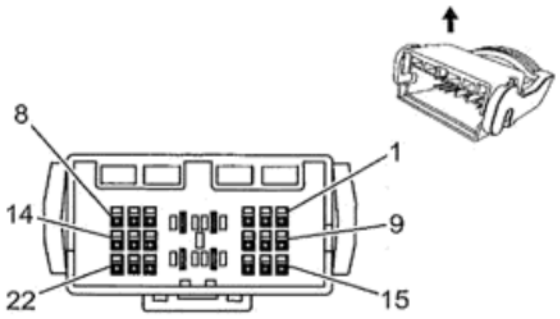
X207 Instrument Panel Harness to Passenger Air Bag Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	YE/ OG	3025	I	—	Passenger IP Module Stage 1 High Control	1	0.5	BN	3025	II	—
2	0.5	OG/ WH	3024	I	—	Passenger IP Module Stage 1 Low Control	2	0.5	D-BU	3024	II	—
3	0.5	GY/ OG	3027	I	—	Passenger IP Module Stage 2 High Control	3	0.5	WH	3027	II	—
4	0.5	OG/ VT	3026	I	—	Passenger IP Module Stage 2 Low Control	4	0.5	D-GN	3026	II	—

X208 Headliner Harness to Body Harness



2173982



2220413

Connector Part Information

Harness Type: Headliner
OEM Connector: 1897543-2
Service Connector: 13395404
Description: 22-Way F MQS/MCP 2.8 Series (BK)

Connector Part Information

Harness Type: Body
OEM Connector: 1897540-2
Service Connector: 13580994
Description: 22-Way M MQS/MCP 2.8 Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451902	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	13582286	J-35616-35 (VT)	J38125-215A	Not Available	Not Available	Not Available	Not Available
III	12451901	J-35616-35 (VT)	J38125-215A	Not Available	Not Available	Not Available	Not Available
IV	12451869	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
V	12451900	J-35616-65B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

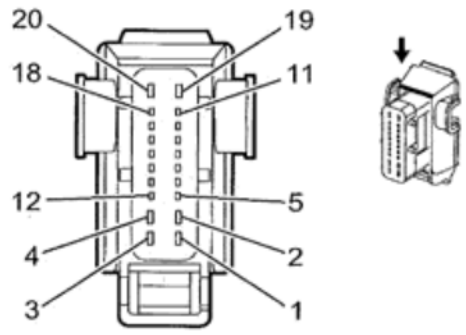
X208 Headliner Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BN/ L-BU	118	I	—	Left Front Speaker Signal (-) (1)	1	0.75	BN/ L-BU	118	IV	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.35	VT/BN	641	-	CF5	Run Ignition 3 Voltage	3	0.35	VT/BN	641	-	—
4–5	—	—	—	—	—	Not Occupied	4–5	—	—	—	—	—
6	0.35	L-GN/ BK	2515	I	UE1	Keypad Supply Voltage	6	0.35	L-GN/ BK	2515	IV	UE1
7	0.35	L-GN/ WH	2514	I	UE1	Keypad Signal	7	0.35	L-GN/ WH	2514	IV	UE1
8	0.35	YE/VT	2516	I	UE1	Keypad Green LED	8	0.35	YE/VT	2516	IV	UE1
9	0.5	L-BU	201	I	—	Left Front Speaker (+) (1)	9	0.75	L-BU	201	IV	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—

X208 Headliner Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
11	0.5	WH/ BN	6815	I	—	Inadvertent Power Control	11	0.75	WH/ BN	6815	IV	—
12	0.5	GY	157	I	—	Interior Lamp Control	12	0.75	GY	157	IV	—
13	0.35	BN/ WH	2517	-	UE1	Keypad Red LED	13	0.35	BN/ WH	2517	-	UE1
14	0.35	GY/ WH	3272	I	—	Remote Function Actuator Supply Voltage	14	0.35	GY/ WH	3272	IV	—
15	0.35	YE/ L-GN	3274	I	—	Remote Function Actuator Transmit Signal	15	0.35	YE/ L-GN	3274	IV	—
16	0.35	L-BU/ WH	3275	I	—	Remote Function Actuator Receive Signal	16	0.35	L-BU/ WH	3275	IV	—
17	0.35	GY	3273	I	—	Remote Function Actuator Return	17	0.35	GY	3273	IV	—
18	1.5 0.5	BK BK	550 550	III	CF5 w/ o CF5	Ground Ground	18	1.5	BK	550	V	—
19	1.5	RD/ WH	640	III	CF5	Battery Positive Voltage	19	1.5	RD/ WH	640	V	—
20	0.5	BK/ BN	654	I	UE1 or UH7	Microphone Low Signal	20	0.5	BK/ BN	654	IV	UE1 or UH7
21	0.5	L-BU	655	I	UE1 or UH7	Microphone High Signal	21	0.5	L-BU	655	IV	UE1 or UH7
22	—	—	—	—	—	Not Occupied	22	—	—	—	—	—

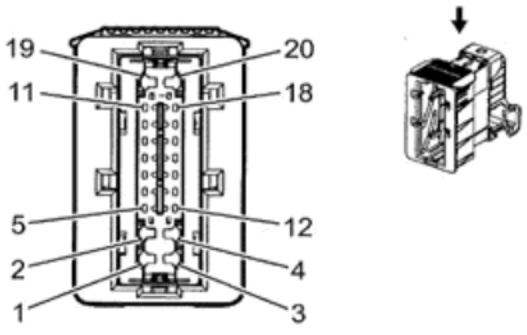
X301 Body Harness to Driver Seat Harness



2220410

Connector Part Information

Harness Type: Body
OEM Connector: 902873-00
Service Connector: 13577553
Description: 20-Way F 1.5, 2.8 Series (BK)



2480564

Connector Part Information

Harness Type: Driver Seat
OEM Connector: 902874-00
Service Connector: 13584427
Description: 20-Way M 1.6, 2.8 Timer Series (BK)

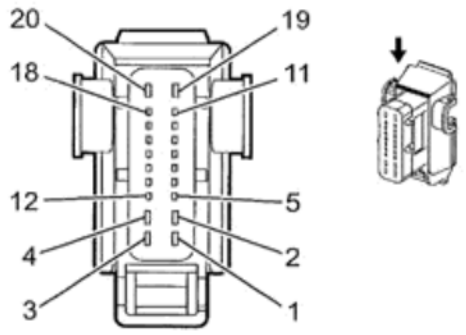
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451904	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451877	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
III	12451906	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
IV	12451905	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

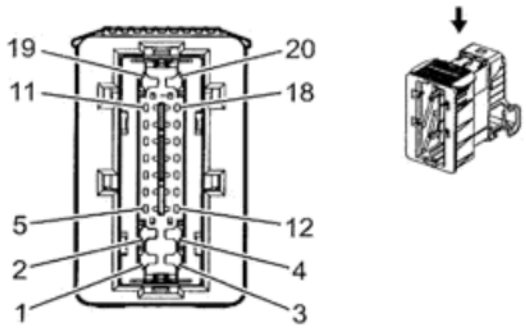
X301 Body Harness to Driver Seat Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	BK	550	I	KA1	Ground	1	1.5	BK	550	III	KA1
2	1	BN/ L-BU	2479	-	KA1	Passenger Heated Seat Element Supply Voltage	2	1	YE	2479	III	KA1
3	1	L-BU/ BK	2433	-	KA1	Passenger Heated Back Element Return	3	1	BK/ YE	2433	III	KA1
4	1.5	RD/ L-BU	540	I	KA1	Battery Positive Voltage	4	1.5	RD	540	III	KA1
5	0.5	OG/ BN	238	-	—	Driver Seat Belt Switch Signal	5	0.5	RD/ L-GN	238	III	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.5	BK/ OG	1363	II	—	Low Reference	7	0.5	BK/ RD	1363	III	—
8	0.5	OG/ L-BU	3068	II	—	Driver Side Impact Module High Control	8	0.5	YE/ BK	3068	III	—
9	0.5	L-GN/ OG	3069	II	—	Driver Side Impact Module Low Control	9	0.5	BN	3069	III	—
10	0.5	BK/ GY	2435	II	KA1	Low Reference	10	0.5	BK/ OG	2435	III	KA1
11	0.5	WH/ BK	7018	II	KA1	Cushion NTC Signal	11	0.5	RD/ OG	7018	III	KA1
12	0.35	L-GN	5060	II	KA1	Low Speed GMLAN Serial Data	12	0.35	L-BU	5060	III	KA1
13	0.5	YE/ OG	3482	II	A69	Driver Seat Belt Anchor Pretensioner Low Control	13	0.5	BN	3482	III	A69
14	0.5	OG/ YE	3481	II	A69	Driver Seat Belt Anchor Pretensioner High Control	14	0.5	D-BU	3481	III	A69
15–20	—	—	—	—	—	Not Occupied	15–20	—	—	—	—	—

X302 Body Harness to Passenger Seat Harness



2220410



2480564

Connector Part Information

Harness Type: Body
OEM Connector: 902873-00
Service Connector: 13577553
Description: 20-Way F 1.5, 2.8 Series (BK)

Connector Part Information

Harness Type: Passenger Seat
OEM Connector: 902874-00
Service Connector: 13584427
Description: 20-Way M 1.6, 2.8 Timer Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	12451904	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	12451877	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
III	12451906	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
IV	12451905	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available

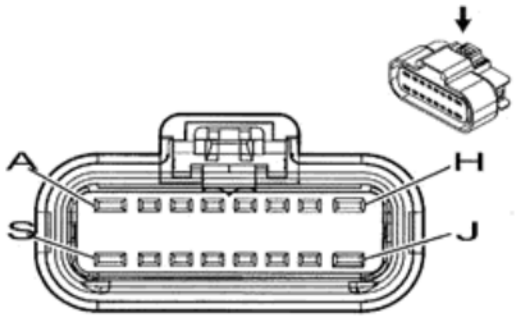
X302 Body Harness to Passenger Seat Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BK	650	I	—	Ground	1	0.5	BN	650	III	—
2	1	BN/ L-BU	2479	I	KA1	Passenger Heated Seat Element Supply Voltage	2	1	YE	2479	III	KA1
3	1	L-BU/ BK	2433	I	KA1	Passenger Heated Back Element Return	3	1	BK/ YE	2433	III	KA1
4	—	—	—	—	—	Not Occupied	4	—	—	—	—	—
5	0.5	OG/ VT	1362	II	—	Passenger Seat Belt Switch Signal	5	0.5	RD	1362	III	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.5	BK/ OG	1361	II	—	Low Reference	7	0.5	BK	1361	III	—
8	0.5	OG/ GY	3066	II	—	Passenger Side Impact Module High Control	8	0.5	OG/ L-GN	3066	III	—

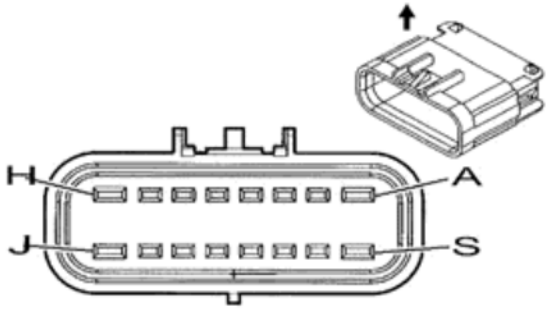
X302 Body Harness to Passenger Seat Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	0.5	BN/ OG	3067	II	—	Passenger Side Impact Module Low Control	9	0.5	WH/ OG	3067	III	—
10	0.5	BK/ GY	2435	II	KA1	Low Reference	10	0.5	BK/ OG	2435	III	KA1
11	0.5	WH/ BK	7018	II	KA1	Cushion NTC Signal	11	0.5	RD/ OG	7018	III	KA1
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	0.5	GY/ OG	3480	II	A69	Passenger Seat Belt Anchor Pretensioner Low Control	13	0.5	D-BU	3480	III	A69
14	0.5	OG/ BN	3479	II	A69	Passenger Seat Belt Anchor Pretensioner High Control	14	0.5	BN	3479	III	A69
15	0.35	VT/ L-GN	439	II	—	Battery Positive Voltage	15	0.35	RD/ L-GN	439	III	—
16	0.35	L-GN	5060	II	—	Low Speed GMLAN Serial Data	16	0.35	L-BU	5060	III	—
17–20	—	—	—	—	—	Not Occupied	17–20	—	—	—	—	—

X350 Body Harness to Fuel Tank Harness



655811



655813

Connector Part Information

Harness Type: Body
OEM Connector: 15326084
Service Connector: 15306348
Description: 16-Way F GT 150 280 Sealed 4.0 5.8 (BK)

Connector Part Information

Harness Type: Fuel Tank
OEM Connector: 15326085
Service Connector: 19181245
Description: 16-Way M GT 150 280 Sealed 4.0 5.8 (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
II	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

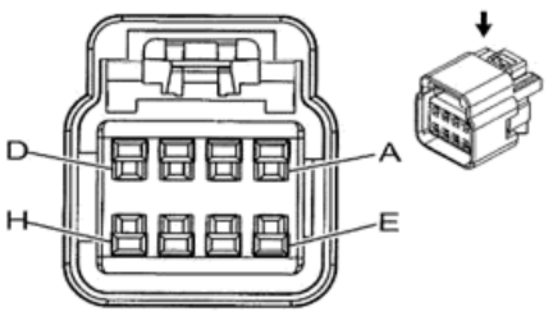
Terminal Part Information (cont'd)

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
III	12451908	J-35616-64B (L-BU)	J38125-215A	Not Available	Not Available	Not Available	Not Available
IV	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
V	Not Available	J-35616-65B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available

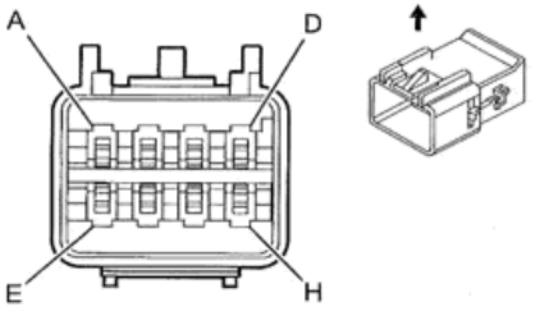
X350 Body Harness to Fuel Tank Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	1.5	GY	120	-	—	Fuel Pump Supply Voltage	A	1.5	GY	120	-	—
B	0.35	BK/ L-GN	6281	-	—	Low Reference	B	0.35	BK/ L-GN	6281	-	—
C	0.35	L-BU/ VT	1589	-	—	Primary Fuel Level Sensor Signal	C	0.35	L-BU/ VT	1589	-	—
D	0.5	WH	1310	-	NT7	EVAP Canister Vent Solenoid Control	D	0.5	WH	1310	-	NT7
E	0.5	RD/ L-BU	1240	-	NT7	Battery Positive Voltage	E	0.5	RD/ L-BU	1240	-	NT7
F	0.5	BN/ WH	6283	-	—	Fuel Tank Vapor Pressure Sensor Supply Voltage	F	0.5	BN/ WH	6283	-	—
G	0.5	BK/ BN	6284	-	—	Fuel Tank Vapor Pressure Sensor Low Reference	G	0.5	BK/ BN	6284	-	—
H–P	—	—	—	—	—	Not Occupied	H–P	—	—	—	—	—
R	0.5	L-BU	7443	-	—	Fuel System Control Module Shield Extension	R	0.5	L-BU	7443	-	—
S	1.5	BK/ L-GN	1580	-	—	Low Reference	S	1.5	BK/ L-GN	1580	-	—

X405 Left Tail Lamp Harness to Body Harness



646374



1710973

Connector Part Information

Harness Type: Tail Lamp
OEM Connector: 15332145
Service Connector: 15306407
Description: 8-Way F 150 GT Series (BK)

Connector Part Information

Harness Type: Body
OEM Connector: 15332150
Service Connector: 88986250
Description: 8-Way M GT 150 Series (BK)

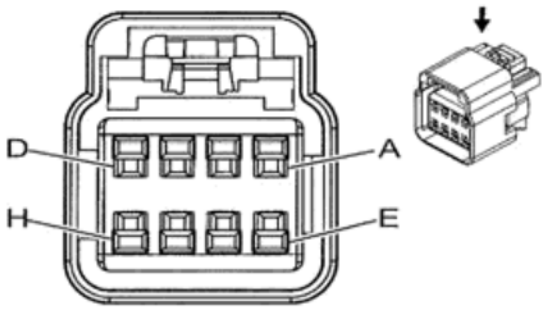
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog
II	13575502	J-35616-3 (GY)	J-38125-553

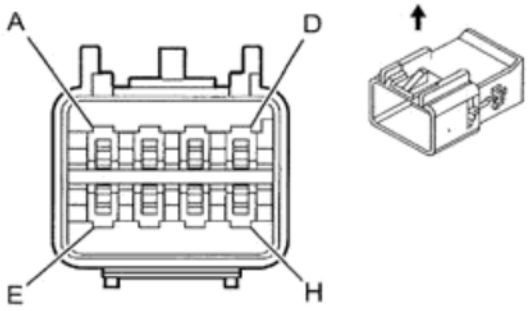
X405 Left Tail Lamp Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.8	RD	2509	I	—	Left Rear Park Lamp Supply Voltage	A	0.75	BN/ L-BU	2509	II	—
B	—	—	—	—	—	Not Occupied	B	—	—	—	—	—
C	0.5	D-GN	709	I	—	Left Park Lamp Supply Voltage	C	0.5	VT/ GY	709	II	—
D	0.8	BK/ WH	1050	I	—	Ground	D	0.75	BK	1050	II	—
E	0.8	YE	1334	I	—	Left Rear Turn Signal Lamp Supply Voltage	E	0.75	L-BU/ WH	1334	II	—
F	0.8	GY	24	I	—	Backup Lamp Supply Voltage	F	0.75	L-GN/ WH	24	II	—
G	—	—	—	—	—	Not Occupied	G	—	—	—	—	—
H	0.8	BK	1050	I	—	Ground	H	0.75	BK	1050	II	—

X406 Right Tail Lamp Harness to Body Harness



646374



1710973

Connector Part Information

Harness Type: Tail Lamp
OEM Connector: 15332145
Service Connector: 15306407
Description: 8-Way F 150 GT Series (BK)

Connector Part Information

Harness Type: Body
OEM Connector: 15332150
Service Connector: 88986250
Description: 8-Way M GT 150 Series (BK)

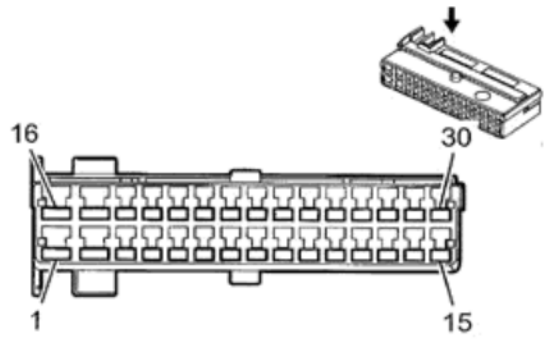
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog	Service by Harness – See Part Catalog
II	13575502	J-35616-3 (GY)	J-38125-553

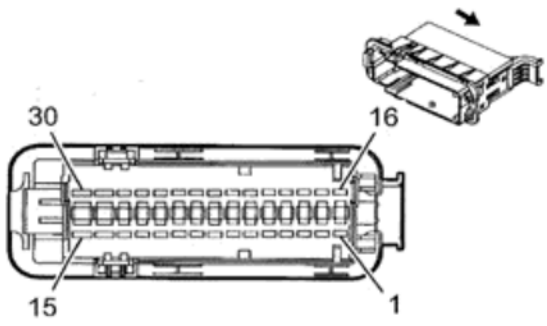
X406 Right Tail Lamp Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.8	RD	2609	I	—	Right Rear Park Lamp Supply Voltage	A	0.75	BN/GY	2609	II	—
B	—	—	—	—	—	Not Occupied	B	—	—	—	—	—
C	0.5	D-GN	309	I	—	Right Park Lamp Supply Voltage	C	0.5	GY/BN	309	II	—
D	0.8	BK/WH	1650	I	—	Ground	D	0.75	BK	1650	II	—
E	0.8	YE	1335	I	—	Right Rear Turn Signal Lamp Supply Voltage	E	0.75	L-BU/VT	1335	II	—
F	0.8	GY	24	I	—	Backup Lamp Supply Voltage	F	0.75	L-GN/WH	24	II	—
G	—	—	—	—	—	Not Occupied	G	—	—	—	—	—
H	0.8	BK	1650	I	—	Ground	H	0.75	BK	1650	II	—

X500 Driver Door Harness to Body Harness



2537286



2537284

Connector Part Information

Harness Type: Driver Door
OEM Connector: MG653933
Service Connector: Service by Harness – See Part Catalog
Description: 30-Way F GT 150, 280 Series (D-GY)

Connector Part Information

Harness Type: Body
OEM Connector: MG643934
Service Connector: 13395414
Description: 30-Way M GT 150/280 Series (D-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575735	J-35616-2A (GY)	J-38125-553
II	Pins 10, 11, 24–28 – 13578871	J-35616-2A (GY)	J-38125-553
III	13575754	J-35616-4A (PU)	J-38125-553

Terminal Part Information (cont'd)

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
IV	13575502	J-35616-3 (GY)	J-38125-553
V	13575510	J-35616-5 (PU)	J-38125-553

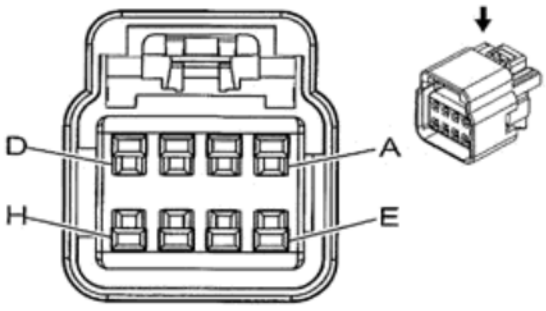
X500 Driver Door Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BN/ L-BU	118	I	—	Left Front Speaker Signal (-) (1)	1	0.75	BN/ L-BU	118	IV	—
2	0.75	L-BU	201	I	—	Left Front Speaker (+) (1)	2	0.75	L-BU	201	IV	—
3	0.5	GY	745	I	w/ o AXG	Left Front Door Ajar Switch Signal	3	0.5	GY	745	IV	w/ o AXG
4	0.35	VT/ GY	5965	I	—	Driver Door Lock Status Indicator Supply Voltage	4	0.35	VT/ GY	5965	IV	—
5	0.35	L-GN/ YE	6134	I	AXG	Linear Interconnect Network Bus 3	5	0.35	L-GN/ YE	6134	IV	AXG
6	0.5	WH/ BN	3410	I	DL7	Mirror Motor Fold In Control	6	0.5	WH/ BN	3410	IV	DL7
7	0.5	VT/YE	3409	I	DL7	Mirror Motor Fold Out Control	7	0.5	VT/YE	3409	IV	DL7
8	0.35	YE/VT	3397	I	DG6	Co-Driver Mirror Motor Up (+) Down (-) Control	8	0.35	YE/VT	3397	IV	DG6
9	0.35	L-GN/ BK	3396	I	DG6	Co-Driver Mirror Motor Right (+) Left (-) Control	9	0.35	L-GN/ BK	3396	IV	DG6
10	1.5	YE/ BK	3384	II	A66	Power Window Switch Co-Driver Up Signal	10	1.5	YE/ BK	3384	-	A66
11	1.5	BN/ YE	3385	II	A66	Power Window Switch Co-Driver Down Signal	11	1.5	BN/ YE	3385	V	A66
12	0.5	GY	5911	I	—	Door Lock Actuator Lock Control 2	12	0.5	GY	5911	IV	—
13	0.5	BN/ YE	294	I	—	Door Lock Actuator Unlock Control	13	0.5	BN/ YE	294	IV	—
14	1.5	VT/YE	443	II	AXG	Accessory Voltage	14	2.5	VT/YE	443	V	AXG
15	1.5	VT/YE	543	II	A33	Accessory Voltage	15	2.5	VT/YE	543	V	A33
16	0.5	OG/ L-GN	2132	I	—	Left Front Side Impact Sensing Module Signal	16	0.5	OG/ L-GN	2132	IV	—
17	0.5	BK/ OG	6628	I	—	Low Reference	17	0.5	BK/ OG	6628	IV	—

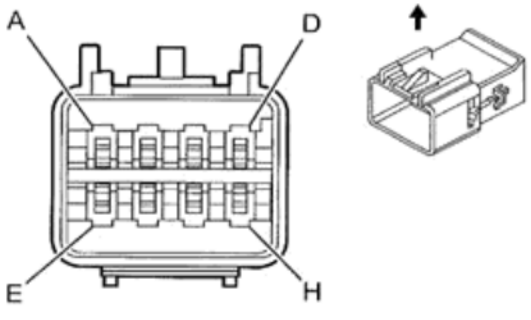
X500 Driver Door Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
18–19	—	—	—	—	—	Not Occupied	18–19	—	—	—	—	—
20	0.5	GY/VT	267	I	DG6	Mirror Heater Element Voltage	20	0.5	GY/VT	267	-	DG6
21	0.5	RD/WH	1040	I	DG6	Battery Positive Voltage	21	0.5	RD/WH	1040	IV	DG6
22	1	L-GN/VT	7628	I	AXG	Power Window Motor Left Front Express Control	22	1	L-GN/VT	7628	IV	AXG
23	0.35	WH	3398	I	DG6	Co-Driver Mirror Motor Common Control	23	0.35	WH	3398	IV	DG6
24	1.5	L-GN/GY	1186	II	A33	Power Window Switch Right Rear Up Signal	24	1.5	L-GN/GY	1186	-	A33
25	1.5	BN/L-BU	1188	II	A33	Power Window Switch Right Rear Down Signal	25	1.5	BN/L-BU	1188	-	A33
26	1.5	L-GN/GY	1185	II	A33	Power Window Switch Left Rear Up Signal	26	1.5	L-GN/GY	1185	-	A33
27	1.5	BN/L-BU	1187	II	A33	Power Window Switch Left Rear Down Signal	27	1.5	BN/L-BU	1187	-	A33
28	1.5	L-BU/WH	1307	II	A33	Power Window Master Switch Lockout Signal	28	1.5	L-BU/WH	1307	-	A33
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	2	BK	550	III	—	Ground	30	2	BK	550	V	—

X501 Driver Door Harness to Outside Rearview Mirror - Driver Harness (DG6)



646374



1710973

Connector Part Information

Harness Type: Driver Door
OEM Connector: 15332145
Service Connector: 15306407
Description: 8-Way F GT 150 Series (BK)

Connector Part Information

Harness Type: Outside Rearview Mirror
OEM Connector: 15332149
Service Connector: 19149300
Description: 8-Way M 150 GT Series (BK)

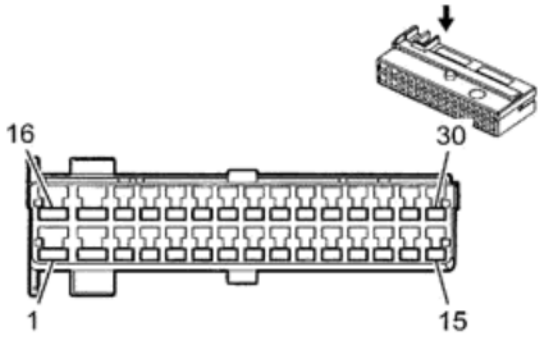
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 15306407	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
II	Service by Connector Assembly – 19149300	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

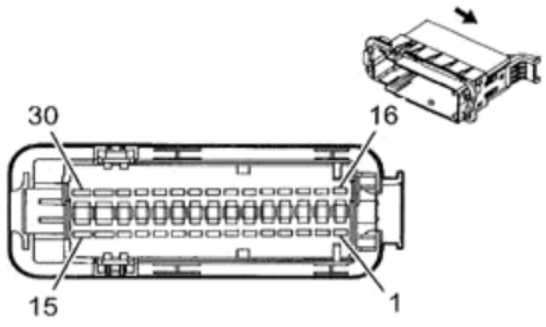
X501 Driver Door Harness to Outside Rearview Mirror - Driver Harness (DG6)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.35	YE/ BN	3391	I	—	Driver Mirror Motor Common Control	A	0.35	BK	3391	II	—
B	0.35	VT/ L-BU	3390	I	—	Driver Mirror Motor Up (+) Down (-) Control	B	0.35	BK	3390	II	—
C	0.35	BN/ BK	3389	I	—	Driver Mirror Motor Right (+) Left (-) Control	C	0.35	BK	3389	II	—
E	—	—	—	—	—	Not Occupied	D–E	—	—	—	—	—
F	0.5	GY/ VT	267	I	DG6	Mirror Heater Element Voltage	F	0.5	BK	267	II	DG6
G	0.5	BK	550	I	—	Ground	G	0.5	BK	550	II	—
H	—	—	—	—	—	Not Occupied	H	—	—	—	—	—

X600 Passenger Door Harness to Body Harness



2537286



2537284

Connector Part Information

Harness Type: Passenger Door
OEM Connector: MG653933
Service Connector: Service by Harness – See Part Catalog
Description: 30-Way F GT 150, 280 Series (D-GY)

Connector Part Information

Harness Type: Body
OEM Connector: MG643934
Service Connector: 13395414
Description: 30-Way M GT 150/280 Series (D-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575735	J-35616-2A (GY)	J-38125-553
II	13575754	J-35616-4A (PU)	J-38125-553
III	13575502	J-35616-3 (GY)	J-38125-553
IV	13575510	J-35616-5 (PU)	J-38125-553

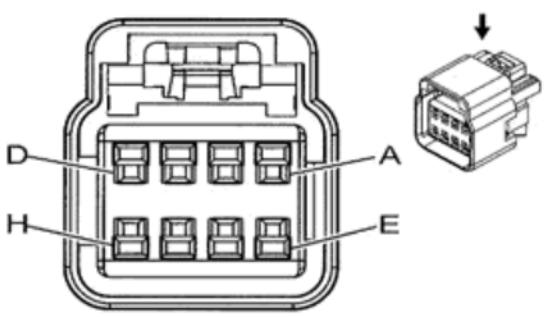
X600 Passenger Door Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	YE/ BK	117	I	—	Right Front Speaker Signal (-) (1)	1	0.75	YE/ BK	117	III	—
2	0.75	YE	200	I	—	Right Front Speaker (+) (1)	2	0.75	YE	200	III	—
3	0.5	GY	746	I	—	Right Front Door Ajar Switch Signal	3	0.5	GY	746	III	—
4–5	—	—	—	—	—	Not Occupied	4–5	—	—	—	—	—
6	0.5	WH/ BN	3410	I	DL7	Mirror Motor Fold In Control	6	0.5	WH/ BN	3410	III	DL7
7	0.5	VT/YE	3409	I	DL7	Mirror Motor Fold Out Control	7	0.5	VT/YE	3409	III	DL7
8	0.35	YE/VT	3397	I	DG6	Co-Driver Mirror Motor Up (+) Down (-) Control	8	0.35	YE/VT	3397	III	DG6
9	0.35	L-GN/ BK	3396	I	DG6	Co-Driver Mirror Motor Right (+) Left (-) Control	9	0.35	L-GN/ BK	3396	III	DG6
10–11	—	—	—	—	—	Not Occupied	10–11	—	—	—	—	—
12	0.5	BN/ YE	294	I	—	Door Lock Actuator Unlock Control	12	0.5	BN/ YE	294	III	—
13	0.5	GY	295	I	—	Door Lock Actuator Lock Control	13	0.5	GY	295	III	—
14	1.5	VT/YE	443	II	A66	Accessory Voltage	14	2.5	VT/YE	443	IV	A66
15	1.5	YE/ BK	3384	II	A66	Power Window Switch Co-Driver Up Signal	15	1.5	YE/ BK	3384	IV	A66
16	0.5	BN/ OG	2134	I	—	Right Front Side Impact Sensing Module Signal	16	0.5	BN/ OG	2134	III	—
17	0.5	BK/ OG	6629	I	—	Low Reference	17	0.5	BK/ OG	6629	III	—
18–19	—	—	—	—	—	Not Occupied	18–19	—	—	—	—	—
20	0.5	GY/ VT	267	I	DG6	Mirror Heater Element Voltage	20	0.5	GY/ VT	267	III	DG6
21–22	—	—	—	—	—	Not Occupied	21–22	—	—	—	—	—

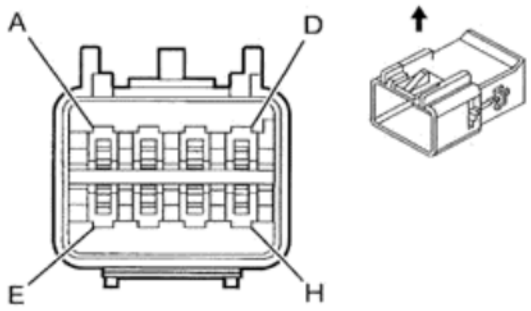
X600 Passenger Door Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
23	0.35	WH	3398	I	DG6	Co-Driver Mirror Motor Common Control	23	0.35	WH	3398	III	DG6
24	0.5	BK	650	I	—	Ground	24	0.5	BK	650	III	—
25–28	—	—	—	—	—	Not Occupied	25–28	—	—	—	—	—
29	1.5	BN/YE	3385	II	A66	Power Window Switch Co-Driver Down Signal	29	1.5	BN/YE	3385	IV	A66
30	—	—	—	—	—	Not Occupied	30	—	—	—	—	—

X601 Passenger Door Harness to Outside Rearview Mirror - Passenger Harness (DG6)



646374



1710973

Connector Part Information

Harness Type: Passenger Door
OEM Connector: 15332145
Service Connector: 15306407
Description: 8-Way F GT 150 Series (BK)

Connector Part Information

Harness Type: Outside Rearview Mirror
OEM Connector: 15332149
Service Connector: 19149300
Description: 8-Way M 150 GT Series (BK)

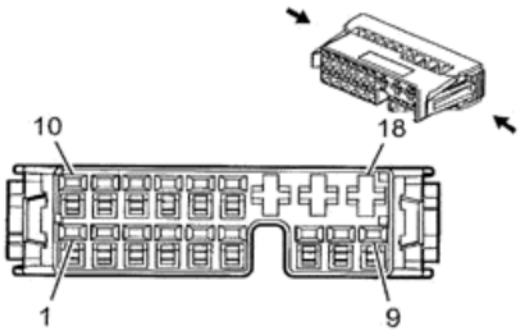
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Service by Connector Assembly – 15306407	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
II	Service by Connector Assembly – 19149300	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

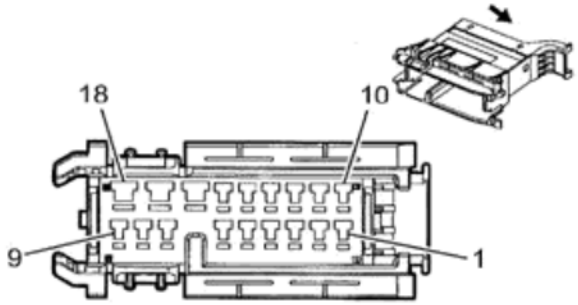
X601 Passenger Door Harness to Outside Rearview Mirror - Passenger Harness (DG6)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.35	WH	3398	I	—	Co-Driver Mirror Motor Common Control	A	0.35	BK	3398	II	—
B	0.35	YE/VT	3397	I	—	Co-Driver Mirror Motor Up (+) Down (-) Control	B	0.35	BK	3397	II	—
C	0.35	L-GN/BK	3396	I	—	Co-Driver Mirror Motor Right (+) Left (-) Control	C	0.35	BK	3396	II	—
E	—	—	—	—	—	Not Occupied	D–E	—	—	—	—	—
F	0.5	GY/VT	267	I	DG6	Mirror Heater Element Voltage	F	0.5	BK	267	II	DG6
G	0.5	BK	650	I	—	Ground	G	0.5	BK	650	II	—
H	—	—	—	—	—	Not Occupied	H	—	—	—	—	—

X700 Left Rear Door Harness to Body Harness



2537285



2537283

Connector Part Information

Harness Type: Left Rear Door
OEM Connector: MG653931
Service Connector: Service by Harness – See Part Catalog
Description: 18-Way F GT 150/280 Series (D-GY)

Connector Part Information

Harness Type: Body
OEM Connector: MG643932
Service Connector: 13395413
Description: 18-Way M GT 150/280 Series (D-GY)

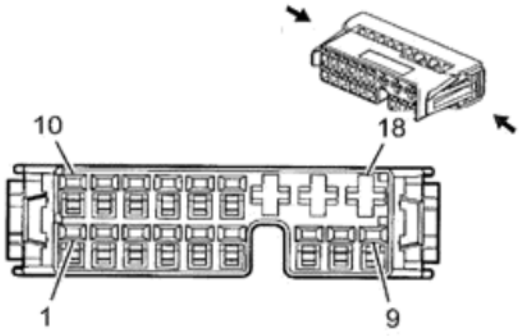
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575735	J-35616-2A (GY)	J-38125-553
II	Service by Harness – See Part Catalog	J-35616-4A (PU)	J-38125-553
III	13575502	J-35616-3 (GY)	J-38125-553
IV	13575510	J-35616-5 (PU)	J-38125-553

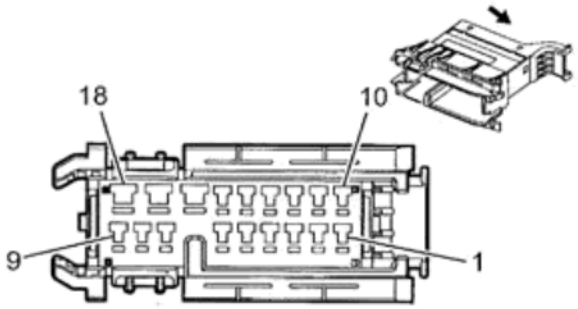
X700 Left Rear Door Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	L-GN/ BK	116	I	UW6	Left Rear Speaker Signal (-)	1	0.75	L-GN/ BK	116	III	UW6
2	0.75	L-GN	199	I	UW6	Left Rear Speaker (+)	2	0.75	L-GN	199	III	UW6
3	0.35	BN/ WH	3269	I	—	Child Security Lock Motor Status Signal Left Rear	3	0.35	BN/ WH	3269	III	—
4–6	—	—	—	—	—	Not Occupied	4–6	—	—	—	—	—
7	0.5	WH/ L-BU	3266	I	—	Child Security Lock Motor Unlock Control	7	0.5	WH/ L-BU	3266	III	—
8	0.5	BN/ YE	294	I	—	Door Lock Actuator Unlock Control	8	0.5	BN/ YE	294	III	—
9	0.5	GY	295	I	—	Door Lock Actuator Lock Control	9	0.5	GY	295	III	—
10	0.35	GY	747	I	—	Left Rear Door Ajar Switch Signal	10	0.5	GY	747	III	—
11–13	—	—	—	—	—	Not Occupied	11–13	—	—	—	—	—
14	0.5	BK	1050	I	—	Ground	14	0.5	BK	1050	III	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	1.5	L-GN/ GY	1185	II	A33	Power Window Switch Left Rear Up Signal	16	1.5	L-GN/ GY	1185	IV	A33
17	1.5	L-BU/ WH	1307	II	A33	Power Window Master Switch Lockout Signal	17	1.5	L-BU/ WH	1307	IV	A33
18	1.5	BN/ L-BU	1187	II	A33	Power Window Switch Left Rear Down Signal	18	1.5	BN/ L-BU	1187	IV	A33

X800 Right Rear Door Harness to Body Harness



2537285



2537283

Connector Part Information

Harness Type: Right Rear Door
OEM Connector: MG653931
Service Connector: Service by Harness – See Part Catalog
Description: 18-Way F GT 150/280 Series (D-GY)

Connector Part Information

Harness Type: Body
OEM Connector: MG643932
Service Connector: 13395413
Description: 18-Way M GT 150/280 Series (D-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575735	J-35616-2A (GY)	J-38125-553
II	Service by Harness – See Part Catalog	J-35616-4A (PU)	J-38125-553
III	13575502	J-35616-3 (GY)	J-38125-553
IV	13575510	J-35616-5 (PU)	J-38125-553

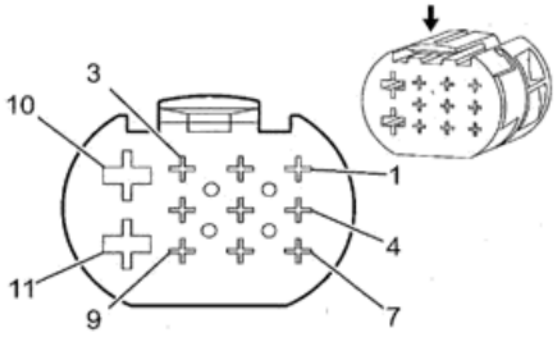
X800 Right Rear Door Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	L-BU/ BK	115	I	UW6	Right Rear Speaker Signal (-)	1	0.75	L-BU/ BK	115	III	UW6
2	0.75	WH	46	I	UW6	Right Rear Speaker (+)	2	0.75	WH	46	III	UW6
3	0.35	GY/ BK	3268	I	—	Child Security Lock Motor Status Signal Right Rear	3	0.35	GY/ BK	3268	III	—
4–6	—	—	—	—	—	Not Occupied	4–6	—	—	—	—	—
7	0.5	WH/ L-BU	3266	I	—	Child Security Lock Motor Unlock Control	7	0.5	WH/ L-BU	3266	III	—
8	0.5	BN/ YE	294	I	—	Door Lock Actuator Unlock Control	8	0.5	BN/ YE	294	III	—
9	0.5	GY	295	I	—	Door Lock Actuator Lock Control	9	0.5	GY	295	III	—
10	0.35	GY	748	I	—	Right Rear Door Ajar Switch Signal	10	0.5	GY	748	III	—
11–13	—	—	—	—	—	Not Occupied	11–13	—	—	—	—	—

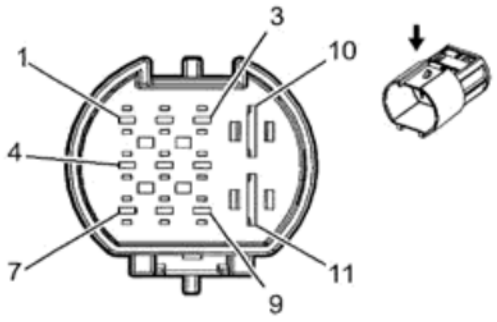
X800 Right Rear Door Harness to Body Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
14	0.5	BK	1650	I	—	Ground	14	0.5	BK	1650	III	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	1.5	L-GN/ GY	1186	II	A33	Power Window Switch Right Rear Up Signal	16	1.5	L-GN/ GY	1186	IV	A33
17	1.5	L-BU/ WH	1307	II	A33	Power Window Master Switch Lockout Signal	17	1.5	L-BU/ WH	1307	IV	A33
18	1.5	BN/ L-BU	1188	II	A33	Power Window Switch Right Rear Down Signal	18	1.5	BN/ L-BU	1188	IV	A33

X900 Liftgate Harness to Body Harness (Hatchback)



2071588



2042937

Connector Part Information

Harness Type: Liftgate
OEM Connector: 24432513
Service Connector: Service by Harness – See Part Catalog
Description: 11-Way F 1.5/5.8 Series (GY)

Connector Part Information

Harness Type: Body
OEM Connector: 24432512
Service Connector: 13395401
Description: 11-Way M 1.5, 5.8 Series (BK)

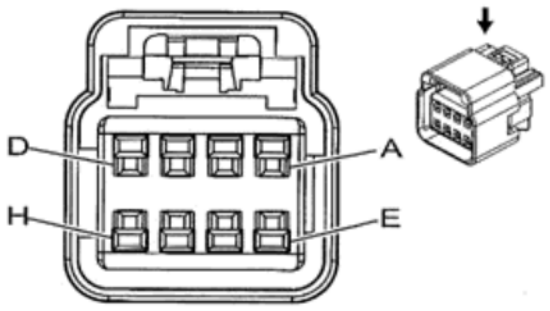
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13578847	J-35616-14 (GN)	J-38125-560
II	13580020	J-35616-2A (GY)	J-38125-560
III	13575858	J-35616-42 (RD)	J-38125-36
IV	13505335	J-35616-3 (GY)	J-38125-560
V	13505334	J-35616-3 (GY)	J-38125-560
VI	Service by Harness - See Part Catalog	J-35616-3 (GY)	J-38125-560
VII	13575857	J-35616-3 (GY)	J-38125-36

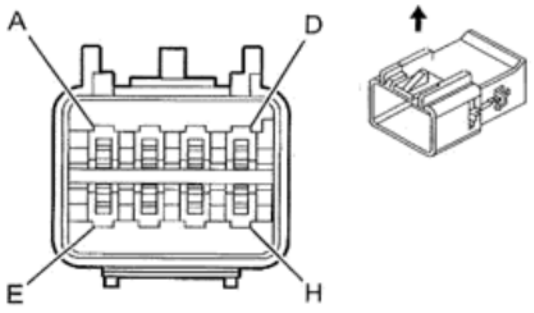
X900 Liftgate Harness to Body Harness (Hatchback)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.5	BN/YE	820	I	TS6	CHMSL Supply Voltage	2	0.5	BN/YE	820	IV	TS6
3	0.5	L-GN/YE	6846	I	—	Rear License Lamp Supply Voltage	3	0.5	L-GN/YE	6846	IV	—
4	0.35	VT/GY	1303	II	—	Lift Gate Ajar Switch Signal (1)	4	0.35	VT/GY	1303	V	—
5	0.35	YE/L-BU	5797	II	—	Rear Closure Handle Switch Open Signal	5	0.35	YE/L-BU	5797	IV	—
6	0.5	L-BU/WH	6128	I	—	Rear Closure Unlatch Motor Unlatch Control	6	0.5	L-BU/WH	6128	IV	—
7	1	L-BU	393	I	C25	Rear Window Wiper Motor Control	7	1	L-BU	393	IV	—
8	1	GY/VT	5780	I	C25	Windshield Wiper Motor Park Switch Fused Signal	8	1	GY/VT	5780	IV	—
9	1.5	BK	1050	I	—	Ground	9	1.5	BK	1050	VI	—
10	2.5	BN/VT	293	III	—	Rear Defog Element Supply Voltage	10	2.5	BN/VT	293	VII	—
11	2.5	BK	1050	III	—	Ground	11	2.5	BK	1050	VII	—

X900 Rear Compartment Lid Harness to Body Harness (Notchback)



646374



1710973

Connector Part Information

Harness Type: Rear Compartment Lid
OEM Connector: 15332145
Service Connector: 15306407
Description: 8-Way F GT 150 Series (BK)

Connector Part Information

Harness Type: Body
OEM Connector: 15332150
Service Connector: 88986250
Description: 8-Way M GT 150 Series (BK)

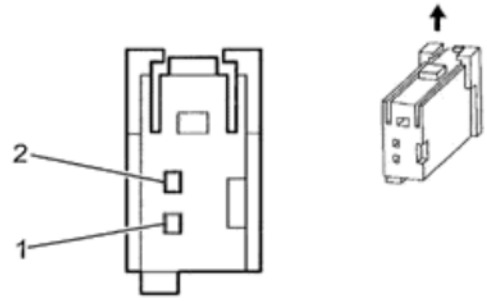
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575735	J-35616-2A (GY)	J-38125-553
II	13575502	J-35616-3 (GY)	J-38125-553

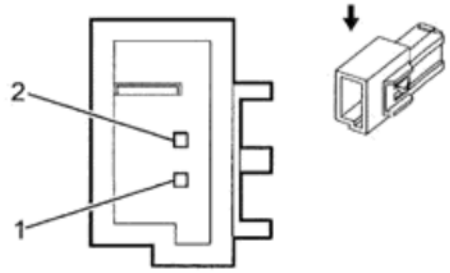
X900 Rear Compartment Lid Harness to Body Harness (Notchback)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.5	BK	1050	I	—	Ground	A	0.5	BK	1050	II	—
B	—	—	—	—	—	Not Occupied	B	—	—	—	—	—
C	0.5	L-GN/ YE	6846	I	—	Rear License Lamp Supply Voltage	C	0.5	L-GN/ YE	6846	II	—
D	0.35	VT/ GY	1303	I	—	Lift Gate Ajar Switch Signal (1)	D	0.35	VT/ GY	1303	II	—
E	0.35	YE/ L-BU	5797	I	A90	Rear Closure Handle Switch Open Signal	E	0.35	YE/ L-BU	5797	II	—
F	0.5	L-BU/ WH	6128	I	A90	Rear Closure Unlatch Motor Unlatch Control	F	0.5	L-BU/ WH	6128	II	—
G–H	—	—	—	—	—	Not Occupied	G–H	—	—	—	—	—

X901 Liftgate Harness to License Lamp Harness (Hatchback)



2173598



2179778

Connector Part Information

Harness Type: Liftgate
OEM Connector: AIT2PB-02A-1AK
Service Connector: 13314093
Description: 2-Way F 0.64 Series (BK)

Connector Part Information

Harness Type: License Lamp
OEM Connector: AIT2WSB-02A-1AK
Service Connector: Service by Harness – See Part Catalog
Description: 2-Way M 0.64 Series (BK)

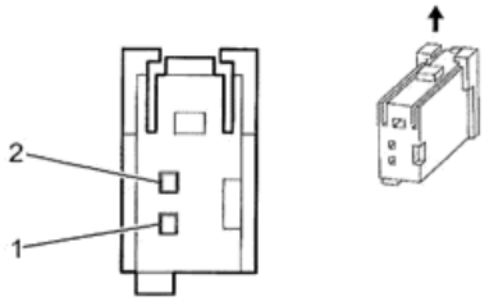
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575867	J-35616-64B (L-BU)	J-38125-215A
II	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog

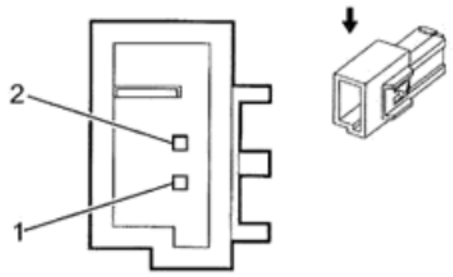
X901 Liftgate Harness to License Lamp Harness (Hatchback)

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	II	—
2	0.5	L-GN/ YE	6846	I	—	Rear License Lamp Supply Voltage	2	0.5	D-GN/ YE	6846	II	—

X901 License Lamp Harness to Rear Compartment Lid Harness (Notchback)



2173598



2179778

Connector Part Information

Harness Type: License Lamp
OEM Connector: AIT2PB-02A-1AK
Service Connector: 13314093
Description: 2-Way F 0.64 Series (BK)

Connector Part Information

Harness Type: Rear Compartment Lid
OEM Connector: AIT2WSB-02A-1AK
Service Connector: Service by Harness – See Part Catalog
Description: 2-Way M 0.64 Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575867	J-35616-64B (L-BU)	J-38125-215A
II	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog	Service by Harness - See Parts Catalog

X901 License Lamp Harness to Rear Compartment Lid Harness (Notchback)

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	II	—
2	0.5	L-GN/ YE	6846	I	—	Rear License Lamp Supply Voltage	2	0.5	L-GN/ YE	6846	II	—

Diagnostic Information and Procedures

DTC B1370 (Instrument Cluster)

Diagnostic Instructions

- Perform the *Diagnostic System Check - Vehicle on page 6-66* prior to using this diagnostic procedure.
- Review *Strategy Based Diagnosis on page 6-58* for an overview of the diagnostic approach.
- *Diagnostic Procedure Instructions on page 6-59* provides an overview of each diagnostic category.

DTC Descriptors

DTC B1370 01: Control Module Ignition On and Start Circuit Short to Battery
DTC B1370 06: Control Module Ignition On and Start Circuit Open

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Instrument Cluster Ignition (Instrument Cluster Terminal 31)	B1370 06	B1370 06	B1370 01	—

Circuit/System Description

The vehicle power mode master is the body control module (BCM). The ignition switch is a low current switch with multiple discrete circuits to the BCM.

The power mode master will activate relays and other direct outputs of the power mode master as needed according to the calculated power mode. Some relays controlled by the BCM are switched ignition voltage outputs that are pass through circuits within the BCM directly from the ignition switch. If these circuits short to ground, the B+ circuit fuse to the ignition switch will open.

Conditions for Running the DTC

B1370 01

Ignition switch is in the Accessory position.

B1370 06

Ignition switch is in the Accessory, Run, or Crank positions.

Conditions for Setting the DTC

B1370 01

Ignition circuit is shorted to voltage.

B1370 06

- Ignition circuit is open.
- Ignition or ignition run relay circuit is shorted to ground.
- B+ circuit of the ignition run relay is open or shorted to ground.
- Ignition run relay control circuit open, including relay coil and ground.

Action Taken When the DTC Sets

The Instrument Cluster still functions except the malfunction indicator light is always off.

Conditions for Clearing the DTC

- The condition responsible for setting the DTC no longer exists.
- A history DTC will clear once 50 consecutive malfunction-free ignition cycles have occurred.

Reference Information

Schematic Reference

Instrument Cluster Schematics on page 8-78

Connector End View Reference

Component Connector End Views on page 11-269

Description and Operation

- *Instrument Cluster Description and Operation on page 8-108*
- *Power Mode Description and Operation on page 11-614*

Electrical Information Reference

- *Circuit Testing on page 11-526*
- *Connector Repairs on page 11-548*
- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Wiring Repairs on page 11-537*

Scan Tool Reference

Control Module References on page 6-3 for scan tool information

Circuit/System Verification

1. Verify that DTC B144B or B1380 is not set.

⇒ **If DTC B144B or B1380 is set**

Refer to *Diagnostic Trouble Code (DTC) List - Vehicle on page 6-69*.

⇓ **If DTC B144B or B1380 is not set**

2. Refer to Circuit/System Testing.

Circuit/System Testing

1. Ignition OFF, disconnect the harness connector at the P16 Instrument Cluster.
2. Verify that a test lamp does not illuminate between the ignition circuit terminal 31 and ground.

⇒ **If the test lamp illuminates**

Repair the short to voltage on the ignition circuit.

⇓ **If the test lamp does not illuminate**

3. Ignition ON.
4. Verify that a test lamp illuminates between the ignition terminal 31 and ground.

⇒ **If the test lamp does not illuminate and the Ignition fuse is good**

4.1. Ignition OFF, remove the test lamp.

4.2. Test for less than 2 Ω in the ignition circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, refer to *Power Mode Mismatch on page 11-515*.

⇒ **If the test lamp does not illuminate and the Ignition fuse is open**

4.1. Ignition OFF, remove the test lamp.

4.2. Test for infinite resistance between the ignition circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇒ If infinite resistance, replace the P16 Instrument Cluster.

⇓ **If the test lamp illuminates**

5. Replace the P16 Instrument Cluster.

Repair Instructions

Perform the *Diagnostic Repair Verification on page 6-92* after completing the repair.

- *Relay Replacement (Within an Electrical Center) on page 11-607* or *Relay Replacement (Attached to Wire Harness) on page 11-607*
- *Control Module References on page 6-3* for instrument cluster replacement, programming and setup

DTC B1370-B1379, B1380-B1389, or B1440-B1443

Diagnostic Instructions

- Perform the *Diagnostic System Check - Vehicle on page 6-66* prior to using this diagnostic procedure.
- Review *Strategy Based Diagnosis on page 6-58* for an overview of the diagnostic approach.
- *Diagnostic Procedure Instructions on page 6-59* provides an overview of each diagnostic category.

DTC Descriptors

DTC B1370 01: Control Module Ignition ON and Start Circuit Short to Battery
DTC B1370 04: Control Module Ignition ON and Start Circuit Open
DTC B1380 01: Control Module Ignition Accessory Circuit Short to Battery
DTC B1380 04: Control Module Ignition Accessory Circuit Open
DTC B1441 01: Control Module Ignition OFF, Run, and Start Circuit Short to Battery
DTC B1441 04: Control Module Ignition OFF, Run, and Start Circuit Open

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
B+ terminal 2	B1370 04, B1380 04	B1370 04, B1380 04	—	—
Ignition Terminal 1	B1370 04, B1380 04	B1370 04, B1380 04	B1370 01	—
Ignition Terminal 3	B1370 04, B1380 04	B1380 04	B1380 01	—
Ignition Terminal 4	B1370 04, B1380 04, B1441 04	B1441 04	B1441 01	—
5 V Reference	—	1	—	—
1. Power Mode Mismatch				

Circuit/System Description

The vehicle power mode master is the body control module (BCM). The ignition switch is a low current switch with multiple discrete circuits to the BCM. The BCM logic uses the ignition switch positions to identify the operator's desired power mode and activate specific discrete signals, and serial data messages for the operation of different subsystems as necessary. Other modules which have switched voltage inputs may operate in a default mode if the power mode master serial data message does not match what the individual module can detect from its own connections.

The power mode master will activate relays and other direct outputs of the power mode master as needed according to the calculated power mode. Some relays controlled by the BCM are switched ignition voltage outputs that are pass through circuits within the BCM directly from the ignition switch. If these circuits short to ground, the B+ circuit fuse to the ignition switch will open.

Conditions for Running the DTC

B1370 01, B1370 04

Ignition switch is in the RUN or CRANK positions.

B1380 01, B1380 04

Ignition switch is in the RUN or ACCESSORY positions.

B1441 01, B1441 04

Ignition switch is in the CRANK position.

Conditions for Setting the DTC

B1370 01

Ignition circuit is shorted to voltage.

B1370 04

- Ignition circuit is open.
- Ignition, accessory, or off/run/crank circuit shorted to ground.
- B+ circuit of the ignition switch is open or shorted to ground.
- Ignition relay control circuit open, including relay coil and ground.

B1380 01

Ignition, accessory circuit is shorted to voltage.

B1380 04

- Ignition, accessory circuit is open.
- Ignition, accessory, or off/run/crank circuit shorted to ground.
- B+ circuit of the ignition switch is open or shorted to ground.

B1441 01

Ignition, off/run/crank signal circuit is shorted to voltage.

B1441 04

Ignition, off/run/crank signal circuit is open.

Actions Taken When the DTC Sets

- The BCM operates in a fail-safe power mode dependent on the last valid power mode detected and the state of the engine run flag data on the serial data communications circuits.
- The other modules on the vehicle operate in a fail-safe power mode dependent on the last valid power mode transmitted by the BCM and the state of the engine run flag on the serial data communications circuits.

Conditions for Clearing the DTC

- The condition responsible for setting the DTC no longer exists.
- A history DTC will clear once 50 consecutive malfunction-free ignition cycles have occurred.

Diagnostic Aids

An open in the ignition switch B+ circuit or circuit fuse will cause the key in ignition warning chime to be inoperative.

Reference Information

Schematic Reference

Power Distribution Schematics on page 11-128

Connector End View Reference

Component Connector End Views on page 11-269

Description and Operation

Power Mode Description and Operation on page 11-614

Electrical Information Reference

- *Circuit Testing on page 11-526*
- *Connector Repairs on page 11-548*
- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Wiring Repairs on page 11-537*

Scan Tool Reference

Control Module References on page 6-3 for scan tool information

Circuit/System Verification

1. Verify DTC U1814 is not set.

⇒ **If DTC is set**

Refer to *Diagnostic Trouble Code (DTC) List - Vehicle on page 6-69*.

⇓ **If DTC is not set**

2. Ignition ON.
3. Verify the scan tool power mode parameters change when cycling the S39 Ignition Switch between OFF, ACCESSORY, ON, and CRANK.

⇒ **If the power mode parameters do not change**

Refer to Circuit/System Testing.

⇓ **If the power mode parameters change**

4. All OK.

Circuit/System Testing

1. Ignition ON, disconnect the harness connector at the S39 Ignition Switch while the ignition is ON.
2. Verify a test lamp illuminates between the B+ circuit terminal 2 and ground.

⇒ **If the test lamp does not illuminate and the circuit fuse is good**

2.1. Ignition OFF, remove the test lamp.

2.2. Test for less than 2 Ω in the B+ circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, verify the fuse is not open and there is voltage at the fuse.

⇒ **If the test lamp does not illuminate and the circuit fuse is open**

2.1. Ignition OFF, remove the test lamp.

2.2. Test for infinite resistance between the B+ circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on one of the following circuits listed below:

Note: To help isolate a short to ground, it may be necessary to disconnect modules that are connected to the following circuits:

- B+ circuit terminal 2
- Ignition circuit terminal 1
- Ignition circuit terminal 3
- Ignition circuit terminal 4

⇓ **If the test lamp illuminates**

3. Ignition ON.

4. Test for 4.8–5.2 V between the 5 V reference circuit terminal 6 and ground.

⇒ **If less than 4.8 V**

4.1. Ignition OFF, disconnect the X3 harness connector at the K9 Body Control Module.

4.2. Test for infinite resistance between the 5 V reference circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

4.3. Test for less than 2 Ω in the 5 V reference circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇒ **If greater than 5.2 V**

4.1. Ignition OFF, disconnect the X3 harness connector at the K9 Body Control Module.

4.2. Test for less than 1 V between the 5 V reference circuit and ground.

⇒ If 1 V or greater, repair the short to voltage on the circuit.

⇒ If less than 1 V, replace the K9 Body Control Module.

⇓ **If between 4.8–5.2 V**

5. Connect the harness connector at the S39 Ignition Switch.
6. Ignition OFF.
7. Disconnect the X3 harness connector at the K9 Body Control Module, ignition ON.
8. Verify a test lamp illuminates between each of the ignition circuits listed below and ground:
   - Ignition circuit terminal 5
   - Ignition circuit terminal 6

⇒ **If the test lamp does not illuminate and the circuit fuse is good**

8.1. Ignition OFF, remove the test lamp.

8.2. Test for less than 2 Ω in the ignition circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, verify the fuse is good and there is voltage at the fuse.

⇒ **If the test lamp does not illuminate and the circuit fuse is open**

8.1. Ignition OFF, remove the test lamp.

8.2. Test for infinite resistance between the ignition circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance, replace the K9 Body Control Module.

⇓ **If the test lamp illuminates**

9. Ignition OFF with the key in.
10. Verify a test lamp illuminates between ignition circuit terminal 15 and ground.

⇒ **If the test lamp does not illuminate and the circuit fuse is good**

10.1. Ignition OFF with the key out, remove the test lamp.

10.2. Test for less than 2 Ω in the ignition circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, verify the fuse is good and there is voltage at the fuse.

⇒ **If the test lamp does not illuminate and the circuit fuse is open**

10.1. Ignition OFF with the key out remove the test lamp.

10.2. Test for infinite resistance between the ignition circuit terminal 15 and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance, replace the K9 Body Control Module.

⇓ **If the test lamp illuminates**

11. Connect the X3 harness connector at the K9 Body Control Module, ignition ON.
12. Disconnect the harness connector at the S39 Ignition Switch.
13. Test for less than 1 V between each of the ignition circuits listed below and ground.
    - Ignition circuit terminal 1
    - Ignition circuit terminal 3
    - Ignition circuit terminal 4

⇒ **If 1 V or greater**

Repair the short to voltage on the circuit.

⇓ **If less than 1 V**

14. Test or replace the S39 Ignition Switch.

Component Testing

1. Ignition OFF, disconnect the harness connector at the S39 Ignition Switch.
2. Using the Resistance Test below, verify the resistance between the terminals listed below match for each S39 Ignition Switch position.

⇒ **If any reading is other than specified**

Replace the S39 Ignition Switch.

⇓ **If the readings match**

3. All OK.

Resistance Test

Ignition Switch Position	Terminals 1 and 2	Terminals 2 and 3	Terminals 2 and 4	Terminals 2 and 6	Terminals 4 and 6
OFF Key Out	Infinite	Infinite	Infinite	Infinite	Infinite
OFF Key In	Infinite	Infinite	<5.0 Ω	Infinite	Infinite
ACCESSORY	Infinite	<5.0 Ω	Infinite	Infinite	Infinite
ON/RUN	<5.0 Ω	<5.0 Ω	Infinite	Infinite	<5.0 Ω
CRANK	<5.0 Ω	Infinite	Infinite	Infinite	1275–1325 Ω

Repair Instructions

Perform the *Diagnostic Repair Verification on page 6-92* after completing the repair.

- *Ignition and Start Switch Replacement on page 11-612*
- *Control Module References on page 6-3* for body control module replacement, programming and setup

DTC B1445

Diagnostic Instructions

- Perform the *Diagnostic System Check - Vehicle on page 6-66* prior to using this diagnostic procedure.
- Review *Strategy Based Diagnosis on page 6-58* for an overview of the diagnostic approach.
- *Diagnostic Procedure Instructions on page 6-59* provides an overview of each diagnostic category.

DTC Descriptor

DTC B1445 01: Control Module Voltage Output Circuit Short to Battery
DTC B1445 02: Control Module Voltage Output Circuit Short to Ground
DTC B1445 04: Control Module Voltage Output Circuit Open.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Relay Coil Control	B1445 02	B1445 04	B1445 01	—
Ground	—	B1445 04	—	—

Circuit/System Description

The body control module (BCM) controls the retained accessory power relay through the control circuit by applying voltage to the retained accessory power relay coil control circuit. The retained accessory power relay is energized when the ignition switch is in the ACCESSORY or the ON position.

Conditions for Running the DTC

- The system voltage is between 9–16 V.

Conditions for Setting the DTC

The DTC will set only when the module requests the output and there is a short to ground in the ignition voltage circuit.

Action Taken When the DTC Sets

The module output driver will be shut down and not supply voltage to the circuit.

Conditions for Clearing the DTC

- The current DTC will clear when the malfunction is no longer present.
- A history DTC clears when the module ignition cycle counter reaches the reset threshold of 50, without a repeat of the malfunction.

Reference Information

Schematic Reference

Power Distribution Schematics on page 11-128

Connector End View Reference

Component Connector End Views on page 11-269

Description and Operation

Retained Accessory Power Description and Operation on page 11-615

Electrical Information Reference

- *Circuit Testing on page 11-526*
- *Connector Repairs on page 11-548*
- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Wiring Repairs on page 11-537*

Scan Tool Reference

Control Module References on page 6-3 for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify the KR76 Retained Accessory Power Relay turns ON and OFF when commanding the Accessory/Retained Accessory Power Relay On and Off with a scan tool.

⇒ **If the KR76 Retained Accessory Power Relay does not turn ON and OFF**

Refer to Circuit/System Testing.

⇓ **If the KR76 Retained Accessory Power Relay turns ON and OFF**

3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the KR76 Retained Accessory Power Relay. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 2 and ground.

⇒ **If 10 Ω or greater**

2.1. Ignition OFF.

2.2. Test for less than 2 Ω in the ground circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, repair the open/high resistance in the ground connection.

⇓ **If less than 10 Ω**

3. Ignition ON, connect a test lamp between the control circuit terminal 1 and ground circuit terminal 2.
4. Verify the test lamp turns ON and OFF when commanding the Accessory/Retained Accessory Power Relay On and Off with a scan tool.

⇒ **If the test lamp is always OFF**

4.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module.

4.2. Test for infinite resistance between the control circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

4.3. Test for less than 2 Ω in the control circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇒ **If the test lamp is always ON**

4.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module, ignition ON.

4.2. Test for less than 1 V between the control circuit and ground.

⇒ If 1 V or greater, repair the short to voltage on the circuit.

⇒ If less than 1 V, replace the K9 Body Control Module.

⇓ **If the test lamp turns ON and OFF**

5. Test or replace the KR76 Retained Accessory Power Relay.

Repair Instructions

Perform the *Diagnostic Repair Verification on page 6-92* after completing the repair.

- *Relay Replacement (Within an Electrical Center) on page 11-607* or *Relay Replacement (Attached to Wire Harness) on page 11-607*
- *Control Module References on page 6-3* for body control module replacement, programming and setup.

DTC B144A

Diagnostic Instructions

- Perform the *Diagnostic System Check - Vehicle on page 6-66* prior to using this diagnostic procedure.
- Review *Strategy Based Diagnosis on page 6-58* for an overview of the diagnostic approach.
- *Diagnostic Procedure Instructions on page 6-59* provides an overview of each diagnostic category.

DTC Descriptor

DTC B144A 01: Run Power Relay Circuit Short to Battery.
DTC B144A 02: Run Power Relay Circuit Short to Ground.
DTC B144A 02: Run Power Relay Circuit Open.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Relay Coil Control	B144A 02	B144A 01, B144A 04	B144A 01, B144A 04	—
Ground	—	B144A 01, B144A 04	—	—

Circuit/System Description

The body control module (BCM) controls the blower motor relay through the control circuit by applying voltage to the ignition run relay coil control circuit. The blower motor relay is energized when the ignition switch is in the ON position.

Conditions for Running the DTC

- The system voltage is between 9–16 V.
- The DTC can only run when the output is activated.

Conditions for Setting the DTC

B144A 01

The ignition output is not active and a short to battery is detected 3 consecutive times on the ignition voltage circuit.

B144A 02

A short to ground is detected on the ignition run relay coil control circuit.

B144A 04

The ignition output is not active and an open is detected 20 consecutive times on the ignition voltage circuit.

Action Taken When the DTC Sets

B144A 01, B144A 04

No action is taken.

B144A 02

The blower motor relay is deactivated when the fault is set. After 100 ms, the blower motor relay will be activated. If the fault is still set, the relay will be deactivated. The blower motor relay will again be activated after 100 ms. If this also results in a fault, the blower motor relay will be deactivated until a new ignition request is received.

The module output driver will be shut down and not supply voltage to the ignition run relay control circuit.

Conditions for Clearing the DTC

- The current DTC will clear when the module request for the output is removed or the malfunction is no longer present.
- A history DTC clears when the module ignition cycle counter reaches the reset threshold of 50, without a repeat of the malfunction.

Reference Information

Schematic Reference

Power Distribution Schematics on page 11-128

Connector End View Reference

Component Connector End Views on page 11-269

Description and Operation

Power Mode Description and Operation on page 11-614

Electrical Information Reference

- *Circuit Testing on page 11-526*
- *Connector Repairs on page 11-548*
- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Wiring Repairs on page 11-537*

Scan Tool Reference

Control Module References on page 6-3 for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify the KR32E Blower Motor Relay turns ON and OFF when commanding the Auxiliary Ignition Run Relay On and Off with a scan tool.

⇒ **If the KR32E Blower Motor Relay does not turn ON and OFF**

Refer to Circuit/System Testing

⇓ **If the KR32E Blower Motor Relay turns ON and OFF**

3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the KR32E Blower Motor Relay. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 1 and ground.

⇒ **If 10 Ω or greater**

2.1. Ignition OFF.

2.2. Test for less than 2 Ω in the ground circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, repair the open/high resistance in the ground connection.

⇓ **If less than 10 Ω**

3. Ignition ON, connect a test lamp between the control circuit terminal 2 and ground circuit terminal 1.
4. Verify the test lamp turns ON and OFF when commanding the Auxiliary Ignition Run Relay On and Off with a scan tool.

⇒ **If the test lamp is always OFF**

4.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module.

4.2. Test for infinite resistance between the control circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

4.3. Test for less than 2 Ω in the control circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇒ **If the test lamp is always ON**

4.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module, ignition ON.

4.2. Test for less than 1 V between the control circuit and ground.

⇒ If 1 V or greater, repair the short to voltage on the circuit.

⇒ If less than 1 V, replace the K9 Body Control Module.

⇓ **If the test lamp turns ON and OFF**

5. Test or replace the KR32E Blower Motor Relay.

Repair Instructions

Perform the *Diagnostic Repair Verification on page 6-92* after completing the repair.

- *Relay Replacement (Within an Electrical Center) on page 11-607* or *Relay Replacement (Attached to Wire Harness) on page 11-607*
- *Control Module References on page 6-3* for body control module replacement, programming and setup

DTC B144B

Diagnostic Instructions

- Perform the *Diagnostic System Check - Vehicle on page 6-66* prior to using this diagnostic procedure.
- Review *Strategy Based Diagnosis on page 6-58* for an overview of the diagnostic approach.
- *Diagnostic Procedure Instructions on page 6-59* provides an overview of each diagnostic category.

DTC Descriptors

DTC B144B 01: Run/Crank Power Relay Circuit Short to Battery
DTC B144B 02: Run/Crank Power Relay Circuit Short to Ground
DTC B144B 04: Run/Crank Power Relay Circuit Open

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Relay Coil Control	B144B 02	B144B 04	B144B 01	—
Ground	—	B144B 04	—	—

Circuit/System Description

The body control module (BCM) controls the ignition main relay through the control circuit by applying voltage to the ignition run/crank relay control circuit. The ignition main relay is energized when the ignition is in the ON and CRANK positions.

Conditions for Running the DTC

System voltage greater than 9 V.

Conditions for Setting the DTC

B144B 01

The ignition output is not active and a short to battery is detected 3 consecutive times on the ignition voltage circuit.

B144B 02

A short to ground is detected on the ignition run/crank relay coil control circuit.

B144B 04

The ignition output is not active and an open is detected 20 consecutive times on the ignition voltage circuit.

Action Taken When the DTC Sets

B144B 01, B144B 04

No action is taken.

B144B 02

The ignition main relay is deactivated when the fault is set. After 100 ms, the ignition main relay will be activated. If the fault is still set, the relay will be deactivated. The ignition main relay will again be activated after 100 ms. If this also results in a fault, the ignition main relay will be deactivated until a new ignition request is received.

Conditions for Clearing the DTC

- The current DTC will clear when the malfunction is no longer present and an ignition request is received.
- A history DTC will clear after 40 malfunction-free ignition cycles.

Diagnostic Aids

A short to voltage on the ignition run/crank relay coil control circuit will cause the engine to remain running after the mode is changed to OFF.

A short to voltage in the ignition run/crank relay coil control circuit will cause the malfunction indicator lamp (MIL) to illuminate with the ignition key OFF.

An open or short to ground on the ignition run/crank relay coil control circuit will cause a no CRANK condition.

Reference Information

Schematic Reference

Power Moding Schematics on page 11-149

Connector End View Reference

Component Connector End Views on page 11-269

Description and Operation

Power Mode Description and Operation on page 11-614

Electrical Information Reference

- *Circuit Testing on page 11-526*
- *Connector Repairs on page 11-548*
- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Wiring Repairs on page 11-537*

Scan Tool Reference

Control Module References on page 6-3 for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify the KR73 Ignition Main Relay turns ON and OFF when commanding the Run/Crank relay On and Off with a scan tool.

⇒ **If the KR73 Ignition Main Relay does not turn ON and OFF**

Refer to Circuit/System Testing.

⇓ **If the KR73 Ignition Main Relay turns ON and OFF**

3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the KR73 Ignition Main Relay. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 85 and ground.

⇒ **If 10 Ω or greater**

2.1. Ignition OFF.

2.2. Test for less than 2 Ω in the ground circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, repair the open/high resistance in the ground connection.

⇓ **If less than 10 Ω**

3. Ignition ON, connect a test lamp between the control circuit terminal 86 and ground circuit terminal 85.
4. Verify the test lamp turns ON and OFF when commanding the Run/Crank relay On and Off with a scan tool.

⇒ **If the test lamp is always OFF**

4.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module.

4.2. Test for infinite resistance between the control circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

4.3. Test for less than 2 Ω in the control circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇒ **If the test lamp is always ON**

4.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module, ignition ON.

4.2. Test for less than 1 V between the control circuit and ground.

⇒ If 1 V or greater, repair the short to voltage on the circuit.

⇒ If less than 1 V, replace the K9 Body Control Module.

⇓ **If the test lamp turns ON and OFF**

5. Test or replace the KR73 Ignition Main Relay.

Repair Instructions

Perform the *Diagnostic Repair Verification on page 6-92* after completing the repair.

- *Relay Replacement (Within an Electrical Center) on page 11-607* or *Relay Replacement (Attached to Wire Harness) on page 11-607*
- *Control Module References on page 6-3* for body control module replacement, programming and setup

DTC P2537

Diagnostic Instructions

- Perform the *Diagnostic System Check - Vehicle on page 6-66* prior to using this diagnostic procedure.
- Review *Strategy Based Diagnosis on page 6-58* for an overview of the diagnostic approach.
- *Diagnostic Procedure Instructions on page 6-59* provides an overview of each diagnostic category.

DTC Descriptor

DTC P2537: Ignition Accessory Switch Circuit Low Voltage

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Ignition	P2537	P2537	—	—
Ground	—	P2537	—	—

Circuit/System Description

The transmission control module (TCM) continuously monitors the voltage on the Ignition Accessory/Run circuit from the body control module (BCM). When the ignition switch is in the ACCESSORY or RUN position, the BCM sends a 12 V wake up signal to the TCM. This wake up signal allows the TCM to power up and start functioning before the engine is started.

Conditions for Running the DTC

The ignition switch is in the Accessory or Run position.

Conditions for Setting the DTC

The TCM detects the Ignition Accessory/Run circuit is less than 6 V for 1 min.

Action Taken When the DTC Sets

DTC P2537 is a Type C DTC.

Conditions for Clearing the DTC

DTC P2537 is a Type C DTC.

Reference Information

Schematic Reference

Automatic Transmission Controls Schematics on page 17-30

Connector End View Reference

- *Component Connector End Views on page 11-269*
- *Inline Harness Connector End Views on page 11-465*

Description and Operation

- *Transmission General Description on page 17-317*
- *Transmission Component and System Description on page 17-318*
- *Electronic Component Description on page 17-319*

Electrical Information Reference

- *Circuit Testing on page 11-526*
- *Connector Repairs on page 11-548*
- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Wiring Repairs on page 11-537*

DTC Type Reference

Powertrain Diagnostic Trouble Code (DTC) Type Definitions on page 6-68

Scan Tool Reference

Control Module References on page 6-3 for scan tool information

Special Tools

DT 48616–10 Jumper Harness

For equivalent regional tools, refer to *Special Tools on page 17-394*.

Circuit/System Verification

1. Ignition in the ACCESSORY position.
2. Verify the scan tool BCM Accessory Relay Command parameter is Active.

⇒ **If the parameter is not Active**

Refer to *Power Mode Mismatch on page 11-515*.

⇓ **If the parameter is Active**

3. Ignition ON.
4. Verify the scan tool BCM Accessory Relay Command parameter is Active.

⇒ **If the parameter is not Active**

Refer to *Power Mode Mismatch on page 11-515*.

⇓ **If the parameter is Active**

5. Ignition ON, clear all DTCs in the K9 Body Control Module and the Transmission Control Module, ignition OFF for 2 min.
6. Engine Running for 1 min with the transmission in Park.
7. Verify DTC P2537 is not set in the K71 Transmission Control Module.

⇒ **If DTC P2537 is set**

Refer to Circuit/System Testing.

⇓ **If DTC P2537 is not set**

8. After performing the above steps, verify that the DTC does not set by operating the vehicle within the Conditions for Running the DTC. You may also operate the vehicle within the conditions you observe from the Freeze Frame/Failure Records data. If the vehicle passes the Circuit/System Verification procedure, then STOP. Do not perform the Circuit/System Testing or Component Testing as this may result in an unnecessary part replacement. Refer to *Testing for Intermittent Conditions and Poor Connections on page 11-531*.

Circuit/System Testing

1. Ignition OFF, disconnect the harness connector at the T12 Automatic Transmission Assembly. Install the *DT 48616–10* jumper harness to the X1 vehicle wire harness connector.
2. Ignition ON.
3. Verify a test lamp illuminates between the ignition circuit terminal 13 and ground.

⇒ **If the test lamp does not illuminate.**

3.1. Ignition OFF remove the test lamp, disconnect the X4 connector at the K9 Body Control Module.

3.2. Test for infinite resistance between the ignition circuit and ground.

⇒ If less than infinite resistance, repair the short to ground in the circuit.

⇓ If infinite resistance

3.3. Test for less than 2 Ω on the ignition circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇓ **If the test lamp illuminates**

4. Replace the K71 Transmission Control Module.

Repair Instructions

Perform the *Diagnostic Repair Verification on page 6-92* after completing the repair.

Refer to *Control Module References on page 6-3* for body control module or transmission control module replacement, programming, and setup.

Symptoms - Wiring Systems

Note: The following steps must be completed before using the symptom tables.

1. Perform the *Diagnostic System Check - Vehicle on page 6-66* before using the symptom tables in order to verify that all of the following are true:
   - There are no DTCs set.
   - The control modules can communicate via the serial data links.
2. Review the system operation in order to familiarize yourself with the system functions. Refer to the following:
   - *Electronic Park Lock Description and Operation on page 11-614*
   - *Power Mode Description and Operation on page 11-614*
   - *Retained Accessory Power Description and Operation on page 11-615*

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the systems. Refer to *Checking Aftermarket Accessories on page 11-525*.
- Inspect the easily accessible or visible system components for obvious damage or conditions which could cause the symptom.

Intermittent

Faulty electrical connections or wiring may be the cause of intermittent conditions. Refer to *Testing for Intermittent Conditions and Poor Connections on page 11-531*.

Symptom List

Refer to a symptom diagnostic procedure from the following list in order to diagnose the symptom:

- *Ignition Can/Cannot Be Turned Off with Transmission in Any Gear on page 11-514*
- *Power Mode Mismatch on page 11-515*
- *Retained Accessory Power Malfunction on page 11-520*
- *Vehicle Will Not Change Power Mode on page 11-523*

Ignition Can/Cannot Be Turned Off with Transmission in Any Gear

Diagnostic Instructions

- Perform the *Diagnostic System Check - Vehicle on page 6-66* prior to using this diagnostic procedure.
- Review *Strategy Based Diagnosis on page 6-58* for an overview of the diagnostic approach.
- *Diagnostic Procedure Instructions on page 6-59* provides an overview of each diagnostic category

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Ignition	1	1	—	—
Control	2	1	—	—
Ground	—	1	—	—
1. Ignition key will not turn to OFF with vehicle in park. 2. Ignition key will turn to OFF with vehicle out of park.				

Circuit/System Description

If the vehicle is equipped with automatic transmission and a floor mounted console gear shift, it has an electronic park lock system. The electronic park lock system purpose is to prevent the ignition key from being turned to the OFF position when the transmission is in any position other than PARK and the vehicle may still be moving. The electronic park lock system consists of an ignition lock cylinder solenoid, and a park position switch that is located in the A/T shift lock control switch. The ignition lock cylinder solenoid contains a pin that is spring loaded to mechanically prevent the ignition key cylinder from being turned to the lock position when it is not energized. The park position switch receives voltage from the body control module (BCM) when the ignition is turned ON. When the transmission shift selector is in PARK, the park position switch closes and energizes the key capture solenoid actuator retracting the pin, allowing the ignition switch to be turned OFF. If vehicle power is lost, power is lost to the ignition switch, the ignition switch has a fault, and/or the transmission is not in the Park position the operator will not be able to turn the ignition key to the lock position and will not be able to remove the ignition key from the column.

Diagnostic Aids

- Verify that the transmission shift selector indicator matches the position of the gear shift lever while selecting between the Park, Reverse, Drive and Low positions.
- Lost power to the ignition switch or a faulty ignition switch can prevent the ignition key from turning to the lock position and prevent ignition key removal from the column.

Reference Information

Schematic Reference

Ignition Lock Schematics on page 11-151

Connector End View Reference

Component Connector End Views on page 11-269

Description and Operation

Electronic Park Lock Description and Operation on page 11-614

Electrical Information Reference

- *Circuit Testing on page 11-526*
- *Connector Repairs on page 11-548*
- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Wiring Repairs on page 11-537*

Circuit/System Verification

1. Ignition OFF, gear shift selector in PARK, ignition ON.
2. Verify that S39 Ignition Switch can be rotated to the ON position.

⇒ **If the ignition switch cannot be rotated to the ON position and *Ignition Key Cannot Be Inserted, Rotated, or Removed from the Ignition Lock Cylinder on page 11-605* has NOT been performed**

Refer to *Ignition Key Cannot Be Inserted, Rotated, or Removed from the Ignition Lock Cylinder on page 11-605*.

⇒ **If the ignition switch can not be rotated to the ON position and *Ignition Key Cannot Be Inserted, Rotated, or Removed from the Ignition Lock Cylinder on page 11-605* has been performed**

Refer to Circuit/System Testing.

⇓ **If the ignition switch can be rotated to the ON position**

3. Ignition ON, gear shift selector in NEUTRAL, ignition OFF.

4. Verify that the S39 Ignition Switch cannot be rotated to the LOCK position.

⇒ **If the ignition switch can be rotated to the LOCK position and *Ignition Key Cannot Be Inserted, Rotated, or Removed from the Ignition Lock Cylinder on page 11-605* has NOT been performed**

Refer to *Ignition Key Cannot Be Inserted, Rotated, or Removed from the Ignition Lock Cylinder on page 11-605*.

⇒ **If the ignition switch can be rotated to the LOCK position and *Ignition Key Cannot Be Inserted, Rotated, or Removed from the Ignition Lock Cylinder on page 11-605* has been performed**

Refer to Circuit/System Testing.

⇓ **If the ignition switch cannot be rotated to the LOCK position**

5. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S3 Transmission Shift Lever. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 2 and ground.

⇒ **If 10 Ω or greater**

2.1. Ignition OFF.

2.2. Test for less than 2 Ω in the ground circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, repair the open/high resistance in the ground connection.

⇓ **If less than 10 Ω**

3. Ignition OFF, connect the harness connector at the S3 Transmission Shift Lever. Disconnect the harness connector at the M93 Key Capture Solenoid Actuator, ignition ON.
4. Verify a test lamp illuminates between the ignition circuit terminal 1 and ground.

⇒ **If the test lamp does not illuminate**

4.1. Ignition OFF, remove the test lamp.

4.2. Test for infinite resistance between the ignition circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

4.3. Test for less than 2 Ω in the ignition circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇓ **If the test lamp illuminates**

5. Verify that a test lamp does not illuminate between the ignition circuit terminal 1 and the control circuit terminal 2 with the gear shift selector in NEUTRAL .

⇒ **If the test lamp illuminates**

5.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the S3 Transmission Shift Lever.

5.2. Test for infinite resistance between the control circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇒ If infinite resistance, replace the S3 Transmission Shift Lever.

⇓ **If the test lamp does not illuminate**

6. Verify that a test lamp illuminates between the ignition circuit terminal 1 and the control circuit terminal 2, with the gear shift selector in PARK.

⇒ **If the test lamp does not illuminate**

6.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the S3 Transmission Shift Lever.

6.2. Test for less than 2 Ω in the control circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, test or replace the S3 Transmission Shift Lever.

⇒ **If the test lamp illuminates**

7. Test or replace the M93 Key Capture Solenoid Actuator.

Repair Instructions

Perform the *Diagnostic Repair Verification on page 6-92* after completing the repair.

- *Transmission Control Replacement on page 17-193*
- *Ignition Lock Cylinder Replacement on page 11-611*
- *Control Module References on page 6-3* for body control module replacement, programming, and setup

Power Mode Mismatch

Diagnostic Instructions

- Perform the *Diagnostic System Check - Vehicle on page 6-66* prior to using this diagnostic procedure.
- Review *Strategy Based Diagnosis on page 6-58* for an overview of the diagnostic approach.
- *Diagnostic Procedure Instructions on page 6-59* provides an overview of each diagnostic category.

Circuit/System Description

The body control module (BCM) controls the ignition main, blower motor, and retained accessory power relays by applying voltage to their individual relay control circuits. The ignition main relay is energized when the ignition is in the ON or the CRANK position.

The blower motor relay is energized when the ignition switch is in the ACCESSORY or the ON position. The accessory relay is energized during all power modes, except OFF-awake and CRANK. The relay is also energized for approximately 10 min after shutting the ignition OFF, providing no door is opened.

The engine control module (ECM) controls the engine controls the ignition relay by applying voltage to the engine controls relay control circuit.

Diagnostic Aids

A short to voltage on the ignition run/crank relay coil control circuit will cause the engine to remain running after the mode is changed to OFF.

Reference Information

Schematic Reference

- *Power Distribution Schematics on page 11-128*
- *Power Moding Schematics on page 11-149*

Connector End View Reference

Component Connector End Views on page 11-269

Electrical Center Identification View Reference

Electrical Center Identification Views on page 11-240

Description and Operation

Power Mode Description and Operation on page 11-614

Electrical Information Reference

- *Circuit Testing on page 11-526*
- *Connector Repairs on page 11-548*
- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Wiring Repairs on page 11-537*

Scan Tool Reference

Control Module References on page 6-3 for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify that the KR32E Blower Motor Relay turns on and off/Clicks when commanding the Auxiliary Ignition Run Relay On and Off with a scan tool.

⇒ **If the KR32E Blower Motor Relay does not change**

Refer to Circuit/System Testing – Diagnostic A.

⇓ **If the KR32E Blower Motor Relay changes**

3. Verify that the KR76 Ignition Main Relay turns on and off/Clicks when commanding the Run/Crank Relay On and Off with a scan tool.

⇒ **If the KR76 Ignition Main Relay does not change**

Refer to Circuit/System Testing – Diagnostic B.

⇓ **If the KR76 Ignition Main Relay changes**

4. Verify that the KR75 Engine Controls Ignition Relay turns on and off/Clicks when commanding the Engine Controls Ignition Relay On and Off with a scan tool.

⇒ **If the KR75 Engine Controls Ignition Relay does not change**

Refer to Circuit/System Testing – Diagnostic C.

⇓ **If the KR75 Engine Controls Ignition Relay changes**

5. Verify that the KR76 Retained Accessory Power Relay turns on and off/Clicks when commanding the Accessory/Retained Accessory Power Relay On and Off with a scan tool.

⇒ **If the KR76 Retained Accessory Power Relay does not change**

Refer to Circuit/System Testing – Diagnostic D.

⇓ **If the KR76 Retained Accessory Power Relay changes**

6. All OK.

Circuit/System Testing

Diagnostic A

1. Ignition OFF and all vehicle systems OFF, disconnect the KR32E Blower Motor Relay. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 1 and ground.

⇒ **If 10 Ω or greater**

2.1. Ignition OFF.

2.2. Test for less than 2 Ω in the ground circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, repair the open/high resistance in the ground connection.

⇓ **If less than 10 Ω**

3. Ignition ON.
4. Verify a test lamp illuminates between the B+ circuit terminal 3 and ground.

⇒ **If the test lamp does not illuminate and the circuit fuse is good**

4.1. Ignition OFF, remove the test lamp.

4.2. Test for less than 2 Ω in the B+ circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, verify the fuse is good and there is voltage at the fuse.

⇒ **If the test lamp does not illuminate and the circuit fuse is open**

4.1. Ignition OFF, remove the test lamp.

4.2. Test for infinite resistance between the ignition circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇒ If infinite resistance, replace the KR32E Blower Motor Relay.

⇓ **If the test lamp illuminates**

5. Connect a test lamp between the control circuit terminal 2 and the ground circuit terminal 1.
6. Verify the test lamp turns ON and OFF when commanding the Auxiliary Ignition Run Relay On and Off with a scan tool.

⇒ **If the test lamp is always OFF**

6.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module.

6.2. Test for infinite resistance between the control circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

6.3. Test for less than 2 Ω in the control circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇒ **If the test lamp is always ON**

6.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module, ignition ON.

6.2. Test for less than 1 V between the control circuit and ground.

⇒ If 1 V or greater, repair the short to voltage on the circuit.

⇒ If less than 1 V, replace the K9 Body Control Module.

⇓ **If the test lamp turns ON and OFF**

7. Verify that a test lamp does not illuminate between the ignition circuit terminal 5 and ground.

⇒ **If the test lamp illuminates**

Repair the short to voltage on the ignition circuit.

⇓ **If the test lamp does not illuminate**

8. Ignition ON, connect a 40 A fused jumper wire between the B+ circuit terminal 3 and the ignition control circuit terminal 5.
9. Verify the M8 Blower Motor is activated.

⇒ **If the M8 Blower Motor does not activate**

9.1. Ignition OFF, disconnect the harness connector at the M8 Blower Motor.

9.2. Test for infinite resistance between the ignition circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

9.3. Test for less than 2 Ω in the ignition circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the device.

⇓ **If the M8 Blower Motor activates**

10. Test or replace the KR32E Blower Motor Relay.

Diagnostic B

1. Ignition OFF and all vehicle systems OFF, disconnect the KR76 Ignition Main Relay. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 85 and ground.

⇒ **If 10 Ω or greater**

2.1. Ignition OFF.

2.2. Test for less than 2 Ω in the ground circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, repair the open/high resistance in the ground connection.

⇓ **If less than 10 Ω**

3. Ignition ON.
4. Verify a test lamp illuminates between the B+ circuit terminal 30 and ground.

⇒ **If the test lamp does not illuminate**

Replace the X50A Fuse Block - Underhood

⇓ **If the test lamp illuminates**

5. Connect a test lamp between the control circuit terminal 86 and the ground circuit terminal 85.
6. Verify the test lamp turns ON and OFF when commanding the Ignition Run/Crank Relay On and Off with a scan tool.

⇒ **If the test lamp is always OFF**

6.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module.

6.2. Test for infinite resistance between the control circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

6.3. Test for less than 2 Ω in the control circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇒ **If the test lamp is always ON**

6.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module, ignition ON.

6.2. Test for less than 1 V between the control circuit and ground.

⇒ If 1 V or greater, repair the short to voltage on the circuit.

⇒ If less than 1 V, replace the K9 Body Control Module.

⇓ **If the test lamp turns ON and OFF**

7. Verify that a test lamp does not illuminate between the ignition circuit terminal 87 and ground.

⇒ **If the test lamp illuminates**

Repair the short to voltage on the ignition circuit

⇓ **If the test lamp does not illuminate**

8. Ignition ON, connect a 40 A fused jumper wire between the B+ circuit terminal 30 and the ignition circuit terminal 87.
9. Verify device is activated.

⇒ **If the device does not activate**

9.1. Ignition OFF, disconnect the harness connector at the device.

9.2. Test for infinite resistance between the ignition circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

9.3. Test for less than 2 Ω in the ignition circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the device.

⇓ **If the device activates**

10. Test or replace the KR73 Ignition Run Relay.

Diagnostic C

1. Ignition OFF and all vehicle systems OFF, disconnect the KR75 Engine Controls Ignition Relay, ignition ON.
2. Verify a test lamp illuminates between the B+ circuit terminal 30 and ground.

⇒ **If the test lamp does not illuminate and the circuit fuse is good**

2.1. Ignition OFF, remove the test lamp.

2.2. Test for less than 2 Ω in the B+ circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, verify the fuse is not open and there is voltage at the fuse.

⇒ **If the test lamp does not illuminate and the circuit fuse is open**

2.1. Ignition OFF, remove the test lamp.

2.2. Test for infinite resistance between the B+ circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇒ If infinite resistance, test or replace the KR75 Engine Controls Ignition Relay.

⇓ **If the test lamp illuminates**

3. Verify a test lamp illuminates between the B+ circuit terminal 85 and ground.

⇒ **If the test lamp does not illuminate and the circuit fuse is good**

3.1. Ignition OFF.

3.2. Test for less than 2 Ω in the B+ circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇓ **If the test lamp illuminates**

4. Connect a test lamp between the B+ circuit terminal 85 and the control circuit terminal 86.
5. Verify the test lamp turns ON and OFF when switching the ignition ON and OFF.

⇒ **If the test lamp is always OFF**

5.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K20 Engine Control Module, ignition ON.

5.2. Test for less than 1 V between the control circuit and ground.

⇒ If 1 V or greater, repair the short to voltage on the circuit.

⇓ If less than 1 V

5.3. Ignition OFF.

5.4. Test for less than 2 Ω in the control circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K20 Engine Control Module.

⇒ **If the test lamp is always ON**

5.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K20 Engine Control Module.

5.2. Test for infinite resistance between the control circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇒ If infinite resistance, replace the K20 Engine Control Module.

⇓ **If the test lamp turns ON and OFF**

6. Verify a test lamp does not illuminate between the ignition circuit terminal 87 and ground.

⇒ **If the test lamp illuminates**

Repair the short to voltage on the circuit.

⇓ **If the test lamp does not illuminate**

7. Ignition ON, connect a 40 A fused jumper wire between the B+ circuit terminal 30 and the ignition circuit terminal 87.

8. Verify device is activated.

⇒ **If the device does not activate**

8.1. Ignition OFF, disconnect the harness connector at the device.

8.2. Test for infinite resistance between the ignition circuit terminal 87 and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

8.3. Test for less than 2 Ω in the ignition circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the device.

⇓ **If the device activates**

9. Test or replace the KR75 Engine Controls Ignition Relay.

Diagnostic D

1. Ignition OFF and all vehicle systems OFF, disconnect the KR76 Retained Accessory Power Relay. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 2 and ground.

⇒ **If 10 Ω or greater**

2.1. Ignition OFF.

2.2. Test for less than 2 Ω in the ground circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, repair the open/high resistance in the ground connection.

⇓ **If less than 10 Ω**

3. Ignition ON.
4. Verify a test lamp illuminates between the B+ circuit terminal 3 and ground.

⇒ **If the test lamp does not illuminate**

Replace the X51A Fuse Block - Instrument Panel

⇓ **If the test lamp illuminates**

5. Connect a test lamp between the control circuit terminal 1 and the ground circuit terminal 2.
6. Verify the test lamp turns ON and OFF when commanding the Accessory/Retained Accessory Power Relay On and Off with a scan tool.

⇒ **If the test lamp is always OFF**

6.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module.

6.2. Test for infinite resistance between the control circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

6.3. Test for less than 2 Ω in the control circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇒ **If the test lamp is always ON**

6.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module, ignition ON.

6.2. Test for less than 1 V between the control circuit and ground.

⇒ If 1 V or greater, repair the short to voltage on the circuit.

⇒ If less than 1 V, replace the K9 Body Control Module.

⇓ **If the test lamp turns ON and OFF**

7. Verify that a test lamp does not illuminate between the ignition circuit terminal 5 and ground.

⇒ **If the test lamp illuminates**

Repair the short to voltage on the ignition circuit

⇓ **If the test lamp does not illuminate**

8. Ignition ON, connect a 40 A fused jumper wire between the B+ circuit terminal 3 and the ignition circuit terminal 5.
9. Verify device is activated.

⇒ **If the device does not activate**

9.1. Ignition OFF, disconnect the harness connector at the device.

9.2. Test for infinite resistance between the ignition circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

9.3. Test for less than 2 Ω in the ignition circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the device.

⇓ **If the device activates**

10. Test or replace the KR76 Retained Accessory Power Relay.

Component Testing

Relay Test

1. Ignition OFF, disconnect the appropriate relay.
2. Test for 70–150 Ω between terminals 85 or 1 and 86 or 2.

⇒ **If less than 70 or greater than 150 Ω**

Replace the relay.

⇓ **If between 70–150 Ω**

3. Test for infinite resistance between the terminals listed below:
   - 30 or 3 and 86 or 2
   - 30 or 3 and 87 or 5
   - 30 or 3 and 85 and 1
   - 85 or 1 and 87 or 5

⇒ **If less than infinite resistance**

Replace the relay.

⇓ **If infinite resistance**

4. Test for less than 5.0 Ω between terminals 30 or 3 and 87 or 5.

⇒ **If 5.0 Ω or greater**

Replace the relay.

⇓ **If less than 5.0 Ω**

5. Install a 3 A fused jumper wire between relay terminal 85 or 1 and 12 V. Install a jumper wire between relay terminal 86 or 2 and ground.
6. Test for less than 5.0 Ω between terminals 30 or 3 and 87 or 5.

⇒ **If 5.0 Ω or greater**

Replace the relay.

⇓ **If less than 5.0 Ω**

7. All OK

Repair Instructions

Perform the *Diagnostic Repair Verification on page 6-92* after completing the repair.

- *Relay Replacement (Within an Electrical Center) on page 11-607* or *Relay Replacement (Attached to Wire Harness) on page 11-607*
- *Control Module References on page 6-3* for the appropriate module replacement, programming and setup

Retained Accessory Power Malfunction

Diagnostic Instructions

- Perform the *Diagnostic System Check - Vehicle on page 6-66* prior to using this diagnostic procedure.
- Review *Strategy Based Diagnosis on page 6-58* for an overview of the diagnostic approach.
- *Diagnostic Procedure Instructions on page 6-59* provides an overview of each diagnostic category.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Relay Switch B+	1	1	1	—
Relay Switch Ignition	1	1	1, 2	—
Relay Coil Control	B1445 02	B1445 04	B1445 01	—
Relay Coil Ground	—	B1445 04	—	—
1. Retained accessory power malfunction 2. Retained accessory power relay always ON				

Circuit/System Description

The body control module (BCM) controls the accessory relay through the control circuit by applying voltage to the retained accessory power relay coil control circuit. The accessory relay is energized when the ignition switch is in the ACCESSORY or the ON position.

Reference Information

Schematic Reference

Power Distribution Schematics on page 11-128

Connector End View Reference

Component Connector End Views on page 11-269

Description and Operation

Retained Accessory Power Description and Operation on page 11-615

Electrical Information Reference

- *Circuit Testing on page 11-526*
- *Connector Repairs on page 11-548*
- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Wiring Repairs on page 11-537*

Scan Tool Reference

Control Module References on page 6-3 for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify the KR80 Accessory Relay turns ON and OFF when commanding the Accessory/Retained Accessory Power Relay On and Off with a scan tool.

⇒ **If the KR80 Accessory Relay does not turn ON and OFF**

Refer to Circuit/System Testing

⇓ **If the KR80 Accessory Relay turns ON and OFF**

3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the KR80 Accessory Relay. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 2 and ground.

⇒ **If 10 Ω or greater**

2.1. Ignition OFF.

2.2. Test for less than 2 Ω in the ground circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, repair the open/high resistance in the ground connection.

⇓ **If less than 10 Ω**

3. Ignition ON.
4. Verify a test lamp illuminates between the B+ circuit terminal 3 and ground.

⇒ **If the test lamp does not illuminate**

Replace the X51A Fuse Block - Instrument Panel

⇓ **If the test lamp illuminates**

5. Connect a test lamp between the control circuit terminal 1 and the ground circuit terminal 2.
6. Verify the test lamp turns ON and OFF when commanding the Accessory/Retained Accessory Power Relay On and Off with a scan tool.

⇒ **If the test lamp is always OFF**

6.1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K9 Body Control Module.

6.2. Test for infinite resistance between the control circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

6.3. Test for less than 2 Ω in the control circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇒ **If the test lamp is always ON**

6.1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module, ignition ON.

6.2. Test for less than 1 V between the control circuit and ground.

⇒ If 1 V or greater, repair the short to voltage on the circuit.

⇒ If less than 1 V, replace the K9 Body Control Module.

⇓ **If the test lamp turns ON and OFF**

7. Connect the KR80 Accessory Relay.
8. Disconnect the appropriate accessory power receptacle or window switch.
9. Ignition OFF.
10. Verify that a test lamp does not illuminate between each of the ignition circuits listed below and ground.
    - S79D Window Switch - Driver – Ignition circuit terminal 6
    - S79D Window Switch - Driver – Ignition circuit terminal 13
    - S79P Window Switch - Passenger – Ignition circuit terminal 5
    - S72 Sunroof Switch – Ignition circuit terminal 1
    - K61 Sunroof Control Module – Ignition circuit terminal 3
    - E32 Cigarette Lighter Receptacle – Ignition circuit terminal A

⇒ **If the test lamp illuminates**

Repair the short to voltage on the ignition circuit.

⇓ **If the test lamp does not illuminate**

11. Ignition ON.

12. Verify that a test lamp illuminates between each of the ignition circuits listed below and ground.
    - S79D Window Switch - Driver – Ignition circuit terminal 6
    - S79D Window Switch - Driver – Ignition circuit terminal 13
    - S79P Window Switch - Passenger – Ignition circuit terminal 5
    - S72 Sunroof Switch – Ignition circuit terminal 1
    - K61 Sunroof Control Module – Ignition circuit terminal 3
    - E32 Cigarette Lighter Receptacle – Ignition circuit terminal A

⇒ **If the test lamp does not illuminate and the circuit fuse is good**

12.1. Ignition OFF, remove the test lamp.

12.2. Test for less than 2 Ω in the ignition circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, verify the fuse is good and there is voltage at the fuse.

⇒ **If the test lamp does not illuminate and the circuit fuse is open**

12.1. Ignition OFF, remove the test lamp.

12.2. Test for infinite resistance between the ignition circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇒ If infinite resistance, test or replace the KR80 Accessory Relay.

⇓ **If the test lamp illuminates**

13. Test or replace the appropriate S79 Window Switch, S72 Sunroof Switch, K61 Sunroof Control Module, Or E32 Cigarette Lighter Receptacle.

Component Testing

Relay Test

1. Ignition OFF, disconnect the KR80 Accessory Relay.
2. Test for 70–150 Ω between terminals 1 and 2.

⇒ **If less than 70 or greater than 150 Ω**

Replace the relay.

⇓ **If between 70–150 Ω**

3. Test for infinite resistance between the terminals listed below:
    - 3 and 2
    - 3 and 5
    - 3 and 1
    - 1 and 5

⇒ **If less than infinite resistance**

Replace the relay.

⇓ **If infinite resistance**

4. Test for less than 5.0 Ω between terminals 3 and 5.

⇒ **If 5.0 Ω or greater**

Replace the relay.

⇓ **If less than 5.0 Ω**

5. Install a 3 A fused jumper wire between relay terminal 1 and 12 V. Install a jumper wire between relay terminal 2 and ground.
6. Test for less than 5.0 Ω between terminals 3 and 5.

⇒ **If 5.0 Ω or greater**

Replace the relay.

⇓ **If less than 5.0 Ω**

7. All OK

Repair Instructions

Perform the *Diagnostic Repair Verification on page 6-92* after completing the repair.

- *Relay Replacement (Within an Electrical Center) on page 11-607* or *Relay Replacement (Attached to Wire Harness) on page 11-607*
- *Front Side Door Window Switch Replacement (Left Side) on page 4-38* or *Front Side Door Window Switch Replacement (Right Side) on page 4-39*
- *Sunroof Switch Replacement on page 12-15*
- *Cigarette Lighter Receptacle Replacement on page 11-75*
- *Control Module References on page 6-3* for the body control module and sunroof control module replacement, programming and setup.

Vehicle Will Not Change Power Mode

Diagnostic Instructions

- Perform the *Diagnostic System Check - Vehicle on page 6-66* prior to using this diagnostic procedure.
- Review *Strategy Based Diagnosis on page 6-58* for an overview of the diagnostic approach.
- *Diagnostic Procedure Instructions on page 6-59* provides an overview of each diagnostic category.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
B+	B1370 04, B1380 04	B1370 04, B1380 04	—	—
Ignition Terminal 1	B1370 04, B1380 04	B1370 04, B1380 04	B1370 01	—
Ignition Terminal 3	B1370 04, B1380 04	B1380 04	B1380 01	—
Ignition Terminal 4	B1370 04, B1380 04, B1441 04	B1441 04	B1441 01	—
5 V Reference	—	1	—	—
1. Power Mode Mismatch				

Circuit/System Description

The vehicle power mode master is the body control module (BCM). The ignition switch is a low current switch with multiple discrete circuits to the BCM. The BCM logic uses the ignition switch positions to identify the operator's desired power mode and activate specific discrete signals, and serial data messages for the operation of different subsystems as necessary. Other modules which have switched voltage inputs may operate in a default mode if the power mode master serial data message does not match what the individual module can detect from its own connections.

The power mode master will activate relays and other direct outputs of the power mode master as needed according to the calculated power mode. Some relays controlled by the BCM are switched ignition voltage outputs that are pass through circuits within the BCM directly from the ignition switch. If these circuits short to ground, the B+ circuit fuse to the ignition switch will open.

Reference Information

Schematic Reference

Power Distribution Schematics on page 11-128

Connector End View Reference

Component Connector End Views on page 11-269

Description and Operation

Power Mode Description and Operation on page 11-614

Electrical Information Reference

- *Circuit Testing on page 11-526*
- *Connector Repairs on page 11-548*
- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Wiring Repairs on page 11-537*

Scan Tool Reference

Control Module References on page 6-3 for scan tool information

Circuit/System Verification

1. Verify DTC U1814 is not set.

⇒ **If DTC is set**

Refer to *Diagnostic Trouble Code (DTC) List - Vehicle on page 6-69.*

⇓ **If DTC is not set**

2. Ignition ON.
3. Verify the scan tool power mode parameters change when cycling the S39 Ignition Switch between OFF, ACCESSORY, ON, and CRANK.

⇒ **If the power mode parameters do not change**

Refer to Circuit/System Testing.

⇓ **If the power mode parameters change**

4. All OK.

Circuit/System Testing

1. Ignition ON, disconnect the harness connector at the S39 Ignition Switch while the ignition is ON.
2. Verify a test lamp illuminates between the B+ circuit terminal 2 and ground.

⇒ **If the test lamp does not illuminate and the circuit fuse is good**

2.1. Ignition OFF, remove the test lamp.

2.2. Test for less than 2 Ω in the B+ circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, verify the fuse is good and there is voltage at the fuse.

⇒ **If the test lamp does not illuminate and the circuit fuse is open**

2.1. Ignition OFF remove the test lamp.

2.2. Test for infinite resistance between the B+ circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on one of the following circuits listed below:

Note: To help isolate a short to ground, it may be necessary to disconnect modules that are connected to the following circuits:

- B+ circuit terminal 2
- Ignition circuit terminal 1
- Ignition circuit terminal 3
- Ignition circuit terminal 4

⇓ **If the test lamp illuminates**

3. Ignition ON.
4. Test for 4.8–5.2 V between the 5 V reference circuit terminal 6 and ground.

⇒ **If less than 4.8 V**

4.1. Ignition OFF, disconnect the X3 harness connector at the K9 Body Control Module.

4.2. Test for infinite resistance between the 5 V reference circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance

4.3. Test for less than 2 Ω in the 5 V reference circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇒ **If greater than 5.2 V**

4.1. Ignition OFF, disconnect the X3 harness connector at the K9 Body Control Module.

4.2. Test for less than 1 V between the 5 V reference circuit and ground.

⇒ If 1 V or greater, repair the short to voltage on the circuit.

⇒ If less than 1 V, replace the K9 Body Control Module.

⇓ **If between 4.8–5.2 V**

5. Connect the harness connector at the S39 Ignition Switch.
6. Ignition OFF.
7. Disconnect the X3 harness connector at the K9 Body Control Module, ignition ON.
8. Verify a test lamp illuminates between each of the ignition circuits listed below and ground:
   - Ignition circuit terminal 5
   - Ignition circuit terminal 6

⇒ **If the test lamp does not illuminate and the circuit fuse is good**

8.1. Ignition OFF remove the test lamp.

8.2. Test for less than 2 Ω in the ignition circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, verify the fuse is good and there is voltage at the fuse.

⇒ **If the test lamp does not illuminate and the circuit fuse is open**

8.1. Ignition OFF remove the test lamp.

8.2. Test for infinite resistance between the ignition circuits listed below and ground.

- Ignition circuit terminal 5
- Ignition circuit terminal 6

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance, replace the K9 Body Control Module.

⇓ **If the test lamp illuminates**

9. Ignition OFF with the key in.
10. Verify a test lamp illuminates between ignition circuit terminal 15 and ground.

⇒ **If the test lamp does not illuminate and the circuit fuse is good**

10.1. Ignition OFF with the key out, remove the test lamp.

10.2. Test for less than 2 Ω in the ignition circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, verify the fuse is good and there is voltage at the fuse.

⇒ **If the test lamp does not illuminate and the circuit fuse is open**

10.1. Ignition OFF with the key out remove the test lamp.

10.2. Test for infinite resistance between the ignition circuit terminal 15 and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If infinite resistance, replace the K9 Body Control Module.

⇓ **If the test lamp illuminates**

11. Connect the X3 harness connector at the K9 Body Control Module, ignition ON.
12. Disconnect the harness connector at the S39 Ignition Switch.
13. Test for less than 1 V between each of the ignition circuits listed below and ground.
    - Ignition circuit terminal 1
    - Ignition circuit terminal 3
    - Ignition circuit terminal 4

⇒ **If 1 V or greater**

Repair the short to voltage on the circuit.

⇓ **If less than 1 V**

14. Test or replace the S39 Ignition Switch.

Component Testing

1. Ignition OFF, disconnect the harness connector at the S39 Ignition Switch.
2. Using the Resistance Test below, verify the resistance between the terminals listed below match for each S39 Ignition Switch position.

⇒ **If any reading is other than specified**

Replace the S39 Ignition Switch.

⇓ **If the readings match**

3. All OK.

Resistance Test

Ignition Switch Position	Terminals 1 and 2	Terminals 2 and 3	Terminals 2 and 4	Terminals 2 and 6	Terminals 4 and 6
OFF Key Out	Infinite	Infinite	Infinite	Infinite	Infinite
OFF Key In	Infinite	Infinite	<5.0 Ω	Infinite	Infinite
Accessory	Infinite	<5.0 Ω	Infinite	Infinite	Infinite
Run	<5.0 Ω	<5.0 Ω	Infinite	Infinite	<5.0 Ω
Start	<5.0 Ω	Infinite	Infinite	Infinite	1275–1325 Ω

Repair Instructions

Perform the *Diagnostic Repair Verification on page 6-92* after completing the repair.

- *Ignition and Start Switch Replacement on page 11-612*
- *Control Module References on page 6-3* for body control module replacement, programming and setup

General Electrical Diagnosis

Basic Knowledge Required

Without a basic knowledge of electricity, it will be difficult to use the diagnostic procedures contained in the service manual. You should understand the basic theory of electricity, and know the meaning of voltage (V), current (A), and resistance (Ω). You should also be able to read and understand a wiring diagram, as well as understand what happens in a circuit with an open or a shorted wire.

Checking Aftermarket Accessories

Warning: Refer to SIR Warning on page 0-7.

Caution: The OBD II symbol is used on the circuit diagrams in order to alert the technician that the circuit is essential for proper OBD II emission control circuit operation. Any circuit which fails and causes the malfunction indicator lamp (MIL) to turn ON, or causes emissions-related component damage, is identified as an OBD II circuit.

Do not connect aftermarket accessories into the following circuits:

- SIR circuits, all such circuits are indicated on circuit diagrams with the SIR symbol.
- OBD II circuits, all such circuits are indicated on circuit diagrams with the OBD II symbol.

Always check for aftermarket accessories (non-OEM) as the first step in diagnosing electrical problems. If the vehicle is so equipped, disconnect the system to verify that these add-on accessories are not the cause of the problems.

Possible causes of vehicle problems related to aftermarket accessories include:

- Power feeds connected to points other than the battery
- Antenna location
- Transceiver wiring located too close to vehicle electronic modules or wiring
- Poor shielding or poor connectors on antenna feed line
- Check for recent service bulletins detailing installation guidelines for aftermarket accessories.

Circuit Testing

The Circuit Testing section contains the following diagnostic testing information. Using this information along with the diagnostic procedures will identify the cause of the electrical malfunction.

- *Using Connector Test Adapters on page 11-526*
- *Probing Electrical Connectors on page 11-526*
- *Troubleshooting with a Digital Multimeter on page 11-527*
- *Troubleshooting with a Test Lamp on page 11-528*
- *Using Fused Jumper Wires on page 11-529*
- *Measuring Voltage on page 11-529*
- *Measuring Voltage Drop on page 11-529*
- *Measuring Frequency on page 11-529*
- *Testing Ground and Low Reference Circuits on page 11-530*
- *Testing for Continuity on page 11-530*
- *Testing for Short to Ground on page 11-530*
- *Testing for a Short to Voltage on page 11-531*
- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Inducing Intermittent Fault Conditions on page 11-533*
- *Testing for Electrical Intermittents on page 11-534*
- *Scan Tool Snapshot Procedure (GDS) on page 11-535*
- *Circuit Protection - Fuses on page 11-536*
- *Circuit Protection - Circuit Breakers on page 11-536*
- *Circuit Protection - Fusible Links on page 11-536*

Using Connector Test Adapters

Special Tools

- *EL-35616* Terminal Test Probe Kit
- *EL-38125-550* Terminal Release Tool Kit

For equivalent regional tools, refer to *Special Tools on page 11-616.*

Caution: Do not insert test equipment probes (DMM etc.) into any connector or fuse block terminal. The diameter of the test probes will deform most terminals. A deformed terminal will cause a poor connection, which will result in a system failure. Always use the EL-35616 GM Approved Terminal Test Probe Kit in order to front probe terminals. Do not use paper clips or other substitutes to probe terminals.

When using the EL-35616 GM Approved Terminal Test Probe Kit, ensure the terminal test adapter choice is the correct size for the connector terminal. Do not visually choose the terminal test adapter because some connector terminal cavities may appear larger than the actual terminal in the cavity. Using a larger terminal test adapter will damage the terminal. Refer to the EL-35616 GM Approved Terminal Test Probe Kit label on the inside of the EL-35616 GM Approved Terminal Test Probe Kit for the correct adapter along with the connector end view.

Probing Electrical Connectors

Special Tools

EL-35616 Terminal Test Probe Kit

For equivalent regional tools, refer to *Special Tools on page 11-616.*

Note: Always be sure to reinstall the connector position assurance (CPA) and terminal position assurance (TPA) when reconnecting connectors or replacing terminals.

Front probe

Disconnect the connector and probe the terminals from the mating side (front) of the connector.

Caution: Refer to *Test Probe Caution on page 0-10.*

Note: When probing female 0.64 terminals, it is important to use the correct adapter. There have been some revisions to the test adapter for 0.64 terminals. The proper adapter for 0.64 terminals is the J-35616-64B which has a gold terminal and a black wire between the base and tip. Failure to use the proper test adapter may result in damage to the terminal being tested and improper diagnosis.

Note: The proper adapter for probing the terminals for fuses, relays, or diodes in an electrical center is J-35616-35. Using any other tool or adapter may damage the terminal being tested.

Refer to the following table as a guide in selecting the correct test adapter for front probing connectors:

Test Adapter	Description
J-35616-2A	150 Male Probe Adapter (gray)
J-35616-3	150 Female Probe Adapter (gray)
J-35616-4A	280 Male Probe Adapter (purple)
J-35616-5	280 Female Probe Adapter (purple)
J-35616-6	100W Male (round) Probe Adapter (brown)
J-35616-7	100W Female (round) Probe Adapter (brown)
J-35616-8	Weather Pack Male Probe Adapter (orange)
J-35616-9	Weather Pack Female Probe Adapter (orange)
J-35616-10	100W Male (round) Probe Adapter (green)
J-35616-11	100W Female (round) Probe Adapter (green)
J-35616-12	130 Male Probe Adapter (blue)

Test Adapter	Description
J-35616-13	130 Female Probe Adapter (blue)
J-35616-14	150 Male Probe Adapter (green)
J-35616-16	100 Male Probe Adapter (lt green)
J-35616-17	100 Female Probe Adapter (lt green)
J-35616-18	220 Male Probe Adapter (black)
J-35616-19	220 Female Probe Adapter (black)
J-35616-21	950 Female Probe Adapter (red)
J-35616-22	950 Male Probe Adapter (red)
J-35616-31	500 Male Probe Adapter (orange)
J-35616-32	500 Female Probe Adapter (orange)
J-35616-33	160/180 Male Probe Adapter (yellow)
J-35616-34	160/180 Female Probe Adapter (yellow)
J-35616-35	280 Male Probe Adapter (violet)
J-35616-40	480 Male Probe Adapter (dk blue)
J-35616-41	480 Female Probe Adapter (dk blue)
J-35616-42	630 Male Probe Adapter (red)
J-35616-43	630 Female Probe Adapter (red)
J-35616-44	800 Male Probe Adapter (yellow)
J-35616-45	800 Female Probe Adapter (yellow)
J-35616-54	280 Male (round) Probe Adapter (tan)
J-35616-55	280 Female (round) Probe Adapter (tan)
J-35616-64B	0.64 Male Probe Adapter (lt blue)
J-35616-65B	0.64 Female Probe Adapter (lt blue)
J-35616-66	150 Male (round) Probe Adapter (yellow)
J-35616-67	150 Female (round) Probe Adapter (yellow)

Backprobe

Note:

- Backprobe connector terminals only when specifically required in diagnostic procedures.
- Do not backprobe a sealed (Weather Pack®) connector, less than a 280 series Metri-Pack connector, a Micro-Pack connector, or a flat wire connector.
- Backprobing can be a source of damage to connector terminals. Use care in order to avoid deforming the terminal, either by forcing the test probe too far into the cavity or by using too large of a test probe.
- After backprobing any connector, inspect for terminal damage. If terminal damage is suspected, test for proper terminal contact.

Do not disconnect the connector and probe the terminals from the harness side (back) of the connector.

Troubleshooting with a Digital Multimeter

Special Tools

EL–39200 Digital Multimeter (DMM)

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Caution: Refer to *Test Probe Caution on page 0-10*.

Digital Multimeter (DMM) Basic Requirements

Service information is validated using digital multimeters that meet or exceed the following requirements. Using a multimeter that does not meet these basic requirements may give inaccurate readings which could lead to an incorrect diagnosis.

Display and Settings

1. Four digits displayed
2. Voltage, current, resistance, frequency, diode test settings, and min-max function
3. Display positive and negative values

Voltage

1. Have at least 10 MΩ input impedance
2. Test a DC voltage range of 0.1–1000 V.
3. Test an AC voltage range of 0.1–1000 V.

Current

1. Test a DC current range of 0.1 µA–10 A.
2. Test an AC current range of 0.1 µA–10 A.

Resistance

Test a resistance range of 0.1 Ω–40 MΩ and displays infinite for a value greater than 40 MΩ (O.L. (Over-load))

Frequency

Test for a frequency range of 0.5 Hz–199 k Hz

Diode Test

1. Apply at least 1 mA when performing the diode bias test
2. Display the break over voltage drop (0–3 V) of a forward biased diode
3. Display infinite (O.L. (Over-load)) when a diode is reverse biased

Min-Max Readings

1. Can update at a 25 ms sample rate
2. Saves and displays minimum and maximum values

Note: Circuits which include any solid state control modules, such as the engine control module (ECM), should only be tested with a 10 MΩ or higher impedance digital multimeter such as the EL-39200.

The DMM instruction manual is a good source of information and should be read thoroughly upon receipt of the DMM as well as kept on hand for future reference.

A DMM should be used instead of a test lamp in order to test for voltage in high impedance circuits. While a test lamp shows whether voltage is present if the impedance is low enough, a DMM indicates how much voltage is present. In other words, if there is not enough current, the test lamp will not illuminate even though voltage is present.

The ohmmeter function on a DMM shows how much resistance exists between 2 points along a circuit. Low resistance in a circuit means good continuity.

Note: Disconnect the power feed from the suspect circuit when measuring resistance with a DMM. This prevents incorrect readings. DMMs apply such a small voltage to measure resistance that the presence of voltages can upset a resistance reading.

Diodes and solid state components in a circuit can cause a DMM to display a false reading. To find out if a component is affecting a measurement take a reading once, then reverse the leads and take a second reading. If the readings differ the solid state component is affecting the measurement.

Following are examples of the various methods of connecting the DMM to the circuit to be tested:

- Probe both ends of the connector and either hold the leads in place while manipulating the connector or tape the leads to the harness for continuous monitoring while you perform other operations or test driving. Refer to *Probing Electrical Connectors on page 11-526*.
- Disconnect the harness at both ends of the suspected circuit where it connects either to a component or to other harnesses.
- If the system that is being diagnosed has a specified pinout or breakout box, it may be used in order to simplify connecting the DMM to the circuit or for testing multiple circuits quickly.

Troubleshooting with a Test Lamp

Special Tools

EL-35616-200 Test Light – Probe Kit

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Caution: Refer to *Test Probe Caution on page 0-10*.

A test lamp can simply and quickly test a low impedance circuit for voltage. A Digital Multimeter (DMM) should be used instead of a test lamp in order to test for voltage in high impedance circuits. While a test lamp shows whether voltage is present if the impedance is low enough, a DMM indicates how much voltage is present. In other words, if there is not enough current, the test lamp will not illuminate even though voltage is present.

The *EL-35616-200* kit is Micro-Pack compatible and comprised of a 12 V light bulb with an attached pair of leads.

To properly operate this tool use the following procedures.

When testing for voltage:

1. Attach one lead to ground.
2. Touch the other lead to various points along the circuit where voltage should be present.
3. When the bulb illuminates, there is voltage at the point being tested.

When testing for ground:

1. Attach one lead to battery positive voltage.
2. Touch the other lead to various points along the circuit where ground should be present.
3. When the bulb illuminates, there is ground at the point being tested.

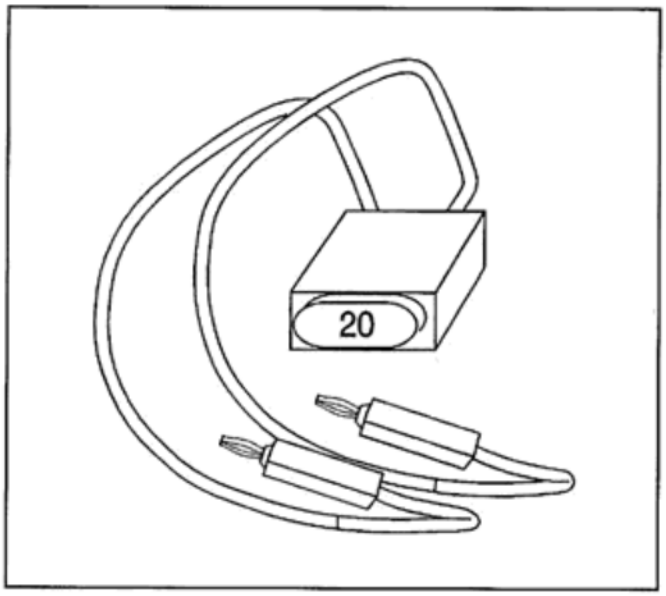
Using Fused Jumper Wires

Special Tools

EL 35616-20F Fused Jumper Wire

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Note: A fused jumper may not protect solid state components from being damaged.



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The *EL 35616-20F* Fused Jumper Wire includes banana jack connectors that provide adaptation to most connectors without damage. This fused jumper wire is supplied with a 20 A fuse which may not be suitable for some circuits. Do not use a fuse with a higher rating than the fuse that protects the circuit being tested.

Measuring Voltage

Special Tools

EL-39200 Digital Multimeter (DMM)

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Caution: Refer to *Test Probe Caution on page 0-10*.

The following procedure measures the voltage at a selected point in a circuit.

1. Disconnect the electrical harness connector for the circuit being tested, if necessary.
2. Enable the circuit and/or system being tested. Use the following methods:
   - Turn ON the ignition, with the engine OFF.
   - Turn ON the engine.
   - Turn ON the circuit and/or system with a scan tool in Output Controls.
   - Turn ON the switch for the circuit and/or system being tested.
3. Select the V (AC) or V (DC) position on the Digital Multimeter (DMM).
4. Connect the positive lead of the DMM to the point of the circuit to be tested.
5. Connect the negative lead of the DMM to a good ground.
6. The DMM displays the voltage measured at that point.

Measuring Voltage Drop

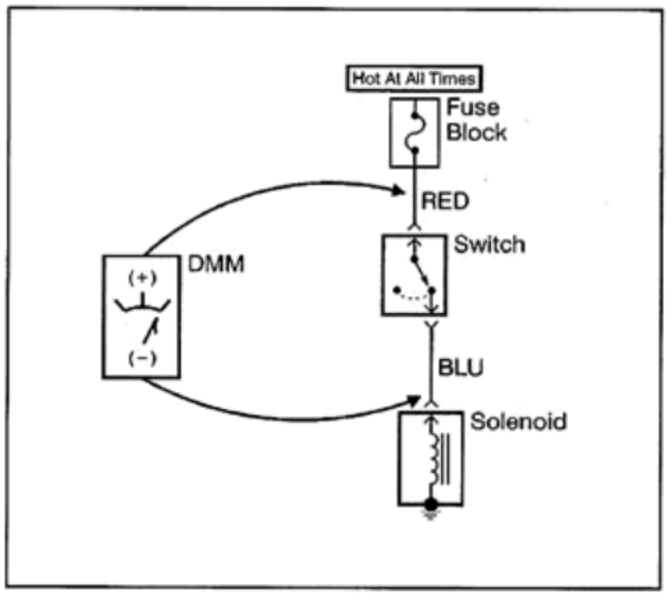
Special Tools

EL–39200 Digital Multimeter (DMM)

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Caution: Refer to *Test Probe Caution on page 0-10*.

The following procedure determines the difference in voltage potential between 2 points.



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1. Set the Digital Multimeter (DMM) to the V (DC) position.
2. Connect the positive lead of the DMM to one point of the circuit to be tested.
3. Connect the negative lead of the DMM to the other point of the circuit.
4. Operate the circuit.
5. The DMM displays the difference in voltage between the 2 points.

Measuring Frequency

Special Tools

EL–39200 Digital Multimeter (DMM)

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Caution: Refer to *Test Probe Caution on page 0-10*.

The following procedure determines the frequency of a signal.

Note: Connecting the Digital Multimeter (DMM) to the circuit before pressing the Hz button will allow the DMM to autorange to an appropriate range.

1. Apply power to the circuit.
2. Set the DMM to the V (AC) position.

3. Connect the positive lead of the DMM to the circuit to be tested.
4. Connect the negative lead of the DMM to a good ground.
5. Set to Hz on the DMM.
6. The DMM will display the frequency measured.

Testing Ground and Low Reference Circuits

Because a test lamp can light with up to 200 Ω in a ground or low reference circuit they are not recommended to be used for this type of test. A low impedance test lamp can light and indicate the circuit is good when there is as much as 20–30 Ω present, while a high impedance test lamp can light with up to 200 Ω present in the circuit. This is why the Digital Multi-Meter (DMM) is used when validating a ground or low reference circuit continuity.

When using the DMM there are many vehicle conditions that can affect the ground and low reference continuity testing. If these conditions are not met, a ground or low reference circuit test can fail on a good circuit. This may cause longer diagnosis time and incorrect component replacement.

Any current flow through a ground or low reference circuit, while being tested, will skew the DMM continuity reading, or display a reading higher than when there is no current flowing. Performing a ground or low reference circuit continuity test, in reference to the vehicles battery negative terminal, will have the highest risk of failing a good ground or low reference circuit test than any other ground reference point. The best ground test points would be a control module housing (if the control modules housing is metal and grounded), door jamb striker (if attached to metal), under dash metal frame work, engine block, or body ground studs (other than where the negative battery cable is attached).

A typical DMM ground or low reference circuit continuity reading can be as high as 100 Ω with the ignition ON, and drop to 15–25 Ω after the ignition is turned OFF. The reading will drop below 10 Ω after 30–40 seconds, then below 5 Ω after 60 seconds. Once the vehicle completely goes to sleep (generally 3-10 minutes) the reading will drop below 0.3 Ω.

The following list of conditions may need to be met to ensure a valid continuity reading on a ground or low reference circuit:

- Ignition OFF
- Key out of the ignition switch (when not equipped with keyless entry and remote start)
- Retained Accessory Power (RAP) OFF (open and close the driver door after ignition OFF)
- Battery charger set at a 2 A or less charge rate
- Scan tool not communicating with any vehicle control module (in some cases it may need to be disconnected from the DLC)
- All entry doors closed
- Headlamps OFF (auto headlamps disabled)
- Any delay lighting OFF
- HVAC after blow OFF
- Any accessory that can work when the ignition is OFF
- Wait up to 60 seconds (after all other listed conditions are met)

Activating the DOOR LOCK function with a key fob can greatly reduce the time to achieve a valid ground or low reference continuity test result.

Testing for Continuity

Special Tools

EL-39200 Digital Multimeter (DMM)

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Caution: Refer to *Test Probe Caution on page 0-10*.

The following procedures verify good continuity in a circuit.

With a Digital Multimeter (DMM)

1. Set the DMM to the Ω position.
2. Disconnect the power feed (i.e. fuse, control module) from the suspect circuit.
3. Disconnect the load.
4. Select the MIN MAX function on the DMM.
5. Connect one lead of the DMM to one end of the circuit to be tested.
6. Connect the other lead of the DMM to the other end of the circuit.
7. If the DMM displays low or no resistance, the circuit has good continuity.

With a Test Lamp

Note: Only use the test lamp procedure on low impedance power and ground circuits.

1. Remove the power feed (i.e. fuse, control module) from the suspect circuit.
2. Disconnect the load.
3. Connect one lead of the test lamp to one end of the circuit to be tested.
4. Connect the other lead of the test lamp to battery positive voltage.
5. Connect the other end of the circuit to ground.
6. If the test lamp illuminates (full intensity), then the circuit has good continuity.

Testing for Short to Ground

Caution: Refer to *Test Probe Caution on page 0-10*.

The following procedures test for a short to ground in a circuit.

With a Digital Multimeter (DMM)

1. Remove the power feed (i.e. fuse, control module) from the suspect circuit.
2. Disconnect the load.
3. Set the rotary dial of the DMM to the Ω position.
4. Connect one lead of the DMM to one end of the circuit to be tested.

5. Connect the other lead of the DMM to a good ground.
6. If the DMM does NOT display infinite resistance (OL), there is a short to ground in the circuit.

With a Test Lamp

1. Remove the power feed (i.e. fuse, control module) from the suspect circuit.
2. Disconnect the load.
3. Connect one lead of the test lamp to battery positive voltage.
4. Connect the other lead of the test lamp to one end of the circuit to be tested.
5. If the test lamp illuminates, there is a short to ground in the circuit.

Fuse Powering Several Loads

1. Review the system schematic and locate the fuse that is open.
2. Open the first connector or switch leading from the fuse to each load.
3. Connect a DMM across the fuse terminals (be sure that the fuse is powered).
   - When the DMM displays voltage the short is in the wiring leading to the first connector or switch.
   - If the DMM does not display voltage refer to the next step.
4. Close each connector or switch until the DMM displays voltage in order to find which circuit is shorted.

Testing for a Short to Voltage

Special Tools

EL-39200 Digital Multimeter (DMM)

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Caution: Refer to *Test Probe Caution on page 0-10*.

The following procedure tests for a short to voltage in a circuit.

1. Remove the power feed (i.e. fuse, control module) from the suspect circuit.
2. Disconnect the load.
3. Set the Digital Multimeter (DMM) to the V (DC) position.
4. Connect the positive lead of the DMM to one end of the circuit to be tested.
5. Connect the negative lead of the DMM to a good ground.
6. Turn ON the ignition and operate all accessories.
7. If the voltage measured is greater than 1 V, there is a short to voltage in the circuit.

Testing for Intermittent Conditions and Poor Connections

Special Tools

EL-35616 Terminal Test Probe Kit

For equivalent regional tools, refer to *Special Tools on page 11-616*.

When the condition is not currently present, but is indicated in DTC history, the cause may be intermittent. An intermittent may also be the cause when there is a customer complaint, but the symptom cannot be duplicated. Refer to the Symptom Table of the system that is suspect of causing the condition before trying to locate an intermittent condition.

Most intermittent conditions are caused by faulty electrical connections or wiring. Inspect for the following items:

- Wiring broken inside the insulation
- Poor connection between the male and female terminal at a connector
- Poor terminal to wire connection - Some conditions which fall under this description are poor crimps, poor solder joints, crimping over the wire insulation rather than the wire itself, and corrosion in the wire to terminal contact area, etc.
- Pierced or damaged insulation can allow moisture to enter the wiring causing corrosion. The conductor can corrode inside the insulation, with little visible evidence. Look for swollen and stiff sections of wire in the suspect circuits.
- Wiring which has been pinched, cut, or its insulation rubbed through may cause an intermittent open or short as the bare area touches other wiring or parts of the vehicle.
- Wiring that comes in contact with hot or exhaust components
- Refer to *Inducing Intermittent Fault Conditions on page 11-533* in order to duplicate the conditions required, in order to verify the customer concern.
- Refer to *Testing for Electrical Intermittents on page 11-534* for test procedures to detect intermittent open, high resistance, short to ground, and short to voltage conditions.
- Refer to *Scan Tool Snapshot Procedure (GDS) on page 11-535* for advanced intermittent diagnosis and Vehicle Data Recorder operation.

Testing for Terminal Fretting

Some intermittent conditions can be caused by wire terminal fretting corrosion. Fretting corrosion is a build-up of insulating, oxidized wear debris that can form when there is a small motion between electrical contacts. The oxidized wear debris can pile up enough at the electrical contact spots that the electrical resistance across the connection increases. Movement between the contacting surfaces as small as 10 to 100 microns can cause fretting. To put this in perspective, a sheet of paper is about 100 microns thick, so fretting motion is small and hard to see. Vibration and thermal expansion/contraction are the main sources that create fretting motion. Since vehicles vibrate and can experience large temperature swings, they are a good source for fretting motion. Tin, copper, nickel, and iron

surfaces are all susceptible to fretting corrosion. Fretting corrosion can be difficult to see but it looks like small, dark smudges on the terminals contact surface.

To correct a fretting condition disconnect the suspect connector and add dielectric grease / lubricant (Nyogel 760G or equivalent, meeting GM specification 9986087) to both sides of the connector terminals. Then reconnect the connector and wipe away any excess lubricant. This will correct the additional terminal contact resistance due to the terminal fretting corrosion.

Testing for Proper Terminal Contact

It is important to test terminal contact at the component and any inline connectors before replacing a suspect component. Mating terminals must be inspected to ensure good terminal contact. A poor connection between the male and female terminal at a connector may be the result of contamination or deformation.

Contamination may be caused by the connector halves being improperly connected. A missing or damaged connector seal, damage to the connector itself, or exposing the terminals to moisture and dirt can also cause contamination. Contamination, usually in the underhood or underbody connectors, leads to terminal corrosion, causing an open circuit or intermittently open circuit.

Deformation is caused by probing the mating side of a connector terminal without the proper adapter. Always use the *EL-35616* kit when probing connectors. Other causes of terminal deformation are improperly joining the connector halves, or repeatedly separating and joining the connector halves. Deformation, usually to the female terminal contact tang, can result in poor terminal contact causing an open or intermittently open circuit.

Testing for Proper Terminal Contact in Bussed Electrical Centers

It is very important to use the correct test adapter when testing for proper terminal contact of fuses and relays in a bussed electrical center. Use the *EL-35616* kit to test for proper terminal contact. Failure to use the *EL-35616* kit can result in improper diagnosis of the bussed electrical center.

Follow the procedure below in order to test terminal contact:

1. Separate the connector halves.
2. Visually inspect the connector halves for contamination. Contamination may result in a white or green build-up within the connector body or between terminals. This causes high terminal resistance, intermittent contact, or an open circuit. An underhood or underbody connector that shows signs of contamination should be replaced in its entirety: terminals, seals, and connector body.
3. Using an equivalent male terminal/terminated lead, verify that the retention force is significantly different between a known good terminal and the suspect terminal. Replace the female terminal in question.

Flat Wire Connectors

There are no serviceable parts for flat wire connectors on the harness side or the component side.

Follow the procedure below in order to test terminal contact:

1. Remove the component in question.
2. Visually inspect each side of the connector for signs of contamination. Avoid touching either side of the connector as oil from your skin may be a source of contamination as well.
3. Visually inspect the terminal bearing surfaces of the flat wire circuits for splits, cracks, or other imperfections that could cause poor terminal contact. Visually inspect the component side connector to ensure that all of the terminals are uniform and free of damage or deformation.
4. Insert the appropriate adapter into the flat wire harness connector in order to test the circuit in question.

Control Module/Component Voltage and Grounds

Poor voltage or ground connections can cause widely varying symptoms.

- Test all control module voltage supply circuits. Many vehicles have multiple circuits supplying voltage to a control module. Other components in the system may have separate voltage supply circuits that may also need to be tested. Inspect connections at the module/component connectors, fuses, and any intermediate connections between the voltage source and the module/component. A test lamp or a DMM may indicate that voltage is present, but neither tests the ability of the circuit to carry sufficient current. Operate the component to test the ability of the circuit to carry sufficient current. Refer to *Circuit Testing on page 11-526* and *Power Distribution Schematics on page 11-128*.
- Test all control module ground and system ground circuits. The control module may have multiple ground circuits. Other components in the system may have separate grounds that may also need to be tested. Inspect grounds for clean and tight connections at the grounding point. Inspect the connections at the component and in splice packs, where applicable. Operate the component to test the ability of the circuit to carry sufficient current. Refer to *Circuit Testing on page 11-526* and *Ground Distribution Schematics on page 11-152*.

Temperature Sensitivity

- An intermittent condition may occur when a component/connection reaches normal operating temperature. The condition may occur only when the component/connection is cold, or only when the component/connection is hot.
- Freeze Frame, Failure Records, Snapshot, or Vehicle Data Recorder data may help with this type of intermittent condition, where applicable.
- If the intermittent is related to heat, review the data for a relationship with the following:
  - High ambient temperatures
  - Underhood/engine generated heat

  - Circuit generated heat due to a poor connection, or high electrical load
  - Higher than normal load conditions, towing, etc.
- If the intermittent is related to cold, review the data for the following:
  - Low ambient temperatures - In extremely low temperatures, ice may form in a connection or component. Inspect for water intrusion.
  - The condition only occurs on a cold start.
  - The condition goes away when the vehicle warms up.
- Information from the customer may help to determine if the trouble follows a pattern that is temperature related.
- If temperature is suspected of causing an intermittent fault condition, attempt to duplicate the condition. Refer to *Inducing Intermittent Fault Conditions on page 11-533* in order to duplicate the conditions required.

Electromagnetic Interference and Electrical Noise

Some electrical components/circuits are sensitive to electromagnetic interference or other types of electrical noise. Inspect for the following conditions:

- A mis-routed harness that is too close to high voltage/high current devices such as secondary ignition components, motors, generator etc. — These components may induce electrical noise on a circuit that could interfere with normal circuit operation.
- Electrical system interference caused by a malfunctioning relay, or a control module driven solenoid or switch — These conditions can cause a sharp electrical surge. Normally, the condition will occur when the malfunctioning component is operating.
- Improper installation of non-factory or aftermarket add on accessories such as lights, 2-way radios, amplifiers, electric motors, remote starters, alarm systems, cell phones, etc. — These accessories may create interference in other circuits while operating and the interference would disappear when the accessory is not operating. Refer to *Checking Aftermarket Accessories on page 11-525*.
- Test for an open diode across the A/C compressor clutch and for other open diodes. Some relays may contain a clamping diode.
- The generator may be allowing AC noise into the electrical system.

Incorrect Control Module

- There are only a few situations where reprogramming a control module is appropriate:
  - A new service control module is installed.
  - A control module from another vehicle is installed.
  - Revised software/calibration files have been released for this vehicle.

Note: DO NOT re-program the control module with the SAME software/calibration files that are already present in the control module. This is not an effective repair for any type of concern.

- Verify that the control module contains the correct software/calibration. If incorrect programming is found, reprogram the control module with the most current software/calibration. Refer to *Control Module References on page 6-3* for replacement, setup, and programming.

Inducing Intermittent Fault Conditions

Special Tools

J-25070 Heat Gun

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Many intermittent open or shorted circuits are affected by harness/connector movement that is caused by vibration, engine torque, bumps/rough pavement, etc. In order to duplicate the customer's concern, it may be necessary to manipulate the wiring harness if the malfunction appears to be vibration related. Manipulation of a circuit can consist of a wide variety of actions, including:

- Wiggling the harness
- Disconnecting a connector and reconnecting
- Stressing the mechanical connection of a connector
- Pulling on the harness or wire in order to identify a separation/break inside the insulation
- Relocating a harness or wires

All these actions should be performed with some goal in mind. For instance, with a scan tool connected, wiggling the wires may uncover a faulty input to the control module. The snapshot option would be appropriate here. Refer to *Scan Tool Snapshot Procedure (GDS) on page 11-535*. Another option is, with the component commanded ON and OFF by the scan tool, to move related connectors and wiring and observe the component operation. With the engine running, move related connectors and wiring while monitoring engine operation. If harness or connector movement affects the data displayed, component/ system operation, or engine operation, inspect and repair the harness/connections as necessary.

You may need to load the vehicle in order to duplicate the concern. This may require the use of weights, floor jacks, jackstands, frame machines, etc. In these cases you are attempting to duplicate the concern by manipulating the suspension or frame. This method is useful in finding harnesses that are too short and their connectors pull apart enough to cause a poor connection. A DMM set to the Min/Max mode and connected to the suspect circuit while testing can yield desirable results. Refer to *Testing for Electrical Intermittents on page 11-534*.

Certainly, using the senses of sight, smell, and hearing while manipulating the circuit can provide good results as well.

There may be instances where circuit manipulation alone will not meet the required criteria for the fault condition to appear. In such cases it may be necessary to expose the suspect circuit to other conditions while manipulating the harness. Such conditions would include high moisture conditions, along with exceptionally high or low temperatures. The following discusses how to expose the circuit to these kinds of conditions.

High Temperature Conditions

If the complaint tends to be heat related, you can simulate the condition using the *J-25070* heat gun.

Using the heat gun, you can heat up the suspected area or component. Manipulate the harnesses under high temperature conditions while monitoring the scan tool or DMM to locate the fault condition.

The high temperature condition may be achieved simply by test driving the vehicle at normal operating temperature. If a heat gun is unavailable, consider this option to enhance your diagnosis. This option does not allow for the same control, however.

Low Temperature Conditions

Depending on the nature of the fault condition, placing a fan in front of the vehicle while the vehicle is in the shade can have the desired effect.

If this is unsuccessful, use local cooling treatments such as ice or a venturi type nozzle (one that provides hot or cold air). This type of tool is capable of producing air stream temperatures down to −18°C (0°F) from one end and +71°C (160°F) from the other. This is ideally suited for localized cooling needs. In addition, circuit cooling spray can be used to cool down a component or circuit.

Once the vehicle, component, or harness has been sufficiently cooled, manipulate the harness or components in an effort to duplicate the concern.

Duplicating Failure Conditions

- If none of the previous tests are successful, attempt to duplicate and/or capture the failure conditions.
- Freeze Frame/Failure Records data, where applicable, contains the conditions that were present when the DTC set.
  1. Review and record Freeze Frame/Failure Records data.
  2. Clear the DTCs using the scan tool.
  3. Turn the key to OFF and wait 15 seconds.
  4. Operate the vehicle under the same conditions that were noted in Freeze Frame/ Failure Records data, as closely as possible. The vehicle must also be operating within the Conditions for Running the DTC. Refer to Conditions for Running the DTC in the supporting text if a DTC is being diagnosed.
  5. Monitor DTC Status for the DTC being tested. The scan tool will indicate Ran, when the enabling conditions have been satisfied long enough for the DTC to run. The scan tool will also indicate whether the DTC passed or failed.
- An alternate method is to drive the vehicle with the DMM connected to a suspected circuit. An abnormal reading on the DMM when the concern occurs, may help you locate the concern.

Testing for Electrical Intermittents

Special Tools

EL-39200 Digital Multimeter

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Perform the following procedures while wiggling the harness from side to side. Continue this at convenient points (about 6 inches apart) while watching the test equipment.

- *Testing for Short to Ground on page 11-530*
- *Testing for Continuity on page 11-530*
- *Testing for a Short to Voltage on page 11-531*

If the fault is not identified, perform the procedure below using the MIN MAX feature on the *EL-39200* digital multimeter (DMM). This feature allows you to manipulate the circuit without having to watch the DMM. The DMM will generate an audible tone when a change is detected.

Note: The DMM must be used in order to perform the following procedure since the DMM can monitor current, resistance or voltage while recording the minimum (MIN), and maximum (MAX) values measured.

1. Connect the DMM to both sides of a suspected connector (still connected), or from one end of a suspected circuit to the other. Refer to *Troubleshooting with a Digital Multimeter on page 11-527* for information on connecting the DMM to the circuit.
2. Set the DMM to the V (AC) or V (DC) position.
3. Select the voltage range feature of the DMM in order to select the desired voltage range.

Note: The 100 ms RECORD mode is the length of time an input must stay at a new value in order to record the full change.

4. Select the MIN MAX function of the DMM. The DMM displays the 100 ms RECORD and emits an audible tone (beep).
5. Simulate the condition that is potentially causing the intermittent connection, either by wiggling the connections or the wiring, test driving, or performing other operations. Refer to *Inducing Intermittent Fault Conditions on page 11-533*.
6. Listen for the audible Min Max Alert which indicates that a new minimum or maximum value has been recorded.
7. Press the MIN MAX button until the MAX value is displayed and note the value.

8. Press the MIN MAX button until the MIN value is displayed and note the value.
9. Determine the difference between the MIN and MAX values.
   - If the variation between the recorded MIN and MAX voltage values is 1 V or greater an intermittent open or high resistance condition exists. Repair the condition as necessary.
   - If the variation between the recorded MIN and MAX voltage values is less than 1 V, an intermittent open or high resistance condition does not exist.

Scan Tool Snapshot Procedure (GDS)

Using Snapshots in Global Diagnostic System (GDS)

Overview

A snapshot is a recording of what a control module on the vehicle was receiving for information while the snapshot is being made. A snapshot may be used to analyze the data during the time a vehicle condition is current. This allows you to concentrate on making the condition occur, rather than trying to view all the data in anticipation of the fault. In GDS 2, snapshots are automatically recorded whenever the user views Module Diagnostics, Vehicle Diagnostics and/or Systems Diagnostics. Module Diagnostics includes DTC Data, Identification Information, Data Display, Control Functions and Configuration/Reset Functions. Vehicle Diagnostics includes Vehicle Wide DTCs. Systems Diagnostics includes Inspection/Maintenance Status and Inspection/Maintenance Information.

Snapshot Replay

The Snapshot Replay function allows reviews of previously recorded vehicle snapshot data. This information can be used in analysis of vehicle problems and detection of trigger error conditions. The graph function can be used to compare parameters to see if a component is functioning properly. Recorded snapshots can be selected for viewing by the following two methods:

- From the Home Page, click on Review Stored Data. In the Snapshot Select Page, highlight the vehicle in the upper pane and highlight the desired snapshot in the lower pane, then click the Select Snapshot button.
- The user can view a snapshot without ending a current on-vehicle diagnostic session by clicking the Module button (when active) or Back button until the Session Manager is displayed in the menu. This is used when a user is viewing live data and wants the quickest way to review the data. Click on the Session Manager button. Highlight the desired snapshot in the lower pane and click Select Snapshot

View Selections

The following information can be selected in the tabs at the top of the screen:

- Line Graph – Displays information from the snapshot file in graph view. The current value of the parameters is displayed on the screen. Use the buttons on the right side to modify the graph data.
- Diagnostic Data Display – Displays incoming information from the snapshot file. The current value of the parameters is displayed on the screen. Use the buttons on the right side to modify the data.
- DTC Display – This tab will be displayed when a DTC is current or the status has changed. The tab will not be displayed when there are no DTCs.
- Bookmarks – If bookmarks are present, this displays the Type, Description and Time of automatic and manually generated bookmarks.
- System Information – Displays the GDS 2 Software Version and MDI Serial Number used when the snapshot was recorded.
- Selected Vehicle Configuration – Displays vehicle options information.

Snapshot Replay Functions

To review the snapshot there are buttons at the bottom of the window to control the cursor. From left to right the buttons are:

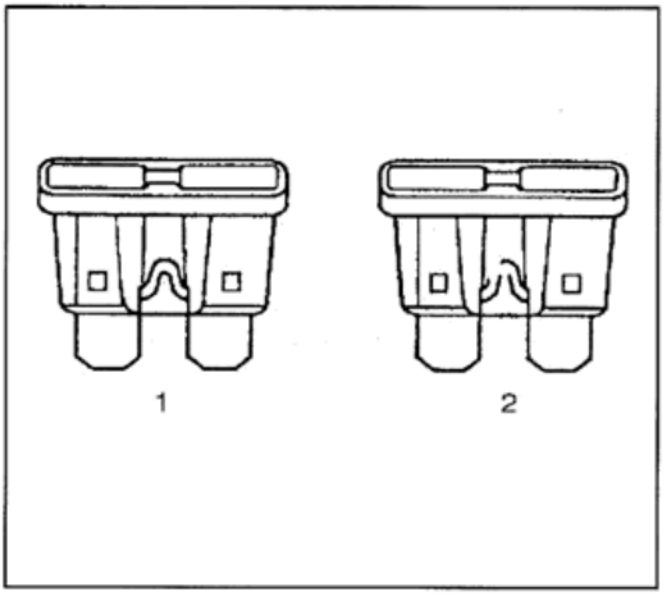
- Return to Frame 0 – This button returns the cursor to frame 0.
- Stop – This button pauses or stops the cursor. Click the Play button to resume.
- Play – This button starts the replay of the data.
- Play Speed – This button changes the speed between 1x, 2x, 4x and 8x.
- Back 1 Frame – This button moves the cursor back 1 frame.
- Forward 1 Frame – This button moves the cursor forward 1 frame.
- Previous Bookmark – This button moves the cursor to the previous bookmark.
- Next Bookmark – This button moves the cursor forward 1 bookmark.

Circuit Protection - Fuses

Special Tools

EL–39200 Digital Multimeter (DMM)

For equivalent regional tools, refer to *Special Tools on page 11-616.*



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The fuse is the most common method of an automotive wiring circuit protection. Whenever there is an excessive amount of current flowing through a circuit the fusible element will melt and create an open or incomplete circuit. Fuses are a one time protection device and must be replaced each time the circuit is overloaded. To determine if a fuse is open, remove the suspected fuse and examine if the element in the fuse is broken (2). If not broken (1), also check for continuity using a Digital Multimeter (DMM) or a continuity tester. If the element is broken or continuity is suspect, replace the fuse with one of equal current rating.

Fuse Types

Current Rating Amperes	Color
Auto Fuses, Mini Fuses	
2	Gray
3	Violet
5	Tan
7.5	Brown
10	Red
15	Blue
20	Yellow
25	White or Natural
30	Green
Maxi Fuses	
20	Yellow
30	Light Green
40	Orange or Amber

Fuse Types (cont'd)

Current Rating Amperes	Color
60	Blue
50	Red
J-Case Fuses	
20	Blue
30	Pink
40	Green
50	Red
60	Yellow
Midi Fuses	
80	Black
Mega Fuses	
100	Black
150	Black
200	Black

Circuit Protection - Circuit Breakers

A circuit breaker is a protective device that is designed to open the circuit when a current load is in excess of the rated breaker capacity. If there is a short or other type of overload condition in the circuit, the excessive current will open the circuit between the circuit breaker terminals. Two types of circuit breakers are used.

Circuit Breaker: This type opens when excessive current passes through it for a period of time. It closes again after a few seconds, and if the cause of the high current is still present, it will open again. The circuit breaker will continue to cycle open and closed until the condition causing the high current is removed.

Positive Temperature Coefficient (PTC) Circuit Breaker: This type greatly increases its resistance when excessive current passes through it. The excessive current heats the PTC device, as the device heats its resistance increases. Eventually the resistance gets so high that the circuit is effectively open. Unlike the ordinary circuit breaker the PTC unit will not reset until the circuit is opened, by removing the voltage from its terminals. Once the voltage is removed the circuit breaker will re-close within a second or 2.

Circuit Protection - Fusible Links

Special Tools

EL–39200 Digital Multimeter (DMM)

For equivalent regional tools, refer to *Special Tools on page 11-616.*

Note: When repairing a fusible link, fusible links cut longer than 225 mm (approximately 9 in) will not provide sufficient overload protection.

Fusible link is wire designed to melt and break continuity when excessive current is applied. It is often located between or near the battery and starter or electrical center. Use a continuity tester or a Digital Multimeter (DMM) at each end of the wire containing

the fusible link in order to determine if it is broken. If broken, it must be replaced with fusible link of the same gauge size.

Wiring Repairs

The Wiring Repairs section contains the following types of wiring repair information. Using these elements together will make wiring repair faster and easier:

- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Flat Wire Repairs on page 11-541*
- *GMLAN and Media Oriented Systems Transport (MOST) Wiring Repairs on page 11-606*
- *High Temperature Wiring Repairs on page 11-543*
- *Heated Oxygen Sensor Wiring Repairs on page 11-543*
- *Splicing Copper Wire Using Splice Sleeves on page 11-544*
- *Splicing Twisted or Shielded Cable on page 11-546*
- *Splicing Inline Harness Diodes on page 11-547*
- *SIR/SRS Wiring Repairs on page 11-548*

Repairing Damaged Wire Insulation

If the wire insulation has been chafed, or broken, enough to show the conductive portion of the wire, and the wire is not damaged, determine the length of insulation that needs to be repaired. If the repair is less than 280 mm (11 in), cut the wire within the damaged area. Then slide the appropriate heat shrink tubing (listed below) over the wire, and repair the wire by splicing the wires together. Refer to *Splicing Copper Wire Using Splice Sleeves on page 11-544*. Once the wire is spliced together slide heat shrink tubing over the damaged area and apply heat to seal the repaired wire.

If the wire is damaged, or the damaged area is larger than 280 mm (11 in), then replace the damaged wire by splicing in a new section of wire. Refer to *Splicing Copper Wire Using Splice Sleeves on page 11-544*.

Heat Shrink Tubing Selection

GM Part Number	Diameter		Description	Color	Length	
	Metric	English			Metric	English
12355003	9.5 mm	0.375 in	Tubing, Shrink 3/8	Black	305 mm	12 in
12355005	12.7 mm	0.5 in	Tubing, Shrink 1/2	Black	305 mm	12 in
12355011	19.1 mm	0.75 in	Tubing, Shrink 3/4	Black	305 mm	12 in
12355008	25.4 mm	1.0 in	Tubing, Shrink 1.00	Black	305 mm	12 in

Wire Size Conversion

Metric Wire Sizes (mm 2)	AWG Sizes
0.13	26
0.21	24
0.32	22
0.52	20
0.83	18
1.31	16
2.09	14
3.31	12
5.27	10
8.37	8
13.3	6
21.2	4
33.6	2
53.5	1/0

Coaxial Cable Repairs

The GM global coaxial cable repair strategy uses coaxial cables, connectors and jumpers to repair coaxial cables. The intent is to install the new service cable in vehicle, but removal of the old cable is not necessary. There are several repair scenarios:

- New cables, jumpers, and connector housing are required.
- Only new cables are required while it is possible to reuse the existing connector housing in vehicle. A jumper may or may not be needed.
- Only new connector housing are required, while it is possible to reuse the existing cable in the vehicle.
- A new cable would need to be installed from source to destination and by-pass the inline connector in some cases when an inline connector is unrepairable (Example: a cracked male end of a 1-way connector).

Coaxial Cable Kits

Four different kits will be available to repair coaxial cables. Components of each kit cannot be ordered separately from the kit.

- **Communication Interface Module Antenna Cable Kit** (Kit # 13581174) is used to repair Cellular coaxial cables. This kit uses RG58 low loss coaxial cables that are available in four lengths. The coaxial cables can be attached together in various lengths to closely match the length of the faulty/damaged coaxial cable.
- **Digital Radio and Vehicle Locator Antenna Coaxial Cable Kit** (Kit # 13581173) is used to repair XM and GPS coaxial cables. For vehicles that have a combined GPS and Cellular/OnStar signal on one cable, use Kit # 13581174. This kit uses RG316 low loss coaxial cables that are available in three lengths. The coaxial cables can be attached together in various lengths to closely match the length of the faulty/damaged coaxial cable.
- **Digital Radio, Mobile Telephone and Vehicle Locator Antenna Coaxial Cable Kit** (Kit # 19119056) is used with OnStar, XM, and GPS cables. This kit consists of jumpers and connectors. The jumpers are used to adapt different types of connectors together (to attach 2-way and 3-way connector onto the long 7, 5, and 3 foot cables). The connectors are used to replace existing connectors. The 1-way and 2-way connectors in the kit are in water-blue color (different than what the vehicle is built with) and are non-keyed (universal fit). The 3-way connectors in the kit are in the same color as in the vehicle.
- **Communication Interface Module Antenna Cable Kit** (Kit # 22803854) is used for the OnStar module on some vehicles built before the 2011 model year.

Coaxial Cable Repair Kits

Repair Kit Name		Description
Communication Interface Module Antenna Cable Kit (Kit # 13581174)		RG58 coaxial cable with female/female connectors – 7ft/2.1m
		RG58 coaxial cable with female/male connectors – 5ft/1.5m
		RG58 coaxial cable with female/male connectors – 3.5ft/1.1m
		RG58 coaxial cable with female/male connectors – 3.5ft/1.1m
Digital Radio and Vehicle Locator Antenna Coaxial Cable Kit (Kit # 13581173)		RG316 coaxial cable with female/female connectors – 7ft/2.1m
		RG316 coaxial cable with female/male connectors – 5ft/1.5m
		RG316 coaxial cable with female/male connectors – 3.5ft/1.1m
Digital Radio, Mobile Telephone and Vehicle Locator Antenna Coaxial Cable Kit (Kit # 19119056)	3-way Gen 1 sub-kit	1-way to 3-way Gen 1 jumper for female connector – Part # 13581154 – 4in/10cm
		1-way to 3-way Gen 1 jumper for male connector – Part # 19119052 – 4in/10cm
		White female connector
		White male connector
		Blue female connector
		Blue male connector
	3-way Gen 2 sub-kit	1-way to 3-way Gen 2 jumper for female connector – Part # 13581155 – 4in/10cm
		1-way to 3-way Gen 2 jumper for male connector – Part # 19119058 – 4in/10cm
		Tan female connector
		Tan male connector
		Gray female connector
		Gray male connector
	2-way Gen 1 sub-kit	1-way to 2-way Gen 1 jumper for female connector – Part # 13581156 – 4in/10cm
		Water-blue female connector

Coaxial Cable Repair Kits (cont'd)

Repair Kit Name		Description
	2-way Gen 2 sub-kit (wide)	1-way to 2-way Gen 2 jumper for female connector – Part # 13581157 – 4in/10cm
		1-way to 2-way Gen 2 jumper for male connector – Part # 13581158 – 4in/10cm
		Water-blue female connector
		Water-blue male connector
	2-way Gen 2 and 3 sub-kit (narrow)	1-way to 2-way Gen 2 and 3 jumper for female connector – Part # 13582468 – 4in/10cm
		Use the 1-way to 2-way Gen 2 jumper for female connector 19119058 – 4in/10cm from the 2-way Gen 2 sub-kit.
		Water-blue female connector
		Water-blue male connector
	Right-angle jumper with water-blue universal 1-way connector – 4in/10cm	
Communication Interface Module Antenna Cable Kit (Kit # 22803854)		1-way to mini UHF jumper – 4in/10cm

Connector Housing Repair Procedure

The connector housings (available in Digital Radio, Mobile Telephone and Vehicle Locator Antenna Coaxial Cable Kit) are available for 1-way housings, 2-way housings and 3-way housings. Determine the connector housing required:

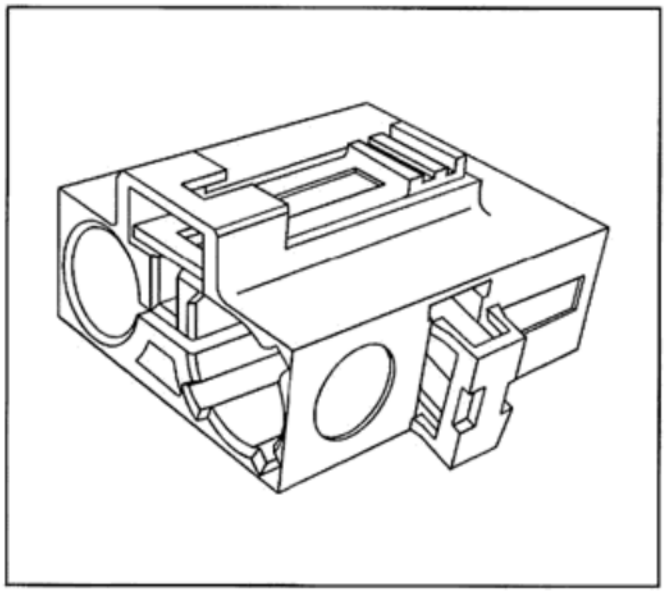
1-way housing

No change to the service coaxial cable is necessary in order to install the new coaxial cable into the vehicle.

2-way housing

A 4-inch jumper is required.

1. Determine the appropriate generation (1, 2, or 3) and/or size (12.7mm or 8mm) of the 2-way housing that is in the vehicle.
2. Remove the faulty/damaged coaxial cable from the 2-way connector housing by removing the terminal position assurance (TPA) from the connector housing and then slide the cable out of the connector.



2695718

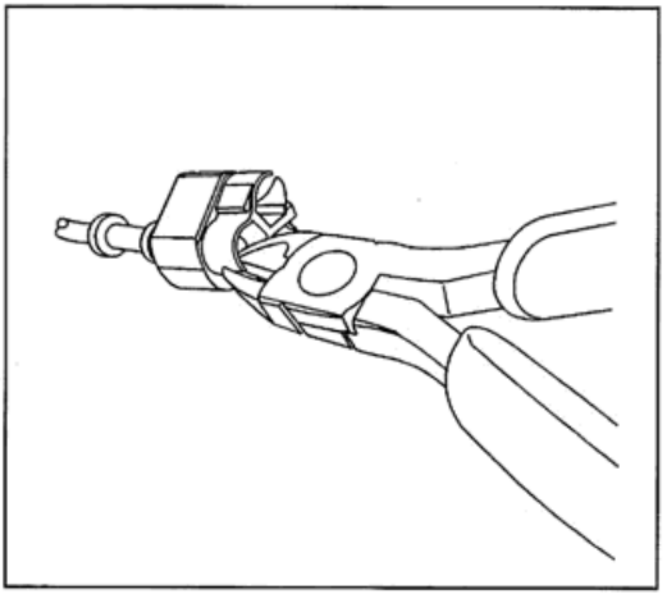
3. Install the new service coaxial cable into the vehicle. Use the 4-inch jumper for the appropriate 2-way connector housing to connect the new service coaxial cable to the connector housing.
4. If the issue is found to be the connector housing and not cable, a new connector housing may be installed while reusing all other components.

3-way housing

A 4-inch jumper is required.

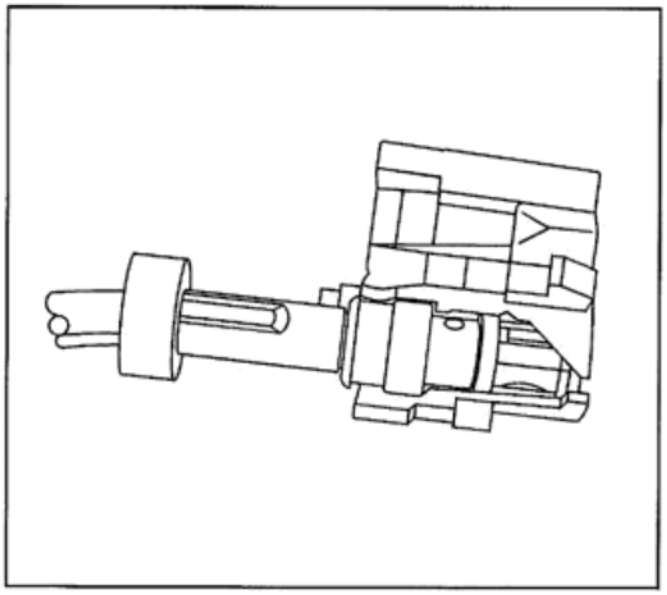
1. Determine the appropriate generation (1 or 2) and keyed 3-way connector housing based on the connector housing color.
2. Note the locations of each of the cables in 3-way housing, as it is important for new cables be placed in the appropriate terminal location in the new connector. The connector housing colors are not interchangeable.

3. Remove the faulty/damaged coaxial cable from the 3-way connector housing by using a pair of side/ diagonal cutters to nip and break away the housing.



2695719

4. Use caution not to damage the conductive ends of the coaxial cables inside the connector housing. Do not bend or force the terminal out or it could be damaged.

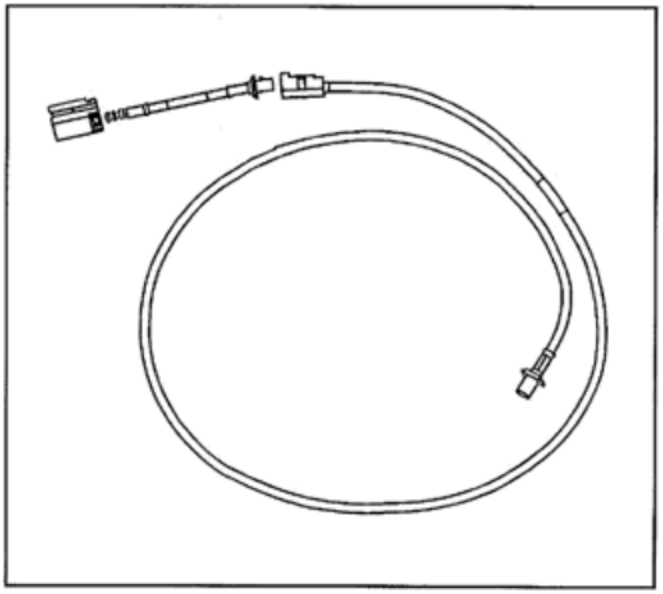


2695720

5. Install the new service coaxial cable into the vehicle. Use the 4-inch jumper for the appropriate color 3-way connector housing to connect the new service coaxial cable to the new 3-way connector housing.
6. If the issue is found to be the connector housing and not cable, a new connector housing may be installed while reusing all other components.

Coaxial Cable Repair Procedure

1. Identify the faulty/damaged coaxial cable.
2. Disconnect the faulty/damaged coaxial cable and leave it in the vehicle.
3. Identify the type of coaxial cable to be replaced and match up with the appropriate pieces to repair the damaged coaxial cable. Match up the type of coaxial cable, cable length and connector types. In some cases there may be extra length of cable left over.



2695722

4. Install the new coaxial cable in the vehicle.

Note: Avoid routing the new coaxial cable near sharp edges that can damage the new coaxial cable.

Use tie-straps to attach the new service coaxial cable to existing harnesses or brackets. Use felt tape/foam to reduce rattles, as necessary.

Note: To avoid permanent damage, do not pinch the cable or bend it tighter than a 2 inch (5 centimeter) radius.

5. Remove the faulty/damaged connectors, if applicable.
6. Install new connectors or jumpers, as needed. Refer to Connector Housing Repair Procedure.
7. Verify the repair by operating the system with the engine running.

Flat Wire Repairs

The flat wire within the flex wiring harness is not serviceable. If an open or short exists within the flex wiring harness the complete harness must be replaced.

Folded-Over Wire Repair

Special Tools

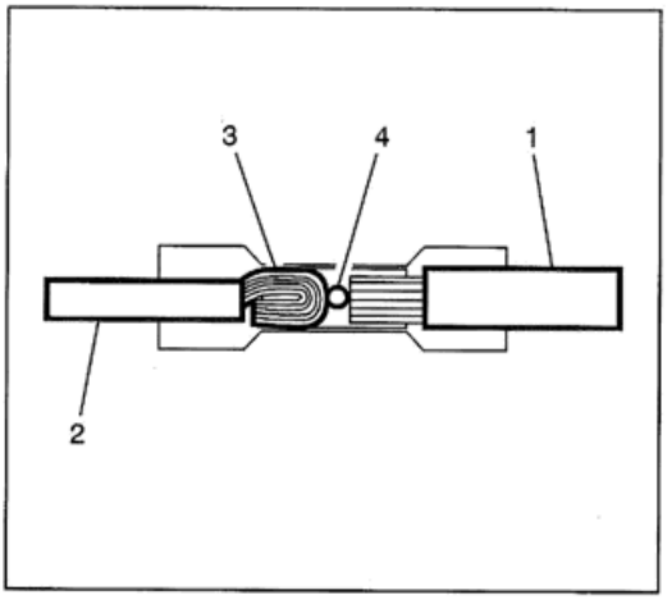
EL-38125-10 Splice Sleeve Crimping Tool

For equivalent regional tools, refer to *Special Tools on page 11-616.*

The GM global wire repair strategy uses connector assemblies (pigtails) and terminated leads to repair wiring harnesses.

To reduce and manage GM Service Parts proliferation, the service pigtails and terminated leads are designed with the largest wire gauge size that can be held by either the terminal or the connector housing.

The folded over wire repair technique, in which the copper wire strands are folded over before being installed into a splice sleeve, allows the service part to be used when repairing a smaller gauge size wire in a vehicle. This technique has passed all GM testing standards.



2527260

The larger harness size wires (1) will be placed in one side of the splice sleeve and match the splice sleeve closely in size. The wires are moved into the splice sleeve until they hit the stop (4) in the splice sleeve. The smaller harness size wires (2) will be placed in the other side of the splice sleeve. The smaller harness size wires will be folded over (3) to match up with the splice sleeve size.

Use the folded over wire repair for:

Note: Increasing the amount of copper strands in the smaller gauge size will allow for a better crimp

- Splicing wires of 0.35 mm or less (22, 24, 26 gauge sizes)

Note: Vehicle side needs to be of same or less gauge size (not greater than the service part's gauge size)

- Splicing wires of different gauges

Use the Service Information (SI) connector end-views to determine:

- Gauge size of wiring harness
- Recommended Repair: Terminated Lead or Pigtail

The following table lists the acceptable variance within the gauge size

Folded-Over Wire Selection Table

Harness Wire Gauge		Connector Assembly (Pigtail) or Terminated Lead Wire Gauge Size			
—		Salmon Color Splice Sleeve		Blue Color Splice Sleeve	Yellow Color Splice Sleeve
Metric	—	0.35 mm	0.5–0.8 mm	1.0–2.0 mm	3.0–5.0 mm
—	Wire Gauge (AWG)	22	20–18	16–14	12–10
0.13 mm	26	Fold Over Wire	Fold Over Wire	Fold Over Wire	Not Acceptable
0.22 mm	24	Fold Over Wire	Fold Over Wire	Fold Over Wire	Not Acceptable
0.35 mm	22	Fold Over Wire	Fold Over Wire	Fold Over Wire	Not Acceptable
0.5 mm	20	Not Acceptable	Wire to Wire	Fold Over Wire	Not Acceptable
0.75 mm	—	Not Acceptable	Wire to Wire	Fold Over Wire	Not Acceptable
0.8 mm	18	Not Acceptable	Wire to Wire	Fold Over Wire	Not Acceptable

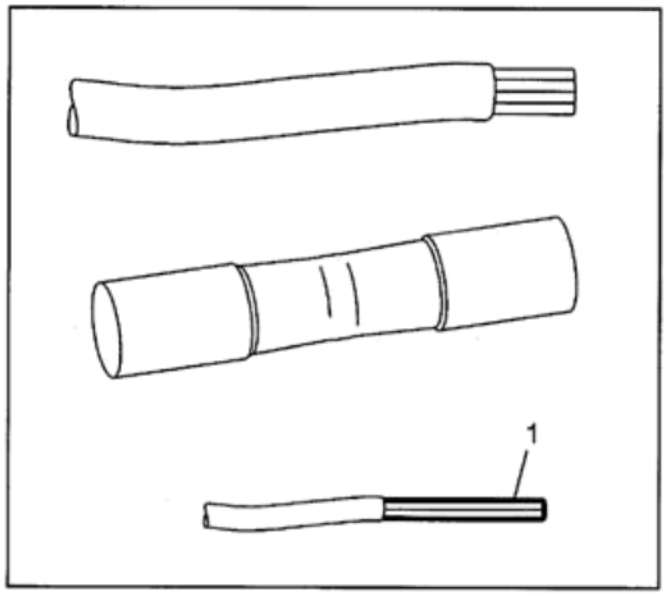
Folded-Over Wire Selection Table (cont'd)

Harness Wire Gauge		Connector Assembly (Pigtail) or Terminated Lead Wire Gauge Size			
1.0 mm	16	Not Acceptable	Wire to Wire	Fold Over Wire	Not Acceptable
1.5 mm	—	Not Acceptable	Not Acceptable	Wire to Wire	Fold Over Wire
2.0 mm	14	Not Acceptable	Not Acceptable	Wire to Wire	Fold Over Wire
2.5 mm	—	Not Acceptable	Not Acceptable	Wire to Wire	Fold Over Wire
3.0-5.0 mm	12–10	Not Acceptable	Not Acceptable	Not Acceptable	Wire to Wire

Example

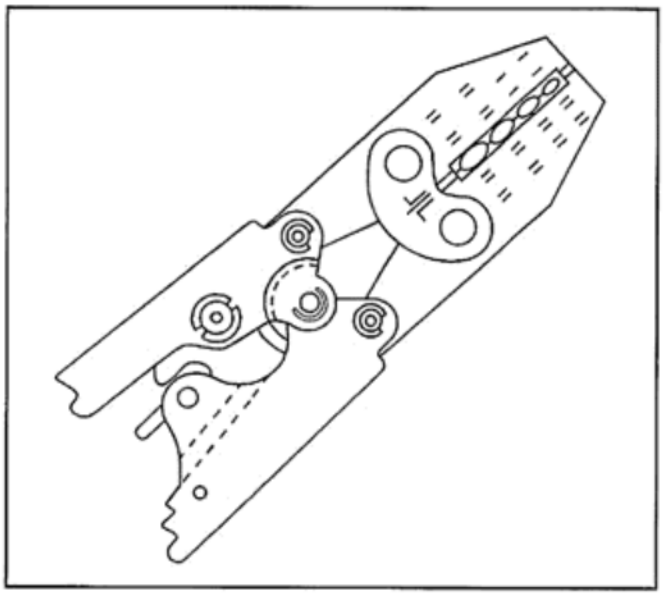
For an IP Harness of 0.22 mm (24 gauge on left side of table) wire size, the SI connector end-view recommends a pigtail with leads of 0.8 mm (18 gauge on the top of the table) with a salmon colored DuraSeal splice sleeve of 0.5–1.0 mm (20–16 gauge).

Follow these steps to use the folded over wire (1) technique on an IP Harness.



2527257

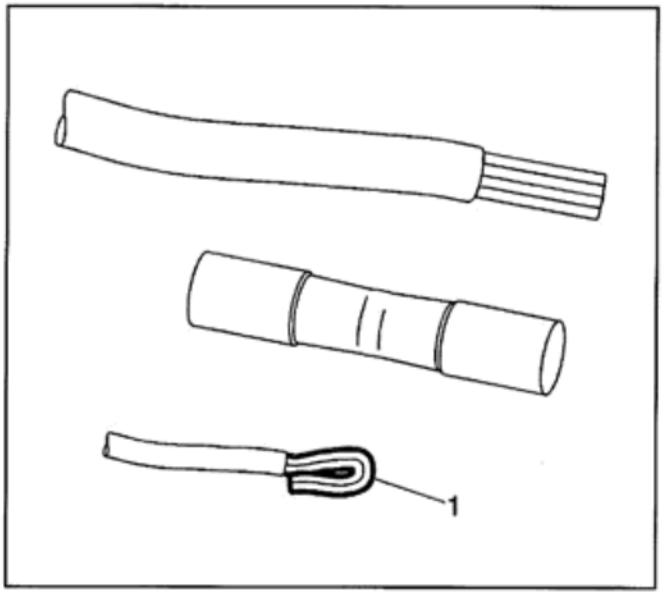
Strip twice the amount of insulation on the smaller (1) wire (IP Harness is the lower wire) than normally required. Normally, the terminated leads have 5 mm of insulation stripped off the wire.



2537879

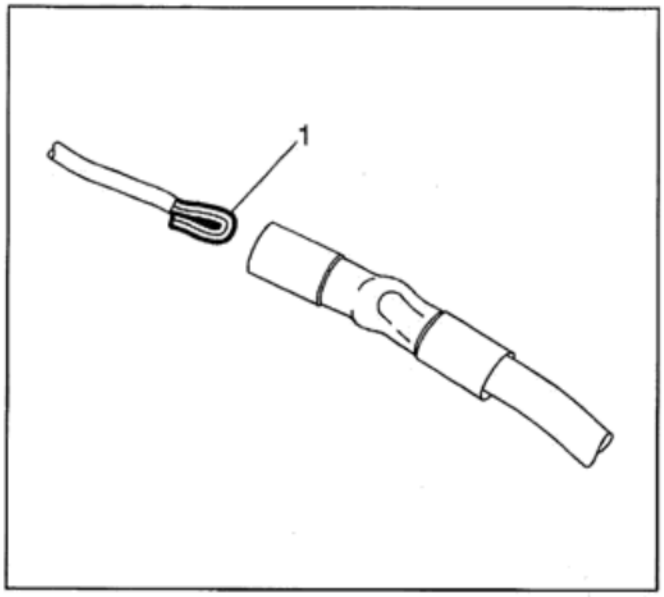
Note: Use *EL-38125-10* splice sleeve crimping tool.

1. For wiring repair, refer to *Splicing Copper Wire Using Splice Sleeves on page 11-544*.



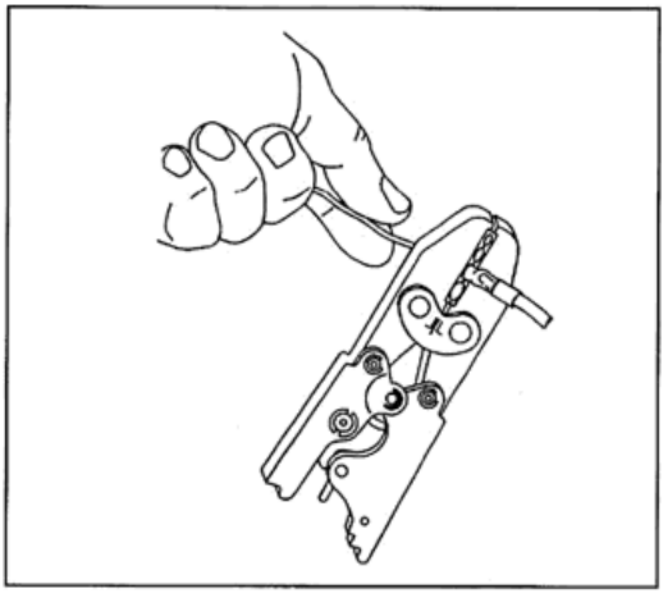
2527270

2. Twist the wires before you fold them over to prevent the wire strands from opening up. Fold over the copper wire strands of the smaller (1) gauge wire so that it is the same length as the non-folded wire.



2527272

3. Insert the folded over wire (1) into the splice sleeve.



2527273

4. Use the proper crimp tool to crimp the splice sleeve to the smaller wire (harness side of repair). Complete the crimp as usual (using the heat tool to shrink the tube).

High Temperature Wiring Repairs

Note: All wiring repairs need to be 200 mm from the heat zone. Areas of consideration would be any area located near the exhaust manifolds, catalytic converter, exhaust pipes, and turbocharged engines.

Items Required

- DuraSeal splice sleeves to crimp and seal connections
- High temperature SCT1 shrink tubing to protect the splice sleeves
- Terminated leads or pigtails
- The correct tools to remove the terminals from the connectors

Use high temperature bulk wire rated at 150°C (302°F) continuous temperature of the same or larger gauge size as the original wire when repair damage wire. Also replace any reflective tape that you remove during the repair.

High Temperature Wiring

Wiring that is exposed to high temperatures, 135°C (275°F) or higher, for prolonged periods of time may use materials i.e. wires, connectors, and shielding that has a higher heat rating than typical wiring. When making a repair in a high temperature area observe the following:

- Use high temperature bulk wire rated at 150°C (302°F) continuous temperature to replace any damaged wire.
- Replace any heat shielding that is removed.
- Cover any DuraSeal splice sleeves with SCT1 shrink tubing.
- After making a wiring repair, ensure that the location of the wiring is not moved closer to the heat source.

Identifying High Temperature Wiring

Note: High temperature areas would be areas located near exhaust manifolds, catalytic converters, exhaust pipes, and turbocharged engines.

Wiring that is exposed to high temperature, 135°C (275°F) or higher, for prolonged periods of time need special considerations when making wiring repairs. Areas that may be exposed to higher temperatures can be identified by heat resistant materials that are being used in those areas. These materials may include heat reflective tape, moon tape, and high temperature shrink tubing. Also conduit and other protective coverings may be used. Because conduit or similar coverings are used throughout the vehicle regardless of the temperature, it may be necessary for the technician to determine if an area is exposed to excessive heat before making a wiring repair.

Heated Oxygen Sensor Wiring Repairs

Caution: Do not solder repairs under any circumstances as this could result in the air reference being obstructed.

If the heated oxygen sensor pigtail wiring, connector, or terminal is damaged the entire oxygen sensor assembly must be replaced. Do not attempt to repair the wiring, connector, or terminals. In order for the sensor to function properly it must have a clean air reference. This clean air reference is obtained by way of the oxygen sensor signal and heater wires. Any attempt to repair the wires, connectors or terminals could result in the obstruction of the air reference and degrade oxygen sensor performance.

The following guidelines should be used when servicing the heated oxygen sensor:

- Do not apply contact cleaner or other materials to the sensor or vehicle harness connectors. These materials may get into the sensor, causing poor performance. Also, the sensor pigtail and harness wires must not be damaged in such a way that the wires inside are exposed. This could provide a path for foreign materials to enter the sensor and cause performance problems.
- Neither the sensor nor vehicle lead wires should be bent sharply or kinked. Sharp bends, kinks, etc., could block the reference air path through the lead wire.
- Do not remove or defeat the oxygen sensor ground wire (where applicable). Vehicles that utilize the ground wire sensor may rely on this ground as the only ground contact to the sensor. Removal of the ground wire will also cause poor engine performance.
- To prevent damage due to water intrusion, be sure that the peripheral seal remains intact on the vehicle harness connector.

Splicing Copper Wire Using Splice Sleeves

Special Tools

- *EL-38125-10* Splice Sleeve Crimping Tool
- *J-38125-5A* Ultra Torch Special Tool
- *J-38125-8* Splice Sleeve Crimping Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Note: The DuraSeal splice sleeves have the following 2 critical features:

- A special heat shrink sleeve environmentally seals the splice. The heat shrink sleeve contains a sealing adhesive inside.
- A cross hatched (knurled) core crimp provides the necessary low resistance contact integrity for these sensitive, low energy circuits.

Use only DuraSeal splice sleeves to form a one-to-one splice on all types of insulation except Tefzel and coaxial. Use DuraSeal splice sleeves where there are special requirements such as moisture sealing. Follow the instructions below in order to splice copper wire using DuraSeal splice sleeves.

Splice Sleeve Selection

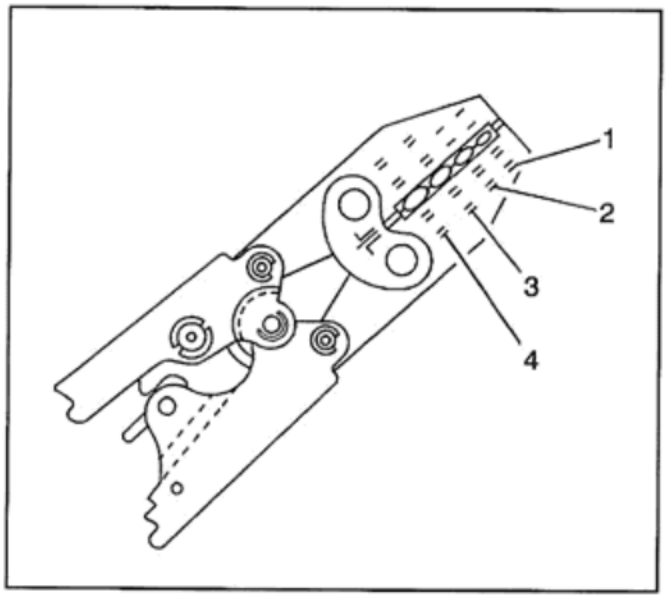
Splice Sleeve Color	Crimp Tool Nest Color		Wire Gauge mm² / (AWG)
	3 Crimp Nests	4 Crimp Nests	
Salmon (Yellow-Pink) 19168446	Red (1) or Red/Green (1)	Red (2)	0.5–0.8/(18–20)
Blue 19168447	Blue (2)	Blue (3)	1.0–2.0/(14–16)
Yellow 19168448	Yellow (3)	Yellow (4)	3.0–5.0/(10–12)

Note: You must perform the following procedures in the listed order. Repeat the procedure if any wire strands are damaged. You must obtain a clean strip with all of the wire strands intact.

1. Open the harness by removing any tape:
   - Use a sewing seam ripper, available from sewing supply stores, in order to cut open the harness in order to avoid wire insulation damage.
   - Use the DuraSeal splice sleeves on all types of insulation except Tefzel and coaxial.
   - Do not use the crimp and DuraSeal splice sleeve to form a splice with more than 2 wires coming together.
2. Cut as little wire off the harness as possible. You may need the extra length of wire in order to change the location of a splice.

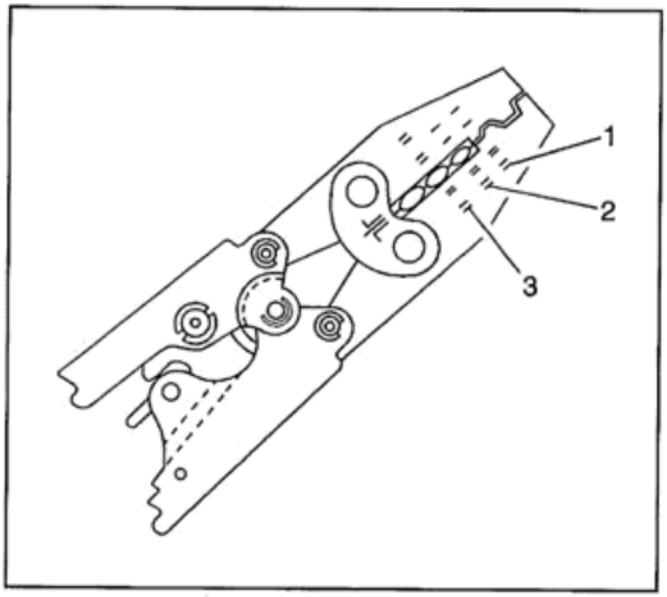
   Adjust splice locations so that each splice is at least 40 mm (1.5 in) away from the other splices, harness branches, or connectors.
3. Strip the insulation:
   - When adding a length of wire to the existing harness, use the same size wire as the original wire.
   - Perform one of the following items in order to find the correct wire size:
     - Find the wire on the schematic and convert to regional wiring gauge size.
     - If you are unsure of the wire size, begin with the largest opening in the wire stripper and work down until achieving a clean strip of the insulation.
   - Strip approximately 5.0 mm (0.20 in) of insulation from each wire to be spliced.
   - Do not nick or cut any of the strands. Inspect the stripped wire for nicks or cut strands.
   - If the wire is damaged, repeat this procedure after removing the damaged section.
4. For high temperature wiring, slide a section of high temperature SCT1 shrink tubing down the length of wire to be spliced. Ensure that the shrink tubing will not interfere with the splice procedure.

5. Select the proper DuraSeal splice sleeve according to the wire size. Refer to the above table at the beginning of the repair procedure for the color coding of the DuraSeal splice sleeves and the crimp tool nests.



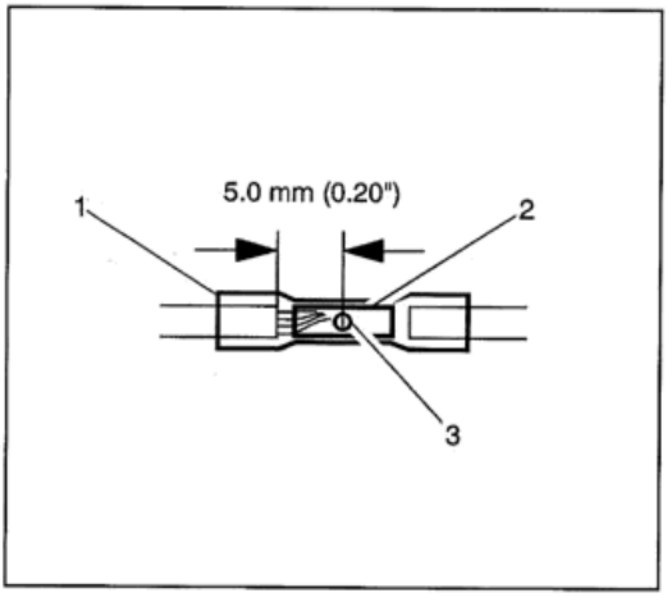
2414855

6. The *EL-38125-10* splice sleeve crimping tool has four crimp nests. The largest crimp nest (4) is used for crimping 10 and 12 gauge wires. The second largest crimp nest (3) is used for crimping 14 and 16 gauge wires. The third largest crimp nest (2) is used for crimping 18 and 20 gauge wires. The smallest crimp nest (1) is used for crimping 22 to 26 gauge wires. The crimp nests are referenced in the table (farther above) under the crimp tool nest color.



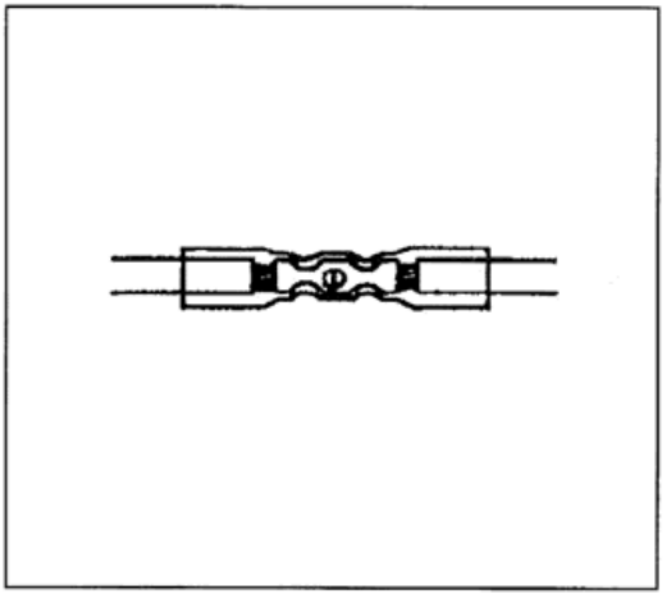
68642

7. The *J-38125-8* splice sleeve crimping tool has three crimp nests. The largest crimp nest (3) is used for crimping 10 and 12 gauge wires. The second largest crimp nest (2) is used for crimping 14 and 16 gauge wires. The smallest crimp nest (1) is used for crimping 18 to 20 gauge wires. The crimp nests are referenced in the table (farther above) under the crimp tool nest color.
8. Use the splice sleeve crimp tool in order to position the DuraSeal splice sleeve in the proper color nest of the splice sleeve crimp tool. For the four crimp nest tool, use the three largest crimp nests to crimp the splice sleeves. For the three crimp nest tool, use all three crimp nests to crimp the splice sleeves. Use the four and three crimp tool diagrams (above) and the table (farther above) to match the splice sleeve with the correct crimp nest. The crimp tool diagram callout numbers match the numbers in the table (under crimp tool nest color).



68639

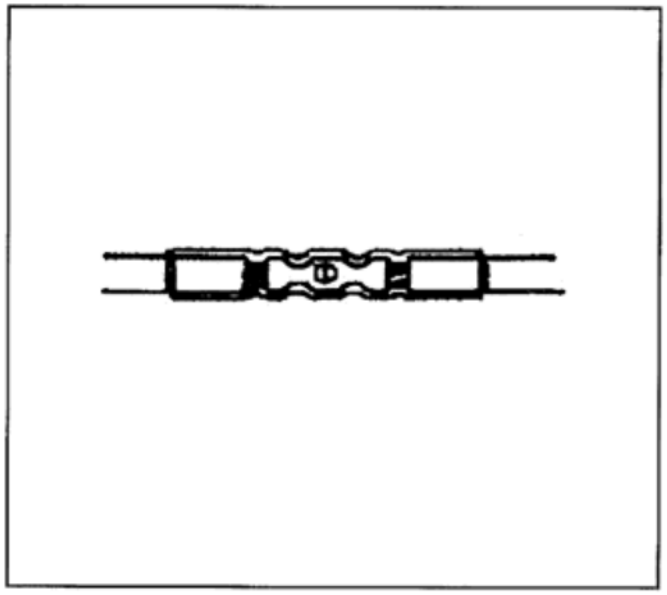
9. Place the DuraSeal splice sleeve in the nest. Ensure that the crimp falls midway between the end of the barrel and the stop. The sleeve has a stop (3) in the middle of the barrel (2) in order to prevent the wire (1) from going further. Close the hand crimper handles slightly in order to firmly hold the DuraSeal splice sleeve in the proper nest.



9502

10. Insert the wire into the splice sleeve barrel until the wire hits the barrel stop.
11. Tightly close the handles of the crimp tool until the crimper handles open when released.

    The crimper handles will not open until you apply the proper amount of pressure to the DuraSeal splice sleeve. Repeat steps 4 and 6 for the opposite end of the splice.



9503

12. Using the heat torch, apply heat to the crimped area of the barrel.
13. Start in the middle and gradually move the heat barrel to the open ends of the tubing:
    - The tubing will shrink completely as the heat is moved along the insulation.
    - A small amount of sealant will come out of the end of the tubing when sufficient shrinkage is achieved.

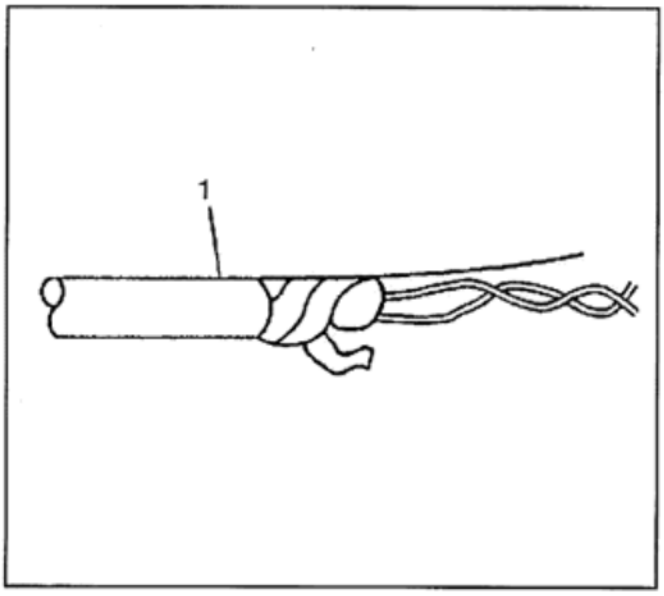
High Temperature Wiring Repairs

Use the following procedures to perform high temperature wiring repairs:

1. Center the high temperature SCT1 shrink tube over the DuraSeal splice sleeve.
2. Using the heat torch, apply heat to the high temperature heat shrink tubing.
3. Gradually move the heat from the center to the open end of the tubing:
    - The tubing will shrink completely as the heat is moved along the insulation.
    - A small amount of sealant will come out of the end of the tubing when sufficient shrinkage is achieved.
4. Replace any reflective tape and clips that may have been removed during the repair.

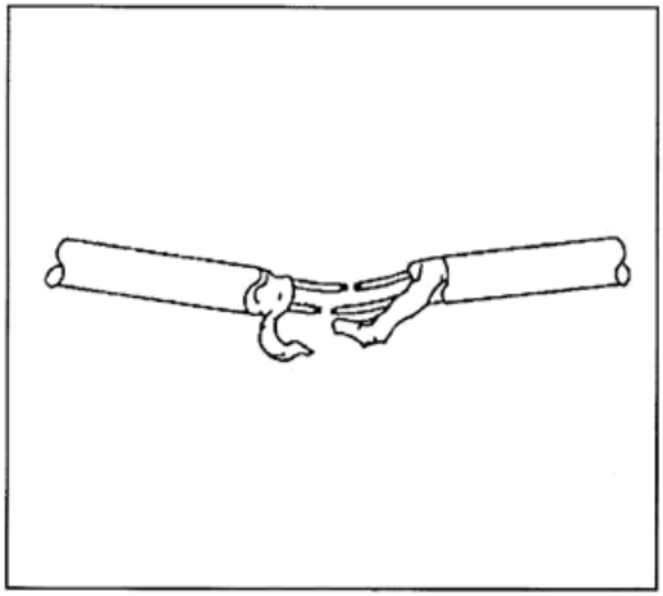
Splicing Twisted or Shielded Cable

Twisted/shielded cable is used in order to protect wiring from electrical noise. Two-conductor cable of this construction is used between the radio and the Delco-Bose® speaker/amplifier units and other applications where low level, sensitive signals must be carried. Follow the instructions below in order to repair the twisted/shielded cable.



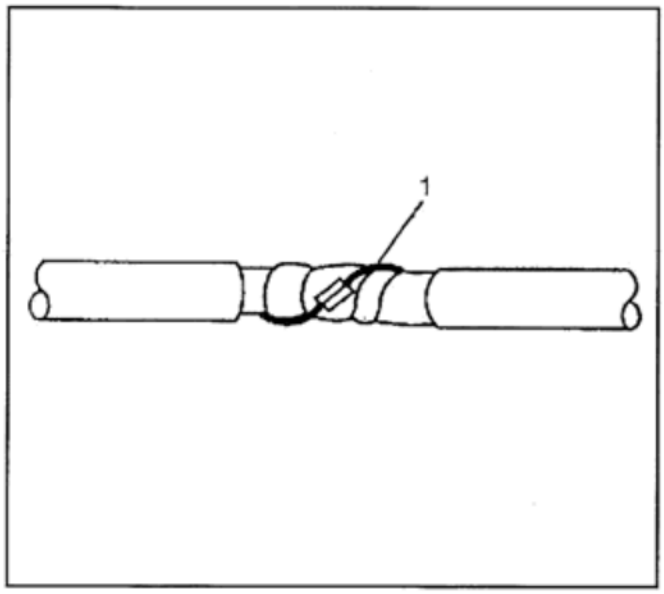
8796

1. Remove the outer jacket (1). Use care not to cut into the drain wire of the mylar tape.
2. Unwrap the tape. Do not remove the tape. Use the tape in order to rewrap the twisted conductors after the splice is made.



6799

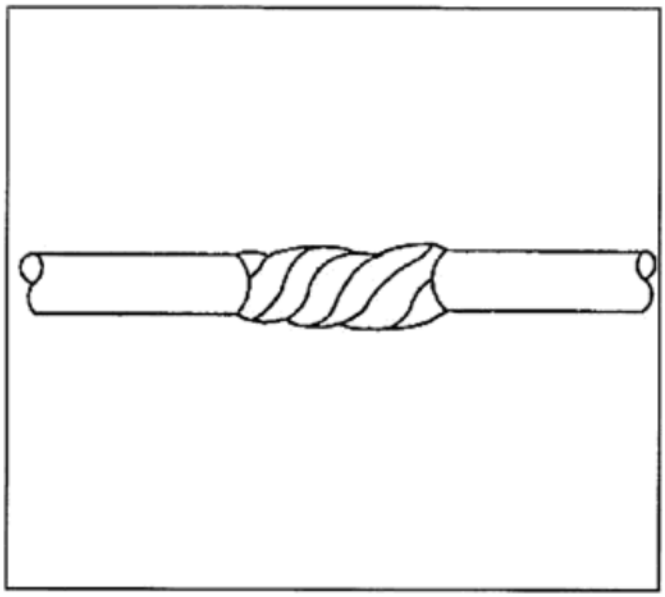
3. Prepare the splice. Untwist the conductors and follow the instructions for *Splicing Copper Wire Using Splice Sleeves on page 11-544*. Staggering the splices by 65 mm (2.5 in) is recommended.



8800

Note: Apply the mylar tape with the aluminum side inward. This ensures good electrical contact with the drain wire.

4. Re-assemble the cable.
   - Rewrap the conductors with the mylar tape. If the mylar tape is damaged, use 3M product AL-36FR to replace the damaged mylar tape.
   - Use caution not to wrap the drain wire in the tape (1).
   - Follow the splicing instructions for copper wire and splice the drain wire.
   - Wrap the drain wire around the conductors and tape with electrical tape to replace the outer insulation.



8801

5. Tape over the entire cable. Use a winding motion when you apply the tape.

Splicing Inline Harness Diodes

Many vehicle electrical systems use a diode to isolate circuits and protect the components from voltage spikes. When installing a new diode use the following procedure.

1. Open the harness.
   - If the harness is taped, remove the tape.
   - To avoid wiring insulation damage, use a sewing seam ripper (available from sewing supply stores) in order to cut open the harness.
   - If the harness has a black plastic conduit, pull out the diode.
2. If the diode is taped to the harness, remove all of the tape.
3. Check and record the current flow direction and orientation of diode.
4. Remove the inoperative diode from the harness with a suitable soldering tool.

Note: If the diode is located next to a connector terminal remove the terminal(s) from the connector to prevent damage from the soldering tool.

5. Carefully strip away a section of insulation next to the old soldered portion of the wire(s). Do not remove any more than is needed to attach the new diode.
6. Check current flow direction of the new diode, being sure to install the diode with correct bias. Reference the appropriate service manual wiring schematic to obtain the correct diode installation position.
7. Attach the new diode to the wire(s) using 60/40 rosin core solder. Before soldering attach some heat sinks (aluminum alligator clips) across the diode wire ends to protect the diode from excessive heat. Follow the manufacturer's instruction for the soldering equipment.

8. Reinstall terminal(s) into the connector body if previously removed.

Note: To prevent shorts to ground and water intrusion, completely cover all exposed wire and diode attachment points with tape.

9. Tape the diode to the harness or connector using electrical tape.

SIR/SRS Wiring Repairs

Note: Refer to *SIR Service Precautions on page 13-113.*

For **European** regions – If the SIR/SRS wiring, connector, or terminal is damaged, the affected wiring harness must be replaced. Do not attempt to repair the wiring, connector, or terminals. Any attempt to repair the wires, connectors, or terminals could result in performance problems of the SIR/SRS System. Operations on restraint systems must only be performed by trained and qualified personnel.

Special Tools

EL-38125-10 Splice Sleeve Crimping Tool

For equivalent regional tools, refer to *Special Tools on page 11-616.*

The Supplemental Inflatable Restraint (SIR) System/ Supplemental Restraint System (SRS) requires special wiring repair procedures due to the sensitive nature of the circuitry. Follow the specific procedures and instructions when working with the SIR/SRS, and the wiring components, such as connectors and terminals.

SIR/SRS Connector Repair (Plastic Body and Terminal Metal Pin)

Note: Do not use the terminals in the kit in order to replace damaged SIR/SRS system terminals. Use either an SIR/SRS pigtail or a terminated lead from the SIR Repair Kit Tray.

The terminals in the SIR/SRS system are made with a special plating. This plating provides the necessary contact integrity for the sensitive, low energy circuits.

Pigtail repair packs are available for SIR/SRS connectors with eight or less terminals. Only the connector body is available for connectors with more than eight terminals. Terminated leads can be used to replace damaged terminals when replacing the connector body.

SIR/SRS Component Wire Pigtail Repair

Note: Do not make wire, connector, or terminal repairs on components with wire pigtails.

A wire pigtail is a wire or wires attached directly to the device, not by a connector. If a wiring pigtail is damaged, you must replace the entire component, with pigtail. The inflatable restraint steering wheel module coil is an example of a pigtail component.

SIR/SRS Wire Repair

Caution: Do not install more than 2 DuraSeal splice sleeves per SIR deployment loop. A deployment loop consists of both wires from the K36 Inflatable Restraint Sensing and Diagnostic Module to the deployable component. If more than 2 DuraSeal splice sleeves are required for any SIR deployment loop, the complete circuit of the loop must be replaced. More than 2 DuraSeal splice sleeves per deployment loop may increase the resistance in the circuit causing a DTC to be set.

Note: Refer to Wiring Repairs in the service information connector end views or the vehicle schematics in order to determine the correct wire size for the circuit you are repairing. You must obtain this information in order to ensure circuit integrity.

If any wire except the pigtail is damaged, repair the wire by splicing in a new section of wire of the same gauge size (0.5 mm, 0.8 mm, 1.0 mm etc.). Use the DuraSeal splice sleeves and *EL-38125-10* splice sleeve crimping tool. For wiring repair, refer to *Splicing Copper Wire Using Splice Sleeves on page 11-544.*

For connector position assurance (CPA), refer to *Connector Position Assurance Locks on page 11-552.*

For terminal position assurance (TPA), refer to *Terminal Position Assurance Locks on page 11-552.*

Connector Repairs

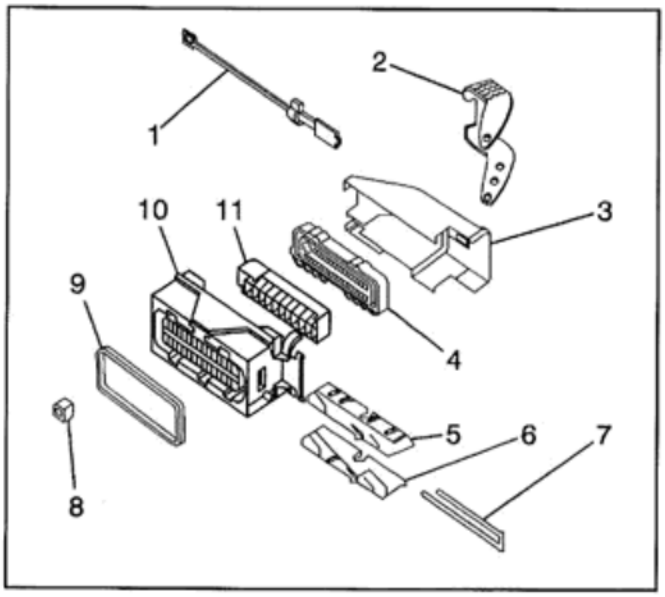
Connector Repairs contains a list of all connector repairs. The connector repairs are listed by the connector manufacturer and then by connector type. If the technician cannot identify the manufacturer of the connector, refer to Identifying Connectors below. Knowing the connector manufacturer will assist in finding the correct connector repair from the following list:

- *Connector Position Assurance Locks on page 11-552*
- *Terminal Position Assurance Locks on page 11-552*
- *AFL/EPC Connectors on page 11-552*
- *Bosch Connectors (BSK) on page 11-554* or *Bosch Connectors (0.64) on page 11-555* or *Bosch Connectors (2.8 JPT) on page 11-556* or *Bosch Connectors (ECM) on page 11-557*
- *Delphi Connectors (Weather Pack) on page 11-559* or *Delphi Connectors (Pull To Seat) on page 11-561* or *Delphi Connectors (Push To Seat) on page 11-560* or *Delphi Connectors (12-Way) on page 11-567* or *Delphi Connectors (Micro .64) on page 11-564* or *Delphi Connectors (Steering Gear) on page 11-569* or *Delphi Connectors (Micro-Pack 100W) on page 11-561*
- *FCI Connectors (Lever Lock) on page 11-569* or *FCI Connectors (SIR) on page 11-571*
- *FEP Connectors (Steering Gear) on page 11-572*
- *JST Connectors on page 11-573*
- *Kostal Connectors (Glow Plug Control Module) on page 11-574* or *Kostal Connectors (Transmission) on page 11-576*
- *Molex Connectors on page 11-578*
- *Sumitomo Connectors on page 11-580*
- *Tyco/AMP Connectors (Sensor) on page 11-584* or *Tyco/AMP Connectors (SIR) on page 11-598* or *Tyco/AMP Connectors (Door Module) on page 11-588* or *Tyco/AMP Connectors (102-Way Inline) on page 11-590* or *Tyco/AMP Connectors (0.25 Cap) on page 11-585* or *Tyco/AMP*

Connectors (Seat) on page 11-586 or *Tyco/AMP Connectors (CM 42-Way) on page 11-583* or *Tyco/AMP Connectors (43-Way) on page 11-586*

- *Yazaki Connectors (2-Way) on page 11-600* or *Yazaki Connectors (16-Way) on page 11-600*
- *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602*

Connector Anatomy



1709341

Legend

(1) Connector Positive Assurance (CPA)
(2) Assist Lever
(3) Wiredress Cover
(4) Seal Strain/Relief
(5) Slide Left Hand
(6) Slide Right Hand
(7) Terminal Positive Assurance (TPA)
(8) Terminal Positive Assurance (TPA)
(9) Connector Seal
(10) Connector Housing
(11) Inner Connector

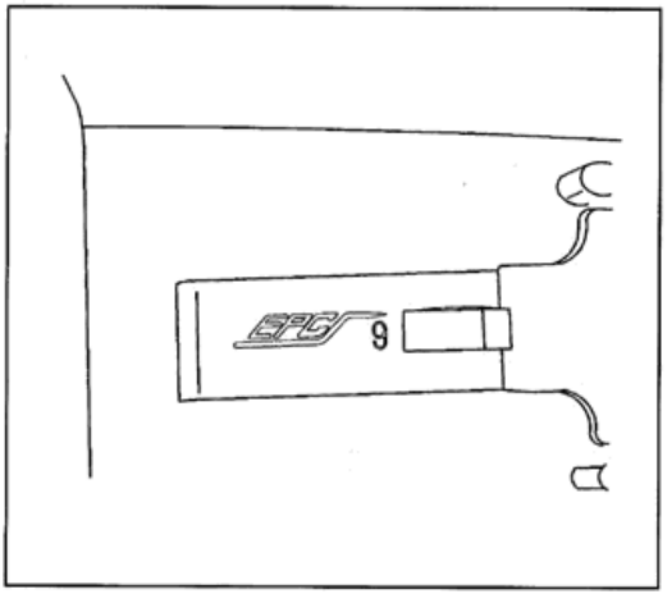
Identifying Connectors

Knowing the connector manufacturer is helpful when trying to locating the correct connector repair procedure. There are many different connector designs used on GM vehicles and it is sometimes difficult to identify the connector manufacturer. The information in this document should help with the identification of connector manufactures.

The following connector manufacturers make most of the connectors found in GM vehicles:

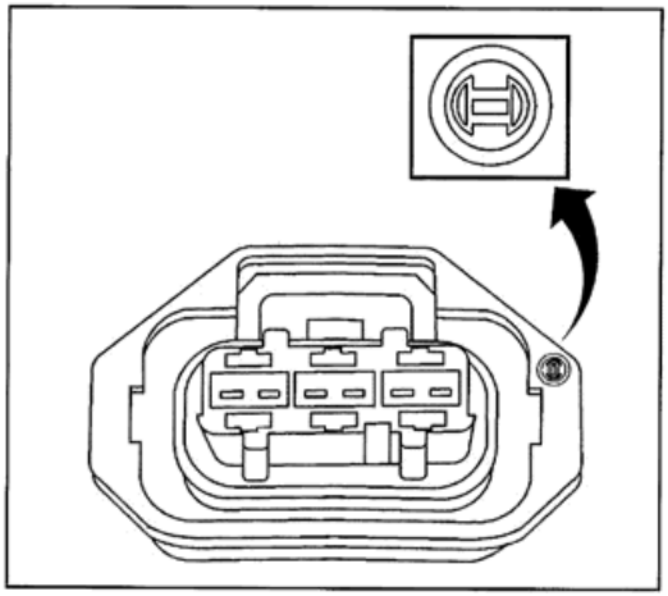
- AFL/EPC (Alcoa Fujikura Ltd./Engineered Plastics Components)
- Bosch
- Delphi
- FCI (Framatome Connectors International)
- JAE (Japan Aviation Electronics)
- JST (Japan Solderless Terminals)
- Kostel
- Molex
- Sumitomo
- Tyco/AMP
- Yazaki

Identifying the manufacturer of a connector is often difficult. When trying to determine the manufacturer of a connector, look for specific identifying marks that are unique to that connector supplier. Most of these identify marks are hard to find or see. Check the connector carefully and refer to the information below for pictures and descriptions of connector identification markings.



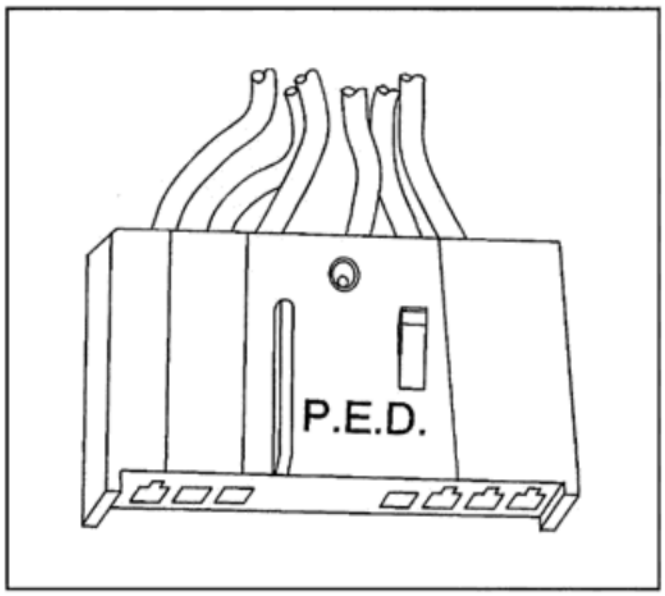
1466850

- Most of AFLs connectors have EPC on their connector body. Some of the smaller connectors will not have any markings on them.



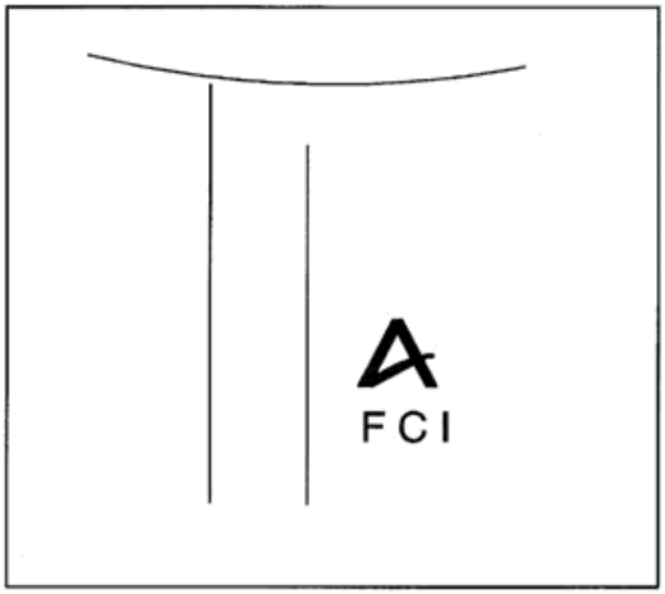
1460356

- In some cases Bosch will actually be printed on the connector. If Bosch does not appear on the connector, look for the Bosch logo. The Bosch logo is a circle with a blunted arrow inside. This logo can appear anywhere on the connector and is often very small.



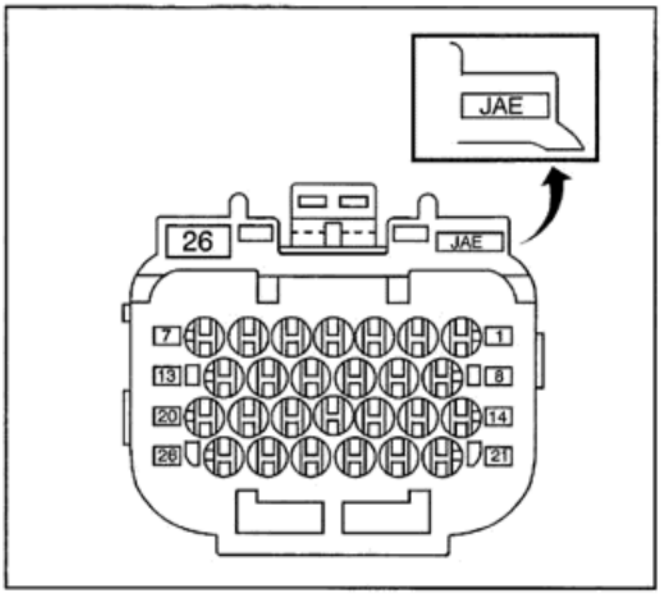
1460486

- In some cases Delphi will actually be printed on the connector. If Delphi is not printed on the connector, look for PED. In both cases there is no specific orientation for Delphi or PED and they can appear anywhere on the connector.



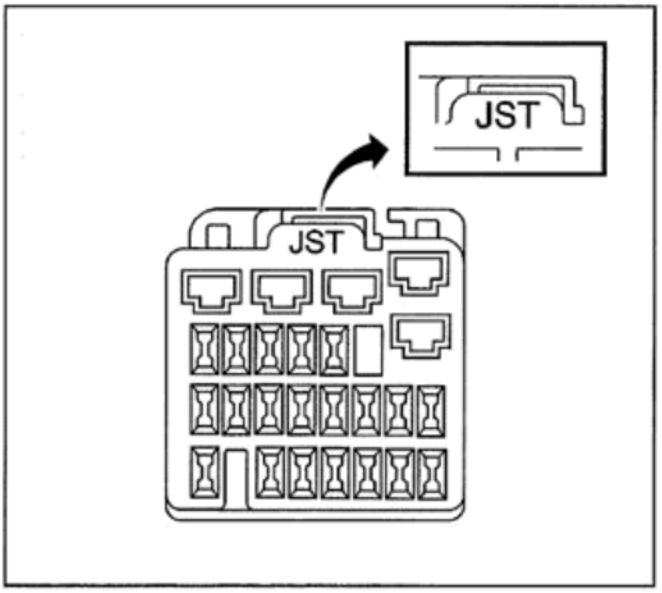
1460611

- FCI connectors may have the FCI logo on their connectors. The logo is the letters FCI with an "A" above it.



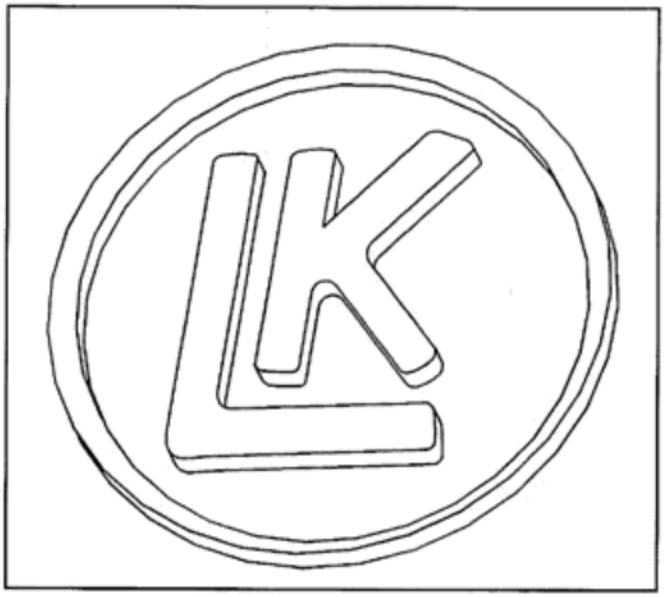
1468768

- JAE connector have JAE in small letters on their connectors.



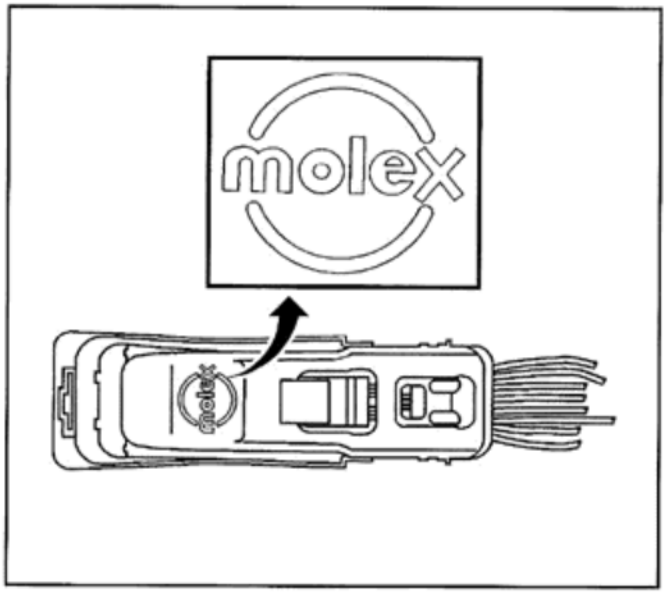
1468706

- JST connectors have JST in small letters on their connectors, similar to that above. The location of the logo will vary with the connector size and style.



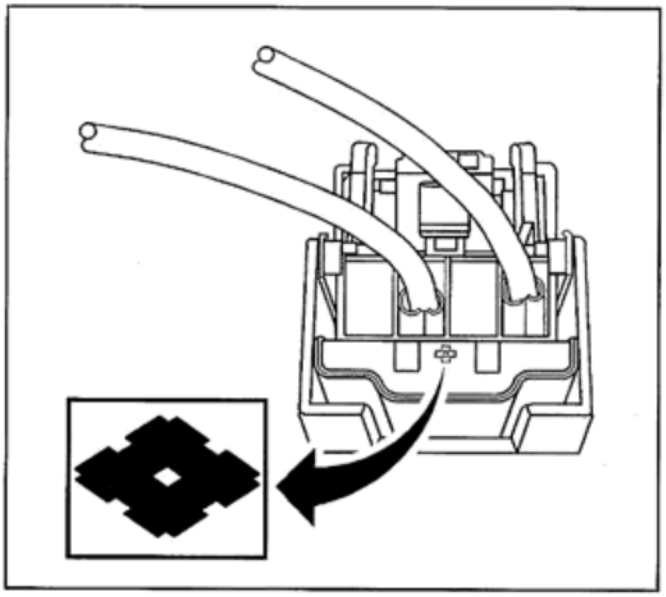
1709340

- Kostel has an "LK" with a circle around it. These connector are usually used as a transmissions connection.



1467199

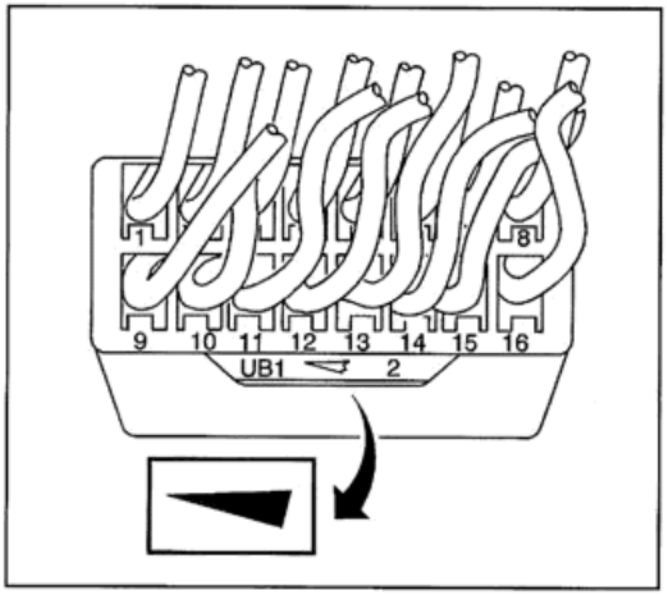
- Most Molex connectors will have the Molex logo on the dresscover of the connector. In some cases the connectors may have MX followed by another letter. The third letter indicates where the connector was made. A connector with MXD is a Molex connector made in Detroit.



1467225

Sumitomo has a unique symbol on their connector and possibly a part number. The symbol is similar to that of a diamond lying on its side, similar to that shown. The logo could appear anywhere but the most common place is at the wire side of the housing.

- Tyco/AMP has many different and unique connector designs. Some may or may not have identifiable marks on them.



1467254

- Yazaki has a wedge or arrow shape, similar to that shown.

Connector Position Assurance Locks

The connector position assurance (CPA) is a small plastic insert that fits through the locking tabs of the connector. CPAs are used in various connectors throughout the vehicle. CPAs are also used in all SIR system electrical connectors. The CPA ensures that the connector halves cannot vibrate apart. You must have the CPA in place in order to ensure good contact between the mating terminals of the connector.

Terminal Position Assurance Locks

The terminal position assurance (TPA) insert resembles the plastic combs used in the control module connectors. The TPA keeps the terminal securely seated in the connector body. Do not remove the TPA from the connector body unless you remove a terminal for replacement. If the TPA is removed, be sure to reinstall it before reconnecting the connector.

AFL/EPC Connectors

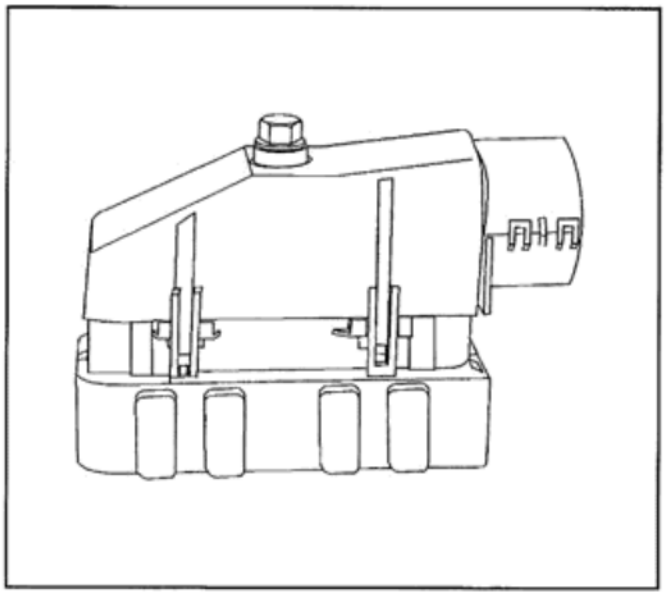
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-12A* Terminal Release Tool
- *J-38125-216* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

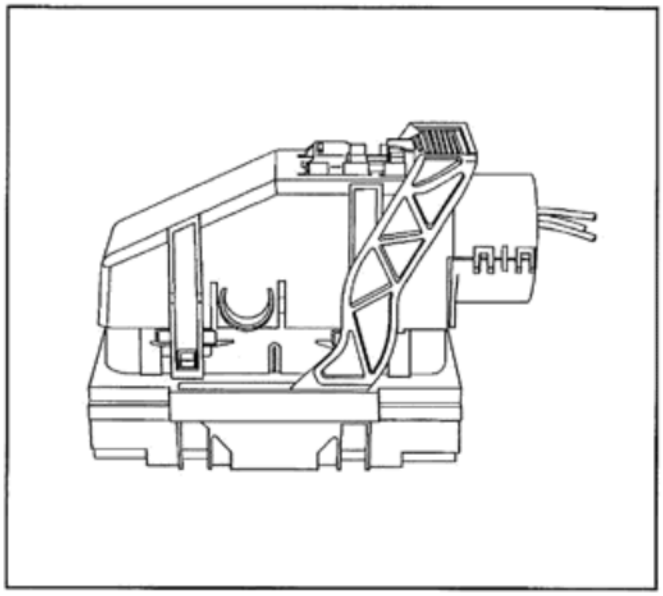
Terminal Removal Procedure

Follow the steps below in order to remove terminals from the connector.



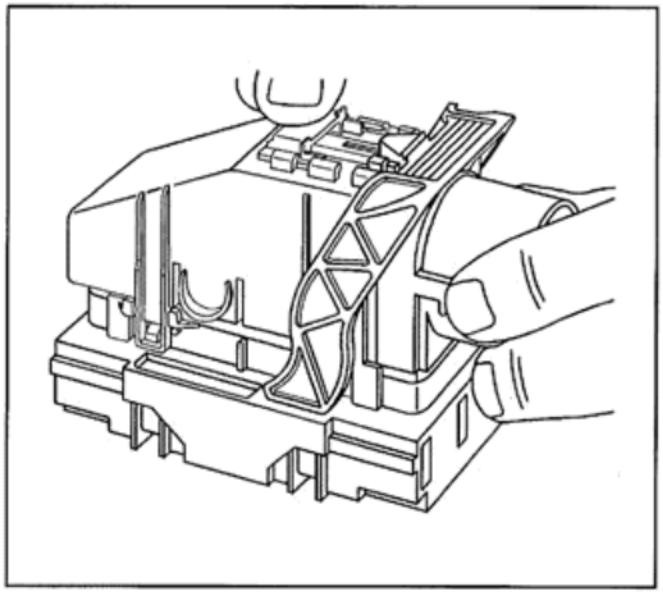
1709283

1. For connectors with a bolt in the dress cover, turn the bolt counterclockwise to remove the connector from the component.



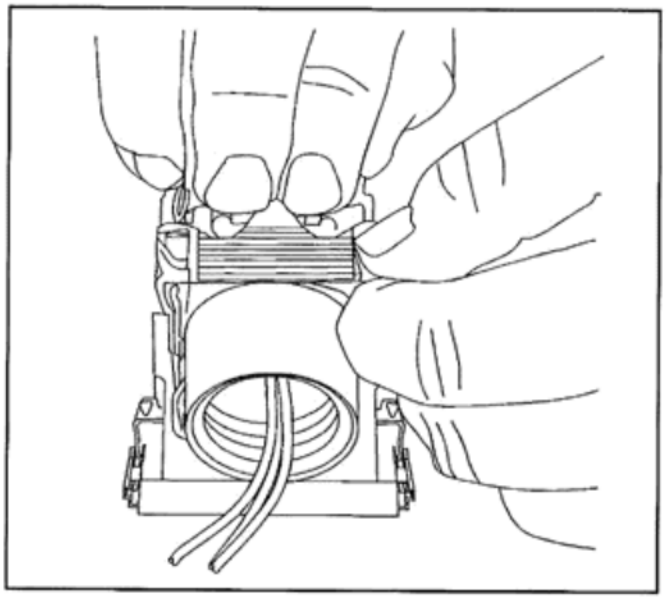
1709284

2. Locate the connector position assurance (CPA) on the top of the wire dress cover. Slide the CPA forward.



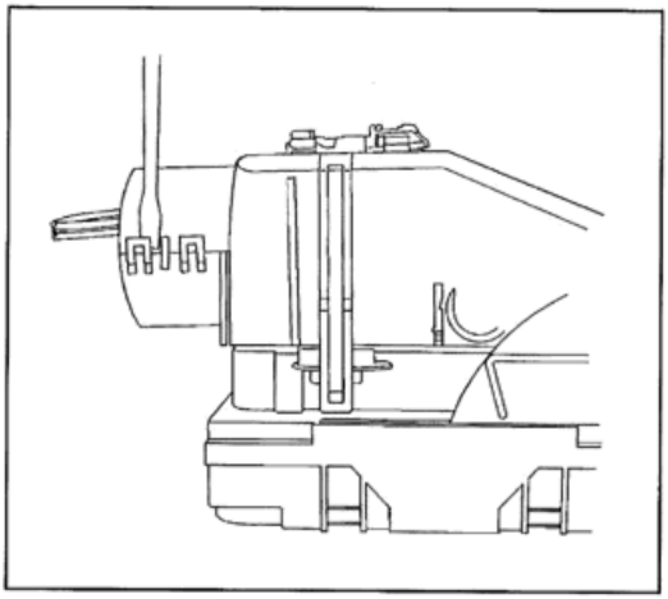
1709285

3. Slide the lever lock forward while pressing down on the lever lock release tab.



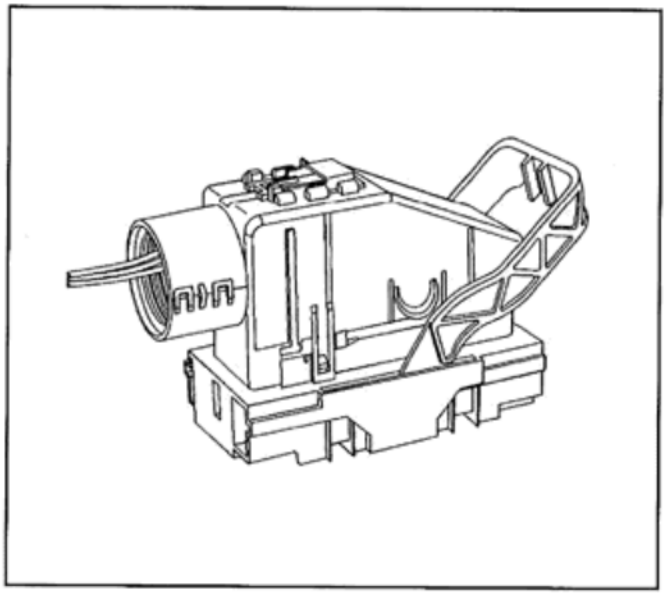
1709286

4. View showing depressing of the lever lock release tab.



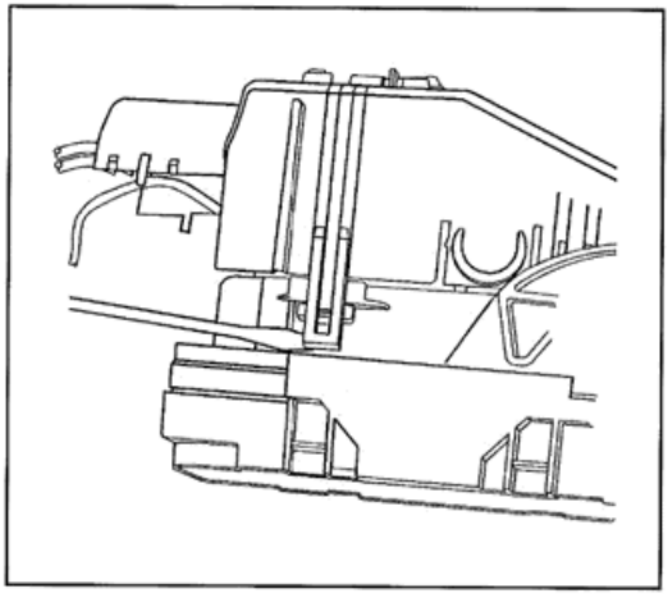
1709288

8. Release the rear lower half of the wiredress cover.



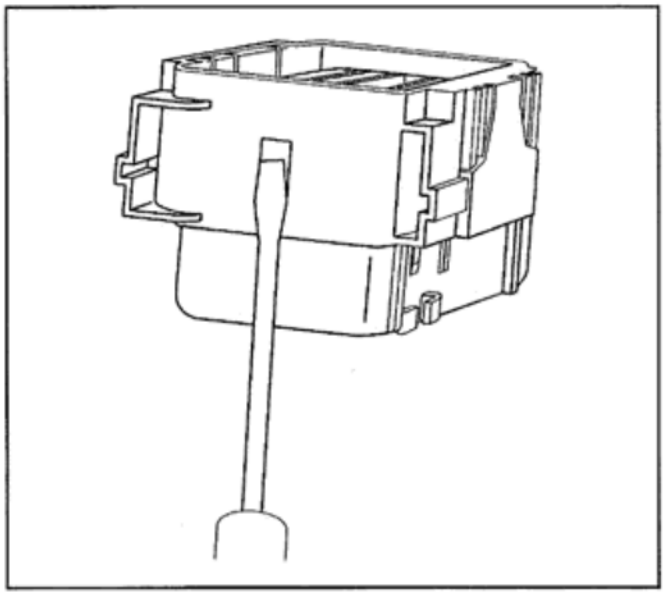
1709287

5. View of connector in released position.
6. Disconnect the connector from the component.
7. Locate the dress cover locking tabs at the corners of the dress cover. Use a small flat-blade tool to release the locking tabs and remove the dress cover.



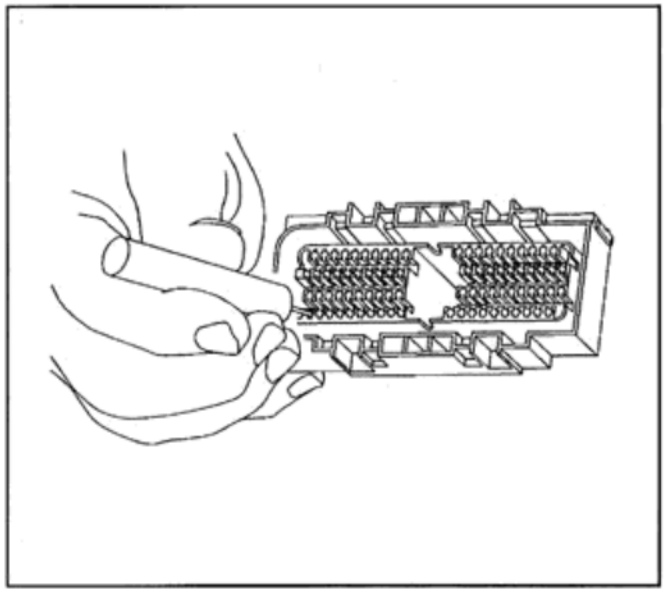
1709289

9. Release the tabs that are holding the wiredress cover to the connector body.
10. Remove the nose piece by inserting a small flat-blade tool into the slots on both ends of the connector body. Gently pry the nose piece out of the connector. J-38125-216 can also be used to remove the nose piece.



1709282

11. Use the J-38125-12A tool to release the terminals by lifting the terminal retaining tabs on the inside of the connector.



1709281

12. While holding the removal tool in place, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
13. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
14. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Bosch Connectors (BSK)

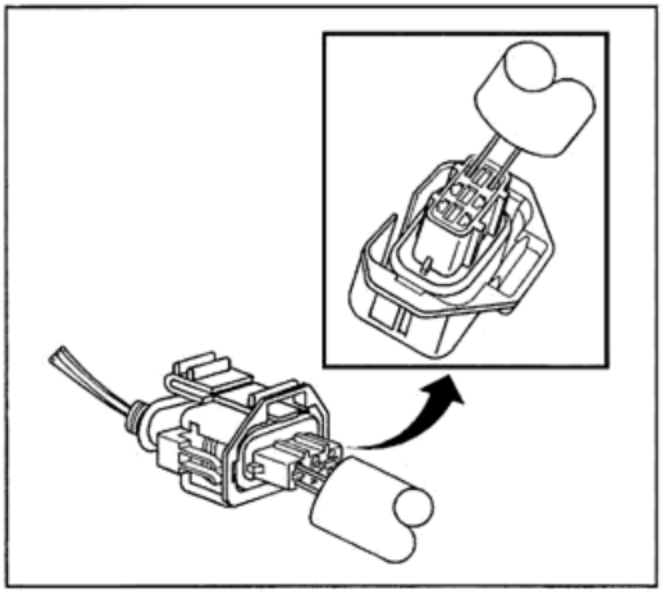
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-561* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure

1. Disconnect the connector from the component.
2. Remove the wire dress cover, if necessary.
3. Push the wire side of the terminal that is being removed toward the connector and hold it in position.



1446346

4. Insert the J-38125-561 tool into the 2 cavities on each side of the terminal at the front of the connector and push until you feel the tool disengage the terminal retainers.
5. Carefully pull the terminal out of the connector. Always remember never use force when pulling a terminal out of a connector. If the terminal is difficult to remove, repeat the entire procedure.
6. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
7. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Bosch Connectors (0.64)

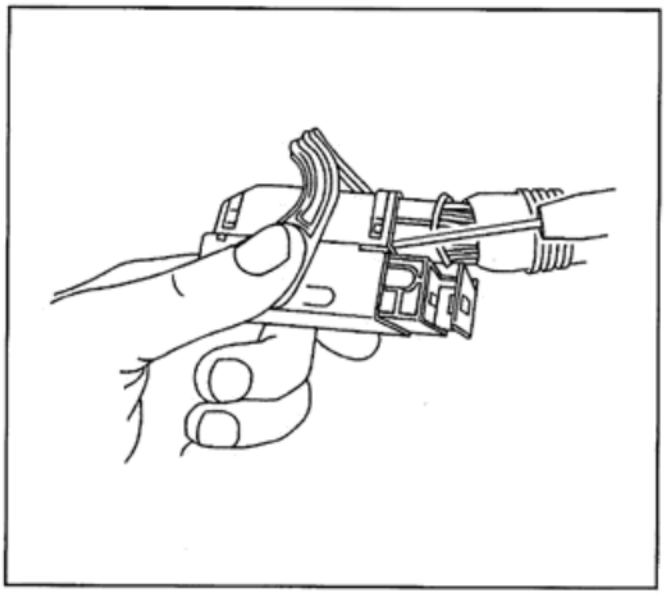
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-560* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

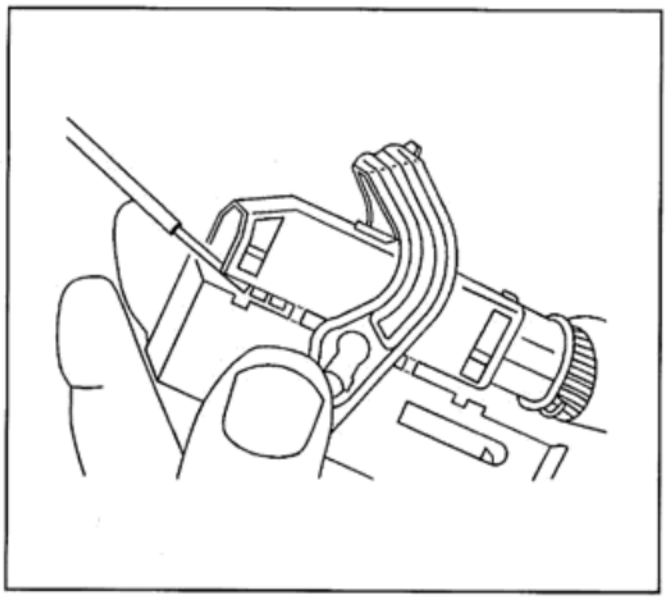
Terminal Removal Procedure

1. Locate the lever lock on the wire dress cover. While pressing the lock, pull the lever over and past the lock until the lever is at the end of its travel.
2. Disconnect the connector from the component.
3. Pull the rubber boot that covers the wires back to expose the end of the connector dress cover.
4. Place the connector locking lever in the center of the connector.



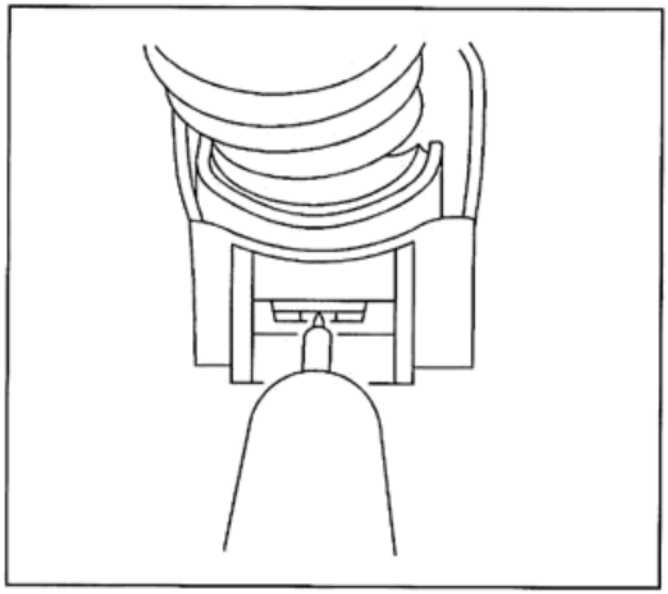
1442703

5. Locate the 2 dress cover locking tabs that are on the wire end of the connector. Insert a small flat-bladed tool between the cover and connector body and pry up.



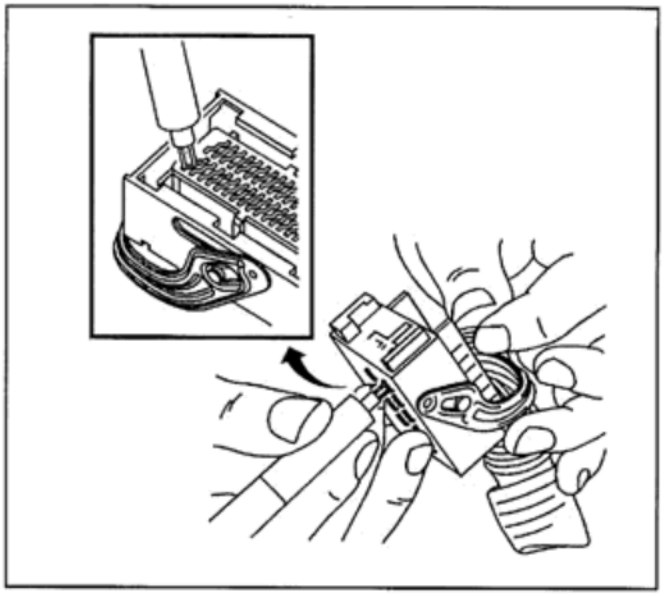
1442709

6. Locate the 2 dress cover locking tabs located on the opposite side of the connector. Insert a small flat-bladed tool between the cover at the connector end and pry up.
7. Remove the dress cover.
8. Cut the tie wrap on the wire bundle.



1442715

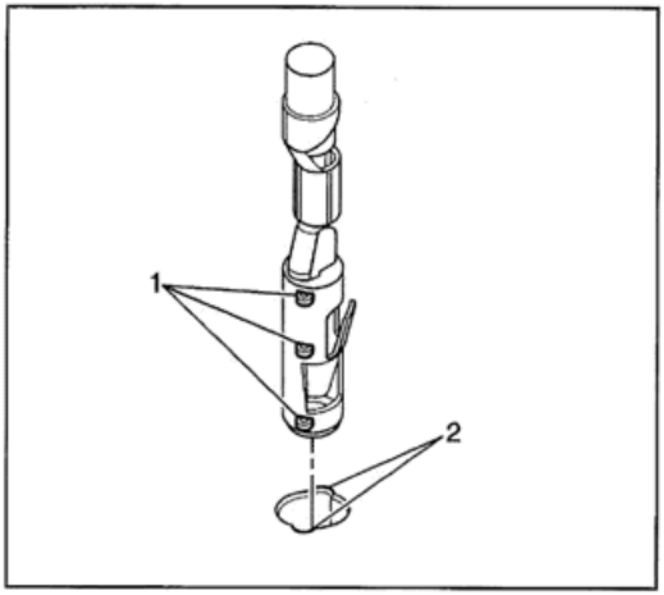
9. Remove the terminal position assurance (TPA) by inserting a small flat-bladed tool into the small slot in the end of the slider and pushing on the TPA until it comes out of the connector. When the TPA exits the opposite side of the connector, gasp the TPA and pull it completely out of the connector.
10. Push the wire side of the terminal that is being removed toward the connector and hold it in position.



1442734

11. Insert the J-38125-560 into the 2 triangular cavities on each side of the terminal at the front of the connector.
12. Carefully pull the terminal out of the connector. Always remember never use force when pulling a terminal out of a connector. If the terminal is difficult to remove, repeat the entire procedure.
13. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
14. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Terminal Insertion Procedure



1442741

1. Prior to installation the terminal must be aligned so the (1) coding lugs align with the (2) coding grooves on the connector.
2. Once the terminal is aligned, slide the terminal into the cavity until the retainer has engaged in the cavity of the connector.
3. Slide the TPA in the connector body and seat it using a small flat bladed tool. The TPA is seated when it is flush with the contact housing.
4. Secure the wires to the connector body using a tie wrap and replace the dress cover and grommet.

Bosch Connectors (2.8 JPT)

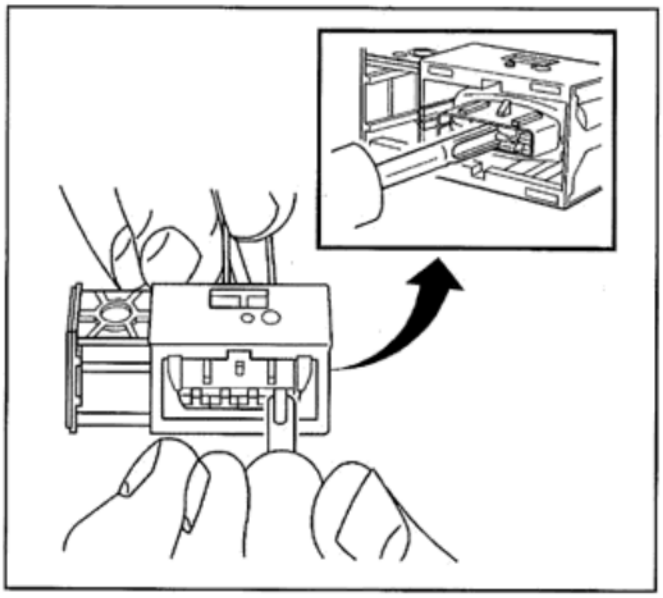
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-557* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure

1. Pull out the slider on the connector position assurance (CPA) until it is at the end of its travel.
2. Disconnect the connector from the component.
3. Remove the wire dress cover, if necessary.
4. Push the wire side of the terminal that is being removed toward the connector and hold it in position.



1445490

5. Insert the J-38125-557 into the 2 cavities on each side of the terminal at the front of the connector and push until you feel the tool disengage the terminal retainers.
6. Carefully pull the terminal out of the connector. Always remember never use force when pulling a terminal out of a connector. If the terminal is difficult to remove, repeat the entire procedure.
7. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
8. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

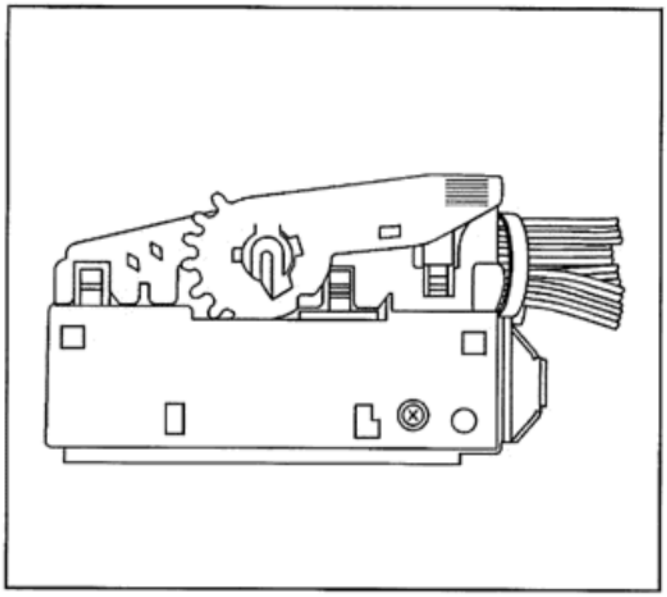
Bosch Connectors (ECM)

Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-213* Terminal Release Tool
- *J-38125-556* Terminal Release Tool

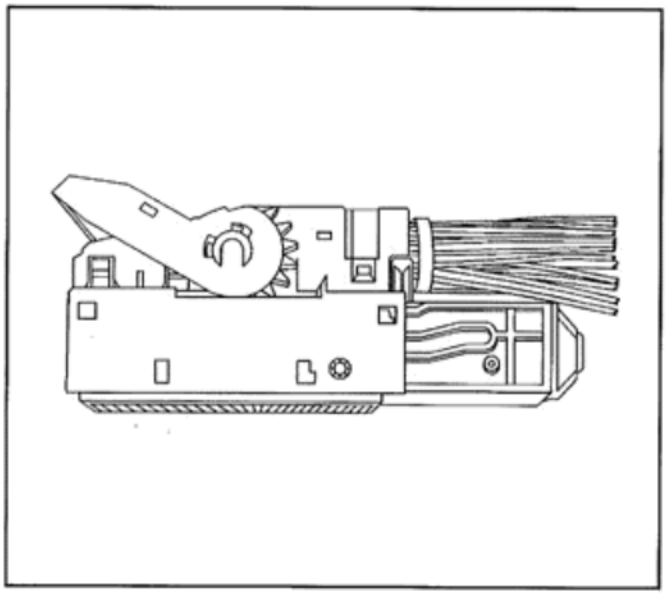
For equivalent regional tools, refer to *Special Tools on page 11-616.*

Terminal Removal Procedure



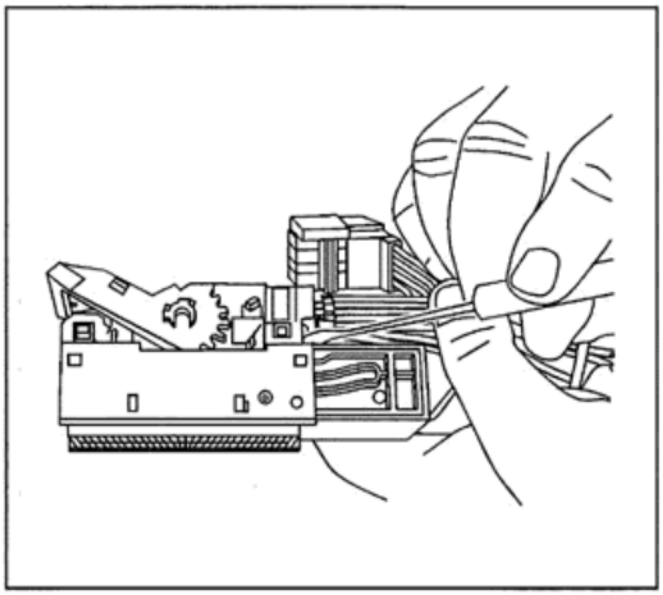
1709276

1. Locate the assist lever on the top of the connector. Move the assist lever to the forward position.



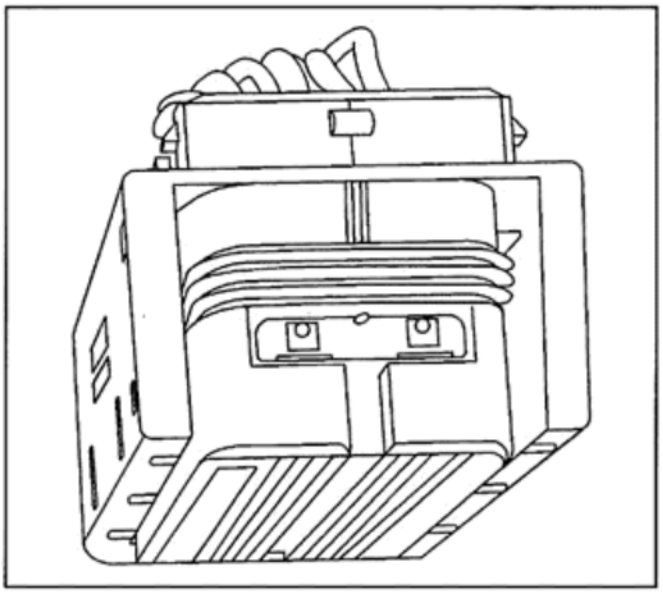
1709277

2. Disconnect the connector from the component.



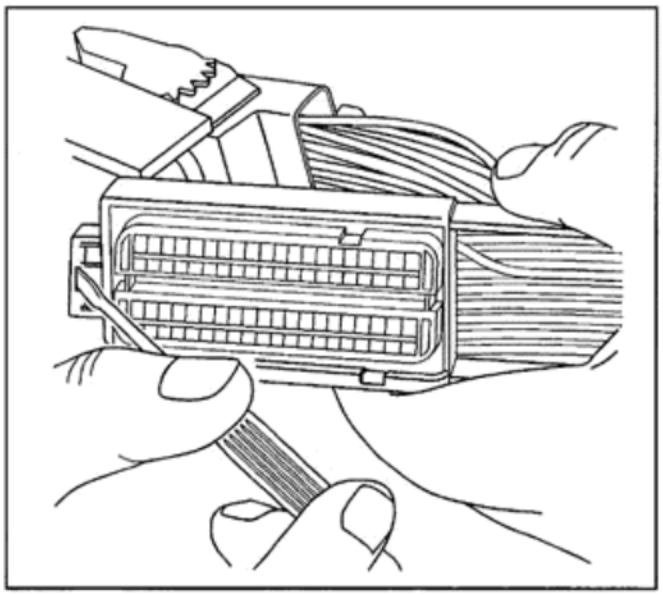
1709273

3. Locate the dress cover locking tabs at the corners of the connector. Use a small flat-blade tool to release the locking tabs and remove the dress cover.



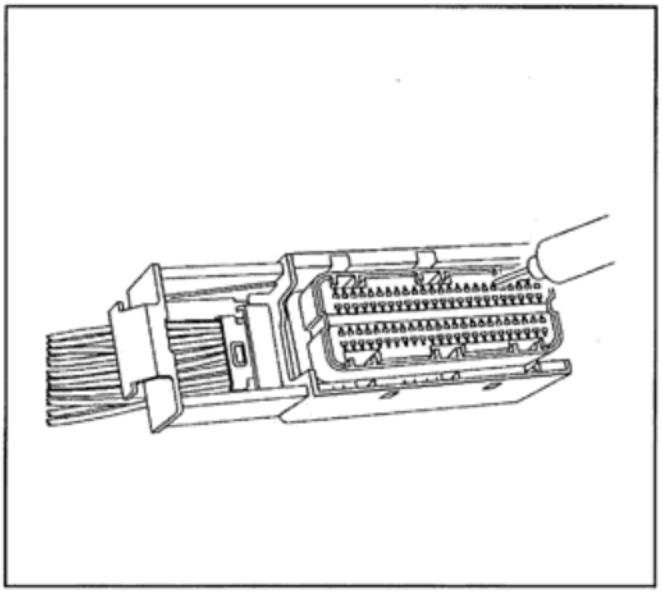
1709274

4. The terminal positive assurance (TPA) is located in the front of the connector.



1709278

5. Use a small flat-blade tool to remove TPA from the connector.



1709275

6. Use the J-38125-213 or the J-38125-556 tool to release the terminals by inserting the tool into the terminal release cavity.
7. While holding the removal tool in place, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
8. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
9. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Note: Ensure that the dress cover and connector body are both in the released position before reassembling. Failure to do so may cause damage to the connector and component.

10. Reconnect the connector bodies.

Delphi Connectors (Weather Pack)

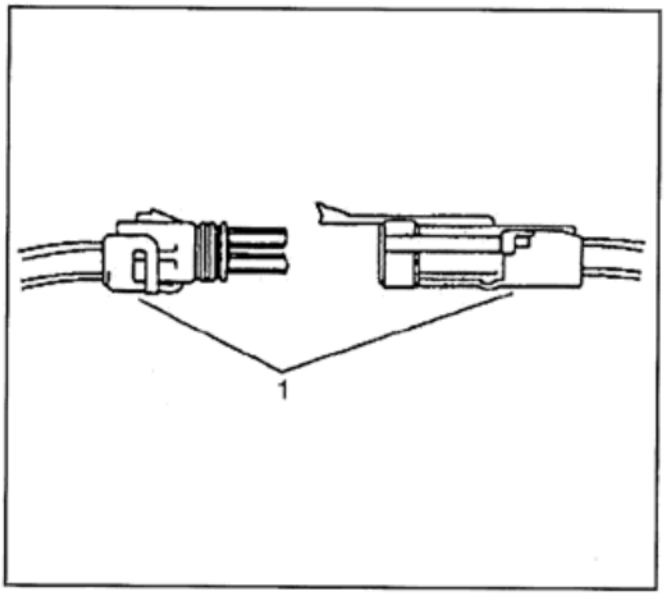
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-10A* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616.*

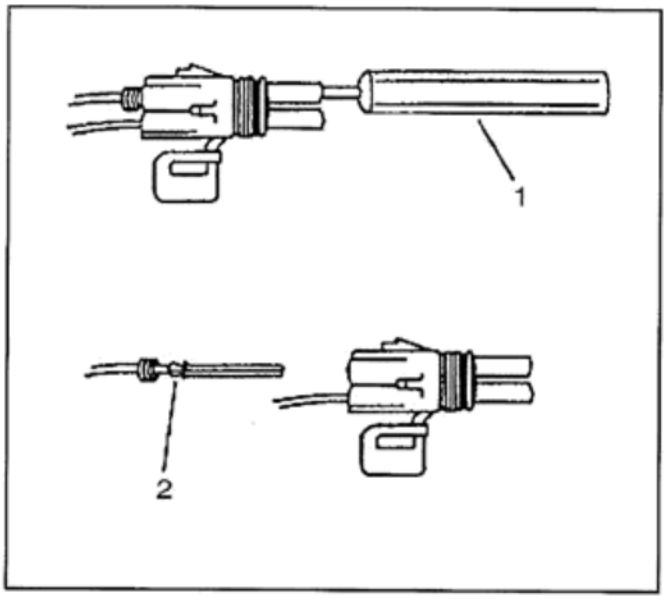
Terminal Removal Procedure

The following is the proper procedure for the repair of Weather Pack® Connectors.



8802

1. Separate the connector halves (1).
2. Open the secondary lock. A secondary lock aids in terminal retention and is usually molded to the connector (1).
3. Grasp the wire and push the terminal to the forward most position. Hold the wire in this position.



8803

4. Insert the Weather Pack® terminal removal tool J-38125-10A into the front (mating end) of the connector cavity until it rests on the cavity shoulder (1).
5. Gently pull on the wire to remove the terminal through the back of the connector (2).

Note: Never use force to remove a terminal from a connector.

6. Inspect the terminal and connector for damage. Repair as necessary. Refer to *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602*.
7. Reform the lock tang (2) and reset terminal in connector body.
8. Close secondary locks and join connector halves.
9. Verify that circuit is complete and working satisfactorily.
10. Perform system check.
11. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
12. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Delphi Connectors (Push To Seat)

Special Tools

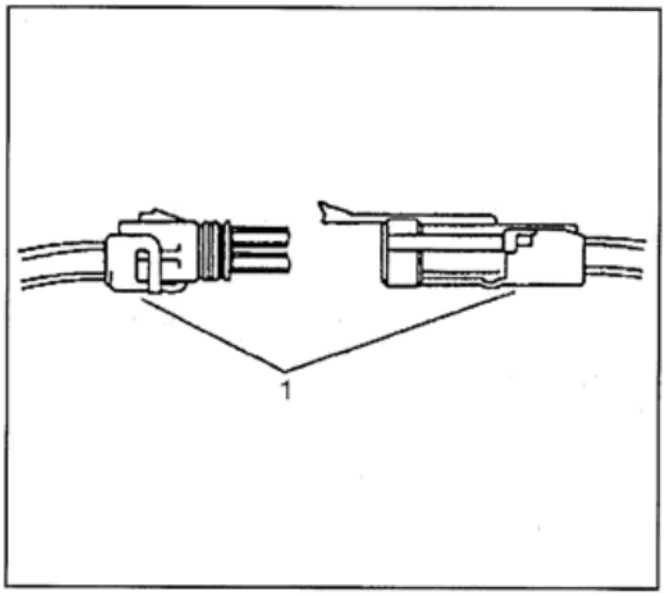
- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure

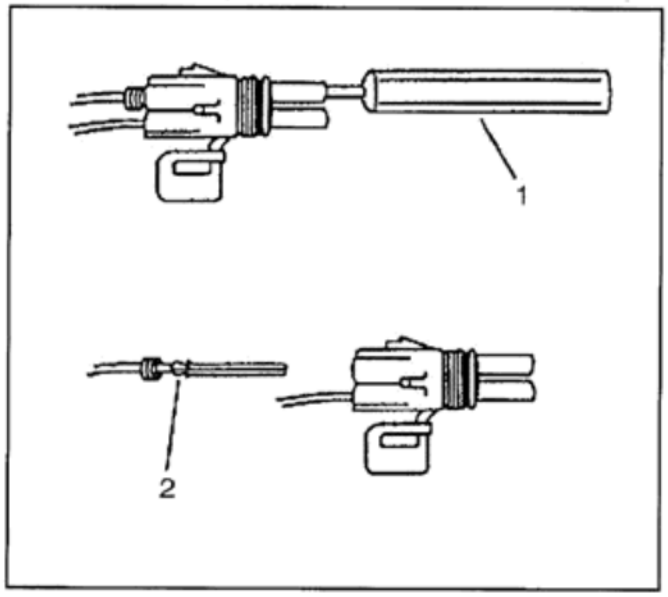
Follow the steps below in order to repair push to seat connectors.

1. Remove the terminal position assurance (TPA) device, the connector position assurance (CPA) device, and/or the secondary lock.



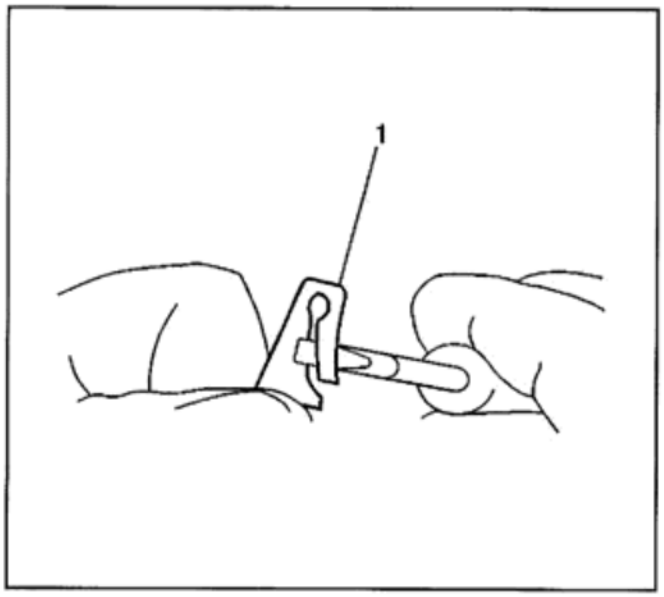
8802

2. Separate the connector halves (1).



8803

3. Use the proper pick or removal tool (1) in order to release the terminal.
4. Gently pull the cable and the terminal (2) out of the back of the connector.



8804

5. Re-form the locking device if you are going to reuse the terminal (1).
6. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
7. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Terminal Insertion Procedure

1. In order to reuse a terminal or lead assembly, refer to *Wiring Repairs on page 11-537*.
2. Ensure that the cable seal is kept on the terminal side of the splice.
3. Insert the lead from the back until it catches.
4. Install the TPA, CPA, and/or the secondary locks.

Delphi Connectors (Pull To Seat)

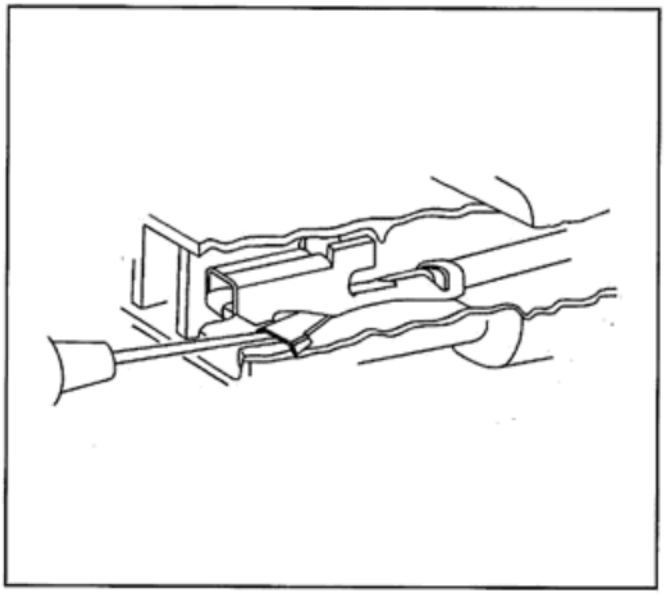
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure

If the terminal is visibly damaged or is suspected of having a faulty connection, the terminal should be replaced.



904718

Follow the steps below in order to repair pull-to-seat connectors:

1. Remove the connector position assurance (CPA) device and/or the secondary lock.
2. Disconnect the connector from the component or separate the connectors for in-line connectors.
3. Remove the terminal position assurance (TPA) device.
4. Review the connector end view to determine the proper test probe and release tool.
5. Insert the release tool into the front of the connector body.
6. Grasp the wire at the back of the connector body and gently push the terminal out the front of the connector body.
7. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
8. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Terminal Insertion Procedure

1. Align the terminal and pull the wire from the back of the connector in order to seat the terminal.
2. If the connector is outside of the passenger compartment, apply dielectric grease to the connector.
3. Install the TPA, CPA, and/or the secondary locks.

Delphi Connectors (Micro-Pack 100W)

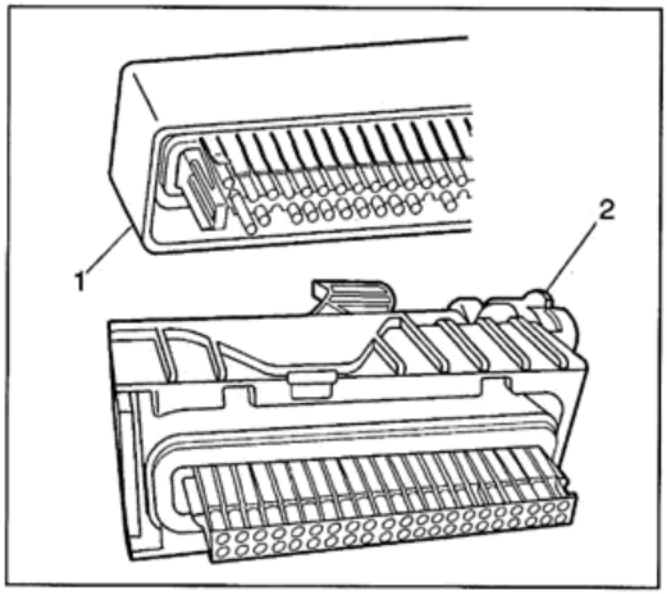
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-12A* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

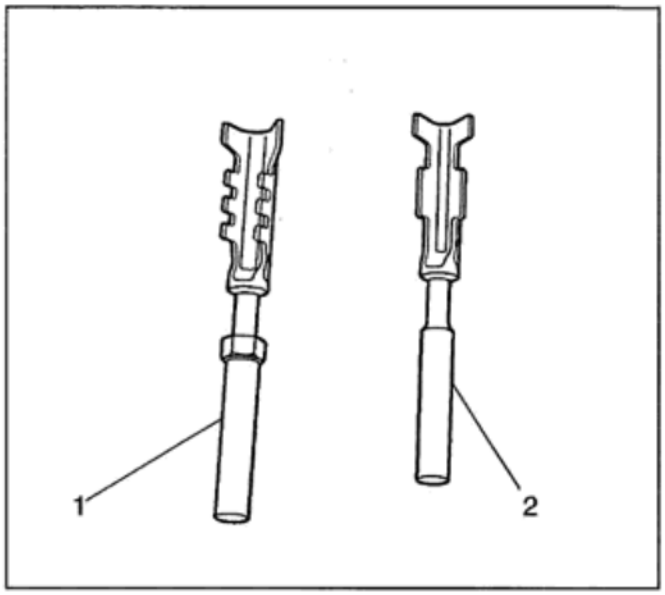
Terminal Removal Procedure

There are 2 styles of Micro-Pack 100W connectors. These connectors are very similar but use different terminals and have some minor physical differences also.



1364951

The first connector design of the Micro-Pack 100W (1) has a white connector interface that holds the terminals. The second design of the Micro-Pack 100W (2) has a gray interface to hold the terminals. Also, the first design has terminal cavities that are further apart (3 mm centerline) and offset from the other row of terminal cavities in the connector. The second design has terminals cavities that are closer together (2.54 mm centerline) and aligned vertically. One other way to identify the second design is the thin strip of material that runs along the outside of the cavities.

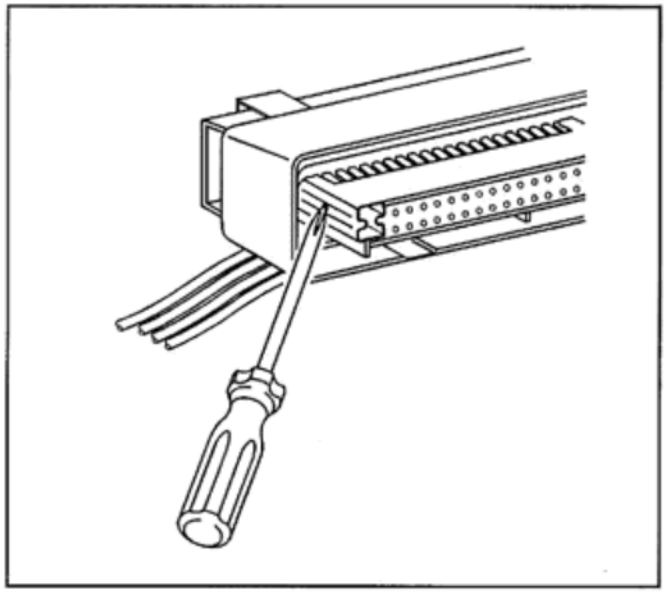


1364942

Note: There are 2 styles of Micro-Pack 100W terminals which are very similar. Ensure that you have the correct terminal before crimping the new terminal to the wire. The first design connector uses the longer terminal (1) that has a raised area in front of the recess in the terminal. The second design connector uses the shorter terminal without the raised area.

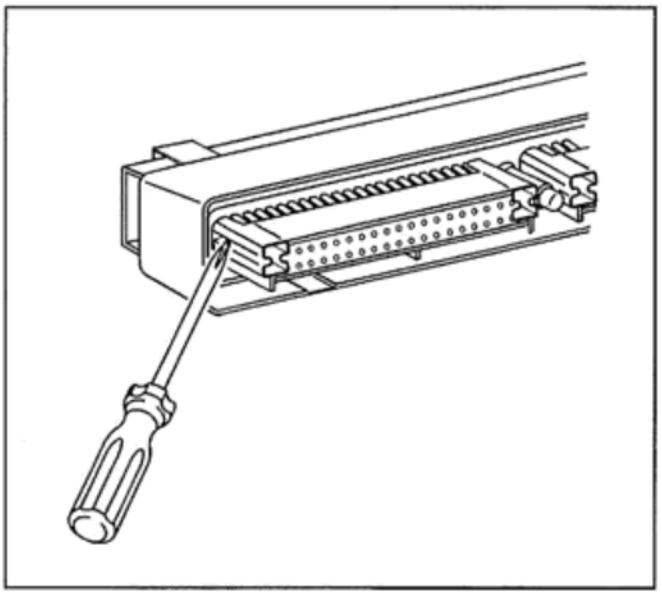
Follow the steps below in order to remove terminals from Micro-Pack 100W connectors. Some Micro-Pack 100W connector disassembly procedures will vary. Use this procedure as a guide.

1. Disconnect the connector from the component.



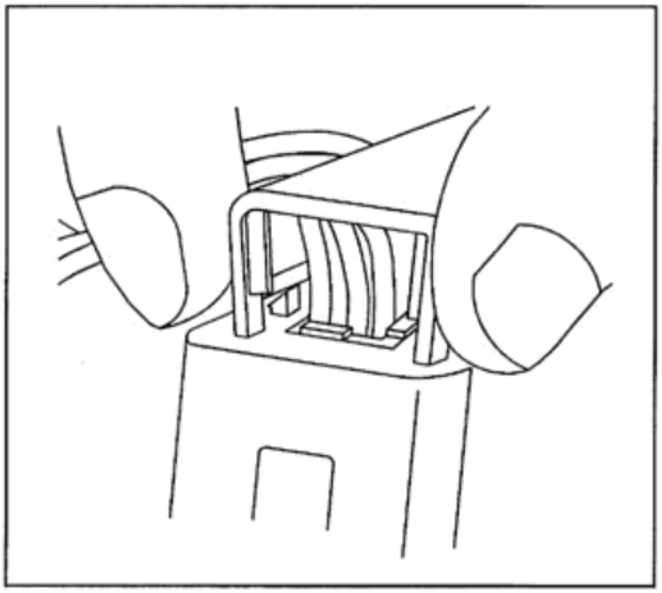
880994

2. Locate the nose piece locking tabs that are positioned on the side of the connector nose piece. The connector nose piece acts as a terminal positive assurance (TPA) and may be referred to as such.



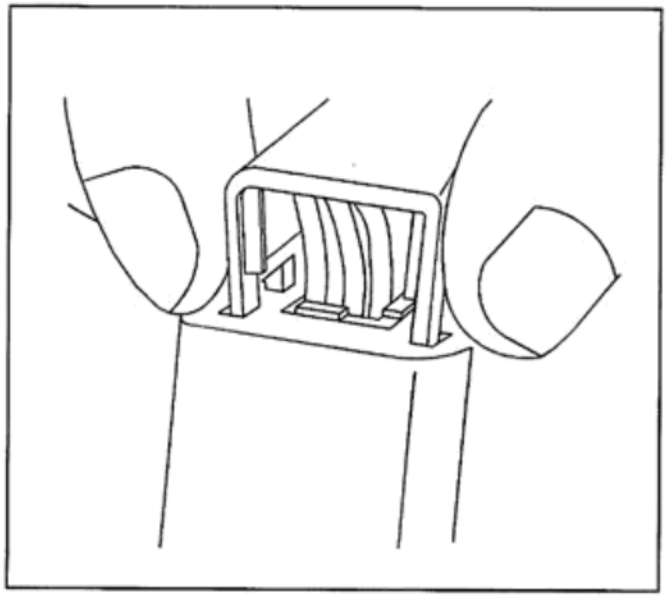
881004

3. Use a small flat-blade tool to push in one of the locking tabs while gently pulling on the same side of the nose piece.
4. Repeat the procedure for the other locking tab and remove the nose piece.
5. Remove the wire dress cover. The following is a general procedure for wire dress cover removal. Use this procedure as a guide, some dress cover removal procedures may vary.



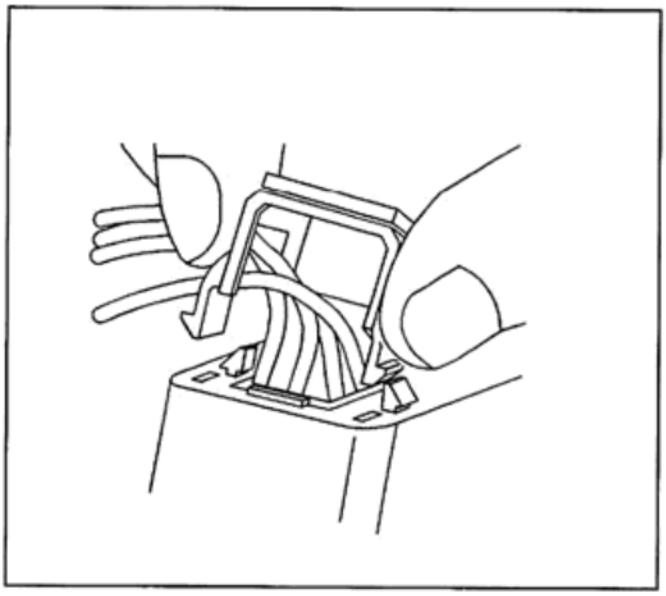
881006

6. Use fingers to squeeze the 2 locking legs of the cover.



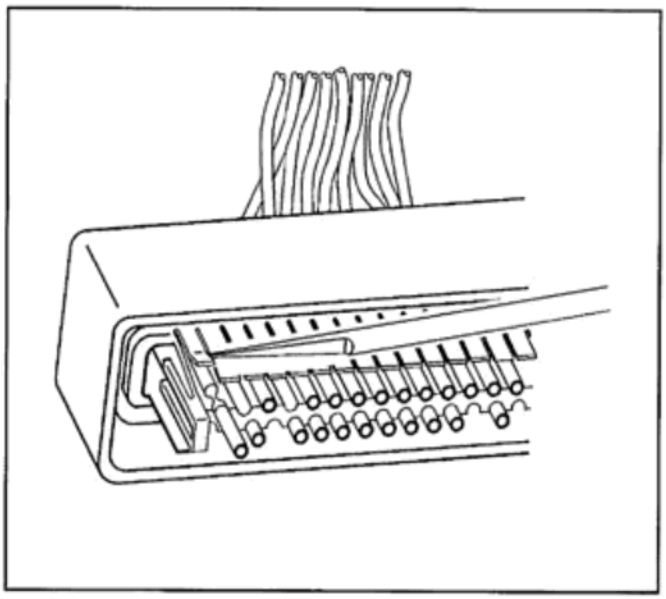
881008

7. Apply pressure and gently rock the cover until one locking leg is unseated.



881011

8. Continue to apply pressure and rock the cover until the second locking leg is unseated. Repeat procedure for the other side of the dress cover and remove the cover.



881017

9. Use J-38125-12A to gently lift the terminal retaining tab while gently pulling the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
10. If the terminal is severely bent or damaged, it may be possible on some connectors to push the wire out of the front of the connector instead of pulling it through. This will prevent damage to the internal seals of the connector. Once the terminal is pushed out of the connector, cut the wire as close to the terminal as possible and pull the wire through the connector.
11. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
12. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Terminal Insertion Procedure

After the terminal is crimped to the wire perform the following procedure in order to replace Micro-Pack 100 terminals.

1. Slide the new terminal into the correct cavity at the back of the connector.
2. Push the terminal into the connector until it locks into place. The new terminal should be even with the other terminals. Ensure that the terminal is locked in place by gently pulling on the wire.
3. To assemble the connector, reverse the Terminal Removal Procedure.

Delphi Connectors (Micro .64)

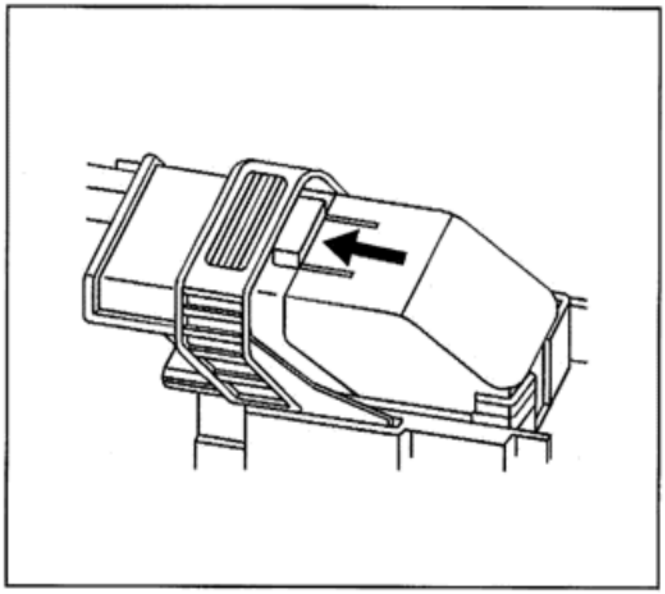
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-21* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616.*

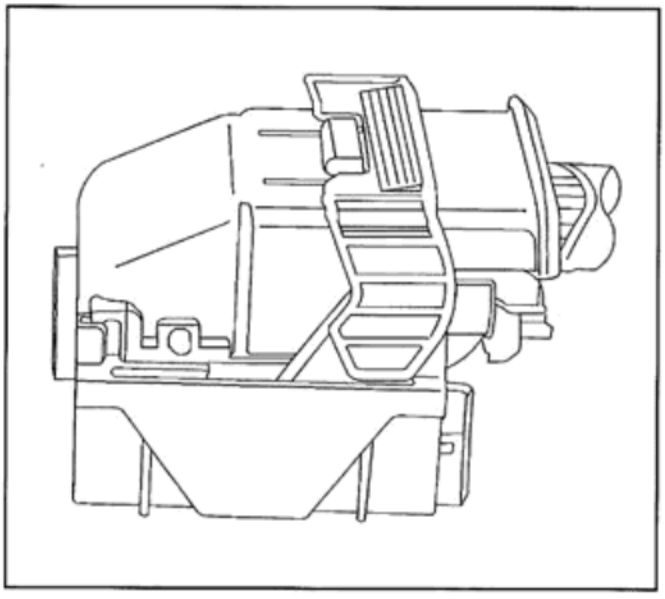
Terminal Removal Procedure

Follow the steps below in order to remove terminals from Micro .64 connectors.



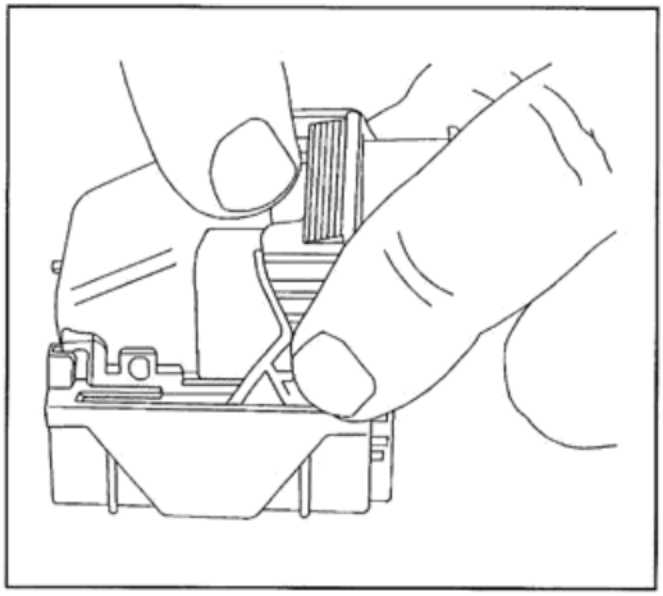
863406

1. Locate the lever lock on the wire dress cover. While depressing the lock, pull the lever over and past the lock. The lever lock may be located on the top or sides of the wire dress cover.



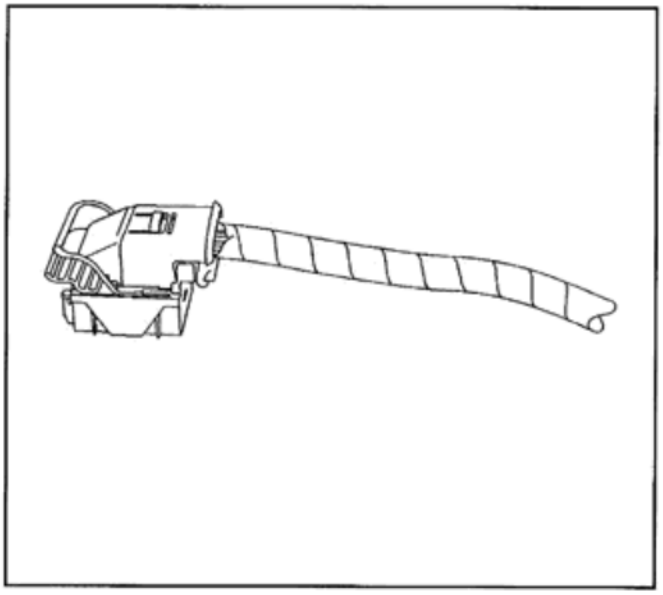
1709337

View of a typical Micro 64 connector.



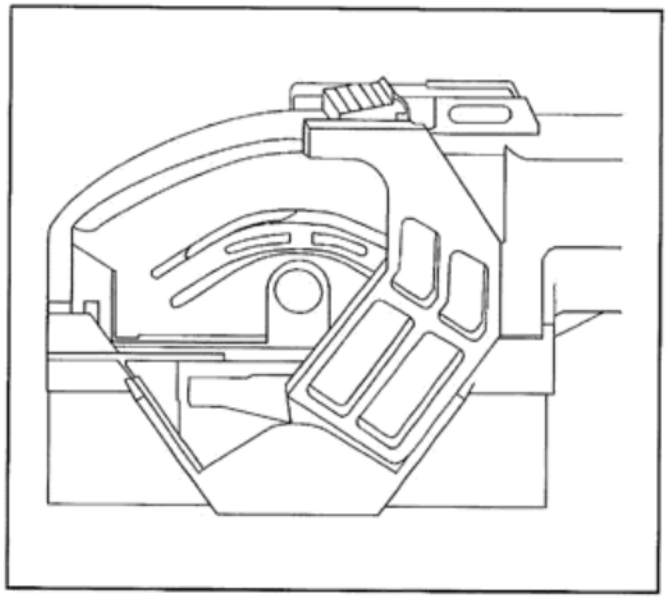
1709338

Depress the lock and pull the lever over and past the lock.



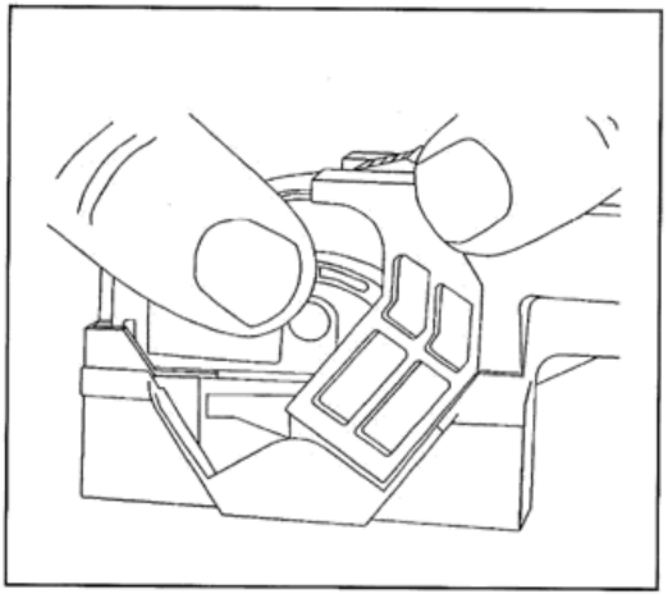
1709339

View of the connector when released from the component.



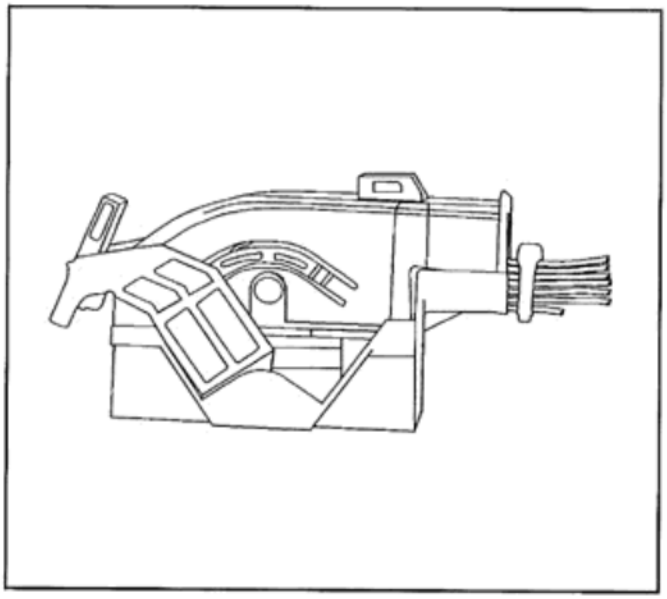
1709290

View of another type of Micro 64 connector.



1709291

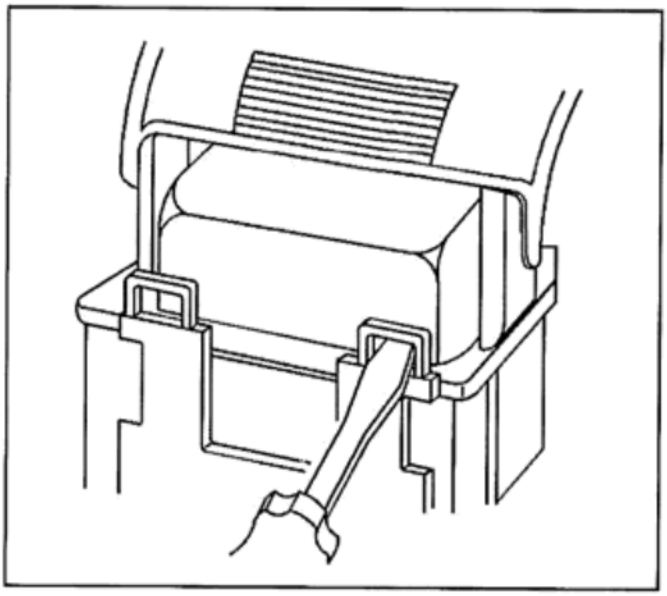
Depress the locks that are located on both sides of the wire dress cover and pull the lever over and past the locks.



1709292

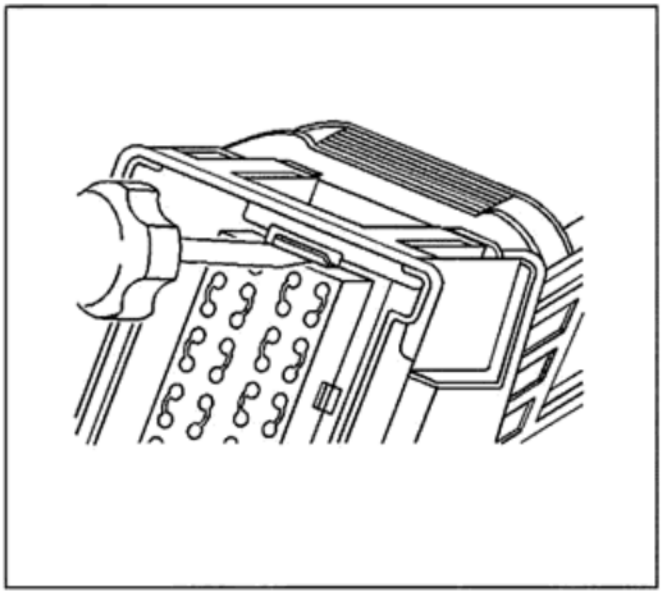
View of the connector when released from the component.

2. Disconnect the connector from the component.



863404

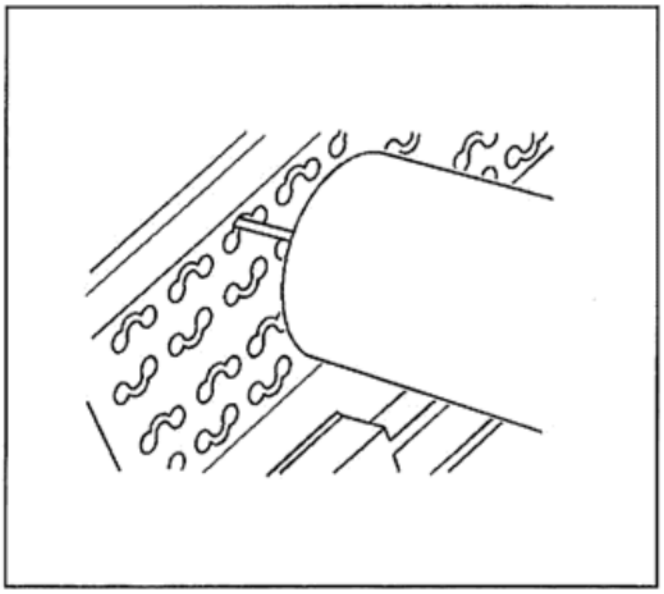
3. Locate the dress cover locking tabs at the front of the connector. Using a small flat-blade tool push down on one of the locking tabs and pull the cover up until the dress cover releases. Repeat this procedure for the other locking tab.
4. Once the front 2 locks are unlocked, lift the front of the dress cover and pull it forward.



863400

Note: Always use care when removing a terminal position assurance (TPA) in order to avoid damaging it.

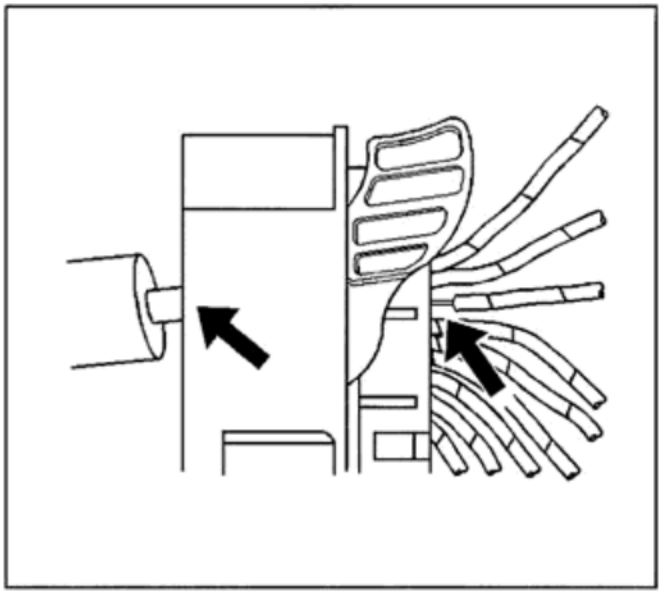
5. Remove the TPA by inserting a small flat-blade tool into the small slot on the TPA and pushing down until the TPA releases. Gently pry the TPA out of the connector.



863397

Note: Be careful not to angle or rock the J-38125-21 tool when inserting it into the connector or the tool may break.

6. Insert the J-38125-21 tool into the round canal between the terminals cavities at the front of the connector.



863390

7. While holding the removal tool in place, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
8. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
9. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Delphi Connectors (12-Way)

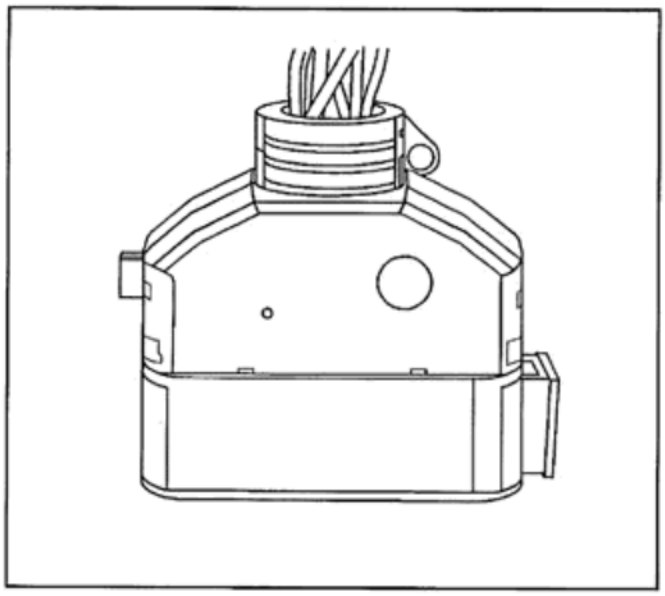
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-12A* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616.*

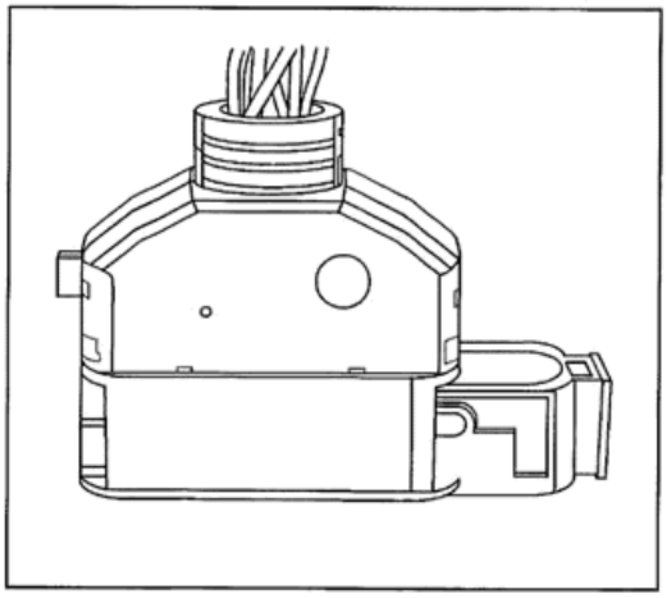
Terminal Removal Procedure

Follow the steps below in order to remove terminals from the connector.



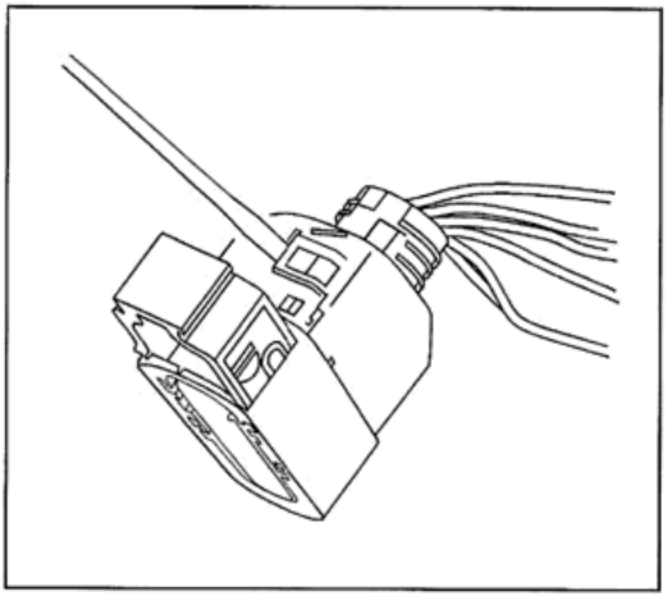
1709308

1. Locate the lever lock on the wire dress cover. Remove the connector position assurance (CPA) and slide the lever lock away from the connector body.
2. Disconnect the connector from the component.



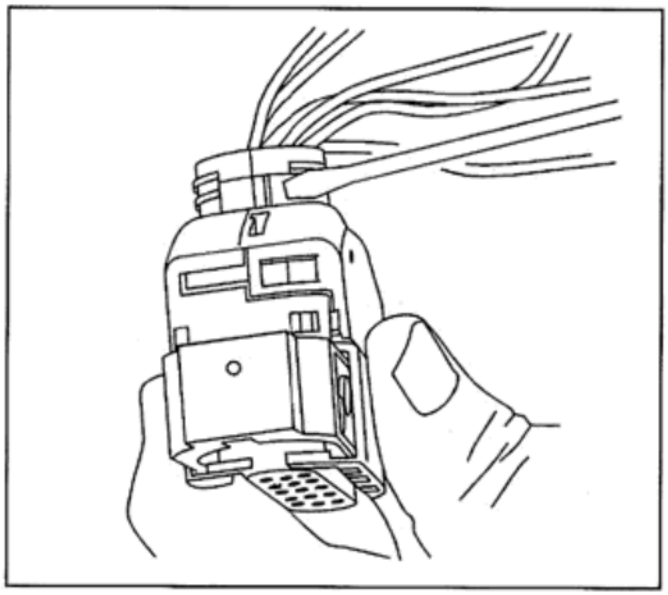
1709309

3. Locate the dress cover locking tabs on the dress cover of the connector. Using a small flat-blade tool release all of the locking tabs.



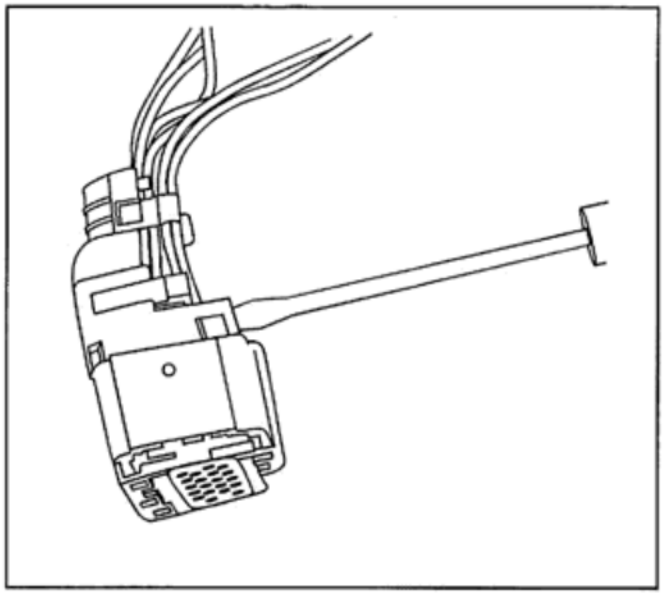
1709311

4. Release the lower wire dress cover locking tab.



1709312

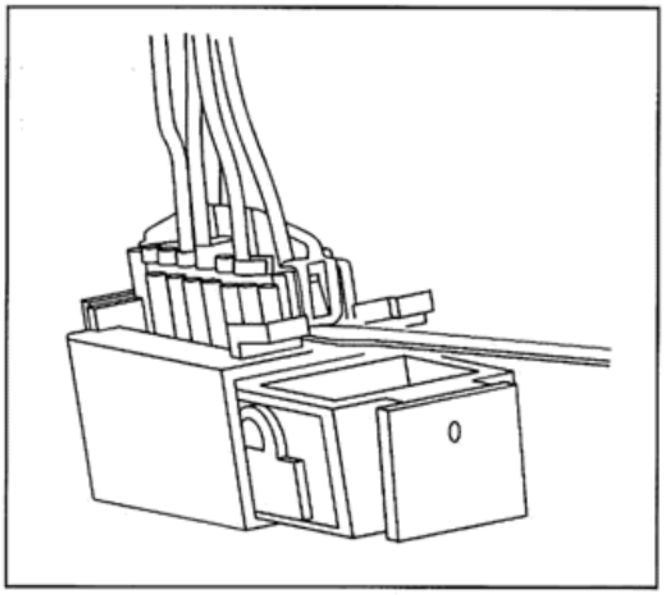
5. Release the upper wire dress cover locking tab.
6. Once the locks are unlocked, lift the dress cover off.



1709313

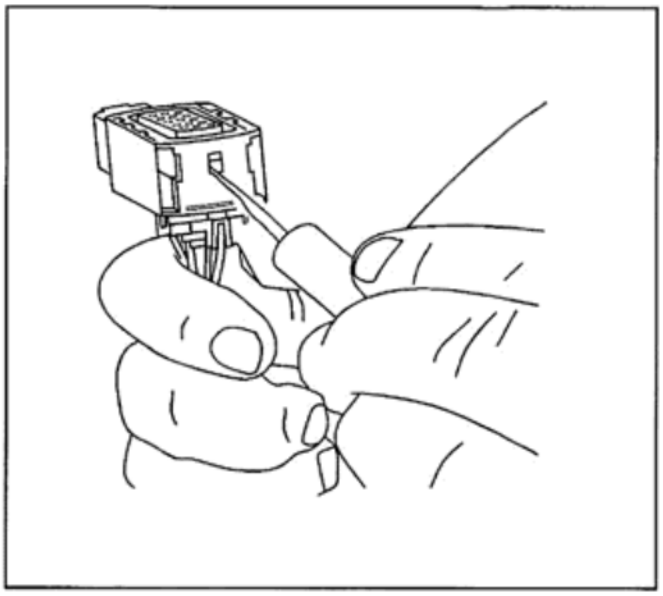
Note: Always use care when removing a terminal position assurance (TPA) in order to avoid damaging it.

7. Remove the TPA by inserting a small flat-blade tool into the locking tabs on both sides of the TPA . Gently pry the TPA out of the connector.



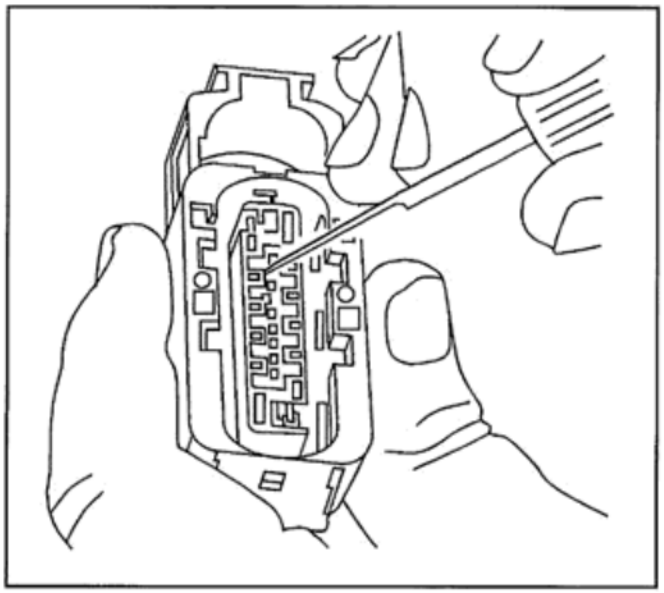
1709314

8. Remove the nose piece by inserting a small flat-blade tool into the locking tabs on both sides of the nose piece. Gently pry the nose piece out of the connector.



1709315

9. Insert the J-38125-12A tool to release the terminals by inserting the tool into the terminal release cavity.

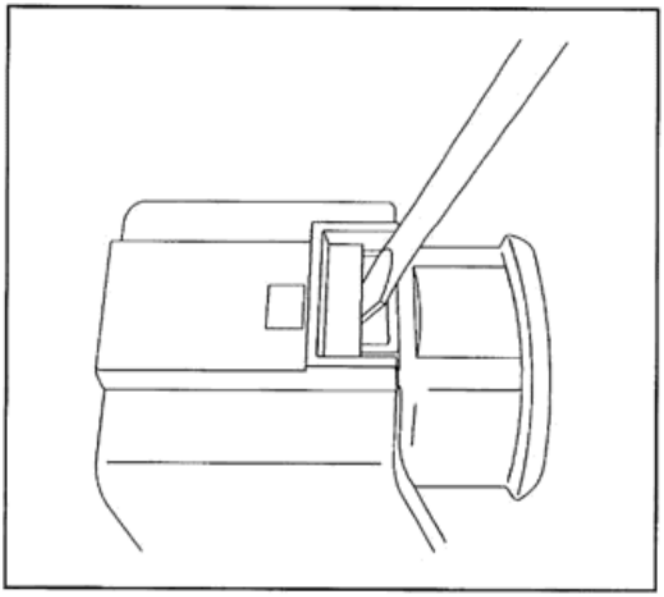


1709316

10. While holding the removal tool in place, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
11. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
12. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

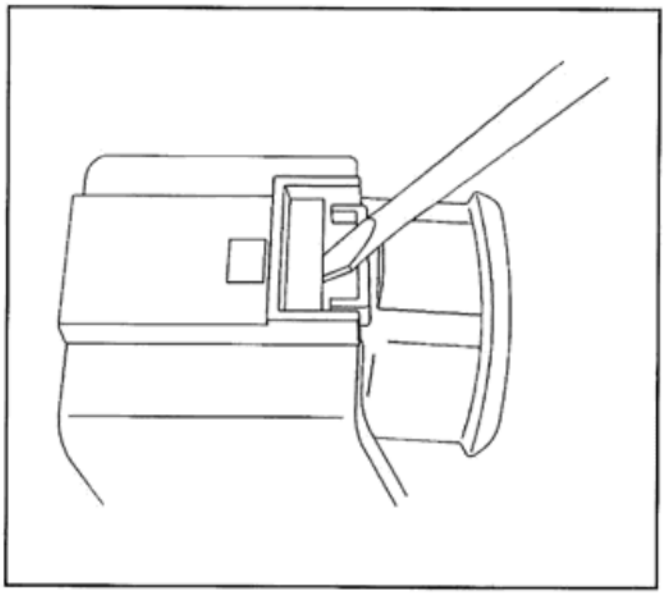
Delphi Connectors (Steering Gear)

Removal Procedure



2374629

1. Use a small flat-bladed tool to release the locking tab on the connector.



2374631

2. Push down the locking tab to release the connector. The small flat-bladed tool may need to be pushed down and angled back slightly to depress the locking tab. Pull on the connector body while releasing the locking tab to disconnect the connector.

FCI Connectors (Lever Lock)

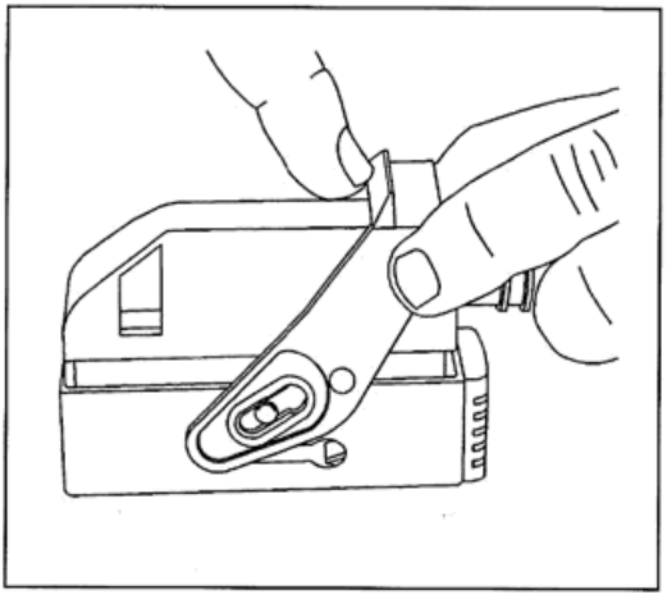
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-556* Terminal Release Tool
- *J-38125-560* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

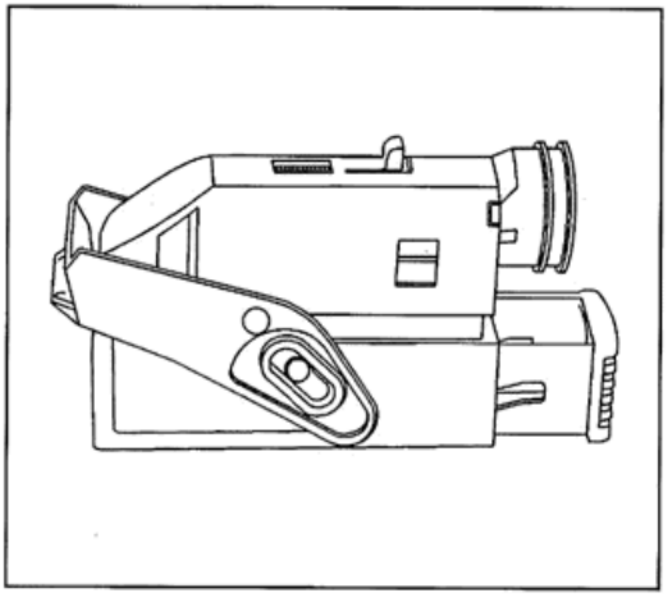
Terminal Removal Procedure

Follow the steps below in order to remove terminals from the connector.



1709268

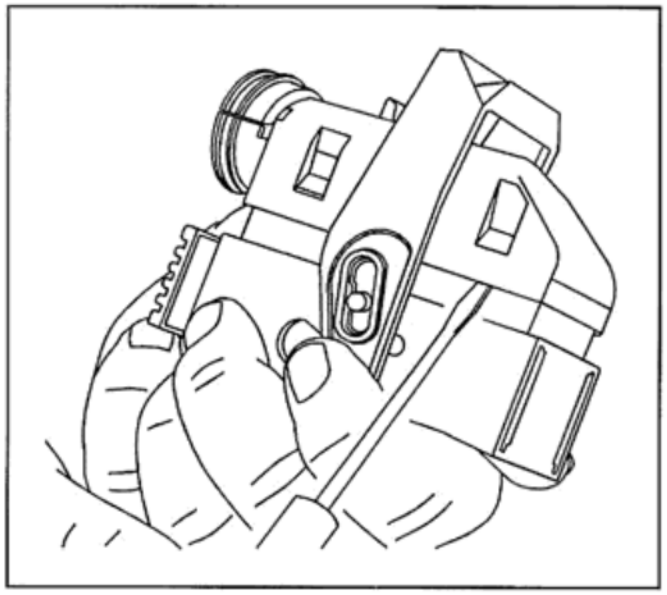
1. Slide the lever lock forward while pressing down on the lever lock release tab.
2. The release tab is located on the top of the wiredress cover.



1709269

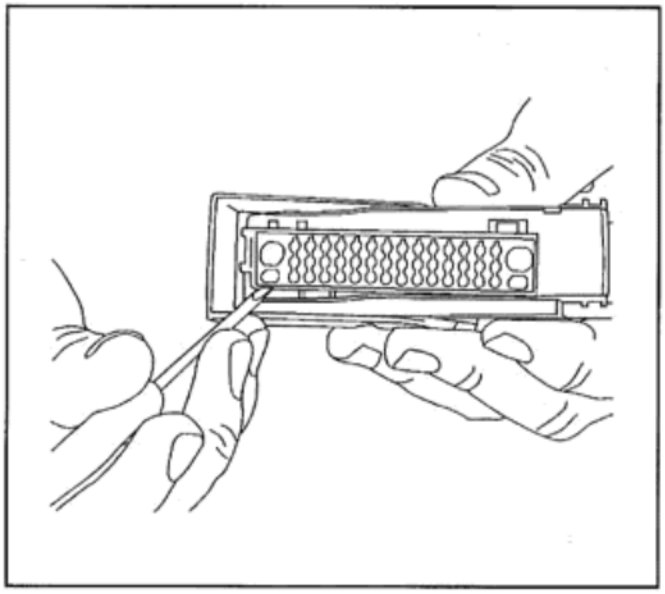
3. View of connector in released position.
4. Disconnect the connector from the component.

5. Locate the dress cover locking tabs at the corners of the dress cover. Use a small flat-blade tool to release the locking tabs and remove the dress cover.



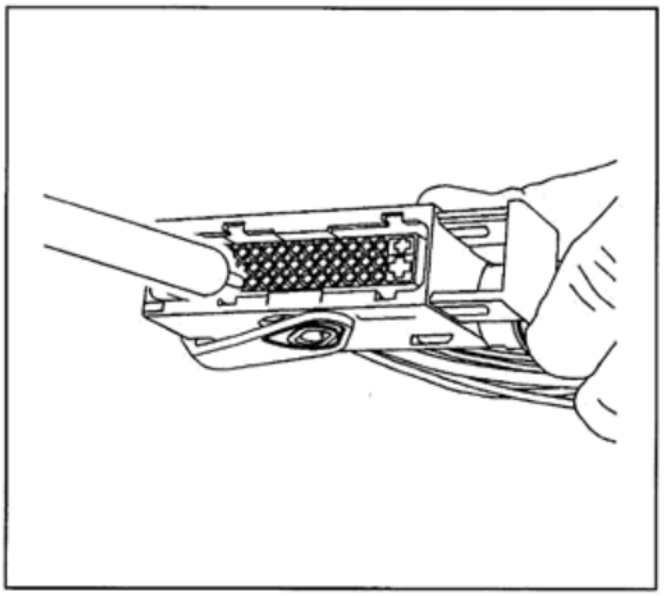
1709270

6. Use a small flat-blade tool to slide the terminal position assurance (TPA) up one notch on both ends of the connector. The TPA is located underneath the wire dress cover.



1709271

7. For the larger terminals insert the J-38125-556 tool to release the terminals by inserting the tool into the terminal release cavity. For the smaller terminals insert the J-38125-560 tool to release the terminals by inserting the tool into the terminal release cavity.



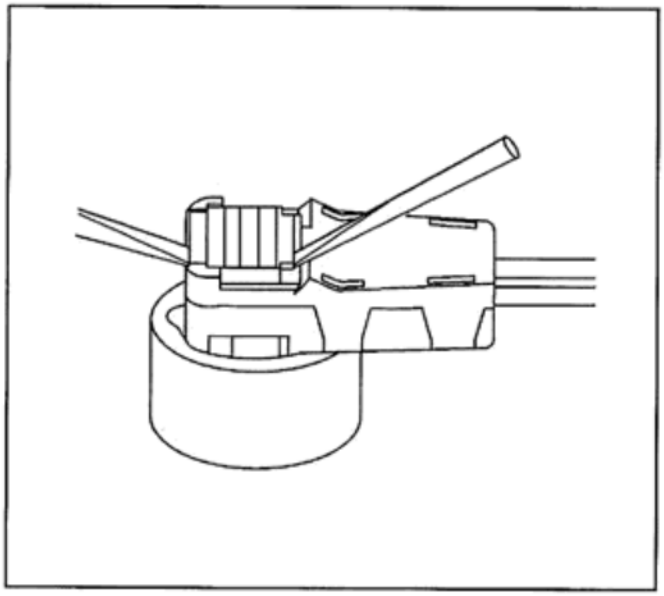
1709272

8. While holding the removal tool in place, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
9. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
10. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

FCI Connectors (SIR)

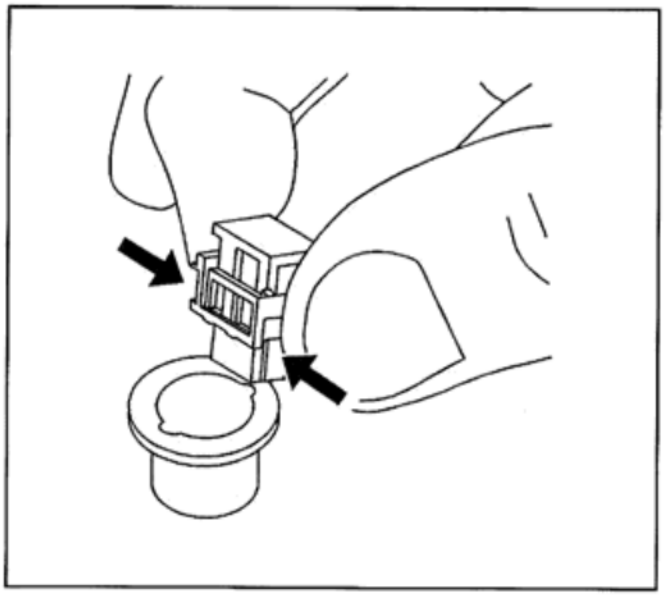
Removal Procedure

Note: The orange or yellow connector position assurance (CPA) must be released first to disconnect or to connect the connector.



2374625

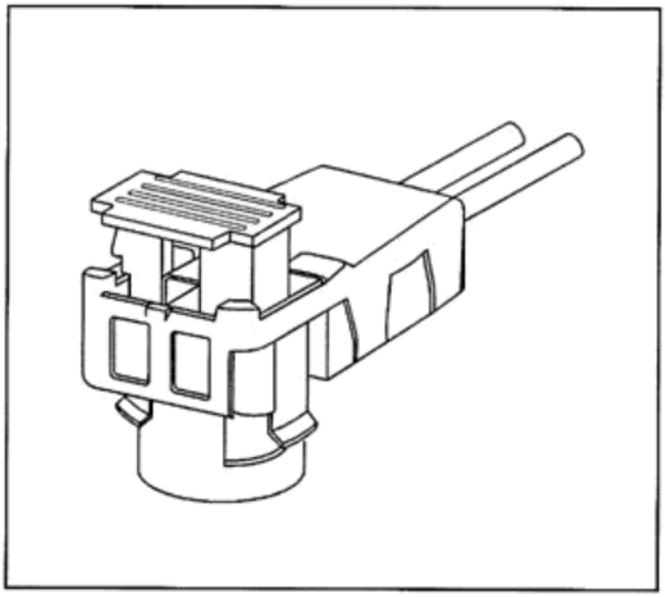
1. Lift the orange or yellow CPA vertically (avoid lifting on an angle to the connector) approximately 4 mm to release the connector. Use a small flat-bladed tool to help release the CPA. The CPA may also be released manually without any tools.



3258545

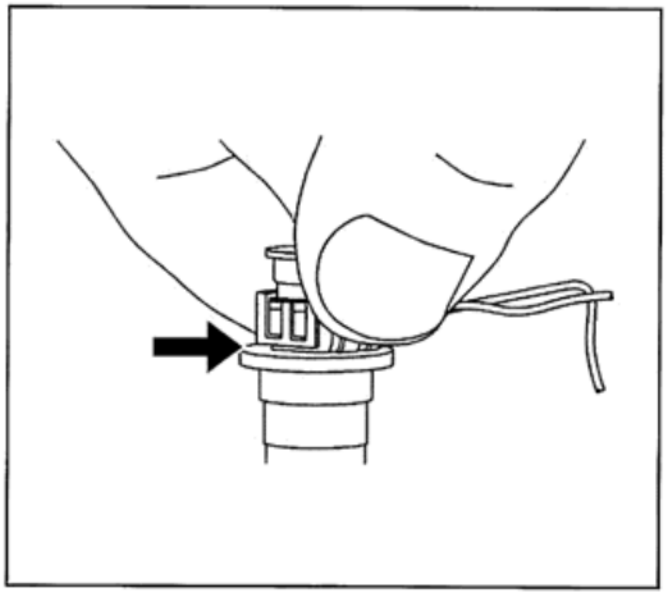
2. Grab the connector on both sides and lift vertically to disconnect the connector.

Installation Procedure



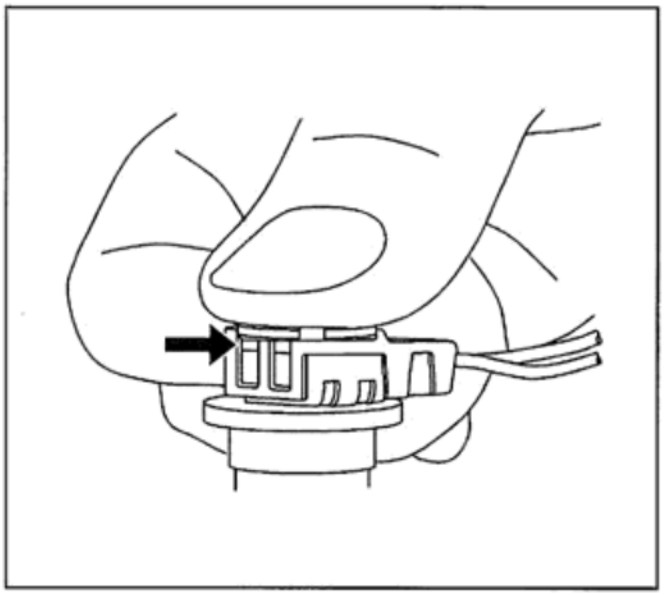
2374626

1. The CPA should be approximately 4 mm above the yellow cover before installing the connector. If not, use a small flat-bladed tool to help release the CPA. The CPA may also be released manually without any tools.



3258546

2. Line up the connector key tabs with the initiator key slots. Grab the connector on both sides and push down into the initiator connector sub assembly until fully seated.

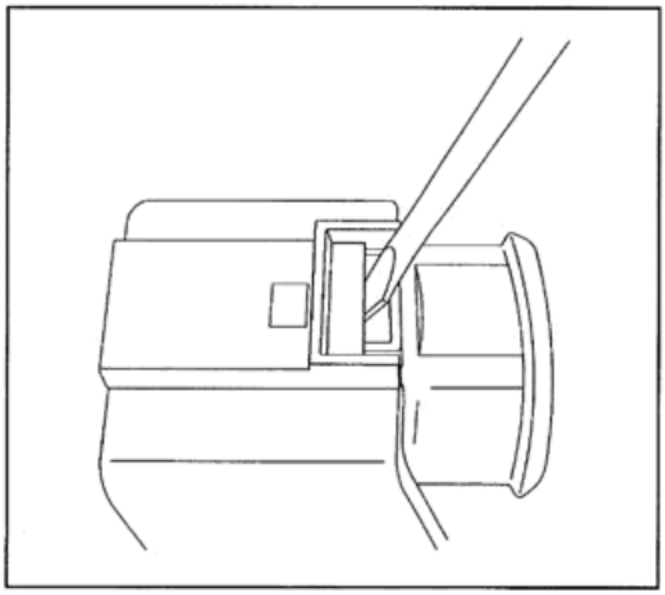


3258548

3. After the connector is fully seated, push the CPA down with your thumb until the CPA is touching the yellow cover on the connector.

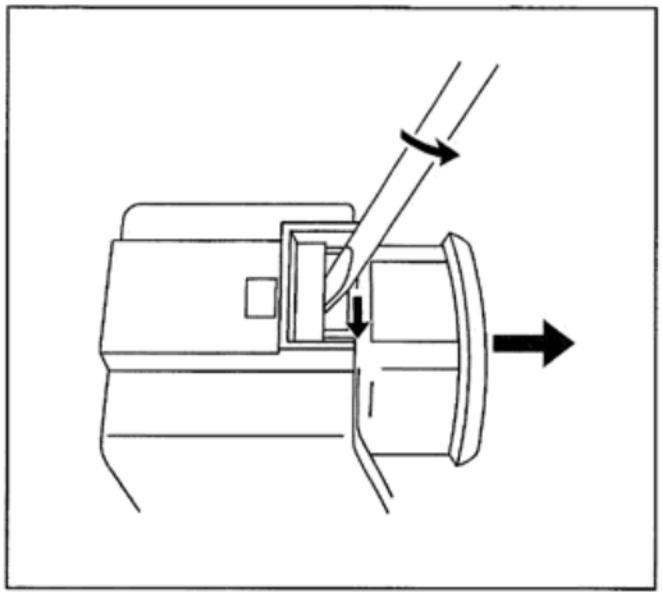
FEP Connectors (Steering Gear)

Removal Procedure



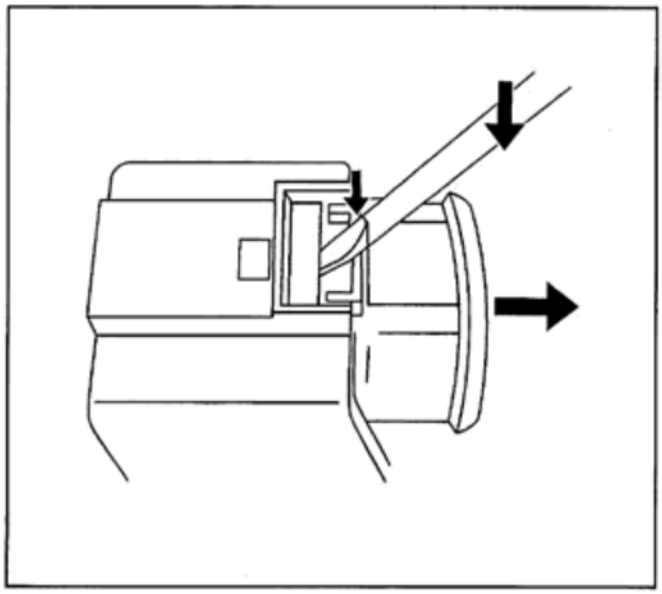
2374629

1. Use a flat-bladed tool to release the locking tab on the connector.



2728308

2. Option 1: Twist the flat-bladed tool to push the top of the locking tab inward while pulling the connector body out.



2728310

3. Option 2: Pry using the flat-bladed tool to depress the locking tab while pulling the connector body out.

JST Connectors

Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-553* Terminal Release Tool

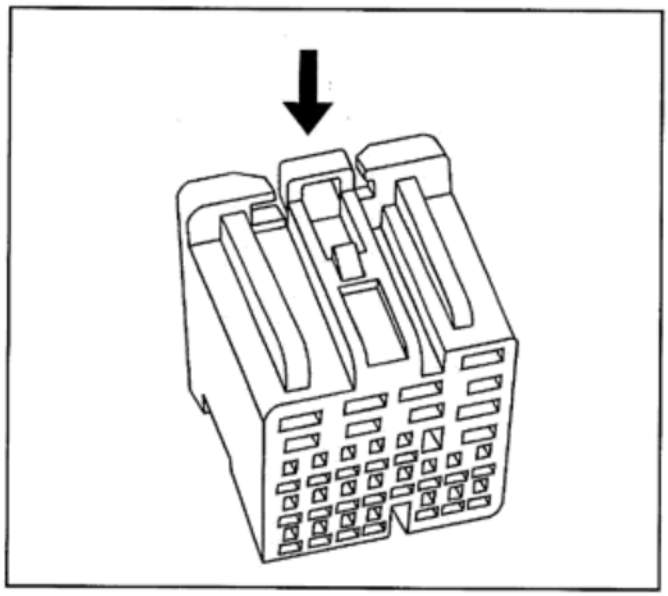
For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure

The JST connector family consists of seven unique connector housings differentiated by color and keying. This connector family is designed to use both 0.64 and 2.8 sized terminals.

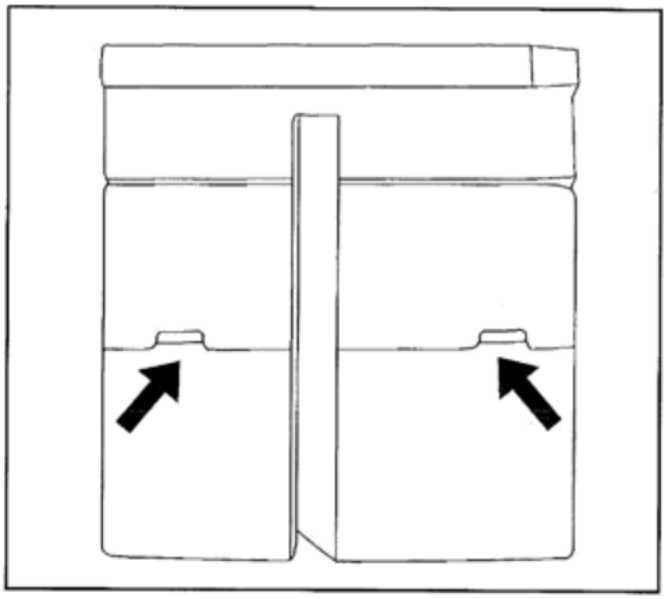
JST BCM Connector

GM Service Part #	Color
88988806	Gray
88988837	Brown
88988838	Lt Green
88988839	Natural
88988840	Lt Blue
88988841	Black
88988842	Pink



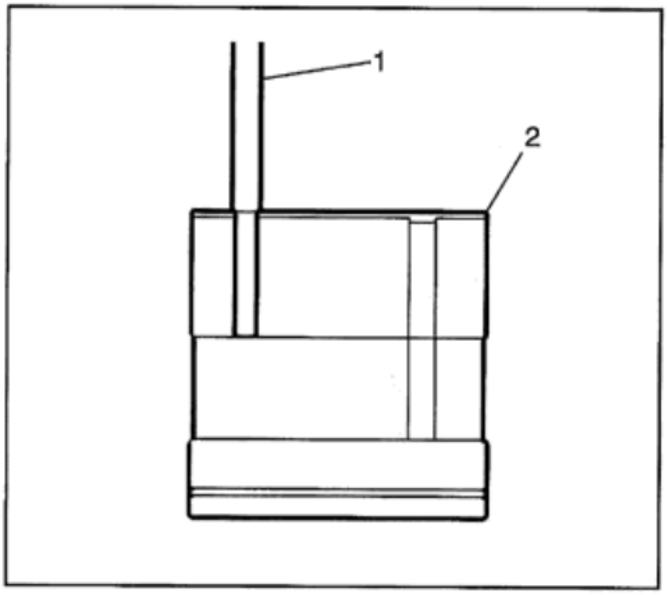
1774096

1. While depressing the lock, remove the connector from the component.



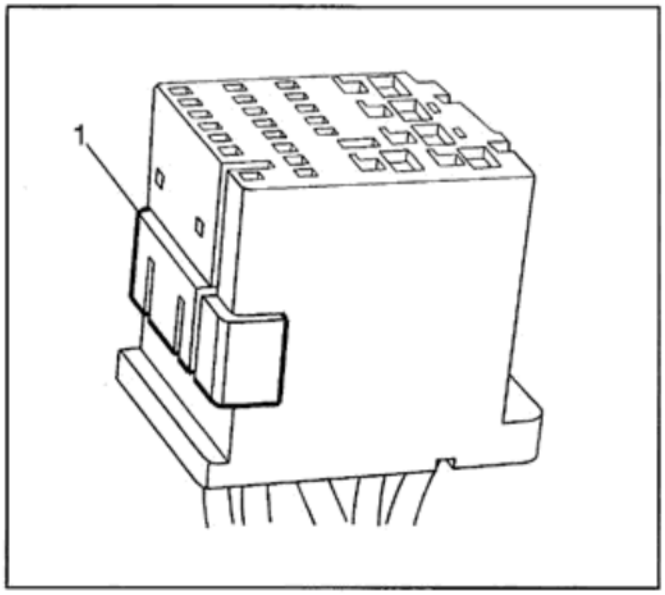
1774100

2. Unlock the terminal position assurance (TPA):
   - Position connector as shown (above) and locate TPA staging cavities.



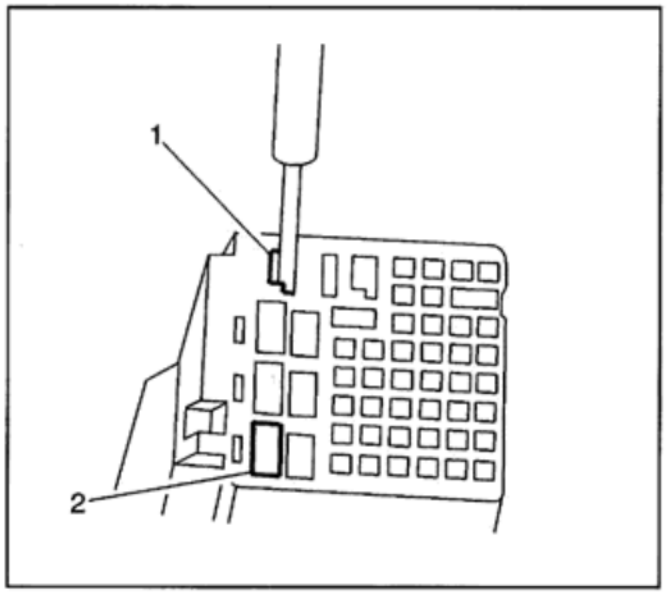
2506090

   - Using connector terminal release tool J-38125-553 (1) lift the TPA into the staged position. Perform this step on both sides of the TPA.



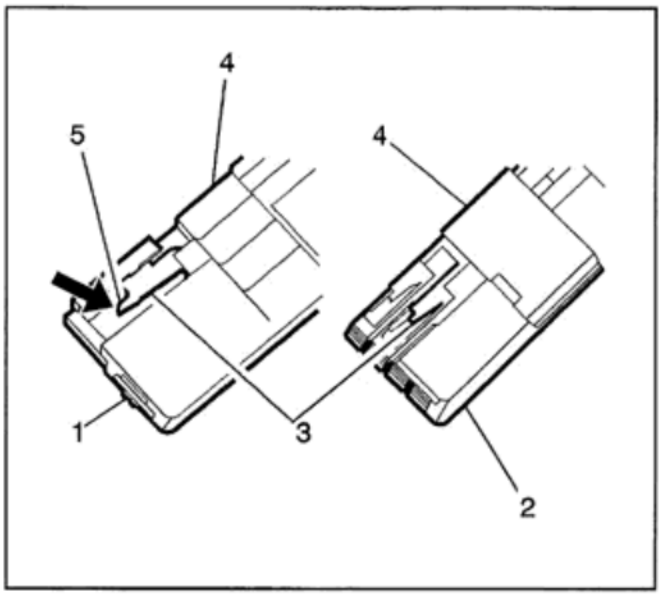
2506084

- You will feel the TPA click into place when fully extended into the staged position. The figure above shows the TPA (1) in the staged position.



2506091

3. Release the terminal from the connector:
   - Position the connector as shown (above) and locate the terminal release entry canal (1) of the suspect terminal.
   - Insert the connector terminal release tool J-38125-553 into the entry canal with the angled side of the tool facing the connector wall containing cavity 4 (2).



2506092

   - The cavity on the left (1) is a 2.8 mm² cavity and the cavity on the right (2) is a 0.64 mm² cavity.
   - Place the tip of the connector terminal release tool onto the connector lance (3) and deflect the lance to the right (5) to release the lock. Hold this released position.
   - Holding the lance in the released position, slightly pull on the suspect terminal to remove it from the connector housing. The side TPA (4) is a secondary lock.
4. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
5. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

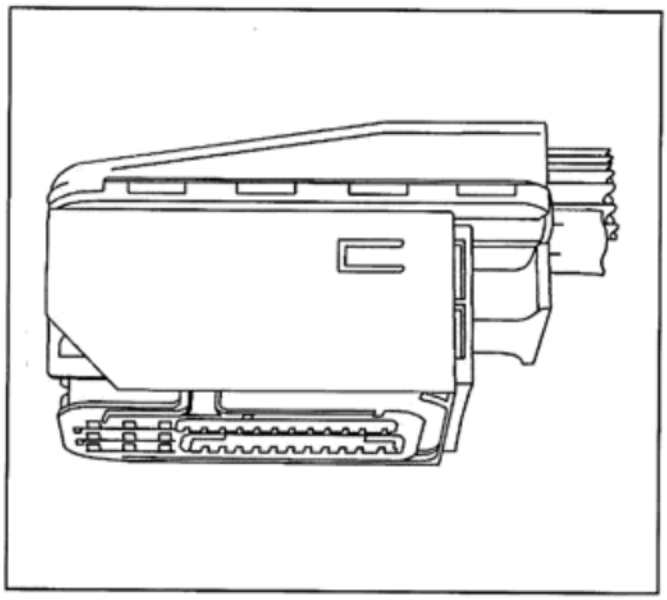
Kostal Connectors (Glow Plug Control Module)

Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-24* Terminal Release Tool
- *J-38125-560* Terminal Release Tool

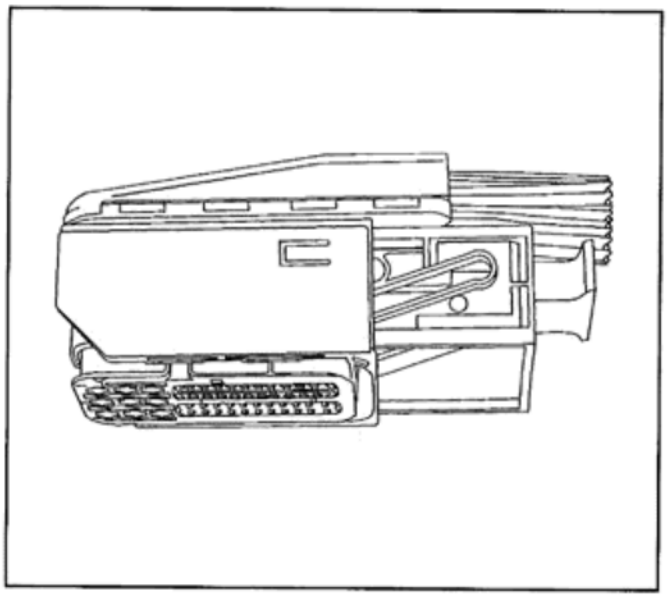
For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure



1709300

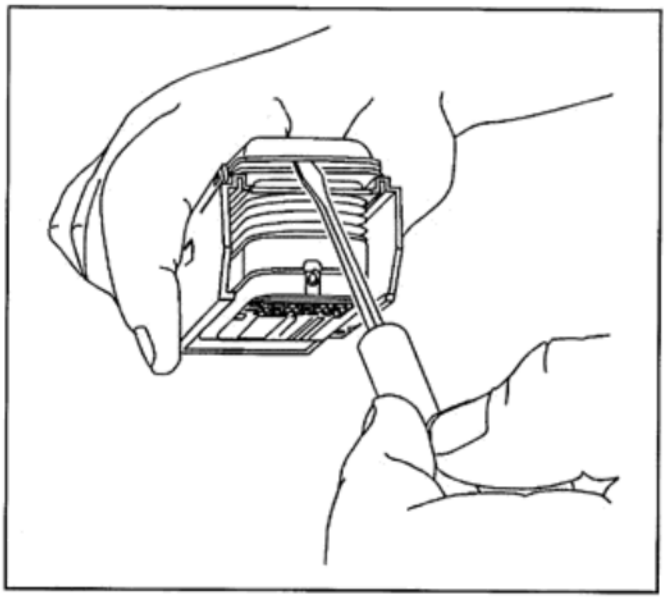
View of typical connector.



1709301

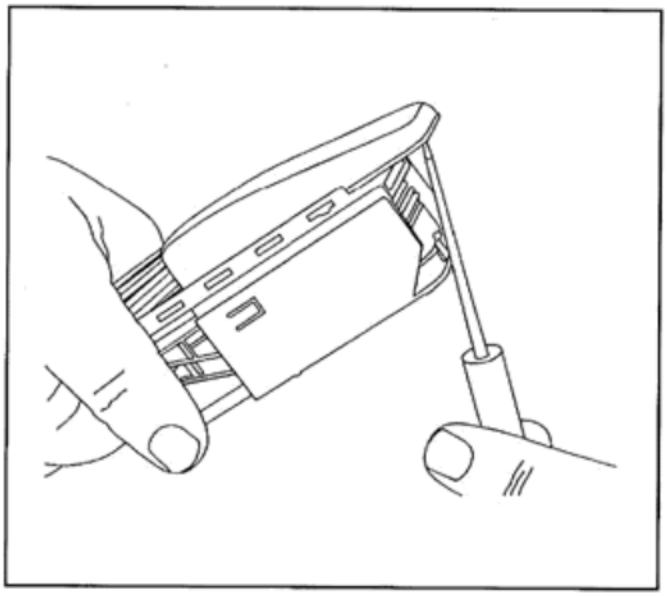
View of connector in released position.

1. Locate the assist lever at the back of the connector. Move the assist lever to the rear position.
2. Disconnect the connector from the component.



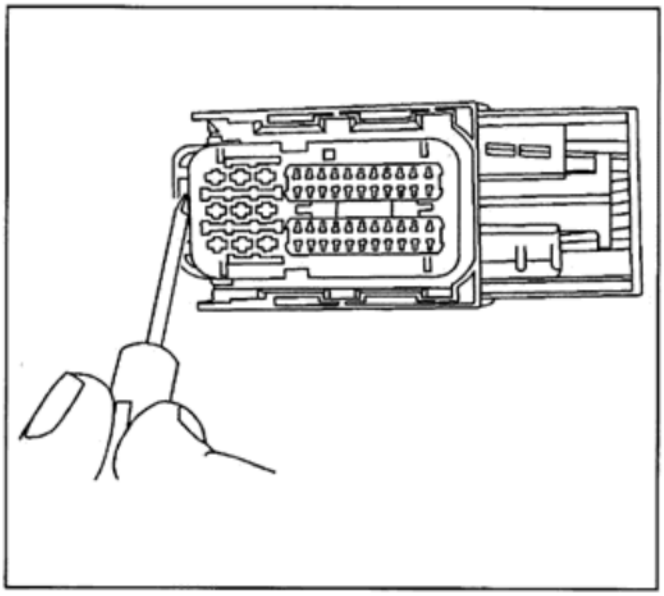
1709302

3. Use a small flat-blade tool to remove the dress cover.



1709303

4. Slide the dress cover forward and off of the connector.

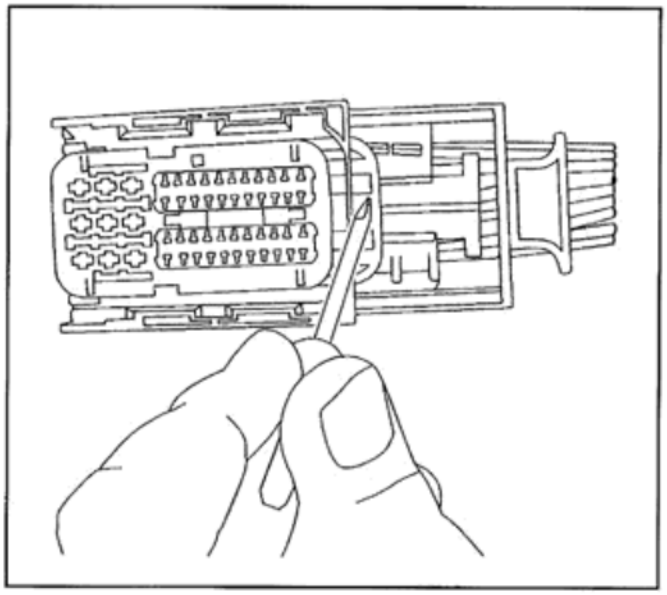


1709304

5. The terminal positive assurance (TPA) is located in the front and rear of the connector.

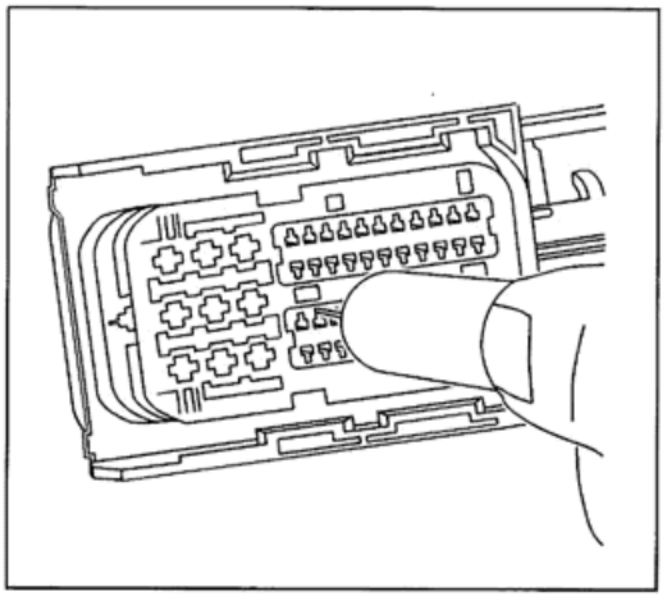
Note: The front TPA cannot be removed from the connector. Only move it to the preset position.

6. Use a small flat-blade tool to move the front TPA to the preset position, outboard approximately 0.125 in. (3 mm).



1709305

7. Use a small flat-blade tool to completely remove the rear TPA from the connector.



1709306

8. Use the J-38125-24 or the J-38125-560 tool to release the terminals by inserting the tool into the terminal release cavity.
9. While holding the removal tool in place, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
10. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.

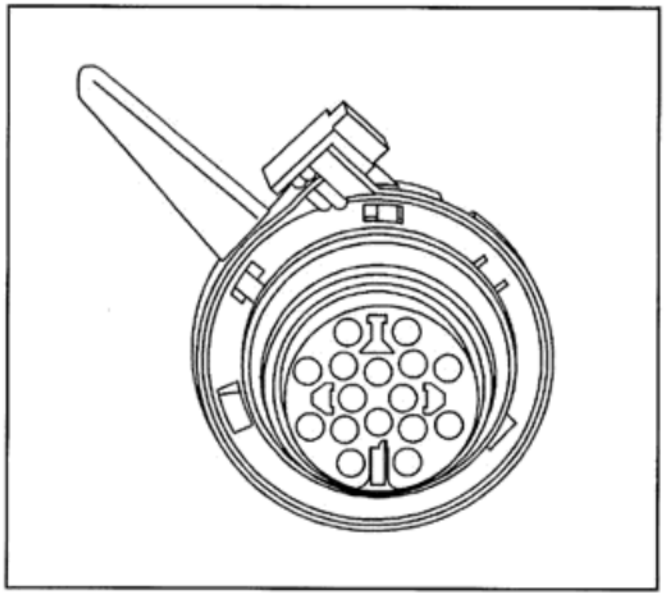
Kostal Connectors (Transmission)

Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-28* Terminal Release Tool

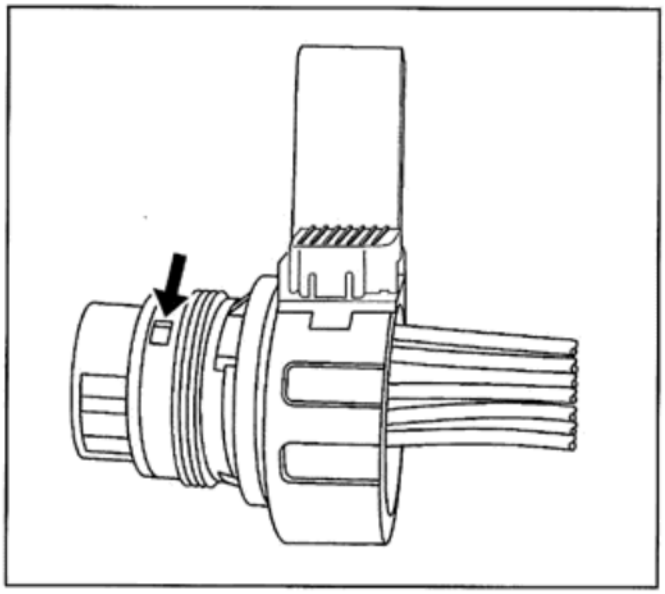
For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure



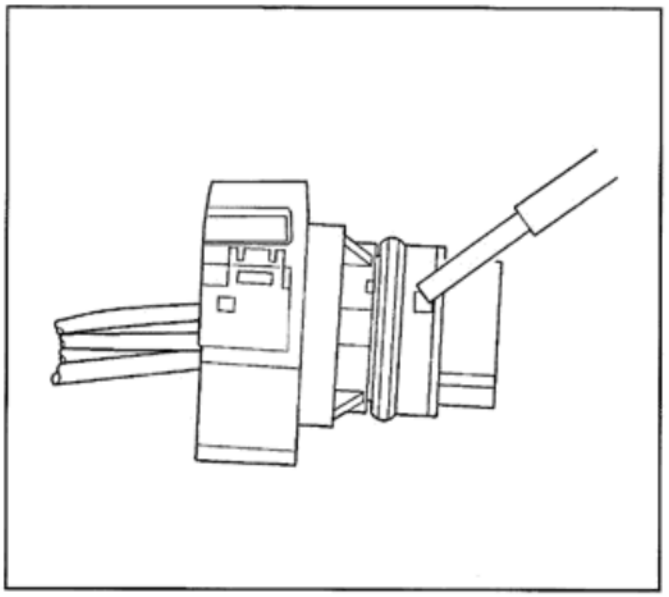
1921876

1. While depressing the lock, twist and remove the connector from the component.



1921872

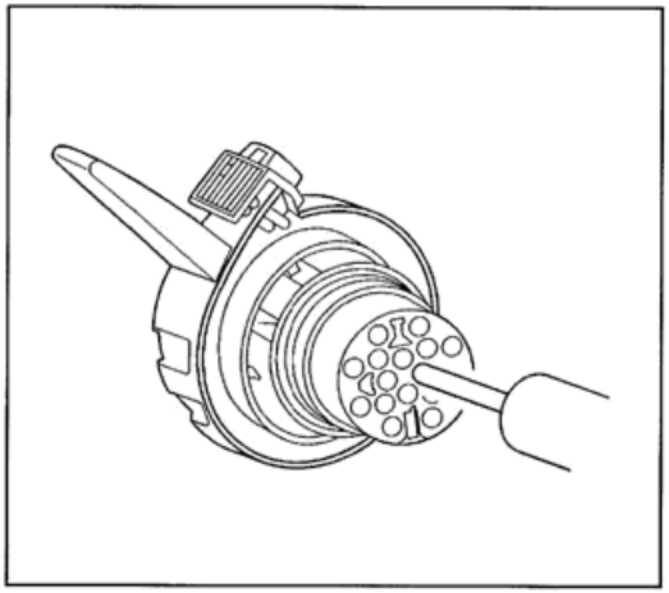
2. Locate the terminal position assurance (TPA).



1921873

Note: The TPA cannot be removed from the connector while there are terminals present in the connector body.

3. Use a small flat-blade tool to push the TPA until it bottoms out.



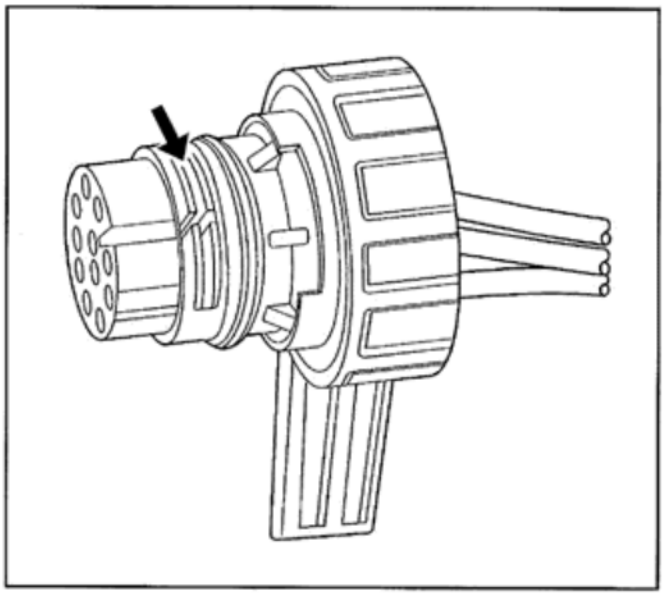
1921843

4. Use the J-38125-28 tool to release the terminals by inserting the tool into the terminal cavity as shown in the graphic.
5. While holding the removal tool in place, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
6. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.

Terminal Insertion Procedure

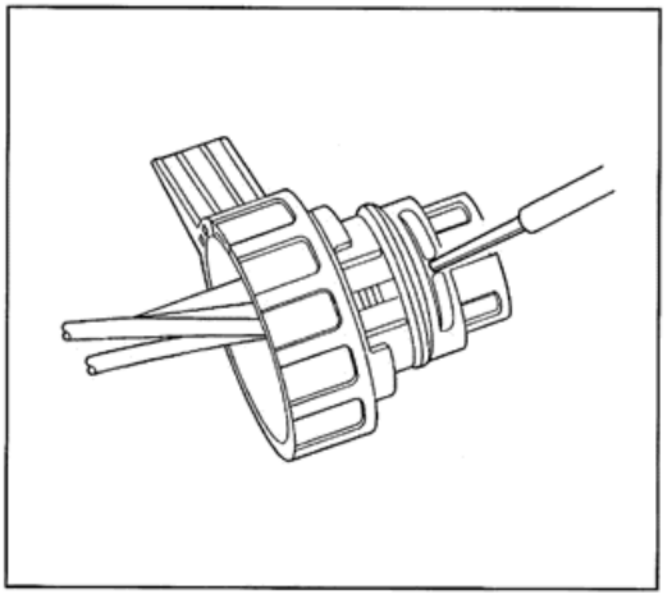
After the terminal is replaced, perform the following procedure in order to insert the terminal.

1. Slide the new terminal into the correct cavity at the back of the connector.
2. Push the terminal into the connector until it locks into place. The new terminal should be even with the other terminals. Ensure that the terminal is locked in place by gently pulling on the wire.



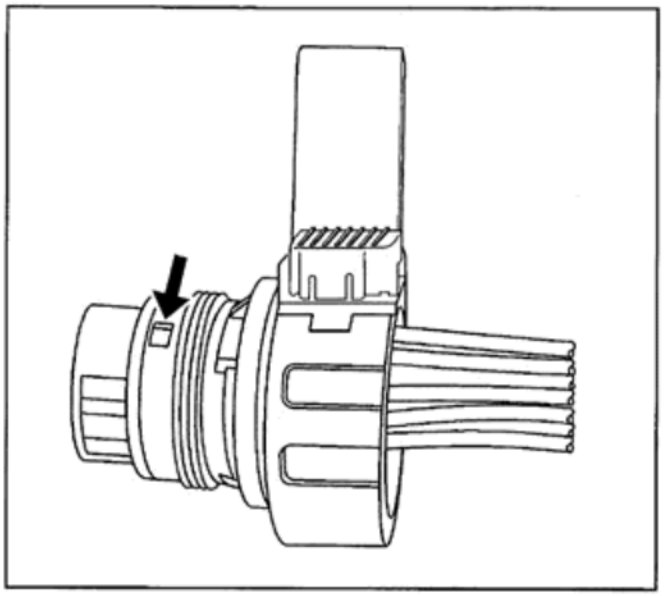
1921848

3. Locate the TPA.



1921849

4. Use a small flat-blade tool to push the TPA until it bottoms out.



1921872

5. Ensure the TPA is fully seated. The TPA should be centered and flush with the connector body when viewed.

Molex Connectors

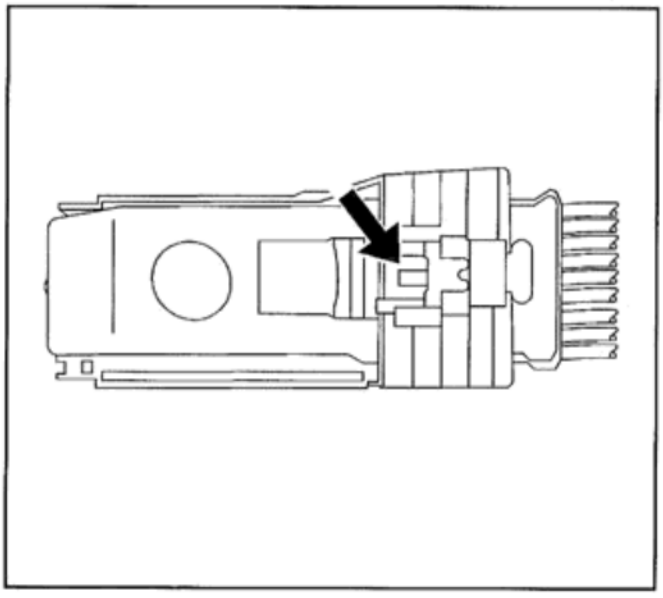
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-213* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

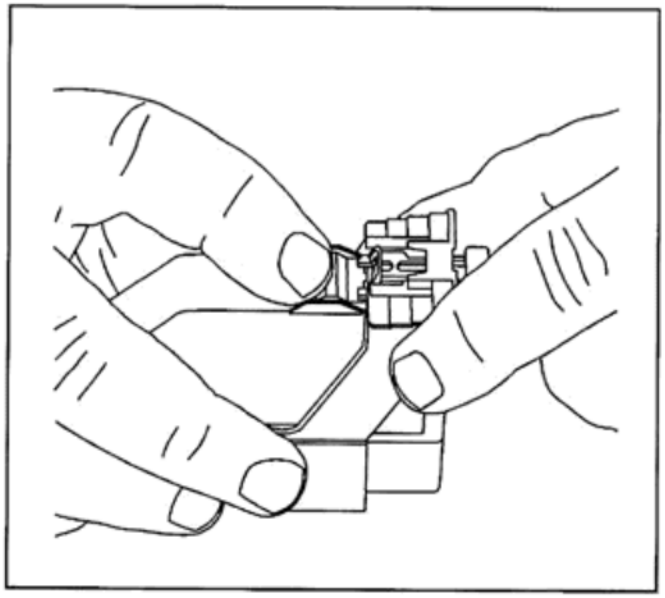
Terminal Removal Procedure

1. Locate the connector position assurance (CPA) on the top of the wire dress cover. Slide the CPA forward.



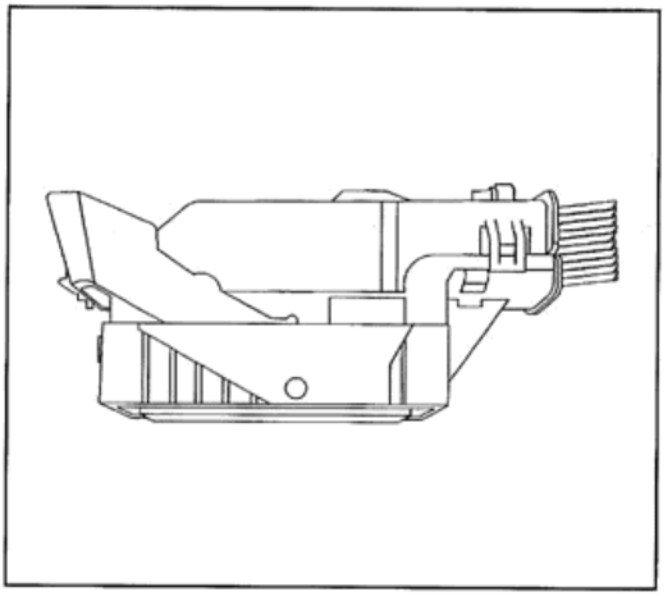
1709320

2. Slide the lever lock forward while pressing down on the lever lock release tab.



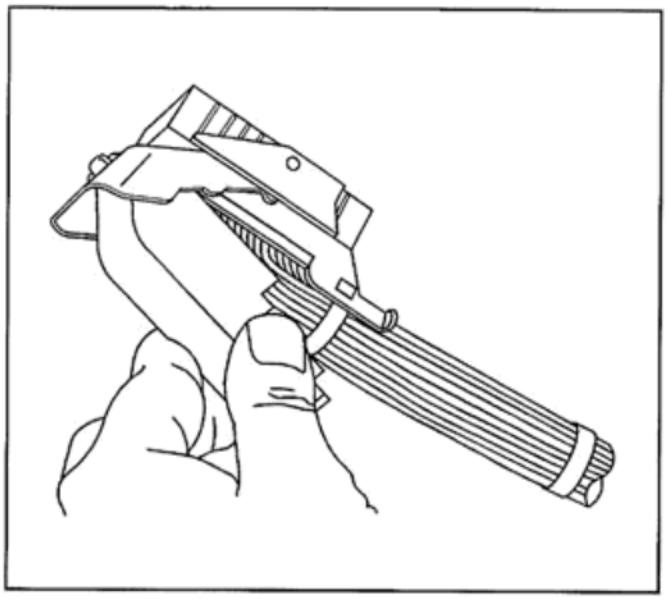
1709258

3. The lever should be in the full forward position.



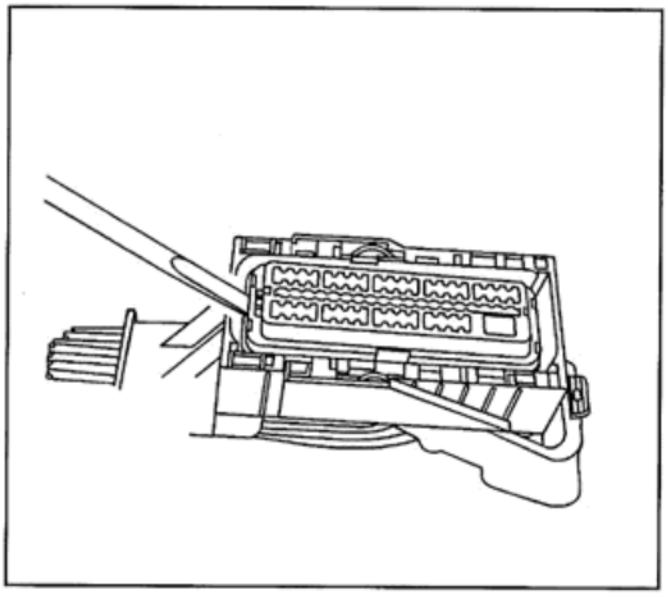
1709322

4. Disconnect the connector from the component.



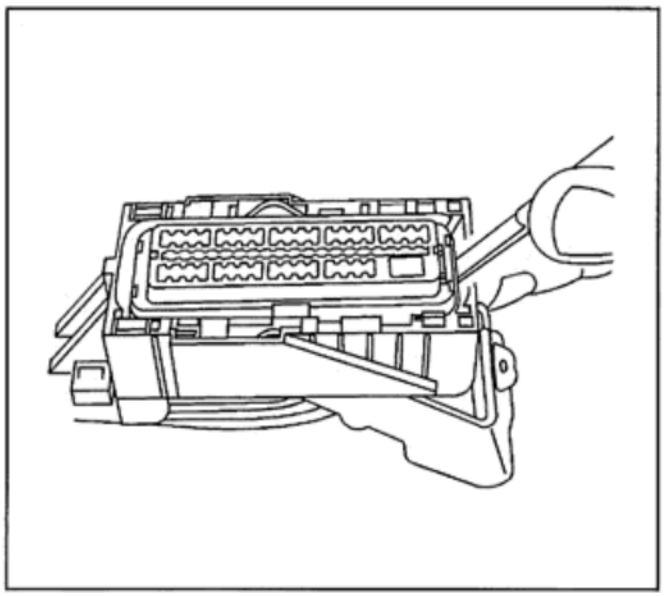
1572878

5. Remove the dress cover by using a flat bladed tool to release the dress cover locking tabs and lift up on the dress cover.
6. Cut the tie wrap that holds the wires to the connector body.



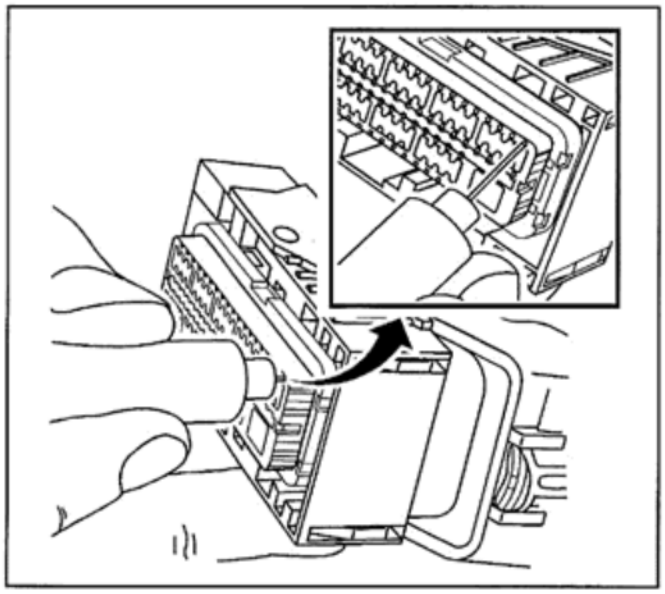
1572905

7. Use a small flat-blade tool to pry one side of the nose piece up to the pre-stage position. When the nose piece is in the pre-staged position, the nose piece will be raised above the connector body the length of the step in the nose piece.



1572908

8. Use a small flat-blade tool to pry the other side of the piece to the pre-stage position. If the nose piece is higher than the first step in the nose piece, gently push down on the nose piece until it meets with resistance from the connector body, you should feel the nose piece click into position.



1572911

9. Insert the J-38125-213 into the small terminal release hole on the nose piece and gently pull on the back of the wire.
10. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
11. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Terminated Lead Repair

1. Remove the terminal.
2. Find the appropriate terminated lead.
3. Use the appropriate splice sleeves depending on the gauge size.
4. Refer to *Splicing Copper Wire Using Splice Sleeves on page 11-544*.

Terminal Insertion Procedure

After the terminal is replaced, perform the following procedure in order to insert the terminal.

1. Slide the new terminal into the correct cavity at the back of the connector.
2. Push the terminal into the connector until it locks into place. The new terminal should be even with the other terminals. Insure that the terminal is locked in place by gently pulling on the wire.
3. To assemble the connector, reverse the connector disassembly procedure.

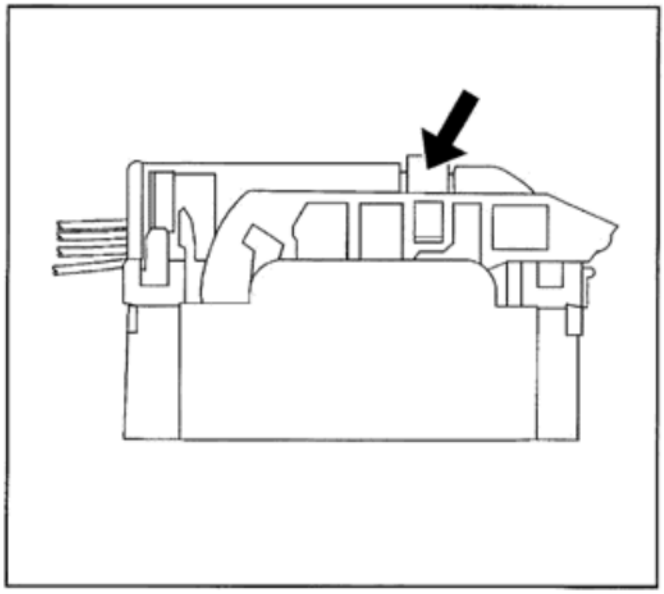
Sumitomo Connectors

Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-12A* Terminal Release Tool
- *J-38125-552* Terminal Release Tool
- *J-38125-553* Terminal Release Tool

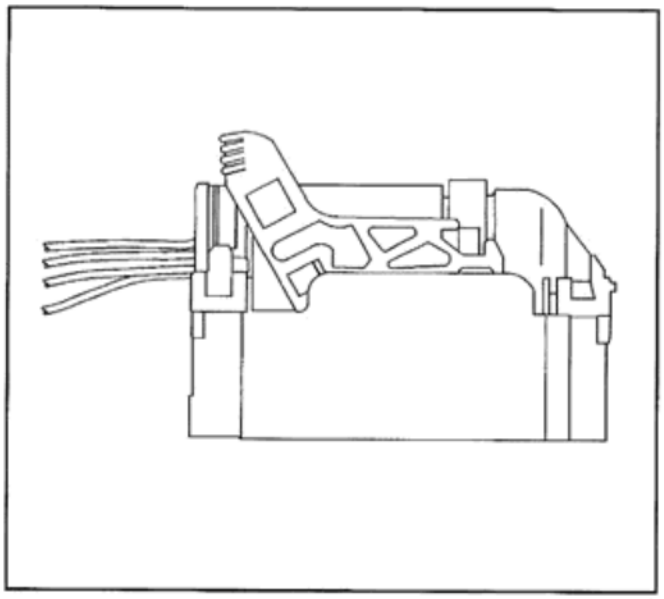
For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure



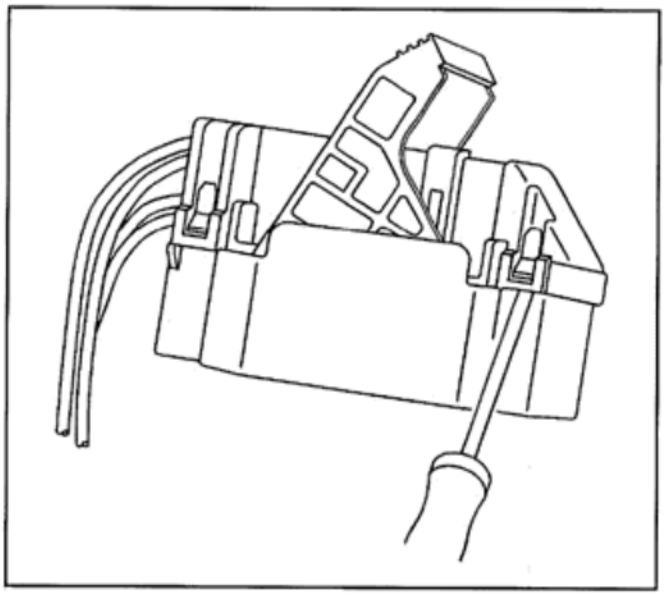
1709317

1. Slide the lever lock forward while pressing down on the lever lock release tab.



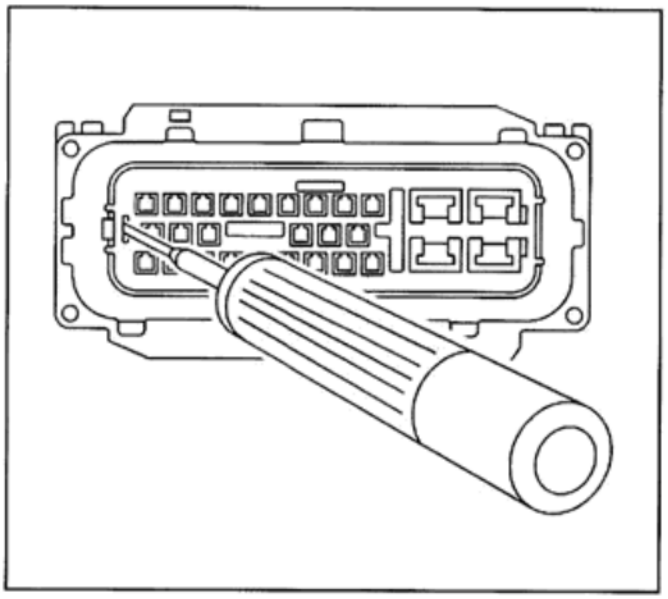
1709319

2. Disconnect the connector from the component.



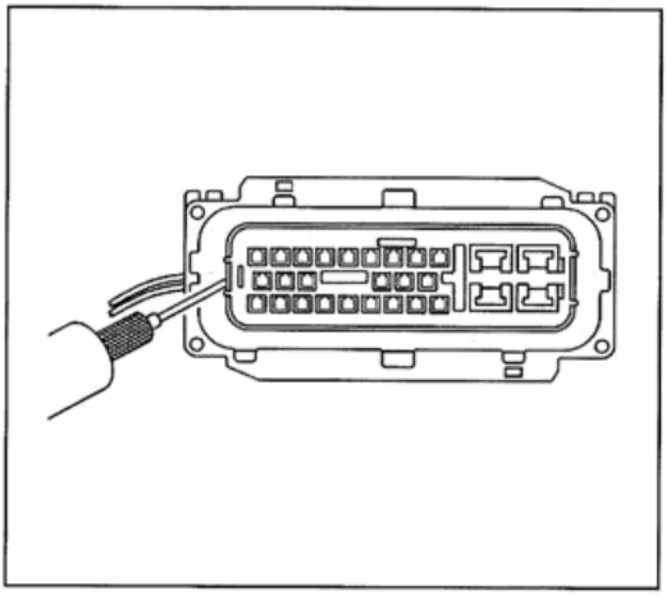
1574033

3. Remove the dress cover by using a flat-blade tool to release the connector locking tabs and pulling off the dress cover.



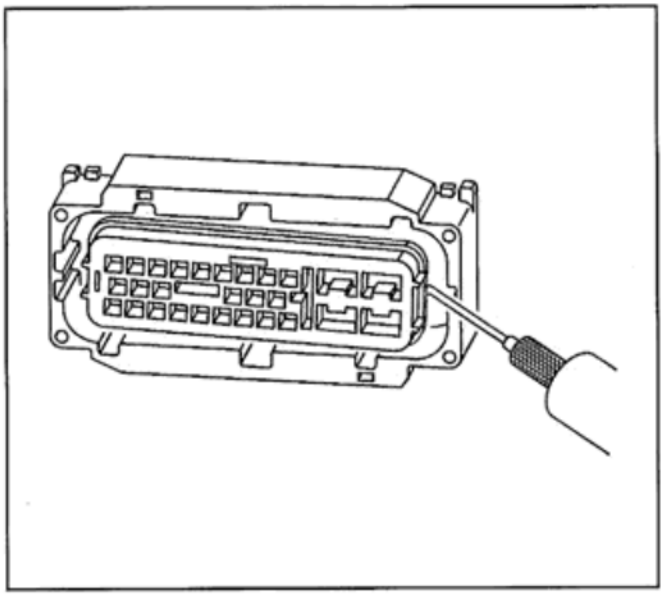
1574069

4. Relieve the tension on the nose piece retainers by inserting J-38125-12A into the single retainer slot on the end of the nose piece and gently prying out the locking tab. Repeat the process for both of the nose piece locking tabs on the opposite side of the nose piece.



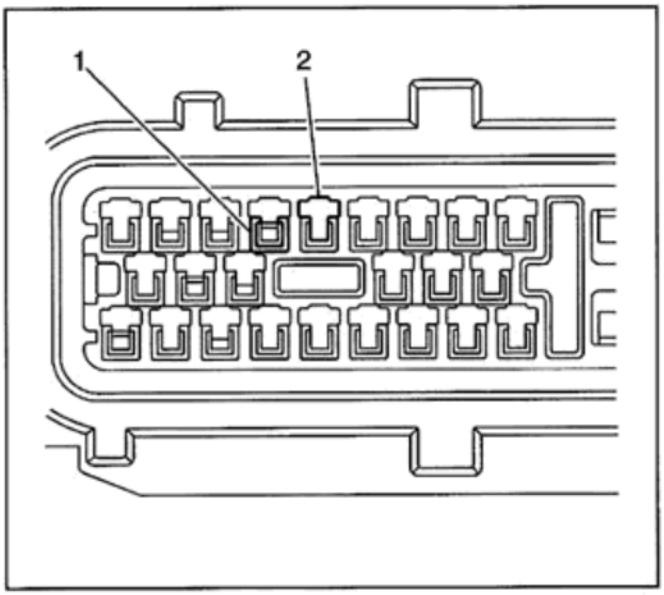
1574058

5. Once the nose piece retainers are relaxed, use the J-38125-552 to pull up the nose piece by hooking the tool under the nose piece and pulling up. The nose piece should raise slightly.



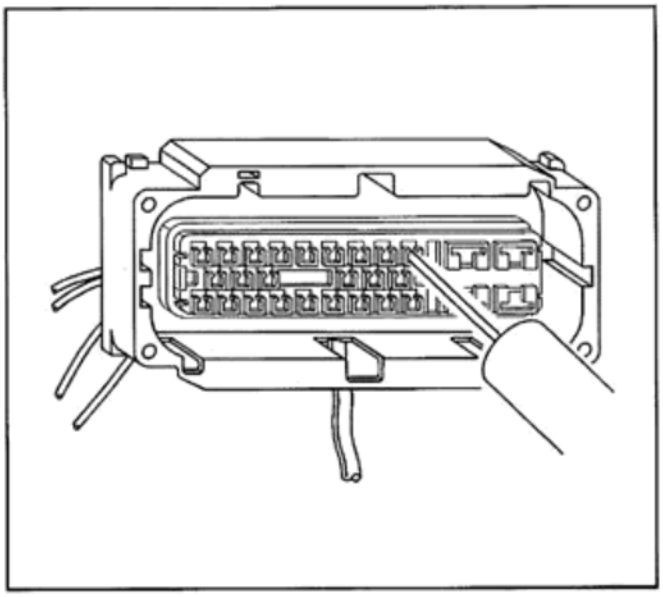
1574184

6. On the opposite side of the nose piece, use the J-38125-552 pull up the nose piece by hooking the tool under the nose piece and pulling up. The nose piece should release completely. If the nose piece does not come off, repeat the procedure on the opposite side.



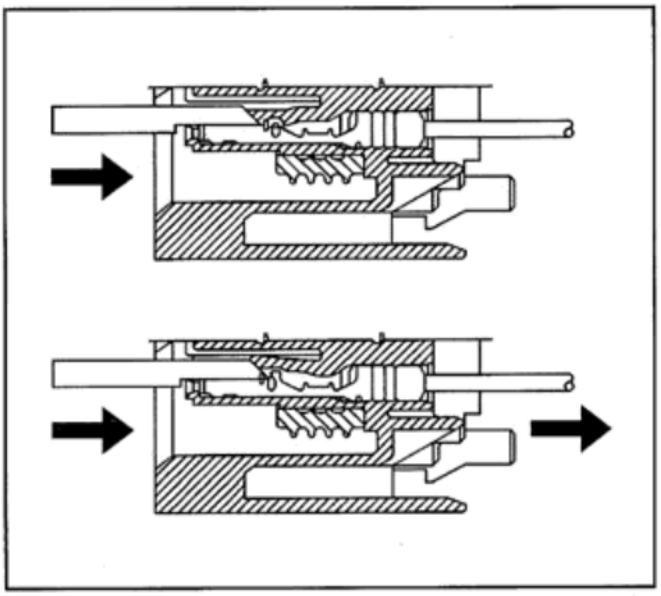
1574213

7. The illustration above identifies the entry canal where the terminal release tool will be inserted, and the terminal cavity.
   - Terminal (1)
   - Entry Canal (2)



1574218

8. Insert the J-38125-553 tool into the entry canal and pry up on the terminal retainer. The terminal retainer is a small plastic piece on the top of the terminal. The terminal retainer must be held up while the terminal is pulled out of the connector.



1574534

9. The illustration shows a cutaway view of the connector to aid the technician in releasing the terminal retainer.
10. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
11. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Terminal Insertion Procedure

After the terminal is replaced, perform the following procedure in order to insert the terminal.

1. Slide the new terminal into the correct cavity at the back of the connector.
2. Push the terminal into the connector until it locks into place. The new terminal should be even with the other terminals. Ensure that the terminal is locked in place by gently pulling on the wire.
3. To assemble the connector, reverse the connector disassembly procedure.

Tyco/AMP Connectors (CM 42-Way)

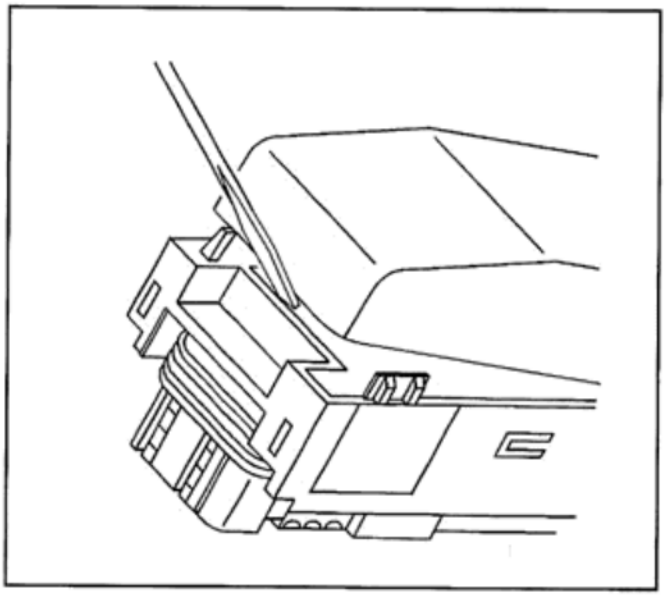
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-12A* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

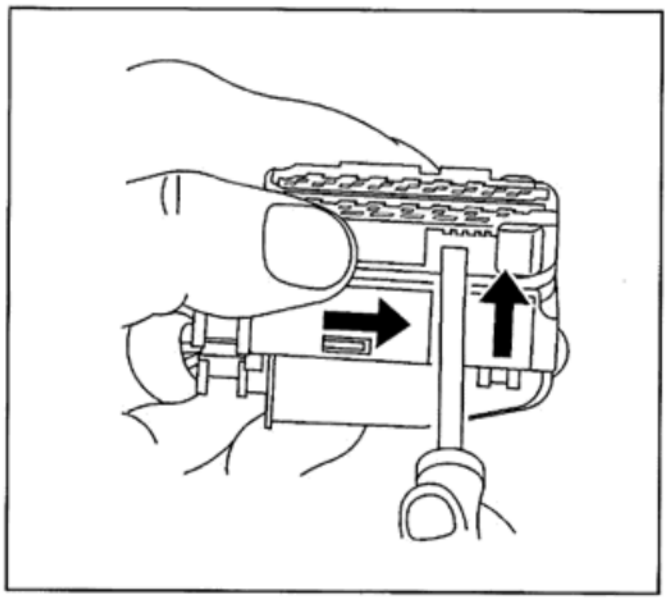
Terminal Removal Procedure

1. Locate the connector position assurance (CPA) on the connector body and pull the CPA out. The CPA is on the wire harness side of connector.
2. Disconnect the connector from the component.



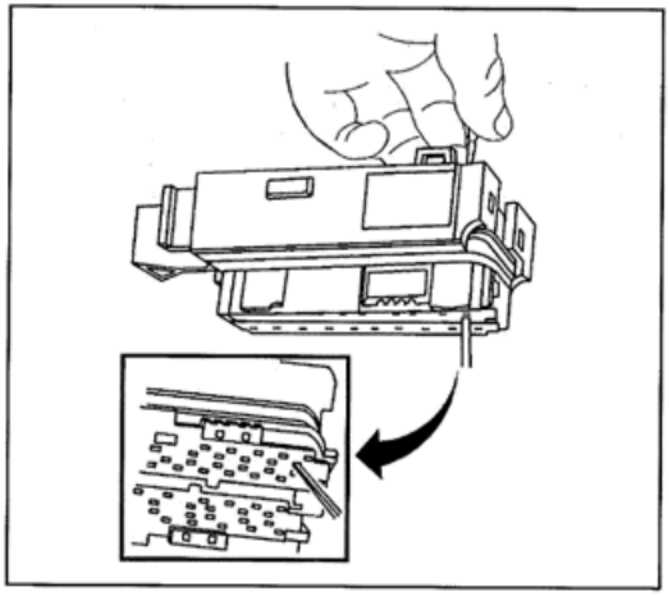
1263409

3. Use a small flat-bladed tool to gently pry off the dress cover by inserting the tool under the cover opposite the harness side and prying up.
4. Remove the cover.



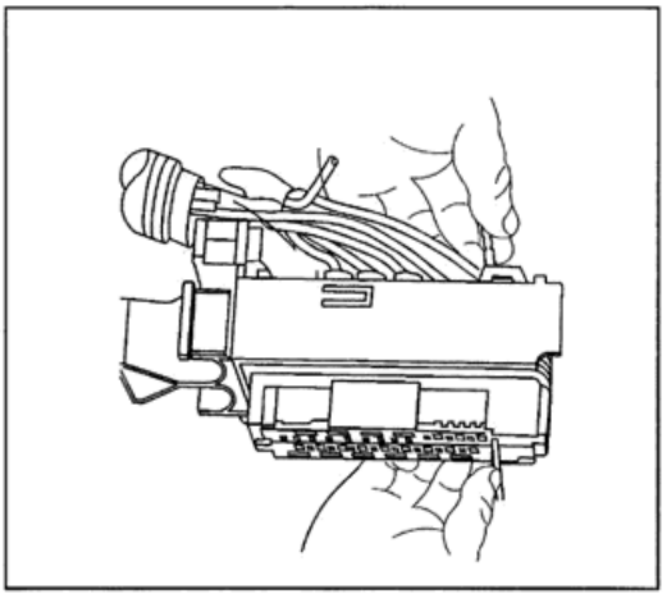
1263511

5. Using a small flat-bladed tool, push on the side of the nose piece retainer while pushing the nose piece forward with your thumb. This will release the terminal position assurance (TPA).



1263568

6. Insert the *J-38125-12A* tool into the corresponding terminal release cavity. The release cavities are the 2 center rows of cavities on one half of the connector.



1263581

7. Pressing the *J-38125-12A* tool in the release cavity of the terminal you are removing, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
8. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
9. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Tyco/AMP Connectors (Sensor)

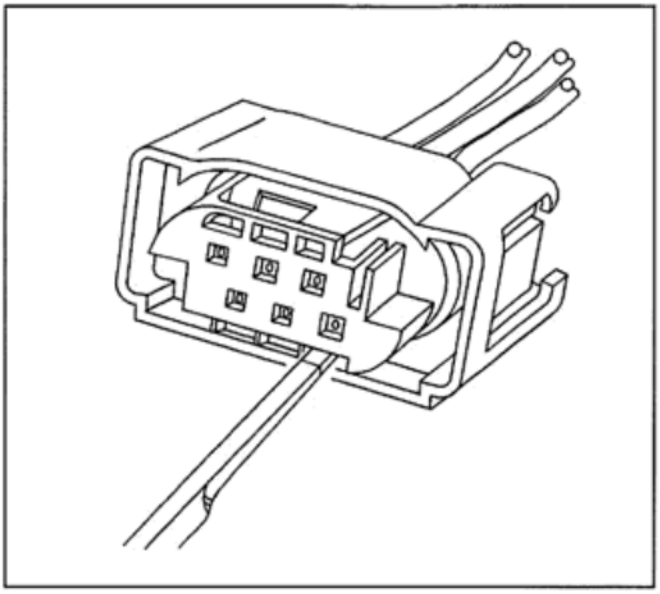
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-11A* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

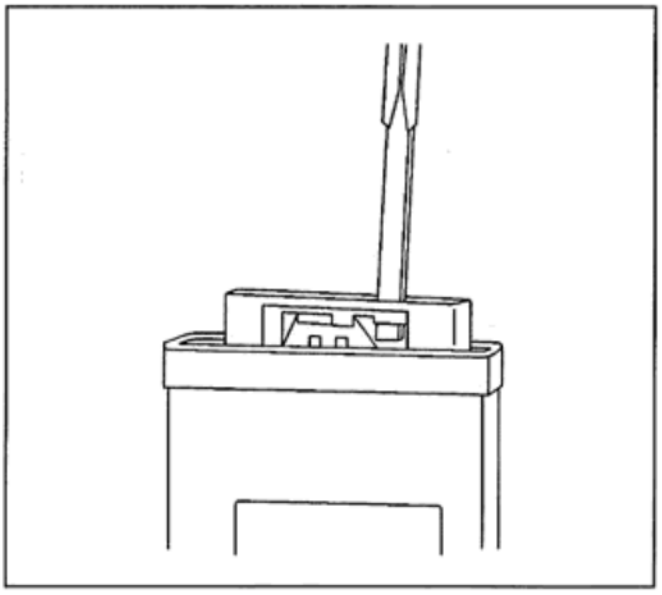
Terminal Removal Procedure

1. Disconnect the connector from the component.



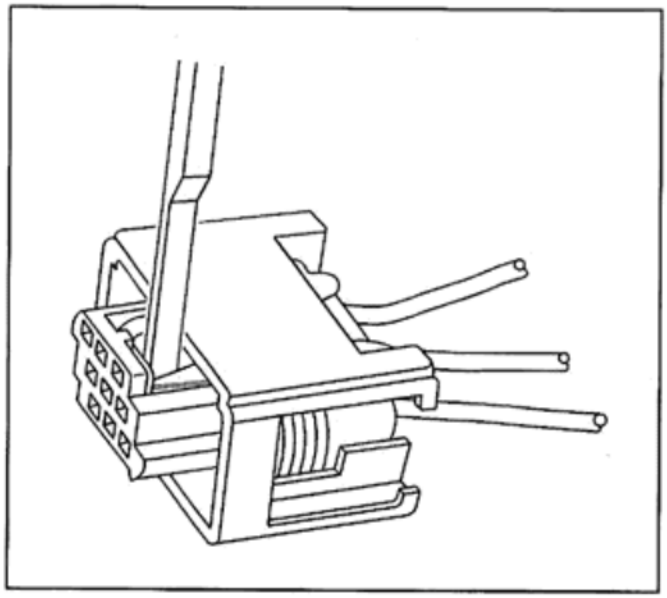
1454796

2. Insert the J-38125-11A tool into the cavity on the lower right hand face of the connector until the terminal release tang access panel slides over.



1454799

3. Ensure that the terminal release tang access panel is in the correct location to access the terminals.
4. Push the wire side of the terminal that is being removed toward the connector and hold it in position.



1454801

5. Insert the J-38125-11A into the terminal release tang access slot located behind the access panel of the connector and press down on the terminal while carefully pulling the terminal out of the connector. Always remember never use force when pulling a terminal out of a connector. If the terminal is difficult to remove, repeat the entire procedure.
6. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
7. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Tyco/AMP Connectors (0.25 Cap)

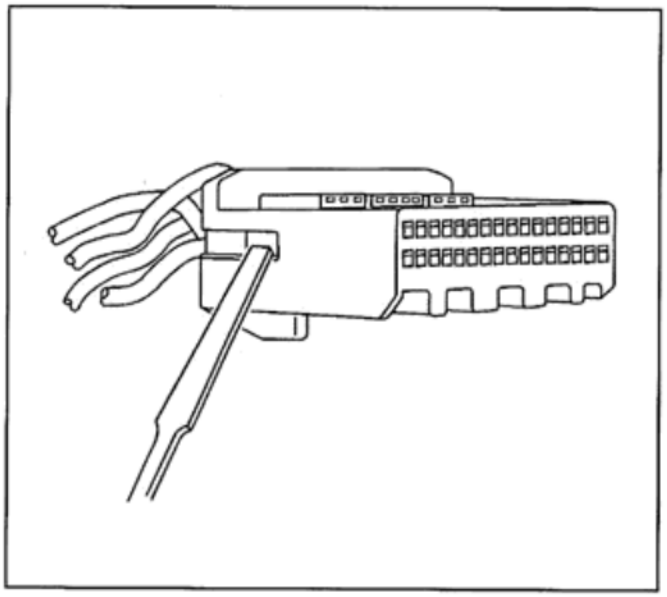
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-24* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure

1. Disconnect the connector from the component by pressing down on the connector position assurance (CPA).

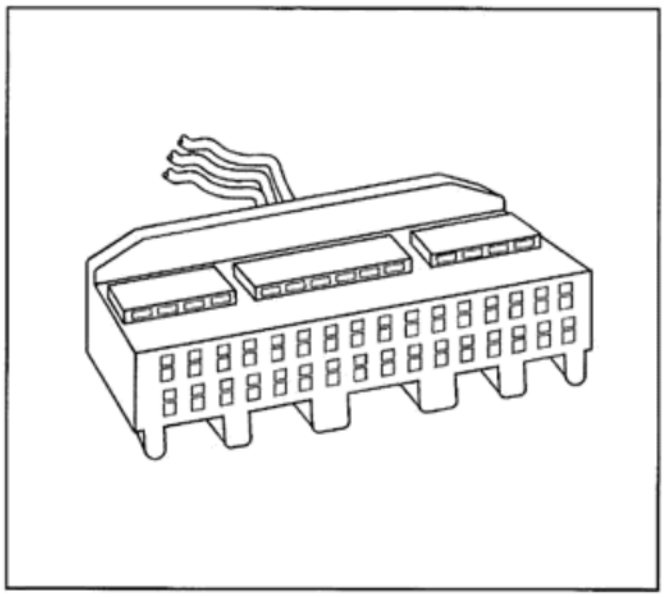


1459859

2. Use a small flat-bladed tool to release the terminal position assurance (TPA) by inserting the tool in the small recess on the side of the connector and pushing up until the TPA releases from the connector body. The TPA should raise just slightly. Do not try to remove the TPA.

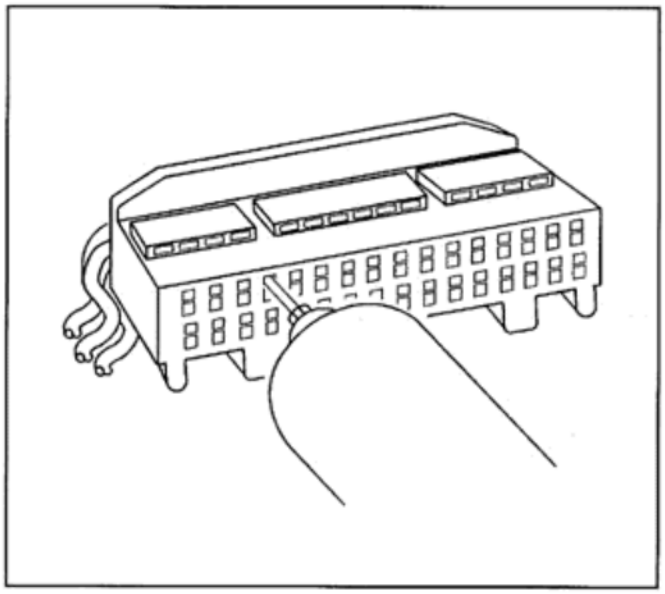
Note: The TPA on this connector cannot be removed unless the terminals are removed first. The TPA will come out of the connector body, but only slightly. When the TPA is slightly raised the terminals can be removed. Using excessive force to remove the TPA with the terminals still in the connector will damage the connector.

3. Repeat the process for the other side of the connector.



1459860

4. Ensure that the TPA is in the proper position to remove the terminals.



1459861

5. While pushing the terminal forward, insert the J-38125-24 in the release cavity above the terminal you are removing, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
6. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
7. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Tyco/AMP Connectors (43-Way)

Special Tools

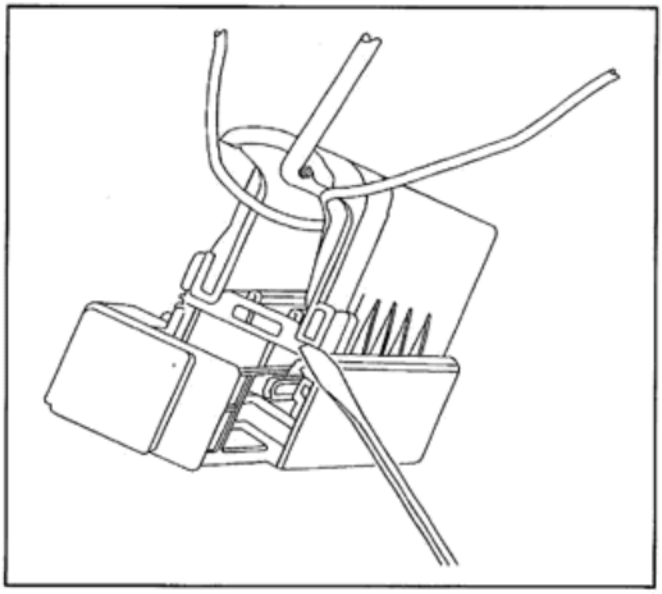
- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-12A* Terminal Release Tool
- *J-38125-13A* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure

Follow the steps below in order to remove terminals from the connector.

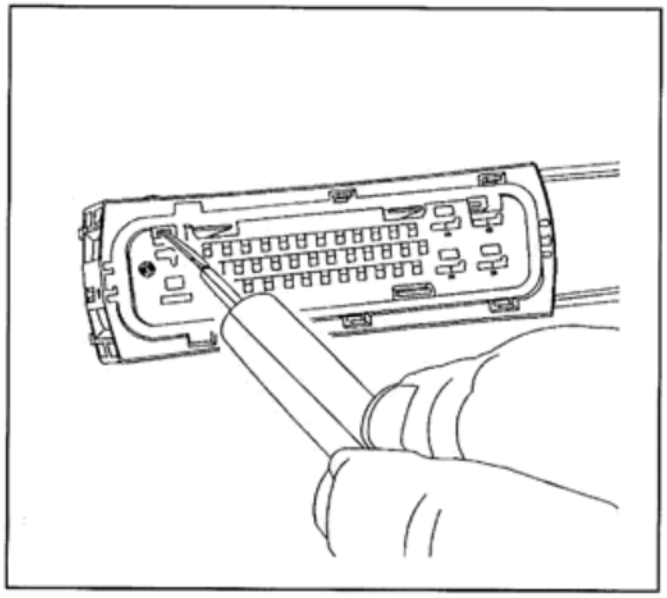
1. Locate the lever lock on the wire dress cover. Slide the lever lock away from the connector body.
2. Disconnect the connector from the component.
3. Locate the dress cover locking tabs on the dress cover of the connector. Using a small flat-bladed tool release all of the locking tabs.
4. Once the locks are unlocked, lift the dress cover off.



1709323

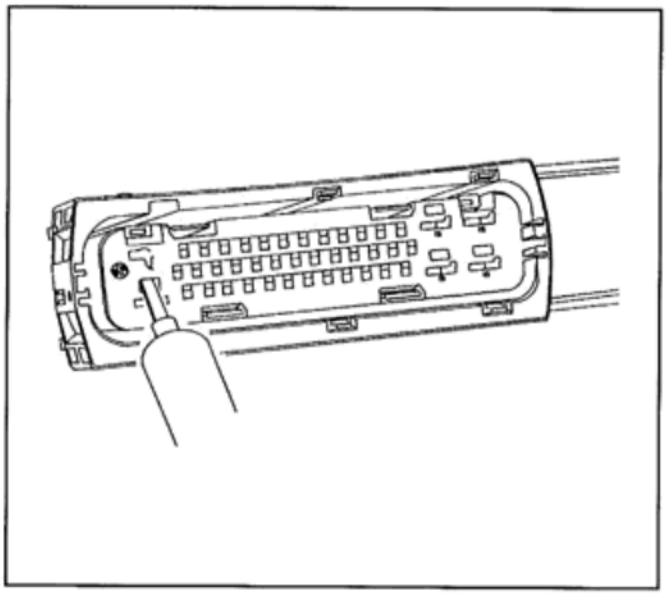
Note: Always use care when removing a terminal position assurance (TPA) in order to avoid damaging it.

5. Release the TPA by inserting a small flat-bladed tool into the blue locking tabs on both ends of the connector. Gently slide the TPA up to the released position on both ends.



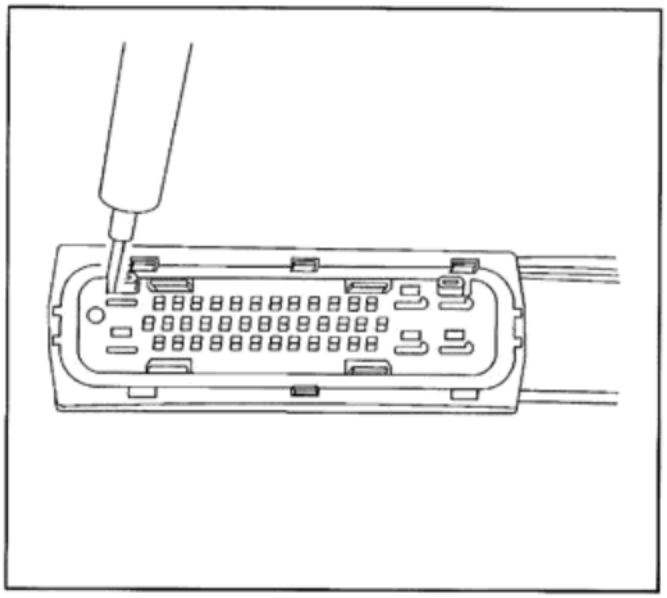
1709325

6. For the larger terminals insert the *J-38125-13A* tool to release the terminals by inserting the tool into the terminal release cavity. For the smaller terminals insert the *J-38125-12A* tool to release the terminals by inserting the tool into the terminal release cavity.



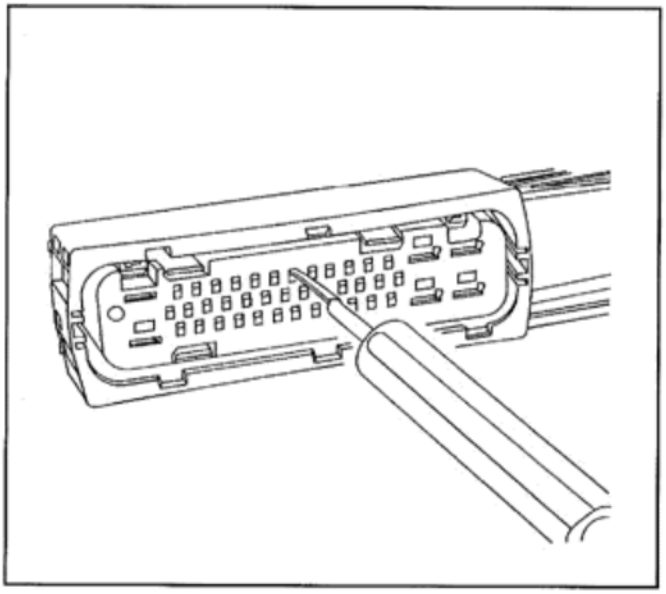
1709326

View of the release tool being used for the larger terminals.



1709327

View of the release tool being used for the larger terminals.



1709328

View of the release tool being used for the smaller terminals.

7. While holding the removal tool in place, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
8. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
9. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

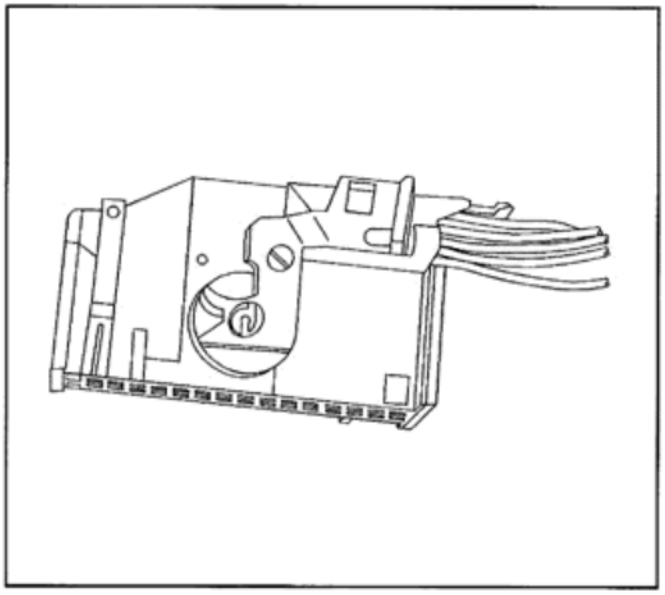
Tyco/AMP Connectors (Door Module)

Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-12A* Terminal Release Tool

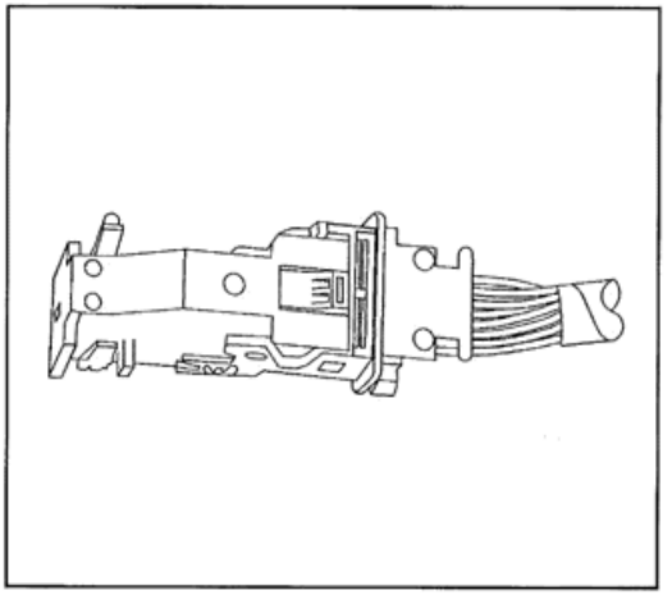
For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure



1709293

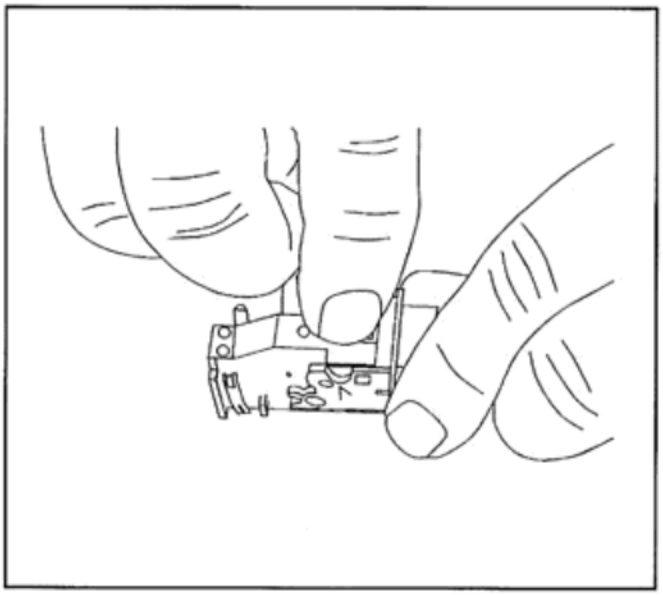
Side view of connector.



1709294

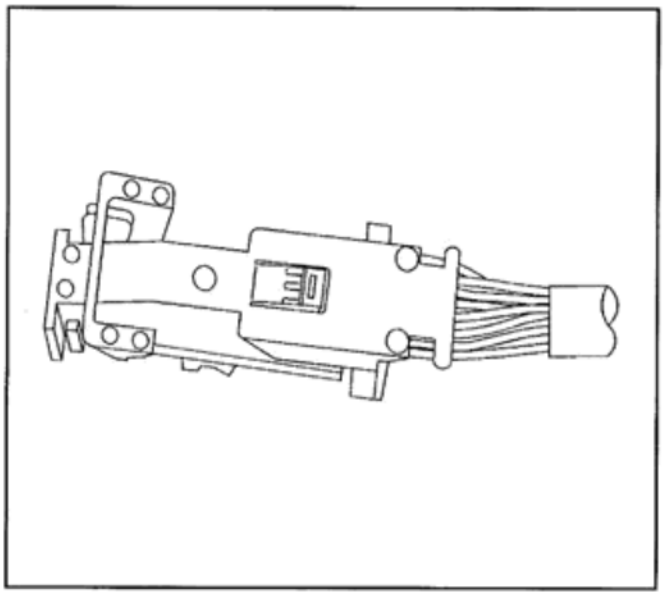
View of top of connector.

1. Locate the assist lever and lock on the top of the connector.



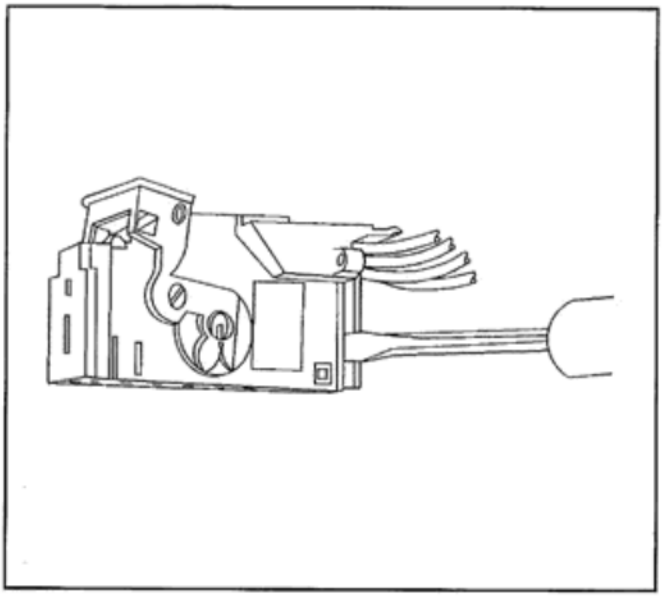
1709295

2. While depressing the lock, pull the lever over and past the lock.



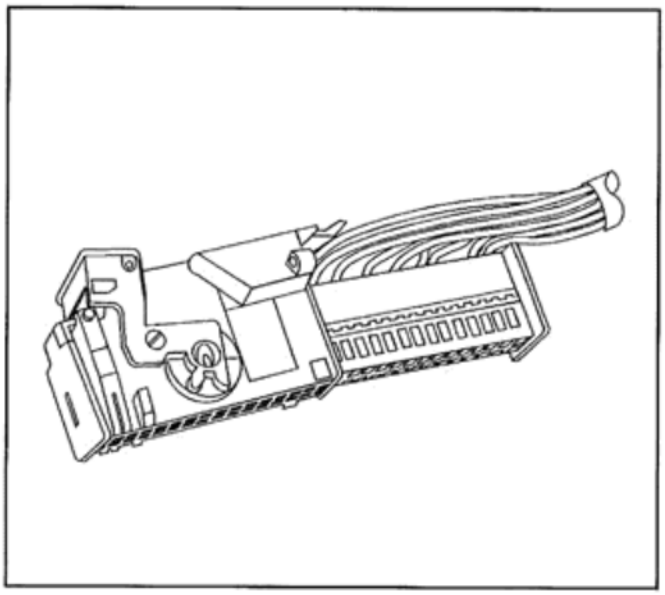
1709296

3. Disconnect the connector from the component.



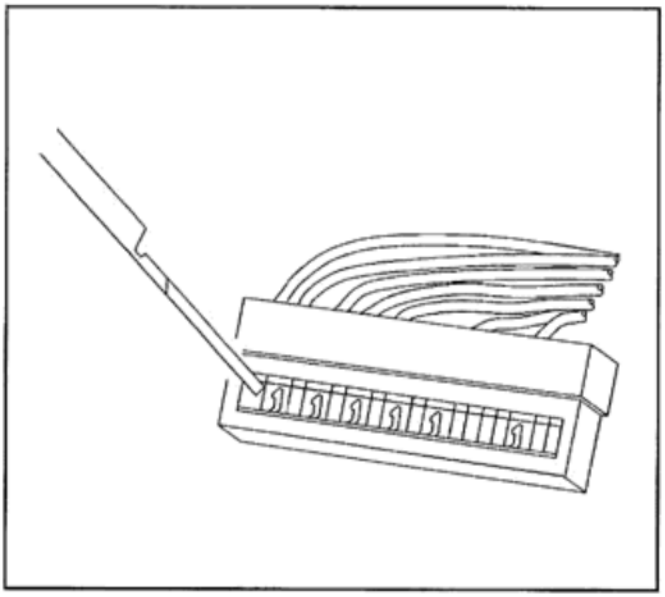
1709297

4. Locate the dress cover locking tabs at the rear of the connector. Use a small flat-blade tool to release the locking tabs. Repeat this procedure for the other locking tab.



1709298

5. Once the locking tabs are unlocked, slide the inner connector out of the rear of the connector housing.



1709299

6. Use the J-38125-12A tool to release the terminals by pressing on the tang.
7. While holding the removal tool in place, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
8. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
9. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

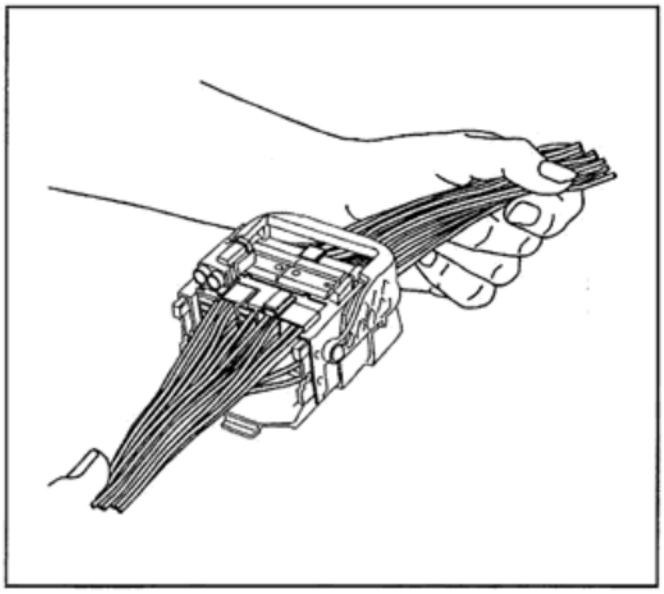
Tyco/AMP Connectors (102-Way Inline)

Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-11A* Terminal Release Tool
- *J-38125-212* Terminal Release Tool
- *J-38125-216* Terminal Release Tool
- *J-38125-221* Terminal Release Tool
- *J-38125-560* Terminal Release Tool
- *J-38125-566* Terminal Release Tool

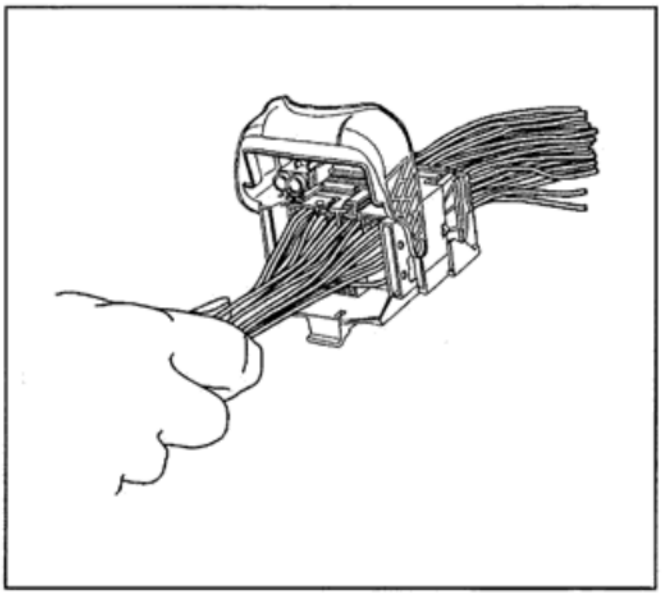
For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure



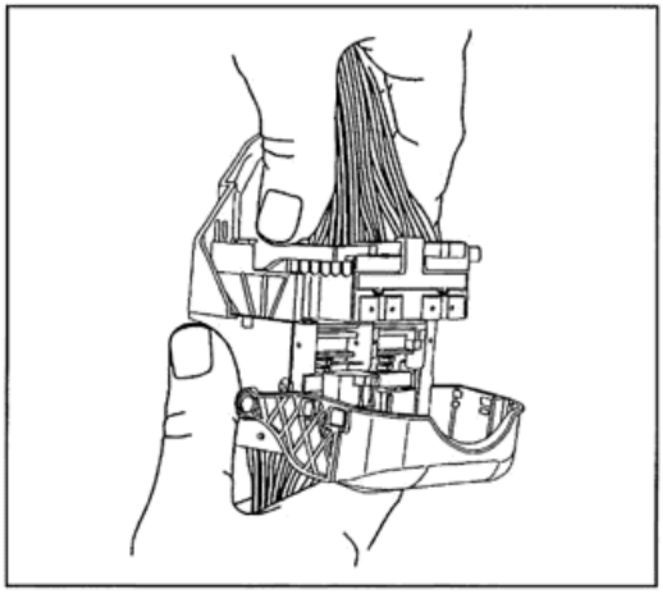
2146431

View of a typical connector in the assembled position.



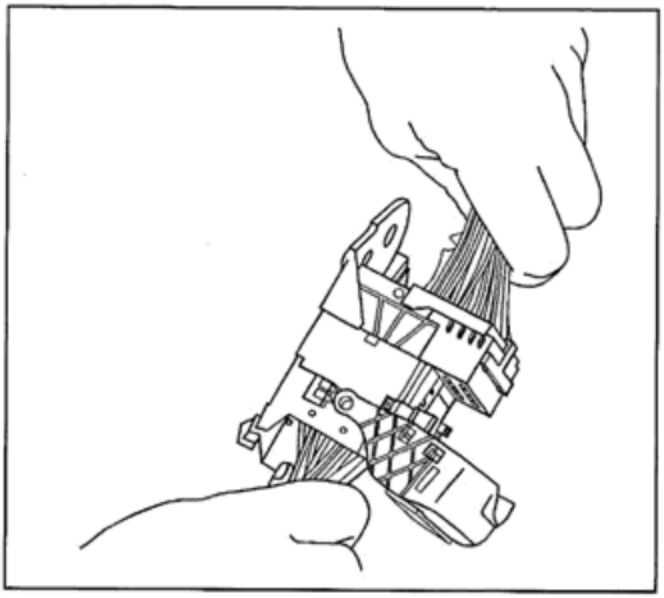
2146432

1. Pull the locking lever to the 90 degree position from the connector body.



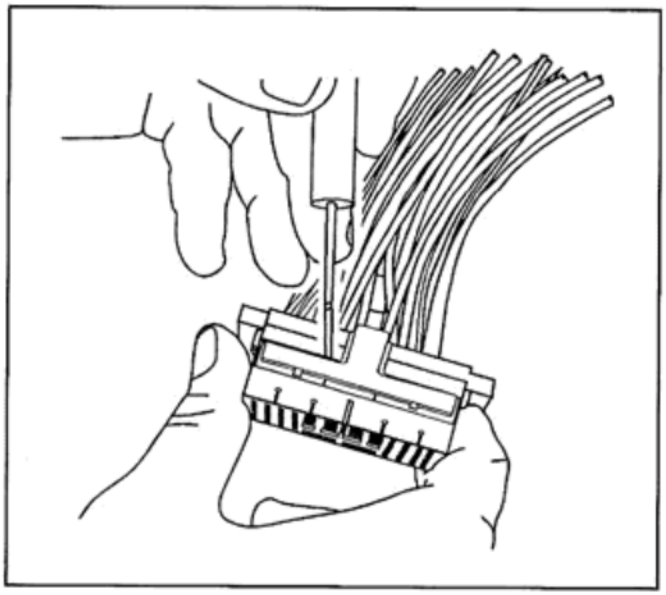
2146434

2. With the locking lever in the 90 degree position and the male connector body separated, it can be slid outward for removal.



2146435

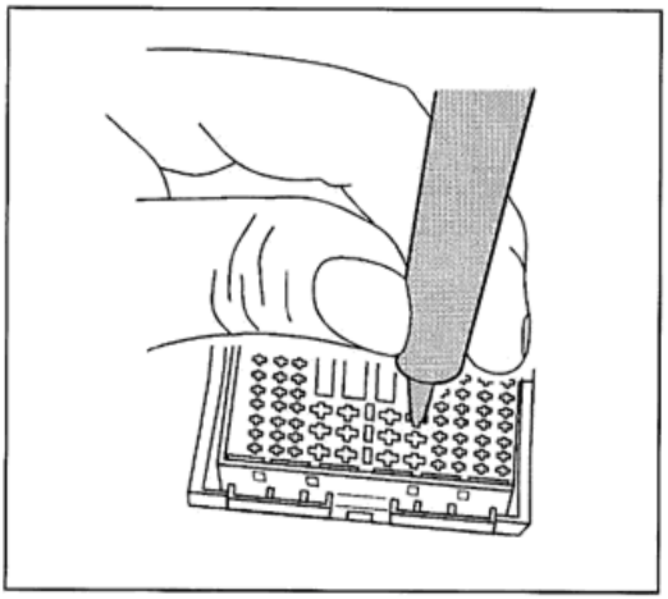
3. Slide the male connector body out away from the guide plates.



2146438

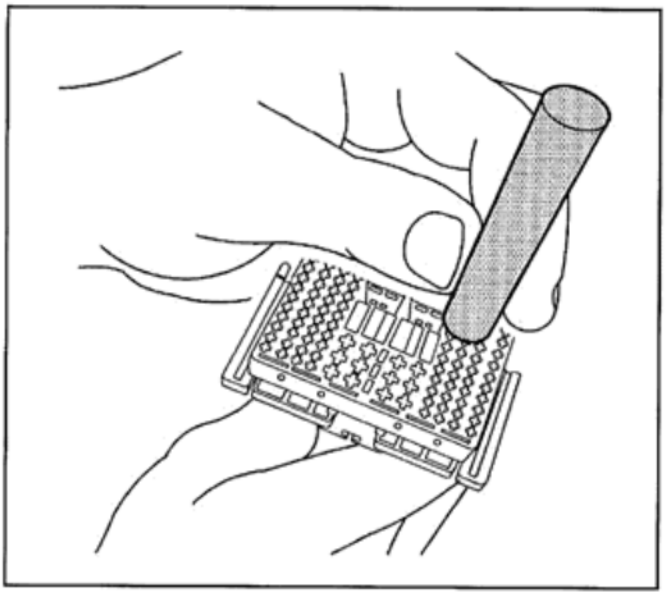
Note: During assembly the terminal position assurance (TPA) will not fully seat if any terminal is not fully seated.

4. Using terminal release tool J-38125-11A or equivalent, remove the TPA from the connector body.



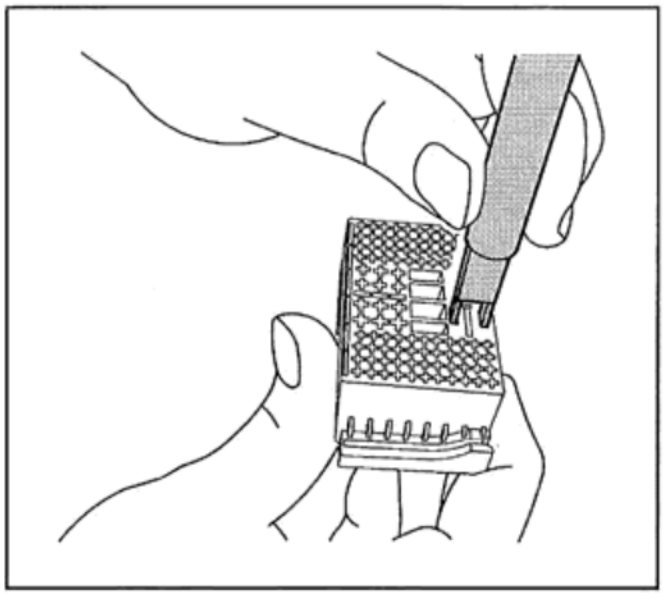
2146439

5. Using terminal release tool J-38125-566, press the prongs into the holes on each side of the terminal to be removed to release the lock tabs and pull the terminal out of the connector body.



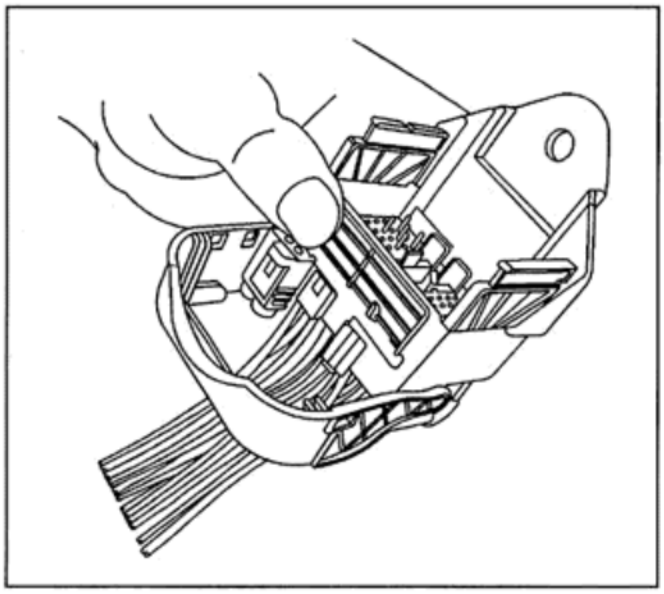
2146440

6. Using terminal release tool J-38125-560, press the prongs into the holes on each side of the terminal to be removed to release the lock tabs and pull the terminal out of the connector body.



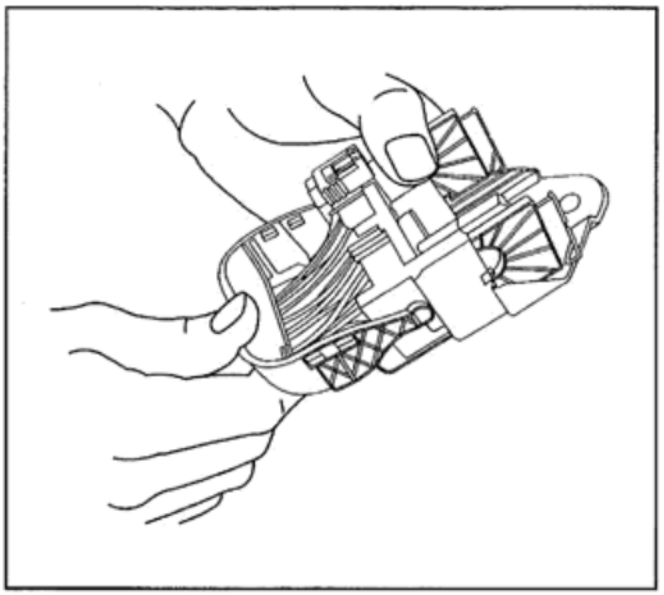
2146442

7. Using terminal release tool J-38125-221, press the prongs into the holes on each side of the terminal to be removed to release the lock tabs and pull the terminal out of the connector body.



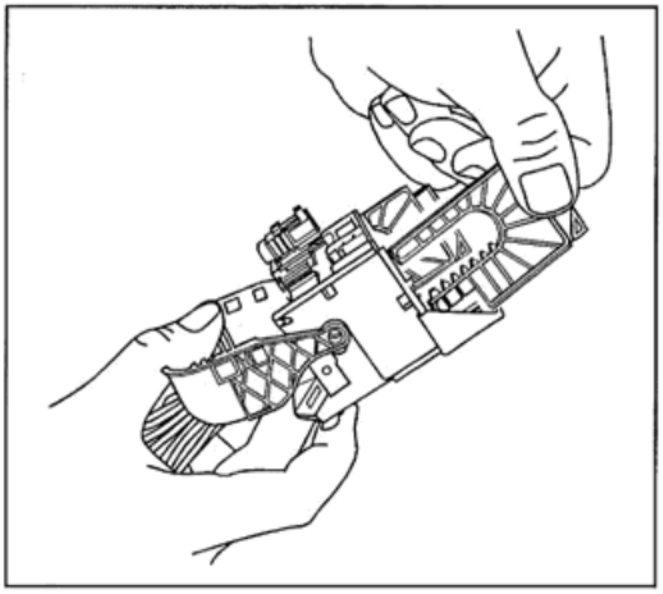
2146443

8. The female connector body may have an additional connector hooked to the edge of the body. Use terminal release tool J-38125-11A or equivalent to release the locking tab and slide the connector off the female body.



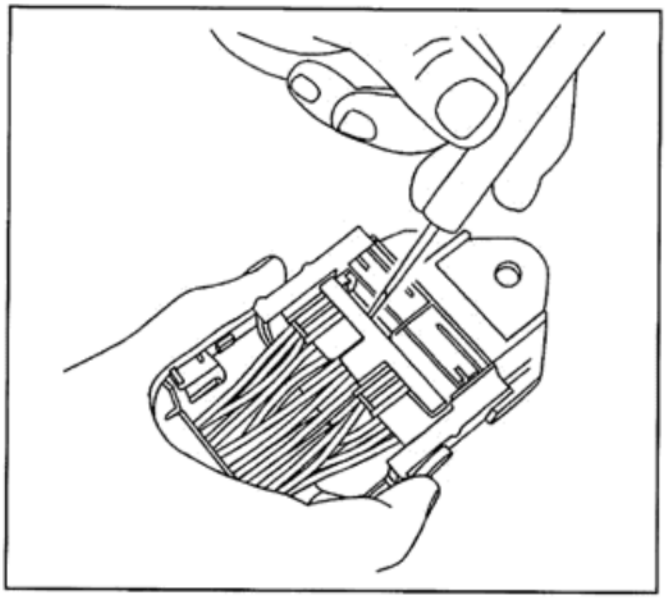
2146444

9. Move the locking lever 180 degrees from the connected position.



2146445

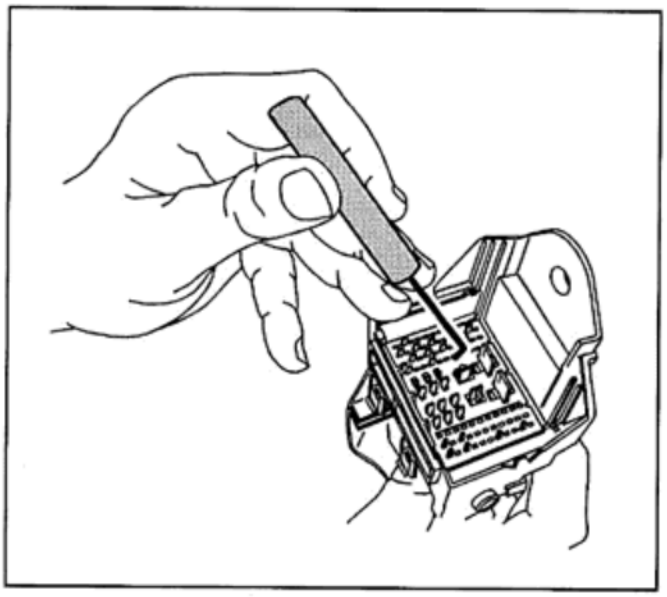
10. With the locking lever in the 180 degree position the guide plates can be removed from the connector body.



2146446

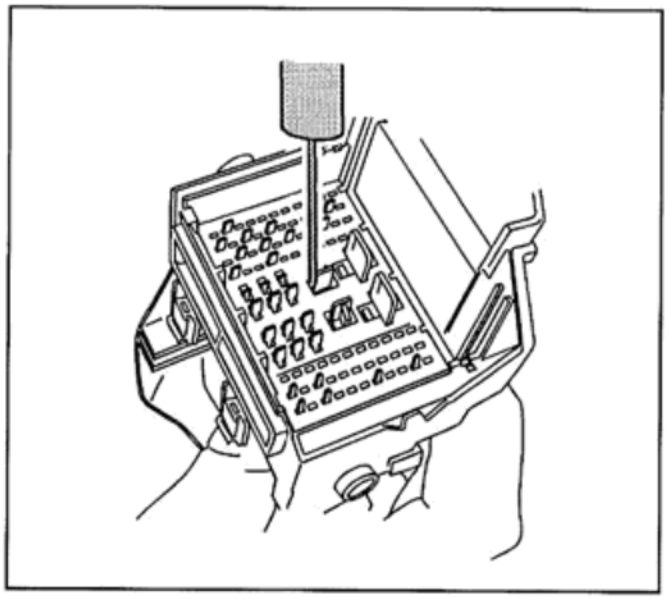
Note: During assembly the TPA will not fully seat if any terminal is not fully seated.

11. Using terminal release tool J-38125-11A or equivalent, remove the TPA from the connector body.



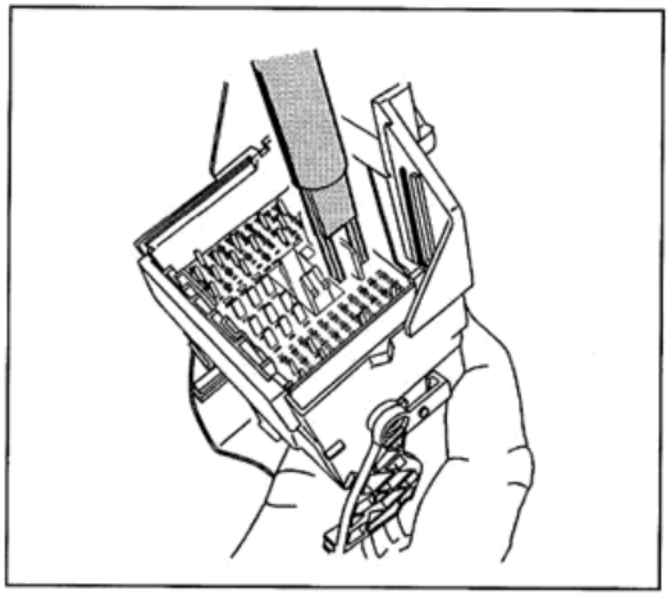
2146447

12. Using terminal release tool J-38125-216, lift the terminal plate past the terminals and out of the connector body cavity.



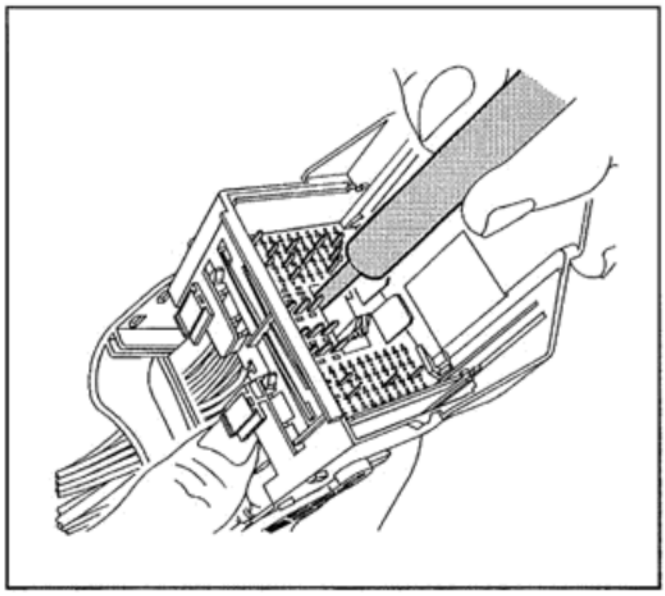
2146449

13. Terminal plate will bind slightly on each corner.



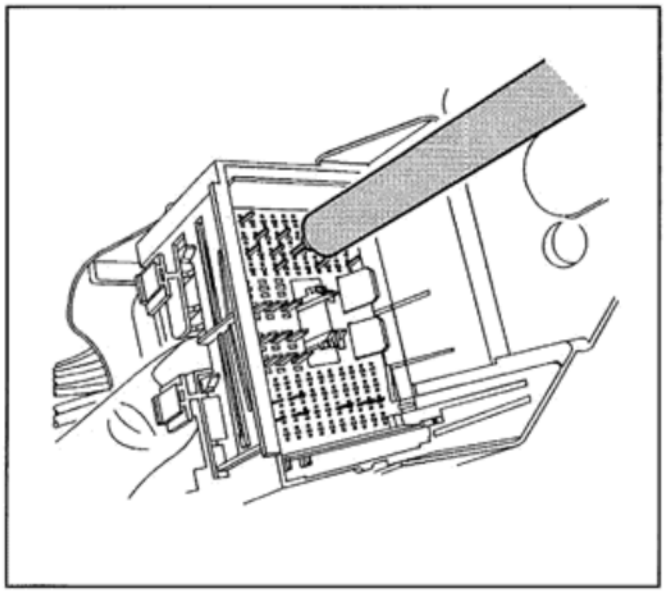
2146451

14. Using terminal release tool J-38125-221, press the prongs into the holes on each side of the terminal to be removed to release the lock tabs and pull the terminal out of the connector body.



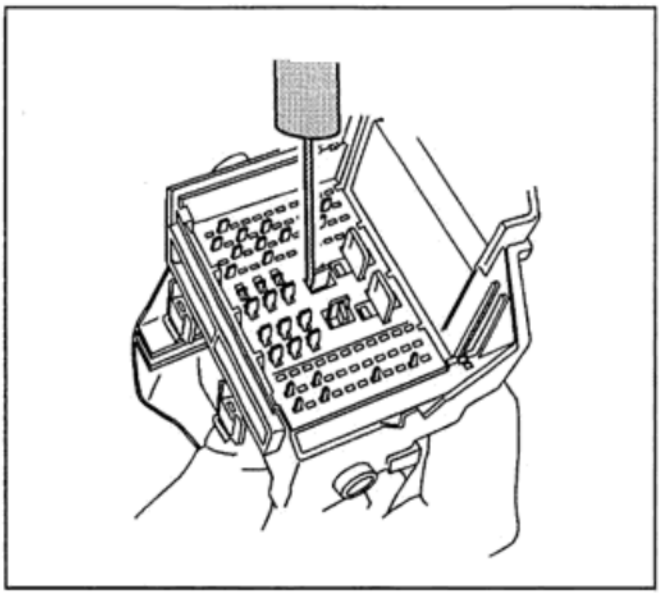
2146452

15. Using terminal release tool J-38125-212, press the prongs into the holes on each side of the terminal to be removed to release the lock tabs and pull the terminal out of the connector body.



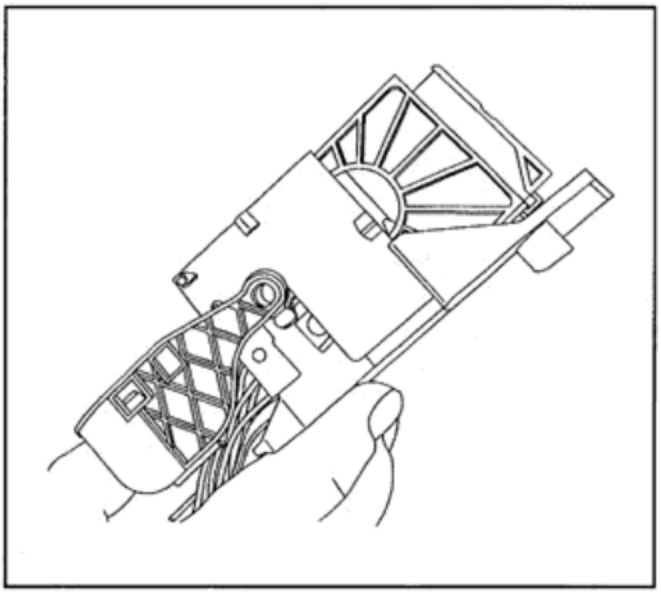
2146453

16. Using terminal release tool J-38125-560, press the prongs into the holes on each side of the terminal to be removed to release the lock tabs and pull the terminal out of the connector body.



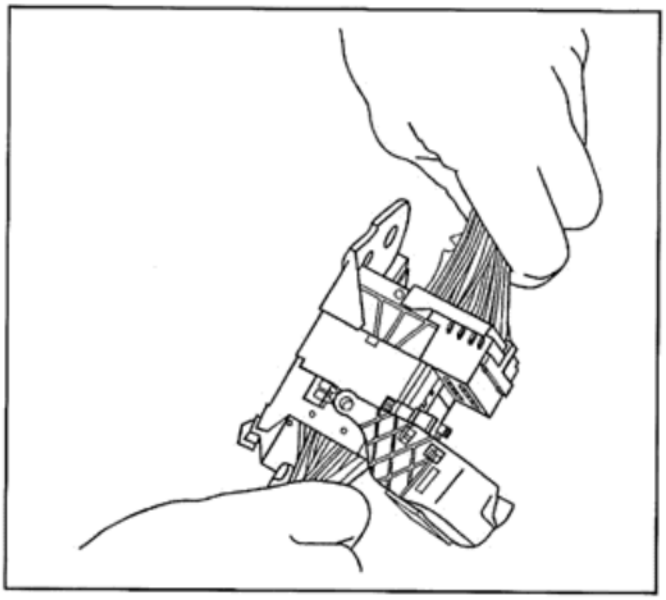
2146449

17. Press the terminal plate back into the female connector to the preset position. The plate will bind slightly on each corner.



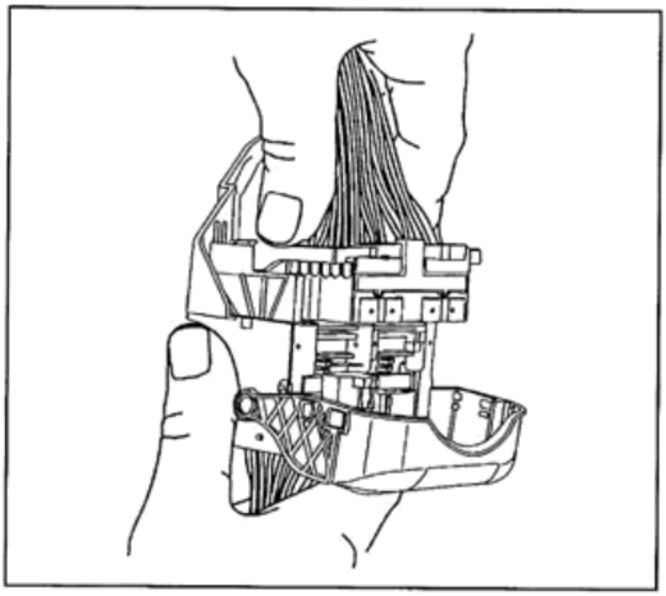
2146454

18. With the locking lever in the 180 degree position, align the guide plates to mesh with the gears on the locking lever.



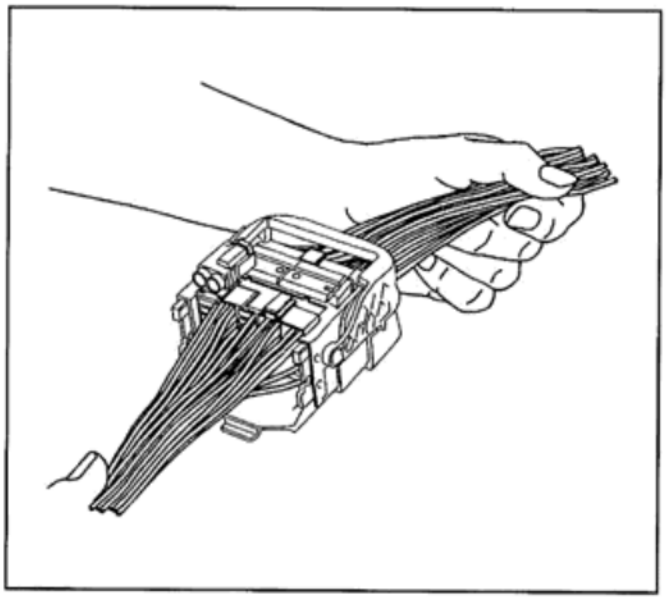
2146435

19. Slide the male connector body back inward toward the guide plates.



2146434

20. With the locking lever in the 90 degree position and the male connector body connected, it can be slid inward for assembly.



2146431

21. Move the lever into the locked position or in the assembled position. This will pull the male connector down into the female connector.
22. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
23. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

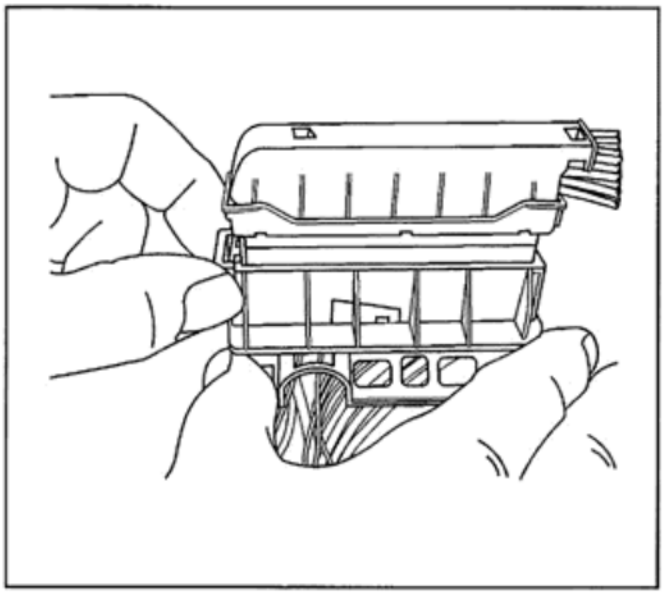
Tyco/AMP Connectors (Seat)

Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-11A* Terminal Release Tool
- *J-38125-212* Terminal Release Tool
- *J-38125-556* Terminal Release Tool
- *J-38125-560* Terminal Release Tool

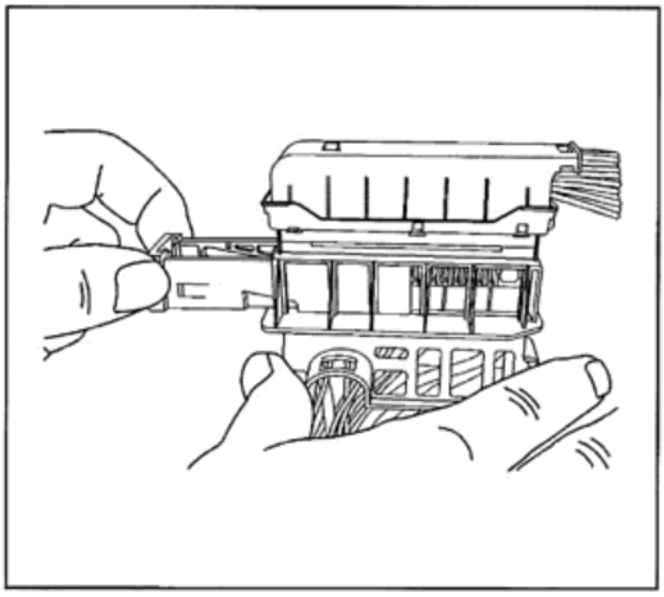
For equivalent regional tools, refer to *Special Tools on page 11-616*.

Terminal Removal Procedure



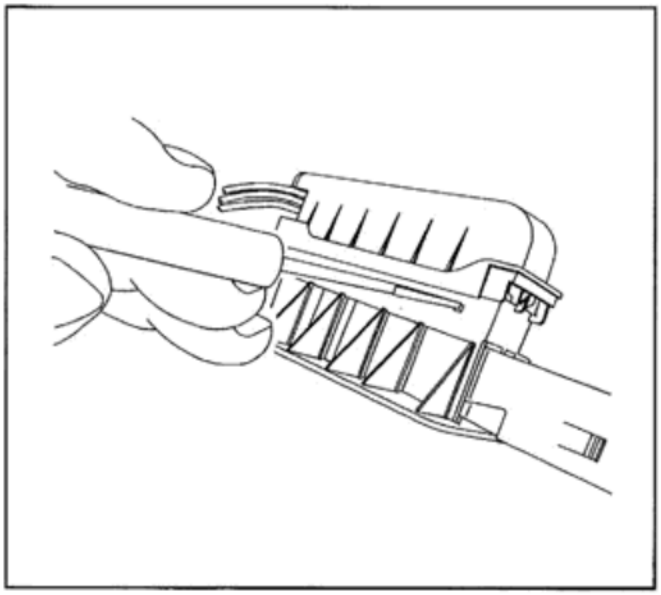
2146421

1. Grasp the locking slide lever and pull outward from the end of the connector.



2146422

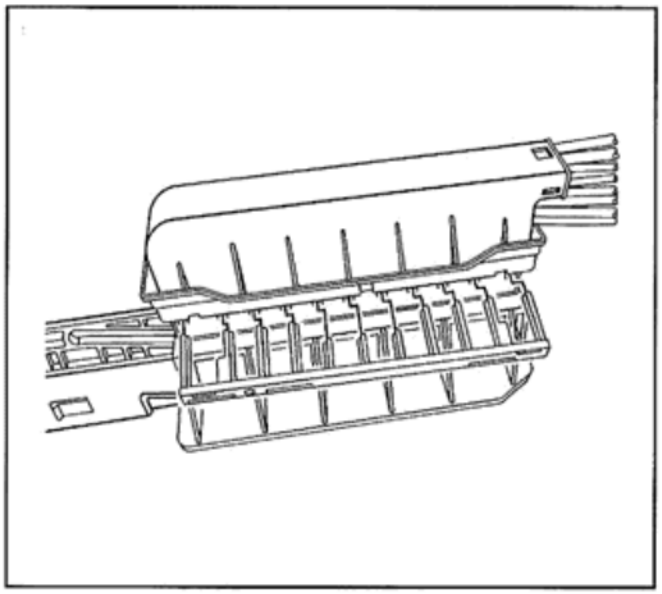
2. As the slide lever is pulled out the mating connector is lifted from the seated position.



2146424

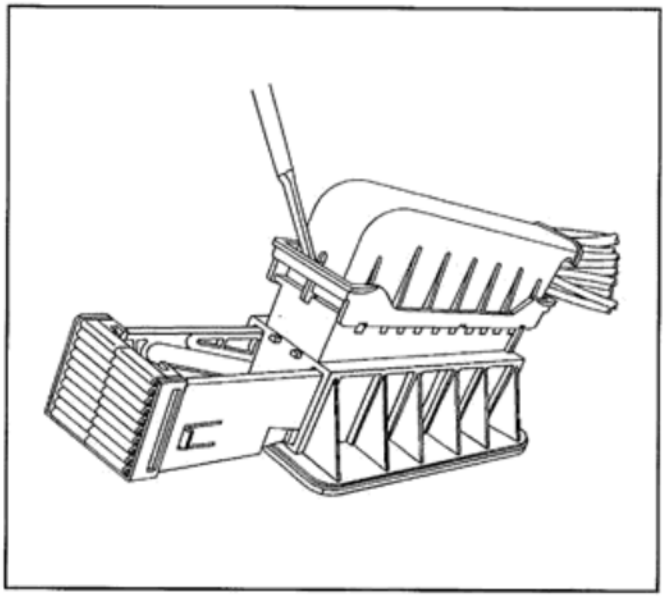
Note: Terminal position assurance (TPA) is keyed and can only be inserted in one direction.

3. Using terminal release tool J-38125-11A or equivalent, push the TPA tabs into the connector body.



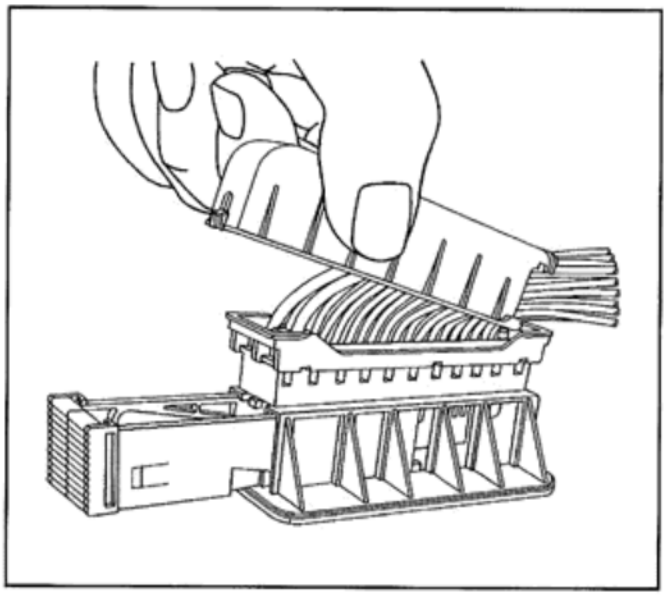
2146425

4. Pull the TPA from the connector body.



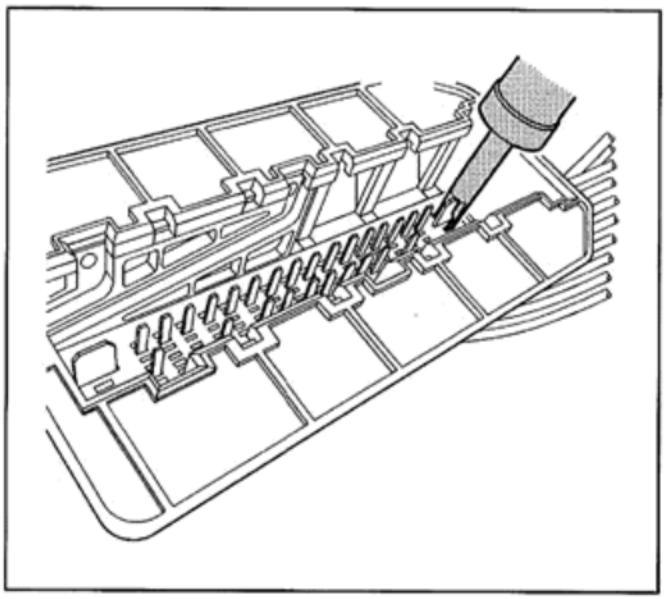
2146426

5. Using terminal release tool J-38125-11A or equivalent, release the connector wire dress cover locking tab.



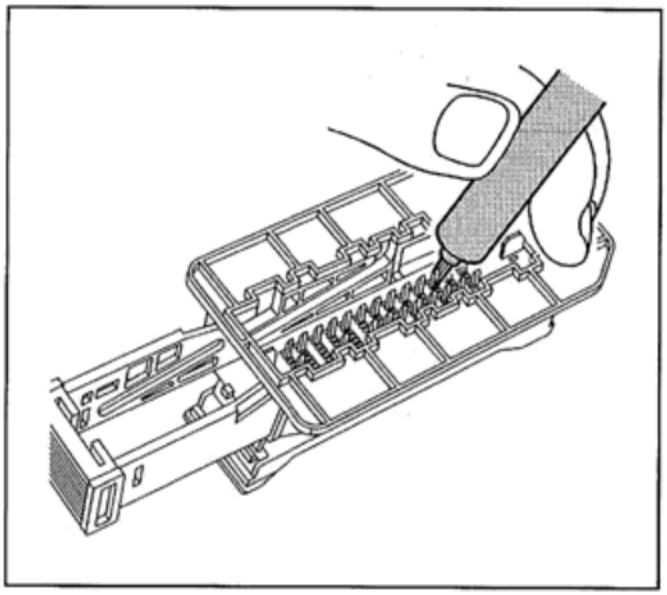
2146427

6. With the lock tab released, lift the connector wire dress cover from the connector body.



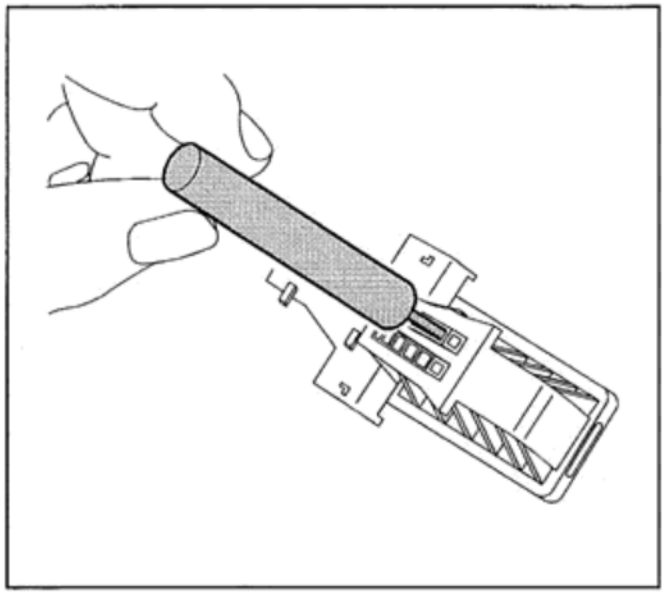
2146428

7. Using terminal release tool J-38125-212, press the prongs into the holes each side of the terminal to be removed to release the lock tabs and pull the terminal out of the connector body.



2146429

8. Using terminal release tool J-38125-560, press the prongs into the holes on each side of the terminal to be removed to release the lock tabs and pull the terminal out of the connector body.



2146430

9. Using terminal release tool J-38125-556, press the prongs into the holes on each side of the terminal to be removed to release the lock tabs and pull the terminal out of the connector body.
10. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
11. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

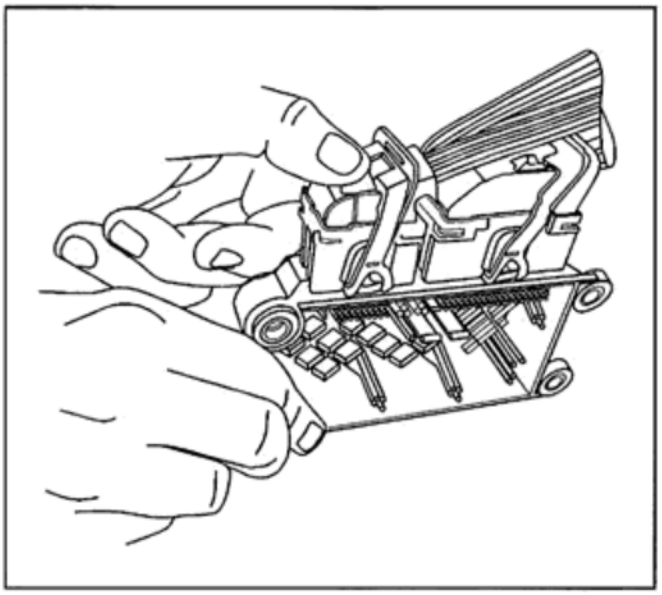
Tyco/AMP Connectors (SIR)

Special Tools

- *EL-38125–550* Terminal Release Tool Kit
- *EL-38125–580* Terminal Release Tool Kit
- *J-38125–11A* Terminal Release Tool
- *J-38125-215A* Terminal Release Tool

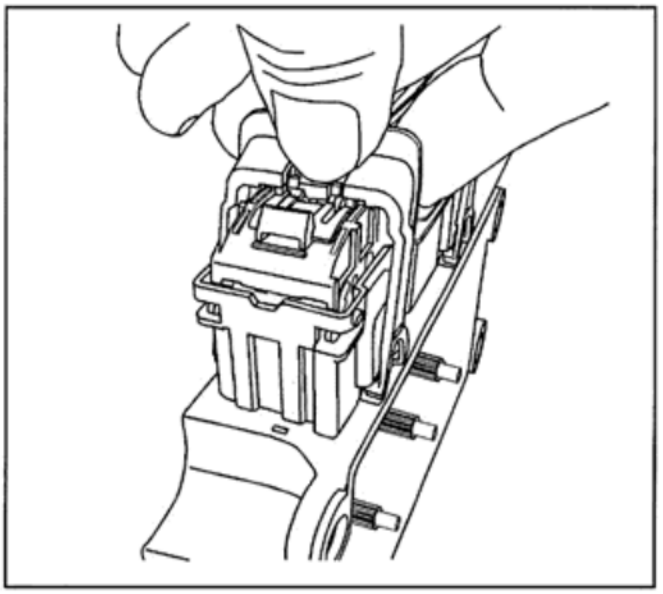
For equivalent regional tools, refer to *Special Tools on page 11-616*.

Removal Procedure



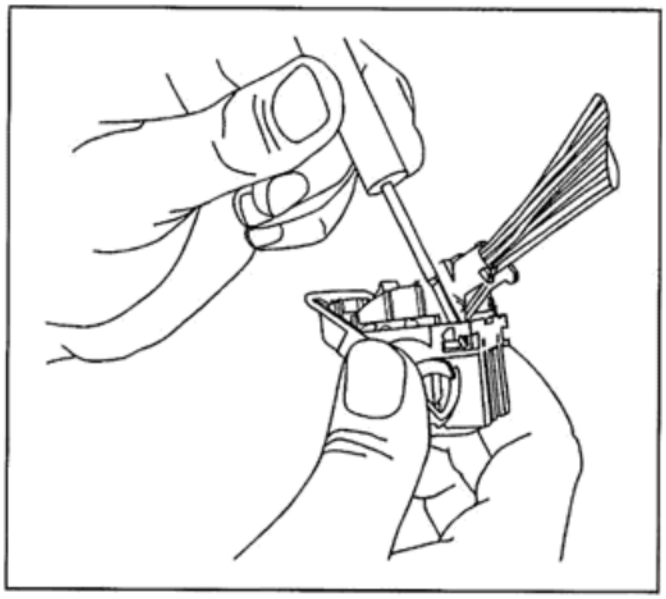
2146413

1. Using your thumbs press down and slide the red CPA away from the connector lever.



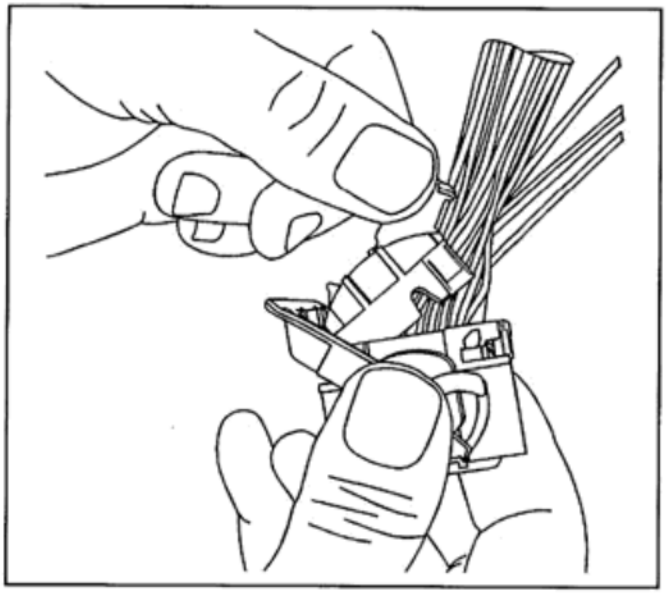
2146414

2. Using your thumb press down on the locking tab and move the lever to the released position.



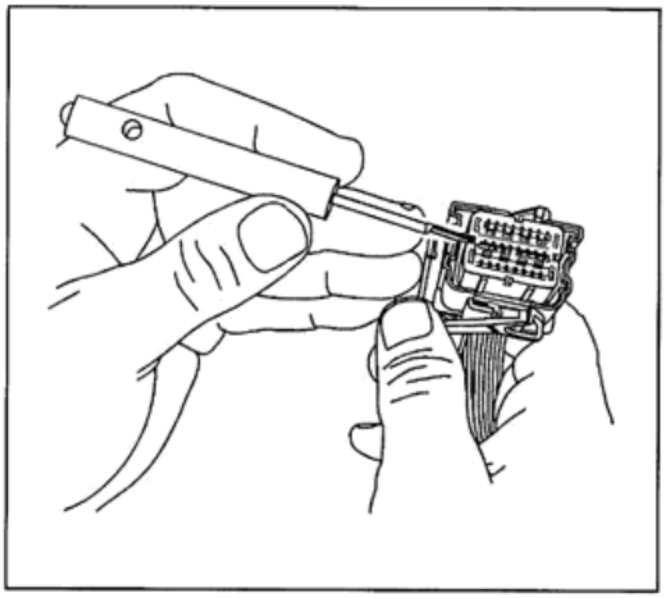
2146417

3. Using terminal tool J-38125-11A or equivalent, release the wire dress cover locking tabs.



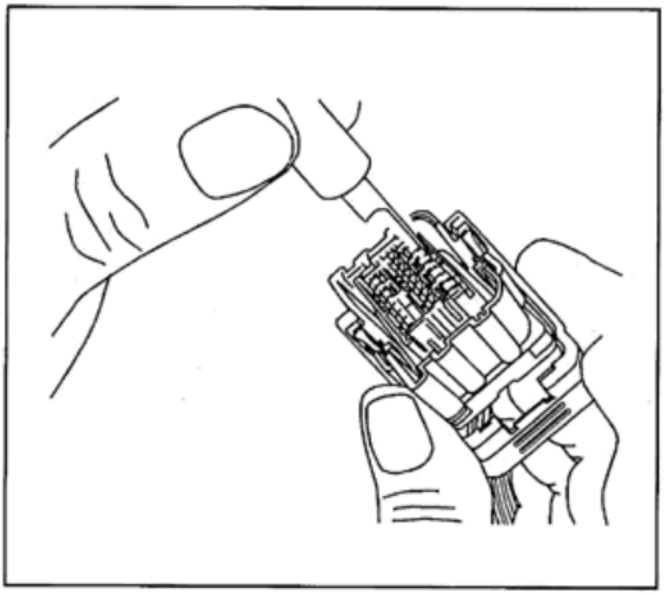
2146418

4. Pivot connector wire dress cover while removing from the connector body.



2146419

5. Using terminal tool J-38125-11A or equivalent, remove the TPA by lifting straight off the connector body.



2146420

6. Using terminal release tool J-38125-215A, place the tip of the tool on the outside edge next to the terminal and depress the lock tab and remove the rear of the connector body.

Terminal Repair Procedure

Use the appropriate terminal and crimper in order to replace the terminal.

Yazaki Connectors (2-Way)

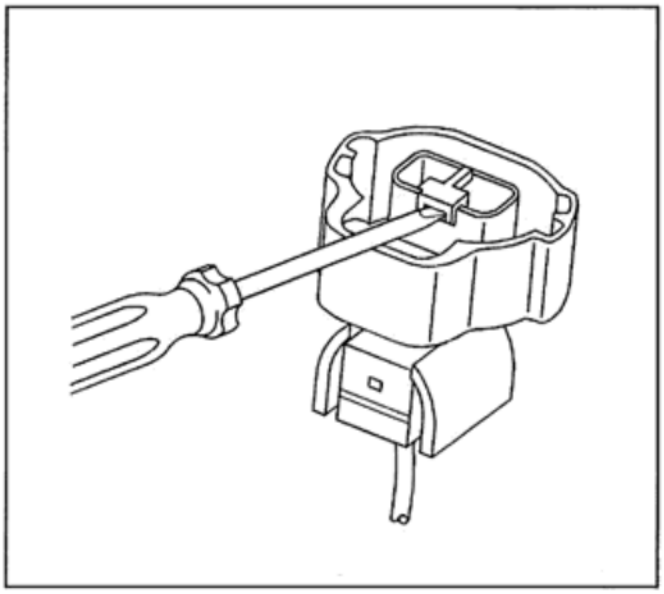
Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-553* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616.*

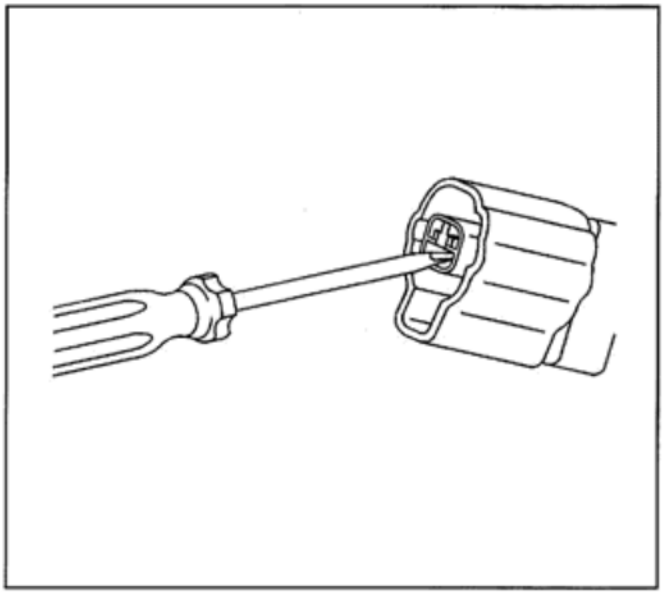
Terminal Removal Procedure

1. Disconnect the connector from the component.



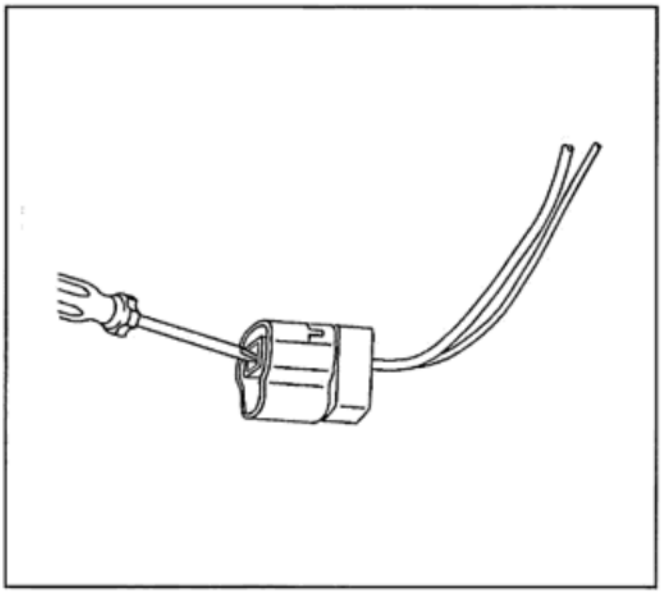
1454532

2. Insert a small flat-blade tool in the slot below the front loaded terminal position assurance (TPA) and pry up.
3. Remove the TPA by pulling it out of the connector.
4. Push the wire side of the terminal that is being removed toward the connector and hold it in position.



1454546

5. Insert the J-38125-553 on a slight upward angle into the cavity below the terminal to be removed. Ensure that the pointed on the end of the tool is facing the bottom of the terminal and it stays in contact with the terminal until it stops on the plastic terminal retainer.



1454553

6. Gently pry the plastic terminal retainer down and carefully pull the terminal out of the connector. Always remember never use force when pulling a terminal out of a connector. If the terminal is difficult to remove, repeat the entire procedure.
7. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
8. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

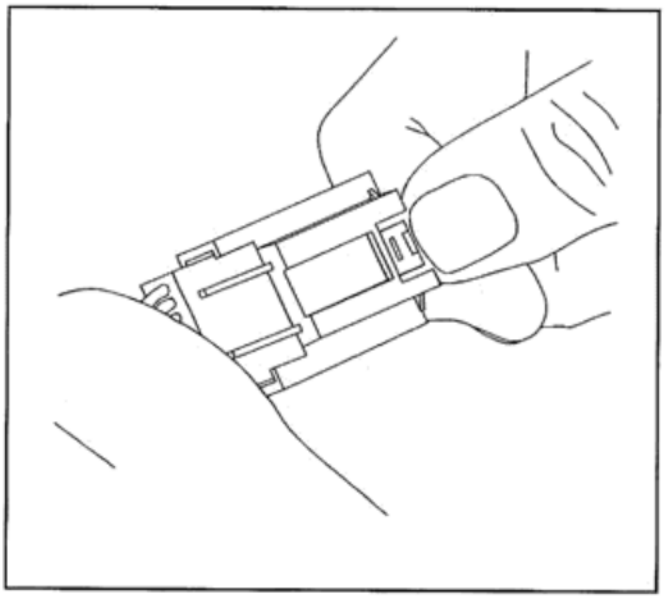
Yazaki Connectors (16-Way)

Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-215* Terminal Release Tool

For equivalent regional tools, refer to *Special Tools on page 11-616.*

Terminal Removal Procedure

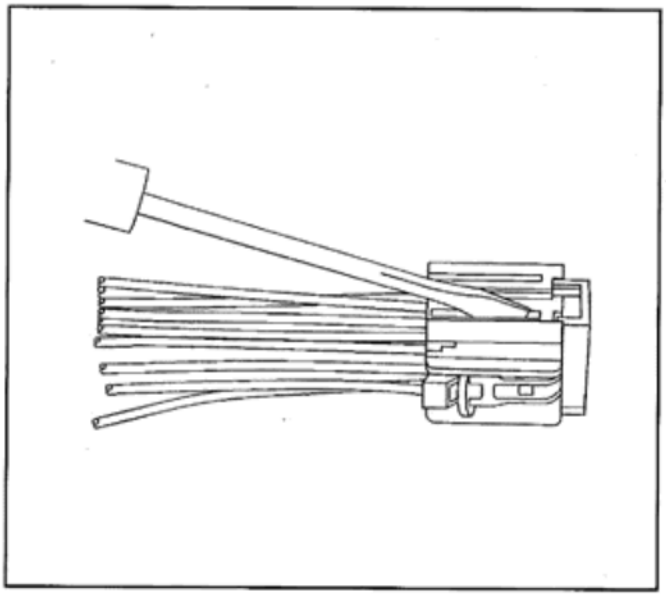


1709336

1. While depressing the lock, pull the two connector halves apart.

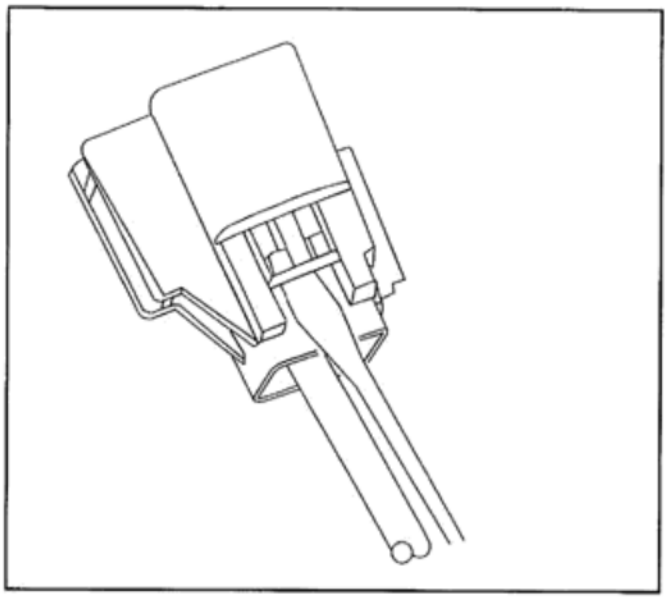
Note: The terminal position assurance (TPA) is fragile and may break if not done carefully.

2. Use a small flat-blade tool to very carefully push the TPA towards the face of the connector on both sides of the connector.



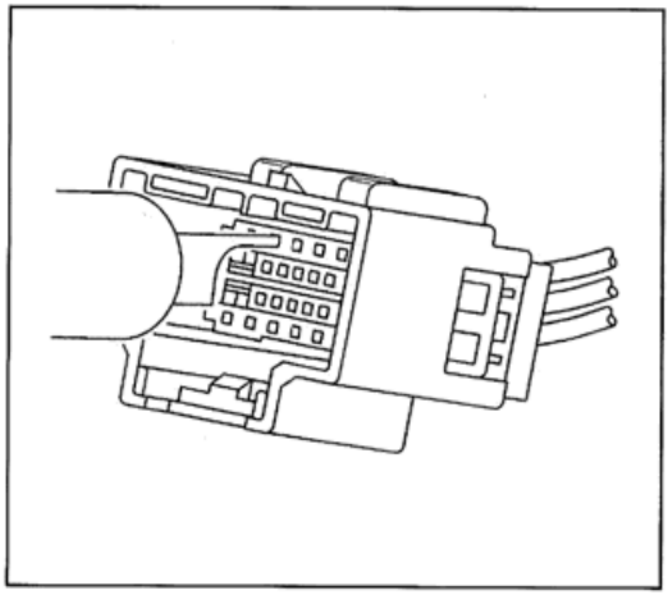
1709329

3. View of the male half of the connector with female terminals.



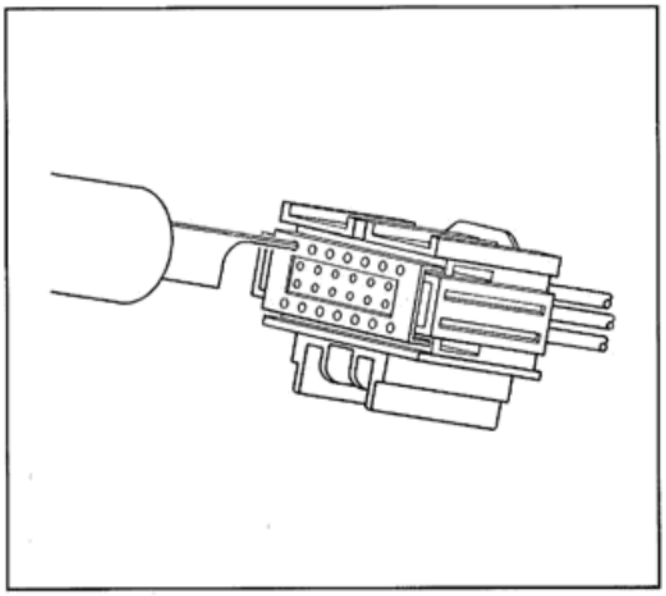
1709335

4. View of the female half of the connector with male terminals.
5. Use the J-38125-215 tool to release the terminals by inserting the tool into the terminal release cavity.



1709332

6. View of the female half of the connector with male terminals.



1709331

7. View of the male half of the connector with female terminals.
8. While holding the removal tool in place, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
9. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
10. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Repairing Connector Terminals (Terminated Lead Repair)

Special Tools

EL-38125-10 Splice Sleeve Crimp Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Note: All repairs near the engine manifold, turbo engine and all exhaust pipes should follow the High Temperature Wiring Repairs procedures.

For high temperature wiring repairs, refer to *High Temperature Wiring Repairs on page 11-543*.

Terminated leads are terminals that are crimped onto wires. The terminated lead can be used throughout the vehicle since it is designed for temperatures up to 150° C. The length of the wire is 450 mm.

1. Use the connector end view to identify the correct terminated lead.
2. The terminated lead package should include a DuraSeal splice sleeve. If not, use the chart to in Splicing Copper Wire Using Splice Sleeves to identify the correct DuraSeal splice sleeve, refer to *Splicing Copper Wire Using Splice Sleeves on page 11-544*.

Repairing Connector Terminals (Terminal Repair)

Special Tools

- *J-38125–580* Terminal Repair Kit
- *J-38125-6* Crimp Tool
- *J-38125-7* Crimp Tool
- *J-38125-8* Crimp Tool
- *J-38125-64* Crimp Tool
- *J-38125-101* Crimp Tool
- *J-38125-641* Crimp Tool
- *J-38125-642* Crimp Tool
- *J-38125-643* Crimp Tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Use the following repair procedures to repair each type of terminal:

- For push to seat terminals, refer to *Delphi Connectors (Weather Pack) on page 11-559* or *Delphi Connectors (Pull To Seat) on page 11-561* or *Delphi Connectors (Push To Seat) on page 11-560* or *Delphi Connectors (12-Way) on page 11-567* or *Delphi Connectors (Micro .64) on page 11-564* or *Delphi Connectors (Steering Gear) on page 11-569* or *Delphi Connectors (Micro-Pack 100W) on page 11-561*.
- For pull to seat terminals, refer to *Delphi Connectors (Weather Pack) on page 11-559* or *Delphi Connectors (Pull To Seat) on page 11-561* or *Delphi Connectors (Push To Seat) on page 11-560* or *Delphi Connectors (12-Way) on page 11-567* or *Delphi Connectors (Micro .64) on page 11-564* or *Delphi Connectors (Steering Gear) on page 11-569* or *Delphi Connectors (Micro-Pack 100W) on page 11-561*.

Note: The first step for all terminal repairs is to find the connector end view in SI.

Cable Seal Terminals

1. Cut off the terminal between the core and the insulation crimp to minimize any wire loss.
2. Remove the old seal.
3. Apply the correct cable seal, per the wire gauge size, from the kit. Slide the seal back along the wire to enable removal of the insulation.
4. To minimize wire loss, remove only the insulation required.
5. Using the connector end view, determine the correct crimp tool and crimp jaw.
6. Align the seal with the end of the cable insulation.
7. Position the stripped wire and seal in the terminal.
8. Hand Crimp the core wings first.
9. Hand Crimp the insulation wings around the seal and the cable.
10. Solder all of the hand crimp terminals except the Micro-Pack 100 and 0.64 sizes.

Unsealed Terminals

1. Cut off the terminal between the core and the insulation crimp to minimize any wire loss.
2. To minimize wire loss, remove only the insulation required.
3. Position the stripped wire in the terminal.
4. Hand Crimp the core wings first.
5. Hand Crimp the insulation wings around the cable.
6. Solder all of the hand crimp terminals except the Micro-Pack 100 and 0.64 sizes.

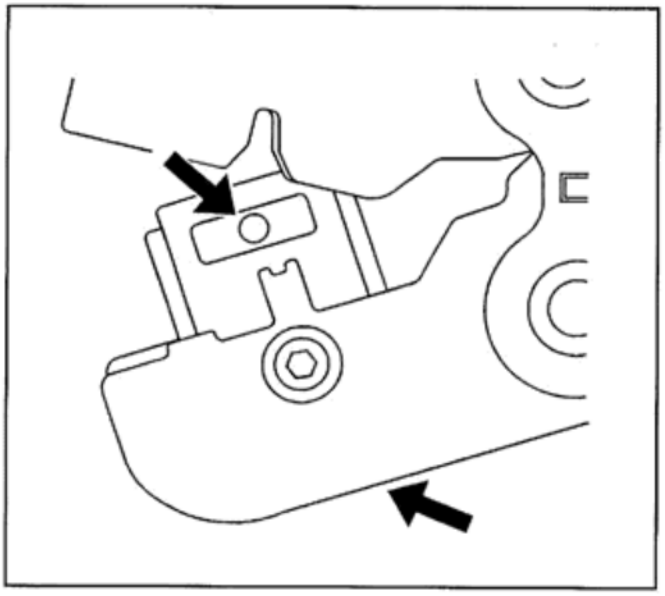
Micro-Pack 100W Size Terminal

The Micro-Pack 100W connectors have small terminals that are difficult to handle and hold when crimping. In order to aid the technician when crimping these terminals, a new crimping tool was developed. The J 38125-101 (W jaw) crimping tool was developed to crimp Micro-Pack 100W terminals. The J 38125-101 (W jaw) crimping tool has a terminal holding block that will hold the terminal in place while the terminal is being crimped. After the terminal is removed from the connector perform the following procedure in order to repair Micro-Pack 100 terminals.

1. Cut the wire as close to the terminal as possible.

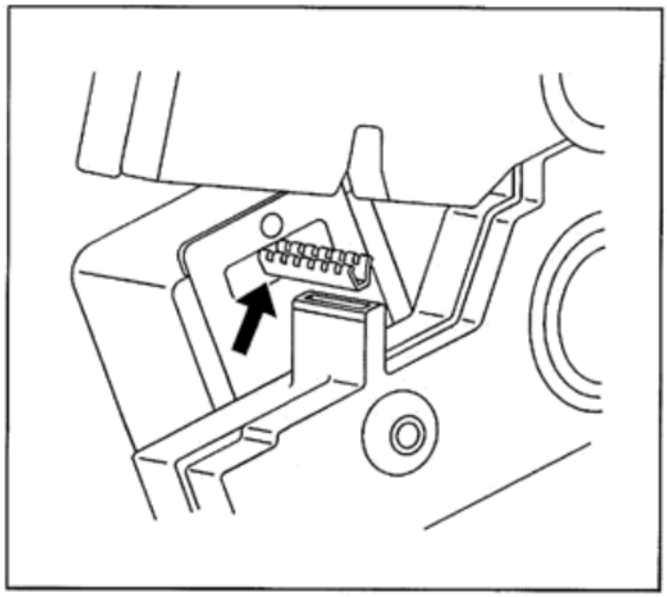
Note: After cutting the damaged terminal from the wire, determine if the remaining wire is long enough to reach the connector without putting a strain on the wire. If the wire is not long enough, splice a small length of the same gauge wire to the existing wire, then crimp the new terminal on the added wire.

2. Strip 5 mm (3/16 in) of insulation from the wire.



862167

3. Depress the spring loaded locator of the J 38125-101 (W jaw) crimping tool until the terminal holder is completely visible.



862185

4. Insert the terminal into the crimp tool until the core wings are flush with the anvil on the crimp tool. Be sure that the wings are pointed toward the crimp tool former and release the spring locator. The locator will hold the terminal in place. Inspect the alignment of the terminal wings with the crimp tool former. If the terminal wings are wider than the crimp tool former, remove the terminal and bend the terminal wings in slightly.
5. Place stripped wire into terminal.
6. Crimp the new terminal to the wire. If a jam occurs, press the emergency release to open applicator.

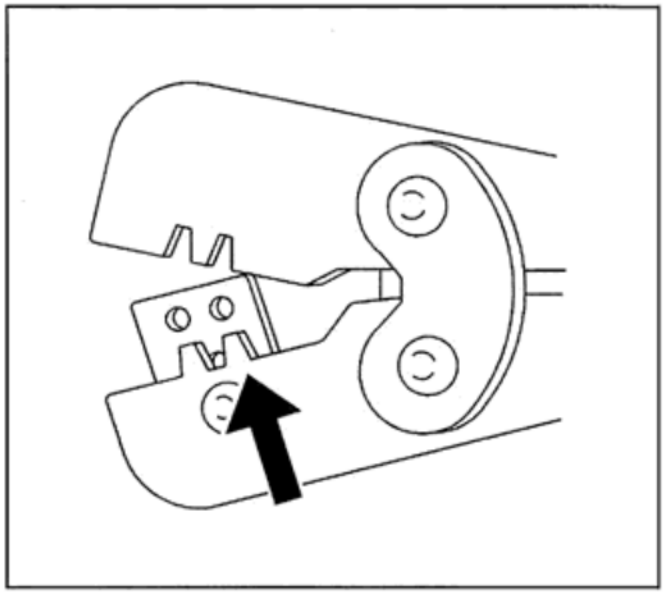
Micro 0.64 Size Terminal

The Micro 64 connectors have small terminals that are difficult to handle and hold when crimping. In order to aid the technician when crimping these terminals, a new crimping tool was developed. The J 38125-64 (M jaw) was developed to crimp Micro 64 terminals. The J-38125-64 crimping tool has a terminal holding block that will hold the terminal in place while the terminal is being crimped. The J-38125-64 crimping tool is also designed to crimp both the wire and the insulation at the same time.

After the terminal is removed from the connector perform the following procedure in order to repair Micro 64 terminals.

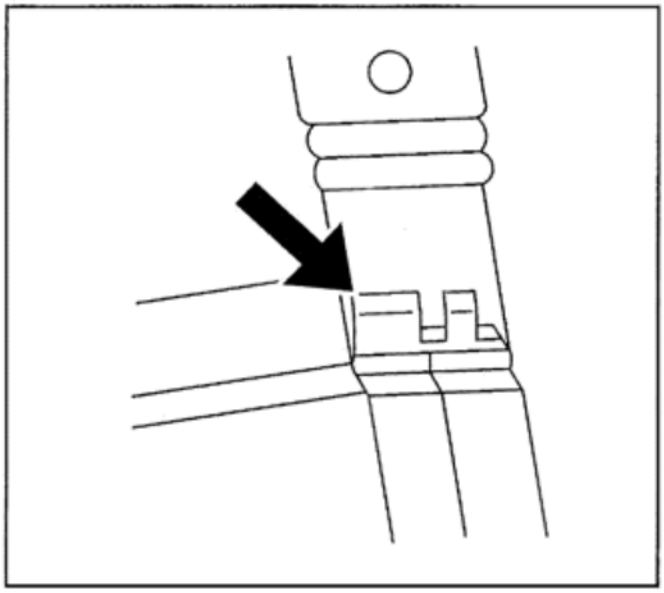
Note: After cutting the damaged terminal from the wire, determine if the remaining wire is long enough to reach the connector without putting a strain on the wire. If the wire is not long enough, splice a small length of the same gauge wire to the existing wire, then crimp the new terminal on the added wire.

1. Cut the wire as close to the damaged terminal as possible.
2. Strip 5 mm (3/16 in) of insulation from the wire.



875015

3. Depress the spring loaded locator of the crimping tool until the terminal holder is completely visible.



875016

4. Insert terminal into the appropriate terminal holder until it hits bottom and stops. The correct terminal holder is determined by the wire size. Also ensure that the terminals wings are pointing towards the former on the tool and the release locator.
5. Insert the stripped cable into the terminal. Insulation should be visible on both sides of the terminal insulation wings.
6. Compress the handles until the ratchet automatically releases.
7. Place the terminal into the appropriate cavity and assemble the connector.

Terminal Removal

Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *EL-35616* Terminal Test Probe Kit

For equivalent regional tools, refer to *Special Tools on page 11-616*.

Note: All repairs near the engine manifold, turbo engine and all exhaust pipes should follow the High Temperature Wiring Repair procedures.

1. Find the appropriate connector end view within the connector end view section. The connector end view has the following information:
   - Diagnostic probe tool
   - Terminal release tool
   - Terminal/terminated lead part numbers

Note: Not using the proper test kit probe may cause damage to the terminal(s) that are probed.

2. Determine if a terminal is damaged.
   - Locate the diagnostic probe tool from the connector end view. The connector end view describes the color and part number to help the technician find and use the correct tool.
   - Connect the probe tool to the Digital Multimeter.
   - Insert the probe tool into the cavity and follow the procedures from the *Troubleshooting with a Digital Multimeter on page 11-527*.
3. Disconnect the connector body to perform the repair.
4. Use the following procedure to remove the terminal from the connector body.

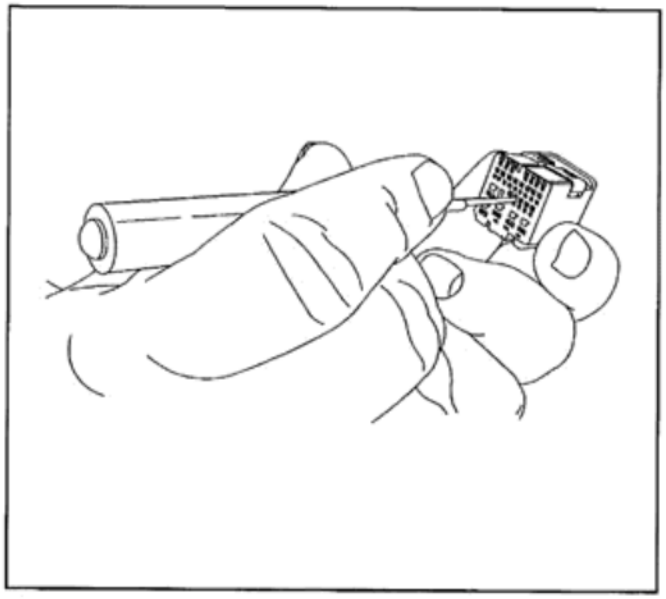
Note: Several procedures for specific connector bodies are called out in the Wiring Repairs section.

- The terminal position assurance (TPA) and connector position assurance (CPA) should be removed before releasing the terminal for the connector body.
- Look at the connector end view to locate the cavity of the damaged terminal and find the proper terminal release tool from the terminal release tool kit.

Note: Using the incorrect terminal release tool can damage the connector body.

Note: Some terminals have a lever that must be disengaged before the terminal can be released.

- Insert the terminal release tool into the cavity.



1774105

5. Gently pull the wire out of the back of the connector.
6. Repair the terminal by following the *Repairing Connector Terminals (Terminated Lead Repair) on page 11-602* or *Repairing Connector Terminals (Terminal Repair) on page 11-602* procedure.
7. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

Ignition Key Cannot Be Inserted, Rotated, or Removed from the Ignition Lock Cylinder

Step	Action	Yes	No
1	1. Ensure the transmission shift lever is in the PARK position and the steering column is NOT in the locked position. 2. Verify the ignition key cannot be removed from the ignition lock cylinder. Can the ignition key be removed from the ignition lock cylinder?	Go to *Step 4*	Go to *Step 2*
2	Verify the ignition key cannot be turned to the OFF position. Can the ignition key be turned to the OFF position?	Go to *Step 3*	Go to *Step 7*
3	Verify the ignition key cannot be removed from the ignition lock cylinder. Can the ignition key be removed from the ignition lock cylinder?	Go to *Step 7*	Go to *Step 12*
4	Verify the ignition key cannot be fully inserted and rotated without sticking in any position. Can the ignition key be fully inserted into the ignition lock cylinder and be rotated without sticking in any position?	Go to *Step 7*	Go to *Step 5*
5	Inspect for an incorrect, worn, or damaged ignition key. Is the ignition key incorrect, worn, or damaged?	Go to *Step 10*	Go to *Step 6*
6	Inspect the ignition key. Clean the entire middle groove area of the side milled ignition key. Can the cleaned key be fully inserted into the ignition lock cylinder and be rotated without sticking in any position?	Go to *Step 13*	Go to *Step 12*
7	Verify the adjustment of the shift control cable. Refer to *Range Selector Lever Cable Adjustment on page 17-196*. Can the ignition key be turned to the OFF position and be removed?	Go to *Step 13*	Go to *Step 8*
8	Attempt to override the ignition lock solenoid on the ignition and start switch housing. Can the ignition key be turned to the OFF position and be removed?	Go to *Step 9*	Go to *Step 12*

Ignition Key Cannot Be Inserted, Rotated, or Removed from the Ignition Lock Cylinder (cont'd)

Step	Action	Yes	No
9	Inspect the electrical system for improper operation. Refer to *Testing for Intermittent Conditions and Poor Connections on page 11-531*. Can the ignition key be turned to the OFF position and be removed?	Go to *Step 13*	Go to *Step 11*
10	1. Replace the ignition key with a new cut key. Refer to *Door Lock and Ignition Lock Folding and Non-Folding Key Cutting on page 1-24*. 2. Program the transmitter. Refer to *Key with Integrated Transmitter Programming on page 13-30*. Did you complete the repair?	Go to *Step 13*	—
11	Replace the floor shifter. Refer to *Transmission Control Replacement on page 17-193*. Did you complete the repair?	Go to *Step 13*	—
12	Replace the ignition lock cylinder. Refer to *Ignition Lock Cylinder Replacement on page 11-611*. Did you complete the repair?	Go to *Step 13*	—
13	Operate the system in order to verify the repair. Did you correct the condition?	System OK	—

Repair Instructions

GMLAN and Media Oriented Systems Transport (MOST) Wiring Repairs

Special Tools

- *EL-38125-10* Splice Sleeve Crimping Tool
- DuraSeal splice sleeves
- A wire stripping tool

For equivalent regional tools, refer to *Special Tools on page 11-616*.

The DuraSeal splice sleeves have the following 2 critical features:

- A special heat shrink sleeve environmentally seals the splice. The heat shrink sleeve contains a sealing adhesive inside.
- A cross hatched (knurled) core crimp provides necessary contact integrity for the sensitive, low energy circuits.

The GM Local Area Network (GMLAN) System requires special wiring repair procedures due to the sensitive nature of the circuitry. Follow the specific procedures and instructions when working on GMLAN connectors and terminals.

GMLAN Repairs

Note: When making a repair to any GMLAN network, the original wire length after the repair must be the same length as before the repair. If the network is a twisted pair, the twist must be maintained after the repair is completed.

GMLAN has 2 types of networks, low speed and high speed. Low speed GMLAN has a single wire and works at slow speeds. High speed GMLAN has 2 wires in a twisted pair and works at higher speeds. For more information on GMLAN, refer to *Data Link Communications Description and Operation on page 11-68*.

GMLAN Connector Terminal Repair

Note: A terminated lead can be used to replace damaged connector terminals for both high speed and low speed GMLAN systems. When making a connector terminal repair on a GMLAN high speed system with twisted pair wires, do not untwist the wires more than necessary to make the repair.

If the individual terminals are damaged on any GMLAN connection, use the appropriate connector repair procedure in order to repair the terminal. Refer to *Connector Repairs on page 11-548* for the appropriate connector repair procedure.

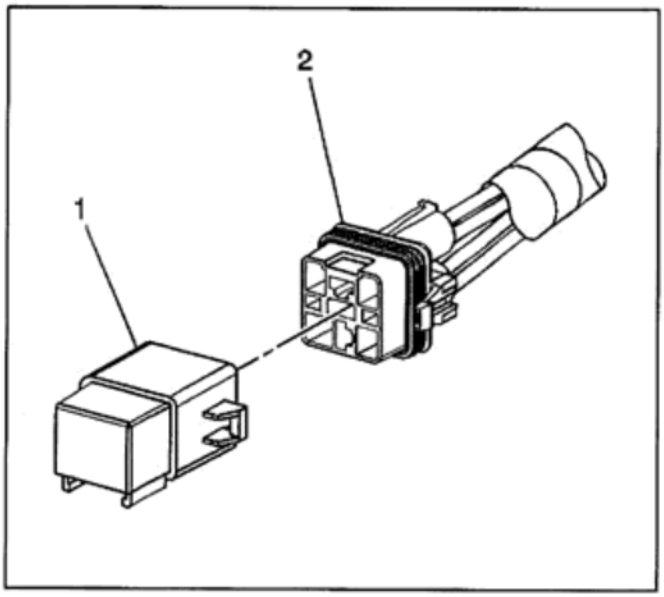
GMLAN Wire Repair

Note: Refer to Wiring Repairs in the service information connector end views or the vehicle schematics in order to determine the correct wire size for the circuit you are repairing. You must obtain this information in order to ensure circuit integrity.

If any wire except the pigtail is damaged, repair the wire by splicing in a new section of wire of the same gauge size (0.5 mm², 0.8 mm², 1.0 mm² etc.). Use the DuraSeal splice sleeves and *EL-38125-10* tool. For wiring repair, refer to *Splicing Copper Wire Using Splice Sleeves on page 11-544*.

Relay Replacement (Attached to Wire Harness)

Removal Procedure



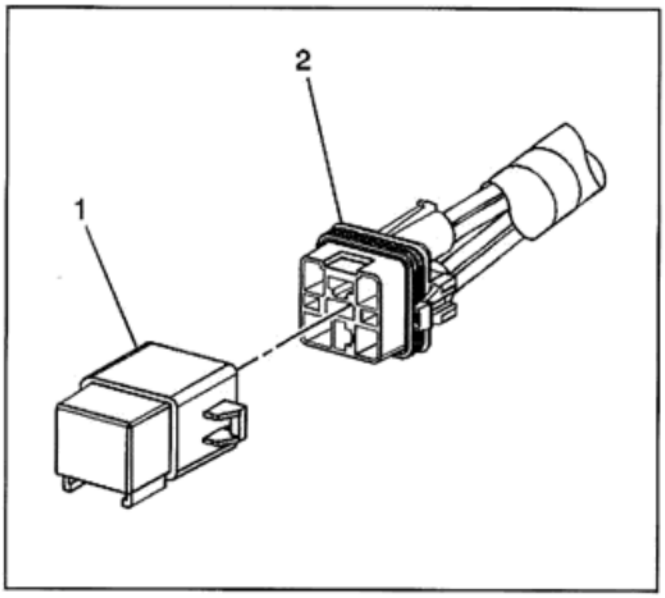
791846

1. Locate the relay. Refer to the *Master Electrical Component List on page 11-162* to locate the relay in the vehicle.
2. Remove any fasteners which hold the relay in place.
3. Remove any connector position assurance (CPA) devices or secondary locks.

Note: Use care when removing a relay in a wiring harness when the relay is secured by fasteners or tape.

4. Separate the relay (1) from the wire harness connector (2).

Installation Procedure



791846

1. Connect the relay (1) to the wire harness connector (2).
2. Install any connector position assurance (CPA) devices or secondary locks.
3. Install the relay using any fasteners or tape that originally held the relay in place.

Relay Replacement (Within an Electrical Center)

Special Tools

EL-43244 Relay Puller Pliers

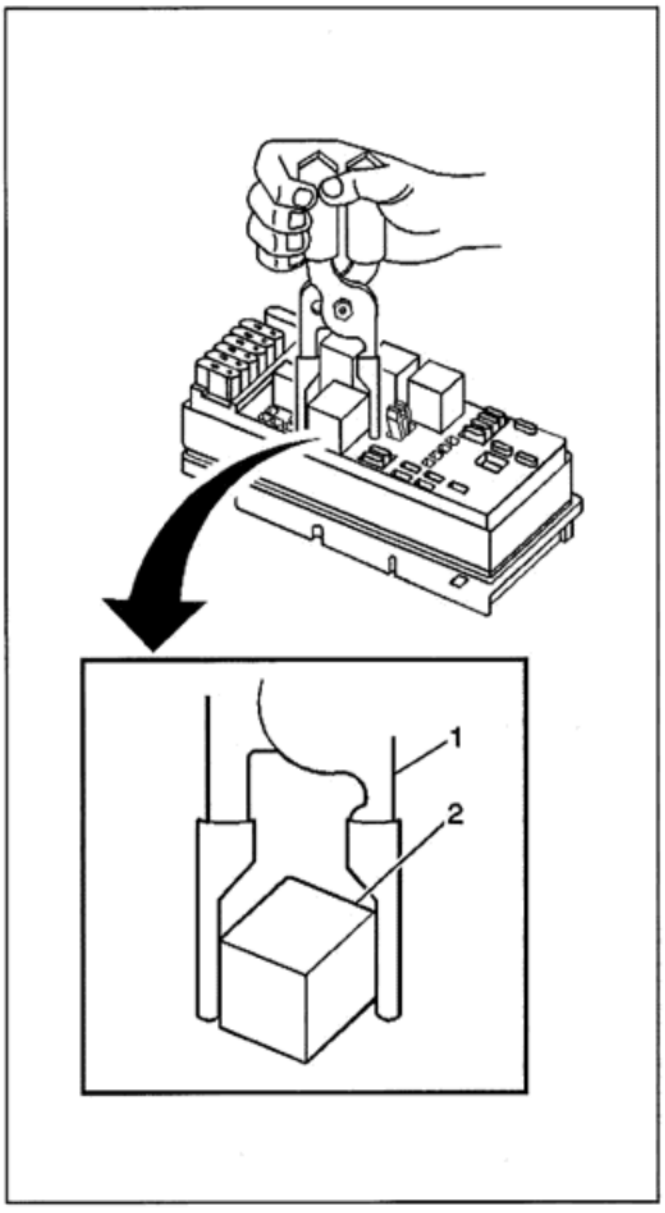
Removal Procedure

1. Remove the electrical center cover.

Note:

- Always note the orientation of the relay.
- If equipped with a notch style relay; observe the location of the notch on the old relay to verify the new relay is installed with the notch in the same location.
- Ensure that the electrical center is secure, as not to put added stress on the wires or terminals.

2. Locate the relay. Refer to *Electrical Center Identification Views on page 11-240* to locate the electrical center where the relay exists.



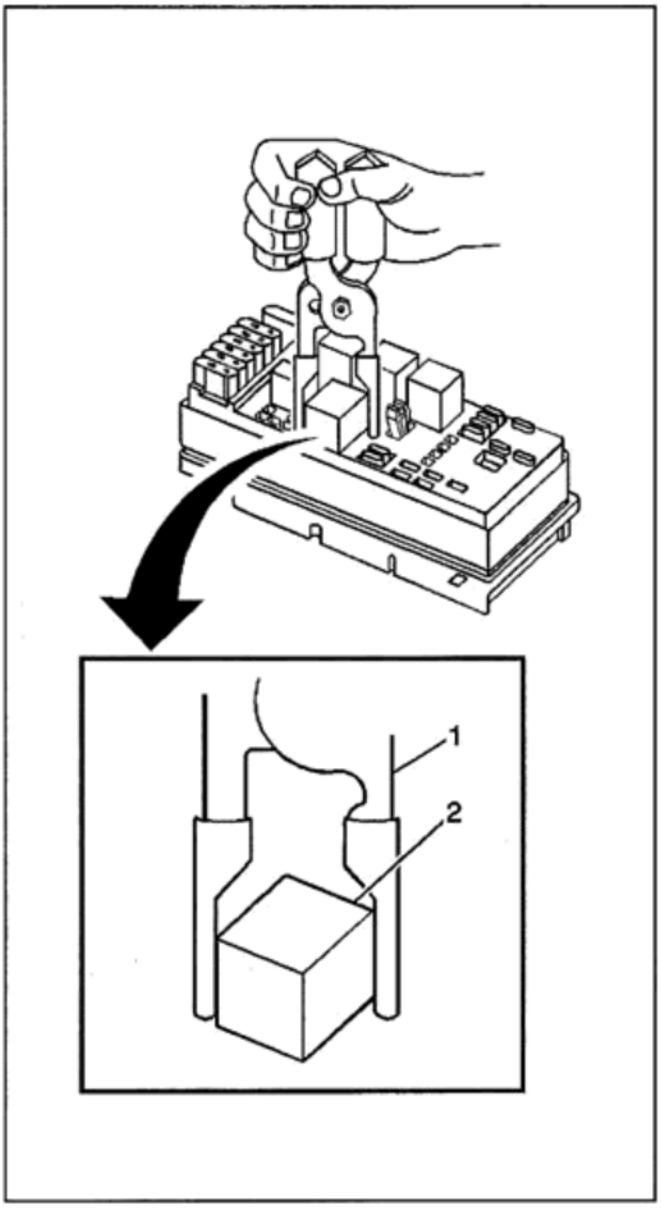
786629

3. Using the EL-43244 (1) position the tool on opposing corners of the relay (2).

Caution: Use *EL-43244* to pull the relay straight out from the electrical center terminals. The use of pliers or a flat bladed tool could damage the electrical center.

4. Remove the relay (2) from the electrical center.

Installation Procedure



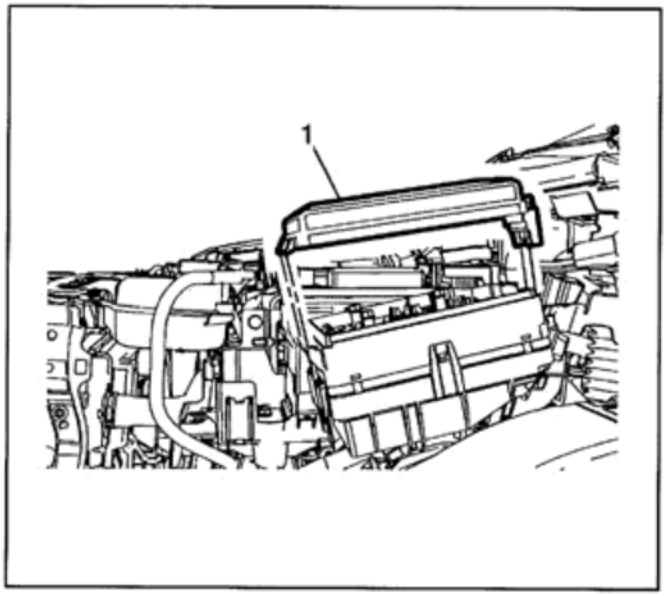
786629

1. Install the relay (2) in the same position as removed.
2. Install the electrical center cover.

Front Compartment Fuse Block Replacement

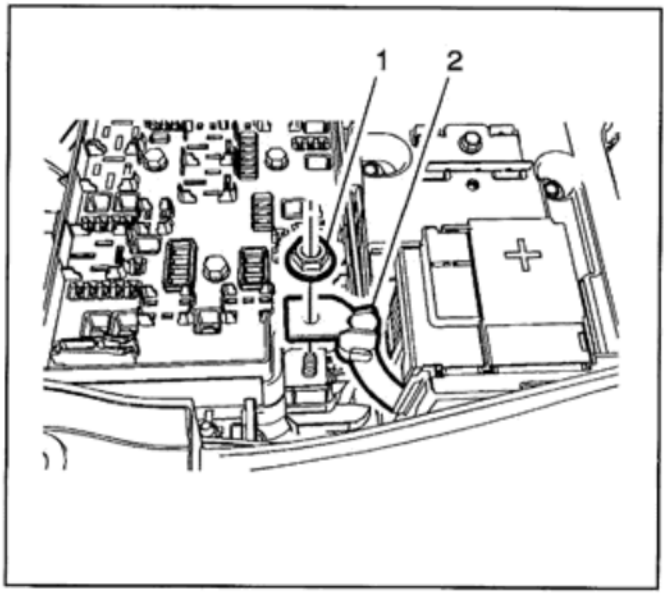
Removal Procedure

1. Disconnect the battery negative cable. Refer to *Battery Negative Cable Disconnection and Connection on page 9-713.*



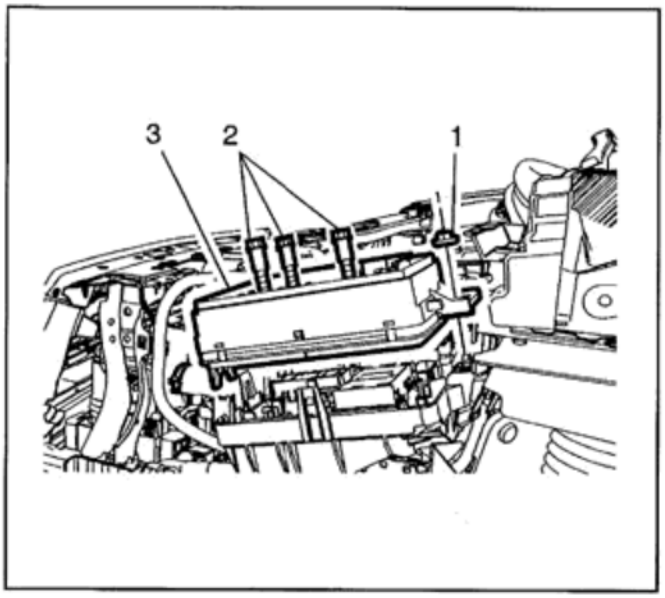
2508802

2. Remove the junction block cover (1).



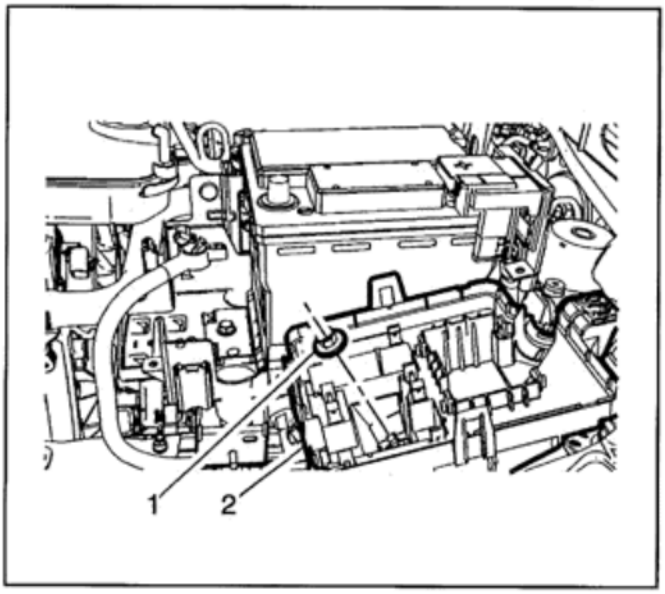
2504689

3. Remove the positive battery cable nut (1) from the junction block.
4. Remove the positive battery cable (2) from the junction block.



2504710

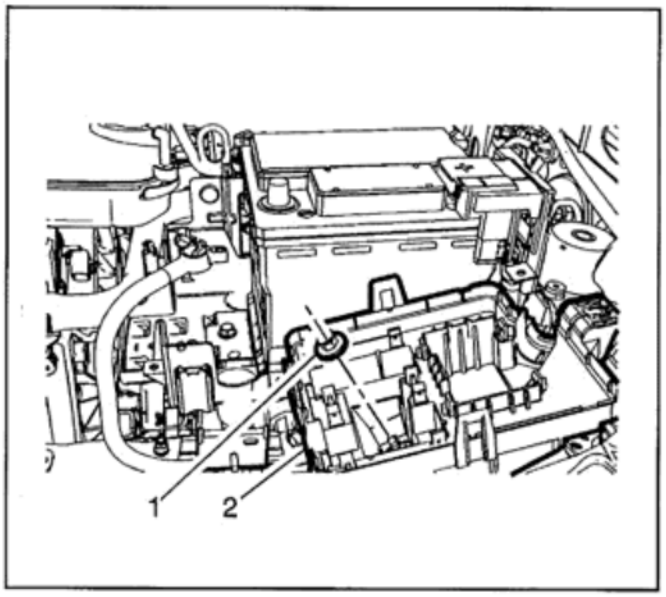
5. Remove the junction block nut (1).
6. Remove the junction block bolts (2).
7. Disconnect the wiring harness from the junction block base.
8. Remove the junction block (3) from the base.



2504774

9. Disconnect the wiring harness from the junction block base.
10. Remove the junction block nut (1) from the block base.
11. Remove the junction block base (2) from the inner wheelhouse.

Installation Procedure

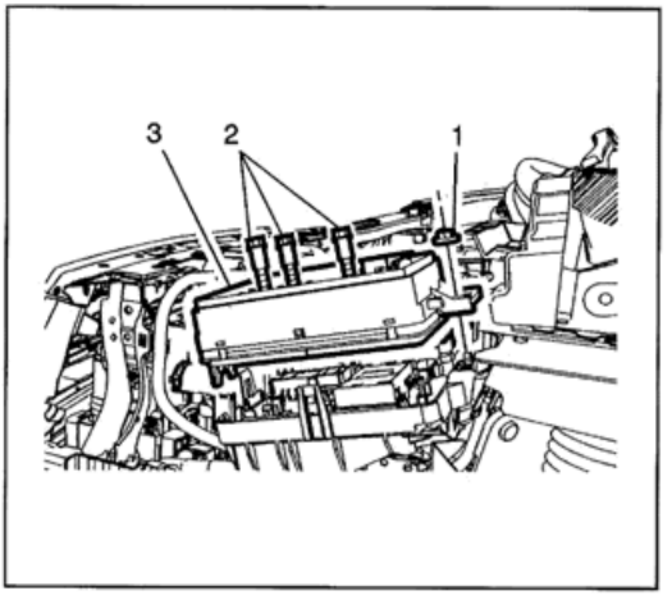


2504774

1. Position the junction block base (2) to the inner wheelhouse stud.

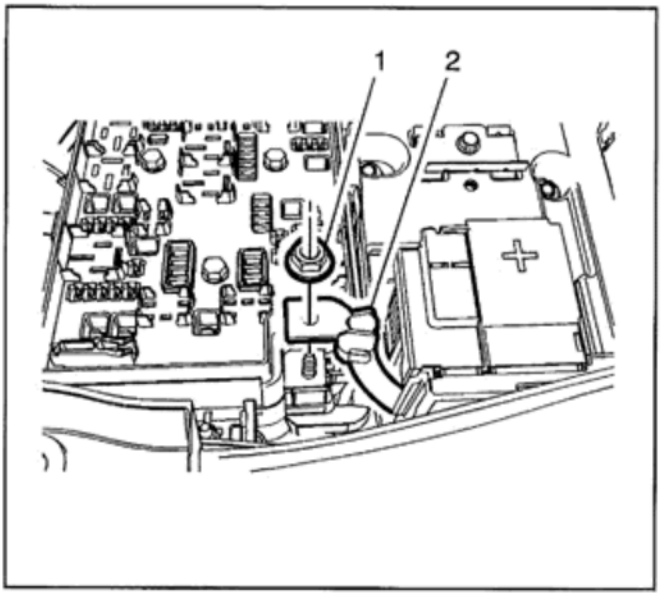
Caution: Refer to *Fastener Caution on page 0-8.*

2. Install the junction block base nut (1) and tighten to **9 N•m (79 lb in)**.



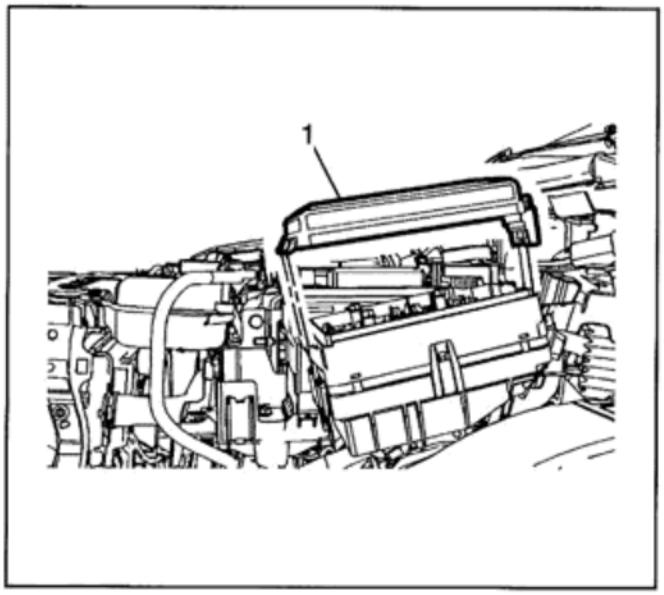
2504710

3. Install the junction block to the base.
4. Install the junction block bolts (2) and tighten to **9 N•m (79 lb in)**.
5. Install the junction block nut (1) and tighten to **7 N•m (61 lb in)**.



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6. Position the positive battery cable to the junction block.
7. Install the positive battery cable nut (2) and tighten to **5 N•m (44 lb in)**.



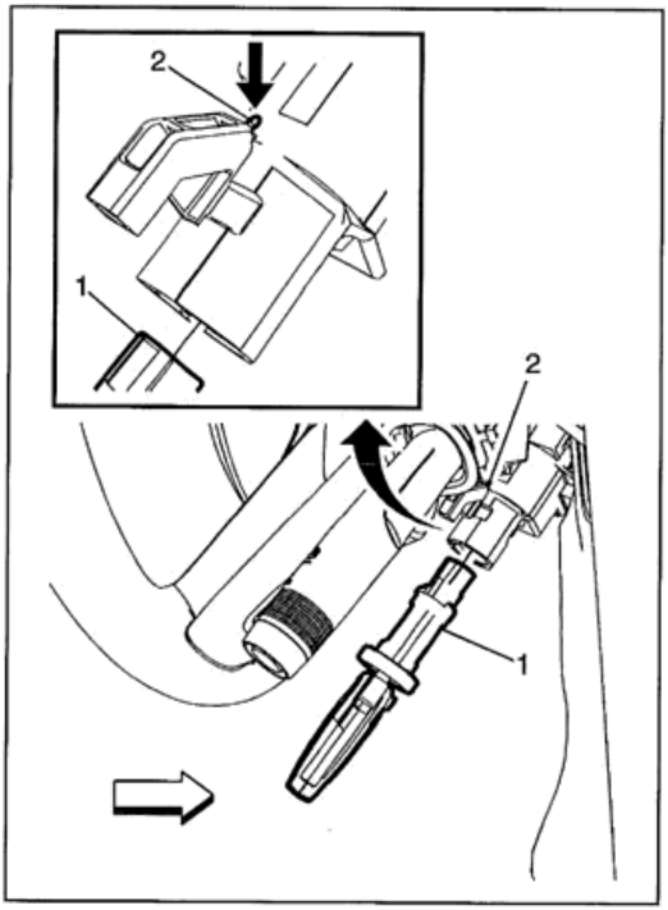
2508802

8. Install the junction block cover (1).
9. Connect the battery negative cable. Refer to *Battery Negative Cable Disconnection and Connection on page 9-713.*

Ignition Lock Cylinder Replacement

Removal Procedure

1. Disconnect the battery negative cable. Refer to *Battery Negative Cable Disconnection and Connection on page 9-713*.
2. Remove the upper trim cover and the lower trim cover from the steering column. Refer to *Steering Column Lower Trim Cover Replacement on page 15-29*.
3. Insert the key into the ignition lock cylinder and turn the key to the RUN position.

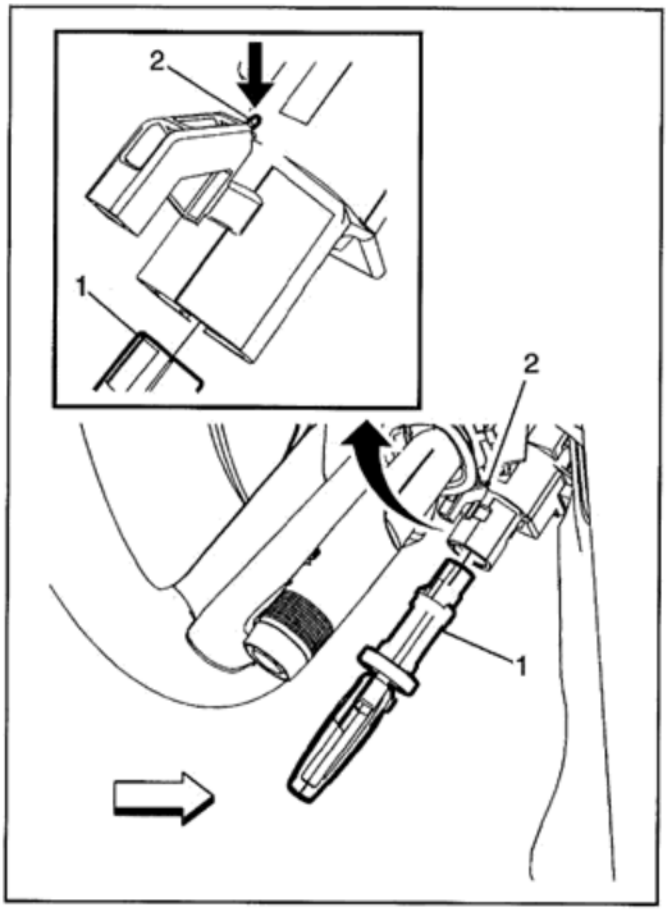


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4. Push a pick-type tool into the access hole (2) in the ignition and start switch housing and press the ignition lock cylinder lock tab down.
5. Remove the ignition lock cylinder (1) from the ignition and start switch housing.

Installation Procedure

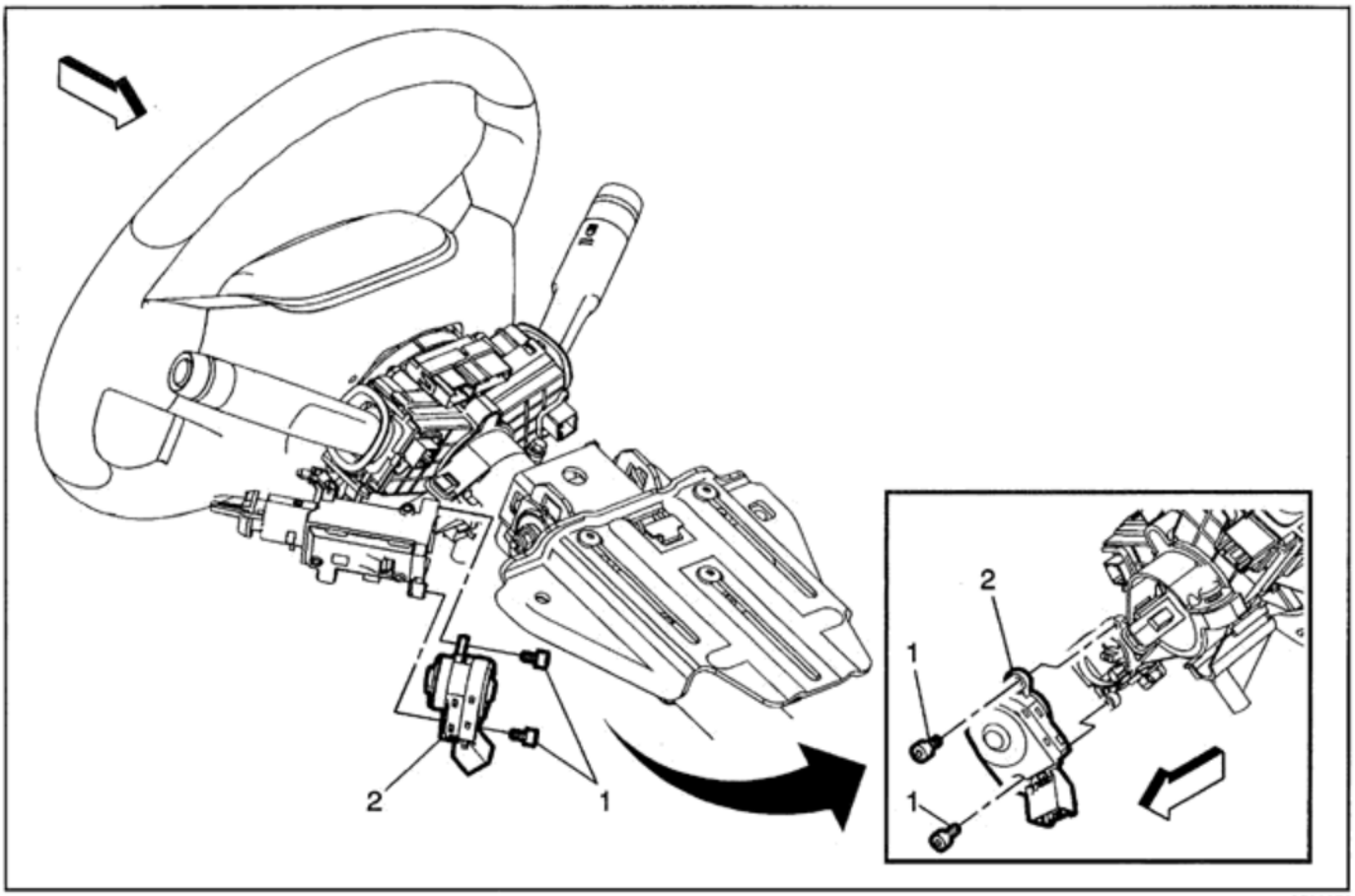
1. If you are installing a new ignition lock cylinder, code the lock cylinder. Refer to *Lock Cylinder Coding - Ignition on page 1-28*.



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2. Turn the key to the RUN position and insert ignition lock cylinder (1) into the ignition and start switch housing.
3. Turn the key to the LOCK position and remove the key from the ignition lock cylinder.
4. Install the upper trim cover and the lower trim cover to the steering column. Refer to *Steering Column Lower Trim Cover Replacement on page 15-29*.
5. Connect the battery negative cable. Refer to *Battery Negative Cable Disconnection and Connection on page 9-713*.

Ignition and Start Switch Replacement

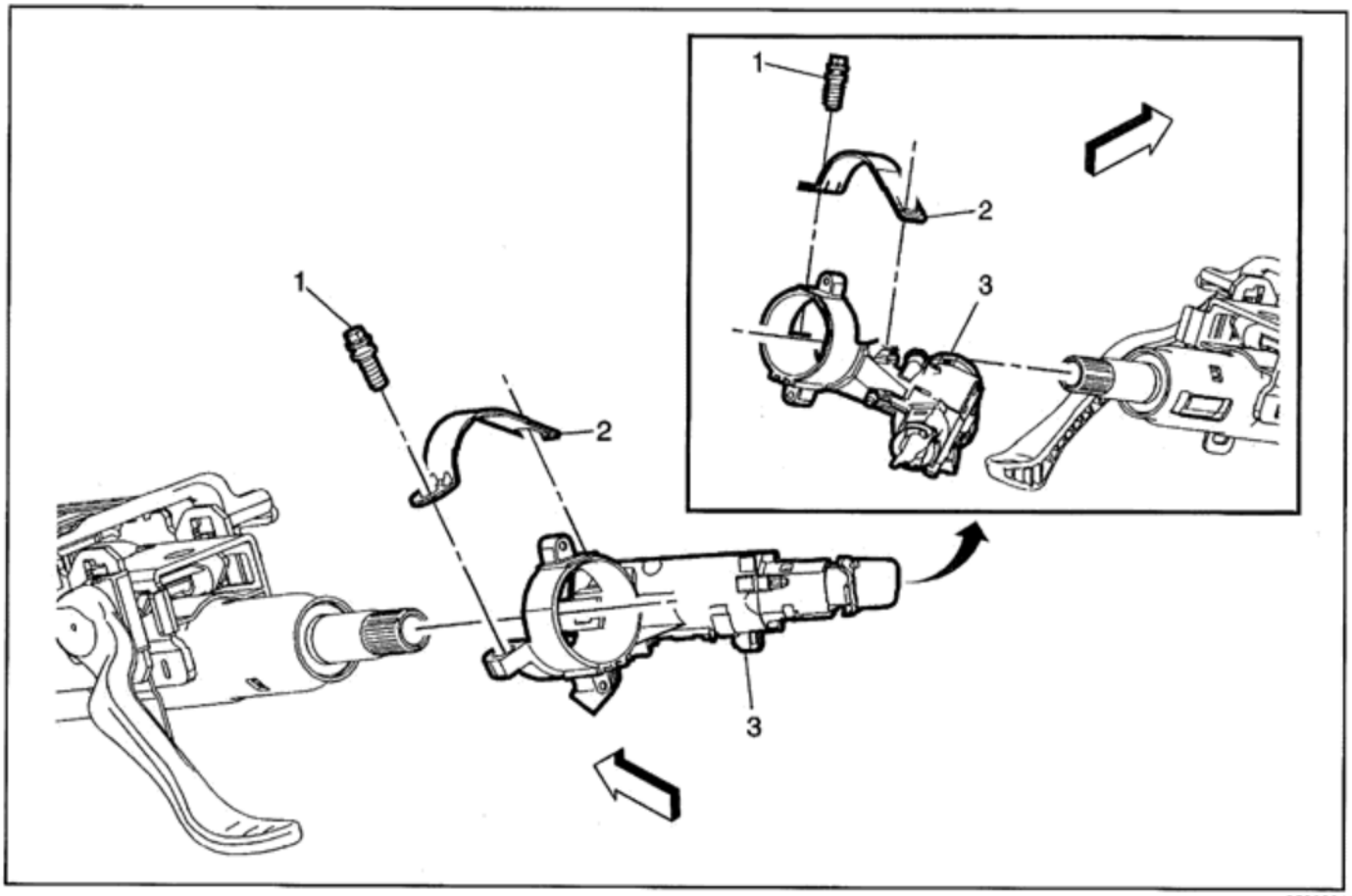


2508978

Ignition and Start Switch Replacement

Callout	Component Name
Preliminary Procedures 1. Disconnect the battery negative cable. Refer to *Battery Negative Cable Disconnection and Connection on page 9-713.* 2. Remove the steering column. Refer to *Steering Column Replacement on page 15-33.*	
1	Ignition and Start Switch Bolt (Qty: 2) **Caution:** Refer to *Fastener Caution on page 0-8.*
2	Ignition and Start Switch **Procedure** Disconnect any electrical connectors as necessary.

Ignition and Start Switch Housing Replacement



2508981

Ignition and Start Switch Housing Replacement

Callout	Component Name
Preliminary Procedure Remove the turn signal switch bracket. Refer to *Turn Signal Switch Bracket Replacement on page 15-30*.	
1	Ignition and Start Switch Housing Bolt **Caution:** Refer to *Fastener Caution on page 0-8*. **Procedure** 1. Discard the old ignition and start switch housing bolt. 2. Install the NEW ignition and start switch housing bolt and tighten until the bolt head breaks off.
2	Ignition and Start Switch Housing Strap **Procedure** Install the right side of the strap to the hook on the right side of the housing.
3	Ignition and Start Switch Housing **Procedure** 1. Disconnect any electrical connectors as necessary. 2. Transfer components as necessary.

Description and Operation

Electronic Park Lock Description and Operation

If the vehicle is equipped with automatic transmission and a floor mounted console gear shift, it has an electronic park lock system (EPL). The EPL system purpose is to prevent the ignition key from being turned to the OFF position when the transmission is in any position other than PARK and the vehicle may still be moving. The EPL system consists of an ignition lock cylinder solenoid, and a park position switch that is located in the A/T shift lock control switch. The ignition lock cylinder solenoid contains a pin that is spring loaded to mechanically prevent the ignition key cylinder from being turned to the lock position when the vehicle transmission is not in the PARK position. If vehicle power is lost, and/or the transmission is not in the Park position the operator will not be able to turn the ignition key to the lock position and will not be able to remove the ignition key from the column.

Power Mode Description and Operation

Serial Data Power Mode Master

Power to many of this vehicles circuits is controlled by the module that is designated the power mode master. This vehicles power mode master is the body control module (BCM). The BCM has multiple B+ circuits that feed into it. Each of those circuits are partitioned within the controller to drive certain outputs of the vehicle's body functions. An open or short in any one of the B+ circuits may induce multiple codes/or a section of non-functionality within the BCM with the rest of the BCM functioning normally. In this case it is useful to refer to the power distribution schematics to determine if the non-functional partition of the controller shares a common B+ circuit. The ignition 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 Parameters table below illustrates 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 remains on for a timed period after the Ignition key is removed. Refer to *Retained Accessory Power Description and Operation on page 11-615* for more information on the retained accessory power function.

Push Button Start (If Equipped)

The ignition mode switch has 2 LEDs that indicate the vehicle power mode. When the vehicle is in the off mode, both LED's will be off. Pressing the ignition mode switch button once (without the brake pedal applied), the vehicle enters the accessory mode and the amber LED (ACC) will illuminate. The accessory mode has a 5 minute timeout to reduce battery drain. Pressing the ignition mode switch button a second time (without the brake pedal applied), the vehicle enters the run/start mode (without the engine running) and the green LED (Run/Start) will illuminate. With the ignition off (without the brake pedal applied) and pressing and holding the push button start switch for up to 10 seconds will place the vehicle in run/start mode

(without the vehicle running) and the green LED (Run/Start) will illuminate. With the ignition off (with the brake pedal applied), pressing the ignition mode switch button once, the vehicle will enter run/start mode and the green LED (run/start) will illuminate. This will start the engine. Both LED's have the voltage supplied from the body control module (BCM). The ignition mode switch sends the ignition mode switch status to the passive entry passive start module (PEPS) and to the BCM. The PEPS module sends a redundant signal to the BCM with the ignition mode switch status.

Battery Saver Mode (Transport Mode) (If Equipped)

The 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 the vehicle is in transport/storage, some features may have reduced functionality while in the battery saver mode (transport mode), such as disabling the Remote Function Actuator or content theft features.

The battery saver mode (transport mode) incorporates a latching relay that when enabled disconnects some modules from their ignition power or memory power sources. Battery saver mode (transport mode) is initiated by turning on the hazard flashers and then turning the ignition key into the crank position or pushing the push button start switch (if equipped) for greater than 15 seconds. The mode is disengaged by repeating the previous process causing the relay to latch in the other direction. After battery saver mode (transport mode) has been enabled, the BCM may not send the command to unlatch the relay until after the ignition has been switched to the off position for up to 1 minute. In battery saver mode (transport mode) the BCM will send a command to latch the relay for operation of those modules while the ignition is in the run position and then again unlatching the relay after the ignition is turned off. The DIC (if equipped) will display Transport Mode is On when the transport mode is enabled and Transport Mode is Off when the transport mode is disabled. For vehicles not equipped with a DIC, the battery indicator light will constantly flash on the Instrument Cluster when transport mode is enabled. Once the vehicle is running and the hazard flashers are on, turning the ignition key into the crank position or pushing the push button start switch (if equipped) for greater than 15 seconds will latch the relay in the other direction. 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.
- 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

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 relay energized during all power modes, except Off-Awake and Crank. The relay is 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 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
- Window Switches
- Sunroof Control Module
- Sunroof Switch
- Mobile Device Wireless Charger Module
- Mobile Telephone Control Module
- Traffic Data Receiver
- Transmission Shift Lever Position Indicator (w/ floor mounted console gear shift)
- Seat Heating Control 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.

Special Tools and Equipment

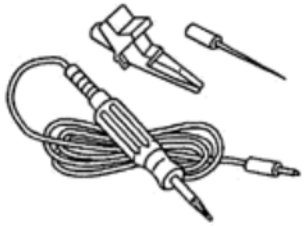
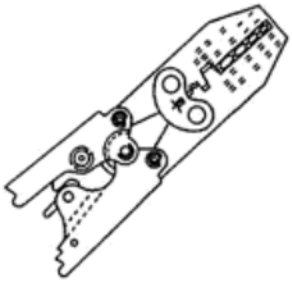
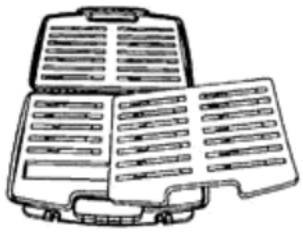
Illustration	Tool Number / Description
 78337	EL-25070 EL-38125-5A EL-38125-5 J-38125-5A Heat Gun 500–700 F
 8917	EL-35616 KM-609 Terminal Test Probe Kit
 1338380	EL-35616-200 KM-J-34142–B Test Light– Probe Kit
 1025	EL-35616-20F KM-963 Fused Jumper Wire
 2498072	EL-38125–10 (Non-North America) EL-38125–EU (Europe) J-38125-8 (North America Only) Splice Sleeve Crimp Tool
 2736016	EL-38125-550 (North America Only) Terminal Release Tool Kit

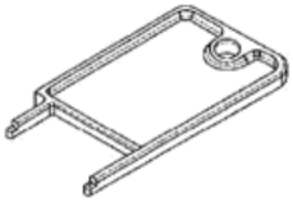
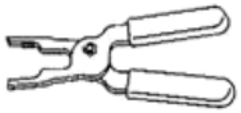
Illustration	Tool Number / Description
 2736019	EL-38125-580 (Non-North America) Terminal Release Tool Kit
 3430	EL-39200 (North America Only) MKM 874 (Non-North America) Digital Multimeter
 606821	EL-42759 Ignition Switch Connector Release Tool

Illustration	Tool Number / Description
 696431	EL-43244 Relay Puller Pliers
 2191416	EL-47955 J-2534 Multi Diagnostic Interface MDI
 2736014	EL-50040 (Holden Only) Crimping Tool Kit