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Backup Alarms

Backup Alarms

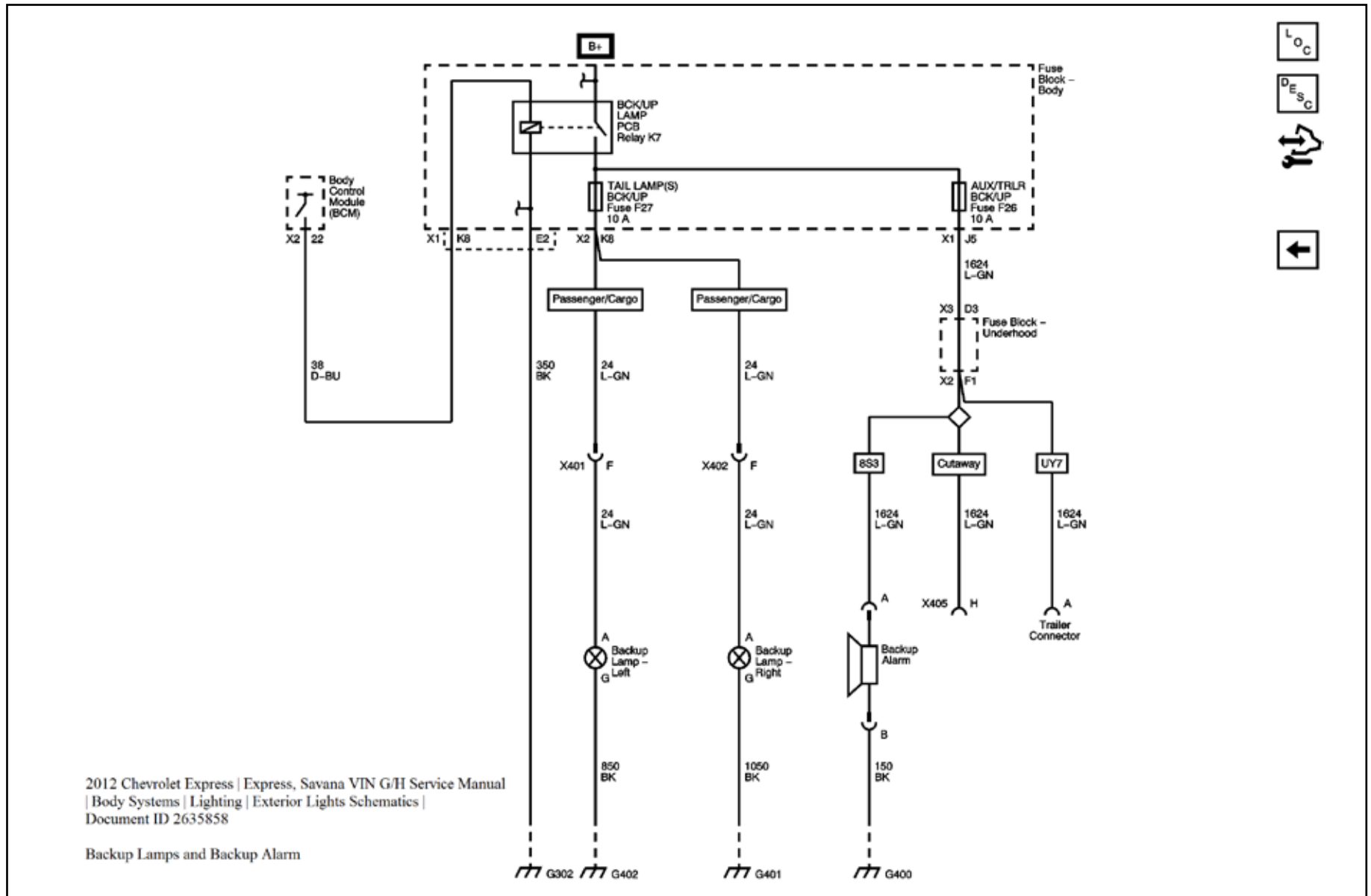
For installation of backup alarms on units with out option code 8S3 [factory backup alarm - loose shipped] connection can be made at the rear lighting connector X-405-H Light Green 1624 wire. [For 8S3 see schematic on next page.]

If the backup lamps illuminate in perimeter lighting and key fob acknowledgement modes there are two solutions for correct operation of the backup alarm:

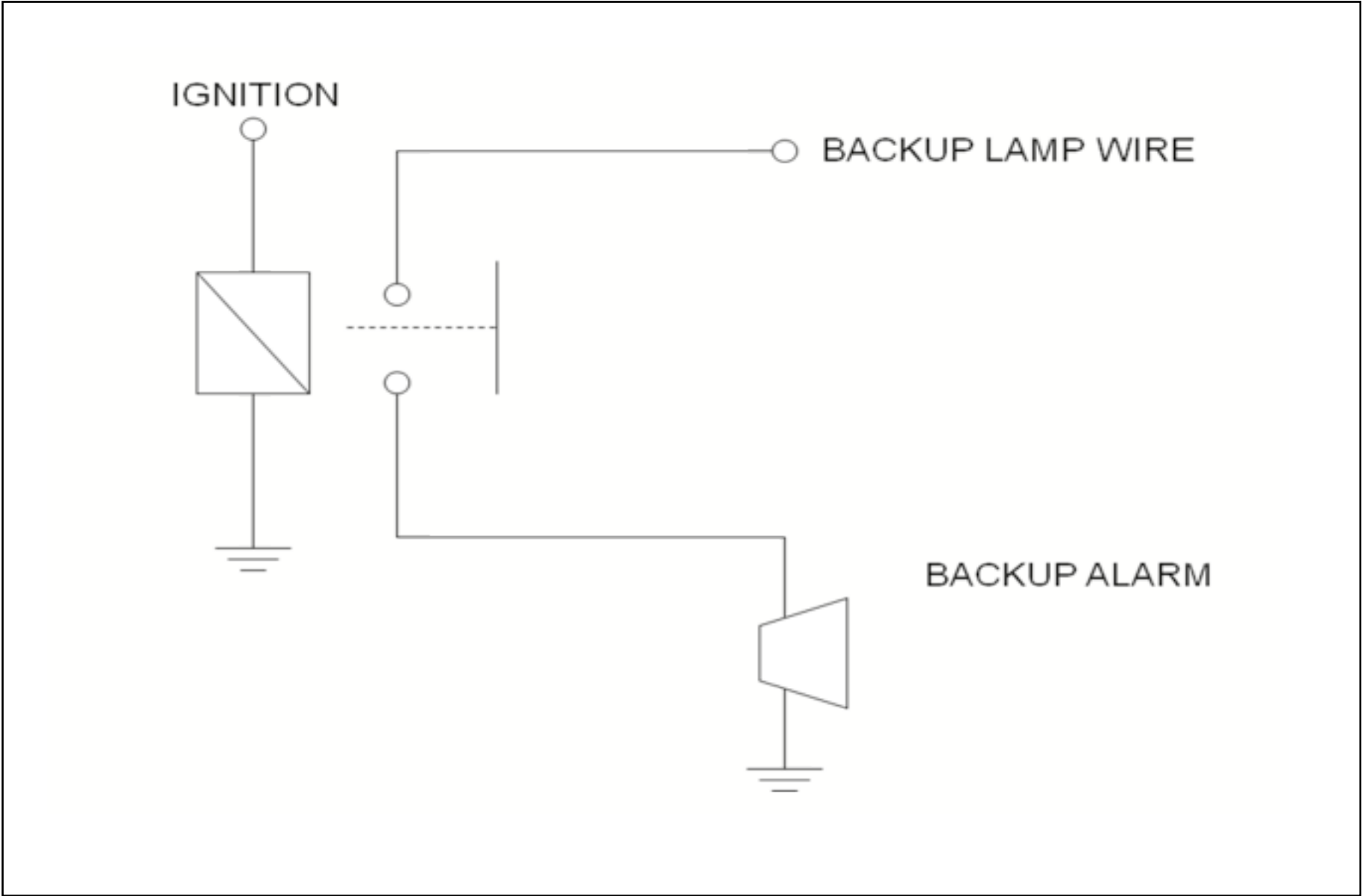
1. Return the unit to a GM dealer to have the BCM software for option 8S3 loaded. This is a fee for service activity.
2. Install an ignition controlled relay to connect the alarm to the 1624 wire such that the relay is closed [alarm connected] with key on. See simplified schematic.

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Backup Alarms (cont'd.)

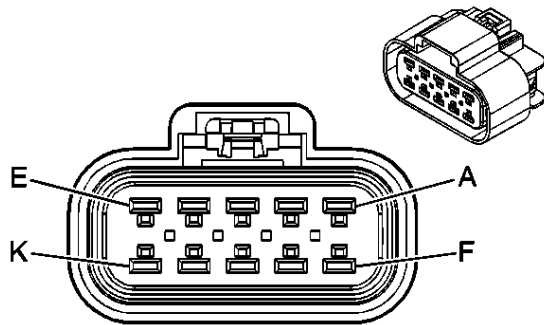


Ignition Controlled Backup Alarm Relay



X405 Cutaway Rear Lighting Connector to Chassis Harness (Cutaway)

Connector Part Information

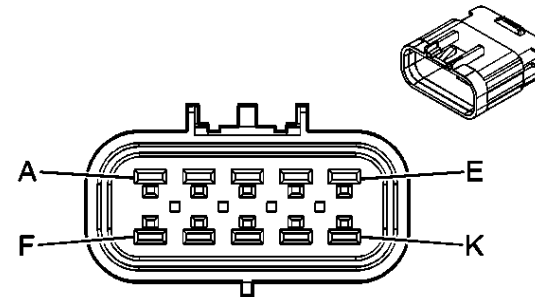


Harness Type: Cutaway Rear Lighting Connector
OEM Connector: 15326660
Service Connector: 88986262
Description: 10-Way F GT 280 5.8 Series, Sealed (BK)

Terminal Part Information

Terminated Lead: 13575405
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-4A (PU)
Terminal/Tray: 15304719/19
Core/Insulation Crimp: 2/5

Connector Part Information



Harness Type: Chassis
OEM Connector: 15326661
Service Connector: 88986245
Description: 10-Way M GT 280 5.8 Series, Sealed (BK)

Terminal Part Information

Terminated Lead: 13327135
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-5 (PU)
Terminal/Tray: 15304731/19
Core/Insulation Crimp: Pins: C-H - 2/5
Core/Insulation Crimp: Pin K - C/5

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X405 Cutaway Rear Lighting Connector to Chassis Harness (Cutaway) cont'd

Harness: Cutaway Rear Lighting Connector, *cont'd.*

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|---|
| A-B | -- | -- | Not Used |
| C | 1 WH | 17 | Center High Mounted Stop Lamp (CHMSL) Control |
| D | 1 YE | 618 | Left Rear Turn Signal Lamp Control |
| E | 1 D-GN | 619 | Right Rear Turn Signal Lamp Control |
| F | 1 BN | 2109 | Trailer Park Lamps Control |
| G | 1 BK | 150 | Ground |
| H | 1 L-GN | 1624 | Trailer Backup Lamps Control |
| J | -- | -- | Not Used |
| K | 0.8 D-BU/WH | 149 | Courtesy Lamp Control |

Harness: Chassis, *cont'd.*

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|---|
| A-B | -- | -- | Not Used |
| C | 1 L-BU | 1320 | Center High Mounted Stop Lamp (CHMSL) Control |
| D | 1 YE | 618 | Left Rear Turn Signal Lamp Control |
| E | 1 D-GN | 619 | Right Rear Turn Signal Lamp Control |
| F | 1 BN | 2109 | Trailer Park Lamps Control |
| G | 1 BK | 150 | Ground |
| H | 1 L-GN | 1624 | Trailer Backup Lamps Control |
| J | -- | -- | Not Used |
| K | 0.8 D-BU/WH | 149 | Courtesy Lamp Control |

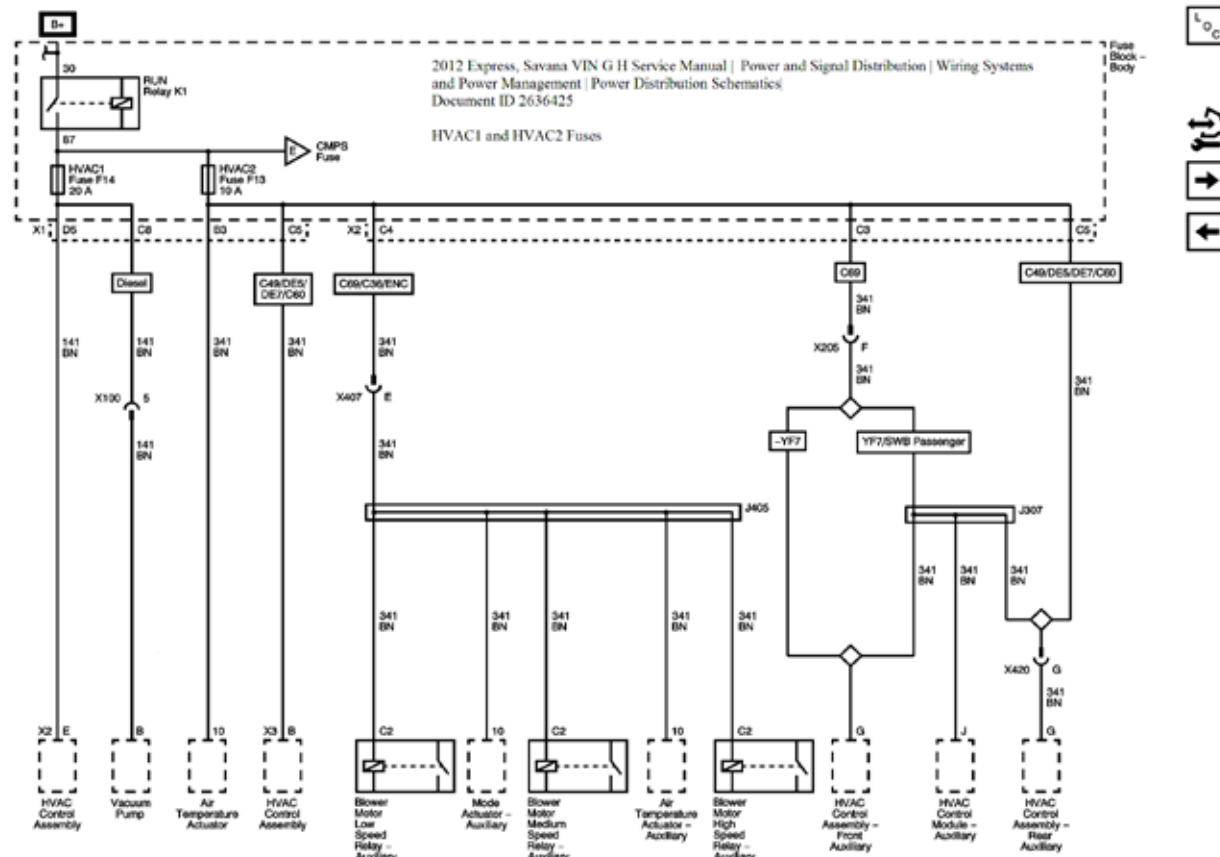
In Cab Ignition Control Signal

An ignition switched control signal can be accessed at several locations. Example:

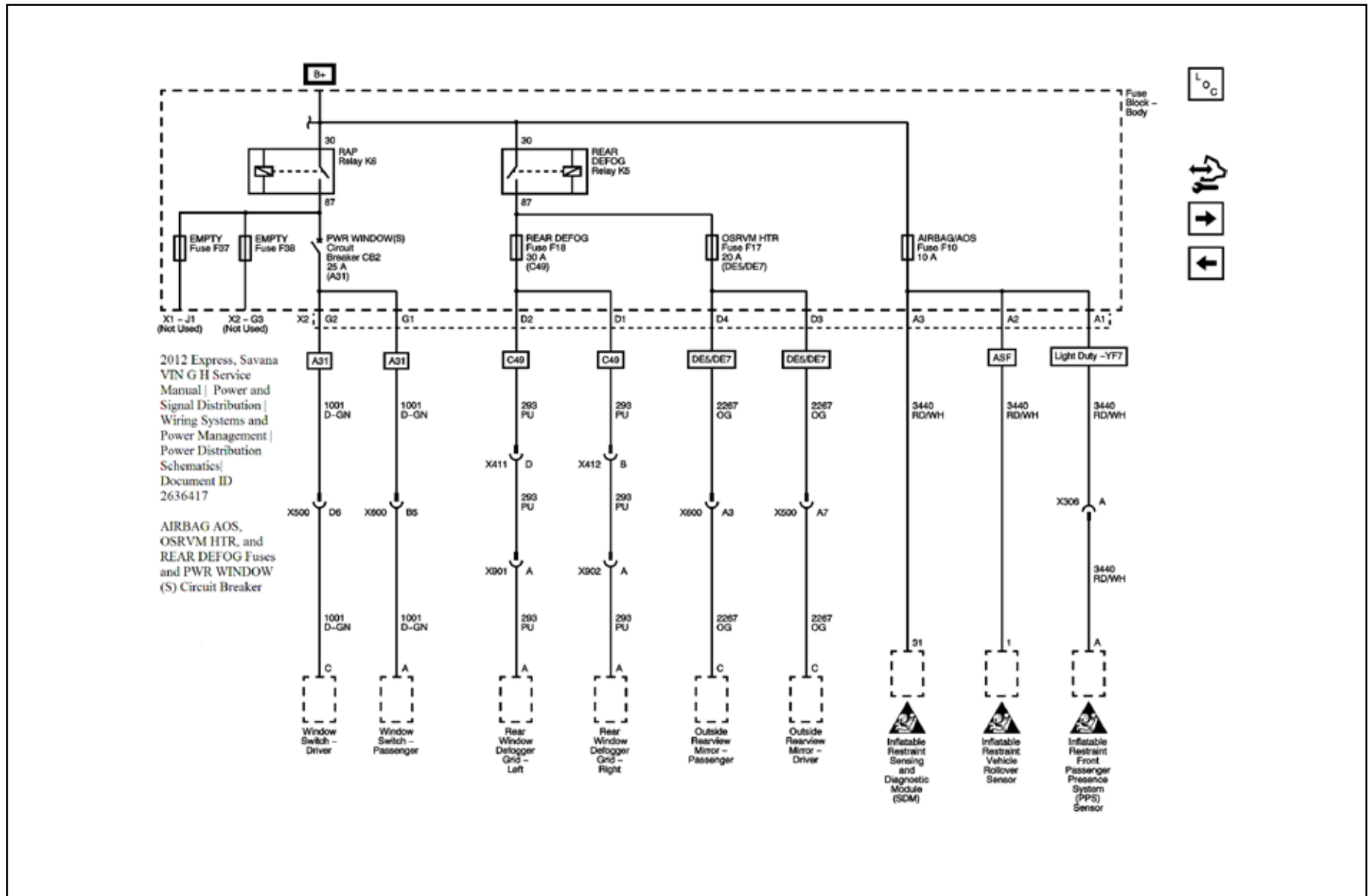
1. Body Fuse Block HVAC1 F14 20A or X1-D5
2. For Units with power windows [A31] Driver Door Harness Connector X500 D6

This signal can be used to close a control relay to power your application with a fused power feed to battery +.

Battery power can be obtained from the main power feed at the side of the body fuse block under the driver seat.

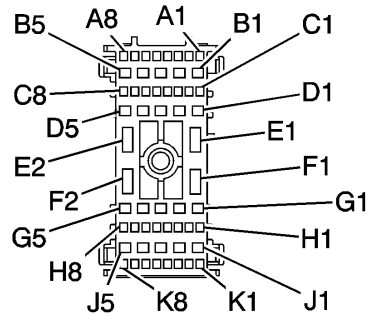


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Fuse Block - Body X1

Connector Part Information



Harness: Instrument Panel

OEM: 15477823

Service: 13574911

Description: 56-Way F GT 150 280
Metri-Pack Series (L-GY)

Terminal Part Information

Pins: A4-A6, C1-C5, C7-C8, H1-H8, K2-K5, K7-K8

Terminal/Tray: 12191812/19

Core/Insulation Crimp: Pins: A4-A6, C2, C4-C5, C7, H3-H4, H6-H8, K2-K5, K7-K8 - E/C

Core/Insulation Crimp: Pins: C1, C3, C8, H1-H2, H5 - C/A

Release Tool/Test Probe: J-38125-553/J-35616-2A (GY)

Pins: B1-B5, D5, G3-G4, J5

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Pins: B3 - E/A

Core/Insulation Crimp: Pins: B1-B2, B4-B5, D5, G3-G4, J5 - 2/A

Release Tool/Test Probe: J-38125-553/J-35616-4A (PU)

Pins: E1, F1

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Release Tool/Test Probe: J-38125-558/J-35616-44 (YE)

Pins: E2

Terminal/Tray: 12065915/5

Core/Insulation Crimp: C/A

Release Tool/Test Probe: J-38125-558/J-35616-44 (YE)

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Fuse Block - Body X1, cont'd.

Harness: Instrument Panel

| Pin | Wire | Circuit | Function |
|-------|------------|---------|---|
| A1-A3 | -- | -- | Not Used |
| A4 | 0.35 YE | 6817 | LED Backlight Dimming Control (K34 or W1Y) |
| A5 | 0.35 D-BU | 45 | Park Lamp Control |
| A6 | 0.35 BN | 6136 | Supply Voltage (K34 or W1Y) |
| A7-A8 | -- | -- | Not Used |
| B1 | 0.8 RD/WH | 3240 | Battery Positive Voltage (UE1) |
| B2 | 1 BN | 2109 | Trailer Park Lamps Control (UY7) |
| B3 | 0.35 BN | 341 | Ignition Voltage |
| B4 | 0.5 BN | 2309 | Front Park Lamps Control |
| | 0.8 BN | 2309 | Front Park Lamps Control (C99) |
| B5 | 1 BN | 2109 | Trailer Park Lamps Control (Cutaway) |
| C1 | 1 YE | 618 | Left Rear Turn Signal Lamp Control (Passenger or Cargo) |
| C2 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control |

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|--|
| C3 | 1 D-GN | 619 | Right Rear Turn Signal Lamp Control (Passenger or Cargo) |
| C4 | 0.35 WH | 193 | Rear Defog Relay Control (C49, DE5 or DE7) |
| C5 | 0.35 BN | 341 | Ignition Voltage |
| C6 | -- | -- | Not Used |
| C7 | 0.35 OG | 300 | Ignition Voltage |
| C8 | 0.8 BN | 141 | Ignition Voltage (LGH) |
| D1-D4 | -- | -- | Not Used |
| D5 | 1 BN | 141 | Ignition Voltage |
| E1 | 5 RD/BK | 1042 | Battery Positive Voltage (YF7) |
| E2 | 0.5 BK | 350 | Ground |
| F1 | 5 BN | 541 | Ignition Voltage (YF2 or YF7) |
| F2 | -- | -- | Not Used |
| G1-G2 | -- | -- | Not Used |
| G3 | 0.8 D-BU/WH | 1315 | Right Front Turn Signal Lamp Control (DE5 or DE7) |

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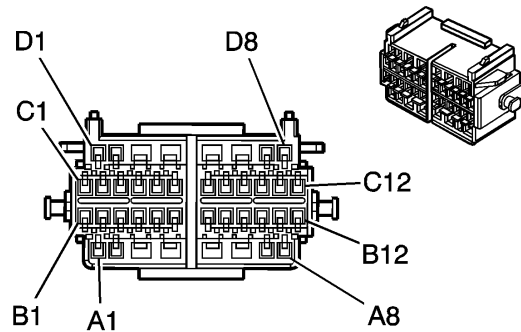
Harness: Instrument Panel, cont'd.

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|--|
| G4 | 1 RD/WH | 340 | Battery Positive Voltage |
| G5 | -- | -- | Not Used |
| H1 | 0.8 L-BU/WH | 1314 | Left Front Turn Signal Lamp Control (DE5 or DE7) |
| H2 | 0.8 D-BU/WH | 149 | Courtesy Lamp Control (Cutaway) |
| | 0.8 D-BU/WH | 149 | Courtesy Lamp Control (except YF2 or YF7) |
| H3 | 0.35 BK/WH | 351 | Ground |
| H4 | 0.35 YE | 43 | Ignition Voltage |
| H5 | 0.8 RD/WH | 4440 | Battery Positive Voltage (C49, DE5 or DE7) |
| H6 | 0.35 RD/WH | 2840 | Battery Positive Voltage (except 8S8) |
| H7 | 0.35 RD/WH | 540 | Battery Positive Voltage |
| H8 | 0.5 RD/WH | 5340 | Battery Positive Voltage (AU0 or UJ6) |
| J1-J4 | -- | -- | Not Used |
| J5 | 1 L-GN | 1624 | Trailer Backup Lamps Control (Cutaway, UY7 or 8S3) |

| Pin | Wire | Circuit | Function |
|-----|-----------|---------|---|
| K1 | -- | -- | Not Used |
| K2 | 0.5 YE | 356 | Driver Door Lock Relay Unlock Control (AU3) |
| K3 | 0.5 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3) |
| K4 | 0.5 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3 without PRP) |
| | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3 with PRP) |
| K5 | 0.5 YE | 356 | Driver Door Lock Relay Unlock Control (AU3 without PRP) |
| | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3 with PRP) |
| K6 | -- | -- | Not Used |
| K7 | 0.5 GY/BK | 690 | Courtesy Lamp Control (YF2 or YF7) |
| K8 | 0.35 D-BU | 38 | Backup Lamp Relay Control |

X500 Driver Door Harness to Body Harness

Connector Part Information

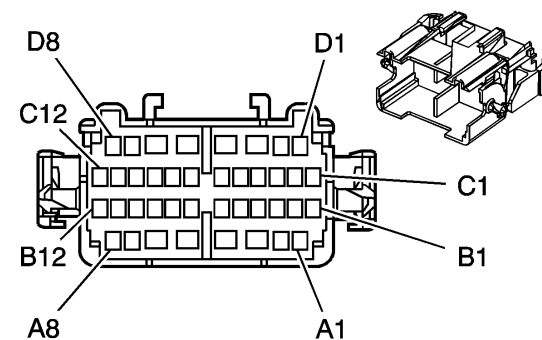


Harness Type: Driver Door
OEM Connector: 15448129
Service Connector: 89046969
Description: 40-Way F GT 150 280 Series (BK)

Terminal Part Information

Pins: A1, A7-A8, B1-B4, B7-B8, B12, C1-C2, C7-C8, C12, D7-D8
Terminated Lead: 13575735
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-2A (GY)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: Pins: A1, A8, B1-B4, D7-D8 - E/C
Core/Insulation Crimp: Pins: A7, B7-B8, B12, C12 - C/A

Connector Part Information



Harness Type: Body
OEM Connector: 15416976
Service Connector: 89047197
Description: 40-Way M GT 150 280 Series (BK)

Terminal Part Information

Pins: A1, A6-A8, B1-B4, B7-B8, B12, C1-C2, C7-C8, C12, D7-D8
Terminated Lead: 13575502
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-3 (GY)
Terminal/Tray: 15304702/19
Core/Insulation Crimp: Pins: A1, A6, B1-B4 - E/C
Core/Insulation Crimp: Pins: A8, C1-C2, C7-C8, D7-D8 - E/4

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X500 Driver Door Harness to Body Harness, cont'd.

Terminal Part Information: Driver Door, *cont'd.*

Pins: A5-A6, D4-D6

Terminated Lead: Pins: A5 (AU3 without DE5, DE7 or A31), A6 - 13575753

Terminated Lead: Pins: A5 (AU3 with DE5, DE7 or A31), D4-D6 - 13575756

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: Pins: A5 (AU3 without DE5, DE7 or A31), A6 - 15304711/8

Terminal/Tray: Pins: A5 (AU3 with DE5, DE7 or A31), D4-D6 - 15304713/19

Core/Insulation Crimp: Pins: A5 (AU3 without DE5, DE7 or A31), A6 - E/A

Core/Insulation Crimp: Pins: A5 (AU3 with DE5, DE7 or A31), D4-D6 - F/D

| Pin | Wire | Circuit | Function |
|-------|---------|---------|--------------------------------------|
| A1 | 0.35 TN | 126 | Left Front Door Open Switch Signal |
| A2-A4 | -- | -- | Not Used |
| A5 | 0.35 BK | 450 | Ground (AU3 without DE5, DE7 or A31) |
| | 3 BK | 450 | Ground (AU3 with DE5, DE7 or A31) |

(continued on next page)

Terminal Part Information: Body, *cont'd.*

Core/Insulation Crimp: Pins: A7, B7-B8, B12, C12 - 2/4

Pins: A5, D4-D6

Terminated Lead: 13575510

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-5 (PU)

Terminal/Tray: 15304724/8

Core/Insulation Crimp: A/D

| Pin | Wire | Circuit | Function |
|-------|------------|---------|---|
| A1 | 0.35 TN | 126 | Left Front Door Open Switch Signal |
| A2-A4 | -- | -- | Not Used |
| A5 | 3 BK | 450 | Ground |
| A6 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (AU3 or A31) |
| A7 | 0.8 OG | 2267 | Mirror Heating Element Control (DE5 or DE7) |
| A8 | 0.5 PU/WH | 889 | Passenger Mirror Motor Down Control (DE5 or DE7) |
| B1 | 0.35 OG/BK | 781 | Driver Door Lock Switch Unlock Signal (AU3) |

(continued on next page)

X500 Driver Door Harness to Body Harness, cont'd.

Harness: Driver Door, cont'd.

| Pin | Wire | Circuit | Function |
|--------|------------|---------|--|
| A6 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (AU3) |
| | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (A31) |
| A7 | 0.8 OG | 2267 | Mirror Heating Element Control (DE5 or DE7) |
| A8 | 0.35 PU/WH | 889 | Passenger Mirror Motor Down Control (DE5 or DE7) |
| B1 | 0.35 OG/BK | 781 | Driver Door Lock Switch Unlock Signal (AU3) |
| B2 | 0.35 PK/BK | 780 | Driver Door Lock Switch Lock Signal (AU3) |
| B3 | 0.35 GY/BK | 745 | Left Front Door Ajar Switch Signal |
| B4 | 0.35 BK | 450 | Ground |
| B5-B6 | -- | -- | Not Used |
| B7 | 0.8 TN | 694 | Driver Door Lock Actuator Unlock Control (AU3) |
| B8 | 0.8 GY | 295 | Door Lock Actuator Lock Control (AU3) |
| B9-B11 | -- | -- | Not Used |
| B12 | 0.8 D-BU | 1857 | Left Front Midrange Speaker Output (+) |
| C1 | 0.5 PU/WH | 6628 | Low Reference (ASF) |

(continued on next page)

Harness: Body, cont'd.

| Pin | Wire | Circuit | Function |
|--------|-------------|---------|--|
| B2 | 0.35 PK/BK | 780 | Driver Door Lock Switch Lock Signal (AU3) |
| B3 | 0.35 GY/BK | 745 | Left Front Door Ajar Switch Signal |
| B4 | 0.35 BK | 450 | Ground |
| B5-B6 | -- | -- | Not Used |
| B7 | 0.8 TN | 694 | Driver Door Lock Actuator Unlock Control (AU3) |
| B8 | 1 GY | 295 | Door Lock Actuator Lock Control (AU3) |
| B9-B11 | -- | -- | Not Used |
| B12 | 0.8 D-BU | 1857 | Left Front Midrange Speaker Output (+) |
| C1 | 0.5 PU/WH | 6628 | Low Reference (ASF) |
| C2 | 0.5 WH | 2132 | Side Impact Sensing Module - Left - Signal (ASF) |
| C3-C6 | -- | -- | Not Used |
| C7 | 0.5 L-BU/WH | 1314 | Left Front Turn Signal Lamp Control (DE5 or DE7) |
| C8 | 0.5 RD/WH | 4340 | Battery Positive Voltage (DE5 or DE7) |
| C9-C11 | -- | -- | Not Used |

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X500 Driver Door Harness to Body Harness, cont'd.

Harness: Driver Door, cont'd.

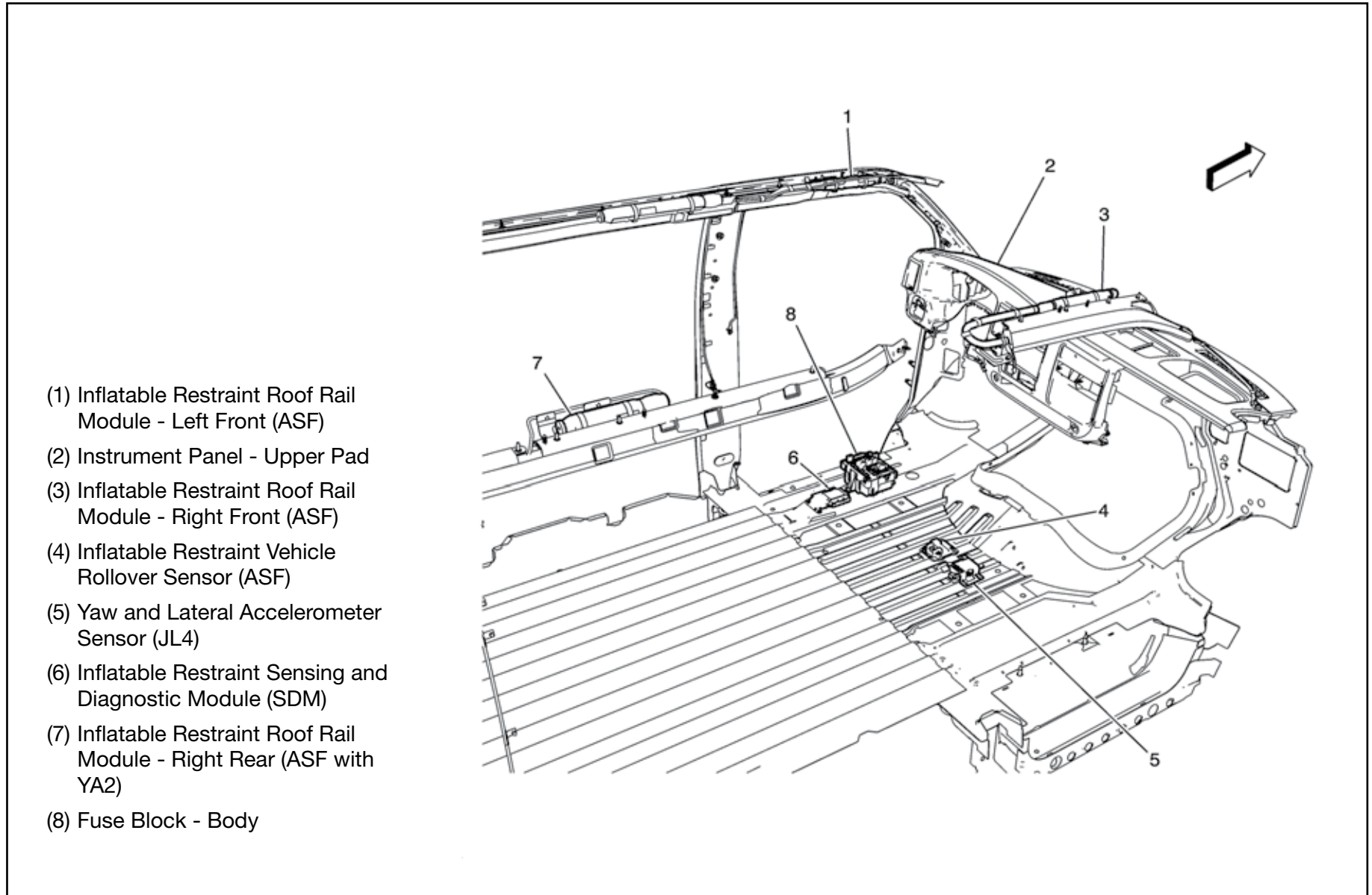
| Pin | Wire | Circuit | Function |
|--------|-------------|---------|--|
| C2 | 0.5 WH | 2132 | Side Impact Sensing Module - Left - Signal (ASF) |
| C3-C6 | -- | -- | Not Used |
| C7 | 0.5 L-BU/WH | 1314 | Left Front Turn Signal Lamp Control (DE5 or DE7) |
| C8 | 0.5 RD/WH | 4340 | Battery Positive Voltage (DE5 or DE7) |
| C9-C11 | -- | -- | Not Used |
| C12 | 0.8 L-BU | 1957 | Left Front Midrange Speaker Output (-) |
| D1-D3 | -- | -- | Not Used |
| D4 | 3 TN | 167 | Power Window Master Switch Right Front Down Signal (A31) |
| D5 | 3 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31) |
| D6 | 3 D-GN | 1001 | RAP Control (A31) |
| D7 | 0.35 BN/WH | 1498 | Passenger Mirror Motor Left/Down Control (DE5 or DE7) |
| D8 | 0.35 OG/WH | 881 | Passenger Mirror Motor Right Control (DE5 or DE7) |

Harness: Body, cont'd.

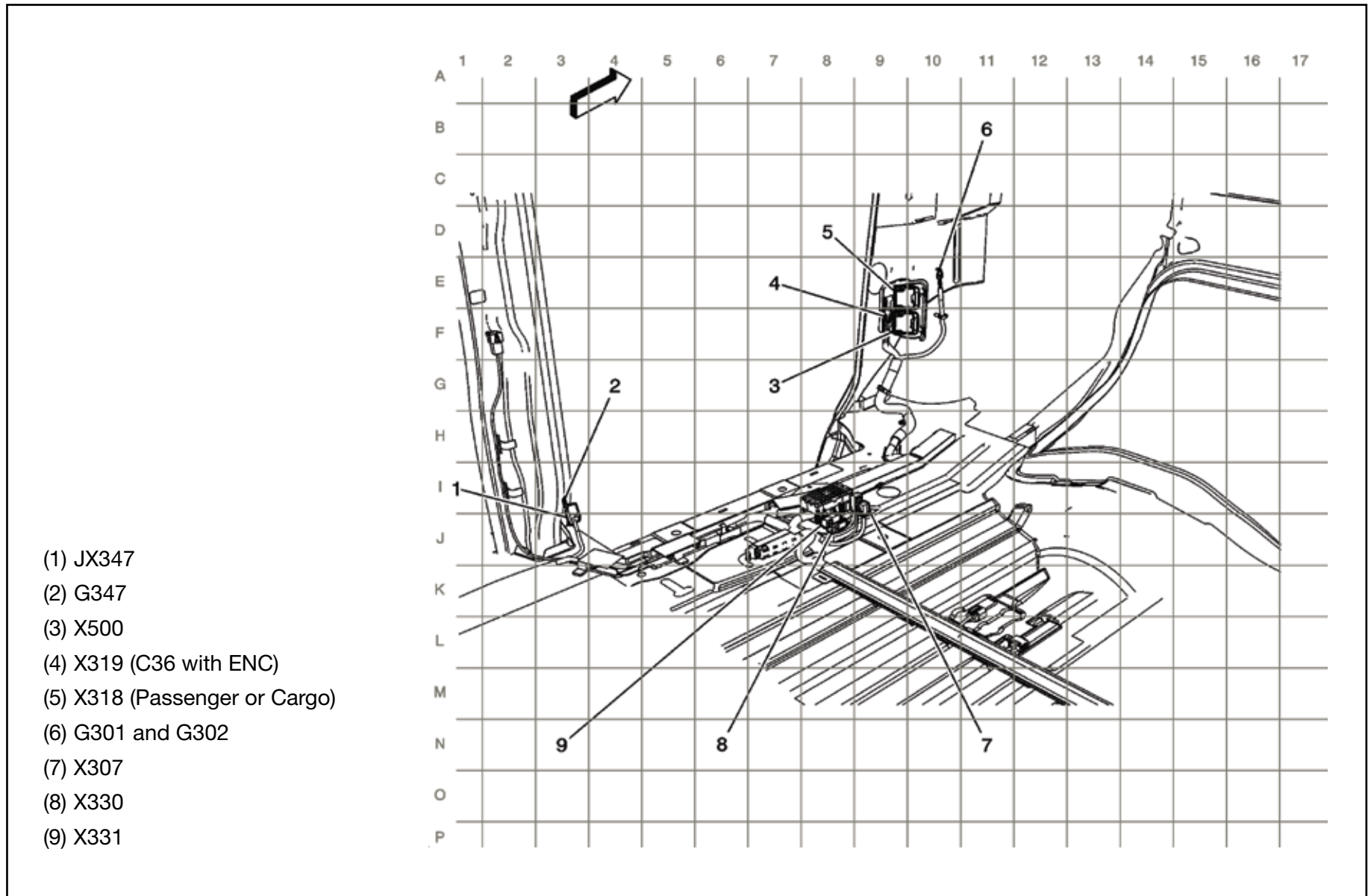
| Pin | Wire | Circuit | Function |
|-------|-----------|---------|--|
| C12 | 0.8 L-BU | 1957 | Left Front Midrange Speaker Output (-) |
| D1-D3 | -- | -- | Not Used |
| D4 | 3 TN | 167 | Power Window Master Switch Right Front Down Signal (A31) |
| D5 | 3 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31) |
| D6 | 3 D-GN | 1001 | RAP Control (A31) |
| D7 | 0.5 BN/WH | 1498 | Passenger Mirror Motor Left/Down Control (DE5 or DE7) |
| D8 | 0.5 OG/WH | 881 | Passenger Mirror Motor Right Control (DE5 or DE7) |

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Front Left Side of Passenger Compartment

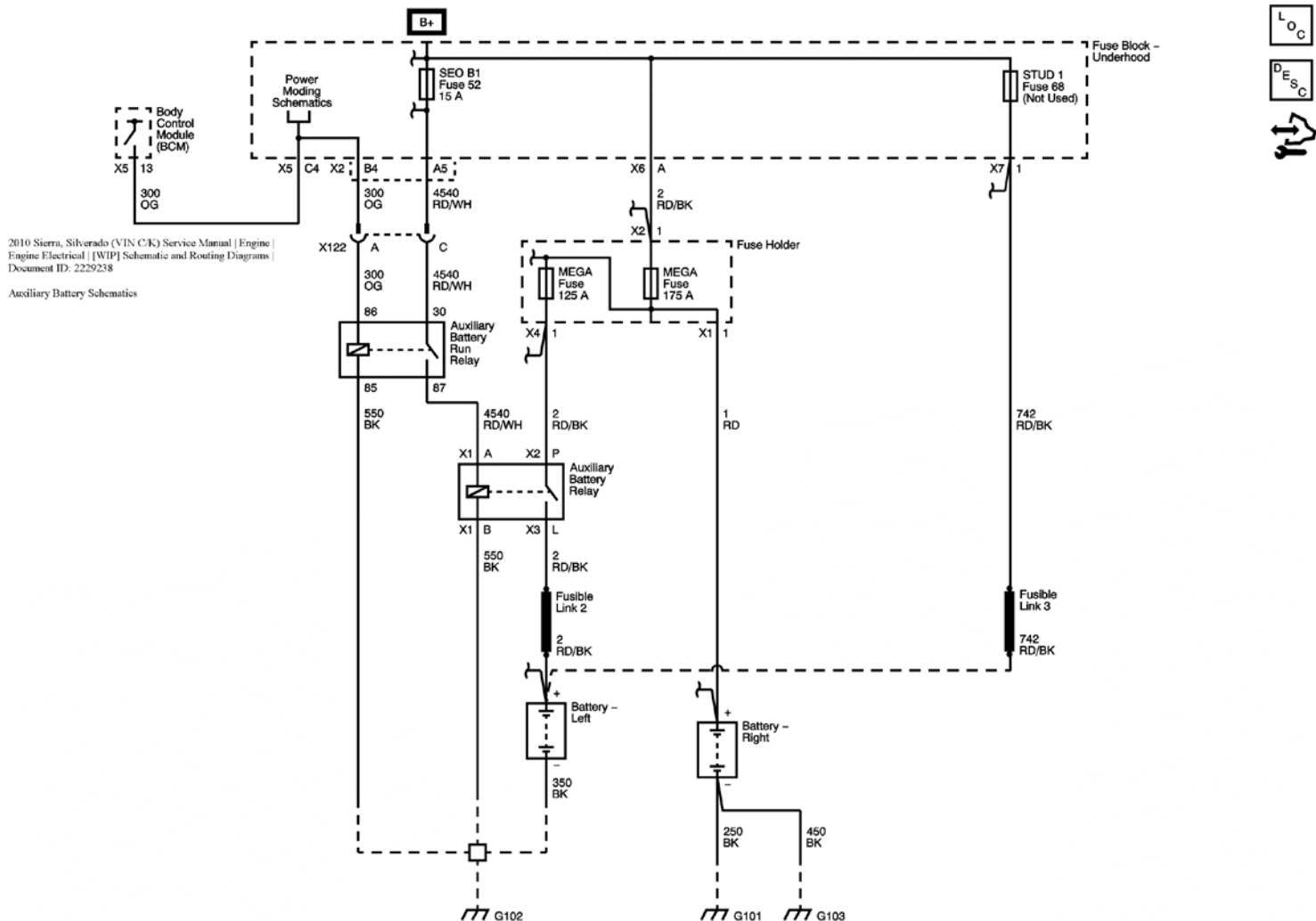


Body Harness Routing - Left Front Passenger Compartment



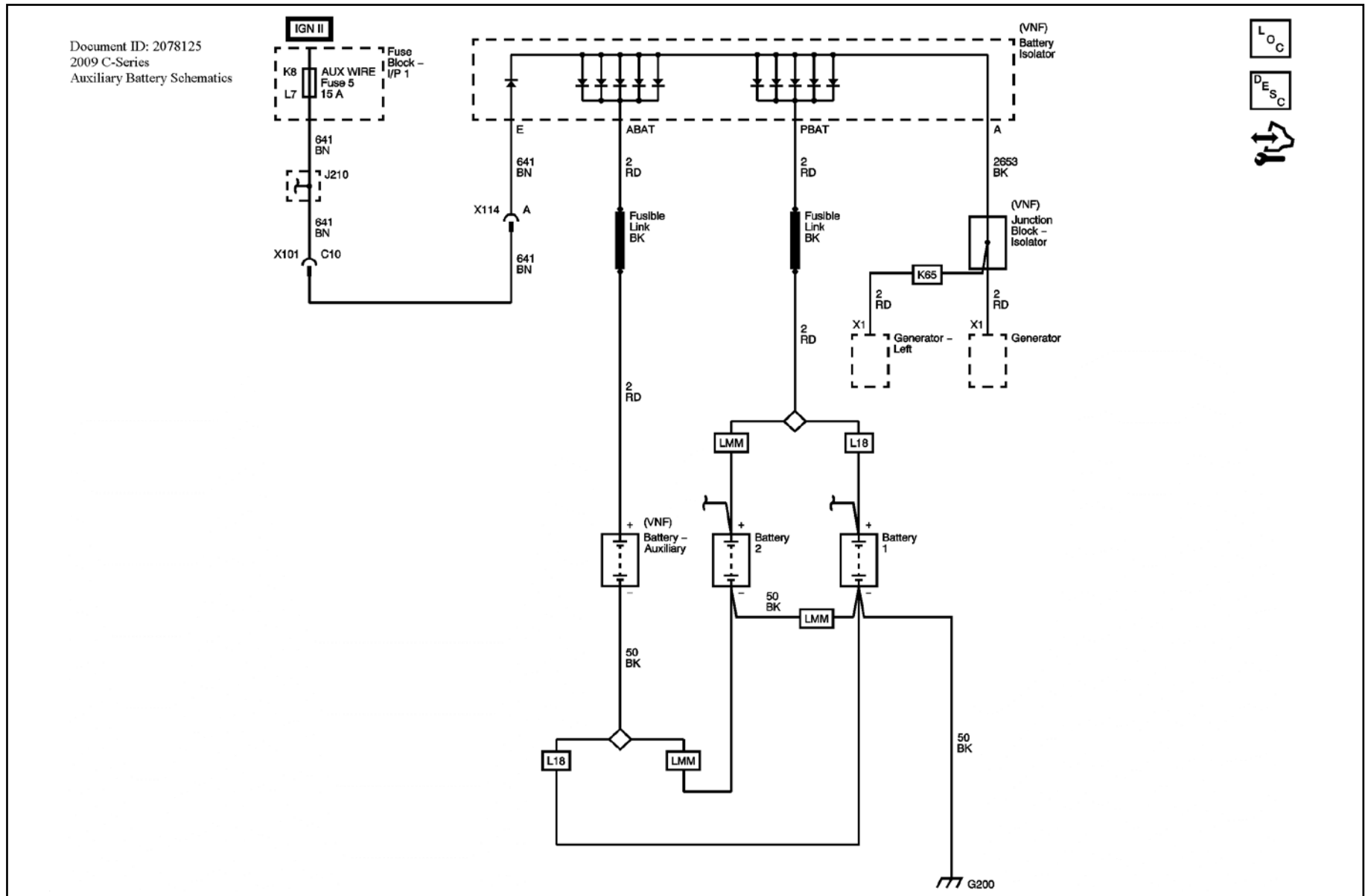
Battery Isolators

Battery isolation can be done in a number of ways. In this section we show you two ways that GM does it. On medium duty trucks we have a diode isolator component that places in line diodes in the battery charge lead going to the alternators. On CK trucks we have a relay isolation scheme. These drawings are provided to show you how you might accomplish your application.



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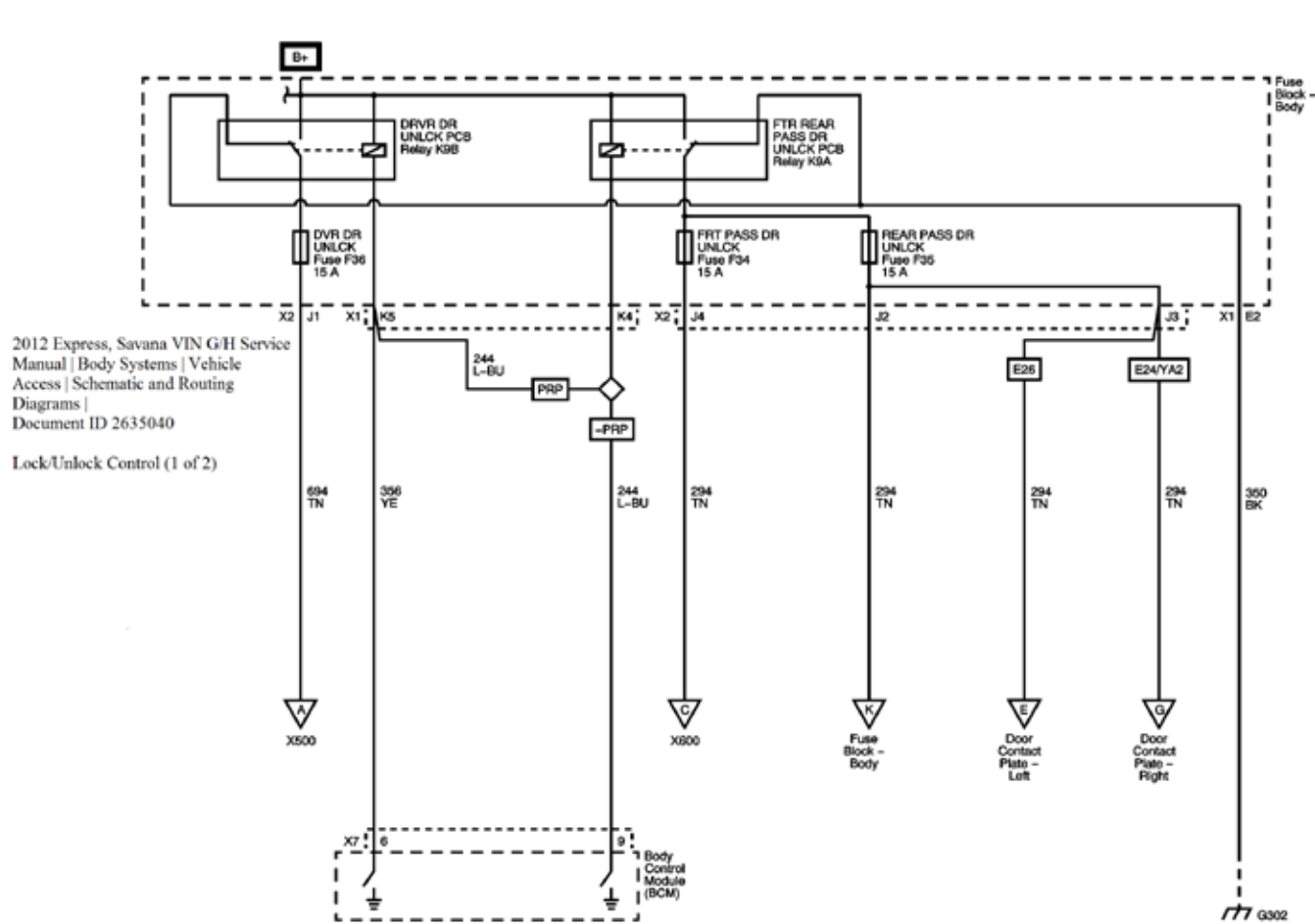
Battery Isolators cont'd.



Door Lock and Unlock – from outside the cab

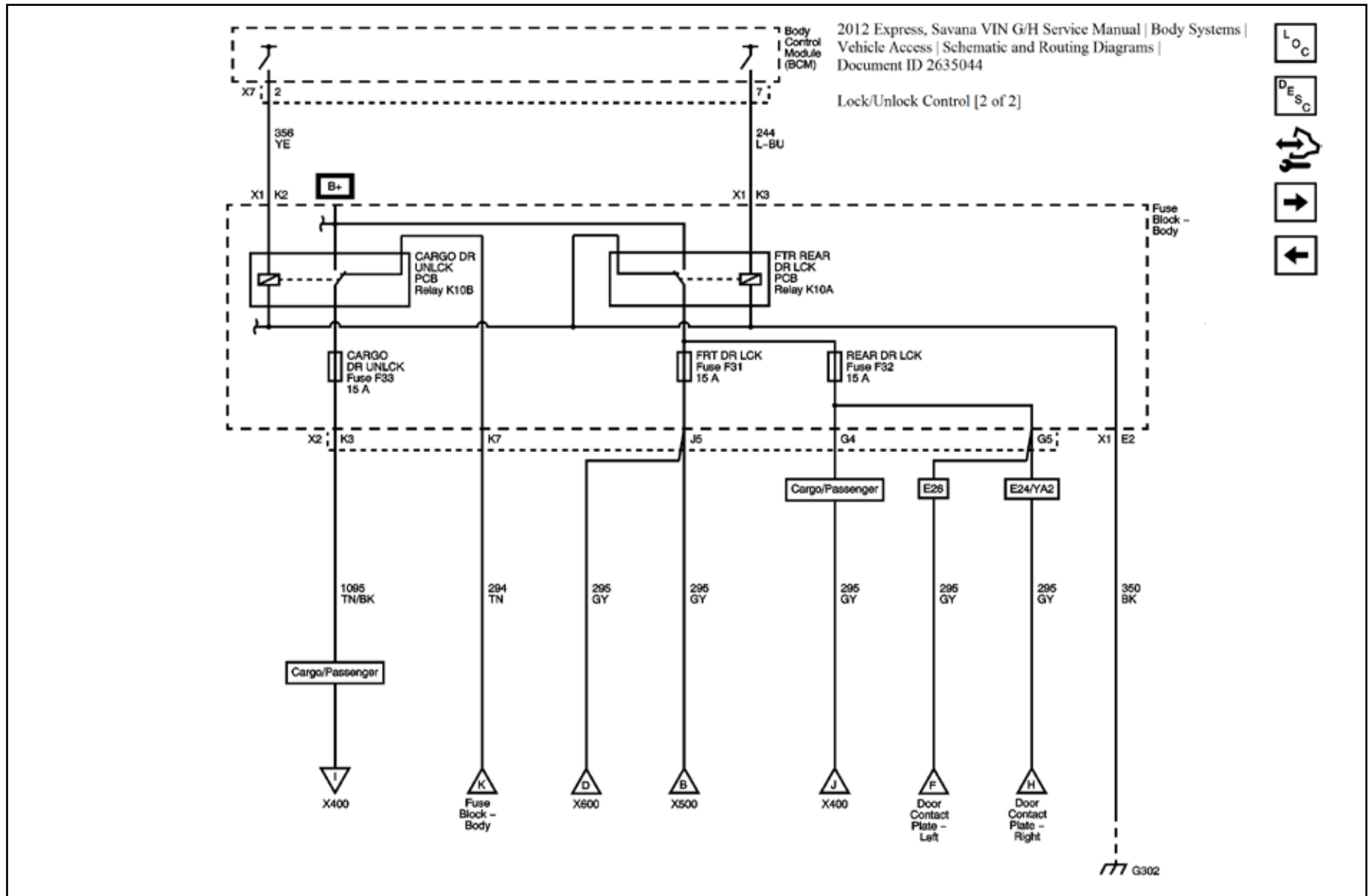
Control access to [driver door lock and unlock switch signals] can be found in the driver door to body harness connector X-500 cavities B1 and B2 – see schematic – Door Lock Switches.

Access to lock and unlock an external door [patient module door or service body door] can be accessed on the passenger side door connector X-600 cavities A2 and B2 – see schematic – Door Latches and Actuators



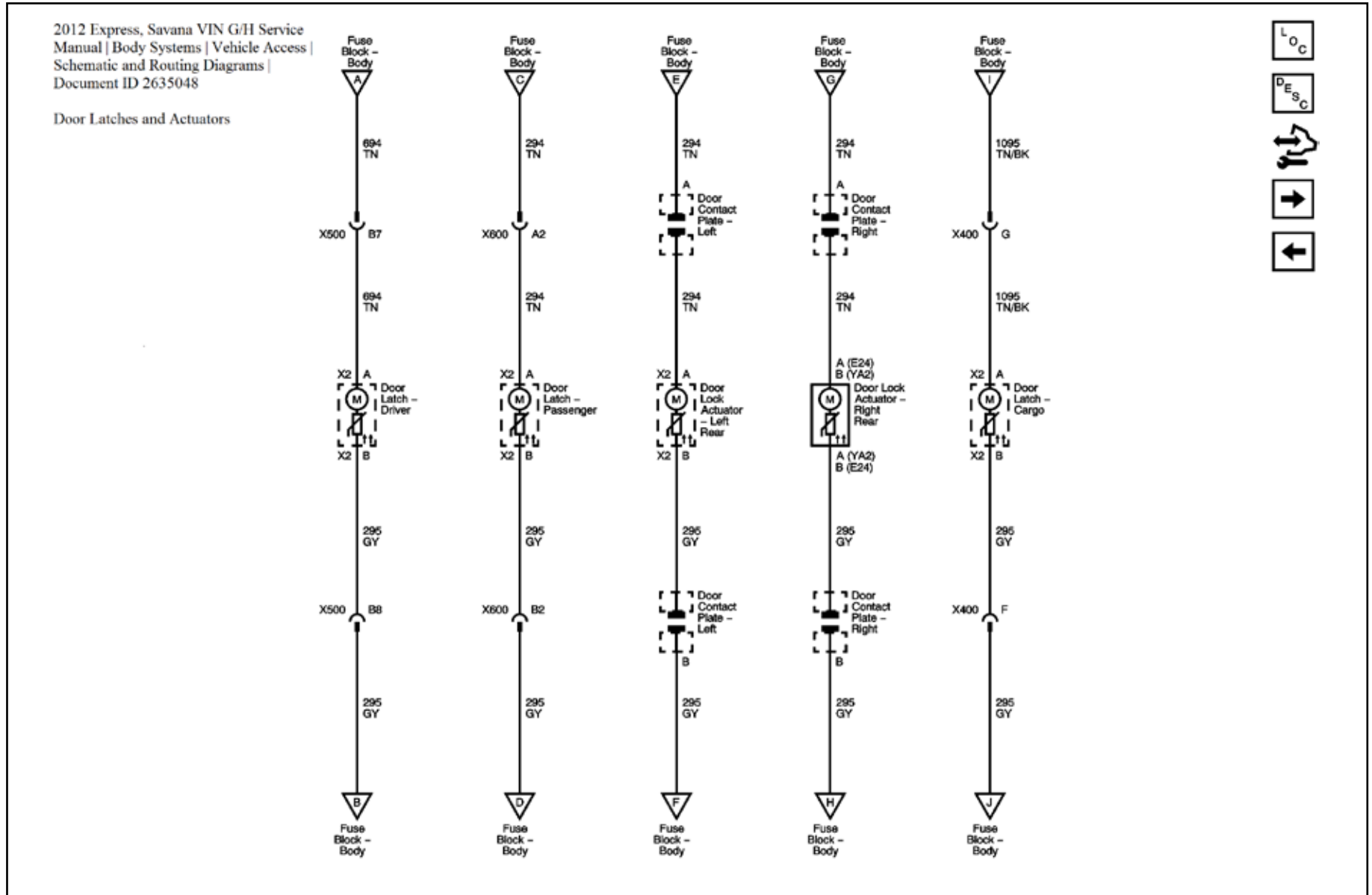
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Door Lock and Unlock – from outside the cab, cont'd.



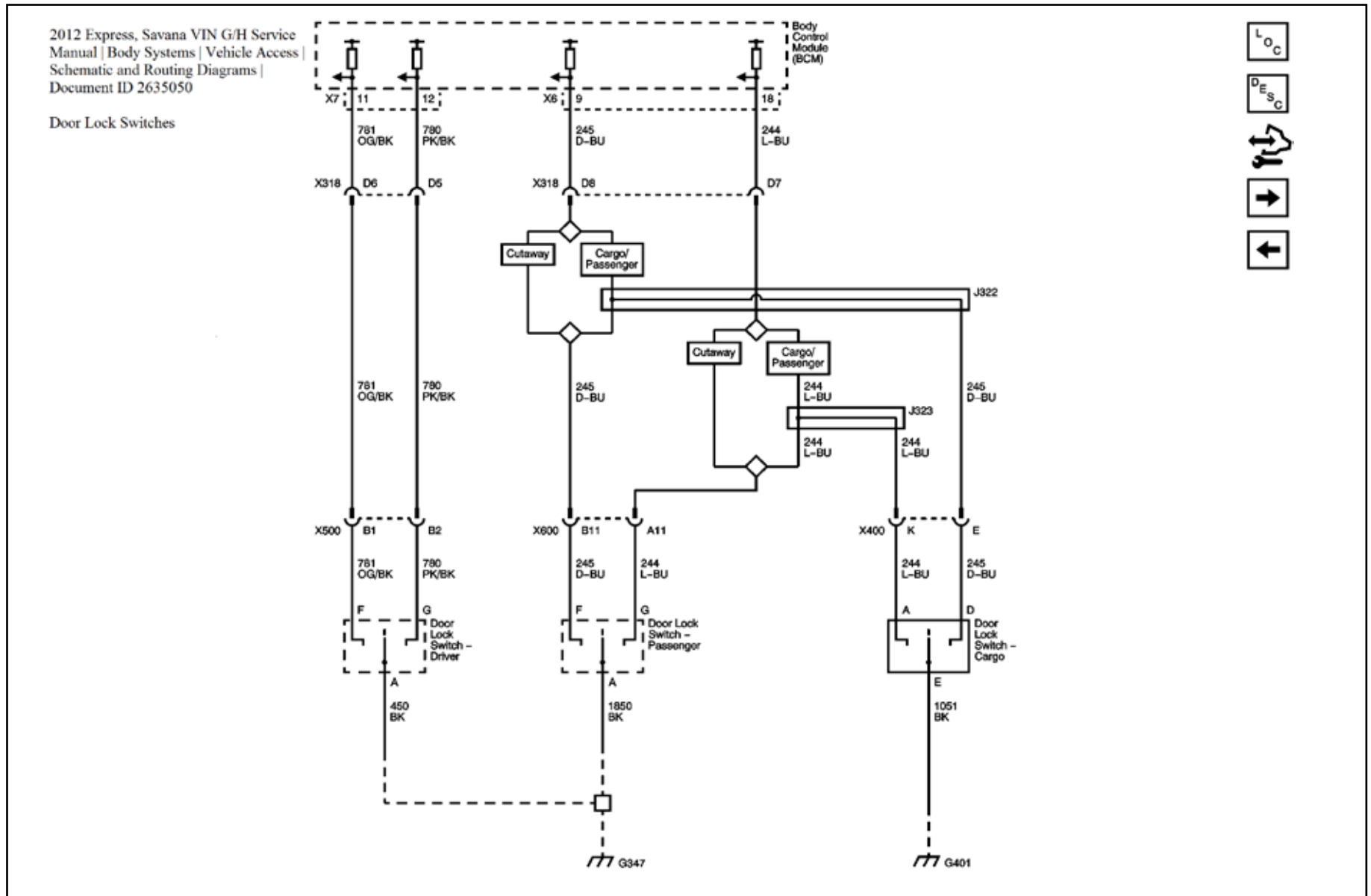
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Door Lock and Unlock – from outside the cab, cont'd.



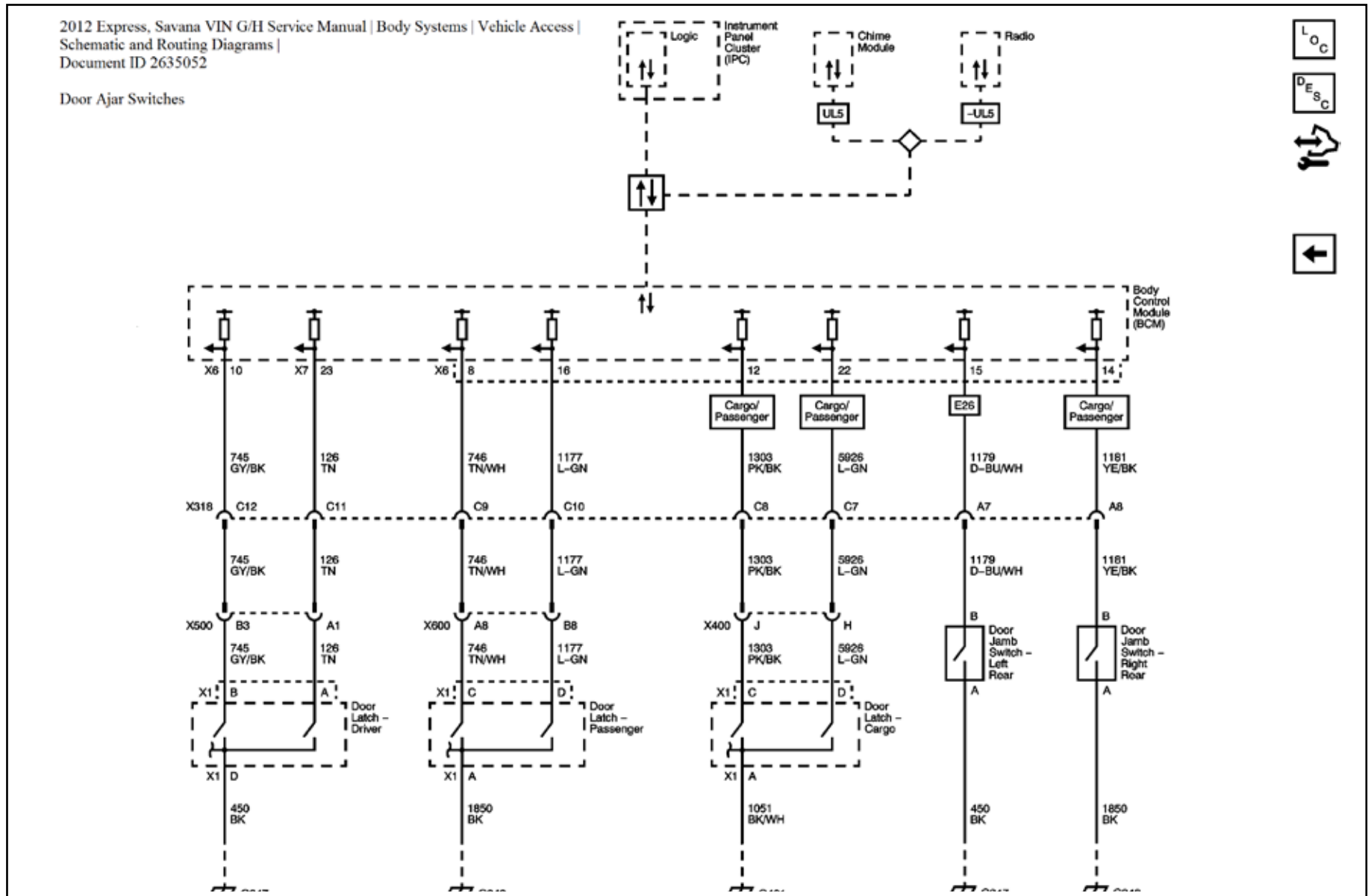
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Door Lock and Unlock – from outside the cab, cont'd.



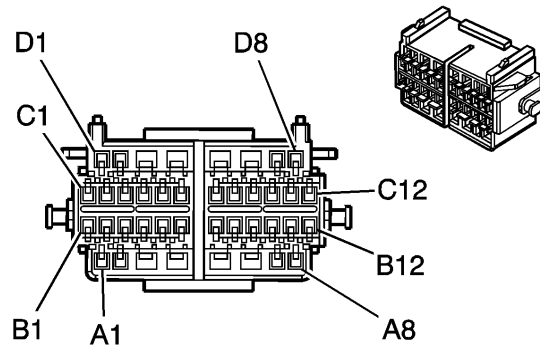
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Door Lock and Unlock – from outside the cab, cont'd.



X500 Driver Door Harness to Body Harness

Connector Part Information



Harness Type: Driver Door
OEM Connector: 15448129
Service Connector: 89046969
Description: 40-Way F GT 150 280 Series (BK)

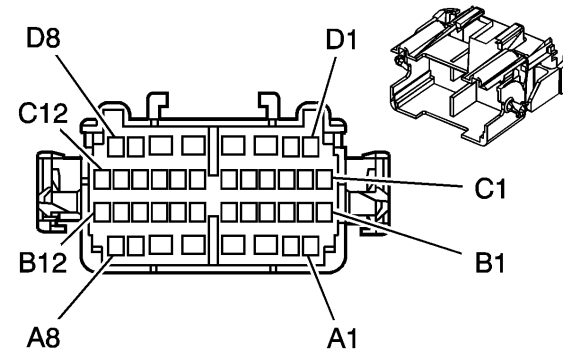
Terminal Part Information

Pins: A1, A7-A8, B1-B4, B7-B8, B12, C1-C2, C7-C8, C12, D7-D8
Terminated Lead: 13575735
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-2A (GY)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: Pins: A1, A8, B1-B4, D7-D8 - E/C
Core/Insulation Crimp: Pins: A7, B7-B8, B12, C12 - C/A

Pins: A5-A6, D4-D6
Terminated Lead: Pins: A5 (AU3 without DE5, DE7 or A31),
A6 - 13575753

(continued on next page)

Connector Part Information



Harness Type: Body
OEM Connector: 15416976
Service Connector: 89047197
Description: 40-Way M GT 150 280 Series (BK)

Terminal Part Information

Pins: A1, A6-A8, B1-B4, B7-B8, B12, C1-C2, C7-C8, C12, D7-D8
Terminated Lead: 13575502
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-3 (GY)
Terminal/Tray: 15304702/19
Core/Insulation Crimp: Pins: A1, A6, B1-B4 - E/C
Core/Insulation Crimp: Pins: A8, C1-C2, C7-C8, D7-D8 - E/4
Core/Insulation Crimp: Pins: A7, B7-B8, B12, C12 - 2/4

(continued on next page)

X500 Driver Door Harness to Body Harness, cont'd.

Terminal Part Information: Driver Door, cont'd.

Terminated Lead: Pins: A5 (AU3 with DE5, DE7 or A31),
D4-D6 - 13575756

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: Pins: A5 (AU3 without DE5, DE7 or A31),
A6 - 15304711/8

Terminal/Tray: Pins: A5 (AU3 with DE5, DE7 or A31),
D4-D6 - 15304713/19

Core/Insulation Crimp: Pins: A5 (AU3 without DE5, DE7 or A31),
A6 - E/A

Core/Insulation Crimp: Pins: A5 (AU3 with DE5, DE7 or A31),
D4-D6 - F/D

| Pin | Wire | Circuit | Function |
|-------|------------|---------|--|
| A1 | 0.35 TN | 126 | Left Front Door Open Switch Signal |
| A2-A4 | -- | -- | Not Used |
| A5 | 0.35 BK | 450 | Ground (AU3 without DE5, DE7 or A31) |
| | 3 BK | 450 | Ground (AU3 with DE5, DE7 or A31) |
| A6 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (AU3) |
| | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (A31) |
| A7 | 0.8 OG | 2267 | Mirror Heating Element Control (DE5 or DE7) |
| A8 | 0.35 PU/WH | 889 | Passenger Mirror Motor Down Control (DE5 or DE7) |

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Terminal Part Information: Body, cont'd.

Pins: A5, D4-D6

Terminated Lead: 13575510

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-5 (PU)

Terminal/Tray: 15304724/8

Core/Insulation Crimp: A/D

| Pin | Wire | Circuit | Function |
|-------|------------|---------|---|
| A1 | 0.35 TN | 126 | Left Front Door Open Switch Signal |
| A2-A4 | -- | -- | Not Used |
| A5 | 3 BK | 450 | Ground |
| A6 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (AU3 or A31) |
| A7 | 0.8 OG | 2267 | Mirror Heating Element Control (DE5 or DE7) |
| A8 | 0.5 PU/WH | 889 | Passenger Mirror Motor Down Control (DE5 or DE7) |
| B1 | 0.35 OG/BK | 781 | Driver Door Lock Switch Unlock Signal (AU3) |
| B2 | 0.35 PK/BK | 780 | Driver Door Lock Switch Lock Signal (AU3) |
| B3 | 0.35 GY/BK | 745 | Left Front Door Ajar Switch Signal |
| B4 | 0.35 BK | 450 | Ground |
| B5-B6 | -- | -- | Not Used |

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X500 Driver Door Harness to Body Harness, cont'd.

Harness: Driver Door, cont'd.

| Pin | Wire | Circuit | Function |
|--------|-------------|---------|--|
| B1 | 0.35 OG/BK | 781 | Driver Door Lock Switch Unlock Signal (AU3) |
| B2 | 0.35 PK/BK | 780 | Driver Door Lock Switch Lock Signal (AU3) |
| B3 | 0.35 GY/BK | 745 | Left Front Door Ajar Switch Signal |
| B4 | 0.35 BK | 450 | Ground |
| B5-B6 | -- | -- | Not Used |
| B7 | 0.8 TN | 694 | Driver Door Lock Actuator Unlock Control (AU3) |
| B8 | 0.8 GY | 295 | Door Lock Actuator Lock Control (AU3) |
| B9-B11 | -- | -- | Not Used |
| B12 | 0.8 D-BU | 1857 | Left Front Midrange Speaker Output (+) |
| C1 | 0.5 PU/WH | 6628 | Low Reference (ASF) |
| C2 | 0.5 WH | 2132 | Side Impact Sensing Module - Left - Signal (ASF) |
| C3-C6 | -- | -- | Not Used |
| C7 | 0.5 L-BU/WH | 1314 | Left Front Turn Signal Lamp Control (DE5 or DE7) |
| C8 | 0.5 RD/WH | 4340 | Battery Positive Voltage (DE5 or DE7) |
| C9-C11 | -- | -- | Not Used |

Harness: Body, cont'd.

| Pin | Wire | Circuit | Function |
|--------|-------------|---------|--|
| B7 | 0.8 TN | 694 | Driver Door Lock Actuator Unlock Control (AU3) |
| B8 | 1 GY | 295 | Door Lock Actuator Lock Control (AU3) |
| B9-B11 | -- | -- | Not Used |
| B12 | 0.8 D-BU | 1857 | Left Front Midrange Speaker Output (+) |
| C1 | 0.5 PU/WH | 6628 | Low Reference (ASF) |
| C2 | 0.5 WH | 2132 | Side Impact Sensing Module - Left - Signal (ASF) |
| C3-C6 | -- | -- | Not Used |
| C7 | 0.5 L-BU/WH | 1314 | Left Front Turn Signal Lamp Control (DE5 or DE7) |
| C8 | 0.5 RD/WH | 4340 | Battery Positive Voltage (DE5 or DE7) |
| C9-C11 | -- | -- | Not Used |
| C12 | 0.8 L-BU | 1957 | Left Front Midrange Speaker Output (-) |
| D1-D3 | -- | -- | Not Used |
| D4 | 3 TN | 167 | Power Window Master Switch Right Front Down Signal (A31) |
| D5 | 3 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31) |
| D6 | 3 D-GN | 1001 | RAP Control (A31) |

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X500 Driver Door Harness to Body Harness, cont'd.

Harness: Driver Door, cont'd.

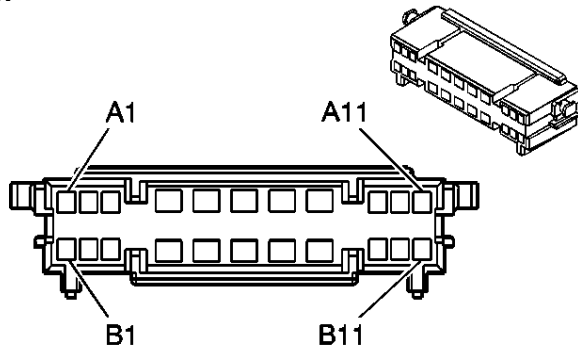
| Pin | Wire | Circuit | Function |
|-------|------------|---------|--|
| C12 | 0.8 L-BU | 1957 | Left Front Midrange Speaker Output (-) |
| D1-D3 | -- | -- | Not Used |
| D4 | 3 TN | 167 | Power Window Master Switch Right Front Down Signal (A31) |
| D5 | 3 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31) |
| D6 | 3 D-GN | 1001 | RAP Control (A31) |
| D7 | 0.35 BN/WH | 1498 | Passenger Mirror Motor Left/Down Control (DE5 or DE7) |
| D8 | 0.35 OG/WH | 881 | Passenger Mirror Motor Right Control (DE5 or DE7) |

Harness: Body, cont'd.

| Pin | Wire | Circuit | Function |
|-----|-----------|---------|---|
| D7 | 0.5 BN/WH | 1498 | Passenger Mirror Motor Left/Down Control (DE5 or DE7) |
| D8 | 0.5 OG/WH | 881 | Passenger Mirror Motor Right Control (DE5 or DE7) |

X600 Passenger Door Harness to Body Harness

Connector Part Information

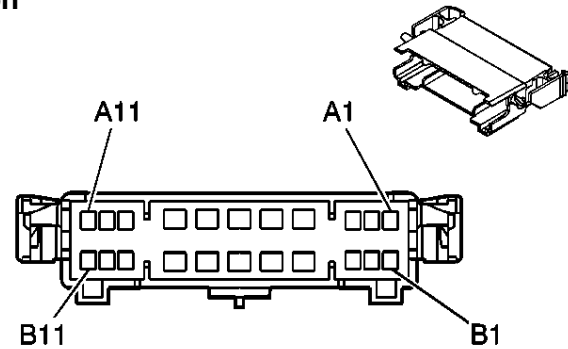


Harness Type: Passenger Door
OEM Connector: 15326063
Service Connector: 15326063
Description: 22-Way F GT 150, 280 (GY)

Terminal Part Information

Pins: A1-A3, A9-A11, B1-B3, B10-B11
Terminated Lead: 13575735
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-2A (GY)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: Pins: A1-A3, B1-B2 - C/A
Core/Insulation Crimp: Pins: A9-A11, B3, B10-B11 - E/C

Connector Part Information



Harness Type: Body
OEM Connector: 15326064
Service Connector: 15326064
Description: 22-Way M GT 150, 280 (GY)

Terminal Part Information

Pins: A1-A3, A9-A11, B1-B3, B10-B11
Terminated Lead: 13575502
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-3 (GY)
Terminal/Tray: 15304702/19
Core/Insulation Crimp: Pins: A1-A3, B1-B2 - 2/4
Core/Insulation Crimp: Pins: A9, A11, B11 - E/C
Core/Insulation Crimp: Pins: A10, B3, B10 - E/4

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X600 Passenger Door Harness to Body Harness, cont'd.

Terminal Part Information: Passenger Door, *cont'd.*

Pins: A4, B4-B5

Terminated Lead: 13575756

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304713/19

Core/Insulation Crimp: F/D

Pins: A5-A8, B6-B8

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Pin A5 - 2/A

Core/Insulation Crimp: Pins: A6-A8, B6-B8 - E/A

| Pin | Wire | Circuit | Function |
|-----|--------|---------|--|
| A1 | 0.8 OG | 1853 | Right Front Midrange Speaker Output (+) |
| A2 | 0.8 TN | 294 | Door Lock Actuator Unlock Control (AU3) |
| A3 | 0.8 OG | 2267 | Mirror Heating Element Control (DE5 or DE7) |
| A4 | 3 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31) |

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Terminal Part Information: Body, *cont'd.*

Pins: A4, B4-B5

Terminated Lead: 13575510

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-5 (PU)

Terminal/Tray: 15304724/8

Core/Insulation Crimp: A/D

Pins: A5-A8, B6-B8

Terminated Lead: 13575507

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-5 (PU)

Terminal/Tray: Pin A5 - 15304724/8

Terminal/Tray: Pins: A6-A8, B6-B8 - 15304722/8

Core/Insulation Crimp: Pin A5 - 2/A

Core/Insulation Crimp: Pins: A6-A8, B6-B8 - E/C

| Pin | Wire | Circuit | Function |
|-----|--------|---------|---|
| A1 | 0.8 OG | 1853 | Right Front Midrange Speaker Output (+) |
| A2 | 0.8 TN | 294 | Door Lock Actuator Unlock Control (AU3) |
| A3 | 0.8 OG | 2267 | Mirror Heating Element Control (DE5 or DE7) |

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X600 Passenger Door Harness to Body Harness, cont'd.

Harness: Passenger Door, cont'd.

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|--|
| A5 | 0.8 BK | 1850 | Ground |
| A6 | 0.35 BN/WH | 1498 | Passenger Mirror Motor Left/Down Control (DE5 or DE7) |
| | 0.35 BN/WH | 1498 | Passenger Mirror Motor Left/Down Control (DE5 or DE7) |
| A7 | 0.35 OG/WH | 881 | Passenger Mirror Motor Right Control (DE5 or DE7) |
| A8 | 0.35 TN/WH | 746 | Right Front Door Ajar Switch Signal |
| A9 | 0.35 BK | 1850 | Ground |
| A10 | 0.5 D-GN | 2134 | Side Impact Sensing Module - Right - Signal |
| A11 | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3) |
| B1 | 0.8 D-GN | 1953 | Right Front Midrange Speaker Output (-) |
| B2 | 0.8 GY | 295 | Door Lock Actuator Lock Control (AU3) |
| B3 | 0.5 D-BU/WH | 1315 | Right Front Turn Signal Lamp Control (DE5 or DE7) |
| B4 | 3 TN | 167 | Power Window Master Switch Right Front Down Signal (A31) |
| B5 | 3 D-GN | 1001 | RAP Control (A31) |
| B6 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (AU3) |
| | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (A31) |

Harness: Body, cont'd.

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|--|
| A4 | 3 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31) |
| A5 | 0.8 BK | 1850 | Ground |
| A6 | 0.5 BN/WH | 1498 | Passenger Mirror Motor Left/Down Control (DE5 or DE7) |
| A7 | 0.5 OG/WH | 881 | Passenger Mirror Motor Right Control (DE5 or DE7) |
| A8 | 0.35 TN/WH | 746 | Right Front Door Ajar Switch Signal |
| A9 | 0.35 BK | 1850 | Ground |
| A10 | 0.5 D-GN | 2134 | Side Impact Sensing Module - Right -- Signal |
| A11 | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3) |
| B1 | 0.8 D-GN | 1953 | Right Front Midrange Speaker Output (-) |
| B2 | 1 GY | 295 | Door Lock Actuator Lock Control (AU3) |
| B3 | 0.5 D-BU/WH | 1315 | Right Front Turn Signal Lamp Control (DE5 or DE7) |
| B4 | 3 TN | 167 | Power Window Master Switch Right Front Down Signal (A31) |
| B5 | 3 D-GN | 1001 | RAP Control (A31) |
| B6 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (AU3 or A31) |

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X600 Passenger Door Harness to Body Harness, cont'd.

Harness: Passenger Door, cont'd.

| Pin | Wire | Circuit | Function |
|-----|------------|---------|--|
| B7 | 0.35 PU/WH | 889 | Passenger Mirror Motor Down Control (DE5 or DE7) |
| B8 | 0.35 L-GN | 1177 | Right Front Door Open Switch Signal |
| B9 | -- | -- | Not Used |
| B10 | 0.5 WH/BK | 6629 | Low Reference (ASF) |
| B11 | 0.35 D-BU | 245 | Passenger Door Lock Switch Unlock Control (AU3) |

Harness: Body, cont'd.

| Pin | Wire | Circuit | Function |
|-----|-----------|---------|--|
| B7 | 0.5 PU/WH | 889 | Passenger Mirror Motor Down Control (DE5 or DE7) |
| B8 | 0.35 L-GN | 1177 | Right Front Door Open Switch Signal |
| B9 | -- | -- | Not Used |
| B10 | 0.5 WH/BK | 6629 | Low Reference (ASF) |
| B11 | 0.35 D-BU | 245 | Passenger Door Lock Switch Unlock Control (AU3) |

Charging System Description and Operation

Electrical Power Management Overview

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

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

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

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

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

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

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

(continued on next page)

Charging System Description and Operation, cont'd.

CHARGING SYSTEM COMPONENTS

Generator

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

Body Control Module (BCM)

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

Battery Current Sensor

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

Engine Control Module (ECM)

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

(continued on next page)

Charging System Description and Operation, cont'd.

CHARGING SYSTEM COMPONENTS, *cont'd.*

Instrument Panel Cluster

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

(continued on next page)

Charging System Description and Operation, cont'd.

CHARGING SYSTEM OPERATION

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

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

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

| Commanded Duty Cycle | Generator Output Voltage |
|----------------------|--------------------------|
| 10% | 11 V |
| 20% | 11.56 V |
| 30% | 12.12 V |
| 40% | 12.68 V |
| 50% | 13.25 V |
| 60% | 13.81 V |
| 70% | 14.37 V |
| 80% | 14.94 V |
| 90% | 15.5 V |

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

(continued on next page)

Charging System Description and Operation, cont'd.

CHARGING SYSTEM OPERATION, *cont'd.*

Battery Sulfation Mode

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

Charge Mode

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

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

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

Fuel Economy Mode

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

Headlamp Mode

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

(continued on next page)

Charging System Description and Operation, cont'd.

CHARGING SYSTEM OPERATION, *cont'd.*

Start Up Mode

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

Voltage Reduction Mode

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

Charging System Description and Operation, cont'd.

INSTRUMENT PANEL CLUSTER OPERATION

Charge Indicator Operation

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

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

BATTERY NOT CHARGING SERVICE CHARGING SYSTEM

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

SERVICE BATTERY CHARGING SYSTEM

The BCM and the ECM will send a GMLAN message to the driver information center for the SERVICE BATTERY CHARGING SYSTEM message to be displayed. It is commanded ON when a charging system DTC is a current DTC. The message is turned OFF when the conditions for clearing the DTC have been met.

Fast Idle (UF3)

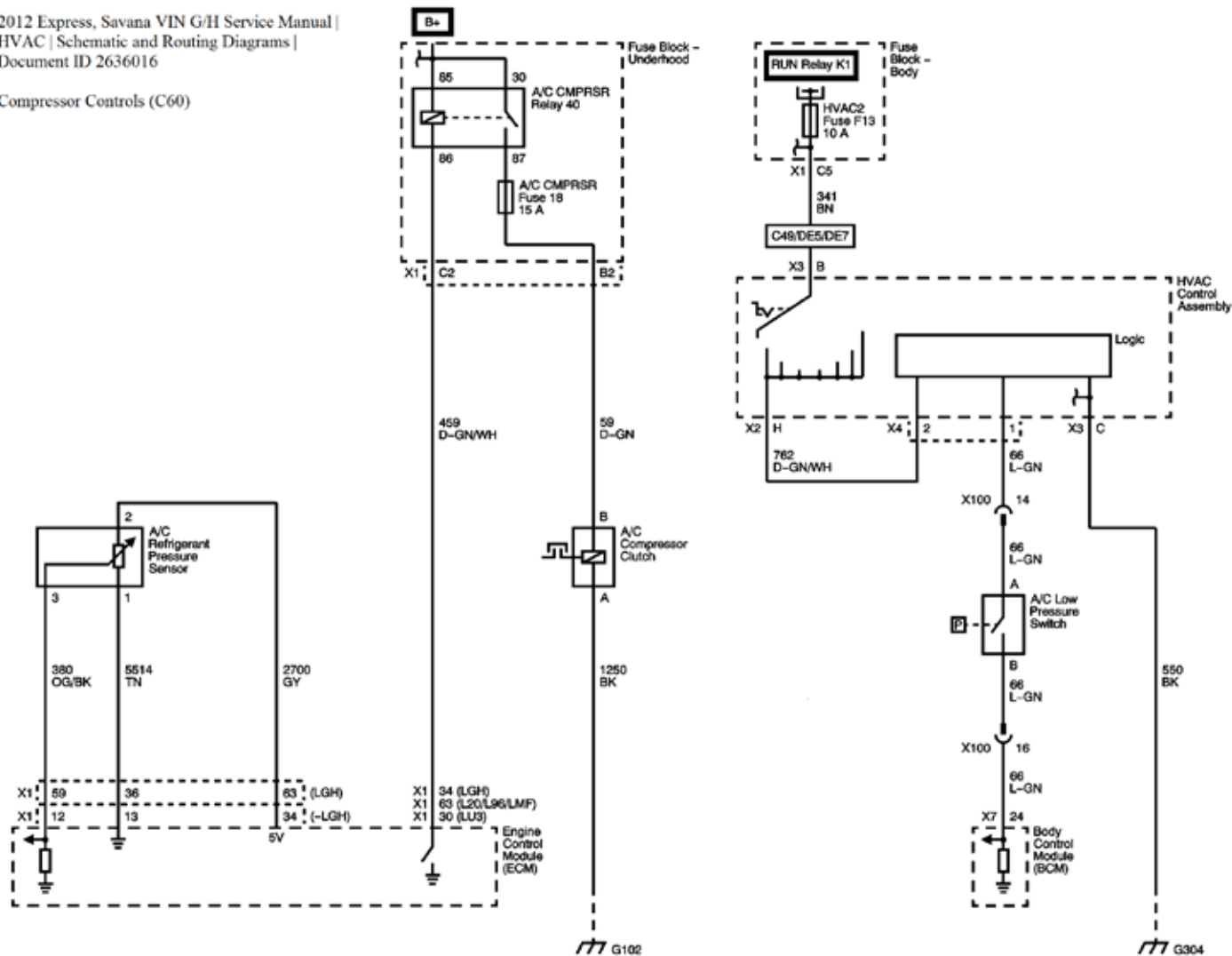
Engine idle up feature – option code UF3 – can be added on units with 6.0L gas or 6.6L Diesel engines and cruise control provided it was available on your model but not ordered. To assure availability for your model go to **www.gmupfitter.com** and select ‘quick links’ then ‘GM Links’ then ‘On Line Order Guide’ and enter your vehicle information. Here is the link **<http://eogld.ecomm.gm.com/dmdindex.htm>**

HVAC Compressor Control – Remote

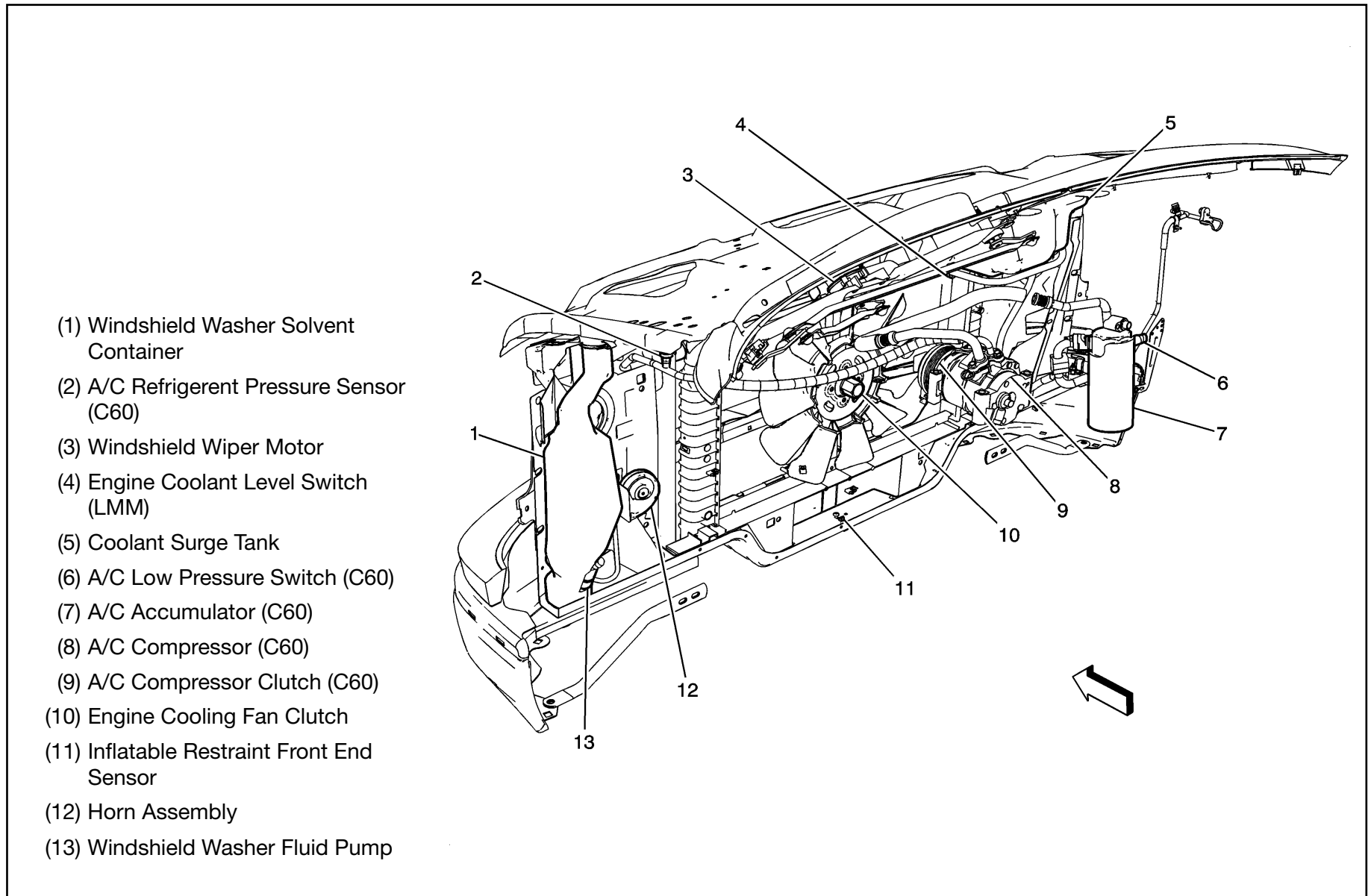
Remote control of the HVAC compressor can be accomplished by supplying a ground at the low pressure switch cavity A – see schematic and locator drawing.

2012 Express, Savana VIN G/H Service Manual |
HVAC | Schematic and Routing Diagrams |
Document ID 2636016

Compressor Controls (C60)

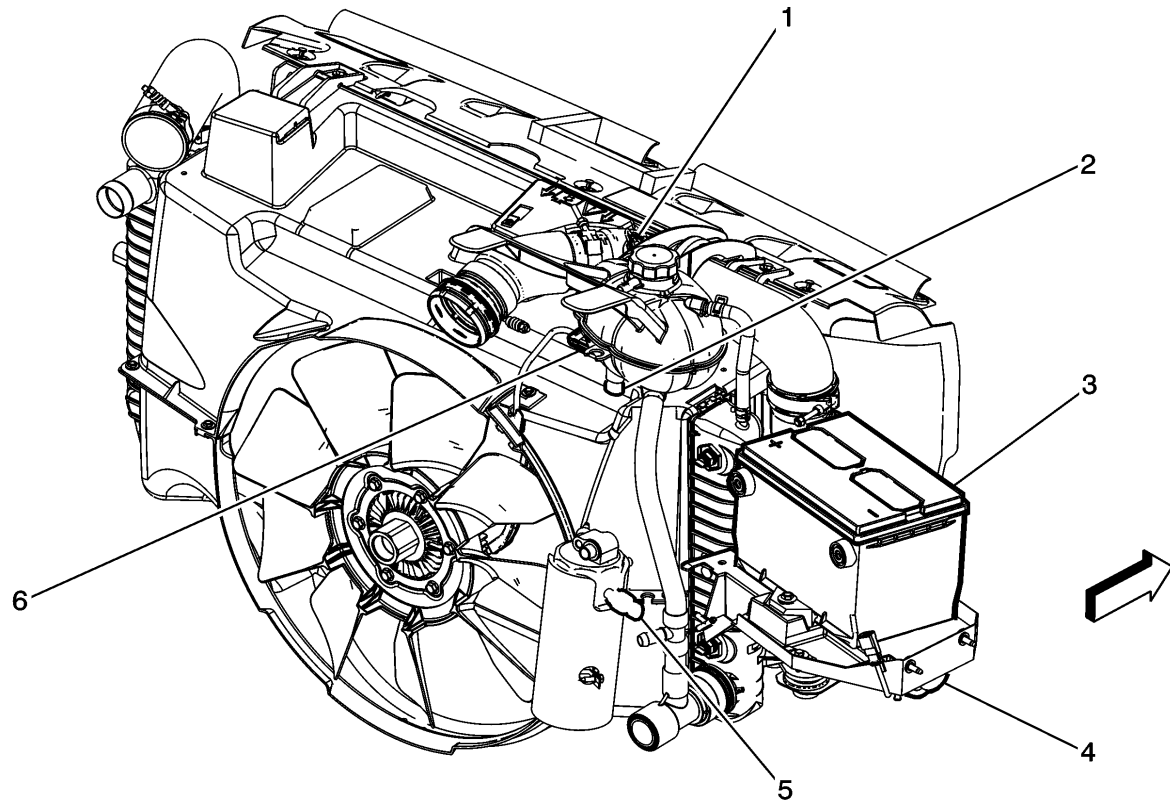


Front of Engine Compartment



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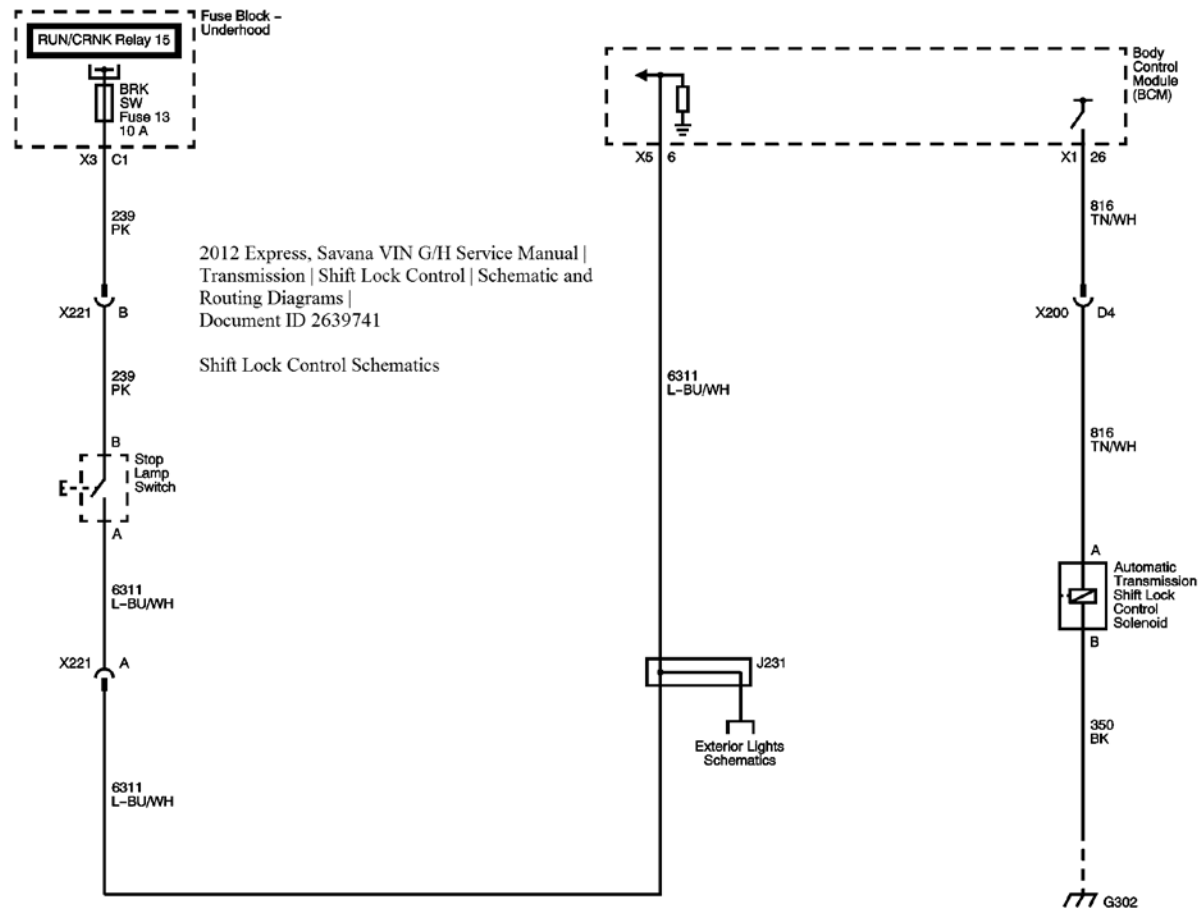
Front of Engine Compartment, cont'd.



- (1) Charge Air Cooler Outlet
Temperature Sensor
- (2) Engine Coolant Level Switch
- (3) Battery
- (4) Vacuum Pump
- (5) A/C Low Pressure Switch (C60)
- (6) X142

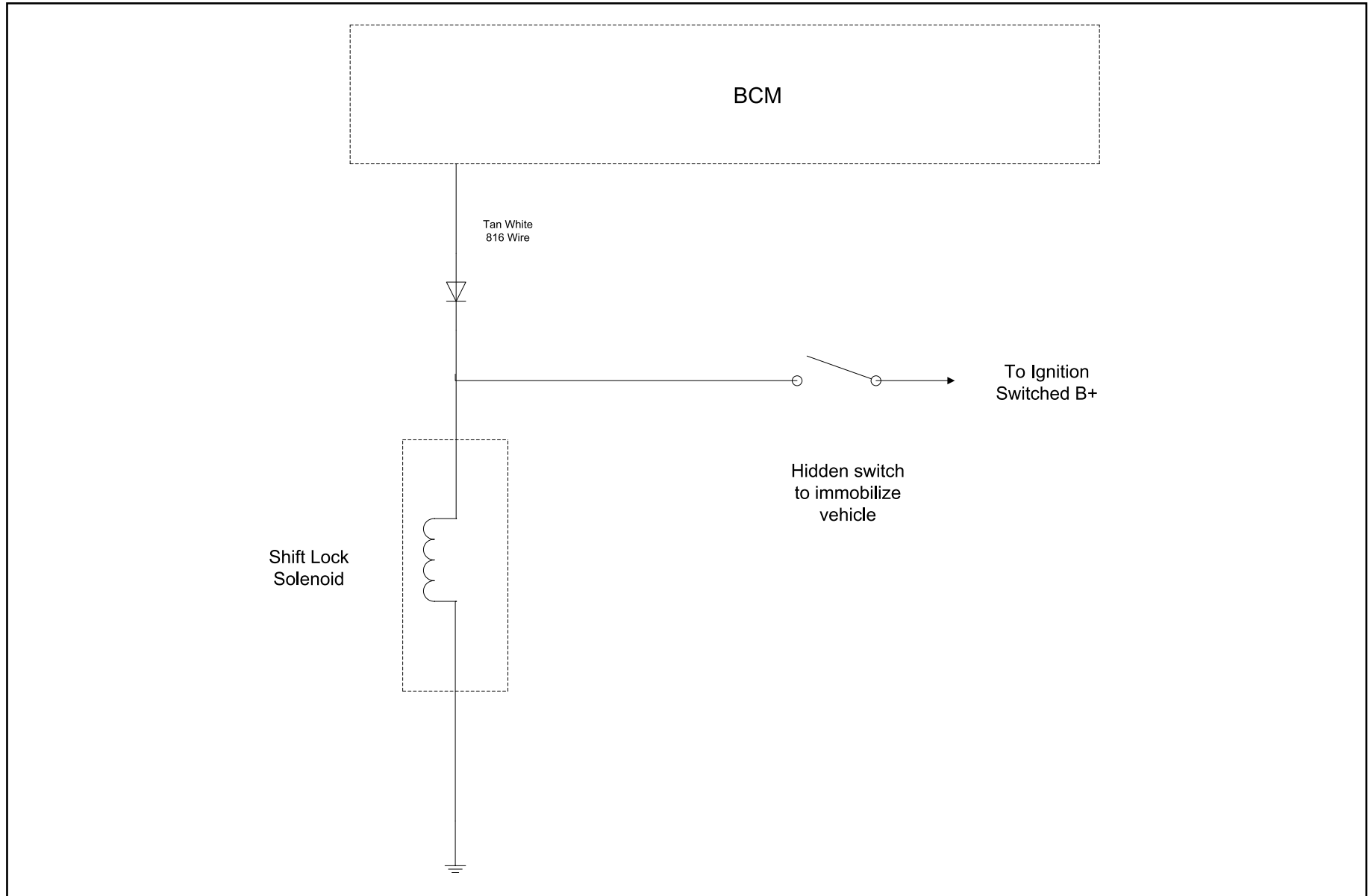
Remote Vehicle Immobilizer

For applications where it is desirable to leave the vehicle running but assure that it can not be moved an external +12 v signal can be supplied to the shift interlock solenoid assuring the vehicle will remain in park – see schematic and location drawings. Best access is at the steering column connector X-200 cavity D4 tan white 816 wire.



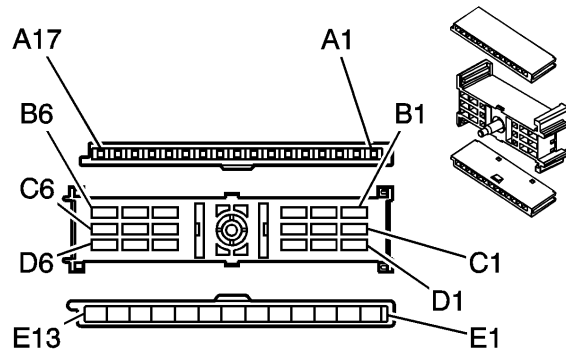
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Remote Vehicle Immobilizer, cont'd.



X200 Steering Column Harness to Instrument Panel Harness

Connector Part Information



Harness Type: Steering Column

OEM Connector: 12047842

Service Connector: 12047842

Description: 17-Way F Metri-Pack 280 Series (BK)

OEM Connector: 15492581

Service Connector: 12084183

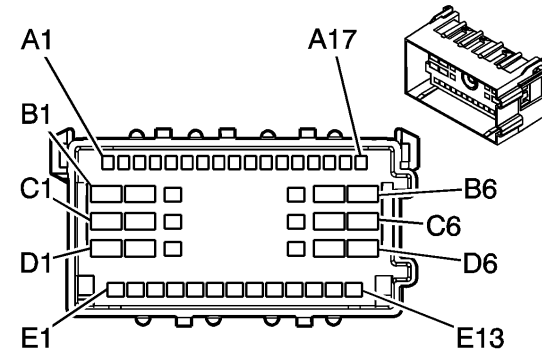
Description: 18-Way F Metri-Pack 280 630 Series Unsealed (BK)

OEM Connector: 12047840

Service Connector: 12047840

Description: 13-Way F Metri-Pack 280 Series (BK)

Connector Part Information



Harness Type: Instrument Panel

OEM Connector: 15492579

Service Connector: 88988982

Description: 48-Way M Metri-Pack 150 280 630 Series (BK)

Terminal Part Information

Pins: A1, A3, A6, A9, A11-A17

Terminated Lead: 13575462

Release Tool: J-38125-12A

Diagnostic Test Probe: J-35616-3 (GY)

Terminal/Tray: 12047581/2

Core/Insulation Crimp: E/C

Pins: B3, C3, D3, D4, E1, E3, E4, E8, E9, E10-E13

Terminated Lead: 13575463

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X200 Steering Column Harness to Instrument Panel Harness, cont'd.

Harness: Steering Column, *cont'd.*

Terminal Part Information

Pins: A1, A3, A6, A9, A11-A17

Terminated Lead: 13575464

Release Tool: J-38125-12A

Diagnostic Test Probe: J-35616-14 (GN)

Terminal/Tray: 15326030/5

Core/Insulation Crimp: E/C

Pins: B1, B6, C1, C6, D1, D5-D6

Terminated Lead: Pending

Release Tool: J-38125-11A

Diagnostic Test Probe: J-35616-42 (RD)

Terminal/Tray: 12015869/3

Core/Insulation Crimp: E/A

Pins: B3, C3, D3-D4, E1, E3-E4, E8-E13

Terminated Lead: Pending

Release Tool: J-38125-11A

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 12034046/2

Core/Insulation Crimp: E/A

Terminal Part Information: Instrument Panel, *cont'd.*

Release Tool: J-38125-12A

Diagnostic Test Probe: J-35616-3 (GY)

Terminal/Tray: 12047581/2

Core/Insulation Crimp: E/C

Pins: B1, B6, C1, C6, D1, D5, D6

Terminated Lead: Service by Harness - See Part Catalog

Release Tool: J-38125-11A

Diagnostic Test Probe: J-35616-43 (RD)

Terminal/Tray: 12020126/2

Core/Insulation Crimp: E/A

| Pin | Wire | Circuit | Function |
|-------|---------|---------|-------------------------|
| A1 | 0.35 TN | 28 | Horn Relay Control |
| A2 | -- | -- | Not Used |
| A3 | 0.35 PK | 1444 | 12-Volt Reference (K34) |
| A4-A5 | -- | -- | Not Used |
| A6 | 0.35 PK | 2239 | Ignition Voltage |
| A7-A8 | -- | -- | Not Used |
| A9 | 0.35 PK | 3 | Ignition Voltage |
| A10 | -- | -- | Not Used |

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X200 Steering Column Harness to Instrument Panel Harness, cont'd.

Harness: Steering Column, *cont'd.*

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|---|
| A1 | 0.35 TN | 28 | Horn Relay Control |
| A2 | -- | -- | Not Used |
| A3 | 0.35 PK | 1444 | 12-Volt Reference (K34) |
| A4-A5 | -- | -- | Not Used |
| A6 | 0.35 PK | 2239 | Ignition Voltage |
| A7-A8 | -- | -- | Not Used |
| A9 | 0.35 PK | 3 | Ignition Voltage |
| A10 | -- | -- | Not Used |
| A11 | 0.35 L-GN | 6818 | Steering Wheel Control Signal (W1Y) |
| A12 | 0.35 YE | 6046 | Steering Angle Sensor Phase A (JL4) |
| A13 | 0.35 D-GN/WH | 7158 | Cruise Control Indicator Dimming Signal (K34) |
| A14 | 0.35 D-BU | 6047 | Steering Angle Sensor Phase B (JL4) |
| A15 | 0.35 BN | 6136 | Supply Voltage (K34/W1Y) |
| A16 | 0.35 TN | 6048 | Steering Angle Sensor Phase C (JL4) |
| A17 | 0.35 GY | 1884 | Cruise Control Switch Signal (K34) |
| B1 | 0.35 RD/WH | 540 | Battery Positive Voltage |

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Harness: Instrument Panel, *cont'd.*

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|---|
| A11 | 0.35 L-GN | 6818 | Steering Wheel Control Signal (W1Y) |
| A12 | 0.5 YE | 6046 | Steering Angle Sensor Phase A (JL4) |
| A13 | 0.35 D-GN/WH | 7158 | Cruise Control Indicator Dimming Signal (K34) |
| A14 | 0.5 D-BU | 6047 | Steering Angle Sensor Phase B (JL4) |
| A15 | 0.35 BN | 6136 | Supply Voltage (K34/W1Y) |
| A16 | 0.5 TN | 6048 | Steering Angle Sensor Phase C (JL4) |
| A17 | 0.35 GY | 1884 | Cruise Control Switch Signal (K34) |
| B1 | 0.35 RD/WH | 540 | Battery Positive Voltage |
| B2 | -- | -- | Not Used |
| B3 | 0.35 WH | 111 | Theft Deterrent Alarm Enable Signal |
| B4-B5 | -- | -- | Not Used |
| B6 | 0.35 PK | 1020 | Ignition Voltage |
| C1 | 0.35 WH | 530 | Ignition Voltage |
| C2 | -- | -- | Not Used |
| C3 | 0.35 YE | 307 | Headlamp Switch Flash to Pass Signal |
| C4-C5 | -- | -- | Not Used |

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X200 Steering Column Harness to Instrument Panel Harness, cont'd.

Harness: Steering Column, *cont'd.*

| Pin | Wire | Circuit | Function |
|-------|------------|---------|--|
| B2 | -- | -- | Not Used |
| B3 | 0.35 WH | 111 | Theft Deterrent Alarm Enable Signal |
| B4-B5 | -- | -- | Not Used |
| B6 | 0.35 PK | 1020 | Ignition Voltage |
| C1 | 0.35 WH | 530 | Ignition Voltage |
| C2 | -- | -- | Not Used |
| C3 | 0.35 YE | 307 | Headlamp Switch Flash to Pass Signal |
| C4-C5 | -- | -- | Not Used |
| C6 | 0.35 BN | 4 | Ignition Voltage |
| D1 | 0.35 TN/BK | 6009 | Low Reference |
| D2 | -- | -- | Not Used |
| D3 | 0.35 YE | 525 | Headlamp Dimmer Switch Low Beam Signal |
| D4 | 0.5 TN/WH | 816 | A/T Shift Lock Solenoid Control |
| D5 | 0.35 L-GN | 6043 | Steering Angle Sensor Signal (JL4) |
| D6 | 0.35 PK | 94 | Windshield Washer Switch Signal |
| E1 | 0.5 BK | 350 | Ground |

(continued on next page)

Harness: Instrument Panel, *cont'd.*

| Pin | Wire | Circuit | Function |
|-------|------------|---------|--|
| C6 | 0.35 BN | 4 | Ignition Voltage |
| D1 | 0.35 TN/BK | 6009 | Low Reference |
| D2 | -- | -- | Not Used |
| D3 | 0.35 YE | 525 | Headlamp Dimmer Switch Low Beam Signal |
| D4 | 0.5 TN/WH | 816 | A/T Shift Lock Solenoid Control |
| D5 | 0.5 L-GN | 6043 | Steering Angle Sensor Signal (JL4) |
| D6 | 0.35 PK | 94 | Windshield Washer Switch Signal |
| E1 | 0.5 BK | 350 | Ground |
| E2 | -- | -- | Not Used |
| E3 | 0.5 BK/WH | 351 | Ground |
| E4 | 0.5 OG/BK | 6045 | Low Reference (JL4) |
| E5-E7 | -- | -- | Not Used |
| E8 | 0.35 D-GN | 663 | Hazard Switch Left Turn Signal |
| E9 | 0.35 TN | 664 | Hazard Switch Turn Right Signal |
| E10 | 0.5 GY | 6044 | 5-Volt Reference (JL4) |
| E11 | 0.35 L-BU | 1714 | Windshield Wiper Switch Low Signal |

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X200 Steering Column Harness to Instrument Panel Harness, cont'd.

Harness: Steering Column, cont'd.

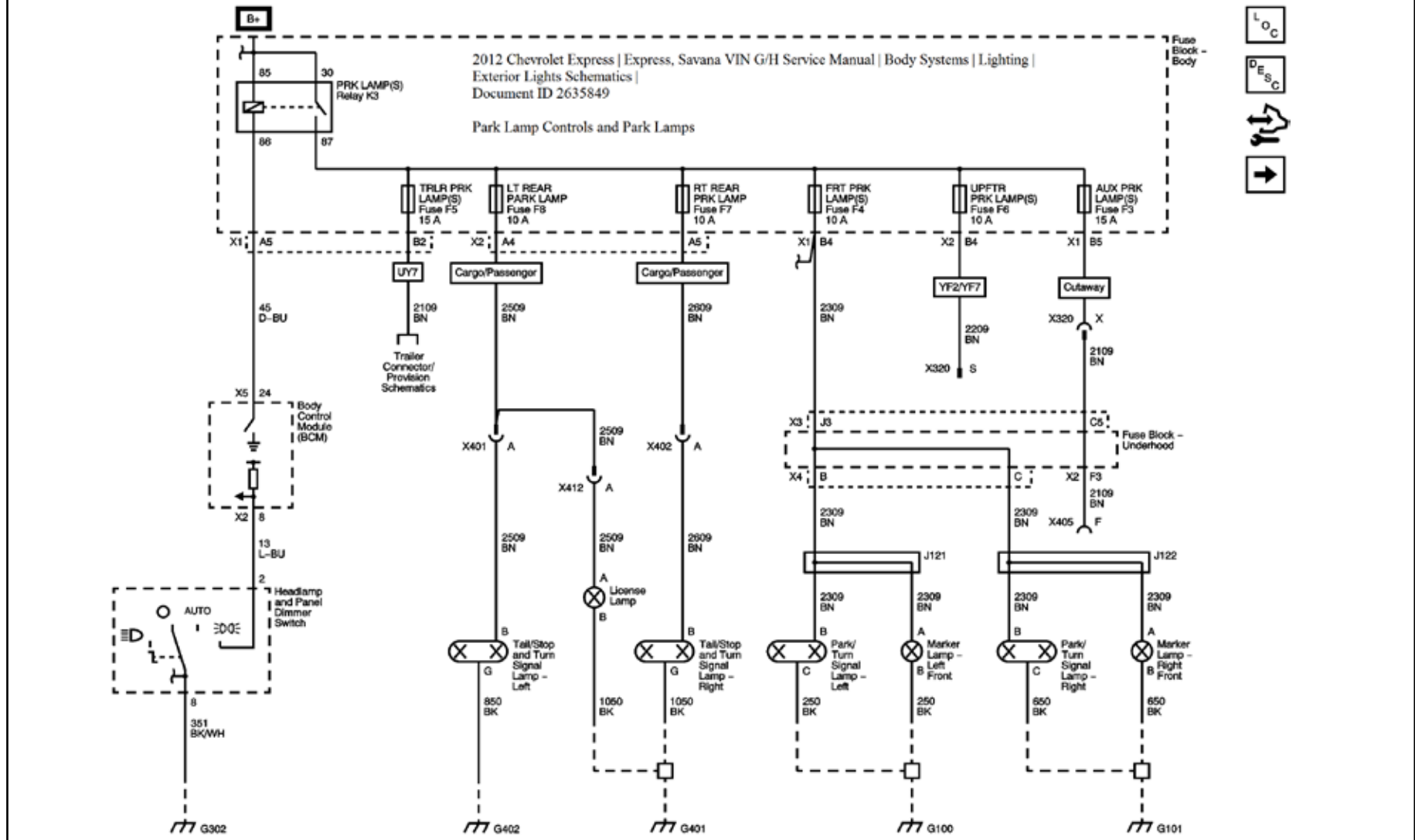
| Pin | Wire | Circuit | Function |
|-------|------------|---------|-------------------------------------|
| E2 | -- | -- | Not Used |
| E3 | 0.5 BK/WH | 351 | Ground |
| E4 | 0.35 OG/BK | 6045 | Low Reference (JL4) |
| E5-E7 | -- | -- | Not Used |
| E8 | 0.35 D-GN | 663 | Hazard Switch Left Turn Signal |
| E9 | 0.35 TN | 664 | Hazard Switch Turn Right Signal |
| E10 | 0.35 GY | 6044 | 5-Volt Reference (JL4) |
| E11 | 0.35 L-BU | 1714 | Windshield Wiper Switch Low Signal |
| E12 | 0.35 L-GN | 1715 | Windshield Wiper Switch High Signal |
| E13 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |

Harness: Instrument Panel, cont'd.

| Pin | Wire | Circuit | Function |
|-----|-----------|---------|-------------------------------------|
| E12 | 0.35 L-GN | 1715 | Windshield Wiper Switch High Signal |
| E13 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |

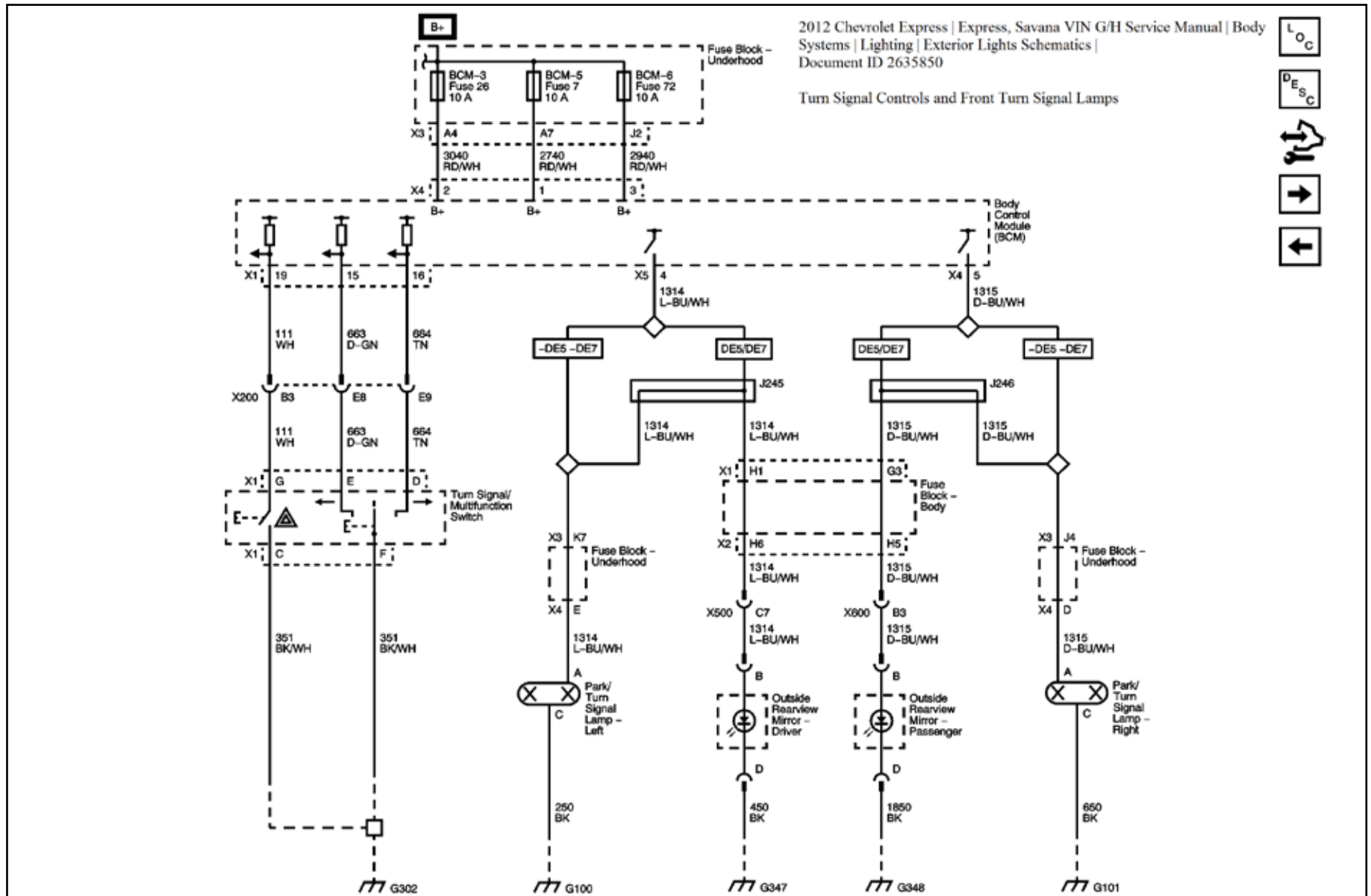
Separated Stop/Turn

Separated stop and turn signals [at the rear lighting connector X405] are standard on all cutaway models. Option V4D provides both separated signals and LED compatibility [no fast flash for bulb outage detection] on the rear signal lamps.



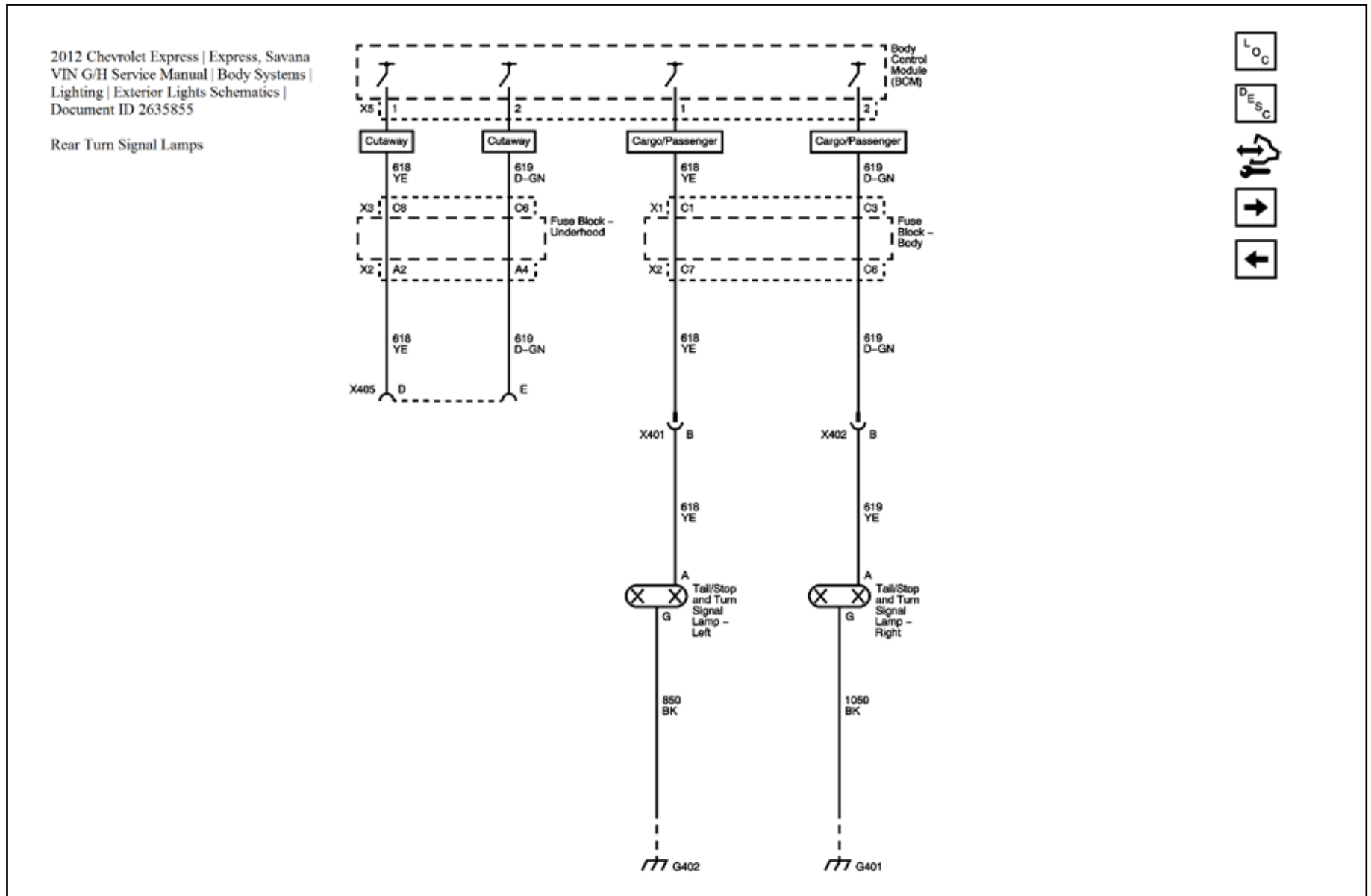
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Separated Stop/Turn, cont'd.



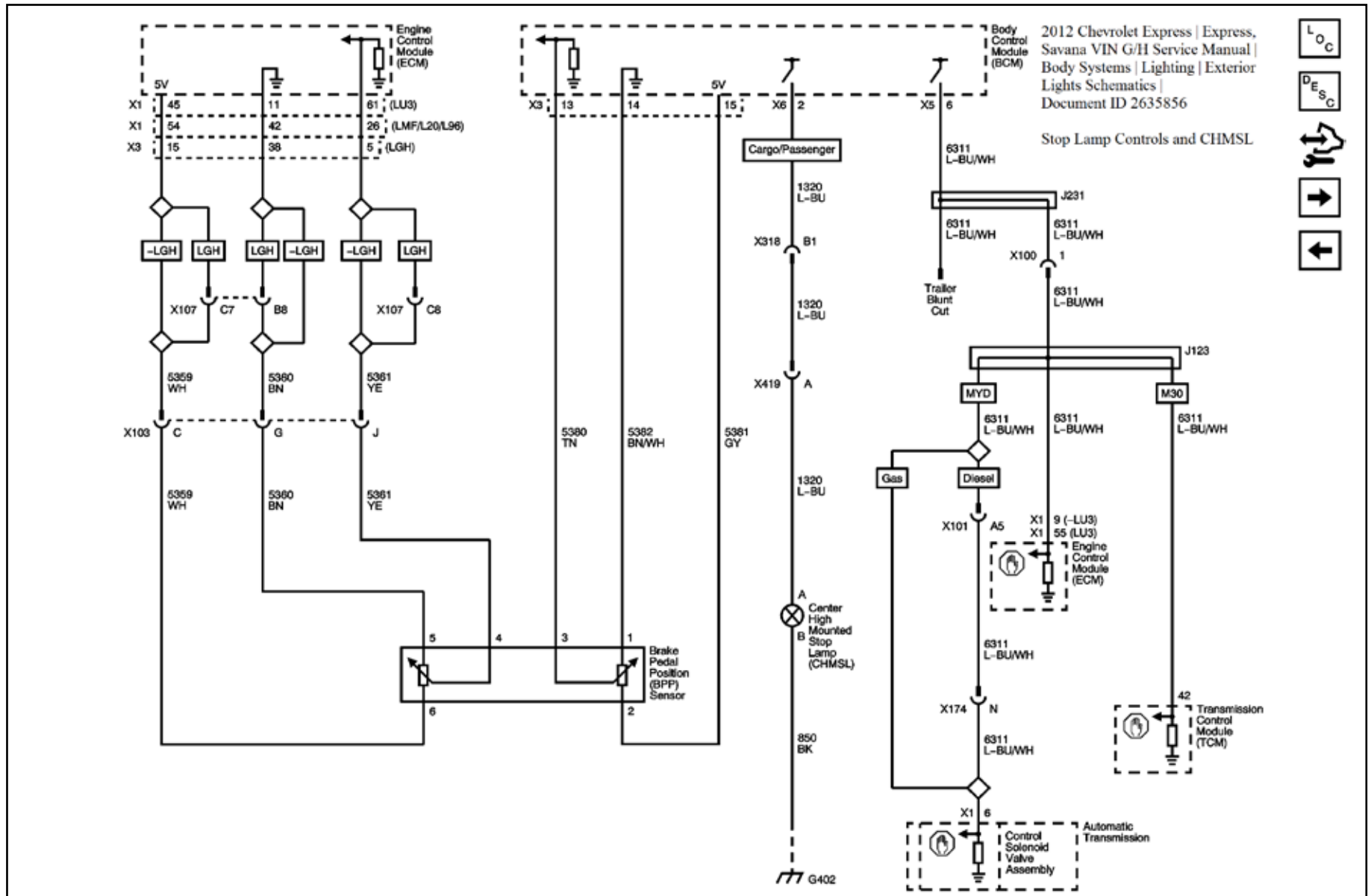
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Separated Stop/Turn, cont'd.



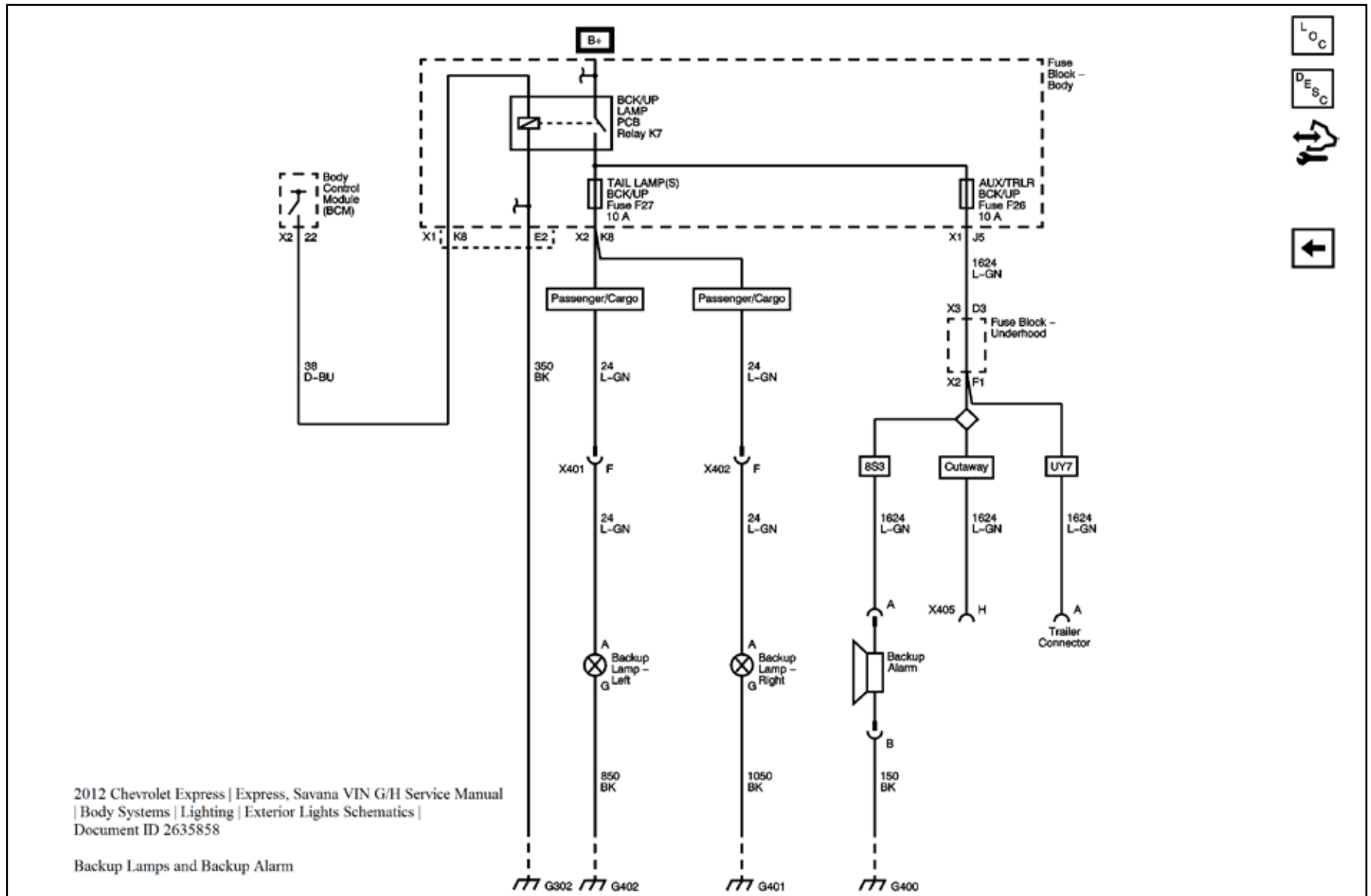
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Separated Stop/Turn, cont'd.



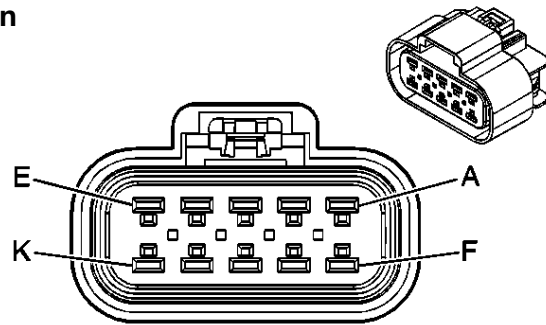
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Separated Stop/Turn, cont'd.



X405 Cutaway Rear Lighting Connector to Chassis Harness (Cutaway)

Connector Part Information

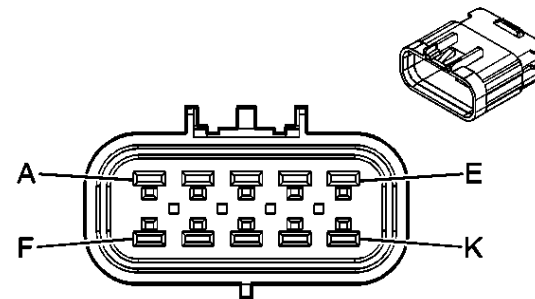


Harness Type: Cutaway Rear Lighting Connector
OEM Connector: 15326660
Service Connector: 88986262
Description: 10-Way F GT 280 5.8 Series, Sealed (BK)

Terminal Part Information

Terminated Lead: 13575405
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-4A (PU)
Terminal/Tray: 15304719/19
Core/Insulation Crimp: 2/5

Connector Part Information



Harness Type: Chassis
OEM Connector: 15326661
Service Connector: 88986245
Description: 10-Way M GT 280 5.8 Series, Sealed (BK)

Terminal Part Information

Terminated Lead: 13327135
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-5 (PU)
Terminal/Tray: 15304731/19
Core/Insulation Crimp: Pins: C-H - 2/5
Core/Insulation Crimp: Pin K - C/5

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X405 Cutaway Rear Lighting Connector to Chassis Harness (Cutaway), cont'd.

Harness: Cutaway Rear Lighting Connector, *cont'd.*

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|---|
| A-B | -- | -- | Not Used |
| C | 1 WH | 17 | Center High Mounted Stop Lamp (CHMSL) Control |
| D | 1 YE | 618 | Left Rear Turn Signal Lamp Control |
| E | 1 D-GN | 619 | Right Rear Turn Signal Lamp Control |
| F | 1 BN | 2109 | Trailer Park Lamps Control |
| G | 1 BK | 150 | Ground |
| H | 1 L-GN | 1624 | Trailer Backup Lamps Control |
| J | -- | -- | Not Used |
| K | 0.8 D-BU/WH | 149 | Courtesy Lamp Control |

Harness: Chassis, *cont'd.*

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|---|
| A-B | -- | -- | Not Used |
| C | 1 L-BU | 1320 | Center High Mounted Stop Lamp (CHMSL) Control |
| D | 1 YE | 618 | Left Rear Turn Signal Lamp Control |
| E | 1 D-GN | 619 | Right Rear Turn Signal Lamp Control |
| F | 1 BN | 2109 | Trailer Park Lamps Control |
| G | 1 BK | 150 | Ground |
| H | 1 L-GN | 1624 | Trailer Backup Lamps Control |
| J | -- | -- | Not Used |
| K | 0.8 D-BU/WH | 149 | Courtesy Lamp Control |

Park Neutral Signal

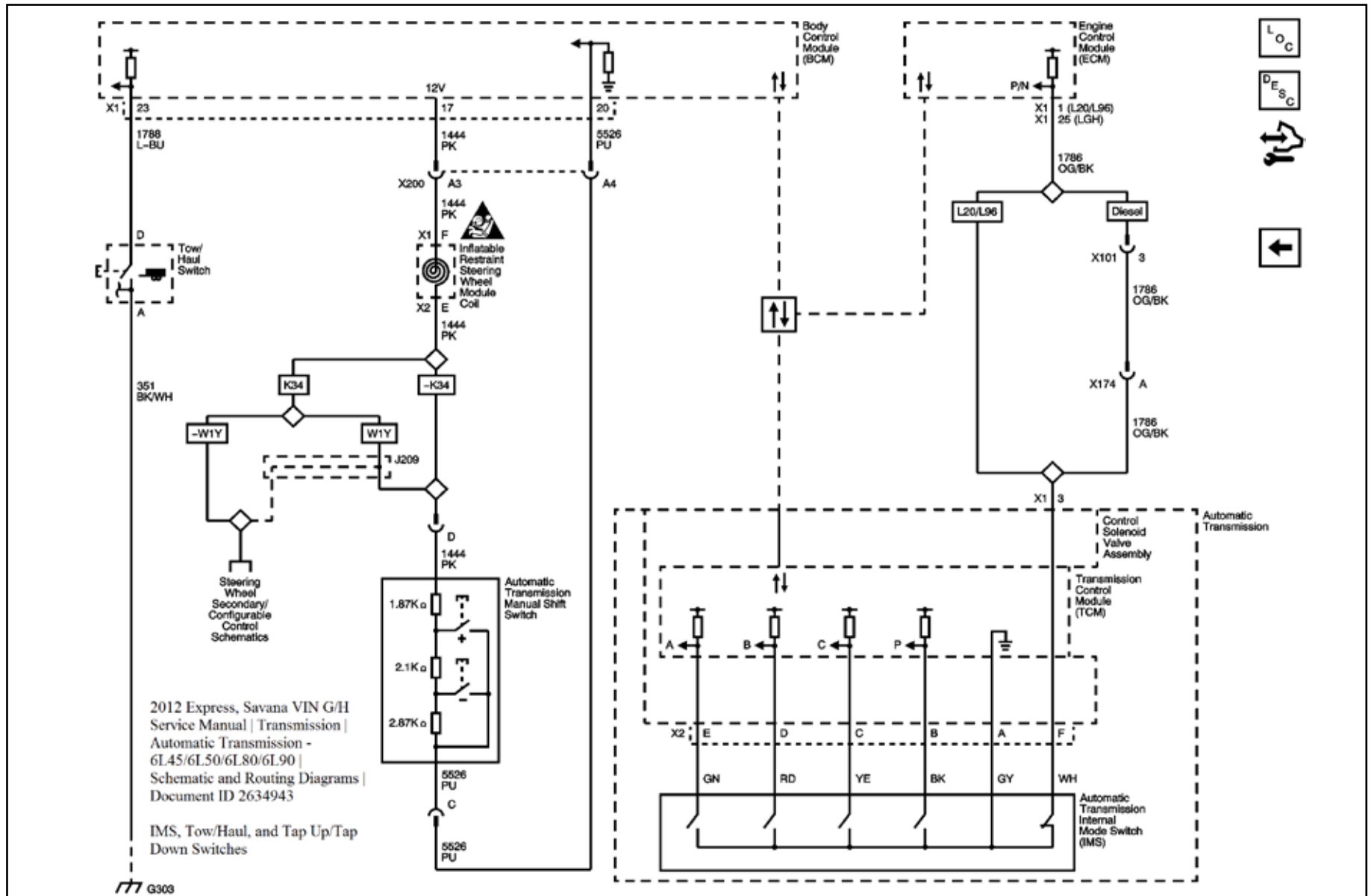
Park Neutral can be monitored in two ways.

1. The preferred method is to monitor the 816 tan white wire from the BCM which drives the shift lock solenoid. This signal goes to B+ when the ignition is ON and the vehicle is in Park. The BCM will drop power to this line when the brake is depressed. The 816 wire is in cavity D4 of X200.
2. When method 1 won't work there is a park/neutral switch in the transmission which supplies a ground signal directly to the engine controller. This is the 1786 orange black wire in the ECM connector [see ECM connector pin charts for specific pins based on engine type] which held low during park and neutral gear selections.

CAUTION: The PN switch or internal mode switch is very low current – intended to interface to a logic gate. You may NOT use it to close a relay unless the relay is very small with a coil current of less than 100 ma. It is best to detect this signal with a solid state gate which will have very small current draw. If you draw too much current from this circuit you will damage the switch and end up with a check engine light.

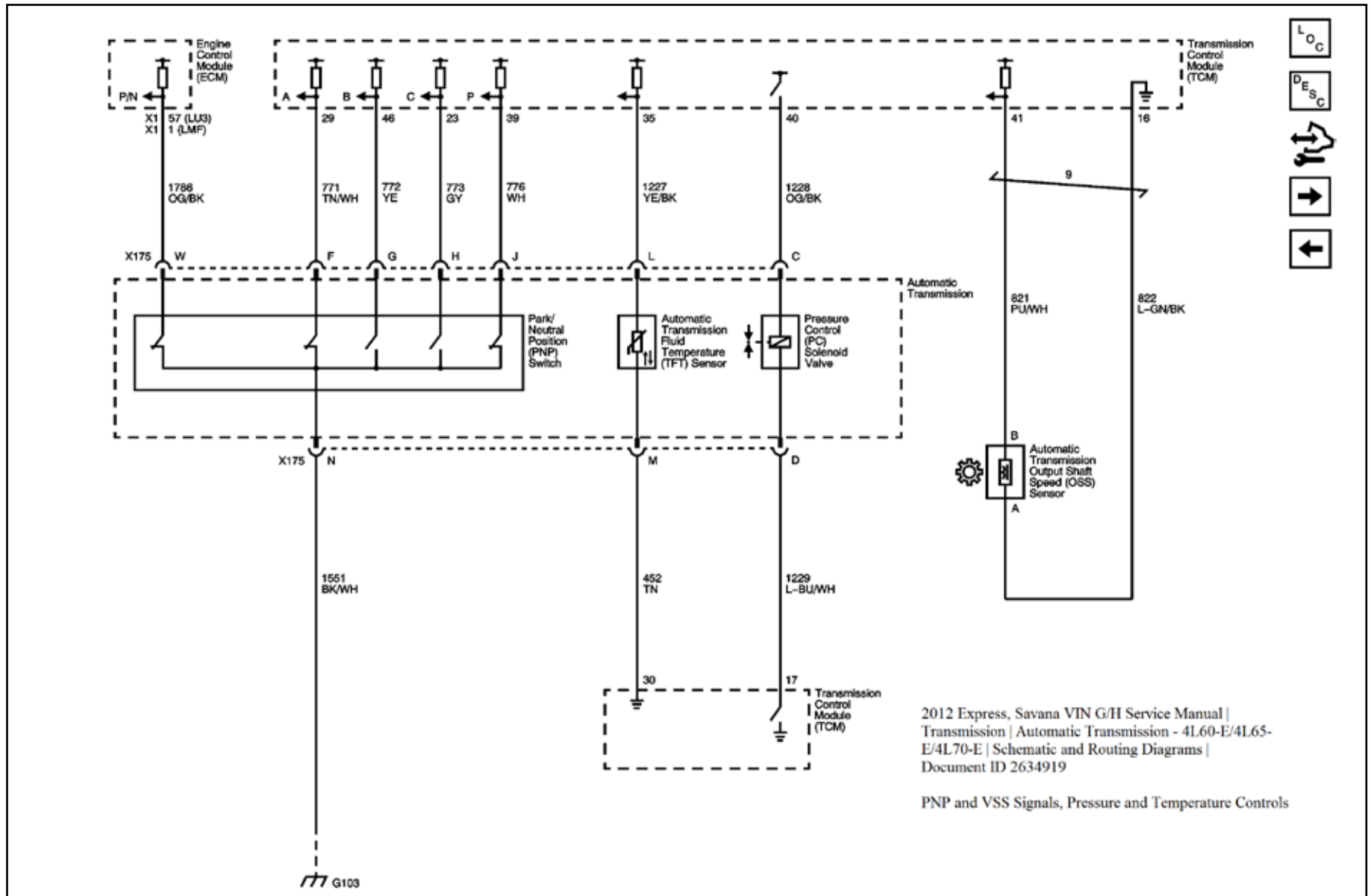
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Park Neutral Signal, cont'd.



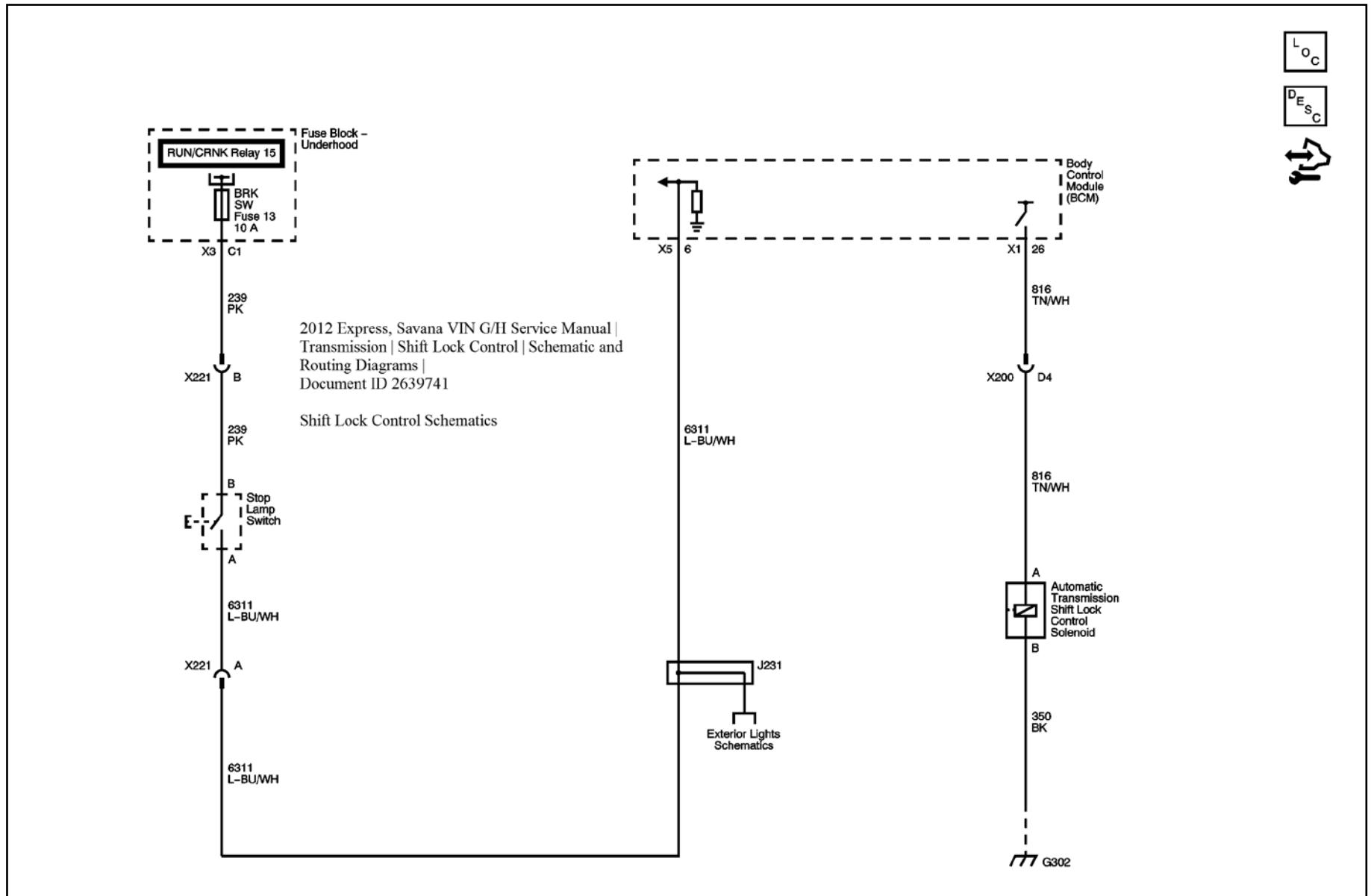
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Park Neutral Signal, cont'd.



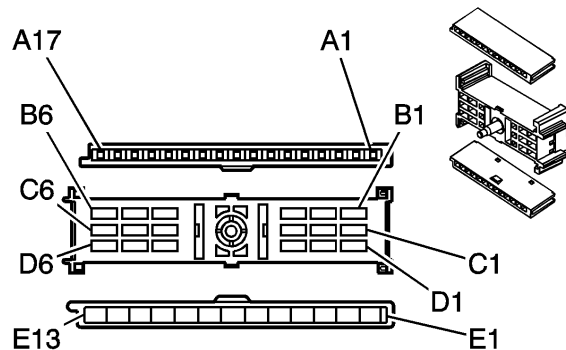
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Park Neutral Signal, cont'd.



X200 Steering Column Harness to Instrument Panel Harness

Connector Part Information



Harness Type: Steering Column

OEM Connector: 12047842

Service Connector: 12047842

Description: 17-Way F Metri-Pack 280 Series (BK)

OEM Connector: 15492581

Service Connector: 12084183

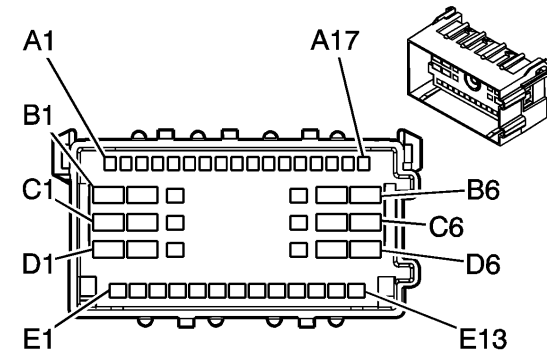
Description: 18-Way F Metri-Pack 280 630 Series Unsealed (BK)

OEM Connector: 12047840

Service Connector: 12047840

Description: 13-Way F Metri-Pack 280 Series (BK)

Connector Part Information



Harness Type: Instrument Panel

OEM Connector: 15492579

Service Connector: 88988982

Description: 48-Way M Metri-Pack 150 280 630 Series (BK)

Terminal Part Information

Pins: A1, A3, A6, A9, A11-A17

Terminated Lead: 13575462

Release Tool: J-38125-12A

Diagnostic Test Probe: J-35616-3 (GY)

Terminal/Tray: 12047581/2

Core/Insulation Crimp: E/C

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X200 Steering Column Harness to Instrument Panel Harness, cont'd.

Harness: Steering Column *cont'd.*

Terminal Part Information

Pins: A1, A3, A6, A9, A11-A17

Terminated Lead: 13575464

Release Tool: J-38125-12A

Diagnostic Test Probe: J-35616-14 (GN)

Terminal/Tray: 15326030/5

Core/Insulation Crimp: E/C

Pins: B1, B6, C1, C6, D1, D5-D6

Terminated Lead: Pending

Release Tool: J-38125-11A

Diagnostic Test Probe: J-35616-42 (RD)

Terminal/Tray: 12015869/3

Core/Insulation Crimp: E/A

Pins: B3, C3, D3-D4, E1, E3-E4, E8-E13

Terminated Lead: Pending

Release Tool: J-38125-11A

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 12034046/2

Core/Insulation Crimp: E/A

Terminal Part Information: Instrument Panel, *cont'd.*

Pins: B3, C3, D3, D4, E1, E3, E4, E8, E9, E10-E13

Terminated Lead: 13575463

Release Tool: J-38125-12A

Diagnostic Test Probe: J-35616-3 (GY)

Terminal/Tray: 12047581/2

Core/Insulation Crimp: E/C

Pins: B1, B6, C1, C6, D1, D5, D6

Terminated Lead: Service by Harness - See Part Catalog

Release Tool: J-38125-11A

Diagnostic Test Probe: J-35616-43 (RD)

Terminal/Tray: 12020126/2

Core/Insulation Crimp: E/A

| Pin | Wire | Circuit | Function |
|-------|---------|---------|-------------------------|
| A1 | 0.35 TN | 28 | Horn Relay Control |
| A2 | -- | -- | Not Used |
| A3 | 0.35 PK | 1444 | 12-Volt Reference (K34) |
| A4-A5 | -- | -- | Not Used |
| A6 | 0.35 PK | 2239 | Ignition Voltage |
| A7-A8 | -- | -- | Not Used |
| A9 | 0.35 PK | 3 | Ignition Voltage |
| A10 | -- | -- | Not Used |

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X200 Steering Column Harness to Instrument Panel Harness, cont'd.

Harness: Steering Column *cont'd.*

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|---|
| A1 | 0.35 TN | 28 | Horn Relay Control |
| A2 | -- | -- | Not Used |
| A3 | 0.35 PK | 1444 | 12-Volt Reference (K34) |
| A4-A5 | -- | -- | Not Used |
| A6 | 0.35 PK | 2239 | Ignition Voltage |
| A7-A8 | -- | -- | Not Used |
| A9 | 0.35 PK | 3 | Ignition Voltage |
| A10 | -- | -- | Not Used |
| A11 | 0.35 L-GN | 6818 | Steering Wheel Control Signal (W1Y) |
| A12 | 0.35 YE | 6046 | Steering Angle Sensor Phase A (JL4) |
| A13 | 0.35 D-GN/WH | 7158 | Cruise Control Indicator Dimming Signal (K34) |
| A14 | 0.35 D-BU | 6047 | Steering Angle Sensor Phase B (JL4) |
| A15 | 0.35 BN | 6136 | Supply Voltage (K34/W1Y) |
| A16 | 0.35 TN | 6048 | Steering Angle Sensor Phase C (JL4) |
| A17 | 0.35 GY | 1884 | Cruise Control Switch Signal (K34) |
| B1 | 0.35 RD/WH | 540 | Battery Positive Voltage |
| B2 | -- | -- | Not Used |
| B3 | 0.35 WH | 111 | Theft Deterrent Alarm Enable Signal |

(continued on next page)

Harness: Instrument Panel, *cont'd.*

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|---|
| A11 | 0.35 L-GN | 6818 | Steering Wheel Control Signal (W1Y) |
| A12 | 0.5 YE | 6046 | Steering Angle Sensor Phase A (JL4) |
| A13 | 0.35 D-GN/WH | 7158 | Cruise Control Indicator Dimming Signal (K34) |
| A14 | 0.5 D-BU | 6047 | Steering Angle Sensor Phase B (JL4) |
| A15 | 0.35 BN | 6136 | Supply Voltage (K34/W1Y) |
| A16 | 0.5 TN | 6048 | Steering Angle Sensor Phase C (JL4) |
| A17 | 0.35 GY | 1884 | Cruise Control Switch Signal (K34) |
| B1 | 0.35 RD/WH | 540 | Battery Positive Voltage |
| B2 | -- | -- | Not Used |
| B3 | 0.35 WH | 111 | Theft Deterrent Alarm Enable Signal |
| B4-B5 | -- | -- | Not Used |
| B6 | 0.35 PK | 1020 | Ignition Voltage |
| C1 | 0.35 WH | 530 | Ignition Voltage |
| C2 | -- | -- | Not Used |
| C3 | 0.35 YE | 307 | Headlamp Switch Flash to Pass Signal |
| C4-C5 | -- | -- | Not Used |
| C6 | 0.35 BN | 4 | Ignition Voltage |
| D1 | 0.35 TN/BK | 6009 | Low Reference |

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X200 Steering Column Harness to Instrument Panel Harness, cont'd.

Harness: Steering Column, *cont'd.*

| Pin | Wire | Circuit | Function |
|-------|------------|---------|--|
| B4-B5 | -- | -- | Not Used |
| B6 | 0.35 PK | 1020 | Ignition Voltage |
| C1 | 0.35 WH | 530 | Ignition Voltage |
| C2 | -- | -- | Not Used |
| C3 | 0.35 YE | 307 | Headlamp Switch Flash to Pass Signal |
| C4-C5 | -- | -- | Not Used |
| C6 | 0.35 BN | 4 | Ignition Voltage |
| D1 | 0.35 TN/BK | 6009 | Low Reference |
| D2 | -- | -- | Not Used |
| D3 | 0.35 YE | 525 | Headlamp Dimmer Switch Low Beam Signal |
| D4 | 0.5 TN/WH | 816 | A/T Shift Lock Solenoid Control |
| D5 | 0.35 L-GN | 6043 | Steering Angle Sensor Signal (JL4) |
| D6 | 0.35 PK | 94 | Windshield Washer Switch Signal |
| E1 | 0.5 BK | 350 | Ground |
| E2 | -- | -- | Not Used |
| E3 | 0.5 BK/WH | 351 | Ground |
| E4 | 0.35 OG/BK | 6045 | Low Reference (JL4) |
| E5-E7 | -- | -- | Not Used |
| E8 | 0.35 D-GN | 663 | Hazard Switch Left Turn Signal |

Harness: Instrument Panel, *cont'd.*

| Pin | Wire | Circuit | Function |
|-------|-----------|---------|--|
| D2 | -- | -- | Not Used |
| D3 | 0.35 YE | 525 | Headlamp Dimmer Switch Low Beam Signal |
| D4 | 0.5 TN/WH | 816 | A/T Shift Lock Solenoid Control |
| D5 | 0.5 L-GN | 6043 | Steering Angle Sensor Signal (JL4) |
| D6 | 0.35 PK | 94 | Windshield Washer Switch Signal |
| E1 | 0.5 BK | 350 | Ground |
| E2 | -- | -- | Not Used |
| E3 | 0.5 BK/WH | 351 | Ground |
| E4 | 0.5 OG/BK | 6045 | Low Reference (JL4) |
| E5-E7 | -- | -- | Not Used |
| E8 | 0.35 D-GN | 663 | Hazard Switch Left Turn Signal |
| E9 | 0.35 TN | 664 | Hazard Switch Turn Right Signal |
| E10 | 0.5 GY | 6044 | 5-Volt Reference (JL4) |
| E11 | 0.35 L-BU | 1714 | Windshield Wiper Switch Low Signal |
| E12 | 0.35 L-GN | 1715 | Windshield Wiper Switch High Signal |
| E13 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |

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X200 Steering Column Harness to Instrument Panel Harness, cont'd.

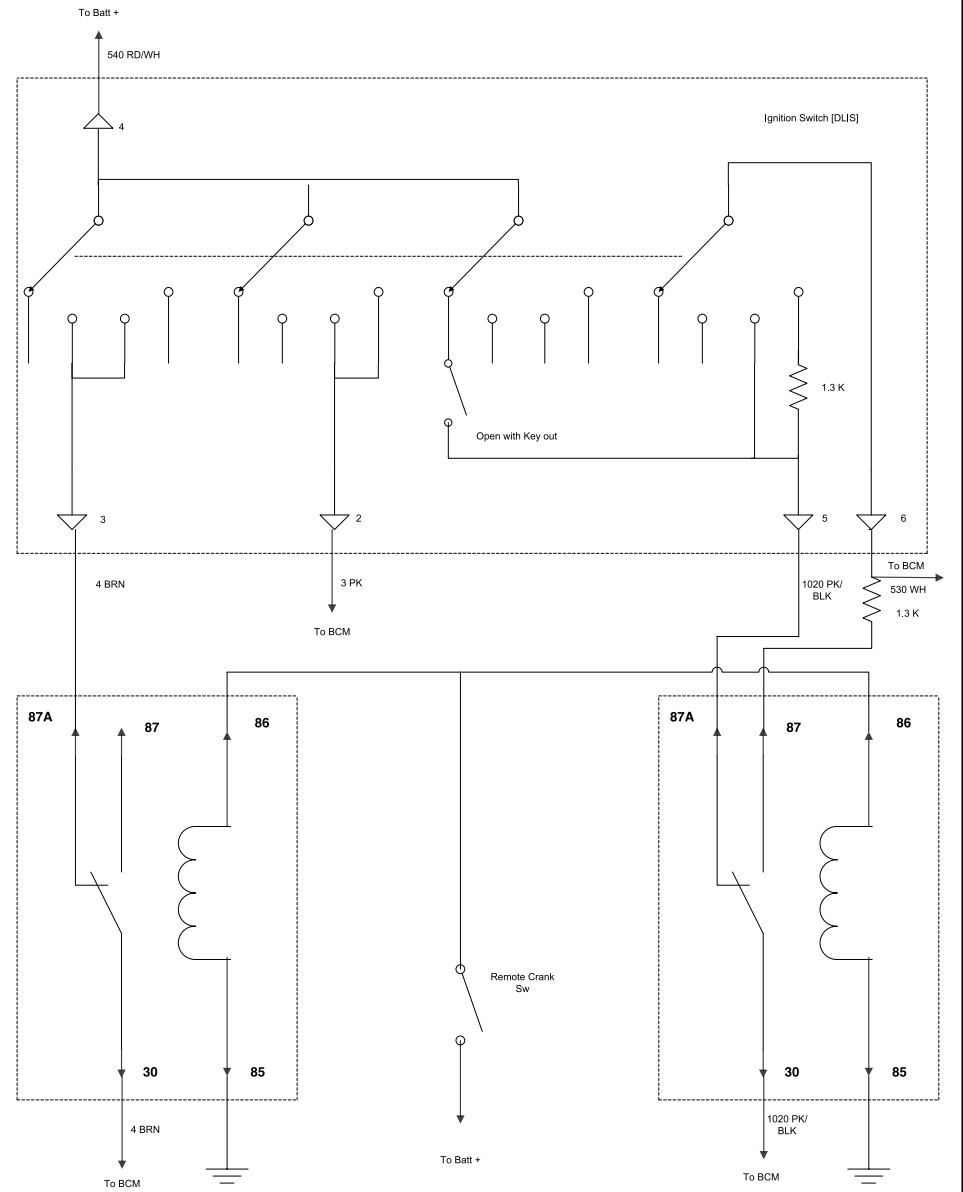
Harness: Steering Column, *cont'd.*

| Pin | Wire | Circuit | Function |
|-----|-----------|---------|-------------------------------------|
| E9 | 0.35 TN | 664 | Hazard Switch Turn Right Signal |
| E10 | 0.35 GY | 6044 | 5-Volt Reference (JL4) |
| E11 | 0.35 L-BU | 1714 | Windshield Wiper Switch Low Signal |
| E12 | 0.35 L-GN | 1715 | Windshield Wiper Switch High Signal |
| E13 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |

Remote Start Stop

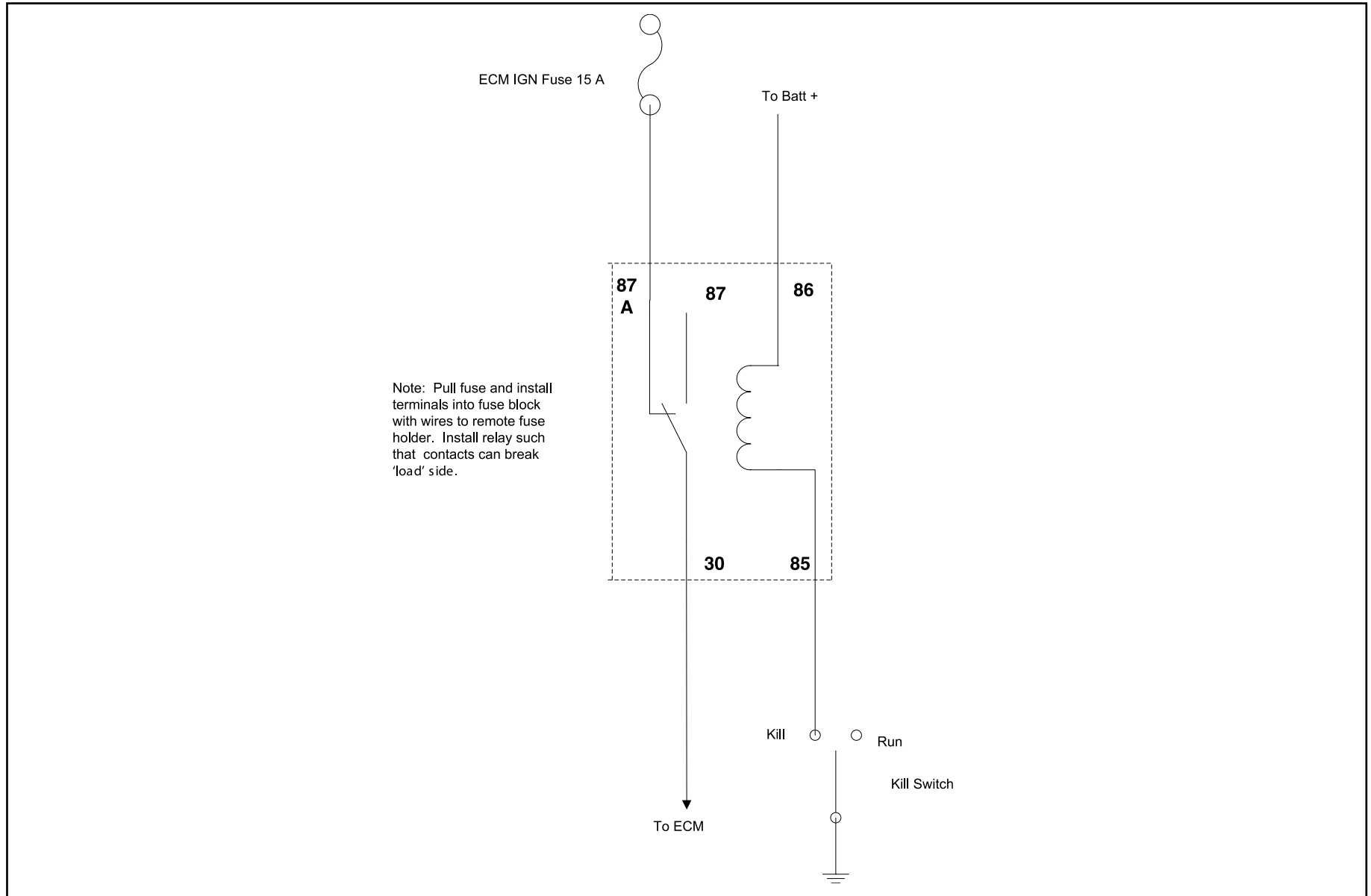
There is no OEM provision to remotely start and stop this vehicle. The best work around solution is to implement the wiring called out in the drawings GM Truck – CK GH Remote Crank and GM Trucks – CK GH – Engine Kill Sw. This method requires the key to be left in the ignition in the RUN position. If desired an interlock can be installed to immobilize the vehicle while in the remote modes. The schematic for this is in the Immobilizer quick reference.

NOTE: Wire splice for the brown wire must be done close to the DLIS so that both the BCM and TDM circuits are switched.



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Remote Start Stop, cont'd.



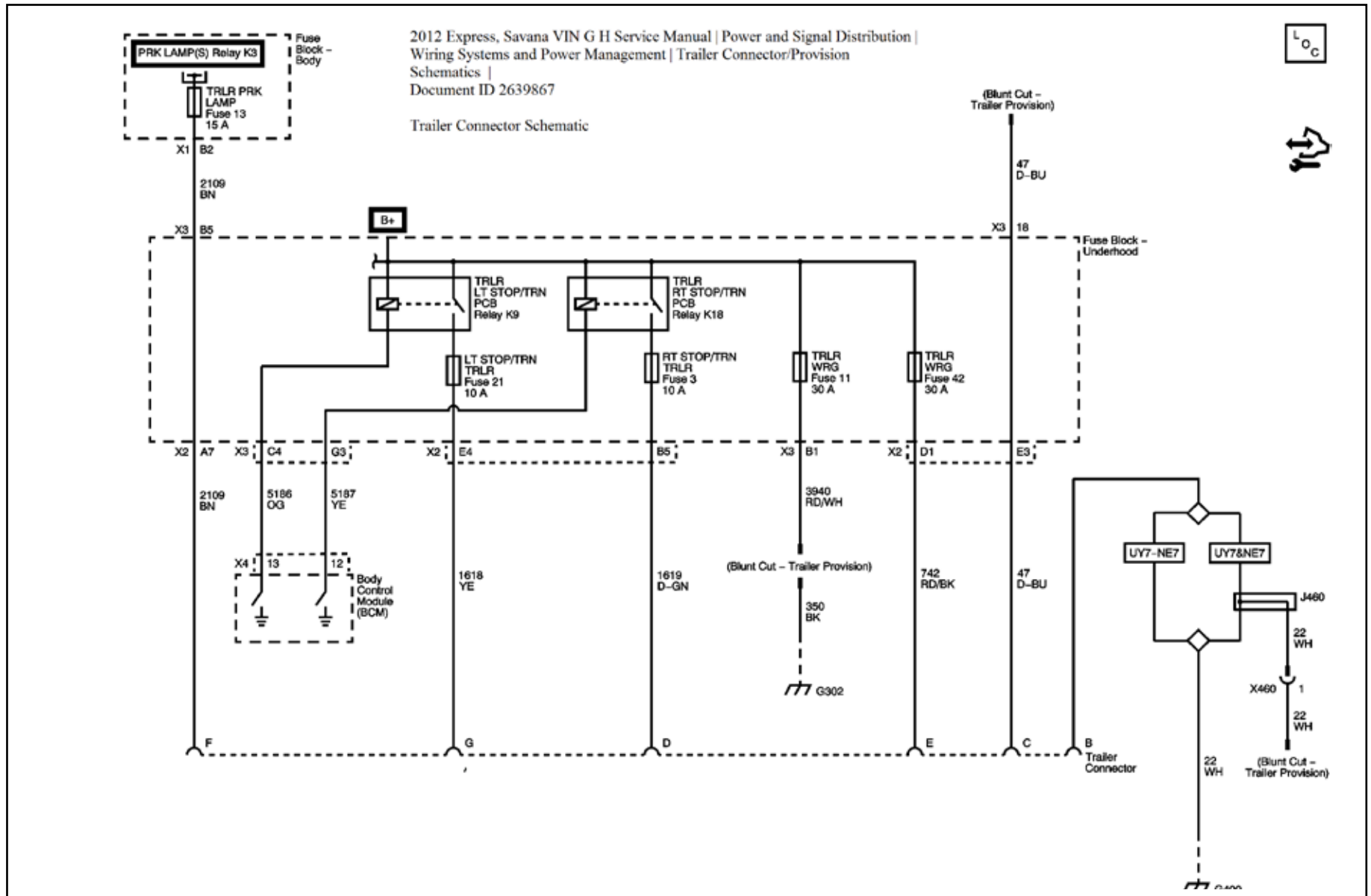
Trailer Wiring

If your vehicle does not have the trailer wiring provisions none of the relays and in cab wires will be present. The lamp driver circuits coming out of the Body Control Module BCM are not robust enough to handle the current requirements for a trailer plug. You will need to obtain control signals to operate power relays for each lighting function on your trailer plug. The coils of the power relays will be connected to the subject lamp circuit and ground such that the lamp signal will close the relay and allow the contacts to switch fused battery power to the appropriate trailer connector pin. Automotive rated relays must be used with noise suppression across the coils so noise spikes are not fed back into the OEM system. The rear lighting connector X405 contains all the lighting signals that will be required and the relay grounds may be connected to the cavity G black 150 wire. Your trailer plug ground must go to an appropriate body ground stud and may not be connected to the X405 ground.

If you are adding an aftermarket trailer brake controller to your vehicle you can use the CHMSL signal in X405-C [light blue 1320 wire] as your control signal for brake switch input to the controller. You will need to provide a power feed for the controller and if an ignition control input is required you can get that signal from any of the RUN/Crank fuses [see run/crank schematic] in the underhood fuse relay center.

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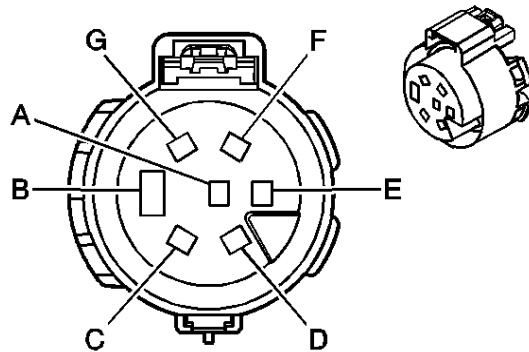
Trailer Wiring, cont'd.



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Trailer Wiring, cont'd.

Connector Part Information



Harness Type: Chassis

OEM Connector: 15354653

Service Connector: 15306164

Description: 7-Way F Metri-Pack 280, Sealed (BK)

Terminal Part Information

Pins: A, C-G

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 12110845/4

Core/Insulation Crimp: Pins: A, D, F, G - Not Available

Core/Insulation Crimp: Pins: C, E - F/5

Pin B

Terminated Lead: Service by Connector Assembly - 15354653

Release Tool: Not Available

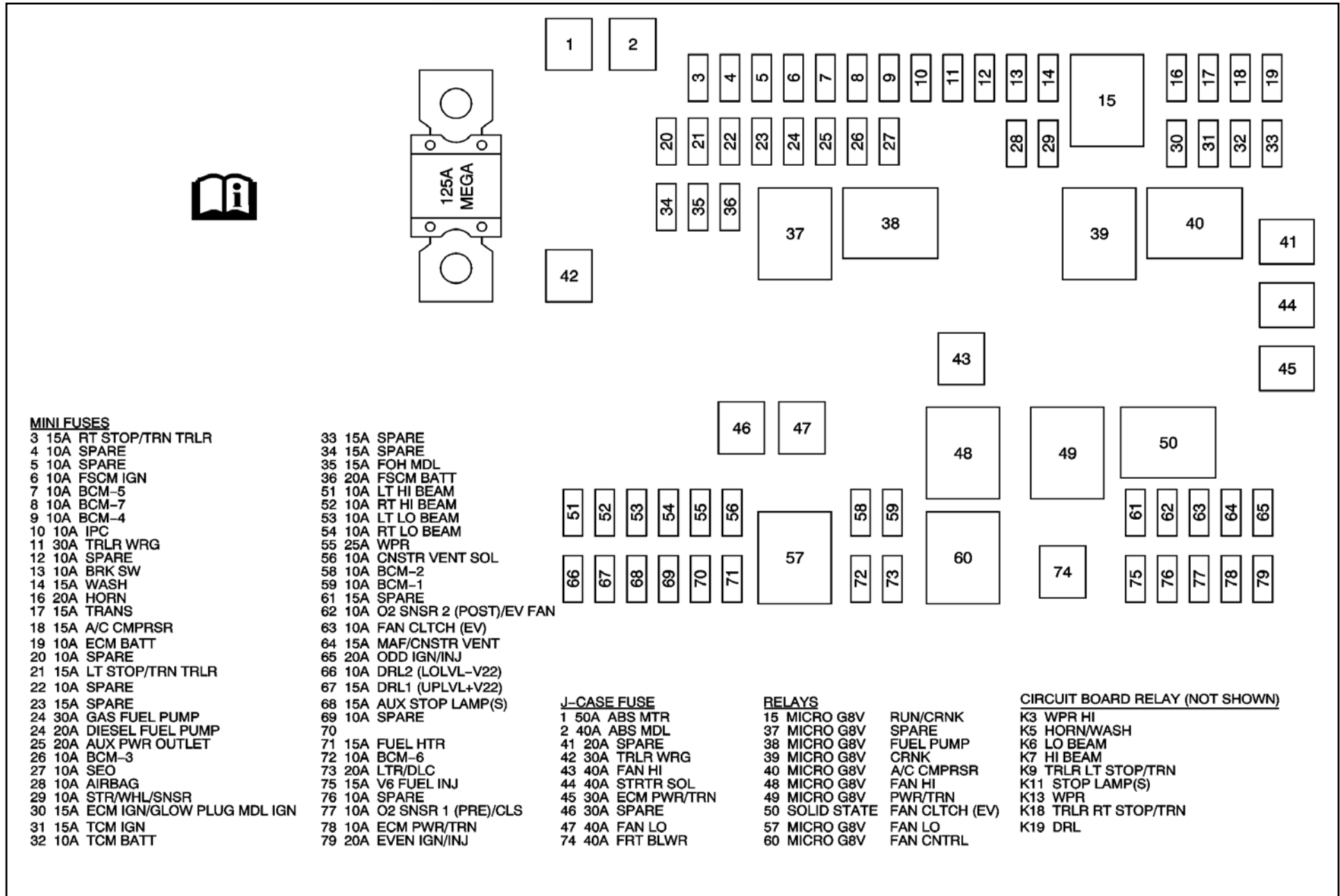
Diagnostic Test Probe: Not Available

Terminal/Tray: Not Available

Core/Insulation Crimp: Not Available

| Pin | Wire | Circuit | Function |
|-----|---------|---------|---|
| A | 1 L-GN | 1624 | Trailer Backup Lamps Control |
| B | 8 WH | 22 | Ground |
| C | 3 D-BU | 47 | Trailer Auxiliary Control |
| D | 1 D-GN | 1619 | Trailer Right Rear Turn/Stop Lamp Control |
| E | 3 RD/BK | 742 | Battery Positive Voltage |
| F | 1 BN | 2109 | Trailer Park Lamps Control |
| G | 1 YE | 1618 | Trailer Left Rear Turn/Stop Lamp Control |

Fuse Block - Underhood Label



Fuse Block Underhood Label Usage

| No. | Device | Rating | Description |
|-----|-----------------------|--------|---|
| 1 | ABS MTR Fuse | 50A | Electronic Brake Control Module (EBCM) |
| 2 | ABS MDL Fuse | 40A | Electronic Brake Control Module (EBCM) |
| 3 | RT STOP/TRN TRLR Fuse | 15A | Trailer Connector |
| 4 | SPARE Fuse | 10A | Not Used |
| 5 | SPARE Fuse | 10A | Not Used |
| 6 | FCSM IGN Fuse | 10A | Fuel Pump Flow Control Module (LMF) |
| 7 | BCM-5 Fuse | 10A | Body Control Module |
| 8 | BCM-7 Fuse | 10A | Body Control Module |
| 9 | BCM-4 Fuse | 10A | Body Control Module |
| 10 | IPC Fuse | 10A | Instrument Panel Cluster (IPC) |
| 11 | TRLR WRG Fuse | 30A | Blunt Cut (UY7) |
| 12 | SPARE Fuse | 10A | Not Used |
| 13 | BRK SW Fuse | 10A | Stop Lamp Switch |
| 14 | WASH Fuse | 15A | Windshield Washer Fluid Pump |
| 15 | RUN/CRNK Relay | -- | AIRBAG, BRK SW, ECM IGN/GLOW PLUG MDL IGN, FCSM IGN (LMF), IPC, STR/WHL/SNSR (JL4), TCM IGN and TRANS Fuses |
| 16 | HORN Fuse | 20A | Horn Assembly |
| 17 | TRANS Fuse | 15A | Automatic Transmission |
| 18 | A/C CMPRSR Fuse | 15A | A/C Compressor Clutch (C60) |
| 19 | ECM BATT Fuse | 10A | Engine Control Module (ECM) (L20, LMF or L96) |
| 20 | SPARE Fuse | 10A | Not Used |
| 21 | LT STOP/TRN TRLR Fuse | 15A | Trailer Connector |
| 22 | SPARE Fuse | 10A | Not Used |

| 23 | SPARE Fuse | 15A | Not Used |
|-----|--------------------------------|--------|--|
| No. | Device | Rating | Description |
| 24 | FUEL PUMP Fuse | 30A | Fuel Pump and Sender Assembly (L20, L96 or LU3) |
| | | 20A | Fuel Pump (LGH) |
| 25 | AUX PWR OUTLET Fuse | 20A | Accessory Power Outlet - Center Console 2 |
| 26 | BCM-3 Fuse | 10A | Body Control Module |
| 27 | SEO Fuse | 10A | Instrument Panel Cluster (IPC) (8S8) |
| 28 | AIRBAG Fuse | 10A | Inflatable Restraint I/P Module Disable Switch (C99) or Inflatable Restraint I/P Module Indicator (without C99) and Inflatable Restraint Sensing and Diagnostic Module (SDM) |
| 29 | STR/WHL/SNSR Fuse | 10A | Steering Wheel Speed/Position Sensor (JL4) |
| 30 | ECM IGN/GLOW PLUG MDL IGN Fuse | 15A | Engine Control Module (ECM) (LU3, L20, LMF or L96) or Glow Plug Control Module (GPCM) (LMM or LGH) |
| 31 | TCM IGN Fuse | 15A | Transmission Control Module (TCM) |
| 32 | TCM BATT Fuse | 10A | Control Solenoid Valve Assembly (MYD) or Transmission Control Module (TCM) (M30) |
| 33 | SPARE Fuse | 15A | Not Used |
| 34 | SPARE Fuse | 15A | Not Used |
| 35 | FOH MDL Fuse | 15A | Coolant Heater (LMM with K08) |
| 36 | FCSM BATT Fuse | 20A | Fuel Pump Flow Control Module (LMF) |
| 37 | SPARE Relay | -- | Not Used |
| 38 | FUEL PUMP Relay | -- | FUEL PUMP Fuse (except LMF) |
| 39 | CRNK Relay | -- | STRTR SOL Fuse |

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Fuse Block Underhood Label Usage (cont d)

| | | | |
|------------|----------------------|---------------|---|
| 40 | A/C CMPRSR Relay | -- | A/C CMPRSR Fuse |
| 41 | SPARE Fuse | 20A | Not Used |
| No. | Device | Rating | Description |
| 42 | TRLR WRG Fuse | 30A | Trailer Connector (UY7) |
| 43 | FAN HI Fuse | 40A | Not Used |
| 44 | STRTR SOL Fuse | 40A | Starter Motor |
| 45 | ECM PWR/TRN Fuse | 30A | Engine Control Module (ECM) (LGH) |
| 46 | SPARE Fuse | 30A | Not Used |
| 47 | FAN LO Fuse | 40A | Not Used |
| 48 | FAN HI Relay | -- | Not Used |
| 49 | PWR/TRN Relay | -- | ECM PWR/TRN, EVEN IGN/INJ (L20, L96 or LMF), FAN CLTCH (EV) (LGH), FUEL HTR (LGH), MAF/CNSTR VENT, O2 SNSR 1 (PRE)/CLS (L20, L96 or LMF), O2 SNSR 2 (POST) (L20, L96 or LMF), ODD IGN/INJ (L20, L96 or LMF) and V6 FUEL INJ (LU3) Fuses |
| 50 | FAN CLTCH (EV) Relay | -- | Engine Cooling Fan (LGH) |
| 51 | LT HI BEAM Fuse | 10A | Headlamp - Left High Beam (Composite) or Headlamp - Left (Sealed) |
| 52 | RT HI BEAM Fuse | 10A | Headlamp - Right High Beam (Composite) or Headlamp - Right (Sealed) |
| 53 | LT LO BEAM Fuse | 10A | Headlamp - Left Low Beam (Composite) or Headlamp - Left (Sealed) |
| 54 | RT LO BEAM Fuse | 10A | Headlamp - Right Low Beam (Composite) or Headlamp - Right (Sealed) |
| 55 | WPR Fuse | 25A | WPR PCB Relay |

| | | | |
|------------|------------------------------|---------------|--|
| 56 | CNSTR VENT SOL Fuse | 10A | Evaporative Emission (EVAP) Canister Vent Solenoid Valve (L20, L96, LMF or LU3) |
| 57 | FAN LO Relay | -- | Not Used |
| 58 | BCM-2 Fuse | 10A | Body Control Module |
| 59 | BCM-1 Fuse | 10A | Body Control Module |
| No. | Device | Rating | Description |
| 60 | FAN CNTRL Relay | -- | Not Used |
| 61 | SPARE Fuse | 15A | Not Used |
| 62 | O2 SNSR 2 (POST)/EV FAN Fuse | 10A | HO2S Bank 1 Sensor 2 (L20, L96, LMF or LU3) and HO2S Bank 2 Sensor 2 (L20, L96, LMF or LU3) |
| 63 | FAN CLTCH (EV) Fuse | 10A | FAN CLTCH (EV) Relay (LGH) |
| 64 | MAF/CNSTR VENT Fuse | 15A | Evaporative Emission (EVAP) Canister Purge Solenoid Valve (L20, L96, LMF or LU3) and Mass Air Flow (MAF)/Intake Air Temperature (IAT) Sensor |
| 65 | ODD IGN/INJ Fuse | 20A | Ignition Control Module (LU3), Odd Fuel Injectors (L20, L96 or LMF) and Odd Ignition Coils (L20, L96 or LMF) |
| 66 | DRL2 (LOLVL-V22) Fuse | 10A | Headlamp - Left (Sealed) and LT LO BEAM Fuse |
| 67 | DRL1 (UPLVL+V22) Fuse | 15A | Headlamp - Left Low Beam (Composite) and LT LO BEAM Fuse |
| 68 | AUX STOP LAMP(S) Fuse | 15A | X405 (Cutaway) |
| 69 | SPARE Fuse | 10A | Not Used |
| 70 | -- | -- | Not Used |
| 71 | FUEL HTR Fuse | 15A | Fuel Heater (LGH) |
| 72 | BCM-6 Fuse | 10A | Body Control Module |

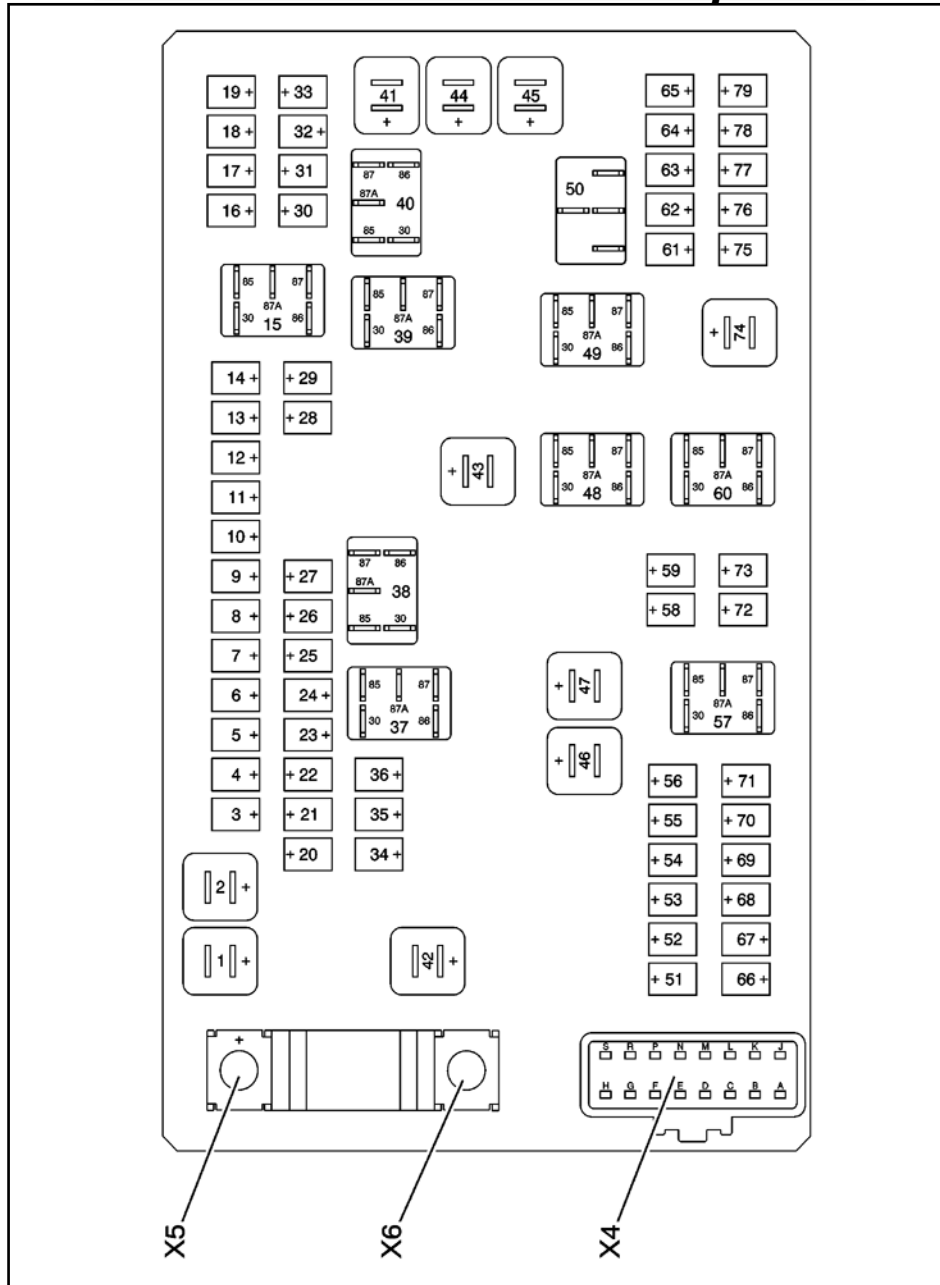
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Fuse Block Underhood Label Usage (cont d)

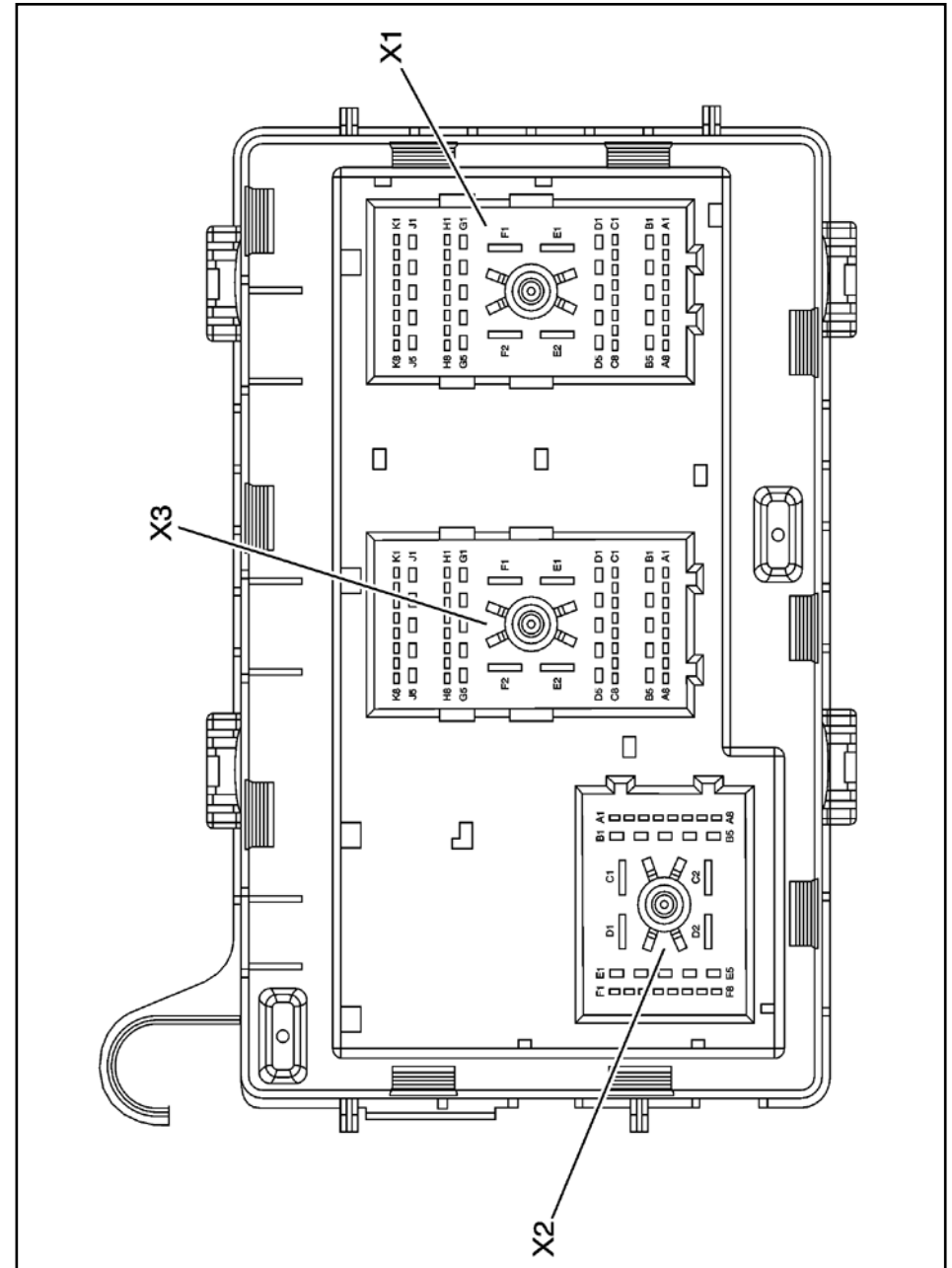
| | | | |
|------------|--------------------------|---------------|--|
| 73 | LTR/DLC Fuse | 20A | Accessory Power Outlet - Center Console 1 (without DT4) or Cigar Lighter (DT4) and Data Link Connector (DLC) |
| 74 | FRT BLWR Fuse | 40A | Blower Motor Resistor |
| 75 | V6 FUEL INJ Fuse | 15A | Fuel Injectors (LU3) |
| No. | Device | Rating | Description |
| 76 | SPARE Fuse | 10A | Not Used |
| 77 | O2 SNSR 1 (PRE)/CLS Fuse | 10A | HO2S Bank 1 Sensor 1 (L20, L96, LMF or LU3) and HO2S Bank 2 Sensor 1 (L20, L96, LMF or LU3) |
| 78 | ECM PWR/TRN Fuse | 10A | Engine Control Module (ECM) |
| 79 | EVEN IGN/INJ Fuse | 20A | Even Fuel Injector (L20, L96 or LMF) and Even Ignition Coils (L20, L96 or LMF) |

| | | | |
|--|----------------------------|---------------|---------------------------------|
| Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block. | | | |
| K3 | WPR HI PCB Relay | -- | Windshield Wiper Motor |
| K5 | HORN/WASH PCB Relay | -- | HORN and WASH Fuses |
| K6 | LO BEAM PCB Relay | -- | LT LO BEAM and RT LO BEAM Fuses |
| No. | Device | Rating | Description |
| K7 | HI BEAM PCB Relay | -- | LT HI BEAM and RT HI BEAM Fuses |
| K9 | TRLR LT STOP/TRN PCB Relay | -- | LT STOP/TRN TRLR Fuse (UY7) |
| K11 | STOP LAMP(S) PCB Relay | -- | AUX STOP LAMP(S) Fuse |

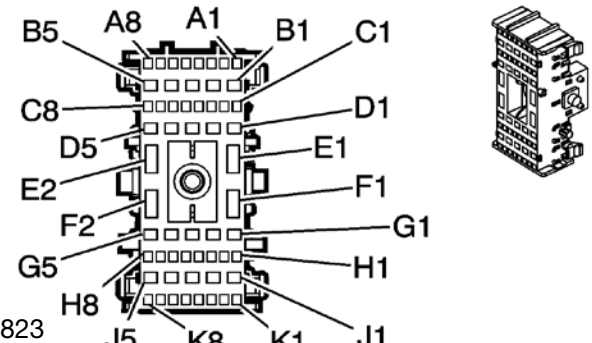
Fuse Block - Underhood Top View



Fuse Block - Underhood Bottom View



Fuse Block - Underhood X1



Connector Part Information
 Harness Type: Engine
 OEM Connector: 15477823
 Service Connector: 13574911
 Description: 56-Way F GT 150 280 Metri-Pack Series, (L-GY)

Terminal Part Information
 Pins: A1-A2, C2, C6-C8, H2, K1-K2, K4, K8
 Terminated Lead: 13575735
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-2A (GY)
 Terminal/Tray: 12191812/19
 Core/Insulation Crimp: Pins: A1 (Gas), A2, C2, C6, C8, H1-H2, K2, K8 - E/C
 Core/Insulation Crimp: Pins: A1 (Diesel), C7, K1, K4 - C/A

Pins: B2, B4-B5, D2-D3, G1-G5, J1-J4
 Terminated Lead: 13575753
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-4A (PU)
 Terminal/Tray: 15304711/8
 Core/Insulation Crimp: Pins: B4, D2, G1-G3, G4 (Gas), J1-J3 - 2/A
 Core/Insulation Crimp: Pins: B2, B5, D3, G4 (Diesel), G5, J4 - E/A

Pins: E1, F1, F2
 Terminated Lead: 13575718
 Release Tool: J-38125-558
 Diagnostic Test Probe: J-35616-44 (YE)
 Terminal/Tray: 12110127/19
 Core/Insulation Crimp: F/G

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|---|
| A1 | 0.5 RD/WH | 440 | Battery Positive Voltage (LU3, L20, LMF or L96) |
| | 1 RD/WH | 440 | Battery Positive Voltage (LMM or LGH) |
| A2 | 0.35 RD/WH | 1840 | Battery Positive Voltage |
| A3-A8 | -- | -- | Not Used |
| B1 | -- | -- | Not Used |
| B2 | 0.5 D-GN | 59 | A/C Compressor Clutch Supply Voltage (C60) |
| B3 | -- | -- | Not Used |
| B4 | 0.8 D-GN | 29 | Horn Control |
| B5 | 0.5 PK | 439 | Ignition Voltage |
| | 0.5 PK | 439 | Ignition Voltage (LGH) |
| C1 | -- | -- | Not Used |
| C2 | 0.35 D-GN/WH | 459 | A/C Compressor Clutch Relay Control (Gas with C60) |
| | 0.5 D-GN/WH | 459 | A/C Compressor Clutch Relay Control (Diesel with C60) |
| C3-C5 | -- | -- | Not Used |
| C6 | 0.35 YE/BK | 625 | Starter Enable Relay Control (LU3, L20, LMF or L96) |
| | 0.5 YE/BK | 625 | Starter Enable Relay Control (LGH) |
| C7 | 1 BK | 1250 | Ground |
| C8 | 0.35 D-GN/WH | 465 | Fuel Pump Relay Control - Primary (L20, LMF or L96) |
| | 0.5 D-GN/WH | 465 | Fuel Pump Relay Control - Primary (LGH) |
| D1 | -- | -- | Not Used |
| D2 | 0.8 PK | 3039 | Ignition Voltage |
| D3 | 0.5 PK | 2139 | Ignition Voltage |

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Fuse Block Underhood X1 (cont d)

| Pin | Wire | Circuit | Function |
|-------|---------|---------|---|
| D4-D5 | -- | -- | Not Used |
| E1 | 5 PU | 6 | Starter Solenoid Crank Voltage |
| E2 | -- | -- | Not Used |
| F1 | 5 PK | 1439 | Ignition Voltage (LMM or LGH) |
| F2 | 5 RD/BK | 542 | Battery Positive Voltage |
| G1 | 1 PK | 1039 | Ignition Voltage (L20, LMF or L96) |
| | 0.8 PK | 1039 | Ignition Voltage (LU3) |
| G2 | 0.8 PK | 1039 | Ignition Voltage (L20, LMF or L96) |
| | 0.8 PK | 1039 | Ignition Voltage (L20, LMF or L96) |
| G3 | 0.8 PK | 1039 | Ignition Voltage (L20, LMF or L96) |
| | 0.8 PK | 1039 | Ignition Voltage (L20, LMF or L96) |
| G4 | 0.5 PK | 1939 | Ignition Voltage |
| G5 | 0.5 PK | 1939 | Ignition Voltage (LU3, L20, LMF or L96) |
| H1 | -- | -- | Not Used |
| H2 | 0.5 PK | 1339 | Ignition Voltage |
| H3-H8 | -- | -- | Not Used |

| Pin | Wire | Circuit | Function |
|-------|---------|---------|---|
| J1 | 1 PK | 1239 | Ignition Voltage (L20, LMF or L96) |
| J2 | 0.8 PK | 1239 | Ignition Voltage (L20, LMF or L96) |
| | 0.8 PK | 1239 | Ignition Voltage (L20, LMF or L96) |
| J3 | 0.8 PK | 1239 | Ignition Voltage (L20, LMF or L96) |
| | 0.8 PK | 1239 | Ignition Voltage (L20, LMF or L96) |
| J4 | 0.5 PK | 1839 | Ignition Voltage (LU3) |
| J5 | -- | -- | Not Used |
| K1 | 0.8 PK | 539 | Ignition Voltage (LU3, L20, LMF or L96) |
| | 0.8 PK | 539 | Ignition Voltage (L20, LMF or L96) |
| | 1 PK/BK | 5293 | Powertrain Relay Control (LGH) |
| K2 | -- | -- | Not Used |
| K3 | -- | -- | Not Used |
| K4 | 0.8 PK | 1539 | Ignition Voltage (LU3, L20, LMF or L96) |
| | 0.8 PK | 1539 | Ignition Voltage (L20, LMF or L96) |
| | 0.5 PK | 939 | Powertrain Relay Control (LGH) |
| K5-K7 | -- | -- | Not Used |
| K8 | 0.5 YE | 5991 | Powertrain Relay Control |

Fuse Block - Underhood X2

Connector Part Information

Harness Type: Chassis
 OEM Connector: 13567518
 Service Connector: 19180280
 Description: 30-Way F GT 150/280
 Metri-Pack 800 Series (BK)

Terminal Part Information

Pins: A2-A4, A7, A8, F1, F3
 Terminated Lead: 13575790
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-2A (GY)
 Terminal/Tray: 15496302/5
 Core/Insulation Crimp: 2/A

Pins: B2, B5, E2, E4

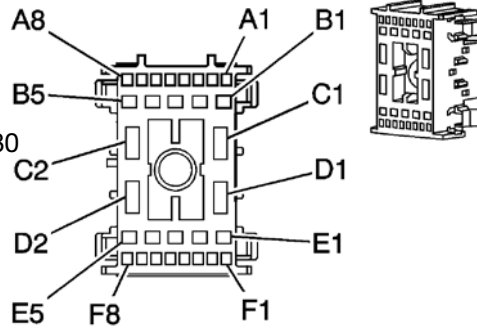
Terminated Lead: Service by Harness - See Part Catalog
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-4A (PU)
 Terminal/Tray: 13525970/4
 Core/Insulation Crimp: 2/A

Pins: B1, E3

Terminated Lead: Service by Harness - See Part Catalog
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-4A (PU)
 Terminal/Tray: 13525969/4
 Core/Insulation Crimp: F/D

Pins: C2, D1

Terminated Lead: 13575718
 Release Tool: J-38125-558
 Diagnostic Test Probe: J-35616-44 (YE)
 Terminal/Tray: 12110127/19
 Core/Insulation Crimp: F/G



Pin: D2

Terminated Lead: 13327105
 Release Tool: J-38125-558
 Diagnostic Test Probe: J-35616-44 (YE)
 Terminal/Tray: 12110127/19
 Core/Insulation Crimp: F/G

Pin: F2

Terminated Lead: 13575790
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-2A (GY)
 Terminal/Tray: 15496302/5
 Core/Insulation Crimp: E/A

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|---|
| A1 | -- | -- | Not Used |
| A2 | 1 YE | 618 | Left Rear Turn Signal Lamp Control (Cutaway) |
| A3 | 0.8 D-BU/WH | 149 | Courtesy Lamp Control (Cutaway) |
| A4 | 1 D-GN | 619 | Right Rear Turn Signal Lamp Control (Cutaway) |
| A5-A6 | -- | -- | Not Used |
| A7 | 1 BN | 2109 | Trailer Park Lamps Control (UY7) |
| A8 | 0.5 PK | 2739 | Ignition Voltage (LMF) |
| B1 | 0.8 GY | 120 | Fuel Pump Control (Diesel) |
| | 2 GY | 120 | Fuel Pump Control (LU3) |
| | 3 GY | 120 | Fuel Pump Control (L20 or L96) |
| B2 | 0.8 PK | 2239 | Ignition Voltage (Diesel) |
| B3 | -- | -- | Not Used |
| B4 | 2 RD/WH | 1740 | Battery Positive Voltage (Diesel with K08) |
| B5 | 1 D-GN | 1619 | Trailer Right Rear Turn/Stop Lamp Control (UY7) |
| C1 | -- | -- | Not Used |

(continued on next page)

Fuse Block - Underhood X2 (cont d)

| Pin | Wire | Circuit | Function |
|------------|-------------|----------------|--|
| C2 | 3 RD/WH | 1640 | Battery Positive Voltage |
| D1 | 3 RD/BK | 742 | Battery Positive Voltage (UY7) |
| D2 | 5 RD/BK | 442 | Battery Positive Voltage |
| E1 | -- | -- | Not Used |
| E2 | 1 L-BU | 1320 | CHMSL Control/Stop Lamp Control (Cutaway) |
| E3 | 3 D-BU | 47 | Trailer Auxiliary Control (UY7) |
| E4 | 1 YE | 1618 | Trailer Left Rear Turn/Stop Lamp Control (UY7) |

| Pin | Wire | Circuit | Function |
|------------|-------------|----------------|--|
| E5 | 2 RD/WH | 1940 | Battery Positive Voltage (LMF) |
| F1 | 1 L-GN | 1624 | Trailer Backup Lamps Control (Cutaway, 8S3 or UY7) |
| F2 | 0.5 RD/WH | 40 | Battery Positive Voltage (LU3, L20, LMF or L96) |
| F3 | 1 BN | 2109 | Trailer Park Lamps Control (Cutaway) |
| F4-F8 | -- | -- | Not Used |

Fuse Block - Underhood X3

Connector Part Information

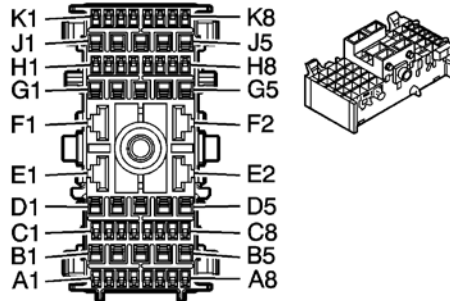
Harness Type: Instrument Panel
 OEM Connector: 15477822
 Service Connector: 19115189
 Description: 56-Way F GT 150 280
 Metri-Pack 800 Series (BK)

Terminal Part Information

Pins: A1-A5, A7, C1-C2, C4-C8, H2-H8, J1-J4, K8 - E/C
 Terminated Lead: 13575735
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-2A (GY)
 Terminal/Tray: 12191812/19
 Core/Insulation Crimp : Pins: A1-A2, A5, C1-C2, C4, H2, H4-H8, K8 - E/C
 Core/Insulation Crimp: Pins: A3-A4, A7, C5, C6-C8, H3, K3, K7 - C/A

 Pins: B2-B5, D1-D3, G1-G3, J1-J4
 Terminated Lead: 13575753
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-4A (PU)
 Terminal/Tray: 15304711/8
 Core/Insulation Crimp: Pins: B2-B3, D1-D2, G2-G3 - E/A
 Core/Insulation Crimp: Pins: B4-B5, D3, G1, J1-J4 - 2/A

 Pins: B1, D4, G4-G5
 Terminated Lead: 13575754
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-4A (PU)
 Terminal/Tray: 15304713/19
 Core/Insulation Crimp: Pins: B1, D4 - F/D
 Core/Insulation Crimp: Pins: G4-G5 - 4/4



| Pin | Wire | Circuit | Function |
|-----|------------|---------|--------------------------------|
| A1 | 0.35 PK | 1639 | Ignition Voltage |
| A2 | 0.35 RD/WH | 2840 | Battery Positive Voltage (8S8) |
| A3 | 0.8 RD/WH | 2240 | Battery Positive Voltage |

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|--|
| A4 | 0.8 RD/WH | 3040 | Battery Positive Voltage |
| A5 | 0.5 RD/WH | 2540 | Battery Positive Voltage |
| A6 | -- | -- | Not Used |
| A7 | 0.8 RD/WH | 2740 | Battery Positive Voltage |
| A8 | -- | -- | Not Used |
| B1 | 3 RD/WH | 3940 | Battery Positive Voltage (UY7) |
| B2 | 0.35 PK | 1139 | Ignition Voltage |
| B3 | 0.35 PK | 1139 | Ignition Voltage |
| B4 | 0.8 RD/WH | 1040 | Battery Positive Voltage |
| B5 | 1 BN | 2109 | Trailer Park Lamps Control (UY7) |
| C1 | 0.35 PK | 239 | Ignition Voltage |
| C2 | 0.5 PK | 2239 | Ignition Voltage (JL4) |
| C3 | -- | -- | Not Used |
| C4 | 0.35 OG | 5186 | Left Trailer Turn Signal Lamp (UY7) |
| C5 | 1 BN | 2109 | Trailer Park Lamps Control (Cut-away) |
| C6 | 1 D-GN | 619 | Right Rear Turn Signal Lamp Control (Cutaway) |
| C7 | 0.8 D-BU/WH | 149 | Courtesy Lamp Control (Cutaway) |
| C8 | 1 YE | 618 | Left Rear Turn Signal Lamp Control (Cutaway) |
| D1 | 0.5 OG | 228 | Windshield Washer Pump Control |
| D2 | 0.35 YE | 5199 | Run/Crank Relay Coil Control |
| D3 | 1 L-GN | 1624 | Trailer Backup Lamps Control (Cutaway, UF7 or 8S8) |
| D4 | 3 D-BU | 47 | Trailer Auxiliary Control (UY7) |
| D5 | -- | -- | Not Used |
| E1-E2 | -- | -- | Not Used |
| F1-F2 | -- | -- | Not Used |

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Fuse Block - Underhood X3 (cont d)

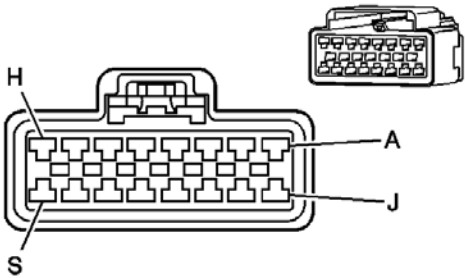
| | | | |
|------------|-------------|----------------|--|
| G1 | 0.8 RD/WH | 640 | Battery Positive Voltage |
| G2 | 0.35 OG | 2268 | Windshield Washer Relay Control |
| Pin | Wire | Circuit | Function |
| G3 | 0.35 YE | 5187 | Right Trailer Turn Signal Lamp (UY7) |
| G4 | 2 PU | 92 | Windshield Wiper Motor High Speed |
| G5 | 2 D-GN | 95 | Windshield Washer Switch Signal |
| H1 | -- | -- | Not Used |
| H2 | 0.5 RD/WH | 3840 | Battery Positive Voltage (except LU3 or LMF) |
| | 1 RD/WH | 3840 | Battery Positive Voltage (LU3 or LMF) |
| H3 | 0.35 TN | 28 | Horn Relay Control |
| | 0.35 TN | 28 | Horn Relay Control |
| H4 | 0.35 PK/WH | 1970 | Headlamp Low Beam Relay Control |
| H5 | 0.35 PU | 544 | Headlamp Low Beam Control |

| | | | |
|------------|-------------|----------------|---|
| H6 | 0.35 GY | 91 | Windshield Wiper Switch Signal 2 |
| H7 | 0.5 WH | 5065 | Stop Lamps Control |
| Pin | Wire | Circuit | Function |
| H8 | 0.35 TN | 860 | Front Windshield Wiper Switch High Signal |
| J1 | 0.8 RD/WH | 640 | Battery Positive Voltage |
| J2 | 0.8 RD/WH | 2940 | Battery Positive Voltage |
| J3 | 0.8 BN | 2309 | Front Park Lamps Control |
| J4 | 0.8 D-BU/WH | 1315 | Right Front Turn Signal Lamp Control |
| J5 | -- | -- | Not Used |
| K1-K2 | -- | -- | Not Used |
| K3 | 0.8 RD/WH | 2140 | Battery Positive Voltage |
| K4-K6 | -- | -- | Not Used |
| K7 | 0.8 L-BU/WH | 1314 | Left Front Turn Signal Lamp Control |
| K8 | 0.35 TN/WH | 1969 | Headlamp High Beam Relay Control |

Fuse Block - Underhood X4

Connector Part Information
 Harness Type: Forward Lamp
 OEM Connector: 15326952
 Service Connector: 15306426
 Description: 16-Way F GT
 280 Series (BK)

Terminal Part Information
 Terminated Lead: 13575753
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-4A (PU)
 Terminal/Tray: 15304711/8
 Core/Insulation Crimp: Pins: B-C, F, K-L, N, P - E/A
 Core/Insulation Crimp: Pins: D-E, M - 2/A



| Pin | Wire | Circuit | Function |
|-----|-------------|---------|---|
| L | 0.35 YE | 712 | Left Headlamp Low Beam Control (except V22 without T79) |
| M | 0.8 L-GN/BK | 311 | Right Headlamp High Beam Control |
| N | 0.5 D-GN/WH | 711 | Left Headlamp High Beam Control |
| P | 0.35 TN/WH | 312 | Right Headlamp Low Beam Control (except V22) |
| | 0.5 TN/WH | 312 | Right Headlamp Low Beam Control (V22) |
| R-S | -- | -- | Not Used |

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|--|
| A | -- | -- | Not Used |
| B | 0.5 BN | 2309 | Front Park Lamps Control |
| C | 0.5 BN | 2309 | Front Park Lamps Control |
| D | 0.8 D-BU/WH | 1315 | Right Front Turn Signal Lamp Control |
| E | 0.8 L-BU/WH | 1314 | Left Front Turn Signal Lamp Control |
| F | 0.5 YE | 712 | Left Headlamp Low Beam Control (V22) |
| | 0.5 YE | 712 | Left Headlamp Low Beam Control (V22) |
| | 0.35 YE | 712 | Left Headlamp Low Beam Control (except V22) |
| | 0.35 YE | 712 | Left Headlamp Low Beam Control (except V22) |
| G-J | -- | -- | Not Used |
| K | 0.5 YE | 712 | Left Headlamp Low Beam Control (V22 without T79) |

Fuse Block - Underhood X5

Terminal Part Information

Harness Type: Battery Positive (Gas)

Harness Type: Auxiliary Battery Positive (Diesel)

Terminal: 15441775

Core/Insulation Crimp: Not Available

Description: Ring Terminal

| Pin | Wire | Circuit | Function |
|------------|-------------|----------------|--------------------------|
| S | 19 RD | 1 | Battery Positive Voltage |

Fuse Block - Underhood X6

Terminal Part Information

Harness Type: Instrument Panel

Harness Type: LPG (KO7)

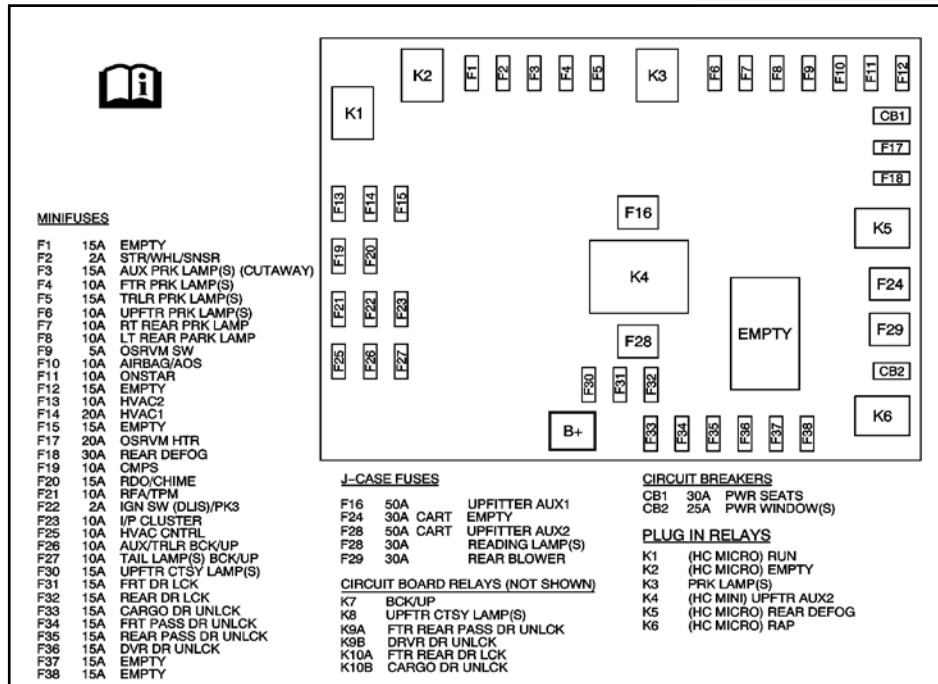
Terminal: Service by Harness

Core/Insulation Crimp: Not Available

Description: Ring Terminal

| Pin | Wire | Circuit | Function |
|------------|-------------|----------------|--------------------------------|
| S | 19 RD/BK | 842 | Battery Positive Voltage |
| S | 3 OG | - | Battery Positive Voltage (KO7) |

Fuse Block - Body Label



| No. | Device | Rating | Description |
|-----|---------------------------------|--------|---|
| F1 | EMPTY | -- | Not Used |
| F2 | STR/WHL/SNSR Fuse | 2A | Inflatable Restraint Steering Wheel Module Coil (K34 or W1Y) |
| F3 | AUX PRK LAMP(S) (CUT-AWAY) Fuse | 15A | X405 (Cutaway) |
| F4 | FRT PRK LAMP(S) Fuse | 10A | Inflatable Restraint I/P Module Disable Switch (C99), Marker Lamp - Left Front, Marker Lamp - Right Front, Park/Turn Signal Lamp - Left and Park/Turn Signal Lamp - Right |
| F5 | TRLR PRK LAMP(S) Fuse | 15A | Trailer Connector (UY7) |
| F6 | UPFTR PRK LAMP(S) Fuse | 10A | X320 (YF2 or YF7) |
| F7 | RT REAR PRK LAMP Fuse | 10A | Tail/Stop and Turn Signal Lamp - Right (Cargo or Passenger) |

| No. | Device | Rating | Description |
|-----|------------------------|--------|---|
| F8 | LT REAR PARK LAMP Fuse | 10A | License Lamp (Cargo or Passenger) and Tail/Stop and Turn Signal Lamp - Left (Cargo or Passenger) |
| F9 | OSRVM SW Fuse | 5A | Outside Rearview Mirror Switch (DE5 or DE7) |
| F10 | AIRBAG/AOS Fuse | 10A | Inflatable Restraint Front Passenger Presence System (PPS) Sensor (Light Duty without YF7), Inflatable Restraint Sensing and Diagnostic Module(SDM) and Inflatable Restraint Vehicle Rollover Sensor (ASF) |
| F11 | ONSTAR Fuse | 10A | Vehicle Communication Interface Module (VCIM) (UE1) |
| F12 | EMPTY | -- | Not Used |
| F13 | HVAC2 Fuse | 10A | Air Temperature Actuator, Air Temperature Actuator - Auxiliary (C69), Blower Motor High Speed Relay - Auxiliary (C36 without C69), Blower Motor Low Speed Relay - Auxiliary (C36 without C69), Blower Motor Medium Speed Relay - Auxiliary (C36 without C69), HVAC Control Assembly (C49, DE5 or DE7), HVAC Control Assembly - Rear Auxiliary (C69 with Rear Auxiliary Controls), HVAC Control Module - Auxiliary and Mode Actuator - Auxiliary (C69) |
| F14 | HVAC1 Fuse | 20A | HVAC Control Assembly and Vacuum Pump (LGH) |
| F15 | EMPTY | -- | Not Used |
| F16 | UPFITTER AUX1 Fuse | 50A | Blunt Cut (YF1), X222 (YF2 or YF7) and X321 (YF2 or YF7) |
| F17 | OSRVM HTR Fuse | 20A | Outside Rearview Mirror - Driver (DE5 or DE7) and Outside Rearview Mirror - Passenger (DE5 or DE7) |
| F18 | REAR DEFOG Fuse | 30A | Rear Window Defogger Grid - Left (C49) and Rear Window Defogger Grid - Right (C49) |
| F19 | CMPS Fuse | 10A | Electronic Compass Module (U80) |
| F20 | RDO/CHIME Fuse | 15A | Chime Module (UL5), Digital Radio Receiver (U2K) and Radio (except UL5) |

Fuse Block - Body Label (cont d)

| No. | Device | Rating | Description |
|-----|--------------------------|--------|---|
| F21 | RFA/TPM Fuse | 10A | Remote Control Door Lock Receiver (RCDLR) (AU0 or UJ6) |
| F22 | IGN SW (DLIS)/PK3 Fuse | 2A | Ignition Switch and Theft Deterrent Module (TDM) |
| F23 | I/P CLUSTER Fuse | 10A | Instrument Panel Cluster (IPC) (except 8S8) |
| F24 | EMPTY | -- | Not Used |
| F25 | HVAC CNTRL Fuse | 10A | HVAC Control Assembly (C49, DE5 or DE7) |
| F26 | AUX/TRLR BCK/UP Fuse | 10A | Backup Alarm (8S3), Trailer Connector (UY7) and X405 (Cutaway) |
| F27 | TAIL LAMP(S) BCK/UP Fuse | 10A | Backup Lamp - Left (Cargo or Passenger) and Backup Lamp - Right (Cargo or Passenger) |
| F28 | UPFITTER AUX2 Fuse | 50A | Blunt Cut (YF1), X321 (YF2 or YF7) and X222 (YF2 or YF7) |
| | READING LAMP(S) Fuse | 30A | Blunt Cut - Provisional Wiring (5B3) |
| F29 | REAR BLWR Fuse | 30A | Blower Motor High Speed Relay - Auxiliary (C36 without C69), Blower Motor Low Speed Relay - Auxiliary (C36 without C69) and Blower Motor Medium Speed Relay - Auxiliary (C36 without C69) |
| F30 | UPFTR CTSY LAMP(S) Fuse | 15A | Body Control Module (except YF7), Dome Lamp (Cargo), Dome/Reading Lamp - Front, Dome/Reading Lamp - Middle (Passenger), Dome/Reading Lamp - Rear (Passenger), X320 (YF7) and X405 (Cutaway) |
| F31 | FRT DR LCK Fuse | 15A | Door Latch - Driver (AU3) and Door Latch - Passenger (AU3) |
| F32 | REAR DR LCK Fuse | 15A | Door Latch - Cargo (Cargo or Passenger), Door Contact Plate - Left Side (E26) and Door Contact Plate - Right Side (E24 or YA2) |

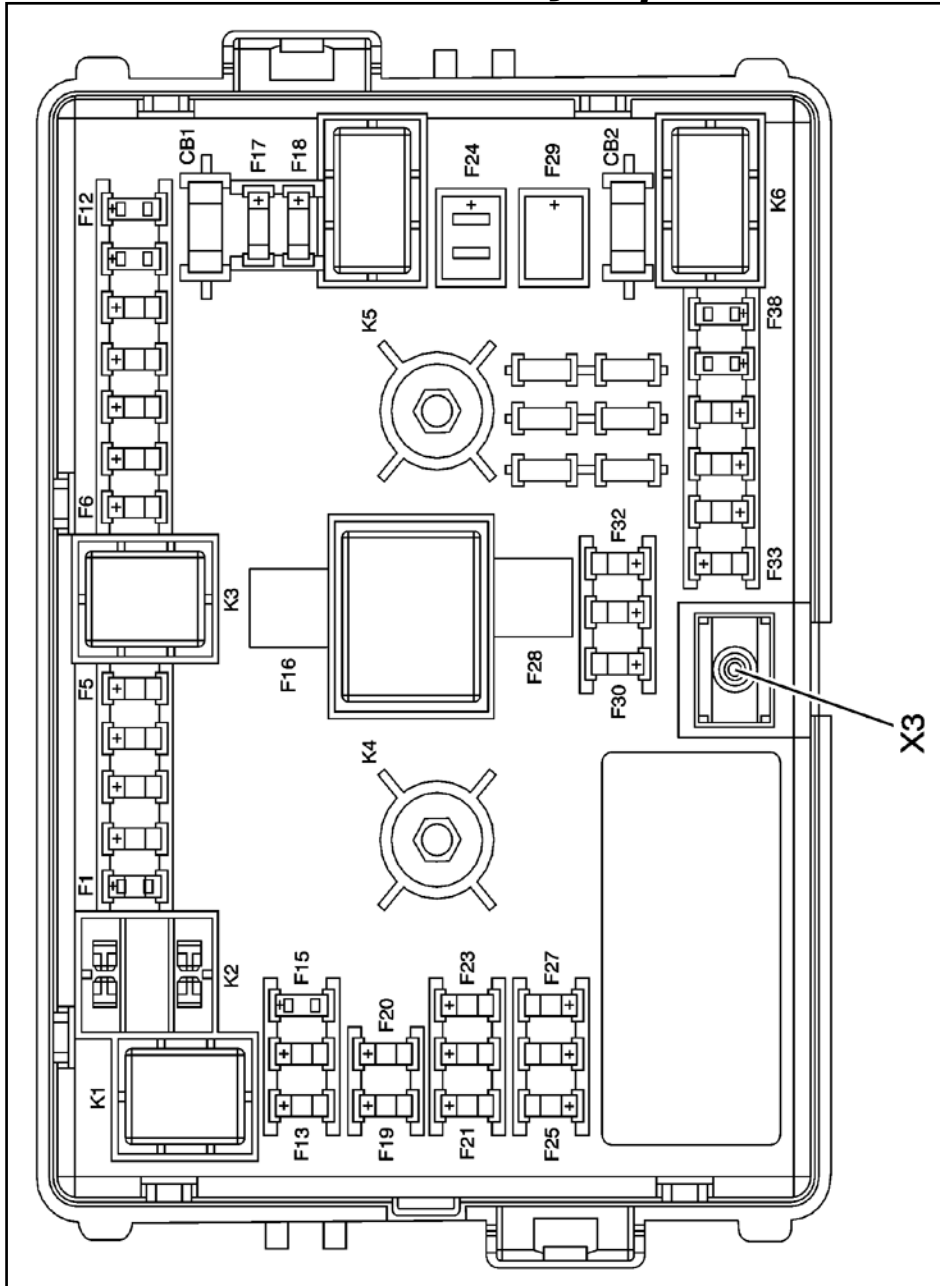
| No. | Device | Rating | Description |
|--|-------------------------------|--------|---|
| F33 | CARGO DR UNLCK Fuse | 15A | Door Latch - Cargo (Cargo or Passenger with AU3) |
| F34 | FRT PASS DR UNLCK Fuse | 15A | Door Latch - Passenger (AU3) |
| F35 | REAR PASS DR UNLCK Fuse | 15A | Door Contact Plate - Left (E26 with AU3), Door Contact Plate - Right (Cargo or Passenger with AU3) and Fuse Block - Body |
| F36 | DVR DR UNLCK Fuse | 15A | Door Latch - Driver (AU3) |
| F37 | EMPTY | -- | Not Used |
| F38 | EMPTY | -- | Not Used |
| CB1 | PWR SEATS Circuit Breaker | 30A | Seat Adjuster Switch - Driver (AG1) and Seat Adjuster Switch - Passenger (AG2) |
| CB2 | PWR WINDOW(S) Circuit Breaker | 25A | Window Switch - Driver (A31) and Window Switch - Passenger (A31) |
| K1 | RUN Relay | -- | CMPS, HVAC1 and HVAC2 Fuses and UPFTR AUX2 Relay |
| K2 | EMPTY | -- | Not Used |
| K3 | PRK LAMP(S) Relay | -- | AUX PRK LAMP(S) (Cutaway), FRT PRK LAMP(S), LT REAR PARK LAMP, RT REAR PRK LAMP, TRLR PRK LAMP(S) and UPFTR PRK LAMP(S) Fuses |
| K4 | UPFTR AUX2 Relay | -- | READING LAMP(S) (5B3) or UPFITTER AUX2 (YF1, YF2 or YF7) Fuses |
| K5 | REAR DEFOG Relay | -- | OSRVM HTR and REAR DEFOG Fuses |
| K6 | RAP Relay | -- | PWR WINDOW(S) Circuit Breaker (A31) |
| Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block. | | | |
| K7 | BCK/UP PCB Relay | -- | AUX/TRLR BCK/UP and TAIL LAMP(S) BCK/UP Fuses |

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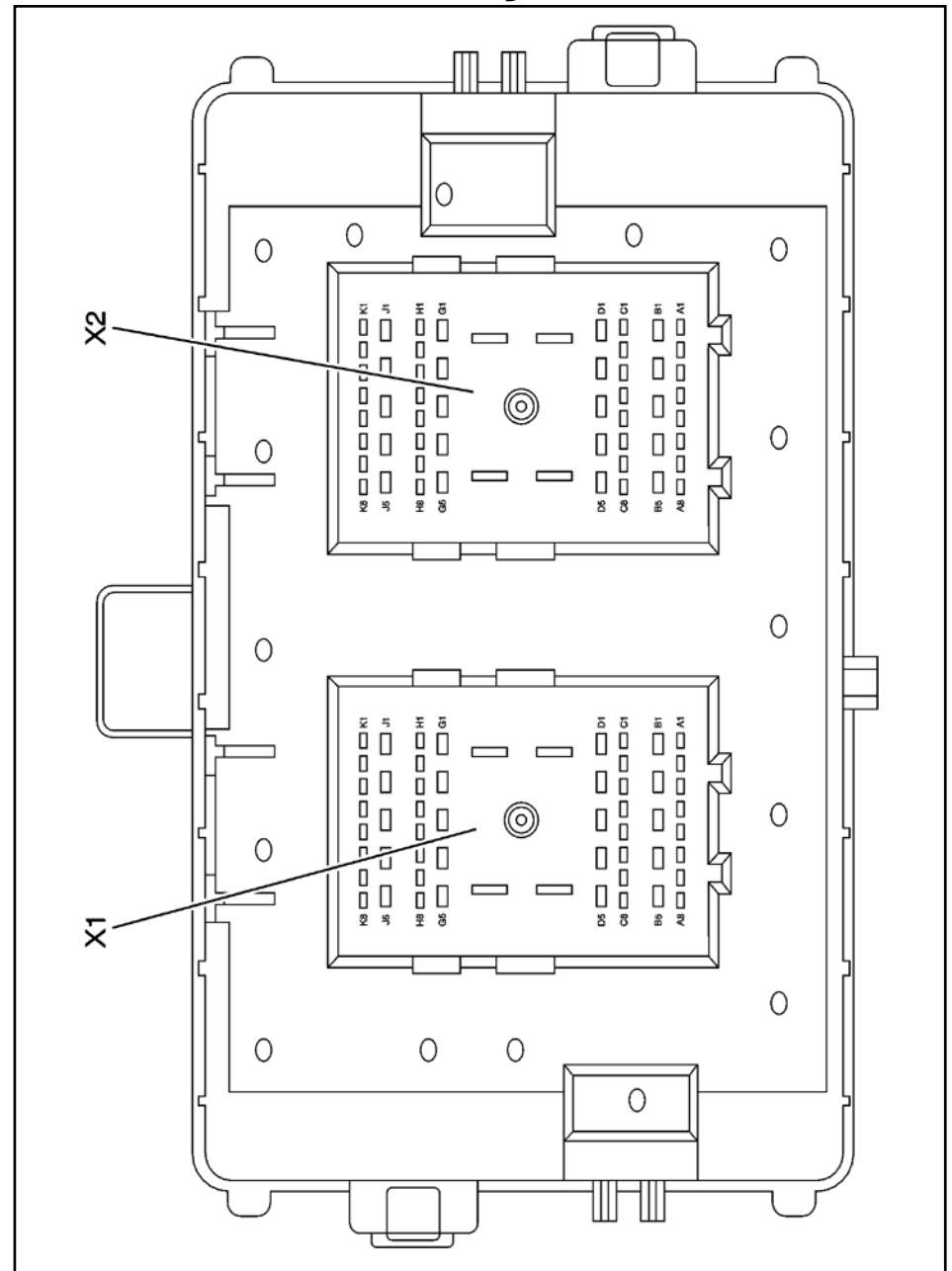
Fuse Block - Body Label (cont d)

| | | | |
|------------|----------------------------------|---------------|--|
| K8 | UPFTR CTSY LAMP(S) PCB Relay | -- | UPFTR CTSY LAMP(S) Fuse |
| No. | Device | Rating | Description |
| K9A | FTR REAR PASS DR UNLCK PCB Relay | -- | FRT PASS DR UNLCK and REAR PASS DR UNLCK Fuses |
| K9B | DRVR DR UNLCK PCB Relay | -- | DVR DR UNLCK Fuse |
| K10A | FTR REAR DR LCK PCB Relay | -- | FRT DR LCK and REAR DR LCK Fuses |
| K10B | CARGO DR UNLCK PCB Relay | -- | CARGO DR UNLCK Fuse |

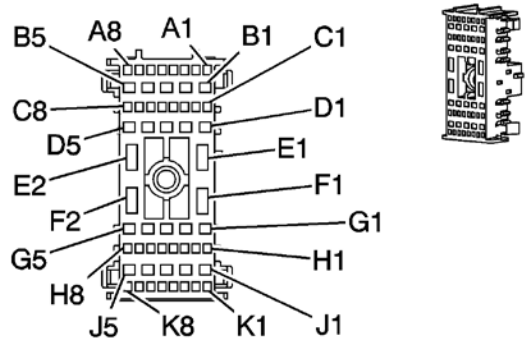
Fuse Block - Body Top View



Fuse Block - Body Bottom View



Fuse Block - Body X1



Connector Part Information
 Harness: Instrument Panel
 OEM: 15477823
 Service: 13574911
 Description: 56-Way F GT 150 280 Metri-Pack Series (L-GY)

Terminal Part Information
 Pins: A4-A6, C1-C5, C7-C8, H1-H8, K2-K5, K7-K8
 Terminal/Tray: 12191812/19
 Core/Insulation Crimp: Pins: A4-A6, C2, C4-C5, C7, H3-H4, H6-H8, K2-K5, K7-K8 - E/C
 Core/Insulation Crimp: Pins: C1, C3, C8, H1-H2, H5 - C/A
 Release Tool/Test Probe: J-38125-553/J-35616-2A (GY)

Pins: B1-B5, D5, G3-G4, J5
 Terminal/Tray: 15304711/8
 Core/Insulation Crimp: Pins: B3 - E/A
 Core/Insulation Crimp: Pins: B1-B2, B4-B5, D5, G3-G4, J5 - 2/A
 Release Tool/Test Probe: J-38125-553/J-35616-4A (PU)

Pins: E1, F1
 Terminal/Tray: 12110127/19
 Core/Insulation Crimp: F/G
 Release Tool/Test Probe: J-38125-558/J-35616-44 (YE)

Pins: E2
 Terminal/Tray: 12065915/5
 Core/Insulation Crimp: C/A
 Release Tool/Test Probe: J-38125-558/J-35616-44 (YE)

| Pin | Wire | Circuit | Function |
|-------|------------|---------|--|
| A1-A3 | -- | -- | Not Used |
| A4 | 0.35 YE | 6817 | LED Backlight Dimming Control (K34 or W1Y) |
| A5 | 0.35 D-BU | 45 | Park Lamp Control |
| A6 | 0.35 BN | 6136 | Supply Voltage (K34 or W1Y) |
| A7-A8 | -- | -- | Not Used |
| B1 | 0.8 RD/WH | 3240 | Battery Positive Voltage (UE1) |
| B2 | 1 BN | 2109 | Trailer Park Lamps Control (UY7) |
| B3 | 0.35 BN | 341 | Ignition Voltage |
| B4 | 0.5 BN | 2309 | Front Park Lamps Control |
| | 0.8 BN | 2309 | Front Park Lamps Control (C99) |
| B5 | 1 BN | 2109 | Trailer Park Lamps Control (Cut-away) |
| C1 | 1 YE | 618 | Left Rear Turn Signal Lamp Control (Passenger or Cargo) |
| C2 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control |
| C3 | 1 D-GN | 619 | Right Rear Turn Signal Lamp Control (Passenger or Cargo) |
| C4 | 0.35 WH | 193 | Rear Defog Relay Control (C49, DE5 or DE7) |
| C5 | 0.35 BN | 341 | Ignition Voltage |
| C6 | -- | -- | Not Used |
| C7 | 0.35 OG | 300 | Ignition Voltage |
| C8 | 0.8 BN | 141 | Ignition Voltage (LGH) |
| D1-D4 | -- | -- | Not Used |
| D5 | 1 BN | 141 | Ignition Voltage |
| E1 | 5 RD/BK | 1042 | Battery Positive Voltage (YF7) |
| E2 | 0.5 BK | 350 | Ground |
| F1 | 5 BN | 541 | Ignition Voltage (YF2 or YF7) |

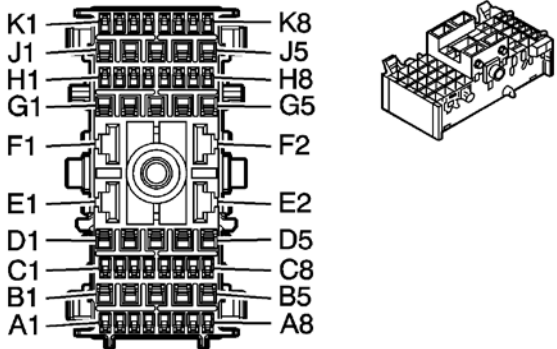
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Fuse Block - Body X1 (Cont d)

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|---|
| F2 | -- | -- | Not Used |
| G1-G2 | -- | -- | Not Used |
| G3 | 0.8 D-BU/WH | 1315 | Right Front Turn Signal Lamp Control (DE5 or DE7) |
| G4 | 1 RD/WH | 340 | Battery Positive Voltage |
| G5 | -- | -- | Not Used |
| H1 | 0.8 L-BU/WH | 1314 | Left Front Turn Signal Lamp Control (DE5 or DE7) |
| H2 | 0.8 D-BU/WH | 149 | Courtesy Lamp Control (Cutaway) |
| | 0.8 D-BU/WH | 149 | Courtesy Lamp Control (except YF2 or YF7) |
| H3 | 0.35 BK/WH | 351 | Ground |
| H4 | 0.35 YE | 43 | Ignition Voltage |
| H5 | 0.8 RD/WH | 4440 | Battery Positive Voltage (C49, DE5 or DE7) |
| H6 | 0.35 RD/WH | 2840 | Battery Positive Voltage (except 8S8) |
| H7 | 0.35 RD/WH | 540 | Battery Positive Voltage |

| Pin | Wire | Circuit | Function |
|-------|-----------|---------|---|
| H8 | 0.5 RD/WH | 5340 | Battery Positive Voltage (AU0 or UJ6) |
| J1-J4 | -- | -- | Not Used |
| J5 | 1 L-GN | 1624 | Trailer Backup Lamps Control (Cutaway, UY7 or 8S3) |
| K1 | -- | -- | Not Used |
| K2 | 0.5 YE | 356 | Driver Door Lock Relay Unlock Control (AU3) |
| K3 | 0.5 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3) |
| K4 | 0.5 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3 without PRP) |
| | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3 with PRP) |
| K5 | 0.5 YE | 356 | Driver Door Lock Relay Unlock Control (AU3 without PRP) |
| | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3 with PRP) |
| K6 | -- | -- | Not Used |
| K7 | 0.5 GY/BK | 690 | Courtesy Lamp Control (YF2 or YF7) |
| K8 | 0.35 D-BU | 38 | Backup Lamp Relay Control |

Fuse Block - Body X2



Connector Part Information

Harness: Body
 OEM: 15477822
 Service: 19115189
 Description: 56-Way F GT 150 280 Metri-Pack 800 Series (BK)

Terminal Part Information

Pins: A1-A6, B4, C2-C8, H2-H3, H5-H8, K3, K7-K8
 Terminal/Tray: 12191812/19
 Core/Insulation Crimp: Pins: A1-A6, B4, C3-C5, C8, H2-H3, H5-H7 - E/C
 Core/Insulation Crimp: Pins: C2, C6-C7, H8, K3, K7-K8 - C/A
 Release Tool/Test Probe: J-38125-553/J-35616-2A (GY)

Pins: B3-B4, D3-D4, G4-G5, J1-J5
 Terminal/Tray: 15304711/8
 Core/Insulation Crimp: Pins: B4 - E/A
 Core/Insulation Crimp: Pins: B3, D3-D4, G4-G5, J1-J5 - 2/A
 Release Tool/Test Probe: J-38125-553/J-35616-4A (PU)

Pins: B1-B2, D1-D2, G1-G2
 Terminated Lead: 13327131
 Terminal/Tray: 15304713/19
 Core/Insulation Crimp: F/D
 Release Tool/Test Probe: J-38125-553/J-35616-4A (PU)

Pins: E2, F1-F2
 Terminal/Tray: 12110127/19
 Core/Insulation Crimp: F/G
 Release Tool/Test Probe: J-38125-558/J-35616-44 (YE)

| Pin | Wire | Circuit | Function |
|-------|------------|---------|--|
| A1 | 0.5 RD/WH | 3440 | Battery Positive Voltage (Light Duty except C99 or YF7) |
| A2 | 0.5 RD/WH | 3440 | Battery Positive Voltage (ASF) |
| A3 | 0.5 RD/WH | 3440 | Battery Positive Voltage |
| A4 | 0.5 BN | 2509 | Left Rear Park Lamps Control (Passenger or Cargo) |
| A5 | 0.5 BN | 2609 | Right Rear Park Lamps Control (Passenger or Cargo) |
| A6 | 0.5 RD/WH | 4340 | Battery Positive Voltage (DE5 or DE7) |
| A7-A8 | -- | -- | Not Used |
| B1 | 3 RD/WH | 3540 | Battery Positive Voltage (AG2) |
| B2 | 3 RD/WH | 3540 | Battery Positive Voltage (AG1) |
| B3 | 1 RD/WH | 3240 | Battery Positive Voltage (UE1) |
| B4 | 0.5 BN | 2209 | Rear Park Lamps Control (YF2 or YF7) |
| B5 | -- | -- | Not Used |
| C1 | -- | -- | Not Used |
| C2 | 1 RD/WH | 3240 | Battery Positive Voltage (UE1) |
| C3 | 0.35 BN | 341 | Ignition Voltage (C69) |
| C4 | 0.35 BN | 341 | Ignition Voltage (C69, C36 or ENC) |
| C5 | 0.35 BN | 341 | Ignition Voltage (C49, DE5, DE7 or C60) |
| C6 | 1 D-GN | 619 | Right Rear Turn Signal Lamp Control (Passenger or Cargo) |
| C7 | 1 YE | 618 | Left Rear Turn Signal Lamp Control (Passenger or Cargo) |
| C8 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control |
| D1 | 5 PU | 293 | Rear Defog Element Control (C49) |
| D2 | 5 PU | 293 | Rear Defog Element Control (C49) |

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Fuse Block Body X2 (cont d)

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|---|
| D3 | 0.8 OG | 2267 | Mirror Heating Element Control (DE5 or DE7) |
| D4 | 0.8 OG | 2267 | Mirror Heating Element Control (DE5 or DE7) |
| D5 | -- | -- | Not Used |
| E1 | -- | -- | Not Used |
| E2 | 5 RD/BK | 1042 | Battery Positive Voltage (YF1, YF2 or YF7) |
| F1 | 5 RD/WH | 1740 | Battery Positive Voltage (C69, C36 or ENC) |
| F2 | 5 BN | 541 | Ignition Voltage (YF1, YF2 or YF7) |
| | 3 BN | 541 | Ignition Voltage (5B3) |
| G1 | 3 D-GN | 1001 | RAP 12-Volt Fuse Control (A31) |
| G2 | 3 D-GN | 1001 | RAP 12-Volt Fuse Control (A31) |
| G3 | -- | -- | Not Used |
| G4 | 1 GY | 295 | Door Lock Actuator Lock Control (Passenger or Cargo with AU3) |
| G5 | 1 GY | 295 | Door Lock Actuator Lock Control (AU3 with E26) |
| | 1 GY | 295 | Door Lock Actuator Lock Control (AU3 with E26 or YA2) |
| H1 | -- | -- | Not Used |
| H2 | 0.35 BN | 441 | Ignition Voltage |
| H3 | 0.35 BK/WH | 351 | Ground |
| H4 | -- | -- | Not Used |
| H5 | 0.5 D-BU/WH | 1315 | Right Front Turn Signal Lamp Control (DE5 or DE7) |
| H6 | 0.5 L-BU/WH | 1314 | Left Front Turn Signal Lamp Control (DE5 or DE7) |
| H7 | 0.5 D-BU/WH | 149 | Courtesy Lamp Control |

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|--|
| H8 | 0.8 D-BU/WH | 149 | Courtesy Lamp Control (Passenger) |
| | 0.8 D-BU/WH | 149 | Courtesy Lamp Control (Passenger or Cargo except YF2 or YF7) |
| J1 | 0.8 TN | 694 | Driver Door Lock Actuator Unlock Control (AU3) |
| J2 | 1 TN | 294 | Door Lock Actuator Unlock Control (Passenger or Cargo with AU3) |
| J3 | 0.8 TN | 294 | Door Lock Actuator Unlock Control (AU3 with E24 or YA2) |
| | 0.8 TN | 294 | Door Lock Actuator Unlock Control (AU3 with E26) |
| J4 | 0.8 TN | 294 | Door Lock Actuator Unlock Control (AU3) |
| J5 | 0.8 GY | 295 | Door Lock Actuator Lock Control (AU3) |
| | 0.8 GY | 295 | Door Lock Actuator Lock Control (AU3) |
| K1-K2 | -- | -- | Not Used |
| K3 | 1 TN/BK | 1095 | Right Rear Door Lock Actuator Unlock Control (Passenger or Cargo with AU3) |
| K4-K6 | -- | -- | Not Used |
| K7 | 1 TN | 294 | Door Lock Actuator Unlock Control (Passenger or Cargo with AU3) |
| K8 | 1 L-GN | 24 | Backup Lamp Control (Passenger or Cargo) |
| | 1 L-GN | 24 | Backup Lamp Control (Passenger or Cargo) |

Fuse Block Body X3

Terminal Part Information

Harness Type: Instrument Panel

Terminated Lead: Service by Harness - See Part Catalog

Release Tool: Not Available

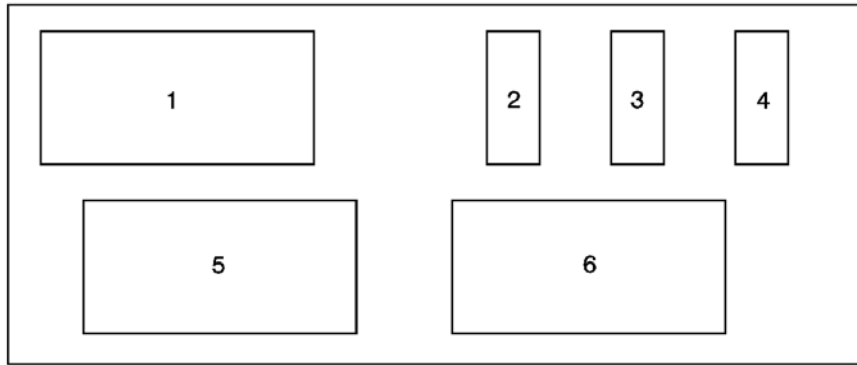
Diagnostic Test Probe: Not Available

Terminal/Tray: Not Available

Core/Insulation Crimp: Not Available

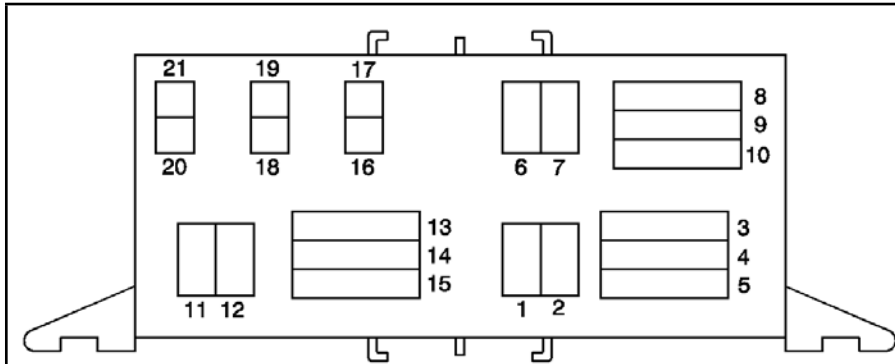
| Pin | Wire | Circuit | Function |
|------------|-------------|----------------|--------------------------|
| S | 19 RD | 842 | Battery Positive Voltage |

Fuse Block - Rear (PRP) - Top View



| No. | Device | Rating | Description |
|-----|--------------------------------------|--------|--|
| 1 | Access Panel Relay - Left Side Rear | -- | Access Panel Latches - Left Side Rear |
| 2 | Dome Fluorescent Work Lamps Fuse | 10 | Dome Fluorescent Work Lamps (UF2) |
| 3 | Panel Actuator Fuse | 15 | Access Panel Relays |
| 4 | -- | -- | Not Used |
| 5 | Access Panel Relay - Left Side Front | -- | Access Panel Latches - Left Side Front |

Fuse Block - Rear (PRP) - Bottom View



Connector Part Information

Harness Type: Professional
 OEM Connector: 63995
 Service Connector: Service by Harness - See Part Catalog
 Description: 21-Way F Fuse Block (BK)

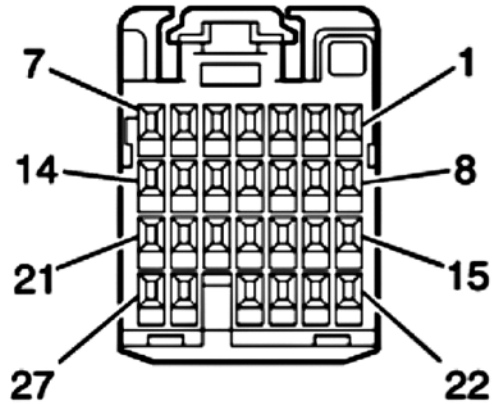
Terminal Part Information

Terminated Lead: Service by Harness - See Part Catalog
 Release Tool: Not Available
 Diagnostic Test Probe: Not Available
 Terminal/Tray: Not Available
 Core/Insulation Crimp: Not Available

| Pin | Wire | Circuit | Function |
|-------|-------|---------|---|
| 8 | L-GN | 1391 | Access Panel Left Side Rear Relay Control |
| 9 | -- | -- | Not Used |
| 10 | OG | 740 | Battery Positive Voltage |
| 11 | OG | 740 | Battery Positive Voltage |
| 12 | TN/BK | 1095 | Access Panel Right Side Lock Actuators Unlock Control |
| 13 | L-BU | 1344 | Access Panel Right Side Relay Control |
| 14 | -- | -- | Not Used |
| 15 | OG | 740 | Battery Positive Voltage |
| 16 | RD | 1042 | Battery Positive Voltage (UF2) |
| 17 | OG | 840 | Battery Positive Voltage (UF2) |
| 18 | RD | 1042 | Battery Positive Voltage |
| 19 | OG | 740 | Battery Positive Voltage |
| 20-21 | -- | -- | Not Used |

| Pin | Wire | Circuit | Function |
|-----|------|---------|--|
| 1 | OG | 740 | Battery Positive Voltage |
| 2 | TN | 294 | Access Panel Left Front Side Lock Actuators Unlock Control |
| 3 | L-BU | 195 | Access Panel Left Side Front Relay Control |
| 4 | -- | -- | Not Used |
| 5 | OG | 740 | Battery Positive Voltage |
| 6 | OG | 740 | Battery Positive Voltage |
| 7 | PK | 1092 | Access Panel Left Rear Side Lock Actuators Unlock Control |

Body Control Module (BCM) X1



Connector Part Information

Harness Type: Instrument Panel
 OEM Connector: 15482789
 Service Connector: 88988838
 Description: 27-Way F HIT Series (L-GN)

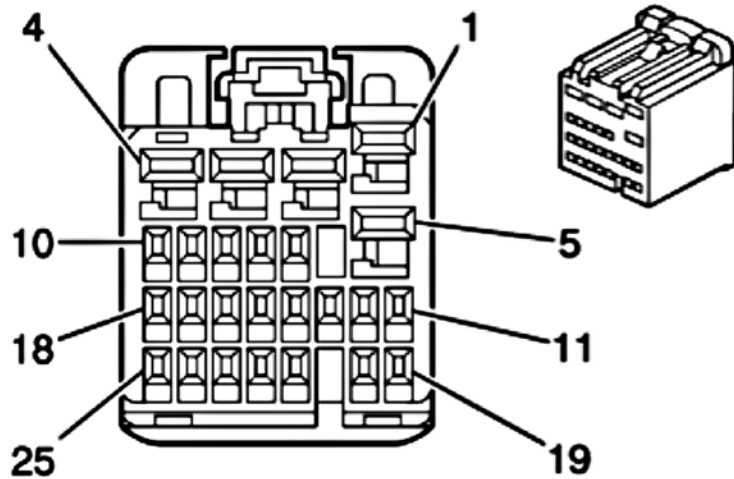
Terminal Part Information

Terminated Lead: 13575870
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: SNAC3-A021T-M0.64/20
 Core/Insulation Crimp: J/J

| Pin | Wire | Circuit | Function |
|-------|-----------|---------|--|
| 9 | 0.35 L-BU | 1714 | Windshield Wiper Switch Low Signal |
| 10-13 | -- | -- | Not Used |
| 14 | 0.35 PK | 3 | Ignition Voltage |
| 15 | 0.35 D-GN | 663 | Hazard Switch Left Turn Signal |
| 16 | 0.35 TN | 664 | Hazard Switch Turn Right Signal |
| 17 | 0.35 PK | 1444 | 12-Volt Reference |
| 18 | 0.35 YE | 525 | Headlamp Dimmer Switch Low Beam Signal |
| 19 | 0.35 WH | 111 | Theft Deterrent Alarm Enable Signal |
| 20 | 0.35 PU | 5526 | Tap Up/Tap Down Switch Signal |
| 21 | 0.35 BN | 4 | Ignition Voltage |
| 22 | -- | -- | Not Used |
| 23 | 0.35 L-BU | 1788 | Tow/Haul Switch Signal |
| 24 | 0.35 PK | 94 | Windshield Washer Switch Signal |
| 25 | 0.35 YE | 307 | Headlamp Switch Flash to Pass Signal |
| 26 | 0.5 TN/WH | 816 | A/T Shift Lock Solenoid Control |
| 27 | -- | -- | Not Used |

| Pin | Wire | Circuit | Function |
|-----|------------|---------|-------------------------------------|
| 1 | -- | -- | Not Used |
| 2 | 0.35 PK | 1020 | Ignition Voltage |
| 3 | 0.35 GY | 1884 | Cruise Control Switch Signal |
| 4 | 0.35 WH | 530 | Ignition Voltage |
| 5 | 0.35 L-GN | 1715 | Windshield Wiper Switch High Signal |
| 6 | 0.35 L-GN | 6818 | Steering Wheel Control Signal |
| 7 | -- | -- | Not Used |
| 8 | 0.35 TN/BK | 6009 | Low Reference |

Body Control Module (BCM) X2



Connector Part Information

Harness Type: Instrument Panel
 OEM Connector: 15482790
 Service Connector: 88988839
 Description: 25-Way F HIT Series (NA)

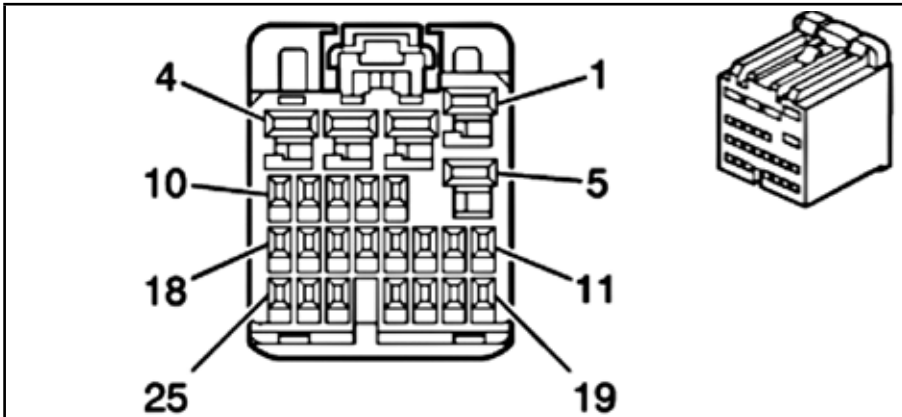
Terminal Part Information

Pins: 1-3, 5
 Terminated Lead: 13327199
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-35 (VT)
 Terminal/Tray: SNAC-A061T-M2.8/20
 Core/Insulation Crimp: E/A

Pins: 8, 11-12, 17-18, 21-22, 25
 Terminated Lead: 13575870
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: SNAC3-A021T-M0.64/20
 Core/Insulation Crimp: J/J

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|---|
| 1 | 0.8 OG | 1732 | Courtesy Lamp Control |
| 2 | 0.5 RD/WH | 2540 | Battery Positive Voltage |
| 3 | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control |
| 4 | -- | -- | Not Used |
| 5 | 0.5 GY/BK | 690 | Courtesy Lamp Control (YF7) |
| | 0.8 D-BU/WH | 149 | Courtesy Lamp Control (without YF7) |
| 6-7 | -- | -- | Not Used |
| 8 | 0.35 L-BU | 13 | Headlamp Switch Park Lamps Signal |
| 9-10 | -- | -- | Not Used |
| 11 | 0.35 WH | 278 | Ambient Light Sensor Signal |
| 12 | 0.35 WH | 103 | Headlamp Switch Headlamps On Signal |
| 13-16 | -- | -- | Not Used |
| 17 | 0.35 D-GN | 306 | Headlamp Switch Headlamps Off Signal |
| 18 | 0.35 D-BU/WH | 149 | Courtesy Lamp Control |
| 19-20 | -- | -- | Not Used |
| 21 | 0.5 D-BU | 6727 | Traction Control Preference Switch Signal (JL4) |
| 22 | 0.35 D-BU | 38 | Backup Lamp Relay Control |
| 23-24 | -- | -- | Not Used |
| 25 | 0.35 PU | 328 | Interior Lamp Defeat Switch Signal |

Body Control Module (BCM) X3



Connector Part Information

Harness Type: Instrument Panel
 OEM Connector: 15482791
 Service Connector: 88988840
 Description: 25-Way F HIT Series (L-BU)

Terminal Part Information

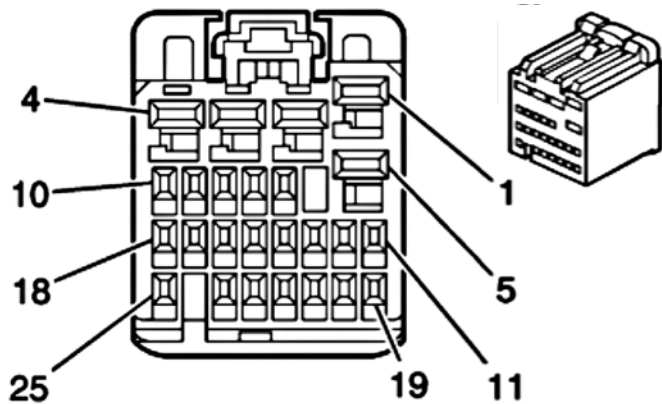
Pins: 1-3, 5
 Terminated Lead: 13575871
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-35 (VT)
 Terminal/Tray: SNAC-A061T-M2.8/20
 Core/Insulation Crimp: E/A

Pins: 8-19, 22
 Terminated Lead: 13327195
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: SNAC3-A021T-M0.64/20
 Core/Insulation Crimp: J/J

| Pin | Wire | Circuit | Function |
|-----|-----------|---------|--------------------------|
| 1 | 0.8 BK/WH | 351 | Ground |
| 2 | 0.8 RD/WH | 2140 | Battery Positive Voltage |

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|---|
| 3 | 0.5 RD/WH | 3840 | Battery Positive Voltage |
| 4 | -- | -- | Not Used |
| 5 | 0.8 BK/WH | 351 | Ground |
| 6-7 | -- | -- | Not Used |
| 8 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 9 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 10 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |
| 11 | 0.35 D-GN | 44 | Instrument Panel Lamps Dimmer Switch Signal |
| 12 | 0.35 OG/WH | 812 | IP Dimming Voltage Reference |
| 13 | 0.5 TN | 5380 | Brake Position Sensor Signal |
| 14 | 0.5 BN | 5382 | Brake Position Sensor Low Reference |
| 15 | 0.5 GY | 5381 | Brake Position Sensor 5 Volt Reference |
| 16 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 17 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 18 | 0.35 YE | 6817 | LED Backlight Dimming Control |
| 19 | 0.5 L-BU | 5986 | Serial Data Communication Enable |
| 20-21 | -- | -- | Not Used |
| 22 | 0.35 D-GN/WH | 7158 | Cruise Control Indicator Dimming Signal |
| 23-25 | -- | -- | Not Used |

Body Control Module (BCM) X4



Connector Part Information

Harness Type: Instrument Panel
 OEM Connector: 15482792
 Service Connector: 88988841
 Description: 25-Way F HIT Series (BK)

Terminal Part Information

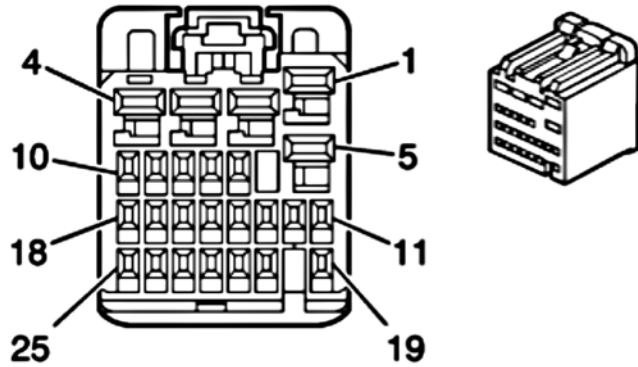
Pins: 1-5
 Terminated Lead: 13327199
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-35 (VT)
 Terminal/Tray: SNAC-A061T-M2.8/20
 Core/Insulation Crimp: E/A

Pins: 6-7, 9-13, 15-17, 19-21, 23-24
 Terminated Lead: 13575870
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: SNAC3-A021T-M0.64/20
 Core/Insulation Crimp: J/J

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|---|
| 3 | 0.8 RD/WH | 2940 | Battery Positive Voltage |
| 4 | 0.8 RD/WH | 2240 | Battery Positive Voltage |
| 5 | 0.8 D-BU/WH | 1315 | Right Front Turn Signal Lamp Control |
| 6 | 0.35 D-GN | 6134 | Local Interconnect Network 3 |
| 7 | 0.35 YE | 196 | Windshield Wiper Motor Park Switch Signal |
| 8 | -- | -- | Not Used |
| 9 | 0.5 BK/WH | 451 | Ground (LU3 or LMF) |
| 10 | 0.5 RD/WH | 2840 | Battery Positive Voltage (LU3 or LMF) |
| 11 | 0.5 L-GN | 1391 | Ignition Voltage (PRP) |
| 12 | 0.35 YE | 5187 | Right Trailer Turn Signal Lamp (UY7) |
| 13 | 0.35 OG | 5186 | Left Trailer Turn Signal Lamp (UY7) |
| 14 | -- | -- | Not Used |
| 15 | 0.35 OG | 2268 | Windshield Washer Relay Control |
| 16 | 0.35 TN/WH | 1969 | Headlamp High Beam Relay Control |
| 17-18 | -- | -- | Not Used |
| 19 | 0.5 D-BU | 5985 | Accessory Wakeup Serial Data |
| 20 | 0.5 L-BU | 1344 | Trunk Release Control (PRP) |
| 21 | 0.35 YE | 5199 | Run/Crank Relay Coil Control |
| 22 | -- | -- | Not Used |
| 23 | 0.35 PU | 544 | Headlamp Low Beam Control |
| 24 | 0.5 L-BU | 244 | Front Passenger Door Lock Switch Lock Control (PRP) |
| 25 | -- | -- | Not Used |

| Pin | Wire | Circuit | Function |
|-----|-----------|---------|--------------------------|
| 1 | 0.8 RD/WH | 2740 | Battery Positive Voltage |
| 2 | 0.8 RD/WH | 3040 | Battery Positive Voltage |

Body Control Module (BCM) X5



Connector Part Information

Harness Type: Instrument Panel
 OEM Connector: 15480179
 Service Connector: 88988837
 Description: 25-Way F HIT Series (BN)

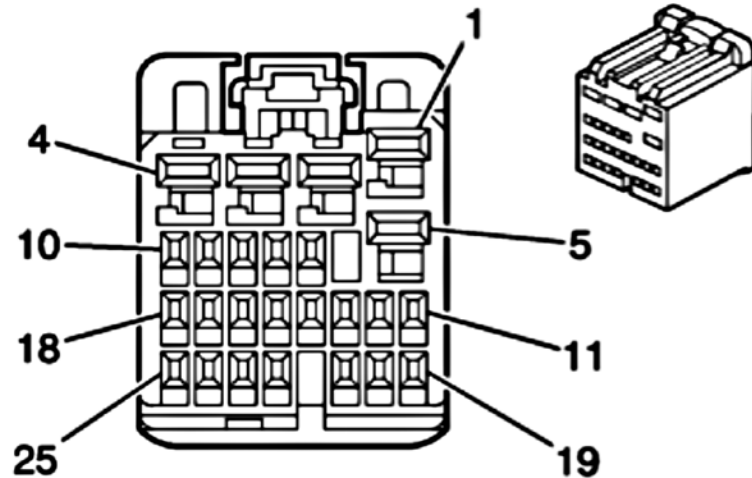
Terminal Part Information

Pins: 6, 8-11, 13, 15-16, 18-21, 23-24
 Terminated Lead: 13575870
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: SNAC3-A021T-M0.64/20
 Core/Insulation Crimp: J/J
 Pins: 1-2, 4-5
 Terminated Lead: 13327199
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-35 (VT)
 Terminal/Tray: SNAC-A061T-M2.8/20
 Core/Insulation Crimp: Pins: 1-2 - C/A
 Core/Insulation Crimp: Pins: 4-5 - E/A

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|--|
| 2 | 1 D-GN | 619 | Right Rear Turn Signal Lamp Control |
| 3 | -- | -- | Not Used |
| 4 | 0.8 L-BU/WH | 1314 | Left Front Turn Signal Lamp Control |
| 5 | 0.5 WH | 5065 | Stop Lamps Control |
| 6 | 0.35 L-BU/WH | 6311 | Torque Converter Clutch (TCC) Brake Signal |
| 7 | -- | -- | Not Used |
| 8 | 0.5 PK | 5076 | 5-Volt Reference (LU3 or LMF) |
| 9 | 0.5 WH | 5075 | Current Sensor Signal (LU3 or LMF) |
| 10 | 0.5 BN | 5077 | Low Reference (LU3 or LMF) |
| 11 | 0.35 YE | 43 | Ignition Voltage |
| 12 | -- | -- | Not Used |
| 13 | 0.35 OG | 300 | Ignition Voltage |
| 14-15 | -- | -- | Not Used |
| 16 | 0.35 L-BU | 1134 | Park Brake Switch Signal |
| 17 | -- | -- | Not Used |
| 18 | 0.35 TN | 28 | Horn Relay Control |
| 19 | -- | -- | Not Used |
| 20 | 0.35 GY | 91 | Windshield Wiper Switch Signal 2 |
| 21 | 0.35 TN | 860 | Front Windshield Wiper Switch High Signal |
| 22 | -- | -- | Not Used |
| 23 | 0.35 PK/WH | 1970 | Headlamp Low Beam Relay Control |
| 24 | 0.35 D-BU | 45 | Park Lamp Control |
| 25 | -- | -- | Not Used |

| Pin | Wire | Circuit | Function |
|-----|------|---------|------------------------------------|
| 1 | 1 YE | 618 | Left Rear Turn Signal Lamp Control |

Body Control Module (BCM) X6



Connector Part Information

Harness Type: Instrument Panel
 OEM Connector: 15482793
 Service Connector: 88988842
 Description: 25-Way F HIT Series (PK)

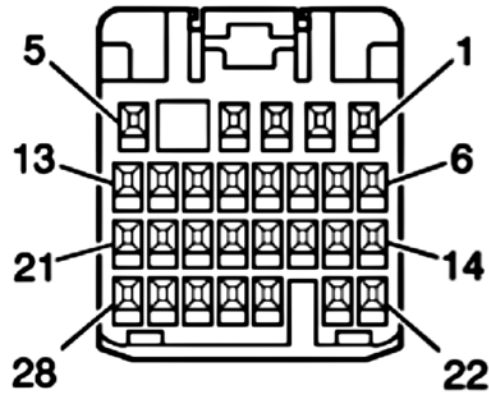
Terminal Part Information

Pin 2
 Terminated Lead: 13327199
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-35 (VT)
 Terminal/Tray: SNAC-A061T-M2.8/20
 Core/Insulation Crimp: E/A

Pins: 8-10, 12, 14-16, 18, 22
 Terminated Lead: 13575870
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: SNAC3-A021T-M0.64/20
 Core/Insulation Crimp: J/J

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|---|
| 1 | -- | -- | Not Used |
| 2 | 0.8 L-BU | 1320 | CHMSL Control (Passenger or Cargo) |
| 3-7 | -- | -- | Not Used |
| 8 | 0.35 TN/WH | 746 | Right Front Door Ajar Switch Signal |
| 9 | 0.35 D-BU | 245 | Passenger Door Lock Switch Unlock Control (AU3) |
| 10 | 0.35 GY/BK | 745 | Left Front Door Ajar Switch Signal |
| 11 | -- | -- | Not Used |
| 12 | 0.35 PK/BK | 1303 | Liftgate Ajar Switch Signal (Passenger or Cargo) |
| 13 | -- | -- | Not Used |
| 14 | 0.35 YE/BK | 1181 | Right Rear Door Open Switch Signal (Passenger or Cargo) |
| 15 | 0.35 D-BU/WH | 1179 | Left Rear Door Open Switch Signal (E26) |
| 16 | 0.35 L-GN | 1177 | Right Front Door Open Switch Signal |
| 17 | -- | -- | Not Used |
| 18 | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3) |
| 19-21 | -- | -- | Not Used |
| 22 | 0.35 L-GN | 5926 | Rear Access Open Switch Signal (Passenger or Cargo) |
| 23-25 | -- | -- | Not Used |

Body Control Module (BCM) X7



Connector Part Information

Harness Type: Instrument Panel
 OEM Connector: 15466053
 Service Connector: 88988806
 Description: 28-Way F HIT Series (GY)

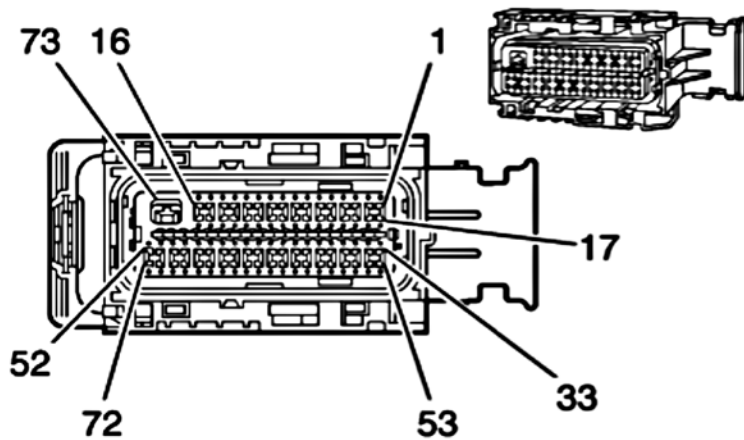
Terminal Part Information

Terminated Lead: 13575870
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: SNAC3-A021T-M0.64/20
 Core/Insulation Crimp: J/J

| Pin | Wire | Circuit | Function |
|-------|-----------|---------|---|
| 9 | 0.5 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3 without PRP) |
| 10 | -- | -- | Not Used |
| 11 | 0.5 OG/BK | 781 | Driver Door Lock Switch Unlock Signal (AU3) |
| 12 | 0.5 PK/BK | 780 | Driver Door Lock Switch Lock Signal (AU3) |
| 13-22 | -- | -- | Not Used |
| 23 | 0.5 TN | 126 | Left Front Door Open Switch Signal |
| 24 | 0.5 L-GN | 66 | A/C Request Signal (C60) |
| 25-28 | -- | -- | Not Used |

| Pin | Wire | Circuit | Function |
|-----|----------|---------|---|
| 1 | -- | -- | Not Used |
| 2 | 0.5 YE | 356 | Driver Door Lock Relay Unlock Control (Passenger or Cargo with AU3) |
| 3-5 | -- | -- | Not Used |
| 6 | 0.5 YE | 356 | Driver Door Lock Relay Unlock Control (AU3) |
| 7 | 0.5 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3) |
| 8 | -- | -- | Not Used |

Engine Control Module (ECM) X1 (LU3)



Connector Part Information

Harness Type: Engine
 OEM Connector: 13580810
 Service Connector: 88988931
 Description: 73-Way F MX123 34566 Series (BK)

Terminal Part Information

Pins: 1, 2-3, 6, 8-11, 13, 15-21, 24-25, 27, 30, 32, 35, 37, 39, 41-45, 47, 50, 54-55, 57-58, 65-67, 70
 Terminated Lead: Pins: 1, 6, 8, 18, 21, 25, 27, 30, 32, 41, 47, 50, 57, 65, 67 - 13575811
 Terminated Lead: Pins: 2-3, 9-11, 13, 15-17, 19-20, 24, 35, 37, 39, 42-45, 54-55, 58, 61, 66, 70 - 13575575
 Release Tool: J-38125-213
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: Pins: 1, 6, 8, 18, 21, 25, 27, 30, 32, 41, 47, 50, 57, 65, 67 - 33467-0003/23
 Terminal/Tray: Pins: 2-3, 9-11, 13, 15-17, 19-20, 24, 35, 37, 39, 42-45, 54-55, 58, 61, 66, 70 - 33467-0005/23
 Core/Insulation Crimp: Pins: 1, 6, 8, 18, 21, 25, 27, 30, 32, 41, 47, 50, 57, 65, 67 - H/H
 Core/Insulation Crimp: Pins: 2, 9-11, 15-17, 35, 37, 58 - K/K
 Core/Insulation Crimp: Pins: 3, 13, 19-20, 24, 39, 42-45, 54-55, 61, 66, 70 - J/J

Pin 73

Terminated Lead: Service by Harness - See Part Catalog
 Release Tool: J-38125-12A
 Diagnostic Test Probe: J-35616-35 (VT)
 Terminal/Tray: 1326030-8/17
 Core/Insulation Crimp: A/4

| Pin | Wire | Circuit | Function |
|-----|--------------|---------|--|
| 1 | 0.35 D-BU | 1161 | Accelerator Pedal Position (APP) Sensor 1 Signal |
| 2 | 0.8 PU | 1670 | Heated Oxygen Sensor (HO2S) High Signal - Bank 2 Sensor 2 |
| 3 | 0.5 D-BU | 5985 | Accessory Wakeup Serial Data |
| 4-5 | -- | -- | Not Used |
| 6 | 0.35 D-GN/WH | 465 | Fuel Pump Relay Control - Primary |
| 7 | -- | -- | Not Used |
| 8 | 0.35 TN | 5514 | Low Reference (C60) |
| 9 | 0.8 TN/WH | 1669 | Heated Oxygen Sensor (HO2S) Low Signal - Bank 1 Sensor 2 |
| 10 | 0.8 TN | 1671 | Heated Oxygen Sensor (HO2S) Low Signal - Bank 2 Sensor 2 |
| 11 | 0.5 BN | 5360 | Brake Apply Sensor Low Reference |
| 12 | -- | -- | Not Used |
| 13 | 0.5 YE | 5991 | Powertrain Relay Control |
| 14 | -- | -- | Not Used |
| 15 | 0.8 GY/WH | 3122 | Heated Oxygen Sensor (HO2S) Heater Low Control - Bank 1 Sensor 2 |
| 16 | 0.8 OG/WH | 3223 | Heated Oxygen Sensor (HO2S) Heater Low Control - Bank 2 Sensor 2 |

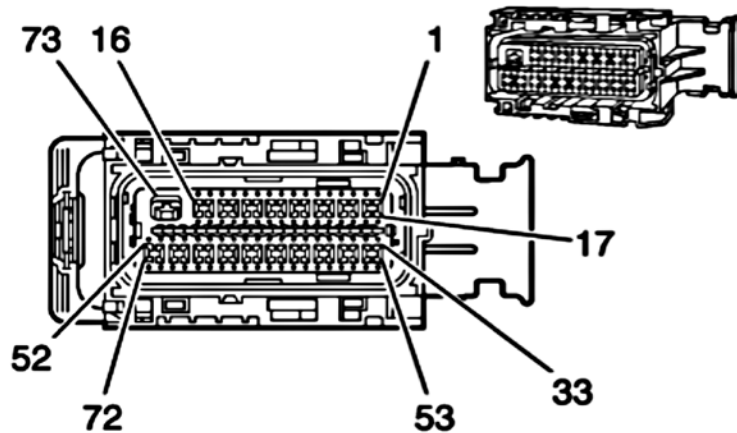
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Engine Control Module (ECM) X1 (LU3) (cont d)

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|---|
| 17 | 0.8 PU/WH | 1668 | Heated Oxygen Sensor (HO2S) High Signal - Bank 1 Sensor 2 |
| 18 | 0.35 L-BU | 1162 | Accelerator Pedal Position (APP) Sensor 2 Signal |
| 19 | 0.5 PK | 439 | Ignition Voltage |
| 20 | 0.5 RD/WH | 440 | Battery Positive Voltage |
| 21 | 0.35 PU | 1272 | Low Reference |
| 22-23 | -- | -- | Not Used |
| 24 | 0.5 TN/BK | 6049 | Low Reference |
| 25 | 0.35 OG/BK | 380 | A/C Refrigerant Pressure Sensor Signal (C60) |
| 26 | -- | -- | Not Used |
| 27 | 0.35 BN/WH | 419 | MIL Control |
| 28-29 | -- | -- | Not Used |
| 30 | 0.35 D-GN/WH | 459 | A/C Compressor Clutch Relay Control (C60) |
| 31 | -- | -- | Not Used |
| 32 | 0.35 YE/BK | 625 | Starter Enable Relay Control |
| 33-34 | -- | -- | Not Used |
| 35 | 0.8 TN | 2760 | Low Reference |
| 36 | -- | -- | Not Used |
| 37 | 0.5 YE | 492 | Mass Air Flow (MAF) Sensor Signal |
| 38 | -- | -- | Not Used |
| 39 | 0.5 PU | 1589 | Fuel Level Sensor Signal - Primary |
| 40 | -- | -- | Not Used |
| 41 | 0.35 BN | 1271 | Low Reference |
| 42 | 0.5 D-GN | 890 | Fuel Tank Pressure Sensor Signal |

| 43 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
|-------|-------------|---------|--|
| Pin | Wire | Circuit | Function |
| 44 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 45 | 0.5 WH | 5359 | Brake Apply Sensor Supply Voltage |
| 46 | -- | -- | Not Used |
| 47 | 0.35 WH/BK | 1164 | 5-Volt Reference 2 |
| 48-49 | -- | -- | Not Used |
| 50 | 0.35 YE/BK | 1827 | Vehicle Speed Signal |
| 51-53 | -- | -- | Not Used |
| 54 | 0.5 OG/BK | 6399 | Replicated TOS Signal |
| 55 | 0.5 L-BU/WH | 6311 | Torque Converter Clutch (TCC) Brake Signal |
| 56 | -- | -- | Not Used |
| 57 | 0.35 OG/BK | 1786 | Park/Neutral Signal |
| 58 | 0.5 TN | 472 | Intake Air Temperature (IAT) Sensor Signal |
| 59-60 | -- | -- | Not Used |
| 61 | 0.5 YE | 5361 | Brake Apply Sensor Signal |
| 62-64 | -- | - | Not Used |
| 65 | 0.35 GY | 2700 | 5-Volt Reference 1 (C60) |
| 66 | 0.5 GY | 2709 | 5-Volt Reference 1 |
| 67 | 0.35 TN | 1274 | 5-Volt Reference 1 |
| 68-69 | -- | -- | Not Used |
| 70 | 0.5 WH | 1310 | Evaporative Emission (EVAP) Canister Vent Solenoid Control |
| 71-72 | -- | -- | Not Used |
| 73 | 0.5 PK | 1339 | Ignition Voltage |

Engine Control Module (ECM) X2 (LU3)



Connector Part Information

Harness Type: Engine

OEM Connector: 13580811

Service Connector: 88988372

Description: 73-Way F MX123 34566 Series (L-GY)

Terminal Part Information

Pins: 4-5, 6-13, 16, 20, 30-33, 35-41, 43, 45-46, 48-51, 53-54, 57-59, 65-66, 68, 70-71

Terminated Lead: Pins: 4-5, 6-13, 16, 20, 30-33, 35-39, 41, 43, 45-46, 48-51, 54, 58, 65-66, 68, 70-71 - 13575575

Terminated Lead: Pins: 40, 53, 57, 59 - 13575811

Release Tool: J-38125-213

Diagnostic Test Probe: J-35616-64B (L-BU)

Terminal/Tray: Pins: 4-5, 6-13, 16, 20, 30-33, 35-39, 41, 43, 45-46, 48-51, 54, 58, 65-66, 68, 70-71 - 33467-0005/23

Terminal/Tray: Pins: 40, 53, 57, 59 - 33467-0003/23

Core/Insulation Crimp: Pins: 4-5, 13, 20, 33, 35-39, 41, 45-46, 48-51, 54, 58, 65-66, 68, 70-71 - K/K

Core/Insulation Crimp: Pins: 6-12, 16, 22-24, 30-32, 43 - J/J

Core/Insulation Crimp: Pins: 40, 53, 57, 59 - H/H

Pin 73

Terminated Lead: Pending

Release Tool: J-38125-11A

Diagnostic Test Probe: J-35616-35 (VT)

Terminal/Tray: 7116-4152-02/9

Core/Insulation Crimp: A/5

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|---|
| 1-3 | -- | -- | Not Used |
| 4 | 0.5 TN | 2761 | Low Reference |
| 5 | 0.35 GY/BK | 6272 | Low Reference |
| 6 | 0.5 TN | 1744 | Fuel Injector 1 Control |
| 7 | 0.5 YE/BK | 846 | Fuel Injector 6 Control |
| 8 | 0.5 TN/WH | 845 | Fuel Injector 5 Control |
| 9 | 0.5 BN | 2129 | Low Reference |
| 10 | 0.5 L-BU/BK | 844 | Fuel Injector 4 Control |
| 11 | 0.5 PK/BK | 1746 | Fuel Injector 3 Control |
| 12 | 0.5 L-GN/BK | 1745 | Fuel Injector 2 Control |
| 13 | 0.5 GY | 2704 | 5-Volt Reference 1 |
| 14-15 | -- | -- | Not Used |
| 16 | 0.5 YE | 581 | Throttle Actuator Control Motor Control - 1 |
| 17-19 | -- | -- | Not Used |
| 20 | 0.35 BN | 6266 | Low Reference |
| 21 | -- | -- | Not Used |
| 22 | 0.5 PU | 2121 | Ignition Coil 1 Control |
| 23 | 0.5 L-BU | 2123 | Ignition Coil 3 Control |
| 24 | 0.5 OG/WH | 2122 | Ignition Coil 2 Control |
| 25-29 | -- | -- | Not Used |
| 30 | 0.5 D-GN/WH | 428 | Evaporative Emission (EVAP) Canister Purge Solenoid Control |

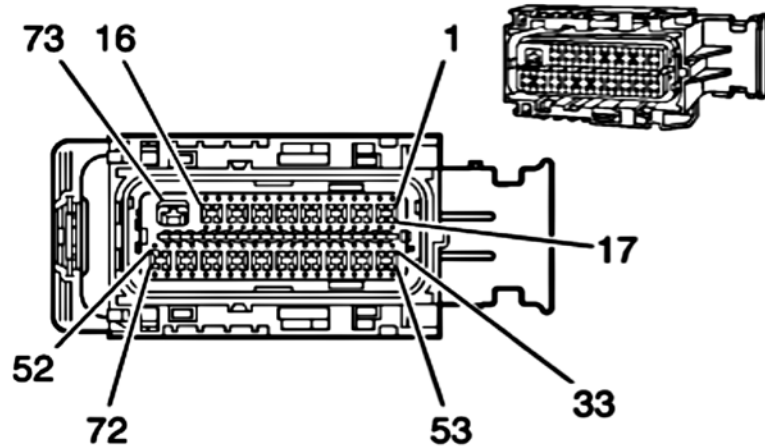
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Engine Control Module (ECM) X2 (LU3) (cont d)

| Pin | Wire | Circuit | Function |
|-----|--------------|---------|---|
| 32 | 0.5 BN | 582 | Throttle Actuator Control Motor Control - 2 |
| 33 | 0.35 D-BU | 6259 | 5-Volt Reference 1 |
| 34 | -- | -- | Not Used |
| 35 | 0.35 GY | 2705 | 5-Volt Reference 1 |
| 36 | 0.35 TN/WH | 331 | Oil Pressure Sensor Signal |
| 37 | 0.8 PU/WH | 1665 | Heated Oxygen Sensor (HO2S) High Signal - Bank 1 Sensor 1 |
| 38 | 0.8 PU | 1666 | Heated Oxygen Sensor (HO2S) High Signal - Bank 2 Sensor 1 |
| 39 | 0.5 L-GN | 432 | Manifold Absolute Pressure (MAP) Sensor Signal |
| 40 | 0.35 TN | 2752 | Low Reference |
| 41 | 0.35 BK | 2755 | Low Reference |
| 42 | -- | -- | Not Used |
| 43 | 0.5 GY | 23 | Generator Field Duty Cycle Signal |
| 44 | -- | -- | Not Used |
| 45 | 0.35 WH/BK | 6271 | Crankshaft Position (CKP) Sensor Signal |
| 46 | 0.35 D-BU/WH | 6265 | Camshaft Position (CMP) Sensor Signal |
| 47 | -- | -- | Not Used |
| 48 | 0.8 TN | 1664 | Heated Oxygen Sensor (HO2S) Low Signal - Bank 1 Sensor 1 |
| 49 | 0.5 OG/BK | 469 | Low Reference |

| 50 | 0.5 GY | 1716 | Knock Sensor (KS) 1 Signal |
|-------|------------|---------|--|
| Pin | Wire | Circuit | Function |
| 51 | 0.5 D-BU | 496 | Knock Sensor (KS) 1 Signal |
| 52 | -- | -- | Not Used |
| 53 | 0.35 GY | 2701 | 5-Volt Reference 2 |
| 54 | 0.35 PU/WH | 6270 | 5-Volt Reference 2 |
| 55-56 | -- | -- | Not Used |
| 57 | 0.35 D-GN | 485 | Throttle Position (TP) Sensor 1 Signal |
| 58 | 0.5 YE | 410 | Engine Coolant Temperature (ECT) Sensor Signal |
| 59 | 0.35 PU | 486 | Throttle Position (TP) Sensor 2 Signal |
| 60-64 | -- | -- | Not Used |
| 65 | 0.8 GY/WH | 3113 | Heated Oxygen Sensor (HO2S) Heater Low Control - Bank 1 Sensor 1 |
| 66 | 0.8 L-GN | 3212 | Heated Oxygen Sensor (HO2S) Heater Low Control - Bank 2 Sensor 1 |
| 67 | -- | -- | Not Used |
| 68 | 0.8 TN | 1667 | Heated Oxygen Sensor (HO2S) Low Signal - Bank 2 Sensor 1 |
| 69 | -- | -- | Not Used |
| 70 | 0.5 GY | 2303 | Knock Sensor (KS) 2 Signal |
| 71 | 0.5 L-BU | 1876 | Knock Sensor (KS) 2 Signal |

Engine Control Module (ECM) X1 (LC8, LMF, L20, or L96)



Connector Part Information

Harness Type: Engine
 OEM Connector: 13580802
 Service Connector: 88988931
 Description: 73-Way F MX123 34566 Series (BK)

Terminal Part Information

Pins: 1, 9-13, 16, 18-20, 22-24, 27-34, 36-39, 41, 47, 49-50, 52, 56-57, 59, 61, 63-65, 68-69, 71
 Terminated Lead: Pins: 1, 12-13, 23, 29-30, 32, 34, 36, 50, 52, 56-57, 63, 68 - 13575811
 Terminated Lead: Pins: 9-11, 16, 18-20, 22, 24, 26-28, 31, 33, 37-39, 41-42, 47, 49, 54, 59, 61, 64-65, 69, 71 - 13575575
 Release Tool: J-38125-213
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: Pins: 1, 12, 13, 23, 29, 30, 32, 34, 36, 50, 52, 56, 57, 63, 68 - 33467-0003/23
 Terminal/Tray:Pins: 9-11, 16, 18-20, 22, 24, 26-28, 31, 33, 37-39, 41-42, 47, 49, 54, 59, 61, 64-65, 69, 71 - 33467-0005/23
 Core/Insulation Crimp :Pins: 1, 12, 13, 23, 29, 30, 32, 34, 36, 50, 52, 56, 57, 63, 68 - H/H
 Core/Insulation Crimp: Pins: 9, 16, 18-20, 24, 26-28, 31, 33, 47, 54, 59, 61, 71 - J/J
 Core/Insulation Crimp: Pins: 10-11, 22, 37-39, 41-42, 49, 64-65, 69, 71 - K/K

Pins: 73

Terminated Lead: Service by Harness - See Part Catalog
 Release Tool: J-38125-11A
 Diagnostic Test Probe: J-35616-35 (VT)
 Terminal/Tray: 7116-4152-02/9
 Core/Insulation Crimp: A/5

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|---|
| 1 | 0.5 OG/BK | 1786 | Park/Neutral Signal |
| 2-8 | -- | -- | Not Used |
| 9 | 0.5 L-BU/WH | 6311 | Torque Converter Clutch (TCC) Brake Signal |
| 10 | 0.8 PU/WH | 1668 | Heated Oxygen Sensor (HO2S) High Signal - Bank 1 Sensor 2 |
| 11 | 0.8 TN/WH | 1669 | Heated Oxygen Sensor (HO2S) Low Signal - Bank 1 Sensor 2 |
| 12 | 0.35 OG/BK | 380 | A/C Refrigerant Pressure Sensor Signal (C60) |
| 13 | 0.35 TN | 5514 | Low Reference (C60) |
| 14-15 | -- | -- | Not Used |
| 16 | 0.5 PU | 1589 | Fuel Level Sensor Signal - Primary |
| 17 | -- | -- | Not Used |
| 18 | 0.5 D-BU | 5985 | Accessory Wakeup Serial Data |
| 19 | 0.5 PK | 439 | Ignition Voltage |
| 20 | 0.5 RD/WH | 440 | Battery Positive Voltage |
| 21 | -- | -- | Not Used |
| 22 | 0.8 L-BU/BK | 6813 | Low Reference |
| 23 | 0.35 PU | 1272 | Low Reference |
| 24 | 0.5 D-GN | 890 | Fuel Tank Pressure Sensor Signal |
| 25 | -- | -- | Not Used |
| 26 | 0.5 YE | 5361 | Brake Apply Sensor Signal |

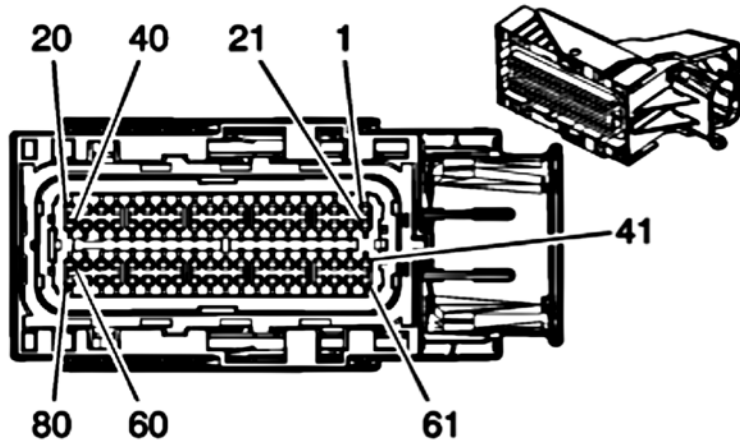
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Engine Control Module (ECM) X1 (L20, LMF or L96) (cont d)

| Pin | Wire | Circuit | Function |
|-------|-----------|---------|--|
| 27 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 28 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 29 | 0.35 D-BU | 1161 | Accelerator Pedal Position (APP) Sensor 1 Signal |
| 30 | 0.35 BN | 1271 | Low Reference |
| 31 | 0.5 TN/BK | 2759 | Low Reference (L20 or L96) |
| | 0.5 TN/BK | 6049 | Low Reference (LMF) |
| 32 | 0.35 L-BU | 1162 | Accelerator Pedal Position (APP) Sensor 2 Signal |
| 33 | 0.5 GY | 2709 | 5-Volt Reference 1 |
| 34 | 0.35 GY | 2700 | 5-Volt Reference 1 (C60) |
| 35 | -- | -- | Not Used |
| 36 | 0.35 TN | 1274 | 5-Volt Reference 1 |
| 37 | 0.5 TN/WH | 472 | Intake Air Temperature (IAT) Sensor Signal |
| 38 | 0.8 TN | 2760 | Low Reference |
| 39 | 0.8 L-GN | 2032 | Engine Coolant Temperature (ECT) Sensor Signal |
| 40 | -- | -- | Not Used |
| 41 | 0.8 YE | 492 | Mass Air Flow (MAF) Sensor Signal |
| 42 | 0.5 BN | 5360 | Brake Apply Sensor Low Reference |
| 43-46 | -- | -- | Not Used |
| 47 | 0.5 PK | 1339 | Ignition Voltage |
| 48 | -- | -- | Not Used |
| 49 | 0.8 TN | 1671 | Heated Oxygen Sensor (HO2S) Low Signal - Bank 2 Sensor 2 |

| 50 | 0.35 D-GN/WH | 465 | Fuel Pump Relay Control - Primary |
|-------|--------------|---------|--|
| Pin | Wire | Circuit | Function |
| 51 | -- | -- | Not Used |
| 52 | 0.35 YE/BK | 625 | Starter Enable Relay Control |
| 53 | -- | -- | Not Used |
| 54 | 0.5 WH | 5359 | Brake Apply Sensor Supply Voltage |
| 55 | -- | -- | Not Used |
| 56 | 0.35 WH/BK | 1164 | 5-Volt Reference 2 |
| 57 | 0.35 YE/BK | 1827 | Vehicle Speed Signal |
| 58 | -- | -- | Not Used |
| 59 | 0.5 YE | 5991 | Powertrain Relay Control |
| 60 | -- | -- | Not Used |
| 61 | 0.5 WH | 1310 | Evaporative Emission (EVAP) Canister Vent Solenoid Control |
| 62 | -- | -- | Not Used |
| 63 | 0.35 D-GN/WH | 459 | A/C Compressor Clutch Relay Control (C60) |
| 64 | 0.8 OG/WH | 3223 | Heated Oxygen Sensor (HO2S) Heater Low Control - Bank 2 Sensor 2 |
| 65 | 0.8 GY/WH | 3122 | Heated Oxygen Sensor (HO2S) Heater Low Control - Bank 1 Sensor 2 |
| 66-67 | -- | -- | Not Used |
| 68 | 0.35 BN/WH | 419 | MIL Control |
| 69 | 0.8 PU | 1670 | Heated Oxygen Sensor (HO2S) High Signal - Bank 2 Sensor 2 |
| 70 | -- | -- | Not Used |
| 71 | 0.5 OG/BK | 6399 | Replicated TOS Signal |

Engine Control Module (ECM) X2 (LC8, LMF, L20, or L96)



Connector Part Information

Harness Type: Engine
 OEM Connector: 13536319
 Service Connector: 19115670
 Description: 80-Way F MX123 34566 Series (GY)

Terminal Part Information

Pins: 2, 5-6, 8, 12-13, 16-22, 26-27, 29-30, 32, 34, 37-41, 43-44, 50, 52-53, 56-61, 64, 66, 68-79
 Terminated Lead: 13575575
 Release Tool: J-38125-213
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: 33467-0005/23
 Core/Insulation Crimp: Pins: 2, 12-13, 16, 21-22, 26-27, 29-30, 34, 41, 43-44, 50, 52-53, 56-60, 64, 66, 68-79 - K/K
 Core/Insulation Crimp: Pins: 5-6, 8, 17-20, 32, 37-40, 61 - J/J
 Pins: 3, 35, 63, 65
 Terminated Lead: 13575811
 Release Tool: J-38125-213
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: 33467-0003/23
 Core/Insulation Crimp: H/H

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|--|
| 1 | -- | -- | Not Used |
| 2 | 0.35 PU/WH | 6270 | 5-Volt Reference 2 |
| 3 | 0.35 GY | 2701 | 5-Volt Reference 2 |
| 4 | -- | -- | Not Used |
| 5 | 0.5 BN | 582 | Throttle Actuator Control Motor Control - 2 |
| 6 | 0.5 YE | 581 | Throttle Actuator Control Motor Control - 1 |
| 7 | -- | -- | Not Used |
| 8 | 0.5 D-GN/WH | 428 | Evaporative Emission (EVAP) Canister Purge Solenoid Control |
| 9-11 | -- | -- | Not Used |
| 12 | 0.8 GY/WH | 3113 | Heated Oxygen Sensor (HO2S) Heater Low Control - Bank 1 Sensor 1 |
| 13 | 0.8 L-GN | 3212 | Heated Oxygen Sensor (HO2S) Heater Low Control - Bank 2 Sensor 1 |
| 14-15 | -- | -- | Not Used |
| 16 | 0.8 PU | 5284 | Camshaft Phaser Intake Solenoid (1) (L96) |
| 17 | 0.5 D-BU/WH | 878 | Fuel Injector 8 Control |
| 18 | 0.5 TN/WH | 845 | Fuel Injector 5 Control |
| 19 | 0.5 YE/BK | 846 | Fuel Injector 6 Control |
| 20 | 0.5 TN | 1744 | Fuel Injector 1 Control |
| 21 | 0.5 YE | 410 | Engine Coolant Temperature (ECT) Sensor Signal |
| 22 | 0.5 TN | 2761 | Low Reference |
| 23-25 | -- | -- | Not Used |
| 26 | 0.8 D-BU | 496 | Knock Sensor (KS) 1 Signal |
| 27 | 0.8 GY | 1716 | Knock Sensor (KS) 1 Signal |

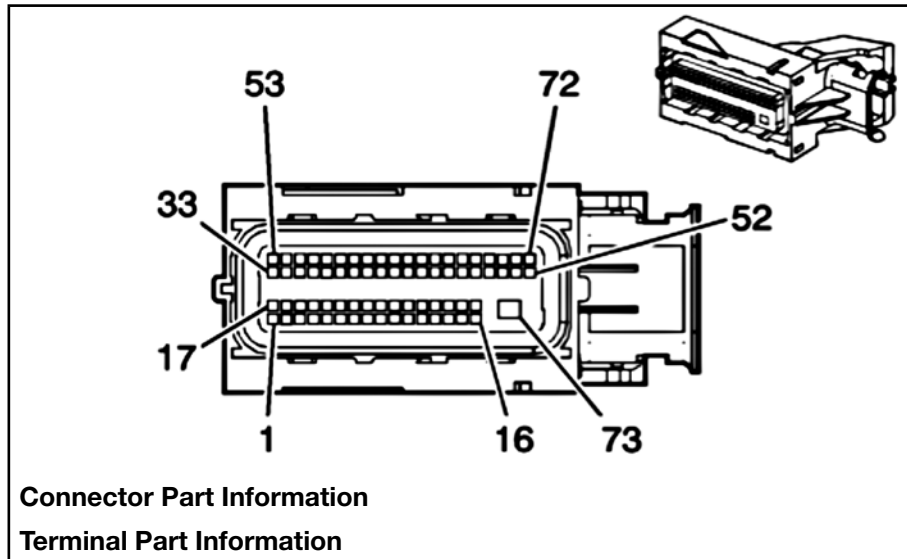
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Engine Control Module (ECM) X2 (LC8, LMF, L20, or L96) (cont d)

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|---|
| 28 | -- | -- | Not Used |
| 29 | 0.8 L-BU | 1876 | Knock Sensor (KS) 2 Signal |
| 30 | 0.8 GY | 2303 | Knock Sensor (KS) 2 Signal |
| 31 | -- | -- | Not Used |
| 32 | 0.5 GY | 23 | Generator Field Duty Cycle Signal |
| 33 | -- | -- | Not Used |
| 34 | 0.35 BK | 2755 | Low Reference |
| 35 | 0.35 TN | 2752 | Low Reference |
| 36 | -- | -- | Not Used |
| 37 | 0.5 L-GN/BK | 1745 | Fuel Injector 2 Control |
| 38 | 0.5 PK/BK | 1746 | Fuel Injector 3 Control |
| 39 | 0.5 L-BU/BK | 844 | Fuel Injector 4 Control |
| 40 | 0.5 OG/BK | 877 | Fuel Injector 7 Control |
| 41 | 0.35 GY | 2705 | 5-Volt Reference 1 |
| 42 | -- | -- | Not Used |
| 43 | 0.35 GY | 2704 | 5-Volt Reference 1 |
| 44 | 0.35 D-BU | 6259 | 5-Volt Reference 1 |
| 45-49 | -- | -- | Not Used |
| 50 | 0.35 TN/WH | 331 | Oil Pressure Sensor Signal |
| 51 | -- | -- | Not Used |
| 52 | 0.8 TN | 2199 | Low Reference (L96) |
| 53 | 0.35 OG/BK | 469 | Low Reference |
| 54-55 | -- | -- | Not Used |
| 56 | 0.8 TN | 1664 | Heated Oxygen Sensor (HO2S) Low Signal - Bank 1 Sensor 1 |
| 57 | 0.8 PU/WH | 1665 | Heated Oxygen Sensor (HO2S) High Signal - Bank 1 Sensor 1 |

| Pin | Wire | Circuit | Function |
|-----|--------------|---------|---|
| 58 | 0.35 L-GN | 432 | Manifold Absolute Pressure (MAP) Sensor Signal |
| 59 | 0.8 PU | 1666 | Heated Oxygen Sensor (HO2S) High Signal - Bank 2 Sensor 1 |
| 60 | 0.8 TN | 1667 | Heated Oxygen Sensor (HO2S) Low Signal - Bank 2 Sensor 1 |
| 61 | 0.5 OG | 225 | Generator Turn On Signal |
| 62 | -- | -- | Not Used |
| 63 | 0.35 PU | 486 | Throttle Position (TP) Sensor 2 Signal |
| 64 | 0.35 D-BU/WH | 6265 | Camshaft Position (CMP) Sensor Signal |
| 65 | 0.35 D-GN | 485 | Throttle Position (TP) Sensor 1 Signal |
| 66 | 0.35 BN | 6266 | Low Reference |
| 67 | -- | -- | Not Used |
| 68 | 0.35 WH/BK | 6271 | Crankshaft Position (CKP) Sensor Signal |
| 69 | 0.35 GY/BK | 6272 | Low Reference |
| 70 | 0.8 PU | 2121 | Ignition Coil 1 Control |
| 71 | 0.8 PU/WH | 2128 | Ignition Coil 8 Control |
| 72 | 0.8 OG | 2127 | Ignition Coil 7 Control |
| 73 | 0.8 OG/WH | 2122 | Ignition Coil 2 Control |
| 74 | 0.8 L-BU/WH | 2126 | Ignition Coil 6 Control |
| 75 | 0.8 D-GN | 2125 | Ignition Coil 5 Control |
| 76 | 0.8 D-GN/WH | 2124 | Ignition Coil 4 Control |
| 77 | 0.8 L-BU | 2123 | Ignition Coil 3 Control |
| 78 | 0.8 BN | 2129 | Low Reference |
| 79 | 0.8 BN/WH | 2130 | Low Reference |
| 80 | -- | -- | Not Used |

Engine Control Module (ECM) X1 (LGH)



| Pin | Wire | Circuit | Function |
|-------|-------------|---------|--|
| 1 | 0.8 BN/WH | 3100 | DEF Dosing Valve Low Control |
| 2 | 0.8 BN | 3099 | DEF Dosing Valve High Control |
| 3 | 0.5 D-BU | 3105 | DEF Smart Pump Control |
| 4 | 0.5 D-GN/WH | 465 | Fuel Pump Primary Relay Control |
| 5 | 0.5 YE/BK | 625 | Starter Enable Relay Control |
| 6 | 0.8 D-GN | 3101 | DEF Reverting Valve High Control |
| 7 | 0.5 BN/WH | 6783 | Low Reference |
| 8 | -- | -- | Not Available |
| 9 | 0.5 L-BU/WH | 6311 | Cruise/ETC/TCC Brake Signal |
| 10-13 | -- | -- | Not Available |
| 14 | 0.5 GY | 2365 | 5 Volt Reference |
| 15 | 0.5 GY/BK | 2931 | Low Reference |
| 16 | 0.5 L-BU/WH | 6288 | Low Reference |
| 17 | 0.5 BN/WH | 419 | Check Engine Indicator Control |
| 18 | 0.5 PU | 2927 | Hydrocarbon Injector Low Control |
| 19 | 0.5 WH/BK | 2366 | Cooling Fan Control Relay Speed Signal |
| 20 | 0.5 D-BU | 507 | Wait To Start Indicator Control |
| 21 | 0.5 WH/BK | 2366 | Cooling Fan Control Relay Speed Signal |
| 22 | 0.5 TN | 3657 | Low Reference |
| 23-24 | -- | -- | Not Available |
| 25 | 0.5 OG/BK | 1786 | Transmission Park/Neutral Signal |
| 26 | 0.5 D-BU | 5985 | Accessory Wakeup Serial Data |
| 27 | 0.5 TN | 3661 | Low Reference |
| 28 | 0.5 TN | 2759 | Low Reference |
| 29 | 0.5 BN | 3108 | DEF Pressure Sensor Signal |
| 30 | 0.5 GY | 3106 | 5 Volt Reference |
| 31 | 0.5 TN | 3107 | Low Reference |

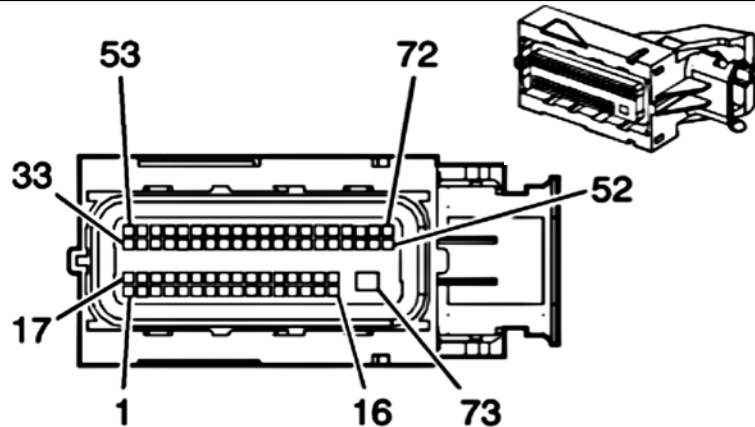
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Engine Control Module (ECM) X1 (LGH) (cont d)

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|---|
| 32 | -- | -- | Not Available |
| 33 | 0.5 D-BU | 2926 | Hydrocarbon Injector High Control |
| 34 | 0.5 D-GN/WH | 459 | A/C Compressor Clutch Relay Control |
| 35 | 0.5 TN | 3104 | Low Reference |
| 36 | 0.5 TN | 5514 | Low Reference |
| 37 | -- | -- | Not Available |
| 38 | 0.5 L-BU | 5377 | Exhaust Gas Temperature Sensor 2 Signal |
| 39 | 0.5 L-BU | 1162 | Accelerator Pedal Position Signal 2 |
| 40 | 0.5 TN/BK | 6289 | Induction Air Temperature Sensor Signal |
| 41 | 0.5 D-BU | 6053 | Exhaust Pressure Sensor Signal 1 |
| 42 | 0.5 WH/BK | 1164 | 5 Volt Reference |
| 43 | 0.5 GY | 6054 | 5 Volt Reference |
| 44 | 0.5 YE | 6055 | Low Reference |
| 45 | 0.5 L-GN | 7494 | High Speed GMLAN Serial Data (-) (3) |
| 46 | 0.5 TN | 2501 | High Speed GMLAN Serial Data (-) (1) |
| 47 | -- | -- | Not Available |
| 48 | 0.5 PK | 439 | Run/Crank Ignition 1 Voltage |
| 49 | 0.5 YE | 492 | Mass Air Flow Sensor Signal |
| 50 | 0.8 OG | 225 | Generator Turn On Signal |
| 51 | 0.5 PU | 1272 | Low Reference |
| 52 | -- | -- | Not Available |

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|---|
| 53 | 0.8 BK | 3102 | DEF Reverting Valve Low Control |
| 54 | 0.5 GY | 3103 | DEF Smart Pump Supply Voltage |
| 55 | 0.5 BN | 1271 | Low Reference |
| 56 | 0.5 D-BU/WH | 3660 | Exhaust Gas Temperature Sensor 4 Signal |
| 57 | 0.5 L-GN | 5378 | Exhaust Gas Temperature Sensor 3 Signal |
| 58 | 0.5 PU | 1589 | Primary Fuel Level Sensor Signal |
| 59 | 0.5 OG/BK | 380 | A/C Refrigerant Pressure Sensor Signal |
| 60 | -- | -- | Not Available |
| 61 | 0.5 D-BU | 1161 | Accelerator Pedal Position Signal 1 |
| 62 | 0.5 TN | 1274 | 5 Volt Reference |
| 63 | 0.5 GY | 2700 | 5 Volt Reference |
| 64 | -- | -- | Not Available |
| 65 | 0.5 D-GN | 7493 | High Speed GMLAN Serial Data (+) (3) |
| 66 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data (+) (1) |
| 67 | 0.5 RD/WH | 440 | Battery Positive Voltage |
| 68 | 0.5 YE | 5991 | Powertrain Relay Coil Control |
| 69 | 0.5 D-BU | 2364 | Cooling Fan Speed Signal |
| 70 | 0.8 GY | 23 | Generator Field Duty Cycle Signal |
| 71 | 0.5 BN/WH | 6141 | Low Reference |
| 72 | 0.5 OG/BK | 6399 | Replicated TOS Signal |

Engine Control Module (ECM) X2 (LGH)



Connector Part Information

Harness Type: Engine
 OEM Connector: 12603596
 Service Connector: 13574947
 Description: 73-Way F MX123 34566 Series (BK)

Terminal Part Information

Pins: 3-10, 13-19, 21-22, 25, 27, 29-32, 41, 47, 66-67
 Terminated Lead: 13575575
 Release Tool: J-38125-213
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: 33467-0005/23
 Core/Insulation Crimp: Pins: 3, 5-10, 22, 25, 27, 41, 47, 66-67 - J/J
 Core/Insulation Crimp: Pins: 4, 13-19, 21, 29-32 - K/K
 Pins: 73
 Terminated Lead: Pending
 Release Tool: J-38125-11A
 Diagnostic Test Probe: J-35616-35 (VT)
 Terminal/Tray: 7116-4152-02/9
 Core/Insulation Crimp: A/5

| Pin | Wire | Circuit | Function |
|-----|------|---------|---------------|
| 1-2 | -- | -- | Not Available |

| Pin | Wire | Circuit | Function |
|-------|-----------|---------|--|
| 3 | 0.5 YE | 2928 | Fuel Metering Valve High Control |
| 4 | 0.8 PU/WH | 2530 | Fuel Rail Pressure Solenoid Supply Voltage |
| 5 | 0.5 BK | 2929 | Fuel Metering Valve Low Control |
| 6 | 0.5 WH | 5931 | Variable Nozzle Turbo Solenoid Low Signal |
| 7 | 0.5 TN | 2752 | Low Reference |
| 8 | 0.5 TN | 2753 | Low Reference |
| 9 | 0.5 BN | 1174 | Oil Level Switch Signal |
| 10 | 0.5 BN | 6782 | Low Reference |
| 11-12 | -- | -- | Not Available |
| 13 | 0.8 BN/WH | 4901 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1 |
| 14 | 0.8 TN/WH | 4907 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 7 |
| 15 | 0.8 L-BU | 4804 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 4 |
| 16 | 0.8 BN | 4801 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 1 |
| 17 | 0.8 BK/WH | 451 | Ground |
| 18 | 0.8 BK/WH | 451 | Ground |
| 19 | 0.8 YE | 2834 | Low Reference |
| 20 | -- | -- | Not Available |
| 21 | 0.8 BK/WH | 451 | Ground |
| 22 | 0.5 D-BU | 5930 | Variable Nozzle Turbo Solenoid High Signal |
| 23-24 | -- | -- | Not Available |
| 25 | 0.5 OG/BK | 5929 | Low Reference |
| 26 | -- | -- | Not Available |
| 27 | 0.5 YE/BK | 1827 | Vehicle Speed Signal |

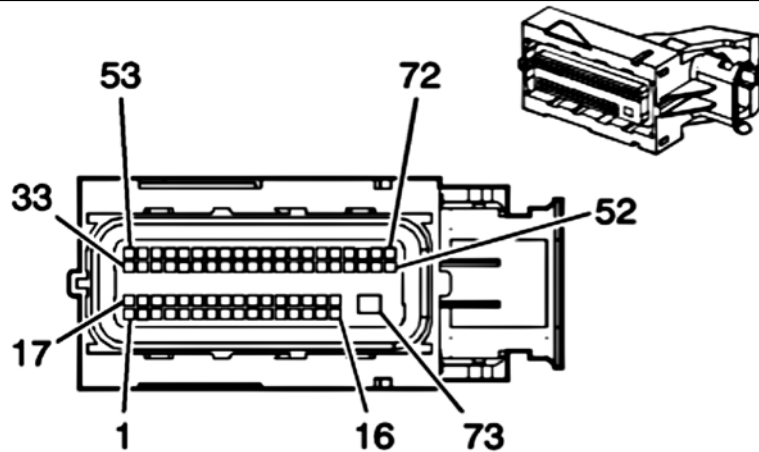
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Engine Control Module (ECM) X2 (LGH) (cont d)

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|--|
| 29 | 0.8 L-BU/WH | 4904 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4 |
| 30 | 0.8 PU/WH | 4906 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6 |
| 31 | 0.8 TN | 4807 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 7 |
| 32 | 0.8 PU | 4806 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 6 |
| 33-40 | -- | -- | Not Available |

| 41 | 0.5 BK | 2755 | Low Reference |
|-------|-----------|---------|---|
| Pin | Wire | Circuit | Function |
| 42-46 | -- | -- | Not Available |
| 47 | 0.5 GY | 2702 | 5 Volt Reference |
| 48-65 | -- | -- | Not Available |
| 66 | 0.5 TN | 5928 | Variable Nozzle Turbo Position Sensor Voltage Reference |
| 67 | 0.5 PU/WH | 6270 | 5 Volt Reference |
| 68-72 | -- | -- | Not Available |
| 73 | 3 BK/WH | 451 | Ground |

Engine Control Module (ECM) X3 (LGH)



Connector Part Information

Harness Type: Engine Chassis
 OEM Connector: 12603597
 Service Connector: 13574948
 Description: 73-Way F MX123 34566 Series (GY)

Terminal Part Information

Pins: 2, 4, 6-7, 9-21, 24, 27-32, 36-38, 40, 44, 46, 48-52, 54-57, 60-61, 65-72
 Terminated Lead: 13575575
 Release Tool: J-38125-213
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: 33467-0005/23
 Core/Insulation Crimp: Pins: 2, 4, 6-7, 9-14, 15-21, 24, 27-32, 36-38, 40, 44, 46, 48, 54-55, 60-61, 65-68 - J/J
 Core/Insulation Crimp: Pins: 49-52, 56-57, 69-72 - K/K
 Pin 73
 Terminated Lead: Pending
 Release Tool: J-38125-11A
 Diagnostic Test Probe: J-35616-35 (VT)
 Terminal/Tray: 7116-4152-02/9
 Core/Insulation Crimp: A/5

| Pin | Wire | Circuit | Function |
|-----|-----------|---------|---|
| 1 | -- | -- | Not Available |
| 2 | 0.5 BU/YE | 6861 | Water In Fuel Sensor Signal |
| 3 | -- | -- | Not Available |
| 4 | 0.5 TN/WH | 331 | Oil Pressure Sensor Signal |
| 5 | 0.5 YE | 5361 | Brake Apply Sensor Signal |
| 6 | 0.5 PU/WH | 7584 | Exhaust Gas Recirculation Temperature Sensor 1 Supply Voltage |
| 7 | 0.5 D-BU | 7583 | Exhaust Gas Recirculation Temperature Sensor 2 Supply Voltage |
| 8 | -- | -- | Not Available |
| 9 | 0.5 BN/WH | 5763 | Exhaust Gas Recirculation Valve Sensor Signal |
| 10 | 0.5 YE | 5947 | Variable Nozzle Turbo Position Sensor Signal |
| 11 | 0.5 YE | 1578 | Fuel Temperature Signal |
| 12 | 0.5 BN | 3681 | Charge Air Cooler Outlet Temperature Sensor Signal |
| 13 | 0.5 TN | 3680 | Charge Air Cooler Outlet Temperature Sensor Return |
| 14 | 0.5 TN | 2917 | 5 Volt Reference |
| 15 | 0.5 WH | 5359 | Brake Apply Sensor Supply Voltage |
| 16 | 0.5 GY | 2704 | 5 Volt Reference |
| 17 | 0.5 D-BU | 6863 | Low Reference |
| 18 | 0.5 D-BU | 5277 | Exhaust Gas Temperature Sensor 1 Signal |
| 19 | 0.5 D-GN | 485 | Throttle Position Sensor Signal 1 |
| 20 | 0.5 YE | 2918 | Fuel Rail Pressure Sensor Signal |
| 21 | 0.5 L-GN | 432 | Manifold Absolute Pressure Sensor Signal |

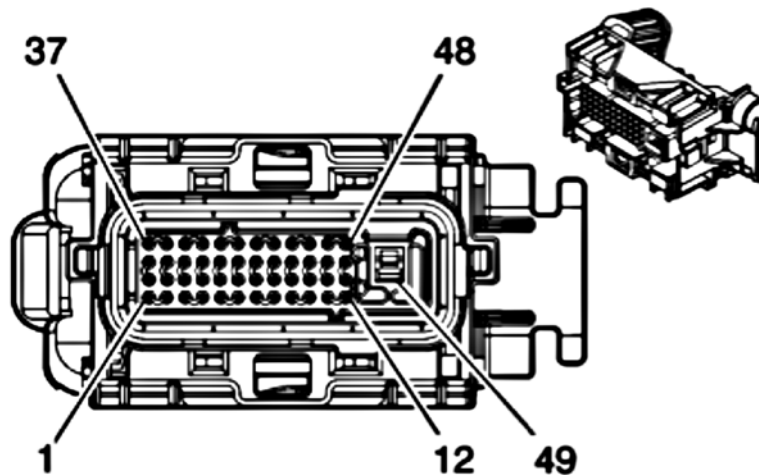
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Engine Control Module (ECM) X3 (LGH) (cont d)

| Pin | Wire | Circuit | Function |
|-------|-----------|---------|---|
| 24 | 0.5 YE | 410 | Engine Coolant Temperature Sensor Signal |
| 25-26 | -- | -- | Not Available |
| 27 | 0.5 BN/GY | 7072 | Sensor Fuel Temperature 1 Signal |
| 28 | 0.5 D-GN | 3683 | Charge Air Cooler Inlet Temperature Sensor Signal |
| 29 | 0.5 TN/BK | 3682 | Charge Air Cooler Inlet Temperature Sensor Return |
| 30 | 0.5 GY | 2705 | 5 Volt Reference |
| 31 | 0.5 D-BU | 6259 | 5 Volt Reference |
| 32 | 0.5 GY | 2701 | 5 Volt Reference |
| 33-35 | -- | -- | Not Available |
| 36 | 0.5 OG/BK | 2919 | Low Reference |
| 37 | 0.5 OG/BK | 469 | Low Reference |
| 38 | 0.5 BN | 5360 | Brake Apply Sensor Low Reference |
| 39 | -- | -- | Not Available |
| 40 | 0.5 TN | 2761 | Low Reference |
| 41-43 | -- | -- | Not Available |
| 44 | 0.5 GY/BK | 5765 | Fuel Filter Pressure Switch Signal |
| 45 | -- | -- | Not Available |
| 46 | 0.5 BN/WH | 7073 | Sensor Fuel Temperature 1 Return |
| 47 | -- | -- | Not Available |
| 48 | 0.5 BN | 6062 | Low Reference |
| 49 | 0.8 GY/WH | 4908 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 8 |

| 50 | 0.8 D-BU/WH | 4902 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2 |
|-------|-------------|---------|--|
| Pin | Wire | Circuit | Function |
| 51 | 0.8 D-BU | 4802 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 2 |
| 52 | 0.8 L-BU | 4805 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 5 |
| 53 | -- | -- | Not Available |
| 54 | 0.5 L-GN/BK | 5746 | Exhaust Gas Recirculation Valve Motor Low Signal |
| 55 | 0.5 OG/BK | 5764 | Exhaust Gas Recirculation Valve Motor High Signal |
| 56 | 0.8 BN | 582 | Throttle Actuator Control Close |
| 57 | 0.8 YE | 581 | Throttle Actuator Control Open |
| 58-59 | -- | -- | Not Available |
| 60 | 0.5 GY/BK | 6272 | Low Reference |
| 61 | 0.5 WH/BK | 6271 | CKP Sensor Signal |
| 62-64 | -- | -- | Not Available |
| 65 | 0.5 D-BU/WH | 6265 | CMP Sensor Signal |
| 66 | 0.5 BN | 6266 | Low Reference |
| 67 | 0.5 BN | 6274 | Low Reference |
| 68 | 0.5 WH | 6275 | Low Reference |
| 69 | 0.8 D-GN/WH | 4903 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3 |
| 70 | 0.8 L-GN/WH | 4905 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5 |
| 71 | 0.8 D-GN | 4803 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 3 |

Transmission Control Module (TCM) (M30)



Connector Part Information

Harness Type: Engine
 OEM Connector: 15463921
 Service Connector: 88987979
 Description: 49-Way F GT 280 Micro-Pack 64 Series, Sealed (BK)

Terminal Part Information

Pins: 1-3, 5-7, 11, 15-17, 19-20, 23, 25, 29-32, 35, 37-42, 45-46
 Terminated Lead: Pins: 1-2, 5-7, 11, 15-16, 19-20, 25, 31, 37-38, 41-42 - 13575528
 Terminated Lead: Pins: 3, 17, 23, 29-30, 32, 35, 39-40, 45-46 - Pending
 Release Tool: J-38125-21
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: 15359541/4
 Core/Insulation Crimp: M/M
 Pin 49
 Terminated Lead: 13575386
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-4A (PU)
 Terminal/Tray: 15392777/23
 Core/Insulation Crimp: D/5

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|---|
| 1 | 0.5 BN | 418 | Torque Converter Clutch Pulse Width Modulation (TCC PWM) Solenoid Valve Control |
| 2 | 0.5 L-GN | 1222 | Shift Solenoid A Valve Control |
| 3 | 0.5 OG/BK | 1230 | Automatic Transmission Input Speed Sensor (AT ISS) High Signal |
| 4 | -- | -- | Not Used |
| 5 | 0.5 OG/BK | 6399 | Replicated TOS Signal |
| 6 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 7 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 8-10 | -- | -- | Not Used |
| 11 | 0.5 D-BU | 5985 | Accessory Wakeup Serial Data |
| 12-14 | -- | -- | Not Used |
| 15 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 16 | 0.5 L-GN/BK | 822 | Vehicle Speed Sensor (VSS) Low Signal |
| 17 | 0.35 L-BU/WH | 1229 | PC Solenoid Valve Low Control (Sol. A) |
| 18 | -- | -- | Not Used |
| 19 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 20 | 0.5 YE/BK | 1223 | Shift Solenoid B Valve Control |
| 21-22 | -- | -- | Not Used |
| 23 | 0.35 GY | 773 | Transmission Range Switch Signal C |
| 24 | -- | -- | Not Used |

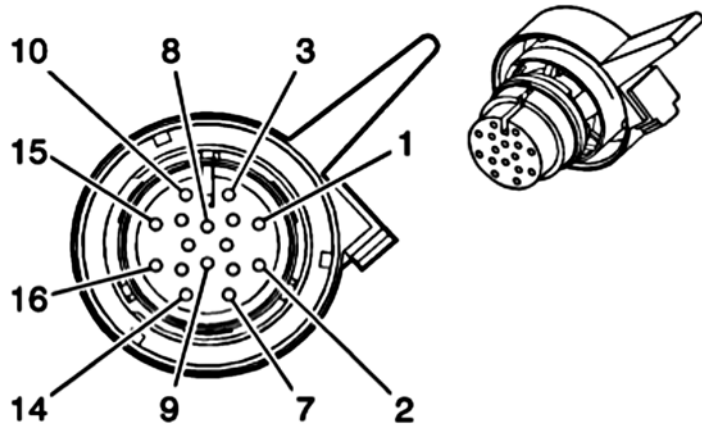
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Transmission Control Module (TCM) (M30) (cont d)

| Pin | Wire | Circuit | Function |
|-------|------------|---------|--|
| 26-28 | -- | -- | Not Used |
| 29 | 0.35 TN/WH | 771 | Transmission Range Switch Signal A |
| 30 | 0.35 TN | 452 | Low Reference |
| 31 | 0.5 PK | 2139 | Ignition Voltage |
| 32 | 0.35 RD/WH | 1840 | Battery Positive Voltage |
| 33-34 | -- | -- | Not Used |
| 35 | 0.35 YE/BK | 1227 | Transmission Fluid Temperature (TFT) Sensor Signal |
| 36 | -- | -- | Not Used |
| 37 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 38 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|--|
| 39 | 0.35 WH | 776 | Transmission Range Switch Signal P |
| 40 | 0.35 OG/BK | 1228 | PC Solenoid Valve High Control (Sol. A) |
| 41 | 0.5 PU/WH | 821 | Vehicle Speed Sensor (VSS) High Signal |
| 42 | 0.5 L-BU/WH | 6311 | Torque Converter Clutch (TCC) Brake Signal |
| 43-44 | -- | -- | Not Used |
| 45 | 0.35 D-BU/WH | 1231 | Low Reference |
| 46 | 0.35 YE | 772 | Transmission Range Switch Signal B |
| 47-48 | -- | -- | Not Used |

Control Solenoid Valve Assembly X1 (MYD)



Connector Part Information

Harness Type: Engine (L20 or L96)

Harness Type: Transmission Jumper (LGH)

OEM Connector: 15491328

Service Connector: 15131300

Description: 16-Way F 1.5 Series, Sealed (BK)

Terminal Part Information

Terminated Lead: 13578934

Release Tool: J-38125-28

Diagnostic Test Probe: J-35616-66 (YE)

Terminal/Tray: 2 21 24 47220 0/12

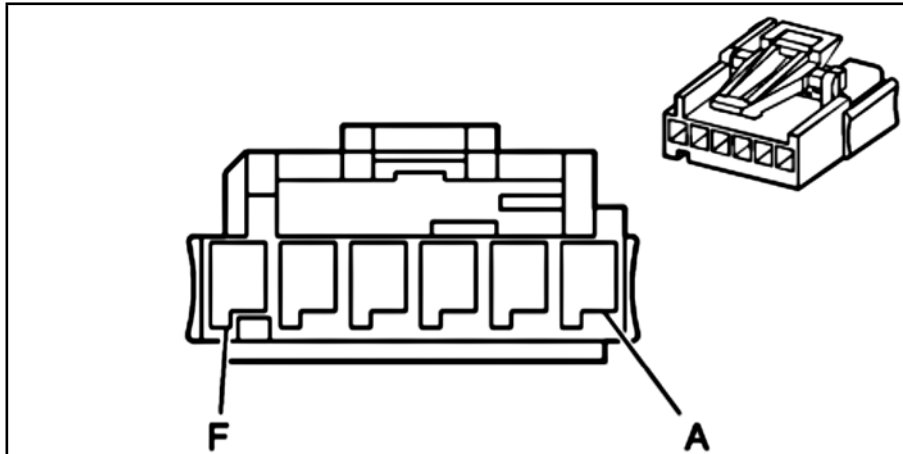
Core/Insulation Crimp: E/1

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|--------------------------------------|
| 6 | 0.5 L-BU/WH | 6311 | Brake Switch Signal |
| 7 | -- | -- | Not Used |
| 8 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 9 | 0.5 D-BU | 5985 | Accessory Wakeup Serial Data |
| 10 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 11 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 12 | 0.5 PK | 2139 | Ignition 1 Voltage |
| 13 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 14 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 15 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 16 | 0.5 OG/BK | 6399 | Replicated TOS Signal |

| Pin | Wire | Circuit | Function |
|-----|------------|---------|---------------------------------------|
| 1 | 0.35 RD/WH | 1840 | Battery Positive Voltage (LGH) |
| 2 | 0.8 BK/WH | 1551 | Ground (LGH) |
| 3 | 0.5 OG/BK | 1786 | Park/Neutral Signal |
| 4 | 0.35 RD/WH | 1840 | Battery Positive Voltage (L20 or L96) |
| 5 | 0.8 BK/WH | 1551 | Ground (L20 or L96) |

Control Solenoid Valve Assembly X2 (MYD)

| Pin | Wire | Circuit | Function |
|-----|------|---------|----------------------------|
| F | WH | -- | Park/Neutral Switch Signal |



Connector Part Information

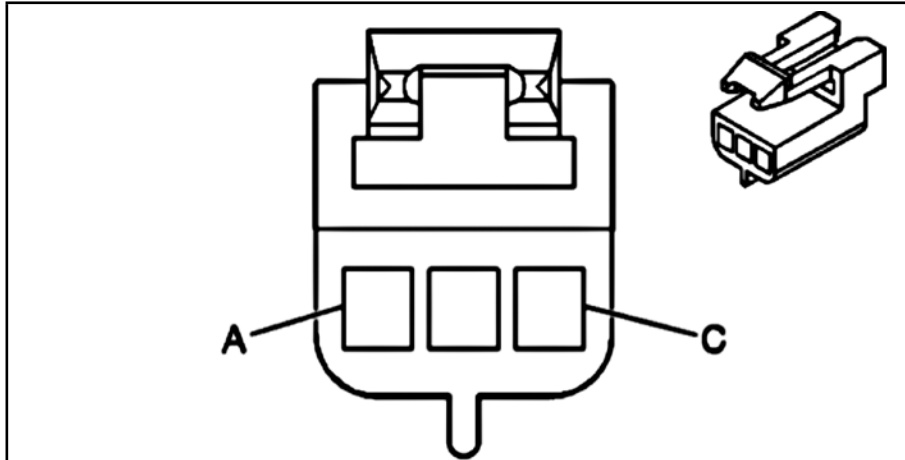
Harness Type: Automatic Transmission
 OEM Connector: 15336500
 Service Connector: 89046635
 Description: 6-Way F Metri-Pack 150.2 Series (GN)

Terminal Part Information

Terminated Lead: Service by Connector Assembly - 89046635
 Release Tool: Not Available
 Diagnostic Test Probe: Not Available
 Terminal/Tray: Not Available
 Core/Insulation Crimp: Not Available

| Pin | Wire | Circuit | Function |
|-----|------|---------|------------------------------------|
| A | GY | -- | Ground |
| B | BK | -- | Transmission Range Switch Signal P |
| C | YE | -- | Transmission Range Switch Signal C |
| D | RD | -- | Transmission Range Switch Signal B |
| E | GN | -- | Transmission Range Switch Signal A |

Control Solenoid Valve Assembly X3 (MYD)



Connector Part Information

Harness Type: Automatic Transmission

OEM Connector: 12064758

Service Connector: 12117320

Description: 3-Way F Metri-Pack 150 Series (BK)

Terminal Part Information

Terminated Lead: Service by Connector Assembly - 12117320

Release Tool: Not Available

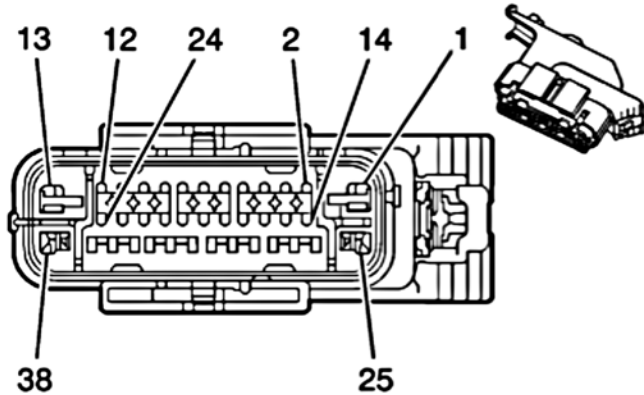
Diagnostic Test Probe: Not Available

Terminal/Tray: Not Available

Core/Insulation Crimp: Not Available

| Pin | Wire | Circuit | Function |
|-----|------|---------|----------------------------------|
| A | GN | -- | Input Speed Sensor (ISS) Signal |
| B | RD | -- | 8-Volt Reference |
| C | BK | -- | Output Speed Sensor (OSS) Signal |

Electronic Brake Control Module (EBCM) (JL4)



Connector Part Information

Harness Type: Chassis
 OEM Connector: 13528146
 Service Connector: 19178085
 Description: 38-Way F 2.8 Series, Sealed (BK)

Terminal Part Information

Pins: 1, 13
 Terminated Lead: 13578926
 Release Tool: J-38125-11A
 Diagnostic Test Probe: J-35616-42 (RD)
 Terminal/Tray: 7116-4142-02/10
 Core/Insulation Crimp: D/3

Pins: 2-9, 12, 16-17, 19-21, 23-24, 28-33, 36-37
 Terminated Lead: 13578883
 Release Tool: J-38125-215A
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: SAITS-A03T-M064/14
 Core/Insulation Crimp: 9/9

Pin: 25
 Terminated Lead: 13575408
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-4A (PU)
 Terminal/Tray: 15392777/23
 Core/Insulation Crimp: D/5

Pin: 38
 Terminated Lead: 13575403
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-4A (PU)
 Terminal/Tray: 13575403/19
 Core/Insulation Crimp: 4/5

| Pin | Wire | Circuit | Function |
|-------|-----------|---------|---------------------------------------|
| 1 | 5 BK | 2150 | Ground |
| 2 | 0.5 WH | 883 | Low Reference |
| 3 | 0.5 BN | 882 | Right Rear Wheel Speed Sensor Signal |
| 4 | 0.5 TN | 884 | Left Rear Wheel Speed Sensor Signal |
| 5 | 0.5 OG | 885 | Low Reference |
| 6 | 0.5 TN | 833 | Low Reference |
| 7 | 0.5 YE | 6046 | Steering Angle Sensor Phase A |
| 8 | 0.5 TN | 6048 | Steering Angle Sensor Phase C |
| 9 | 0.5 L-GN | 6043 | Steering Angle Sensor Signal |
| 10-11 | -- | -- | Not Used |
| 12 | 0.5 L-BU | 5986 | Serial Data Communication Enable |
| 13 | 5 RD/BK | 442 | Battery Positive Voltage |
| 14-15 | -- | -- | Not Used |
| 16 | 0.5 OG/BK | 6045 | Low Reference |
| 17 | 0.5 D-GN | 872 | Right Front Wheel Speed Sensor Signal |
| 18 | -- | -- | Not Used |
| 19 | 0.5 GY/BK | 1337 | 12-Volt Reference |
| 20 | 0.5 D-BU | 6047 | Steering Angle Sensor Phase B |
| 21 | 0.5 WH/BK | 6436 | CAN Bus Low Terminated Serial Data |
| 22 | -- | -- | Not Used |

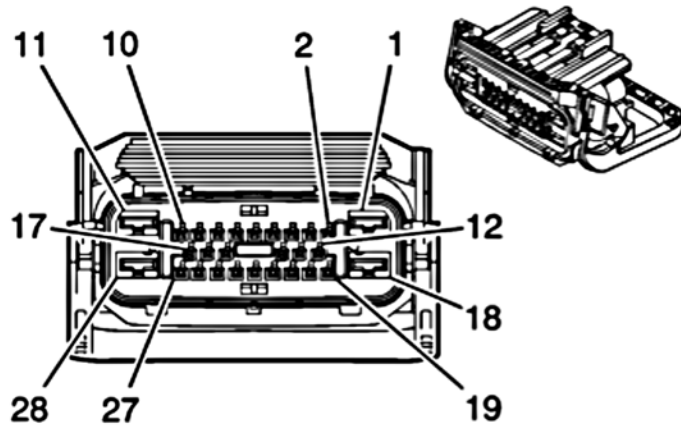
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Electronic Brake Control Module (EBCM) (JL4) (cont d)

| Pin | Wire | Circuit | Function |
|-------|-----------|---------|--------------------------------------|
| 23 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 24 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 25 | 3 BK | 2150 | Ground |
| 26-27 | -- | -- | Not Used |
| 28 | 0.5 L-BU | 830 | Left Front Wheel Speed Sensor Signal |
| 29 | 0.5 YE | 873 | Low Reference |
| 30 | 0.5 BK/PU | 7499 | Low Reference |

| Pin | Wire | Circuit | Function |
|-------|-----------|---------|--------------------------------------|
| 31 | 0.5 GY | 6044 | 5-Volt Reference |
| 32 | 0.5 YE/BK | 1827 | Vehicle Speed Signal |
| 33 | 0.5 BN/WH | 6437 | CAN Bus High Terminated Serial Data |
| 34-35 | -- | -- | Not Used |
| 36 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 37 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 38 | 3 RD/WH | 1640 | Battery Positive Voltage |

Electronic Brake Control Module (EBCM) (without JL4)



Connector Part Information

Harness Type: Chassis
 OEM Connector: 13628862
 Service Connector: 19149286
 Description: 28-Way F 0.64/6.3 Series, Sealed (BK)

Terminal Part Information

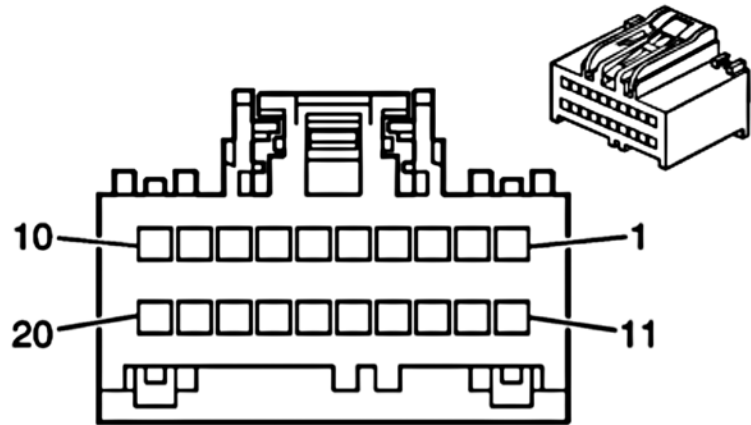
Pins: 1, 11, 18, 28
 Terminated Lead: Pins: 1, 11 - Pending
 Terminated Lead: Pins: 18, 28 - 13575383
 Release Tool: J-38125-11A
 Diagnostic Test Probe: J-35616-42 (RD)
 Terminal/Tray: 7116-4142-02/10
 Core/Insulation Crimp: Pins: 1, 11 - A/3
 Core/Insulation Crimp: Pins: 18, 28 - D/3

 Pins: 2-3, 12-13, 15-16, 19-20, 26-27
 Terminated Lead: 13575378
 Release Tool: J-38125-215A
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: SAITS-A03T-M064/14
 Core/Insulation Crimp: 9/9

| Pin | Wire | Circuit | Function |
|-------|-----------|---------|---------------------------------------|
| 2 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 3 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 4-10 | -- | -- | Not Used |
| 11 | 3 BK | 2150 | Ground |
| 12 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 13 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 14 | -- | -- | Not Used |
| 15 | 0.5 L-BU | 830 | Left Front Wheel Speed Sensor Signal |
| 16 | 0.5 YE | 873 | Low Reference |
| 17 | -- | -- | Not Used |
| 18 | 5 RD/BK | 442 | Battery Positive Voltage |
| 19 | 0.5 L-BU | 5986 | Serial Data Communication Enable |
| 20 | 0.5 YE/BK | 1827 | Vehicle Speed Signal |
| 21-25 | -- | -- | Not Used |
| 26 | 0.5 D-GN | 872 | Right Front Wheel Speed Sensor Signal |
| 27 | 0.5 TN | 833 | Low Reference |
| 28 | 5 BK | 2150 | Ground |

| Pin | Wire | Circuit | Function |
|-----|---------|---------|--------------------------|
| 1 | 3 RD/WH | 1640 | Battery Positive Voltage |

Instrument Panel Cluster (IPC)



Connector Part Information

Harness Type: Instrument Panel
 OEM Connector: 15489824
 Service Connector: 15126711
 Description: 20-Way F 64 Series (BK)

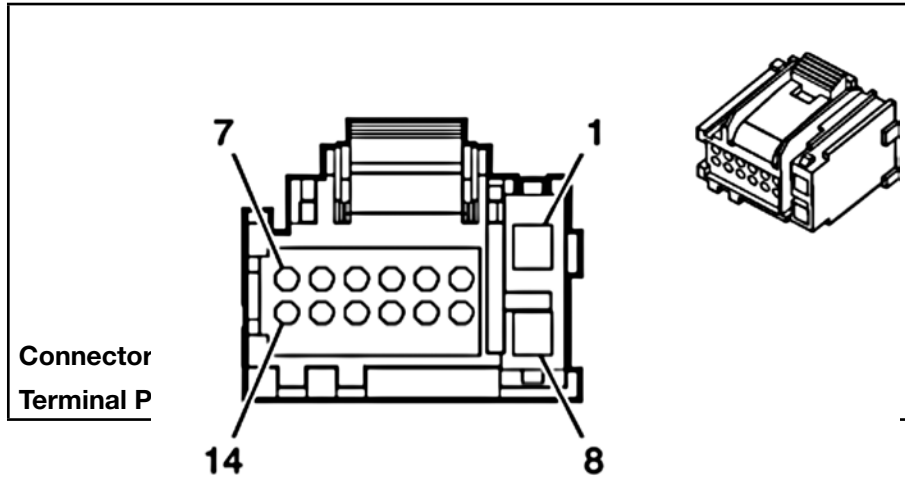
Terminal Part Information

Terminated Lead: 13575845
 Release Tool: J-38125-215A
 Diagnostic Test Probe: J-35616-64B (L-BU)
 Terminal/Tray: SAIT-A03T-M064/14
 Core/Insulation Crimp: P/P

| Pin | Wire | Circuit | Function |
|-----|--------------|---------|--|
| 6 | -- | -- | Not Used |
| 7 | 0.35 BK/WH | 351 | Ground |
| 8 | -- | -- | Not Used |
| 9 | 0.35 D-BU | 507 | Wait to Start Indicator Control (LMM or LGH) |
| 10 | 0.5 D-GN/WH | 636 | Ambient Air Temperature Sensor Signal (UFA) |
| 11 | 0.5 YE | 61 | Low Reference (UFA) |
| 12 | 0.35 D-BU | 2307 | Passenger Air Bag On Indicator Control (Light Duty without YF7) |
| 13 | 0.35 D-GN | 2308 | Passenger Air Bag Off Indicator Control (Light Duty without YF7) |
| 14 | 0.5 TN/WH | 33 | Brake Warning Indicator Control |
| 15 | 0.5 PU | 333 | Brake Fluid Level Sensor Signal |
| 16 | 0.35 PK | 893 | Driver Information Center (DIC) Select Menu Switch Signal |
| 17 | 0.35 D-GN/WH | 1358 | Driver Information Center (DIC) Switch Signal |
| 18 | 0.35 BN | 897 | Low Reference |
| 19 | 0.35 PK | 1639 | Ignition Voltage |
| 20 | 0.35 RD/WH | 2840 | Battery Positive Voltage |

| Pin | Wire | Circuit | Function |
|-----|------------|---------|--|
| 1 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |
| 2 | -- | -- | Not Used |
| 3 | 0.5 L-GN | 1478 | Coolant Level Switch Signal (LMM or LGH) |
| 4 | 0.35 BN/WH | 419 | MIL Control |
| 5 | 0.35 PU | 5234 | Passenger Seat Belt Indicator (Light Duty without YF7) |

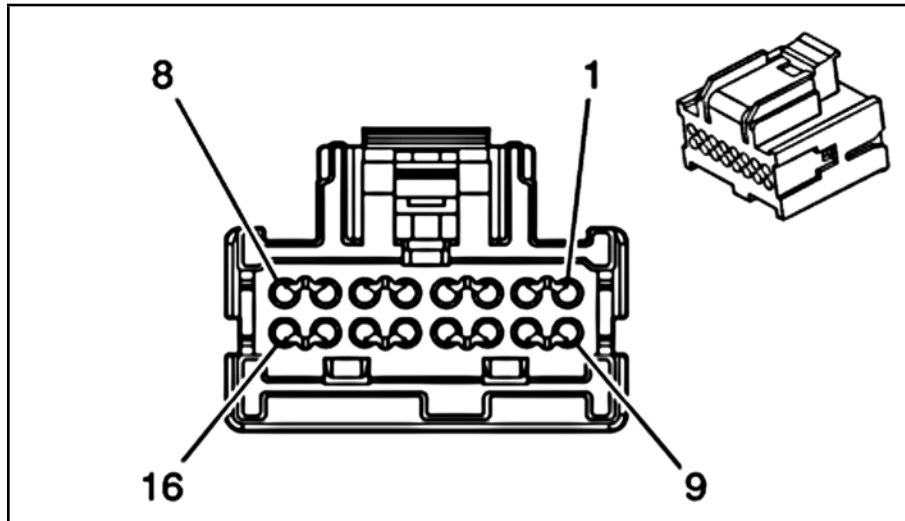
Radio X1



| Pin | Wire | Circuit | Function |
|-------|-----------|---------|---|
| 4-6 | -- | -- | Not Used |
| 7 | 0.35 YE | 6817 | LED Backlight Dimming Control |
| 8 | 1 BK/WH | 351 | Ground |
| 9 | 0.8 L-BU | 1957 | Left Front Midrange Speaker Output (-) |
| 10 | 0.8 D-GN | 1953 | Right Front Midrange Speaker Output (-) |
| 11-12 | -- | -- | Not Used |
| 13 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |
| 14 | -- | -- | Not Used |

| Pin | Wire | Circuit | Function |
|-----|----------|---------|---|
| 1 | 1 RD/WH | 340 | Battery Positive Voltage |
| 2 | 0.8 D-BU | 1857 | Left Front Midrange Speaker Output (+) |
| 3 | 0.8 OG | 1853 | Right Front Midrange Speaker Output (+) |

Radio X2



Connector Part Information

Harness: Instrument Panel
 OEM: 13567860
 Service: 13504130
 Description: 16-Way F Micro-Pack 0.64 Series (PU)

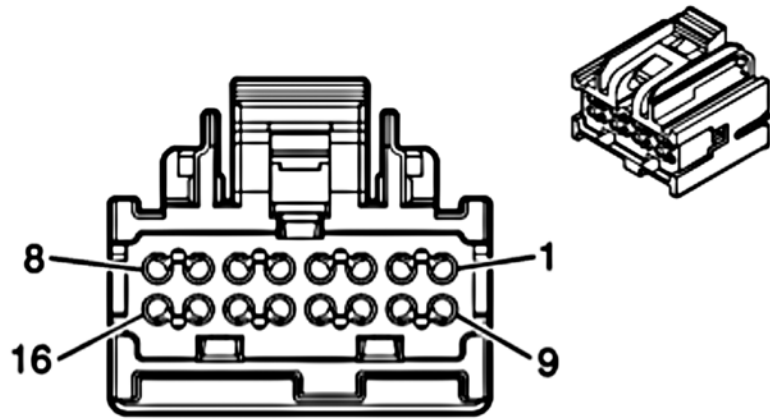
Terminal Part Information

Pins: 1-2, 5-7, 9-10, 13-15
 Terminal/Tray: 15359541/4
 Core/Insulation Crimp: M/M
 Release Tool/Test Probe: J-38125-21/J-35616-64B (L-BU)

| Pin | Wire | Circuit | Function |
|-------|-------------|---------|--|
| 7 | 0.8 D-BU | 658 | Cellular Telephone Voice Signal (UE1) |
| 8 | -- | -- | Not Used |
| 9 | 0.35 TN/WH | 372 | Left Audio Signal (-) (U2K) |
| 10 | 0.35 GY | 388 | Right Audio Signal (-) (U2K) |
| 11-12 | -- | -- | Not Used |
| 13 | 0.8 WH | 1959 | Left Rear Midrange Speaker Output (-) |
| 14 | 0.8 OG | 1955 | Right Rear Midrange Speaker Output (-) |
| 15 | 0.8 L-BU/BK | 659 | Low Reference (UE1) |
| 16 | -- | -- | Not Used |

| Pin | Wire | Circuit | Function |
|-----|--------------|---------|--|
| 1 | 0.35 BN/WH | 367 | Left Audio Signal (+) (U2K) |
| 2 | 0.35 D-GN/WH | 368 | Right Audio Signal (+) (U2K) |
| 3-4 | -- | -- | Not Used |
| 5 | 0.8 TN | 1859 | Left Rear Midrange Speaker Output (+) |
| 6 | 0.8 TN | 1855 | Right Rear Midrange Speaker Output (+) |

Digital Radio Receiver (U2K)



Connector Part Information

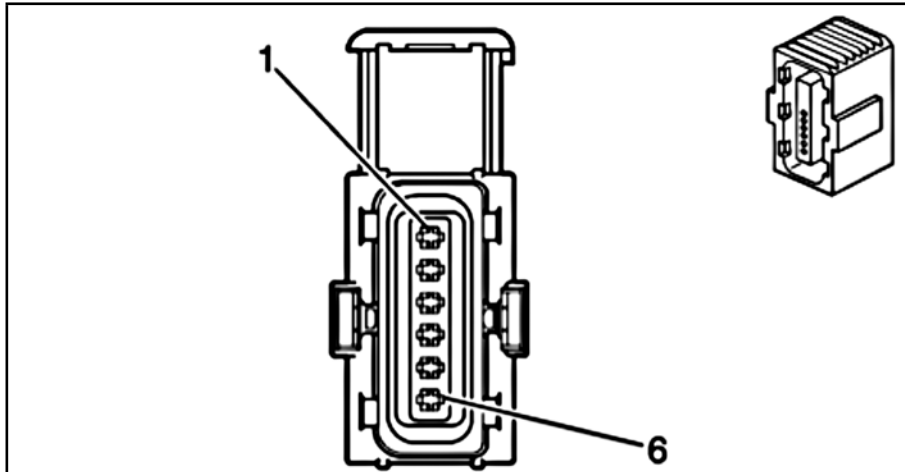
Harness: Instrument Panel
 OEM: 13568238
 Service: 13504130
 Description: 16-Way F Micro 64 Series Sealed (BK)

Terminal Part Information

Pins: 1-5, 9,16
 Terminal/Tray: 15359541/4
 Core/Insulation Crimp: M/M
 Release Tool/Test Probe: J-38125-21/J-35616-64B (L-BU)

| Pin | Wire | Circuit | Function |
|-------|------------------|---------|-----------------------------|
| 1 | 0.35 TN/WH | 372 | Left Audio Signal (-) |
| 2 | 0.35 BN/WH | 367 | Left Audio Signal (+) |
| 3 | 0.35 D-GN/ WH | 368 | Right Audio Signal (+) |
| 4 | 0.35 GY | 388 | Right Audio Signal (-) |
| 5 | 0.5 D-GN | 5060 | Low Speed GMLAN Serial Data |
| 6-8 | -- | -- | Not Used |
| 9 | 0.8 BK/WH | 351 | Ground |
| 10-15 | -- | -- | Not Used |
| 16 | 0.8 RD/WH | 340 | Battery Positive Voltage |

Accelerator Pedal Position (APP) Sensor



Connector Part Information

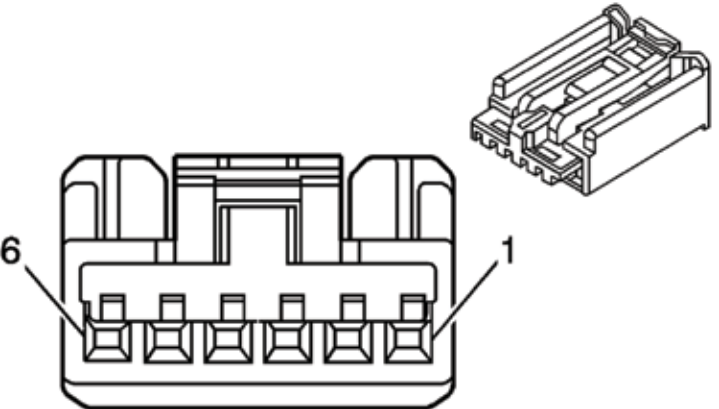
Harness Type: Instrument Panel
 OEM Connector: 15383136
 Service Connector: 13580116
 Description: 6-Way F Sealed (BK)

Terminal Part Information

Terminated Lead: 13575385
 Release Tool: J-38125-560
 Diagnostic Test Probe: J-35616-14 (GN)
 Terminal/Tray: 4-969005-1/16
 Core/Insulation Crimp: E/1

| Pin | Wire | Circuit | Function |
|-----|------------|---------|--|
| 1 | 0.35 TN | 1274 | 5-Volt Reference |
| 2 | 0.35 WH/BK | 1164 | 5-Volt Reference |
| 3 | 0.35 D-BU | 1161 | Accelerator Pedal Position (APP) Sensor 1 Signal |
| 4 | 0.35 BN | 1271 | Low Reference |
| 5 | 0.35 PU | 1272 | Low Reference |
| 6 | 0.35 L-BU | 1162 | Accelerator Pedal Position (APP) Sensor 2 Signal |

Brake Pedal Position (BPP) Sensor

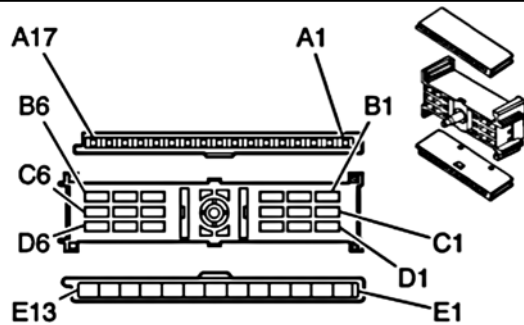


Connector Part Information
Harness Type: Instrument Panel
OEM Connector: 13595476
Service Connector: 19167753
Description: 6-Way F AIT II Series (BK)

Terminal Part Information
Terminated Lead: 13575867
Release Tool: J-38125-215A
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: SAIT-A03T-M064/14
Core/Insulation Crimp: P/P

| Pin | Wire Color | Circuit No. | Function |
|-----|------------|-------------|--|
| 1 | 0.5 BN | 5382 | Brake Position Sensor Low Reference |
| 2 | 0.5 GY | 5381 | Brake Position Sensor 5 Volt Reference |
| 3 | 0.5 TN | 5380 | Brake Position Sensor Signal |
| 4 | 0.5 YE | 5361 | Brake Apply Sensor Signal |
| 5 | 0.5 BN | 5360 | Brake Apply Sensor Low Reference |
| 6 | 0.5 WH | 5359 | Brake Apply Sensor Supply Voltage |

X200 Steering Column Harness to Instrument Panel Harness



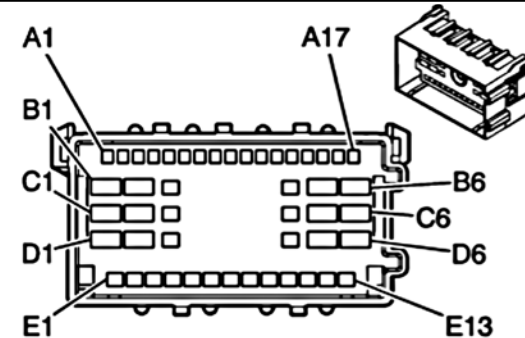
Connector Part Information

OEM Connector: 12047842
Service Connector: 12047842
Description: 17-Way F Metri-Pack 280 Series (BK)
OEM Connector: 15492581
Service Connector: 12084183
Description: 18-Way F Metri-Pack 280 630 Series Unsealed (BK)
OEM Connector: 12047840
Service Connector: 12047840
Description: 13-Way F Metri-Pack 280 Series (BK)

Terminal Part Information

Pins: A1, A3, A6, A9, A11-A17
Terminated Lead: 13575464
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-14 (GN)
Terminal/Tray: 15326030/5
Core/Insulation Crimp: E/C

Pins: B1, B6, C1, C6, D1, D5-D6
Terminated Lead: Pending
Release Tool: J-38125-11A
Diagnostic Test Probe: J-35616-42 (RD)
Terminal/Tray: 12015869/3
Core/Insulation Crimp: E/A



Connector Part Information

Harness Type: Instrument Panel
OEM Connector: 15492579
Service Connector: 88988982
Description: 48-Way M Metri-Pack 150 280 630 Series (BK)

Terminal Part Information

Pins: A1, A3, A6, A9, A11-A17
Terminated Lead: 13575462
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-3 (GY)
Terminal/Tray: 12047581/2
Core/Insulation Crimp: E/C

Pins: B3, C3, D3, D4, E1, E3, E4, E8, E9, E10-E13
Terminated Lead: 13575463
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-3 (GY)
Terminal/Tray: 12047581/2
Core/Insulation Crimp: E/C

Pins: B1, B6, C1, C6, D1, D5, D6
Terminated Lead: Service by Harness - See Part Catalog
Release Tool: J-38125-11A
Diagnostic Test Probe: J-35616-43 (RD)
Terminal/Tray: 12020126/2
Core/Insulation Crimp: E/A

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X200 Steering Column Harness to Instrument Panel Harness (cont d)

Pins: B3, C3, D3-D4, E1, E3-E4, E8-E13
 Terminated Lead: Pending
 Release Tool: J-38125-11A
 Diagnostic Test Probe: J-35616-4A (PU)
 Terminal/Tray: 12034046/2
 Core/Insulation Crimp: E/A

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|---|
| A1 | 0.35 TN | 28 | Horn Relay Control |
| A2 | -- | -- | Not Used |
| A3 | 0.35 PK | 1444 | 12-Volt Reference (K34) |
| A4-A5 | -- | -- | Not Used |
| A6 | 0.35 PK | 2239 | Ignition Voltage |
| A7-A8 | -- | -- | Not Used |
| A9 | 0.35 PK | 3 | Ignition Voltage |
| A10 | -- | -- | Not Used |
| A11 | 0.35 L-GN | 6818 | Steering Wheel Control Signal (W1Y) |
| A12 | 0.35 YE | 6046 | Steering Angle Sensor Phase A (JL4) |
| A13 | 0.35 D-GN/WH | 7158 | Cruise Control Indicator Dimming Signal (K34) |
| A14 | 0.35 D-BU | 6047 | Steering Angle Sensor Phase B (JL4) |
| A15 | 0.35 BN | 6136 | Supply Voltage (K34/W1Y) |
| A16 | 0.35 TN | 6048 | Steering Angle Sensor Phase C (JL4) |
| A17 | 0.35 GY | 1884 | Cruise Control Switch Signal (K34) |
| B1 | 0.35 RD/WH | 540 | Battery Positive Voltage |
| B2 | -- | -- | Not Used |
| B3 | 0.35 WH | 111 | Theft Deterrent Alarm Enable Signal |

| Pin | Wire | Circuit | Function |
|-------|--------------|---------|---|
| A1 | 0.35 TN | 28 | Horn Relay Control |
| A2 | -- | -- | Not Used |
| A3 | 0.35 PK | 1444 | 12-Volt Reference (K34) |
| A4-A5 | -- | -- | Not Used |
| A6 | 0.35 PK | 2239 | Ignition Voltage |
| A7-A8 | -- | -- | Not Used |
| A9 | 0.35 PK | 3 | Ignition Voltage |
| A10 | -- | -- | Not Used |
| A11 | 0.35 L-GN | 6818 | Steering Wheel Control Signal (W1Y) |
| A12 | 0.5 YE | 6046 | Steering Angle Sensor Phase A (JL4) |
| A13 | 0.35 D-GN/WH | 7158 | Cruise Control Indicator Dimming Signal (K34) |
| A14 | 0.5 D-BU | 6047 | Steering Angle Sensor Phase B (JL4) |
| A15 | 0.35 BN | 6136 | Supply Voltage (K34/W1Y) |
| A16 | 0.5 TN | 6048 | Steering Angle Sensor Phase C (JL4) |
| A17 | 0.35 GY | 1884 | Cruise Control Switch Signal (K34) |
| B1 | 0.35 RD/WH | 540 | Battery Positive Voltage |
| B2 | -- | -- | Not Used |
| B3 | 0.35 WH | 111 | Theft Deterrent Alarm Enable Signal |
| B4-B5 | -- | -- | Not Used |
| B6 | 0.35 PK | 1020 | Ignition Voltage |
| C1 | 0.35 WH | 530 | Ignition Voltage |
| C2 | -- | -- | Not Used |
| C3 | 0.35 YE | 307 | Headlamp Switch Flash to Pass Signal |

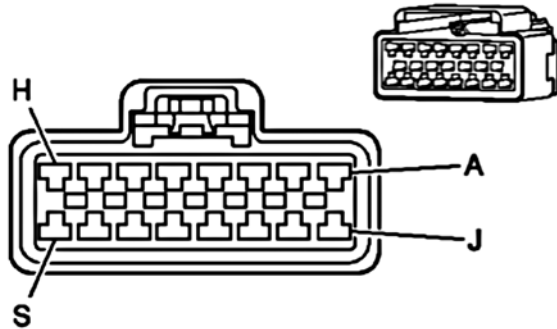
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X200 Steering Column Harness to Instrument Panel Harness (cont d)

| Pin | Wire | Circuit | Function |
|-------|------------|---------|--|
| B4-B5 | -- | -- | Not Used |
| B6 | 0.35 PK | 1020 | Ignition Voltage |
| C1 | 0.35 WH | 530 | Ignition Voltage |
| C2 | -- | -- | Not Used |
| C3 | 0.35 YE | 307 | Headlamp Switch Flash to Pass Signal |
| C4-C5 | -- | -- | Not Used |
| C6 | 0.35 BN | 4 | Ignition Voltage |
| D1 | 0.35 TN/BK | 6009 | Low Reference |
| D2 | -- | -- | Not Used |
| D3 | 0.35 YE | 525 | Headlamp Dimmer Switch Low Beam Signal |
| D4 | 0.5 TN/WH | 816 | A/T Shift Lock Solenoid Control |
| D5 | 0.35 L-GN | 6043 | Steering Angle Sensor Signal (JL4) |
| D6 | 0.35 PK | 94 | Windshield Washer Switch Signal |
| E1 | 0.5 BK | 350 | Ground |
| E2 | -- | -- | Not Used |
| E3 | 0.5 BK/WH | 351 | Ground |
| E4 | 0.35 OG/BK | 6045 | Low Reference (JL4) |
| E5-E7 | -- | -- | Not Used |
| E8 | 0.35 D-GN | 663 | Hazard Switch Left Turn Signal |
| E9 | 0.35 TN | 664 | Hazard Switch Turn Right Signal |
| E10 | 0.35 GY | 6044 | 5-Volt Reference (JL4) |
| E11 | 0.35 L-BU | 1714 | Windshield Wiper Switch Low Signal |
| E12 | 0.35 L-GN | 1715 | Windshield Wiper Switch High Signal |
| E13 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |

| Pin | Wire | Circuit | Function |
|-------|------------|---------|--|
| C4-C5 | -- | -- | Not Used |
| C6 | 0.35 BN | 4 | Ignition Voltage |
| D1 | 0.35 TN/BK | 6009 | Low Reference |
| D2 | -- | -- | Not Used |
| D3 | 0.35 YE | 525 | Headlamp Dimmer Switch Low Beam Signal |
| D4 | 0.5 TN/WH | 816 | A/T Shift Lock Solenoid Control |
| D5 | 0.5 L-GN | 6043 | Steering Angle Sensor Signal (JL4) |
| D6 | 0.35 PK | 94 | Windshield Washer Switch Signal |
| E1 | 0.5 BK | 350 | Ground |
| E2 | -- | -- | Not Used |
| E3 | 0.5 BK/WH | 351 | Ground |
| E4 | 0.5 OG/BK | 6045 | Low Reference (JL4) |
| E5-E7 | -- | -- | Not Used |
| E8 | 0.35 D-GN | 663 | Hazard Switch Left Turn Signal |
| E9 | 0.35 TN | 664 | Hazard Switch Turn Right Signal |
| E10 | 0.5 GY | 6044 | 5-Volt Reference (JL4) |
| E11 | 0.35 L-BU | 1714 | Windshield Wiper Switch Low Signal |
| E12 | 0.35 L-GN | 1715 | Windshield Wiper Switch High Signal |
| E13 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |

X205 Front Headliner Harness to Body Harness



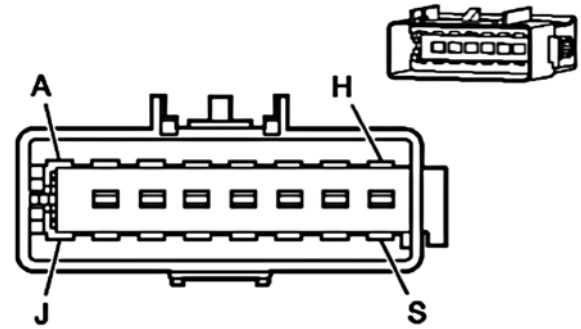
Connector Part Information

Harness: Front Headliner
 OEM: 15326952
 Service: 15306426
 Description: 16-Way F GT 280 Series (BK)

Terminal Part Information

Terminal/Tray: 15304711/8
 Core/Insulation Crimp: Pins: B-C, G, S - 2/A
 Core/Insulation Crimp: Pins: A, D-F, H-R - E/A
 Release Tool/Test Probe: J-38125-553/J-35616-4A (PU)

| Pin | Wire | Circuit | Function |
|-----|----------|---------|---|
| A | 0.35 BN | 441 | Ignition Voltage (U80) |
| B | 0.8 D-GN | 654 | Low Reference (UE1) |
| C | 0.8 GY | 655 | Celular Telephone Voice Signal (UE1) |
| D | 0.35 GY | 2599 | Auxiliary Mode Door Control (C69) |
| E | 0.5 WH | 1924 | Auxiliary Blower Motor High Control (C69) |
| F | 0.35 BN | 341 | Ignition Voltage (C69) |



Connector Part Information

Harness: Body
 OEM: 13573920
 Service: 15326956
 Description: 16-Way M GT 280 Series (BK)

Terminal Part Information

Pins: B-C, G, S
 Terminal/Tray: 15304724/8
 Core/Insulation Crimp: 2/A
 Release Tool/Test Probe: J-38125-553/J-35616-5 (PU)

Pins: A, D-F, H-R
 Terminal/Tray: 15304722/8
 Core/Insulation Crimp: E/C
 Release Tool/Test Probe: J-38125-553/J-35616-5 (PU)

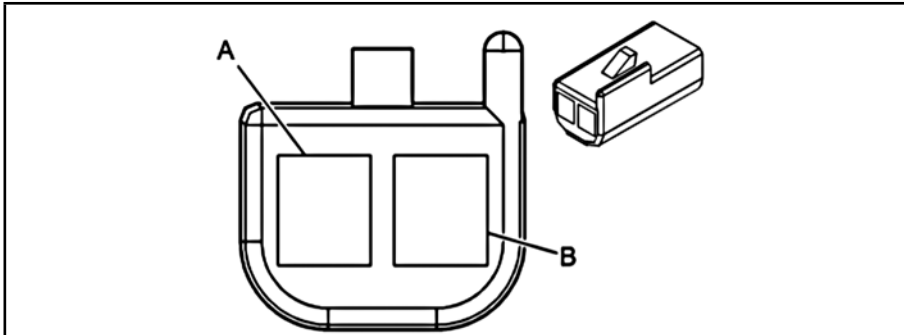
| Pin | Wire | Circuit | Function |
|-----|----------|---------|---|
| A | 0.35 BN | 441 | Ignition Voltage (U80) |
| B | 0.8 D-GN | 654 | Low Reference (UE1) |
| C | 0.8 GY | 655 | Celular Telephone Voice Signal (UE1) |
| D | 0.35 GY | 2599 | Auxiliary Mode Door Control (C69) |
| E | 0.35 WH | 1924 | Auxiliary Blower Motor High Control (C69) |
| F | 0.35 BN | 341 | Ignition Voltage (C69) |

X205 Front Headliner Harness to Body Harness (cont d)

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|--|
| G | 1 BK | 1850 | Ground (C69 or DH6) |
| | 0.8 BK | 1850 | Ground (without C69, DH6 or YF1) |
| H | 0.5 D-BU/WH | 149 | Courtesy Lamp Control |
| J | 0.35 BK/WH | 351 | Ground (U80) |
| K | 0.5 BN | 5263 | Rear Auxiliary Air Temperature Door Control (Passenger with C69) |
| L | 0.35 D-GN | 6134 | Local Interconnect Network 3 (U80) |
| M | 0.35 OG | 2775 | Auxiliary Air Temperature Door Control (C69) |
| N | 0.5 OG | 1925 | Auxiliary Blower Motor Medium Control (C69) |
| P | 0.5 D-BU | 1926 | Auxiliary Blower Motor Low Control (C69) |
| R | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (C69) |
| S | 0.8 OG | 1732 | Courtesy Lamp Control (without YF7) |
| | 0.5 OG | 1732 | Courtesy Lamp Control (YF7 or DH6) |

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|--|
| G | 1 BK | 1850 | Ground |
| H | 0.5 D-BU/WH | 149 | Courtesy Lamp Control |
| J | 0.35 BK/WH | 351 | Ground (U80) |
| K | 0.5 BN | 5263 | Rear Auxiliary Air Temperature Door Control (Passenger with C69) |
| L | 0.35 D-GN | 6134 | Local Interconnect Network 3 (U80) |
| M | 0.35 OG | 2775 | Auxiliary Air Temperature Door Control (C69) |
| N | 0.35 OG | 1925 | Auxiliary Blower Motor Medium Control (C69) |
| P | 0.35 D-BU | 1926 | Auxiliary Blower Motor Low Control (C69) |
| R | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (C69) |
| S | 0.8 OG | 1732 | Courtesy Lamp Control |

X206 Body Harness to Front Headliner Harness (Passenger with C69)



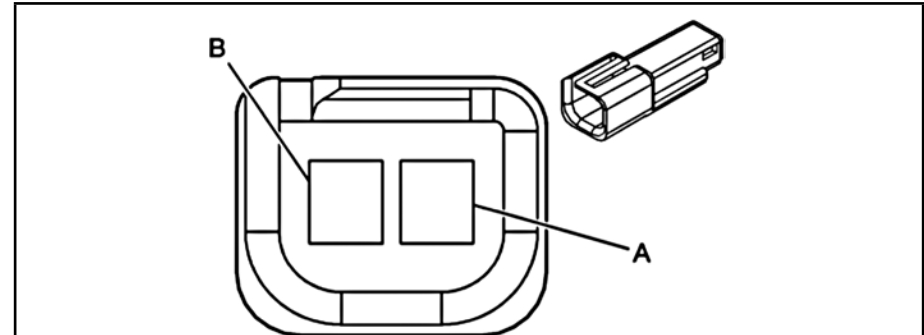
Connector Part Information

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

Terminal Part Information

Terminal/Tray: 15326030/5
 Core/Insulation Crimp: E/C
 Release Tool/Test Probe: J-38125-12A/J-35616-14 (GN)

| Pin | Wire | Circuit | Function |
|-----|-----------|---------|--|
| A | 0.5 PU/WH | 5265 | Rear Auxiliary Mode Door Control |
| B | 0.5 PK/BK | 5264 | Rear Auxiliary Blower Motor Switch Control |



Connector Part Information

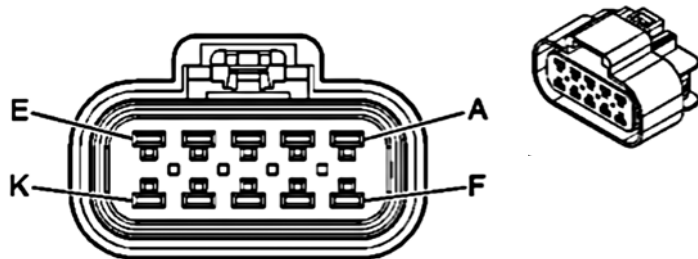
Harness: Front Headliner
 OEM: 12047663
 Service: 12085481
 Description: 2-Way M Metri-Pack 150 Series (BK)

Terminal Part Information

Terminal/Tray: 12047581/2
 Core/Insulation Crimp: E/C
 Release Tool/Test Probe: J-38125-12A/J-35616-3 (GY)

| Pin | Wire | Circuit | Function |
|-----|-----------|---------|--|
| A | 0.5 PU/WH | 5265 | Rear Auxiliary Mode Door Control |
| B | 0.5 PK/BK | 5264 | Rear Auxiliary Blower Motor Switch Control |

X405 Cutaway Rear Lighting Connector to Chassis Harness (Cutaway)



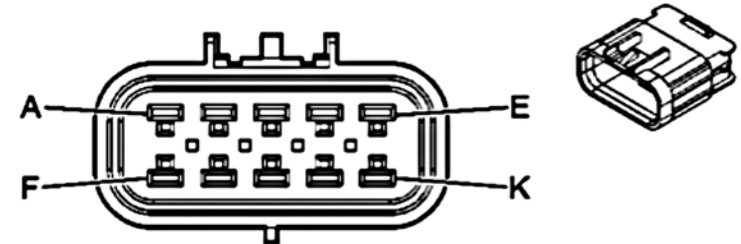
Connector Part Information

Harness Type: Cutaway Rear Lighting Connector
 OEM Connector: 15326660
 Service Connector: 88986262
 Description: 10-Way F GT 280 5.8 Series, Sealed (BK)

Terminal Part Information

Terminated Lead: 13575405
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-4A (PU)
 Terminal/Tray: 15304719/19
 Core/Insulation Crimp: 2/5

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|---|
| A-B | -- | -- | Not Used |
| C | 1 WH | 17 | Center High Mounted Stop Lamp (CHMSL) Control |
| D | 1 YE | 618 | Left Rear Turn Signal Lamp Control |
| E | 1 D-GN | 619 | Right Rear Turn Signal Lamp Control |
| F | 1 BN | 2109 | Trailer Park Lamps Control |
| G | 1 BK | 150 | Ground |
| H | 1 L-GN | 1624 | Trailer Backup Lamps Control |
| J | -- | -- | Not Used |
| K | 0.8 D-BU/WH | 149 | Courtesy Lamp Control |



Connector Part Information

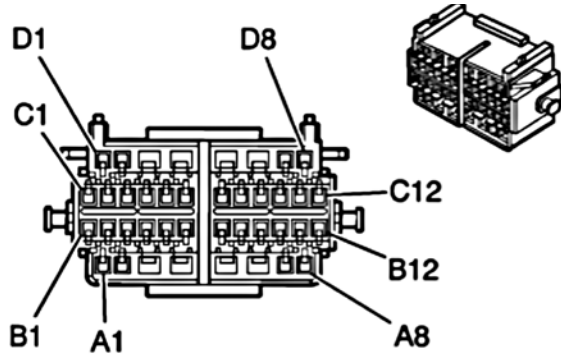
Harness Type: Chassis
 OEM Connector: 15326661
 Service Connector: 88986245
 Description: 10-Way M GT 280 5.8 Series, Sealed (BK)

Terminal Part Information

Terminated Lead: 13327135
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-5 (PU)
 Terminal/Tray: 15304731/19
 Core/Insulation Crimp: Pins: C-H - 2/5
 Core/Insulation Crimp: Pin K - C/5

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|---|
| A-B | -- | -- | Not Used |
| C | 1 L-BU | 1320 | Center High Mounted Stop Lamp (CHMSL) Control |
| D | 1 YE | 618 | Left Rear Turn Signal Lamp Control |
| E | 1 D-GN | 619 | Right Rear Turn Signal Lamp Control |
| F | 1 BN | 2109 | Trailer Park Lamps Control |
| G | 1 BK | 150 | Ground |
| H | 1 L-GN | 1624 | Trailer Backup Lamps Control |
| J | -- | -- | Not Used |
| K | 0.8 D-BU/WH | 149 | Courtesy Lamp Control |

X500 Driver Door Harness to Body Harness



Connector Part Information

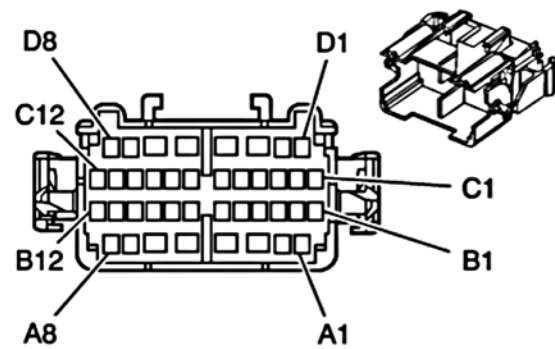
Harness Type: Driver Door
 OEM Connector: 15448129
 Service Connector: 89046969
 Description: 40-Way F GT 150 280 Series (BK)

Terminal Part Information

Pins: A1, A7-A8, B1-B4, B7-B8, B12, C1-C2, C7-C8, C12, D7-D8
 Terminated Lead: 13575735
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-2A (GY)
 Terminal/Tray: 12191812/19
 Core/Insulation Crimp: Pins: A1, A8, B1-B4, D7-D8 - E/C
 Core/Insulation Crimp: Pins: A7, B7-B8, B12, C12 - C/A

 Pins: A5-A6, D4-D6
 Terminated Lead: Pins: A5 (AU3 without DE5, DE7 or A31), A6 - 13575753
 Terminated Lead: Pins: A5 (AU3 with DE5, DE7 or A31), D4-D6 - 13575756
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-4A (PU)
 Terminal/Tray: Pins: A5 (AU3 without DE5, DE7 or A31), A6 - 15304711/8
 Terminal/Tray: Pins: A5 (AU3 with DE5, DE7 or A31), D4-D6 - 15304713/19
 Core/Insulation Crimp: Pins: A5 (AU3 without DE5, DE7 or A31), A6 - E/A
 Core/Insulation Crimp: Pins: A5 (AU3 with DE5, DE7 or A31), D4-D6 - F/D

| Pin | Wire | Circuit | Function |
|-----|---------|---------|------------------------------------|
| A1 | 0.35 TN | 126 | Left Front Door Open Switch Signal |



Connector Part Information

Harness Type: Body
 OEM Connector: 15416976
 Service Connector: 89047197
 Description: 40-Way M GT 150 280 Series (BK)

Terminal Part Information

Pins: A1, A6-A8, B1-B4, B7-B8, B12, C1-C2, C7-C8, C12, D7-D8
 Terminated Lead: 13575502
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-3 (GY)
 Terminal/Tray: 15304702/19
 Core/Insulation Crimp: Pins: A1, A6, B1-B4 - E/C
 Core/Insulation Crimp: Pins: A8, C1-C2, C7-C8, D7-D8 - E/4
 Core/Insulation Crimp: Pins: A7, B7-B8, B12, C12 - 2/4

 Pins: A5, D4-D6
 Terminated Lead: 13575510
 Release Tool: J-38125-553
 Diagnostic Test Probe: J-35616-5 (PU)
 Terminal/Tray: 15304724/8
 Core/Insulation Crimp: A/D

| Pin | Wire | Circuit | Function |
|-----|---------|---------|------------------------------------|
| A1 | 0.35 TN | 126 | Left Front Door Open Switch Signal |

(continued on next page)

X500 Driver Door Harness to Body Harness (cont d)

| Pin | Wire | Circuit | Function |
|--------|------------|---------|--|
| A2-A4 | -- | -- | Not Used |
| A5 | 0.35 BK | 450 | Ground (AU3 without DE5, DE7 or A31) |
| | 3 BK | 450 | Ground (AU3 with DE5, DE7 or A31) |
| A6 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (AU3) |
| | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (A31) |
| A7 | 0.8 OG | 2267 | Mirror Heating Element Control (DE5 or DE7) |
| A8 | 0.35 PU/WH | 889 | Passenger Mirror Motor Down Control (DE5 or DE7) |
| B1 | 0.35 OG/BK | 781 | Driver Door Lock Switch Unlock Signal (AU3) |
| B2 | 0.35 PK/BK | 780 | Driver Door Lock Switch Lock Signal (AU3) |
| B3 | 0.35 GY/BK | 745 | Left Front Door Ajar Switch Signal |
| B4 | 0.35 BK | 450 | Ground |
| B5-B6 | -- | -- | Not Used |
| B7 | 0.8 TN | 694 | Driver Door Lock Actuator Unlock Control (AU3) |
| B8 | 0.8 GY | 295 | Door Lock Actuator Lock Control (AU3) |
| B9-B11 | -- | -- | Not Used |
| B12 | 0.8 D-BU | 1857 | Left Front Midrange Speaker Output (+) |
| C1 | 0.5 PU/WH | 6628 | Low Reference (ASF) |
| C2 | 0.5 WH | 2132 | Side Impact Sensing Module - Left - Signal (ASF) |

| A2-A4 | -- | -- | Not Used |
|--------|-------------|---------|---|
| Pin | Wire | Circuit | Function |
| A5 | 3 BK | 450 | Ground |
| A6 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (AU3 or A31) |
| A7 | 0.8 OG | 2267 | Mirror Heating Element Control (DE5 or DE7) |
| A8 | 0.5 PU/WH | 889 | Passenger Mirror Motor Down Control (DE5 or DE7) |
| B1 | 0.35 OG/BK | 781 | Driver Door Lock Switch Unlock Signal (AU3) |
| B2 | 0.35 PK/BK | 780 | Driver Door Lock Switch Lock Signal (AU3) |
| B3 | 0.35 GY/BK | 745 | Left Front Door Ajar Switch Signal |
| B4 | 0.35 BK | 450 | Ground |
| B5-B6 | -- | -- | Not Used |
| B7 | 0.8 TN | 694 | Driver Door Lock Actuator Unlock Control (AU3) |
| B8 | 1 GY | 295 | Door Lock Actuator Lock Control (AU3) |
| B9-B11 | -- | -- | Not Used |
| B12 | 0.8 D-BU | 1857 | Left Front Midrange Speaker Output (+) |
| C1 | 0.5 PU/WH | 6628 | Low Reference (ASF) |
| C2 | 0.5 WH | 2132 | Side Impact Sensing Module - Left - Signal (ASF) |
| C3-C6 | -- | -- | Not Used |
| C7 | 0.5 L-BU/WH | 1314 | Left Front Turn Signal Lamp Control (DE5 or DE7) |
| C8 | 0.5 RD/WH | 4340 | Battery Positive Voltage (DE5 or DE7) |

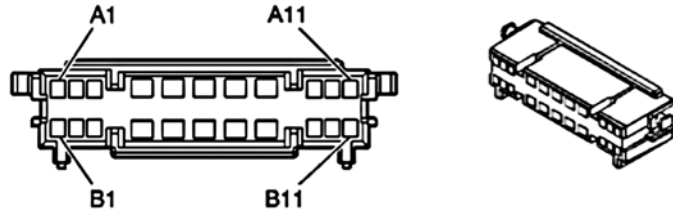
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X500 Driver Door Harness to Body Harness (cont d)

| Pin | Wire | Circuit | Function |
|--------|-------------|---------|--|
| C3-C6 | -- | -- | Not Used |
| C7 | 0.5 L-BU/WH | 1314 | Left Front Turn Signal Lamp Control (DE5 or DE7) |
| C8 | 0.5 RD/WH | 4340 | Battery Positive Voltage (DE5 or DE7) |
| C9-C11 | -- | -- | Not Used |
| C12 | 0.8 L-BU | 1957 | Left Front Midrange Speaker Output (-) |
| D1-D3 | -- | -- | Not Used |
| D4 | 3 TN | 167 | Power Window Master Switch Right Front Down Signal (A31) |
| D5 | 3 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31) |
| D6 | 3 D-GN | 1001 | RAP Control (A31) |
| D7 | 0.35 BN/WH | 1498 | Passenger Mirror Motor Left/Down Control (DE5 or DE7) |
| D8 | 0.35 OG/WH | 881 | Passenger Mirror Motor Right Control (DE5 or DE7) |

| Pin | Wire | Circuit | Function |
|--------|-----------|---------|--|
| C9-C11 | -- | -- | Not Used |
| C12 | 0.8 L-BU | 1957 | Left Front Midrange Speaker Output (-) |
| D1-D3 | -- | -- | Not Used |
| D4 | 3 TN | 167 | Power Window Master Switch Right Front Down Signal (A31) |
| D5 | 3 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31) |
| D6 | 3 D-GN | 1001 | RAP Control (A31) |
| D7 | 0.5 BN/WH | 1498 | Passenger Mirror Motor Left/Down Control (DE5 or DE7) |
| D8 | 0.5 OG/WH | 881 | Passenger Mirror Motor Right Control (DE5 or DE7) |

X600 Passenger Door Harness to Body Harness



Connector Part Information

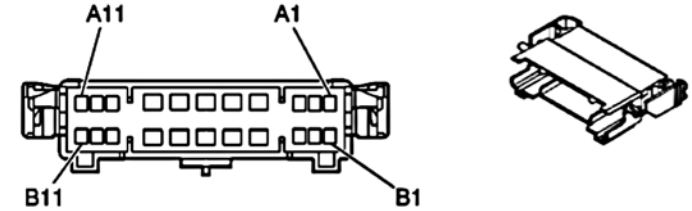
Harness Type: Passenger Door
OEM Connector: 15326063
Service Connector: 15326063
Description: 22-Way F GT 150, 280 (GY)

Terminal Part Information

Pins: A1-A3, A9-A11, B1-B3, B10-B11
Terminated Lead: 13575735
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-2A (GY)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: Pins: A1-A3, B1-B2 - C/A
Core/Insulation Crimp: Pins: A9-A11, B3, B10-B11 - E/C

Pins: A4, B4-B5
Terminated Lead: 13575756
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-4A (PU)
Terminal/Tray: 15304713/19
Core/Insulation Crimp: F/D

Pins: A5-A8, B6-B8
Terminated Lead: 13575753
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-4A (PU)
Terminal/Tray: 15304711/8
Core/Insulation Crimp: Pin A5 - 2/A
Core/Insulation Crimp: Pins: A6-A8, B6-B8 - E/A



Connector Part Information

Harness Type: Body
OEM Connector: 15326064
Service Connector: 15326064
Description: 22-Way M GT 150, 280 (GY)

Terminal Part Information

Pins: A1-A3, A9-A11, B1-B3, B10-B11
Terminated Lead: 13575502
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-3 (GY)
Terminal/Tray: 15304702/19
Core/Insulation Crimp: Pins: A1-A3, B1-B2 - 2/4
Core/Insulation Crimp: Pins: A9, A11, B11 - E/C
Core/Insulation Crimp: Pins: A10, B3, B10 - E/4

Pins: A4, B4-B5
Terminated Lead: 13575510
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-5 (PU)
Terminal/Tray: 15304724/8
Core/Insulation Crimp: A/D

Pins: A5-A8, B6-B8
Terminated Lead: 13575507
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-5 (PU)
Terminal/Tray: Pin A5 - 15304724/8
Terminal/Tray: Pins: A6-A8, B6-B8 - 15304722/8
Core/Insulation Crimp: Pin A5 - 2/A
Core/Insulation Crimp: Pins: A6-A8, B6-B8 - E/C

(continued on next page)

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|--|
| A1 | 0.8 OG | 1853 | Right Front Midrange Speaker Output (+) |
| A2 | 0.8 TN | 294 | Door Lock Actuator Unlock Control (AU3) |
| A3 | 0.8 OG | 2267 | Mirror Heating Element Control (DE5 or DE7) |
| A4 | 3 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31) |
| A5 | 0.8 BK | 1850 | Ground |
| A6 | 0.35 BN/WH | 1498 | Passenger Mirror Motor Left/Down Control (DE5 or DE7) |
| | 0.35 BN/WH | 1498 | Passenger Mirror Motor Left/Down Control (DE5 or DE7) |
| A7 | 0.35 OG/WH | 881 | Passenger Mirror Motor Right Control (DE5 or DE7) |
| A8 | 0.35 TN/WH | 746 | Right Front Door Ajar Switch Signal |
| A9 | 0.35 BK | 1850 | Ground |
| A10 | 0.5 D-GN | 2134 | Side Impact Sensing Module - Right - Signal |
| A11 | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3) |
| B1 | 0.8 D-GN | 1953 | Right Front Midrange Speaker Output (-) |
| B2 | 0.8 GY | 295 | Door Lock Actuator Lock Control (AU3) |
| B3 | 0.5 D-BU/WH | 1315 | Right Front Turn Signal Lamp Control (DE5 or DE7) |
| B4 | 3 TN | 167 | Power Window Master Switch Right Front Down Signal (A31) |

| Pin | Wire | Circuit | Function |
|-----|-------------|---------|--|
| A1 | 0.8 OG | 1853 | Right Front Midrange Speaker Output (+) |
| A2 | 0.8 TN | 294 | Door Lock Actuator Unlock Control (AU3) |
| A3 | 0.8 OG | 2267 | Mirror Heating Element Control (DE5 or DE7) |
| A4 | 3 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31) |
| A5 | 0.8 BK | 1850 | Ground |
| A6 | 0.5 BN/WH | 1498 | Passenger Mirror Motor Left/Down Control (DE5 or DE7) |
| A7 | 0.5 OG/WH | 881 | Passenger Mirror Motor Right Control (DE5 or DE7) |
| A8 | 0.35 TN/WH | 746 | Right Front Door Ajar Switch Signal |
| A9 | 0.35 BK | 1850 | Ground |
| A10 | 0.5 D-GN | 2134 | Side Impact Sensing Module - Right -- Signal |
| A11 | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Control (AU3) |
| B1 | 0.8 D-GN | 1953 | Right Front Midrange Speaker Output (-) |
| B2 | 1 GY | 295 | Door Lock Actuator Lock Control (AU3) |
| B3 | 0.5 D-BU/WH | 1315 | Right Front Turn Signal Lamp Control (DE5 or DE7) |
| B4 | 3 TN | 167 | Power Window Master Switch Right Front Down Signal (A31) |
| B5 | 3 D-GN | 1001 | RAP Control (A31) |

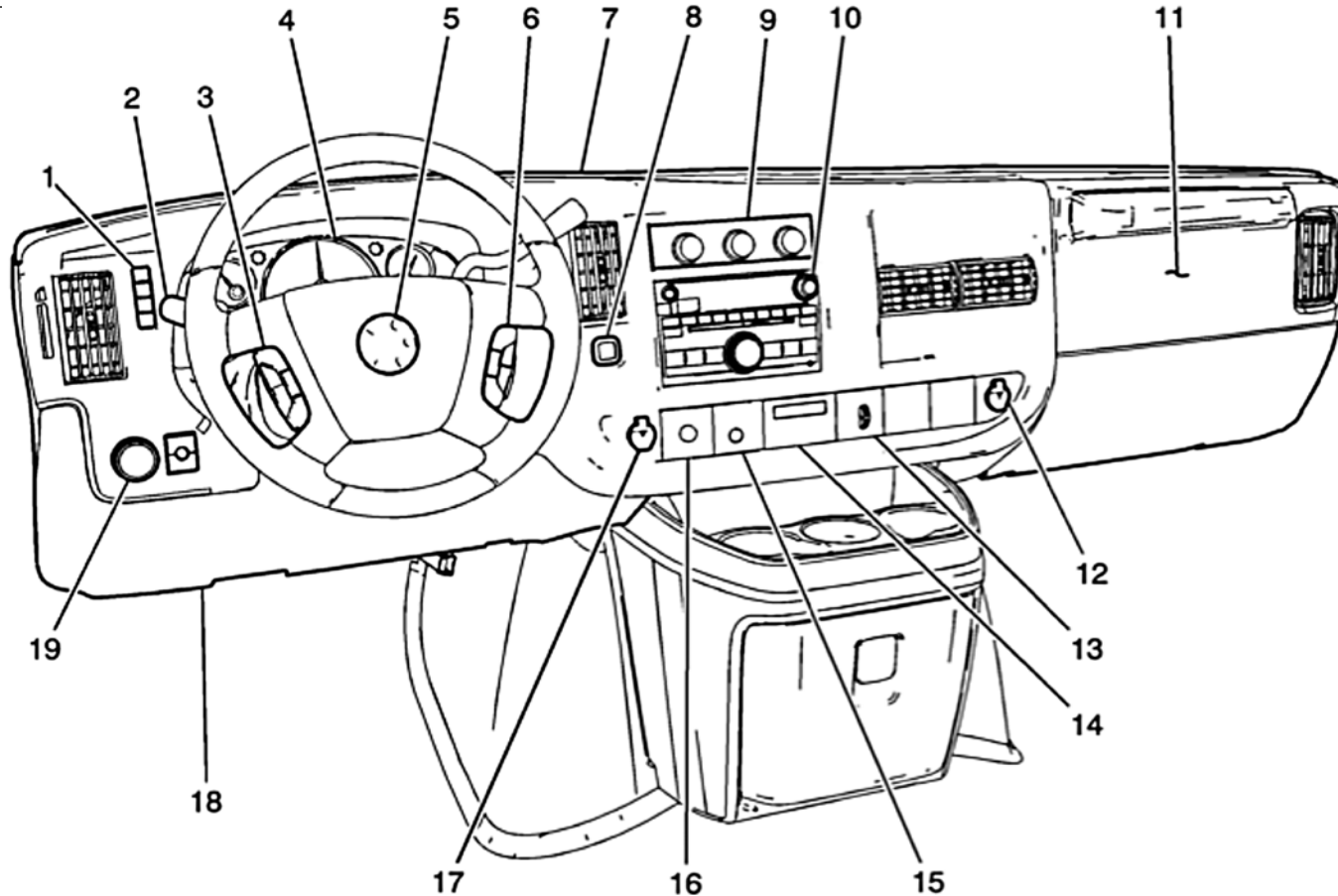
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X600 Passenger Door Harness to Body Harness (cont d)

| B5 | 3 D-GN | 1001 | RAP Control (A31) |
|-----|------------|---------|--|
| Pin | Wire | Circuit | Function |
| B6 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (AU3) |
| | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (A31) |
| B7 | 0.35 PU/WH | 889 | Passenger Mirror Motor Down Control (DE5 or DE7) |
| B8 | 0.35 L-GN | 1177 | Right Front Door Open Switch Signal |
| B9 | -- | -- | Not Used |
| B10 | 0.5 WH/BK | 6629 | Low Reference (ASF) |
| B11 | 0.35 D-BU | 245 | Passenger Door Lock Switch Unlock Control (AU3) |

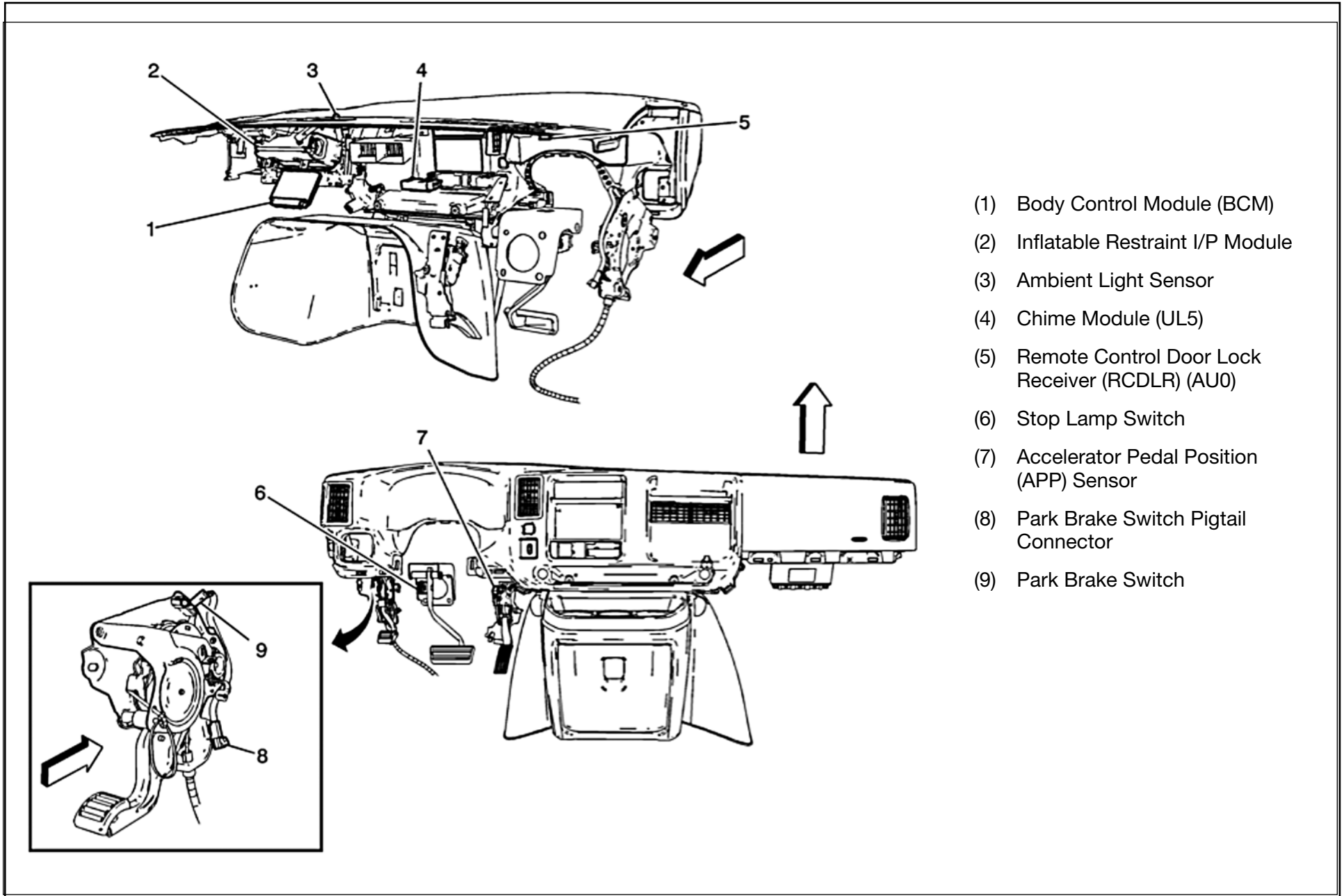
| B6 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (AU3 or A31) |
|-----|------------|---------|---|
| Pin | Wire | Circuit | Function |
| B7 | 0.5 PU/WH | 889 | Passenger Mirror Motor Down Control (DE5 or DE7) |
| B8 | 0.35 L-GN | 1177 | Right Front Door Open Switch Signal |
| B9 | -- | -- | Not Used |
| B10 | 0.5 WH/BK | 6629 | Low Reference (ASF) |
| B11 | 0.35 D-BU | 245 | Passenger Door Lock Switch Unlock Control (AU3) |

Instrument Panel Components

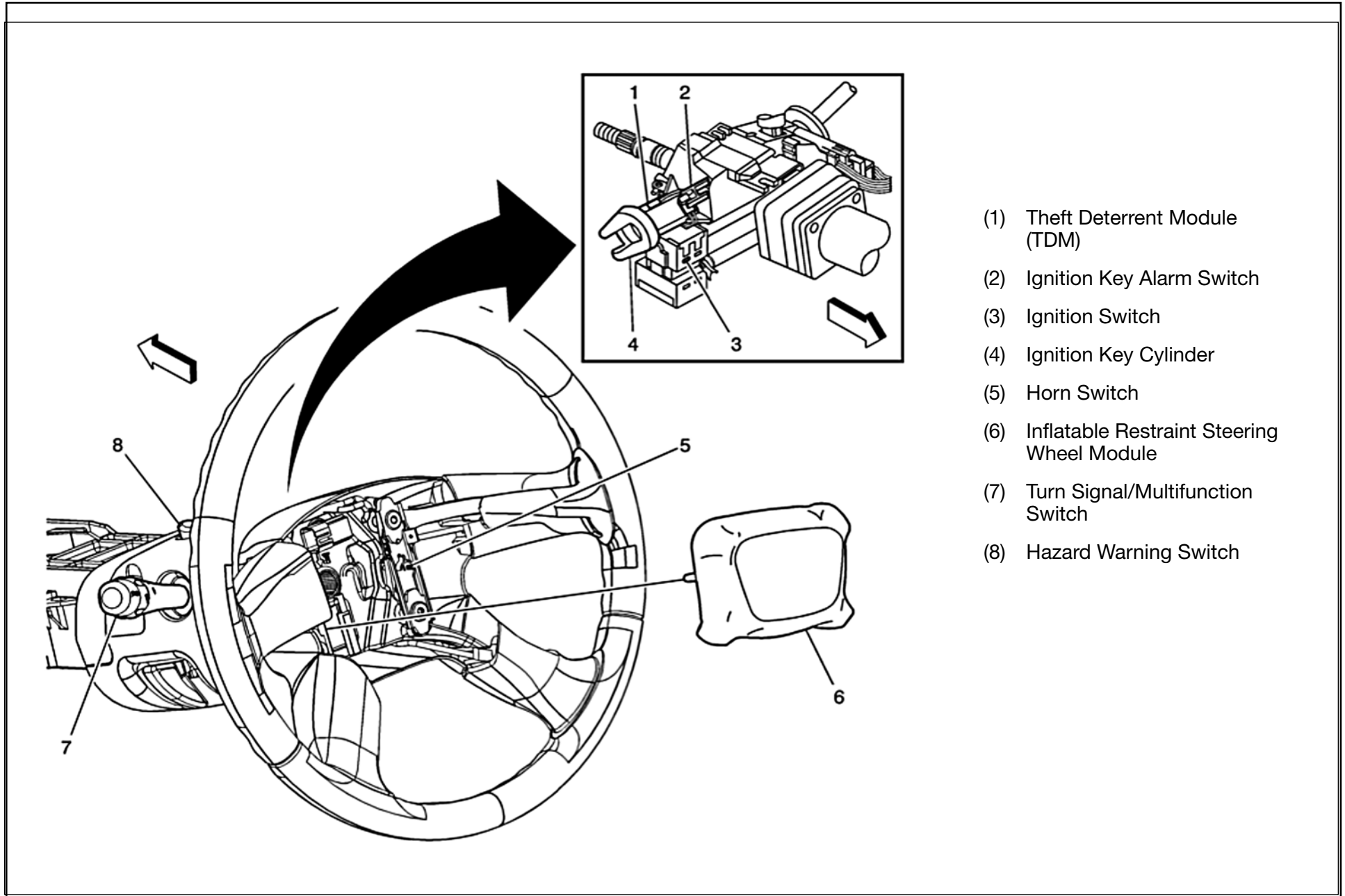


- | | | |
|---|---|--|
| (1) Driver Information Center (DIC) Switch | (8) Tow/Haul Switch | (15) Inflatable Restraint I/P Module Disable Switch (C99) |
| (2) Turn Signal/Multifunction Switch | (9) HVAC Control Assembly | (16) Traction Control Switch (TCS) (JL4) |
| (3) Steering Wheel Control Switch - Left (K34) | (10) Radio | (17) Cigar Lighter (DT4)/Accessory Power Outlet - Center Console 1 (without DT4) |
| (4) Instrument Panel Cluster (IPC) | (11) Inflatable Restraint I/P Module | (18) Data Link Connector (DLC) |
| (5) Inflatable Restraint Steering Wheel Module | (12) Accessory Power Outlet - Center Console 2 | (19) Headlamp and Panel Dimmer Switch |
| (6) Steering Wheel Control Switch - Right (W1Y) | (13) Blower Motor Switch - Auxiliary (C36 without C69) | |
| (7) Instrument Panel | (14) Inflatable Restraint I/P Module Indicator (Light Duty without YF7) | |

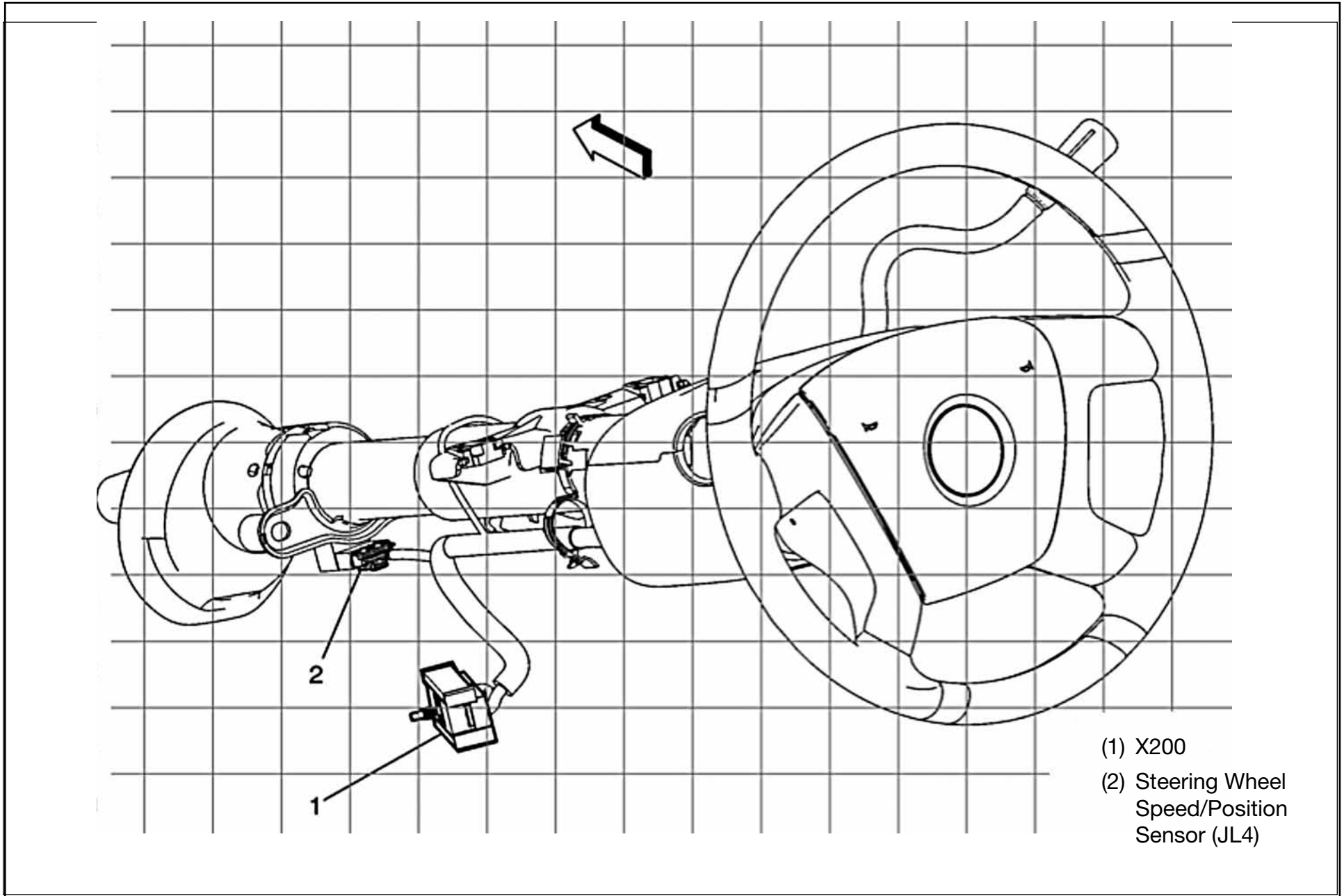
Instrument Panel Harness Components



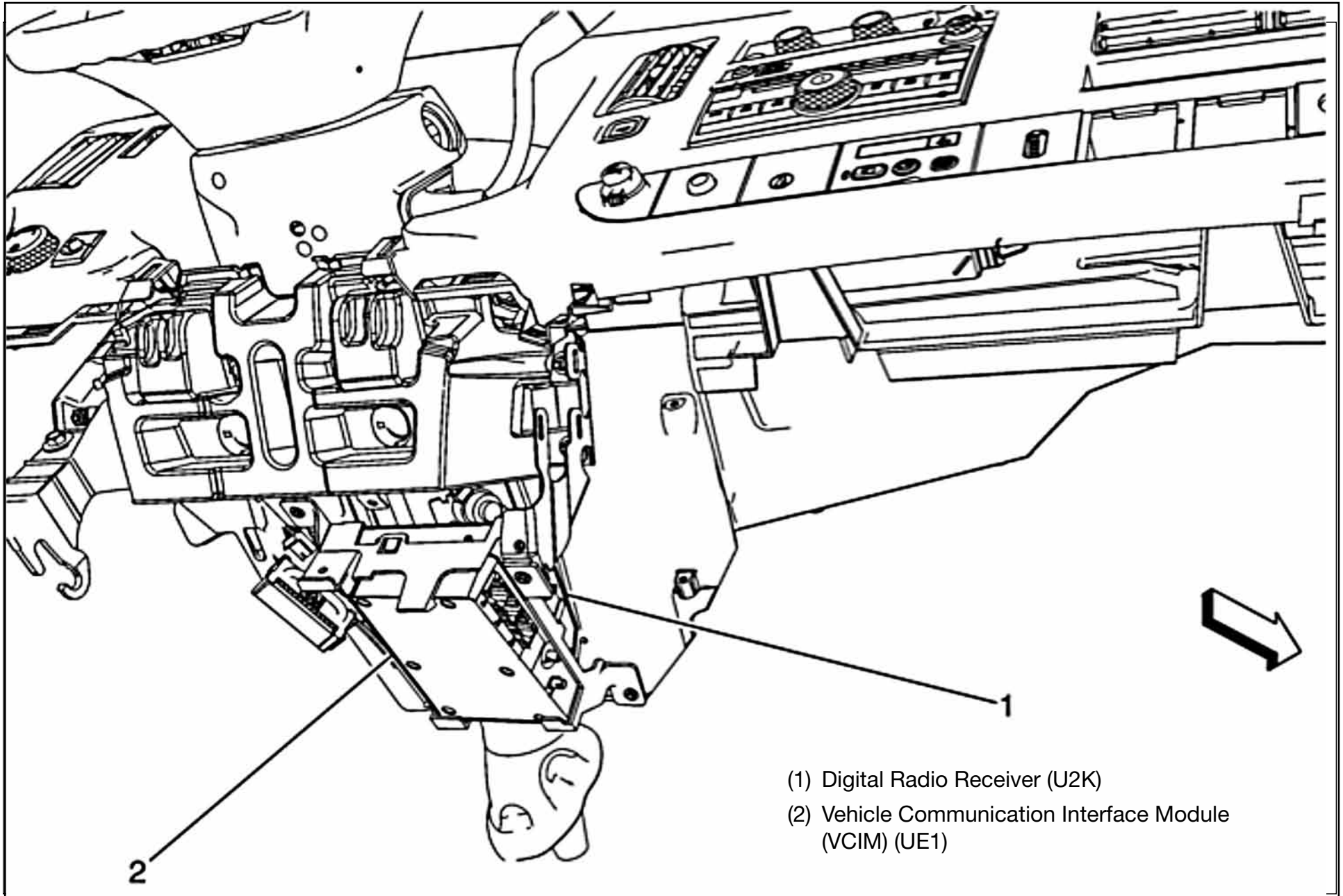
Upper Steering Column



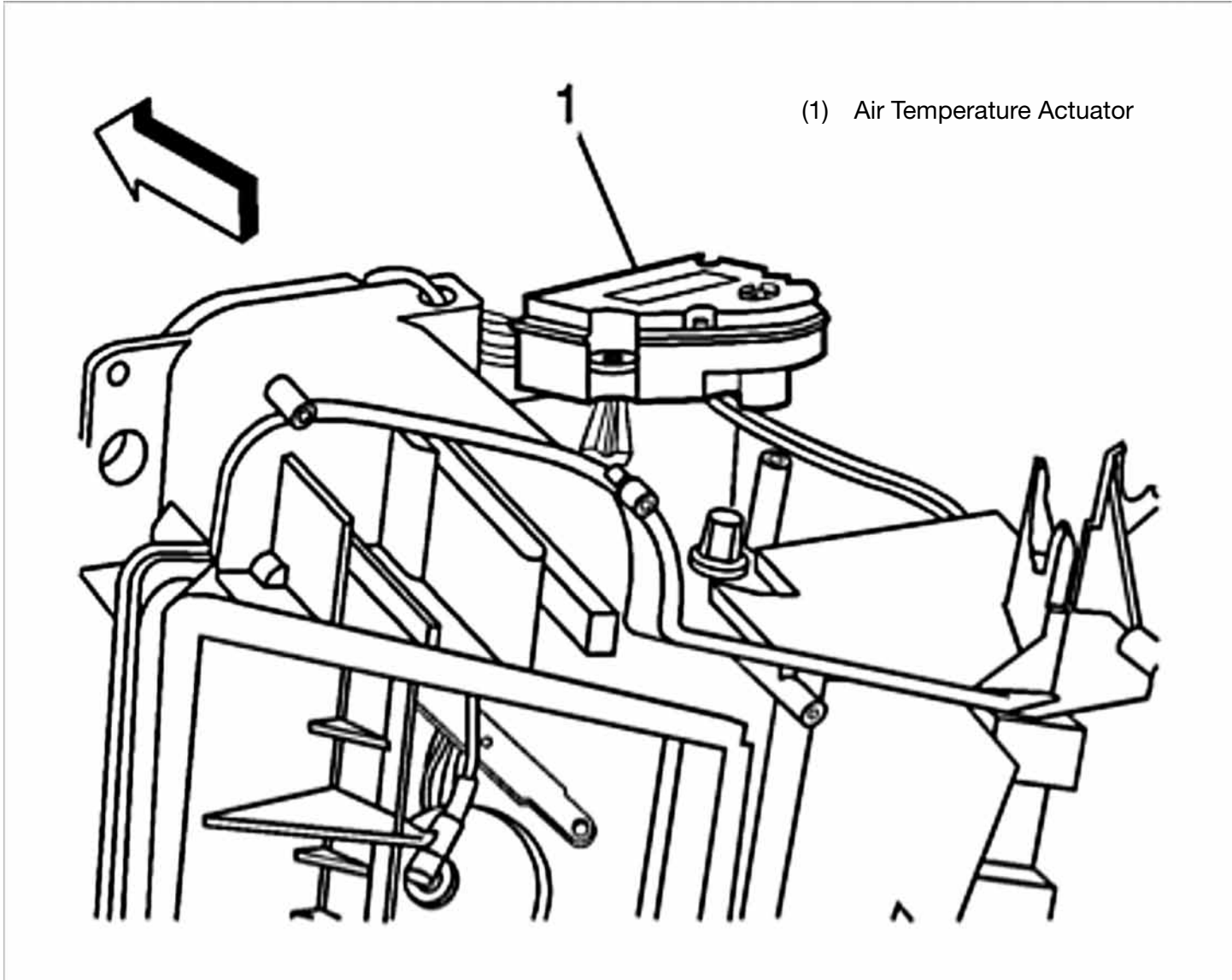
Steering Column



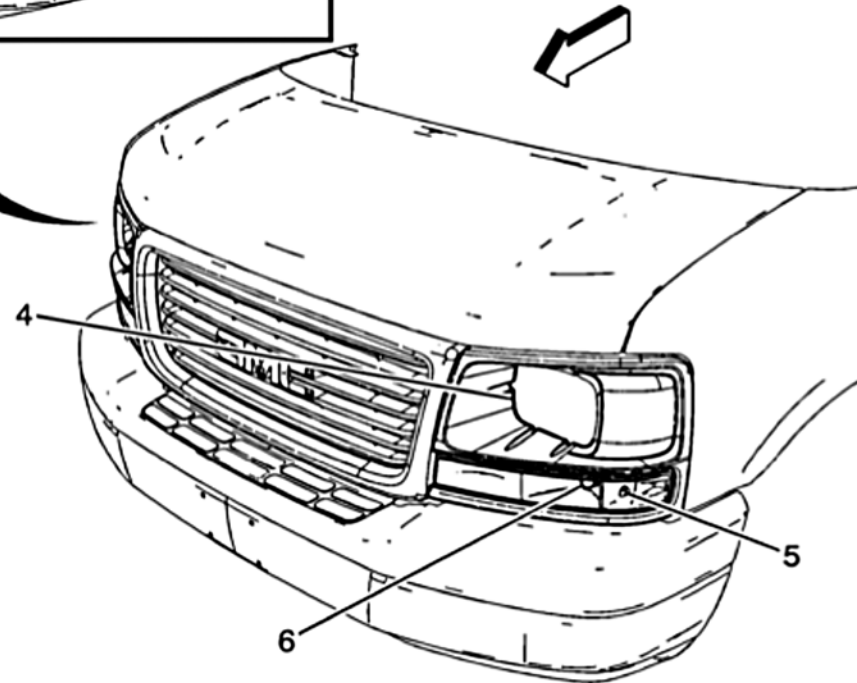
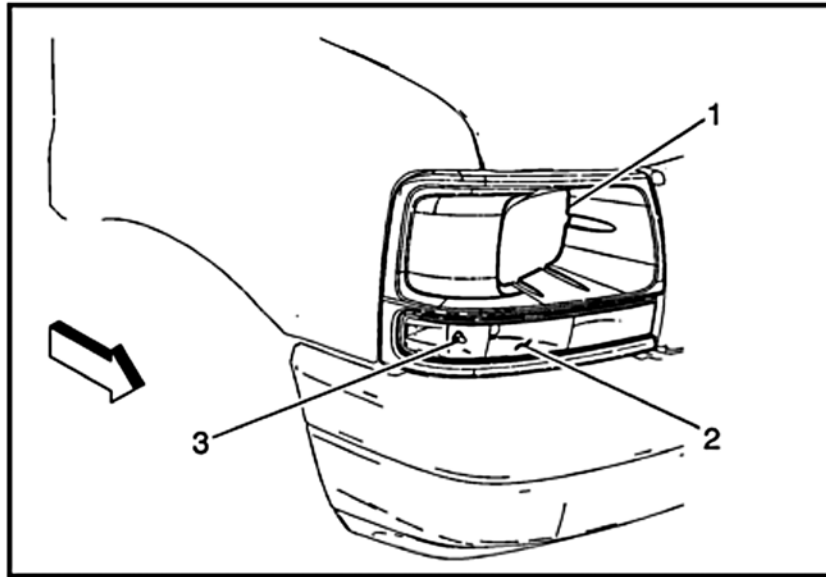
Under Steering Column Components



Air Temperature Actuator

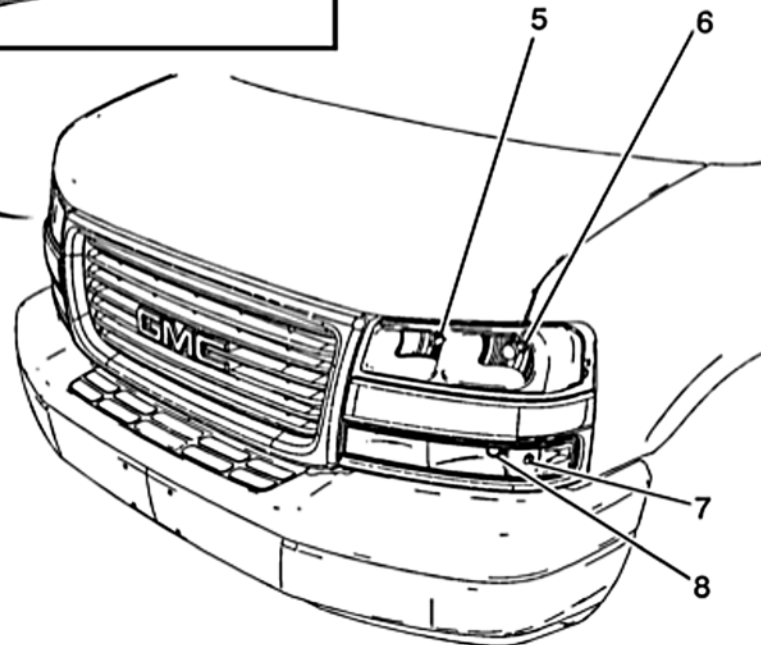
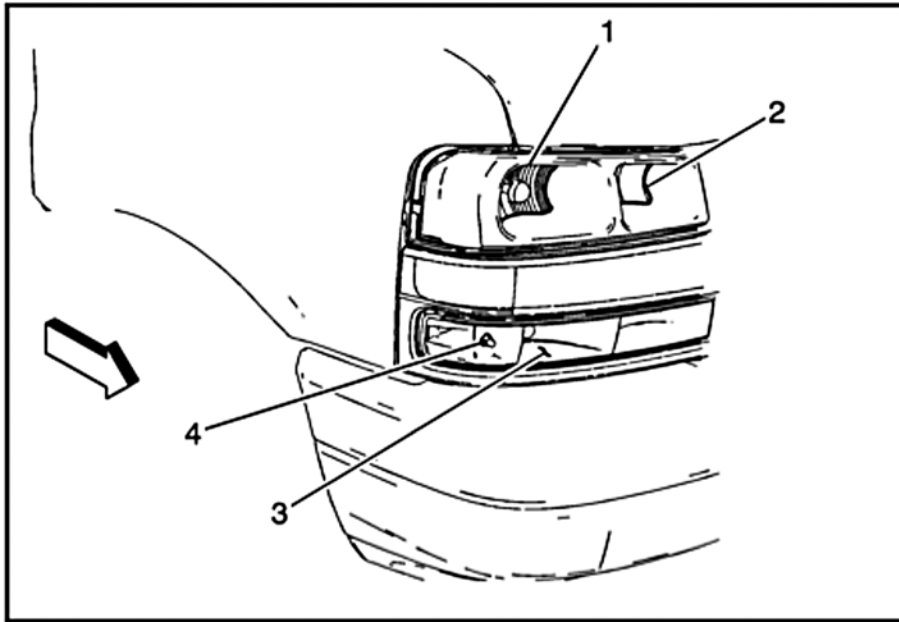


Front Exterior Lighting (Base)



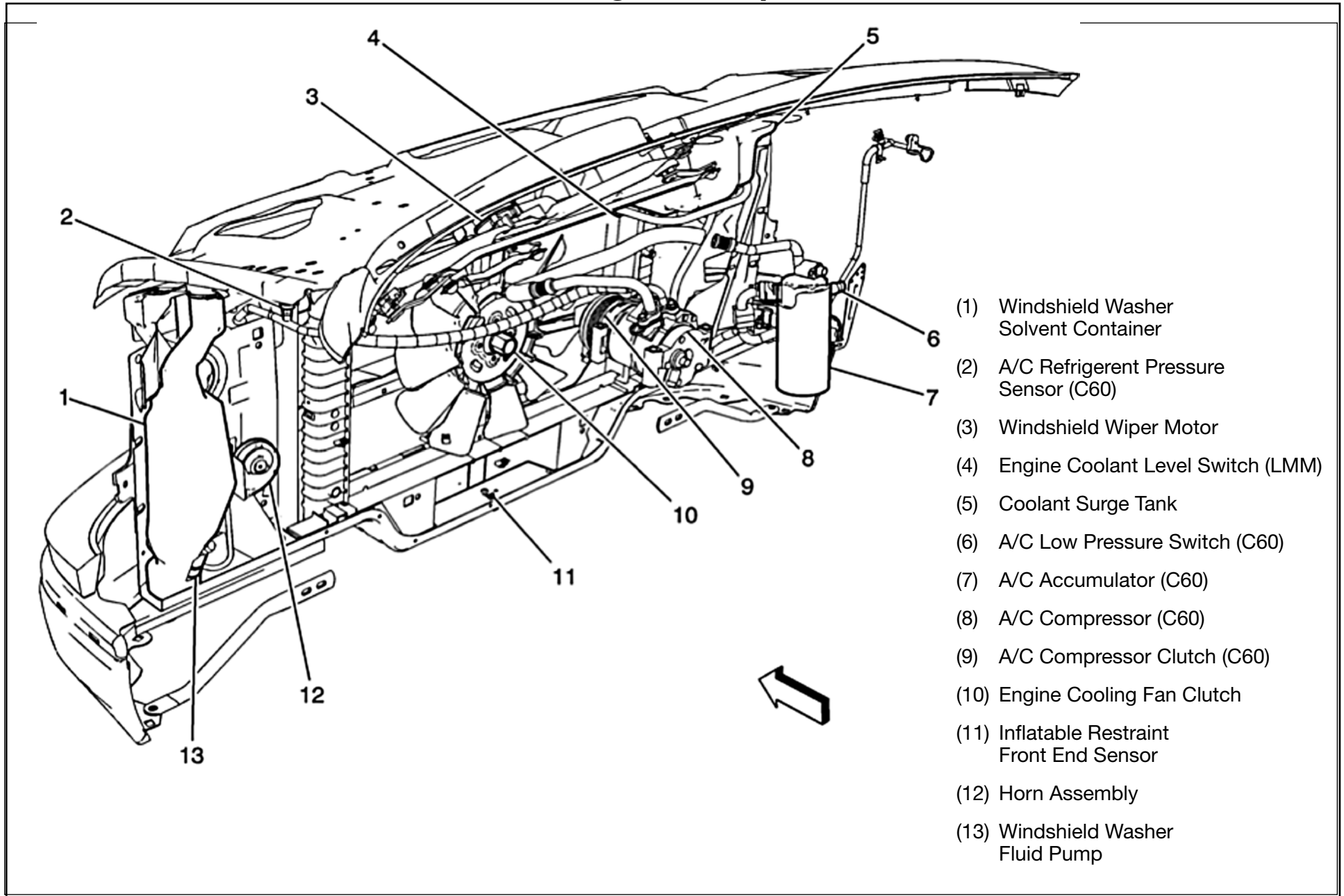
- (1) Headlamp - Right (Sealed)
- (2) Park/Turn Signal Lamp - Right Front
- (3) Marker Lamp - Right Front
- (4) Headlamp - Left (Sealed)
- (5) Marker Lamp - Left Front
- (6) Park/Turn Signal Lamp - Left Front

Front Exterior Lighting (Uplevel)

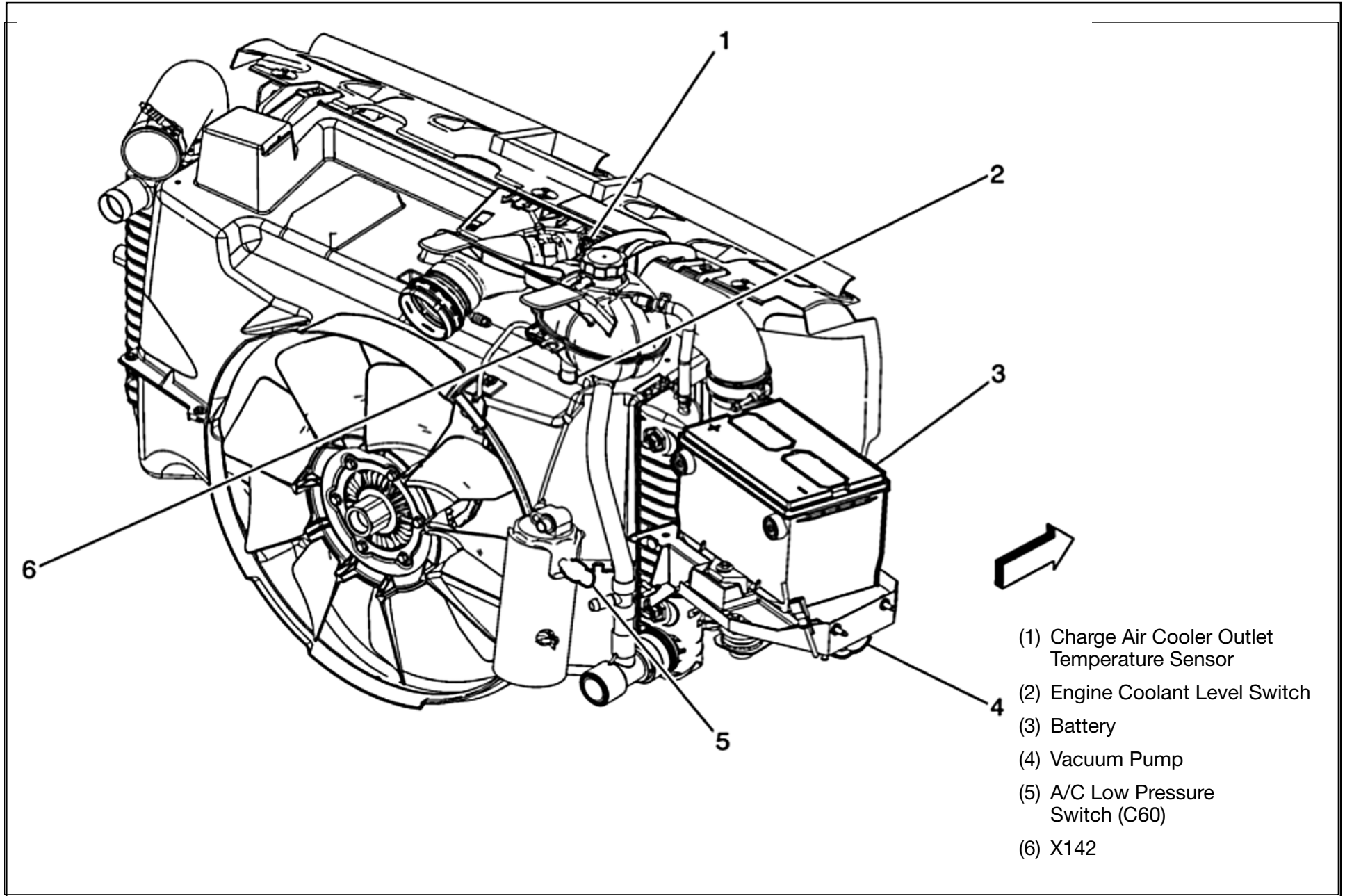


- (1) Headlamp - Right Low Beam (Composite)
- (2) Headlamp - Right High Beam (Composite)
- (3) Park/Turn Signal Lamp - Right Front
- (4) Marker Lamp - Right Front
- (5) Headlamp - Left High Beam (Composite)
- (6) Headlamp - Left Low Beam (Composite)
- (7) Marker Lamp - Left Front
- (8) Park/Turn Signal Lamp - Left Front

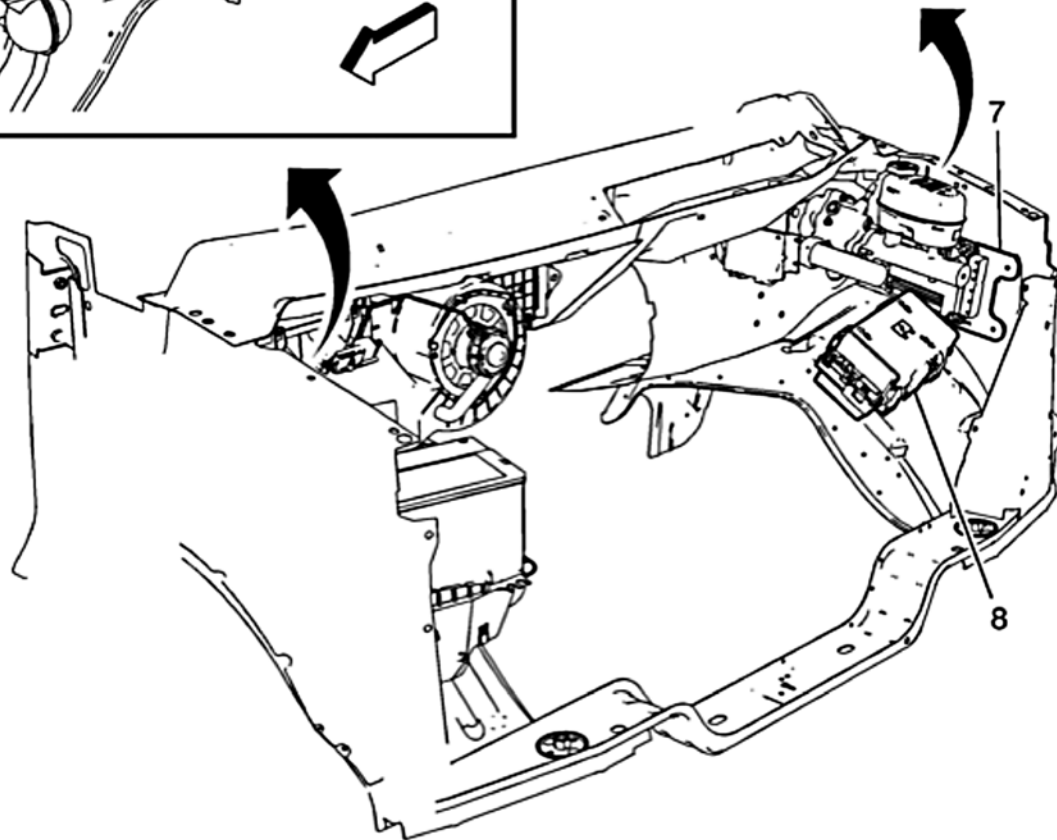
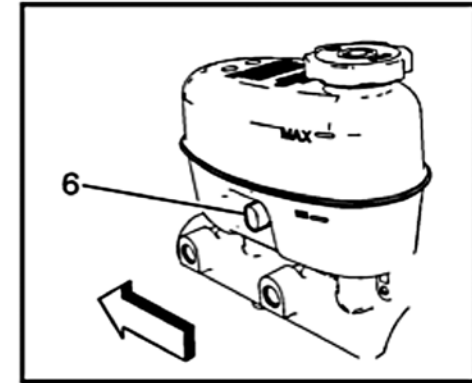
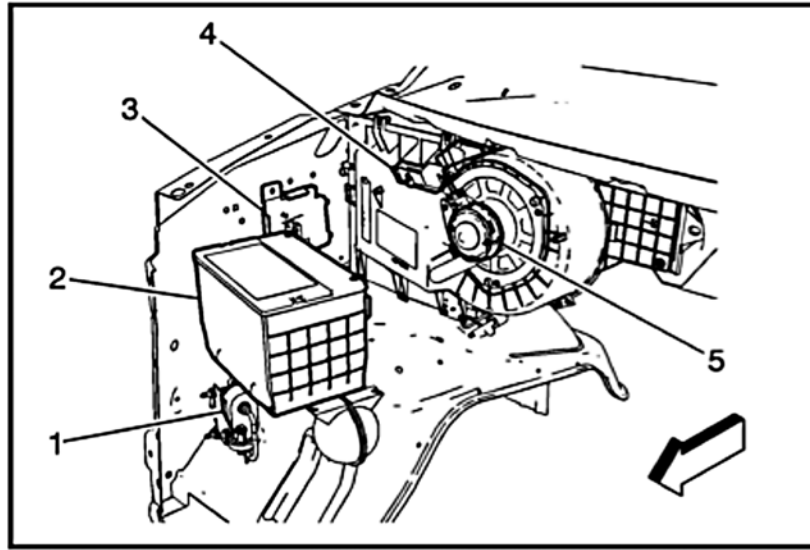
Front of Engine Compartment



Front of Engine Compartment Components (LGH)

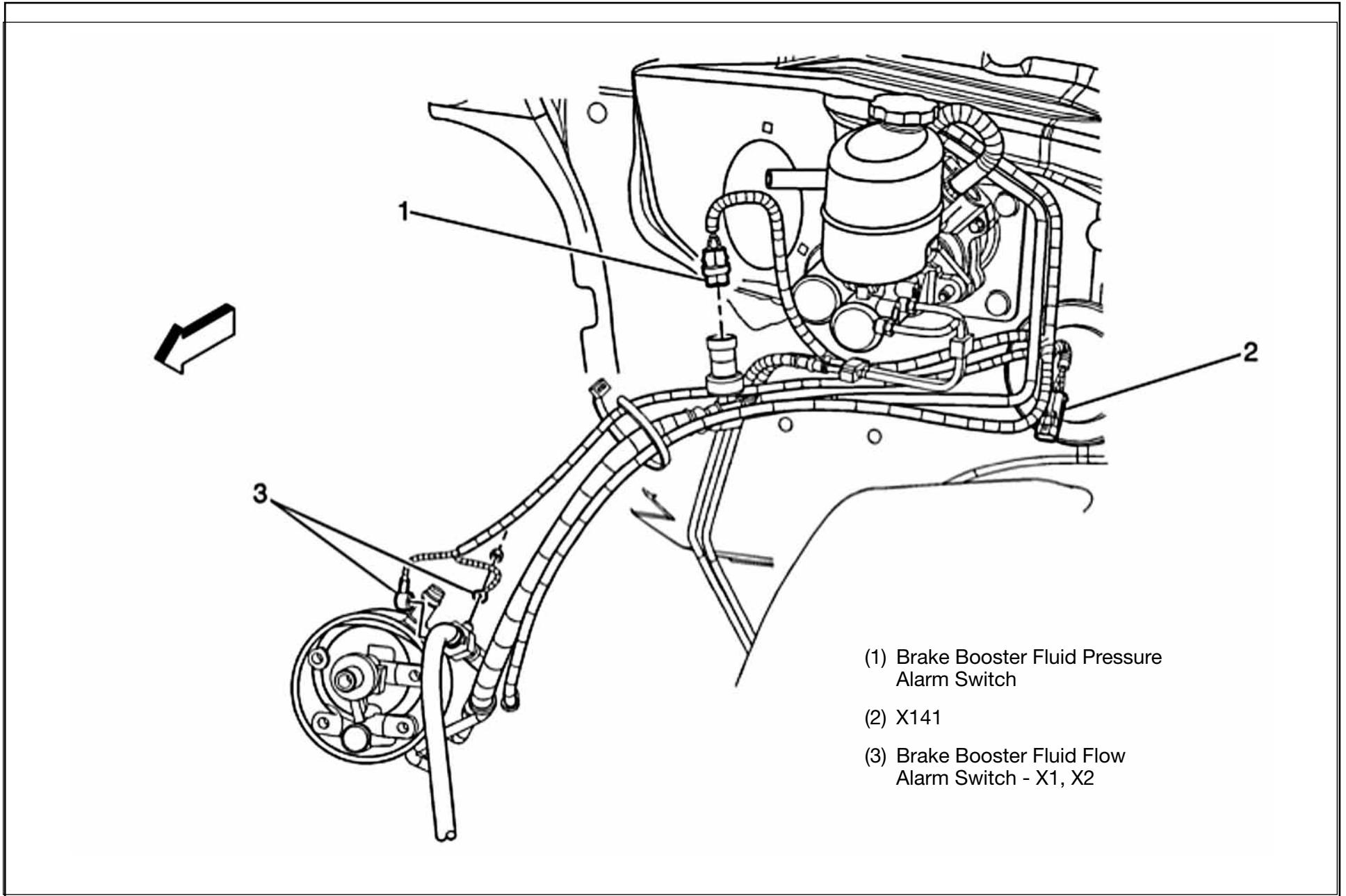


Engine Compartment

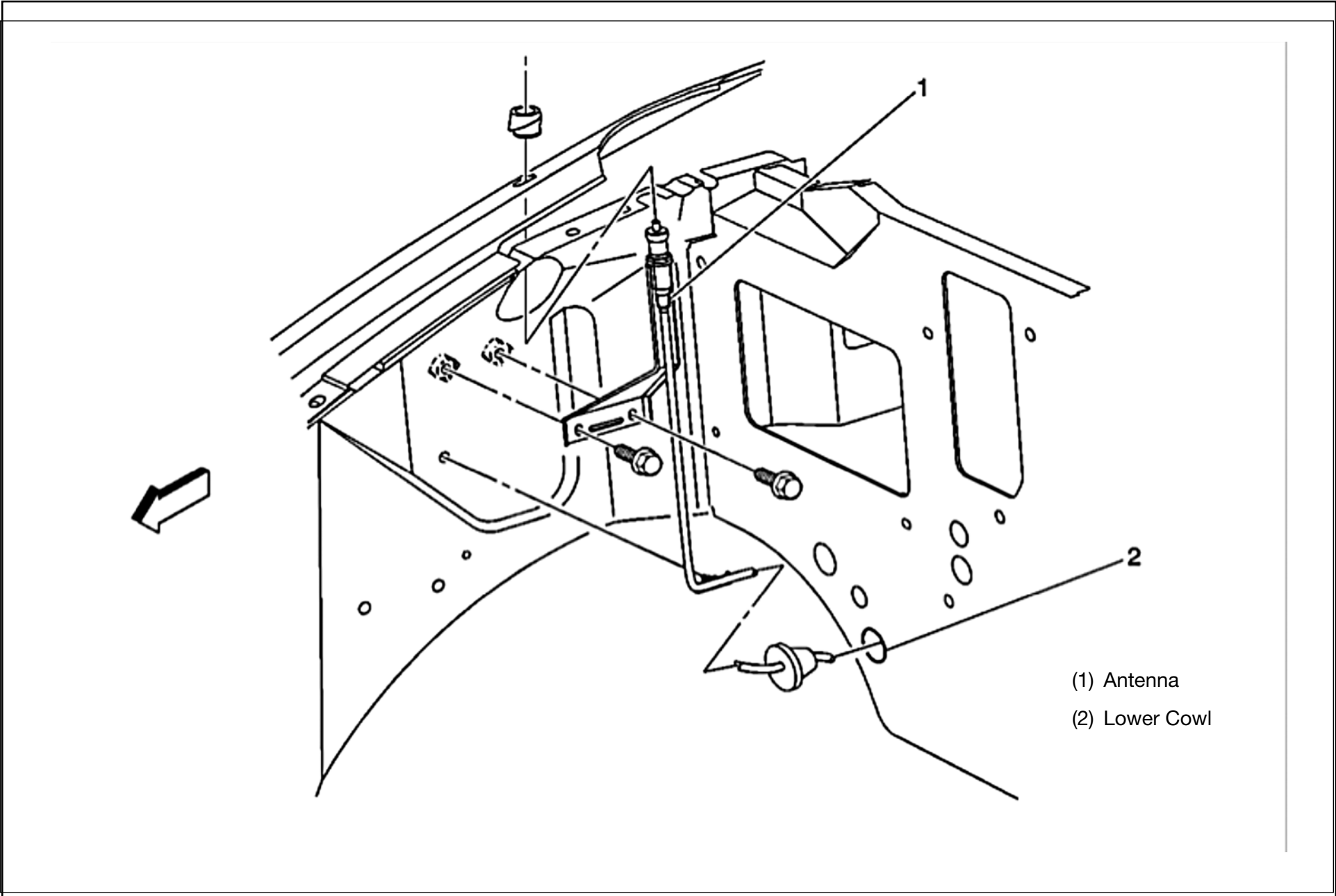


- (1) Vacuum Pump (LMM or LGH)
- (2) Battery
- (3) Transmission Control Module (TCM)
- (4) Blower Motor Resistor
- (5) Blower Motor
- (6) Brake Fluid Level Switch (Heavy Duty)
- (7) Engine Control Module (ECM)
- (8) Fuse Block - Underhood

Brake Booster Fluid Alarm Switches (UJ1)

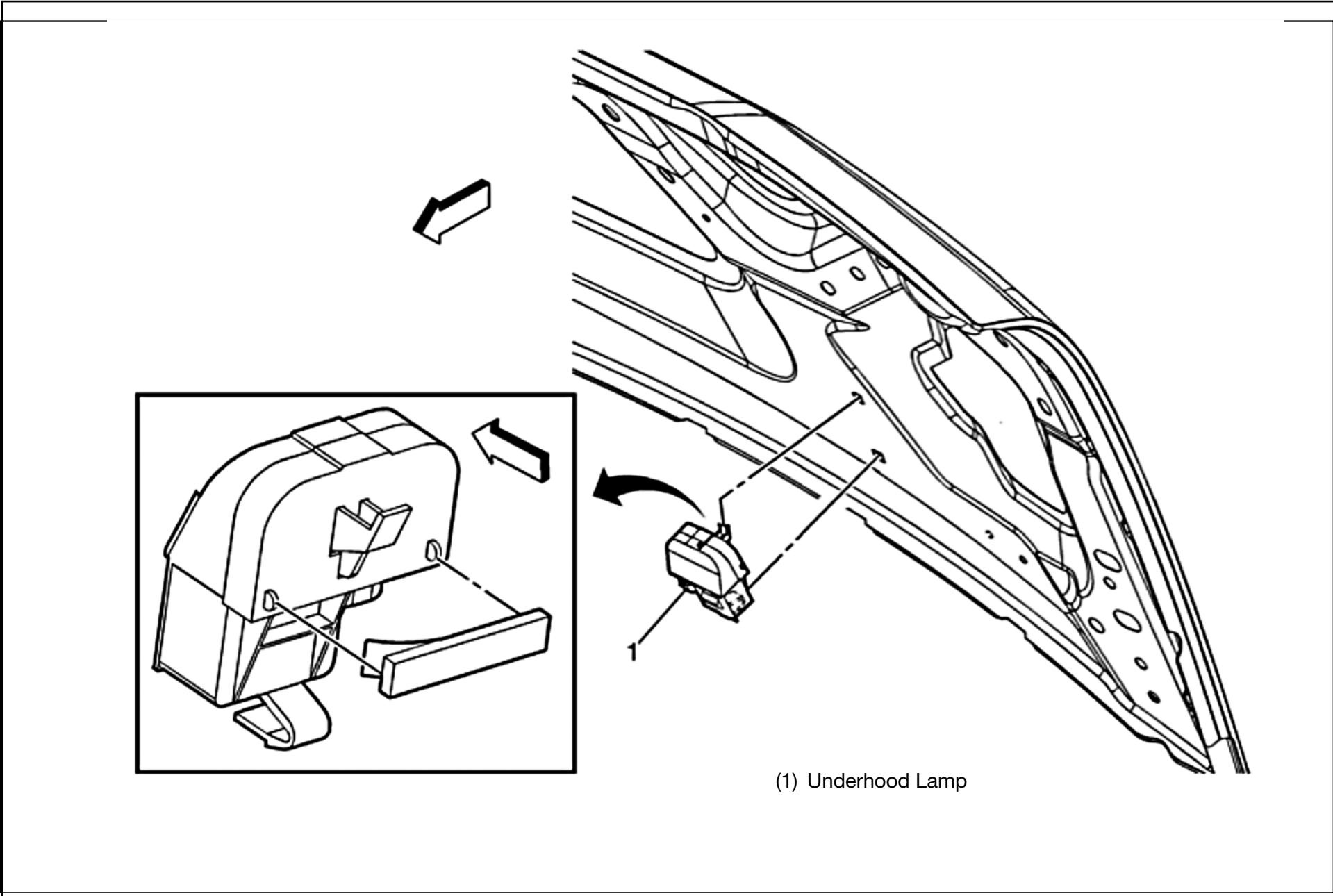


Right Rear of the Engine Compartment

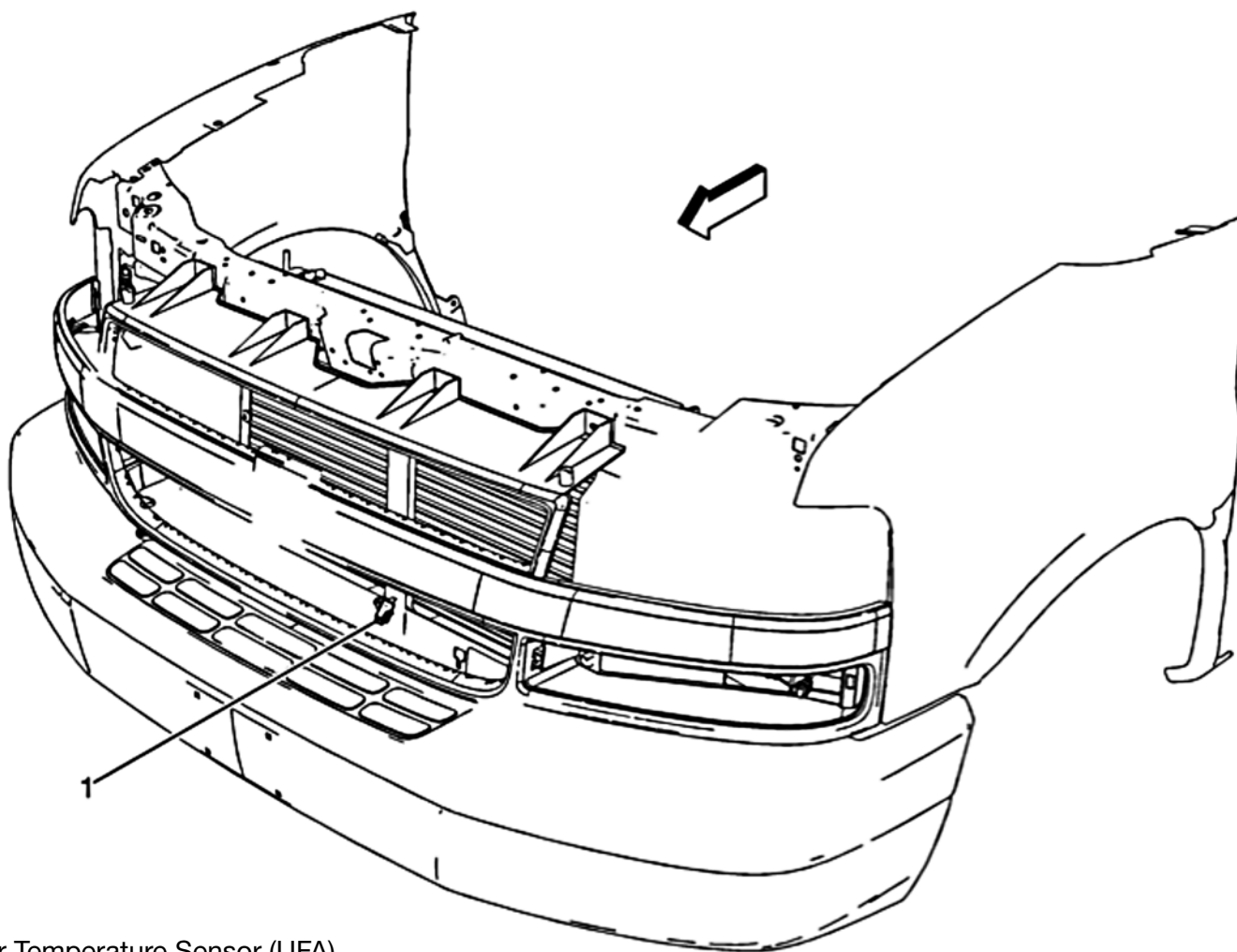


- (1) Antenna
- (2) Lower Cowl

Underhood Lamp

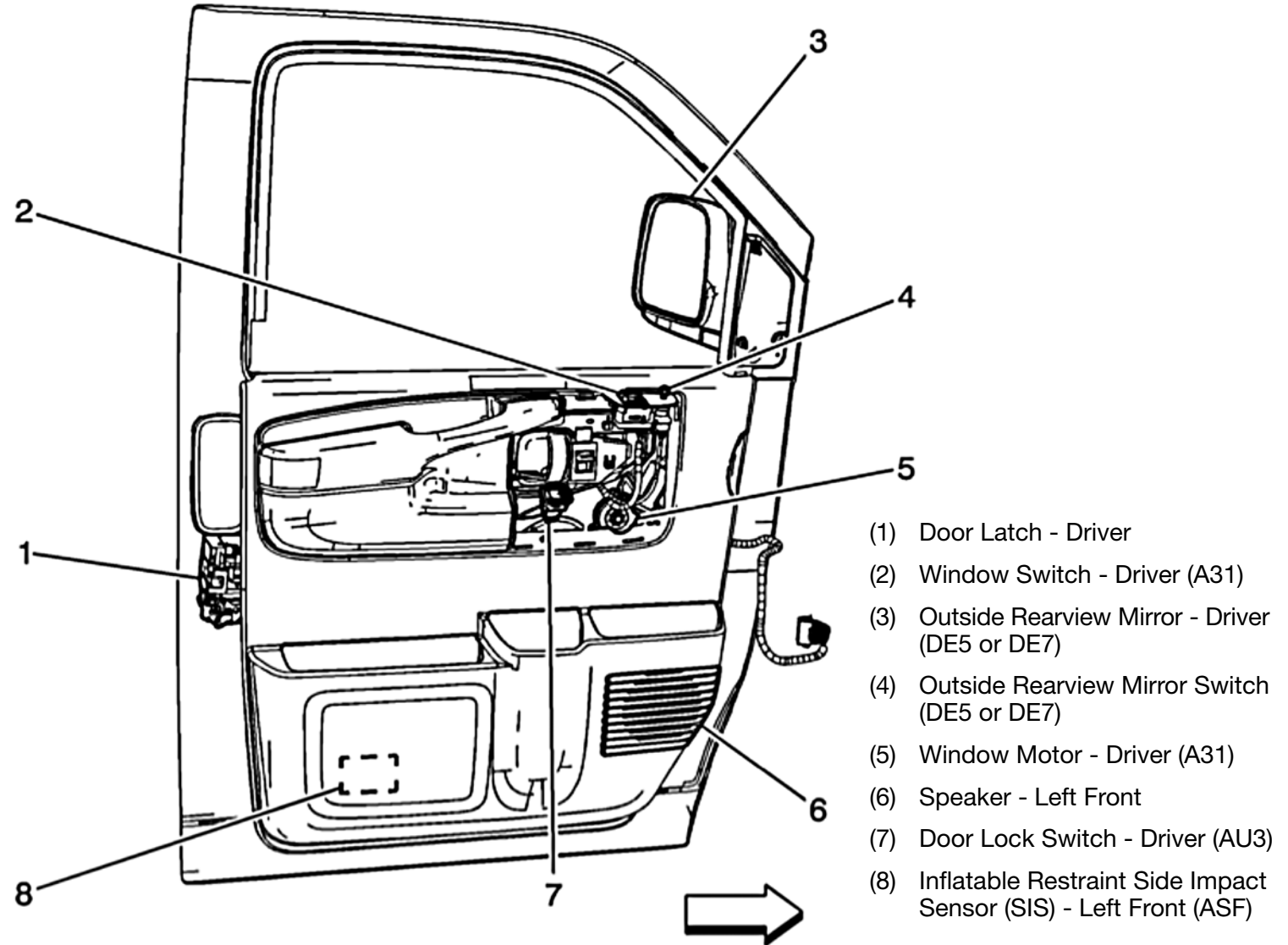


Ambient Air Temperature Sensor (UFA)

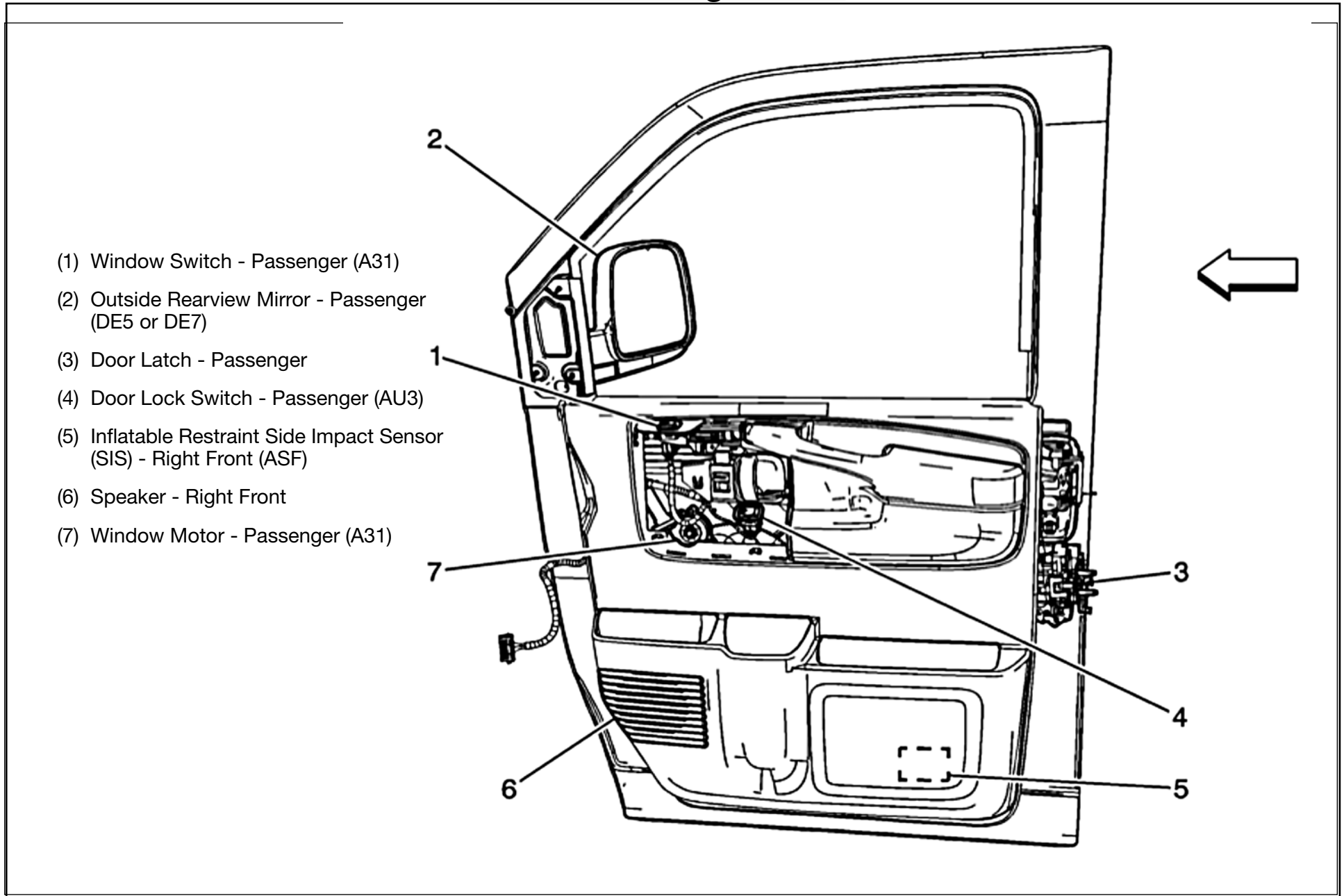


(1) Ambient Air Temperature Sensor (UFA)

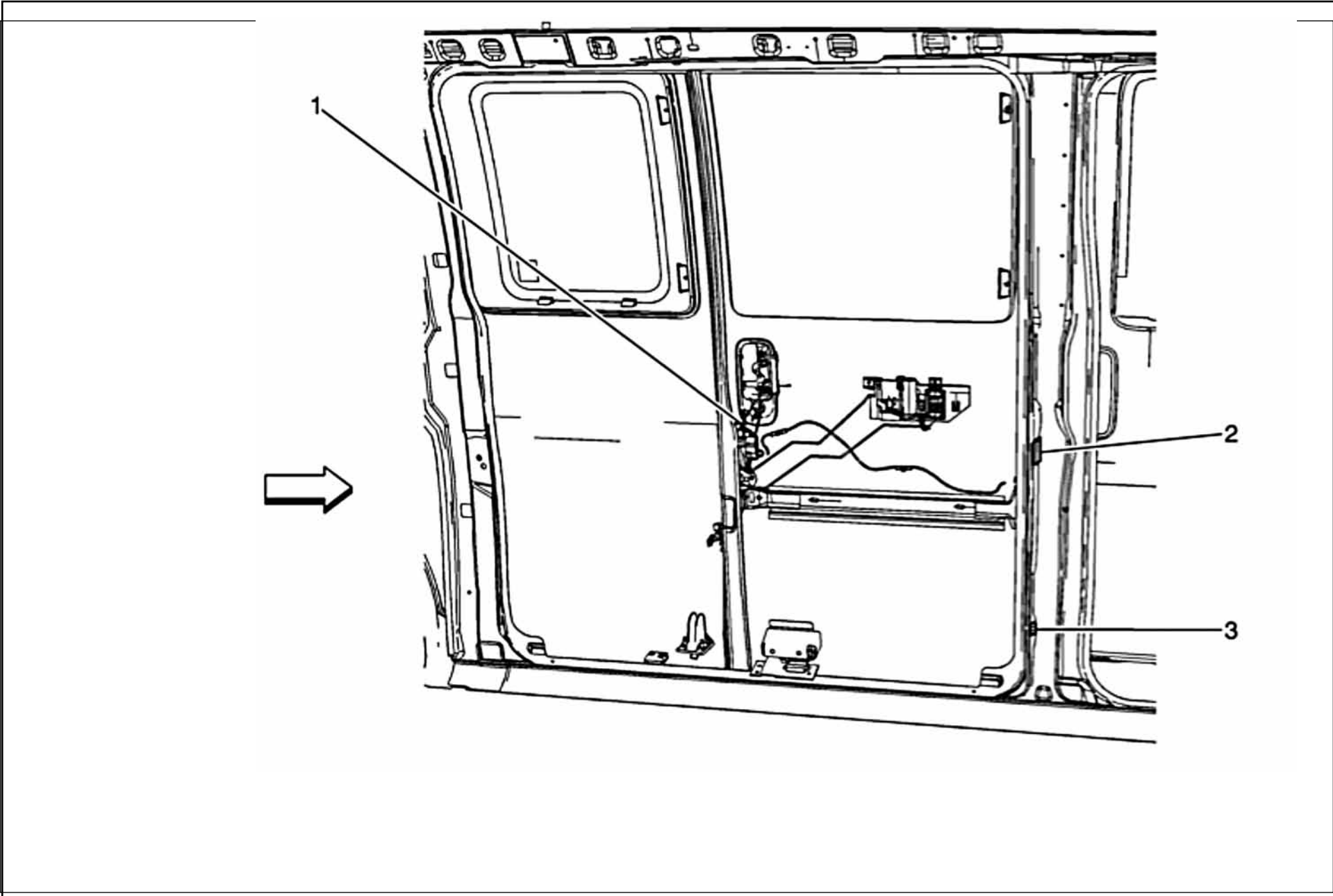
Driver Door



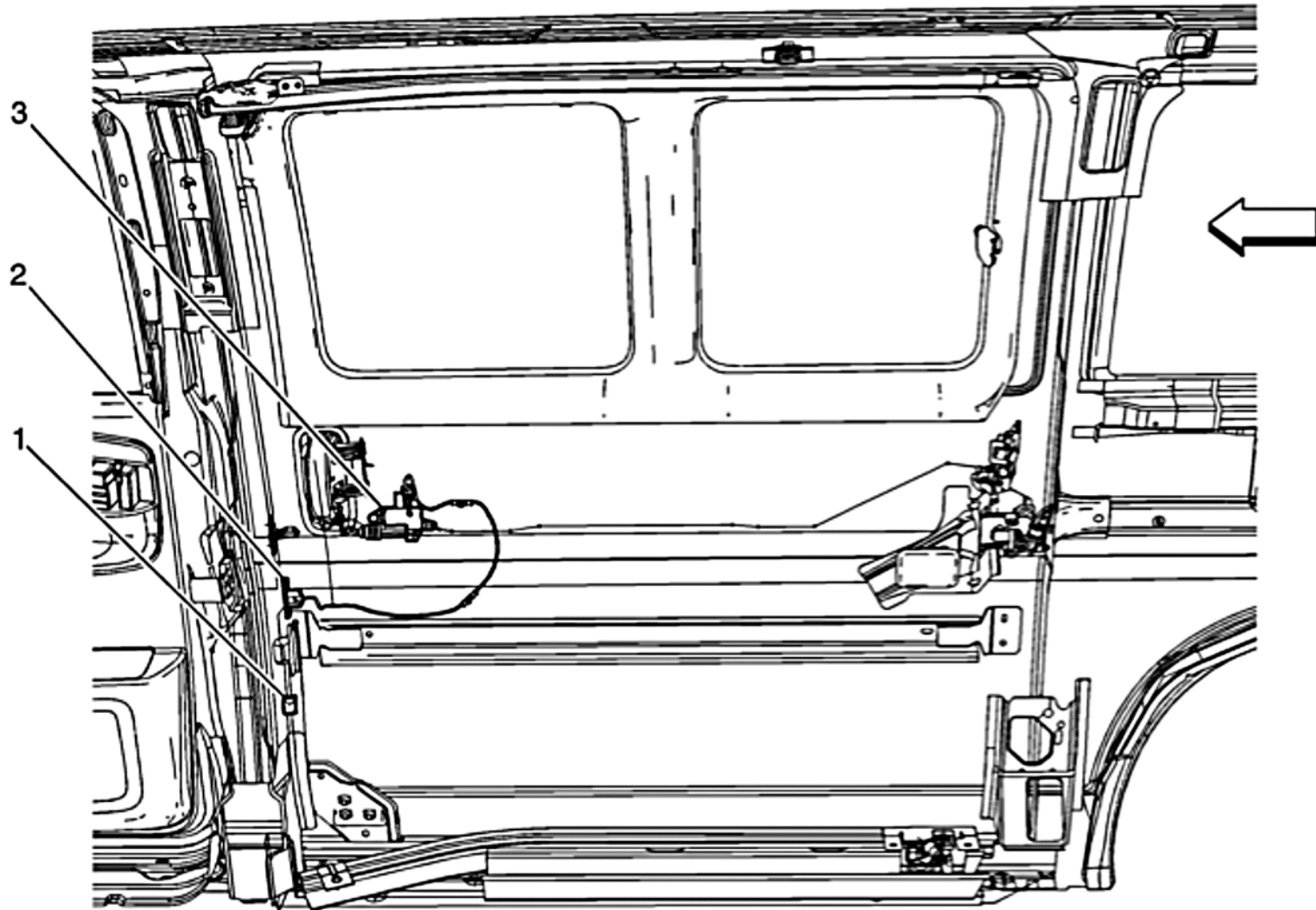
Front Passenger Door



Left Side Door (E26)

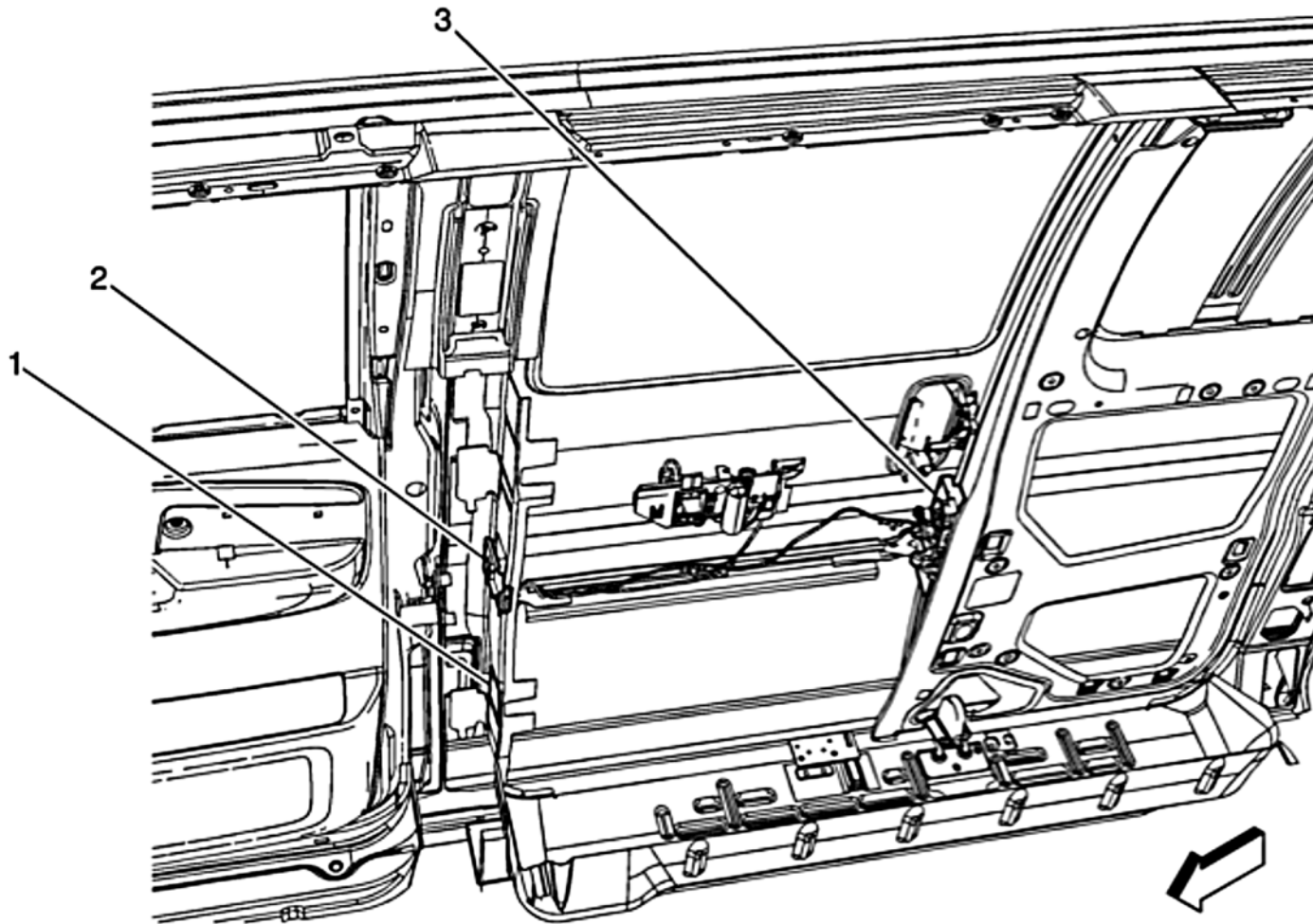


Right Sliding Door (YA2)



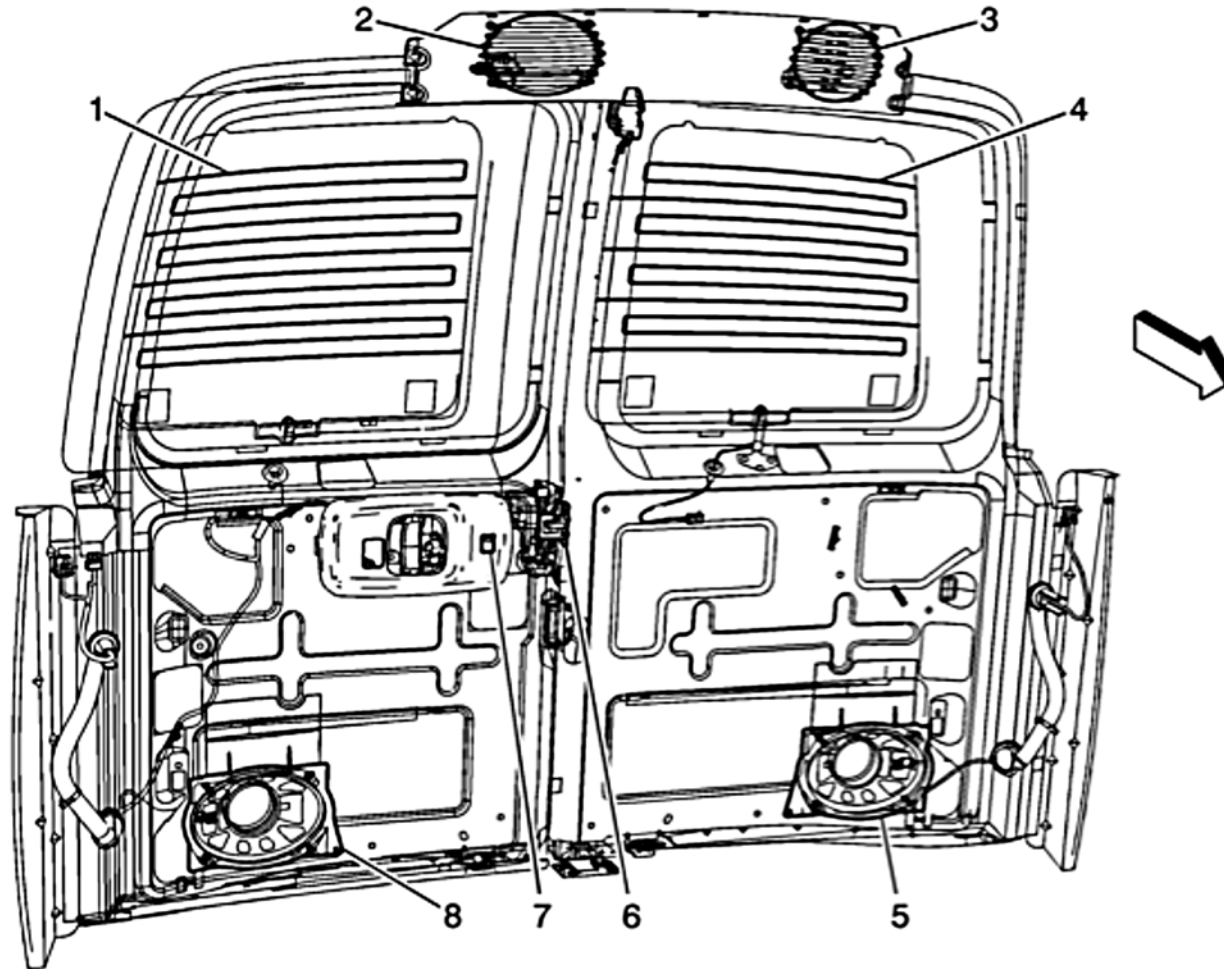
- (1) Door Jamb Switch - Right Rear
- (2) Door Contact Plate - Right (AU3)
- (3) Door Lock Actuator - Right Rear (AU3)

Right Side Door (E24)



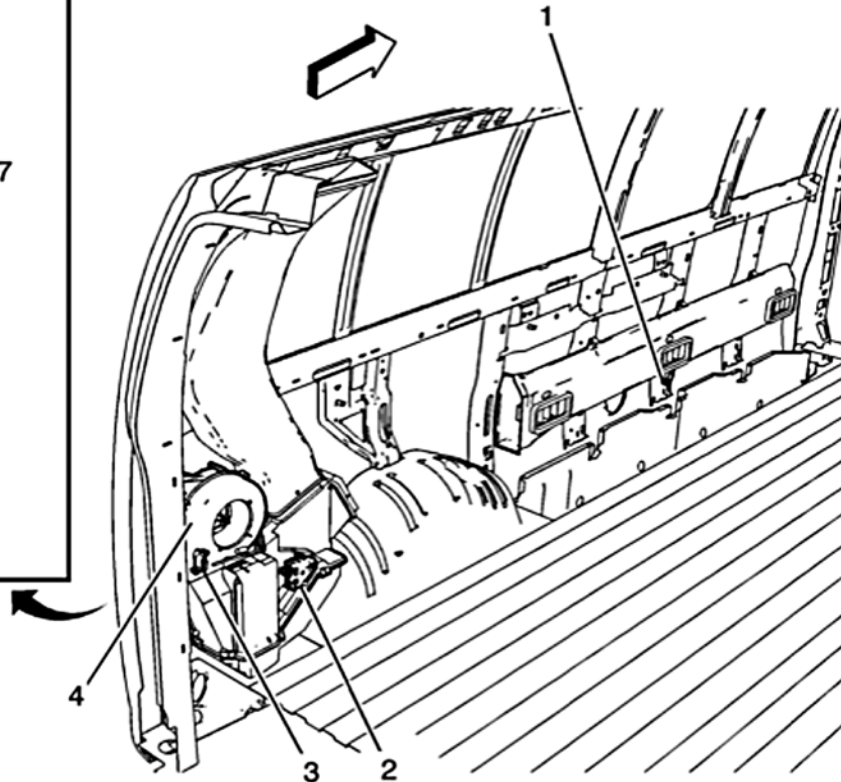
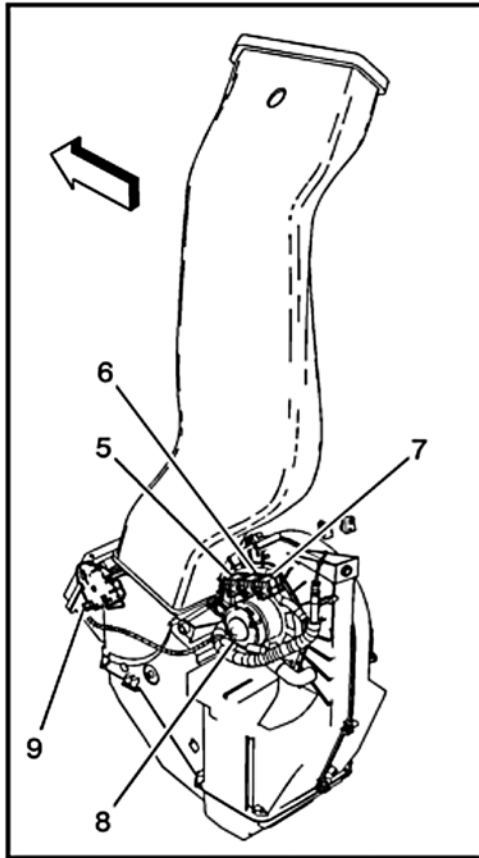
- (1) Door Jamb Switch - Right Rear
- (2) Door Contact Plate - Right (AU3)
- (3) Door Lock Actuator - Right Rear (AU3)

Rear Doors (Passenger or Cargo)



- | | |
|---|---|
| (1) Rear Window Defogger Grid - Right (C49) | (5) Speaker - Left Cargo Door (US8 or US9) |
| (2) Speaker - Right Rear | (6) Door Latch - Cargo |
| (3) Speaker - Left Rear | (7) Door Lock Switch - Cargo (AU3) |
| (4) Rear Window Defogger Grid - Left (C49) | (8) Speaker - Right Cargo Door (US8 or US9) |

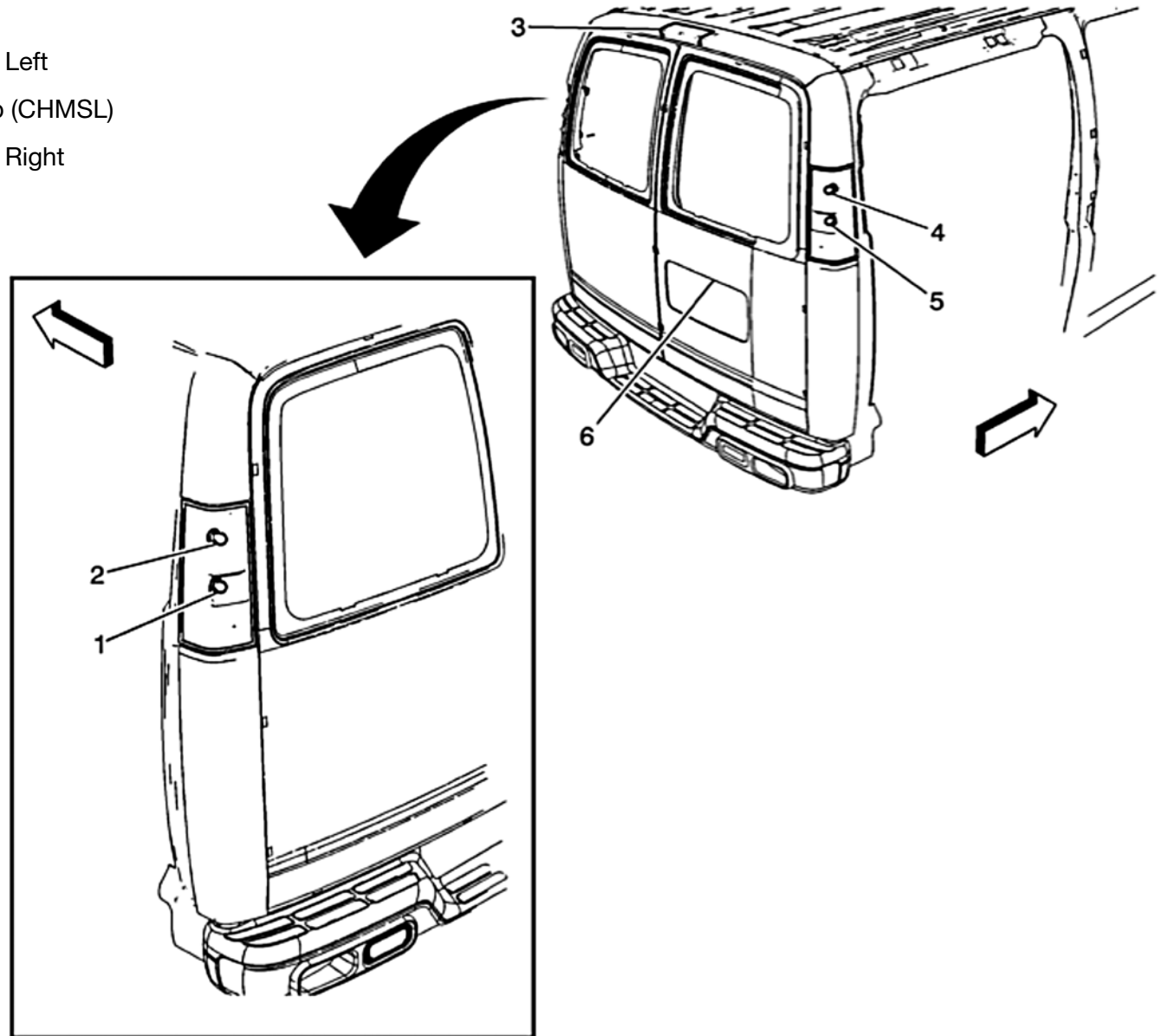
Left Rear Cargo Area (Passenger or Cargo)



- (1) Inflatable Restraint Side Impact Sensor (SIS) - Left Rear (Passenger with ASF without E26)
- (2) Air Temperature Actuator - Auxiliary (C69)
- (3) Blower Motor Resistor - Auxiliary (C36 with C69)
- (4) HVAC Control Module - Auxiliary (C69)
- (5) Blower Motor High Speed Relay - Auxiliary (C36 with C69)
- (6) Blower Motor Medium Speed Relay - Auxiliary (C36 with C69)
- (7) Blower Motor Low Speed Relay - Auxiliary (C36 with C69)
- (8) Blower Motor - Auxiliary (C36 with C69)
- (9) Mode Actuator - Auxiliary (C69)

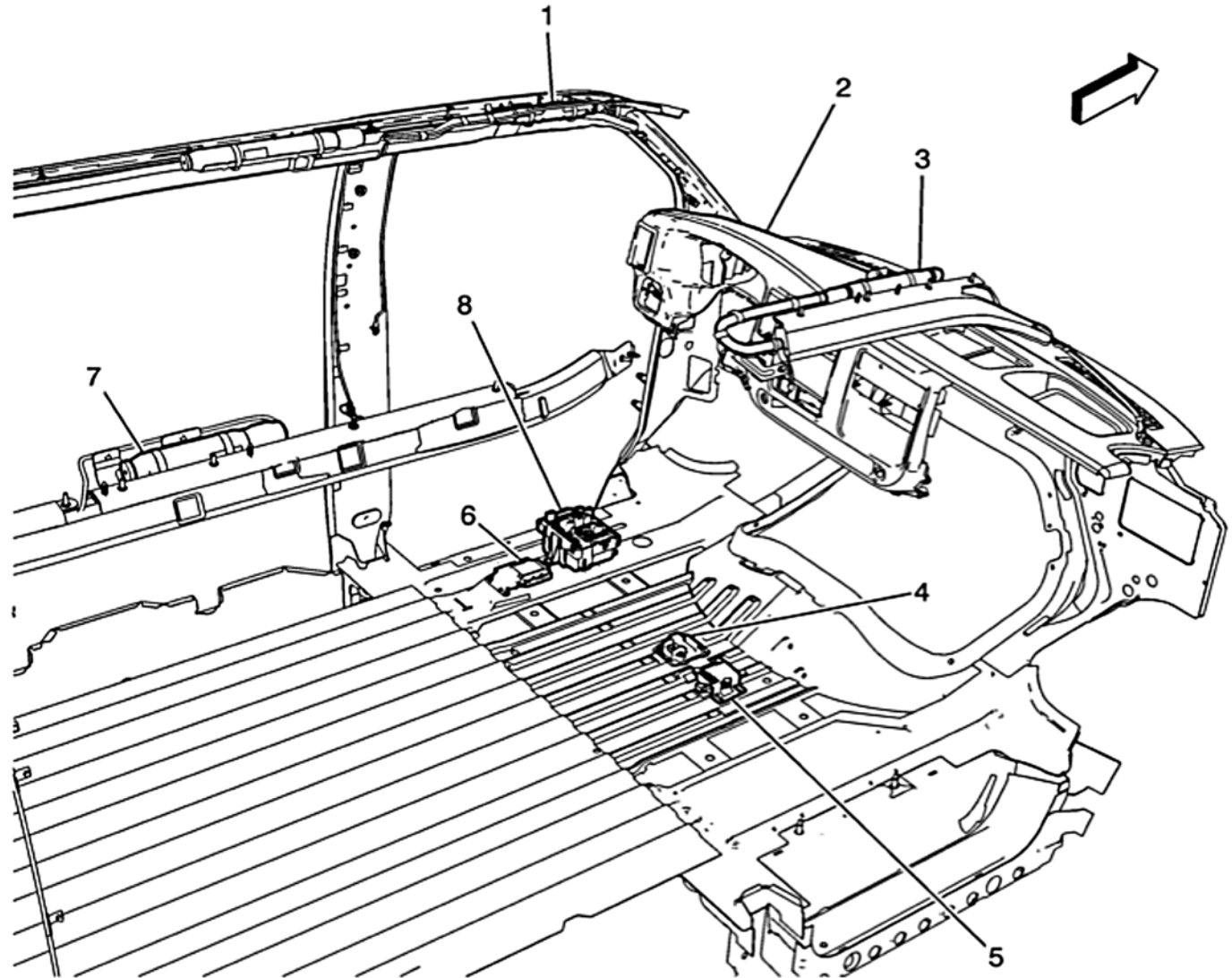
Rear Exterior Lights (Passenger or Cargo)

- (1) Backup Lamp - Left
- (2) Tail/Stop and Turn Signal Lamp - Left
- (3) Center High Mounted Stop Lamp (CHMSL)
- (4) Tail/Stop and Turn Signal Lamp - Right
- (5) Backup Lamp - Right
- (6) License Lamp



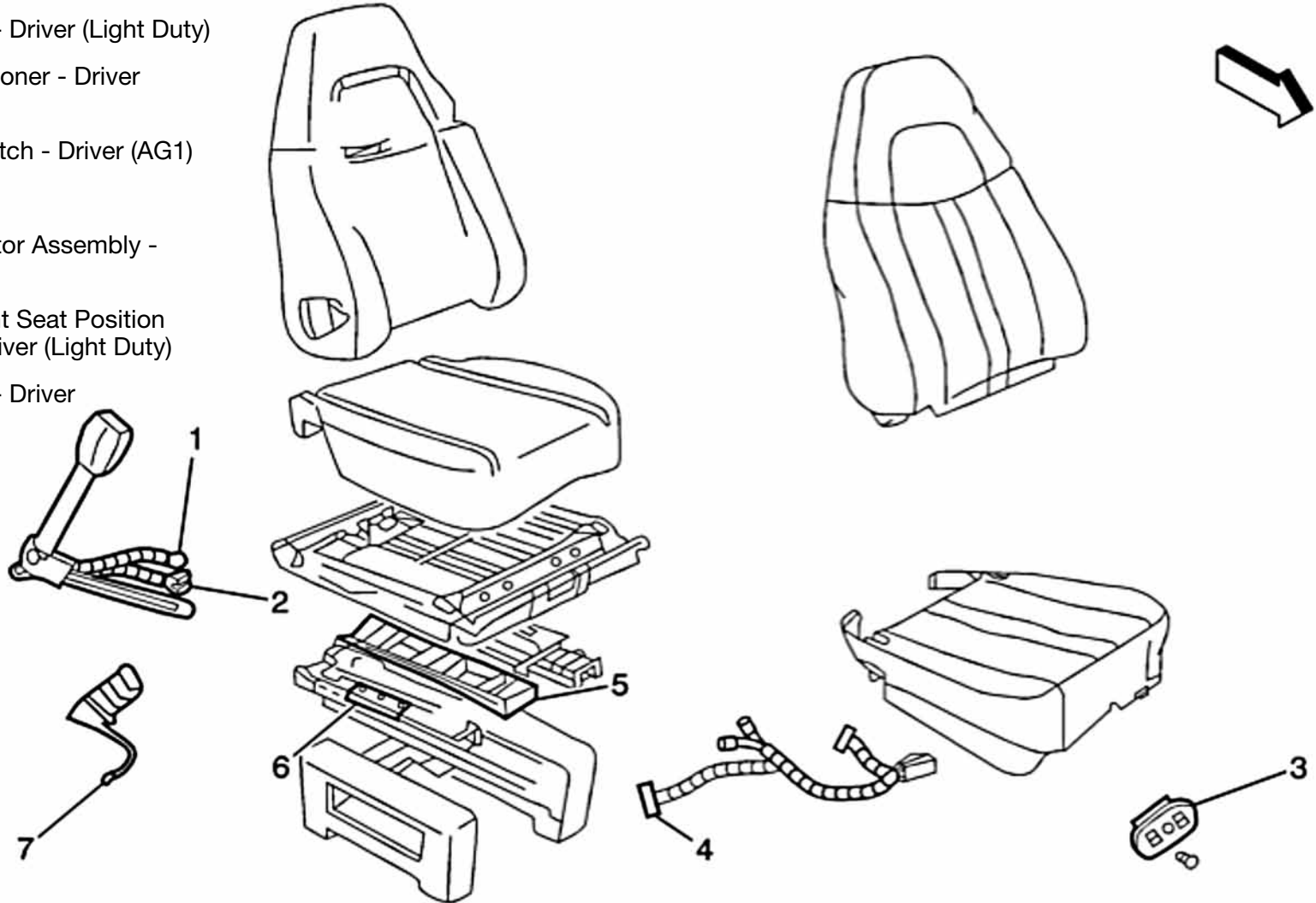
Front Left Side of Passenger Compartment

- (1) Inflatable Restraint Roof Rail Module - Left Front (ASF)
- (2) Instrument Panel - Upper Pad
- (3) Inflatable Restraint Roof Rail Module - Right Front (ASF)
- (4) Inflatable Restraint Vehicle Rollover Sensor (ASF)
- (5) Yaw and Lateral Accelerometer Sensor (JL4)
- (6) Inflatable Restraint Sensing and Diagnostic Module (SDM)
- (7) Inflatable Restraint Roof Rail Module - Right Rear (ASF with YA2)
- (8) Fuse Block - Body



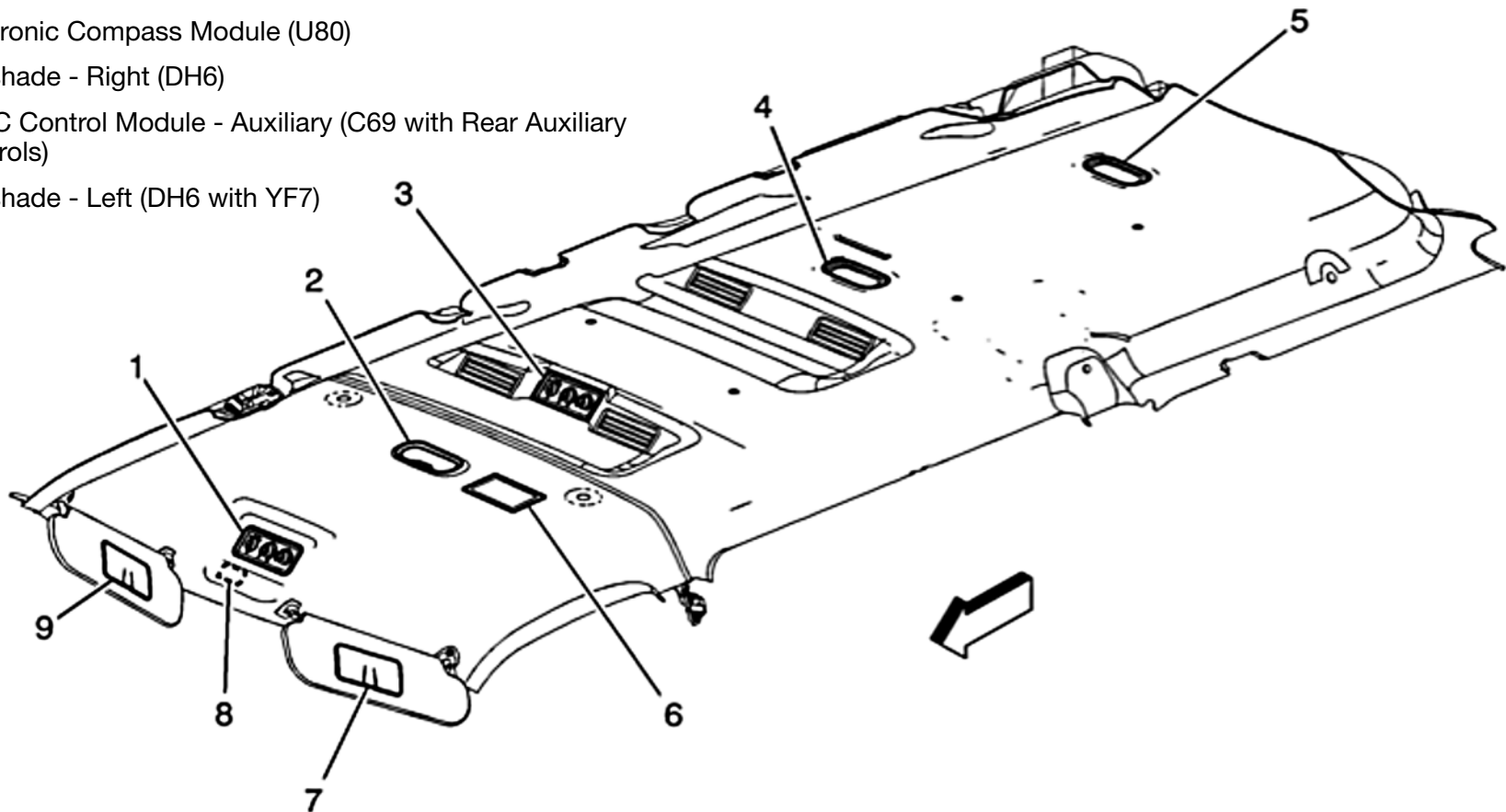
Driver Seat

- (1) Seat Belt Buckle - Driver (Light Duty)
- (2) Seat Belt Pretensioner - Driver (Light Duty)
- (3) Seat Adjuster Switch - Driver (AG1)
- (4) X307
- (5) Seat Adjuster Motor Assembly - Driver (AG1)
- (6) Inflatable Restraint Seat Position Sensor (SPS) - Driver (Light Duty)
- (7) Seat Belt Buckle - Driver (Heavy Duty)

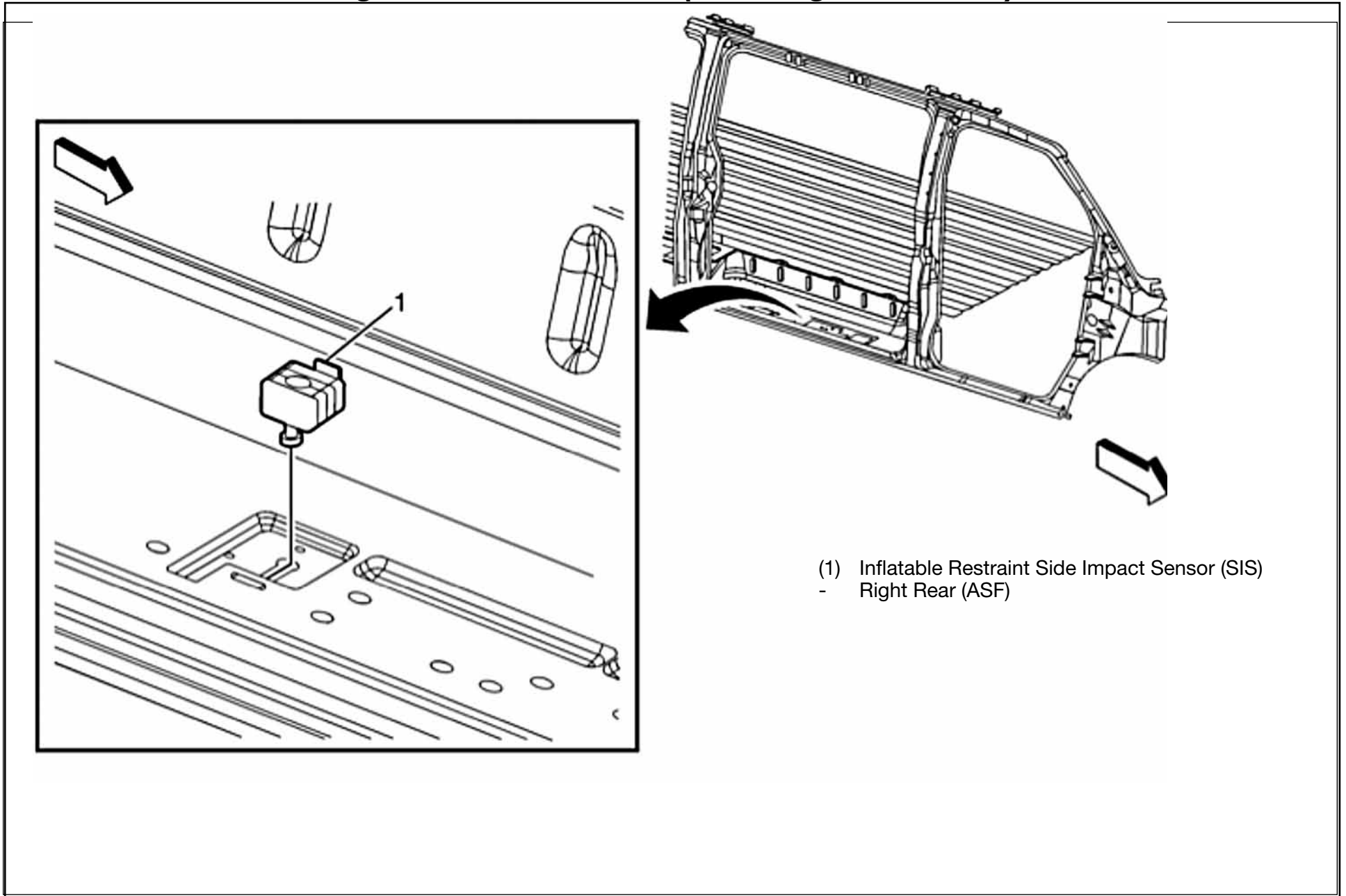


Headliner

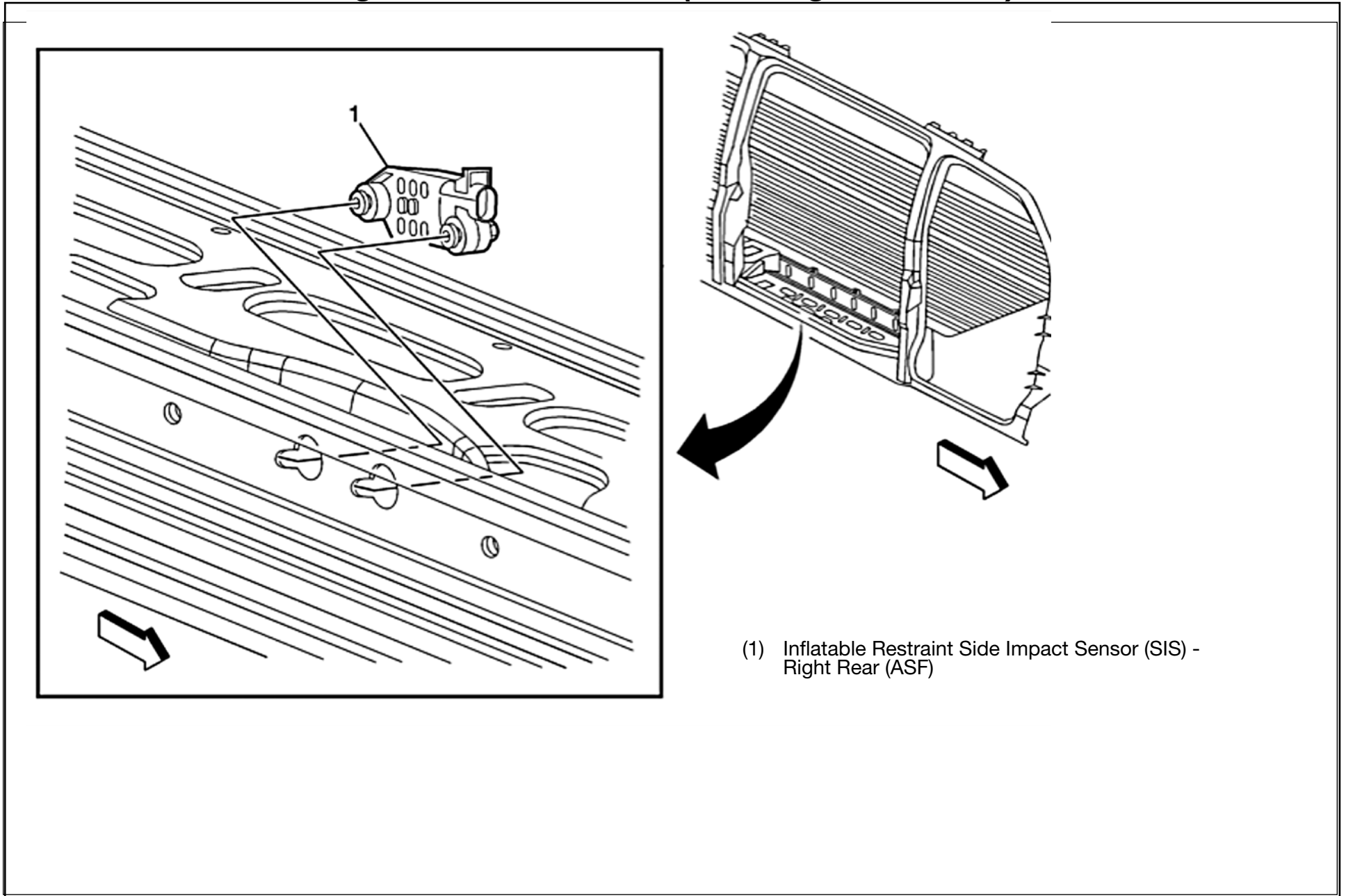
- (1) HVAC Control Assembly - Front Auxiliary (C69)
- (2) Dome/Reading Lamp - Front
- (3) HVAC Control Assembly - Rear Auxiliary (C69 with Rear Auxiliary Controls)
- (4) Dome/Reading Lamp - Middle (Passenger)
- (5) Dome/Reading Lamp - Rear (Passenger)/Dome Lamp (Cargo)
- (6) Electronic Compass Module (U80)
- (7) Sunshade - Right (DH6)
- (8) HVAC Control Module - Auxiliary (C69 with Rear Auxiliary Controls)
- (9) Sunshade - Left (DH6 with YF7)



Right Rear Frame Rail (Passenger with E24)

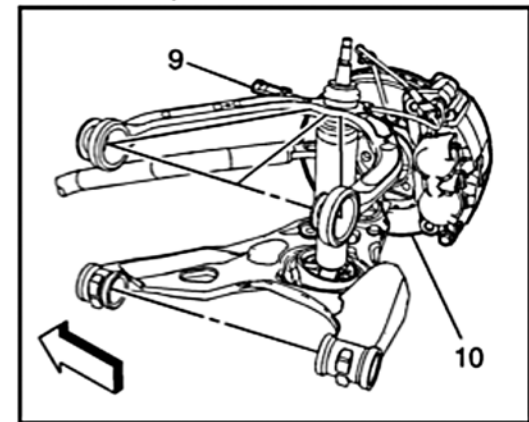
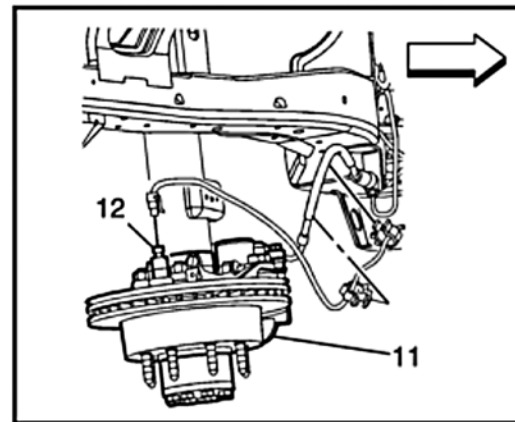
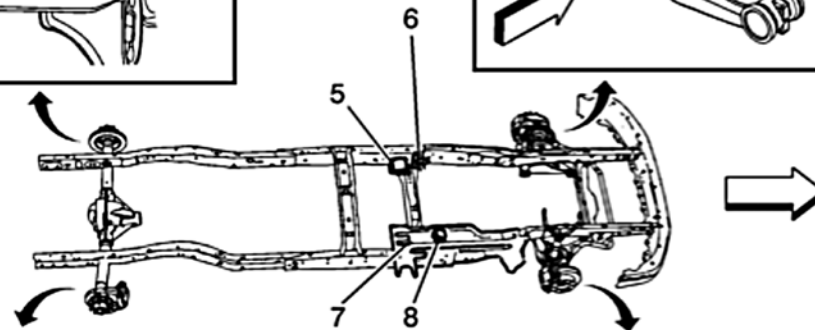
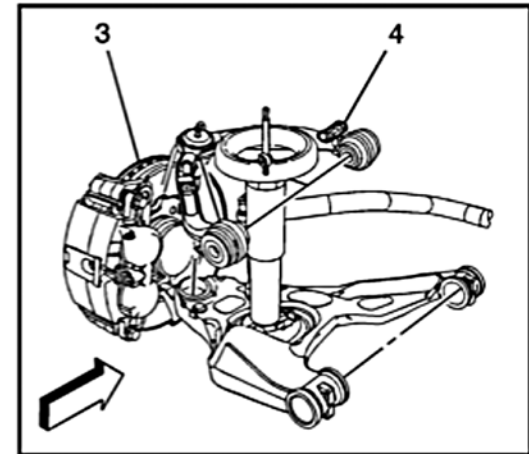
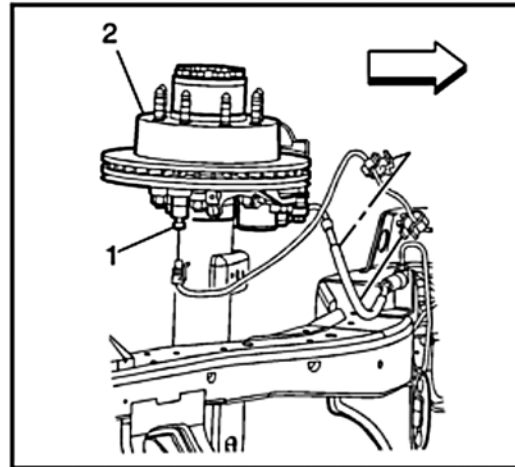


Right Rear Frame Rail (Passenger with YA2)



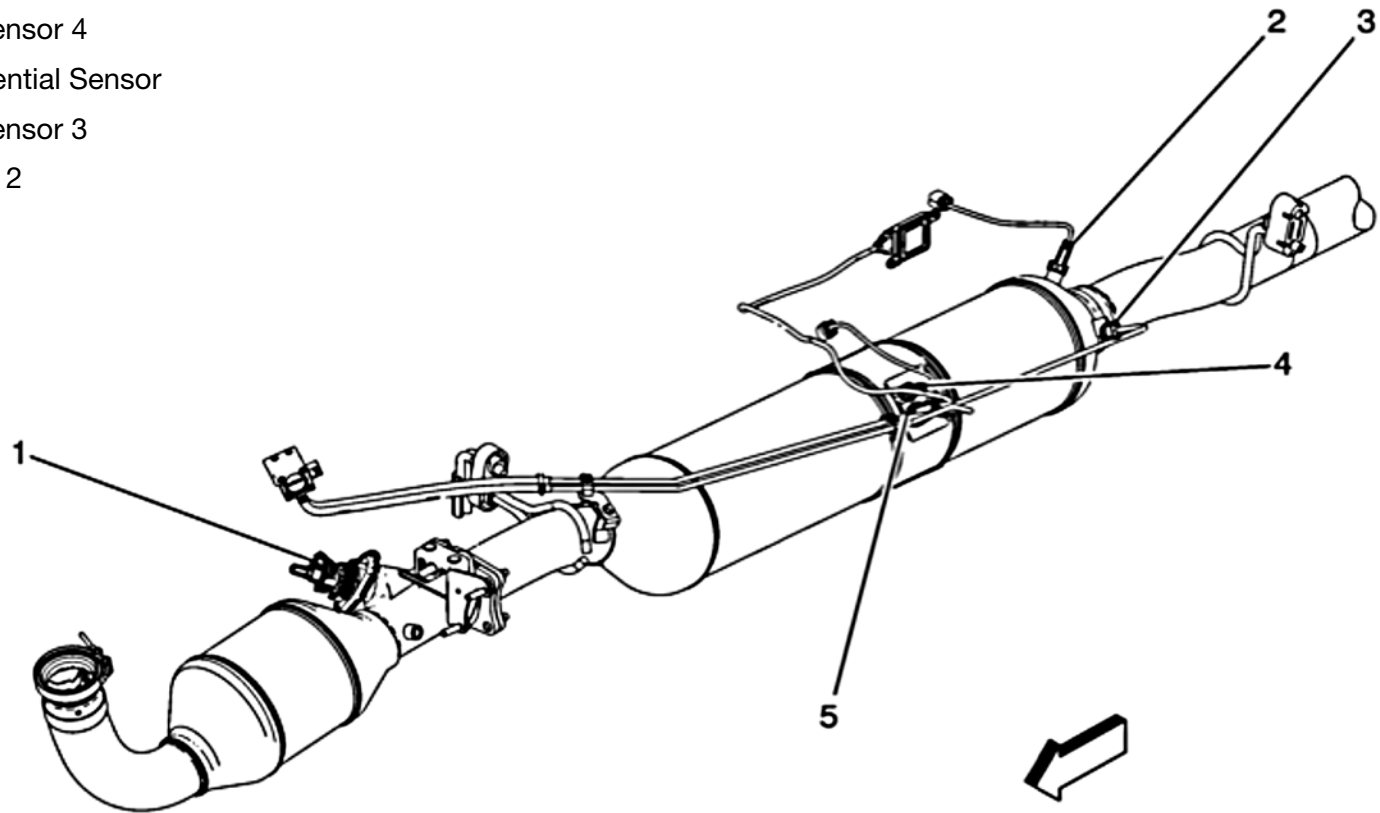
Frame and Underbody

- (1) Wheel Speed Sensor (WSS) - Left Rear (JL4)
- (2) Rotor - Left Rear
- (3) Rotor - Left Front
- (4) Wheel Speed Sensor (WSS) - Left Front
- (5) Electronic Brake Control Module (EBCM)
- (6) Brake Pressure Differential Switch (Light Duty)
- (7) Floor Panel - Right Front
- (8) Yaw and Lateral Accelerometer Sensor (JL4)
- (9) Wheel Speed Sensor (WSS) - Right Front
- (10) Rotor - Right Front
- (11) Rotor - Right Rear
- (12) Wheel Speed Sensor (WSS) - Right Rear (JL4)

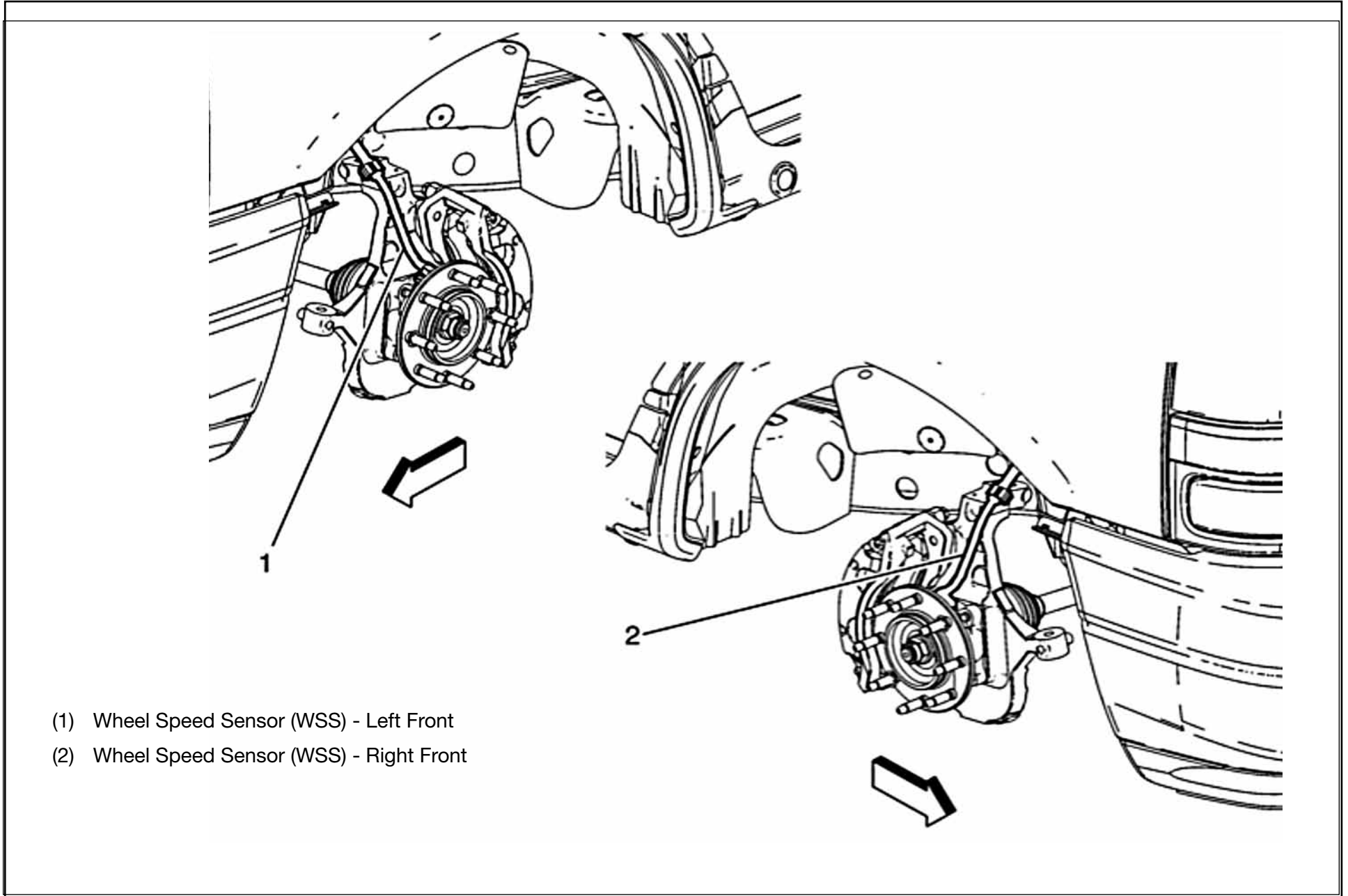


Front of Exhaust System Components (LGH)

- (1) Reductant Injector
- (2) Exhaust Temperature Sensor 4
- (3) Exhaust Pressure Differential Sensor
- (4) Exhaust Temperature Sensor 3
- (5) Nitrogen Oxides Sensor 2

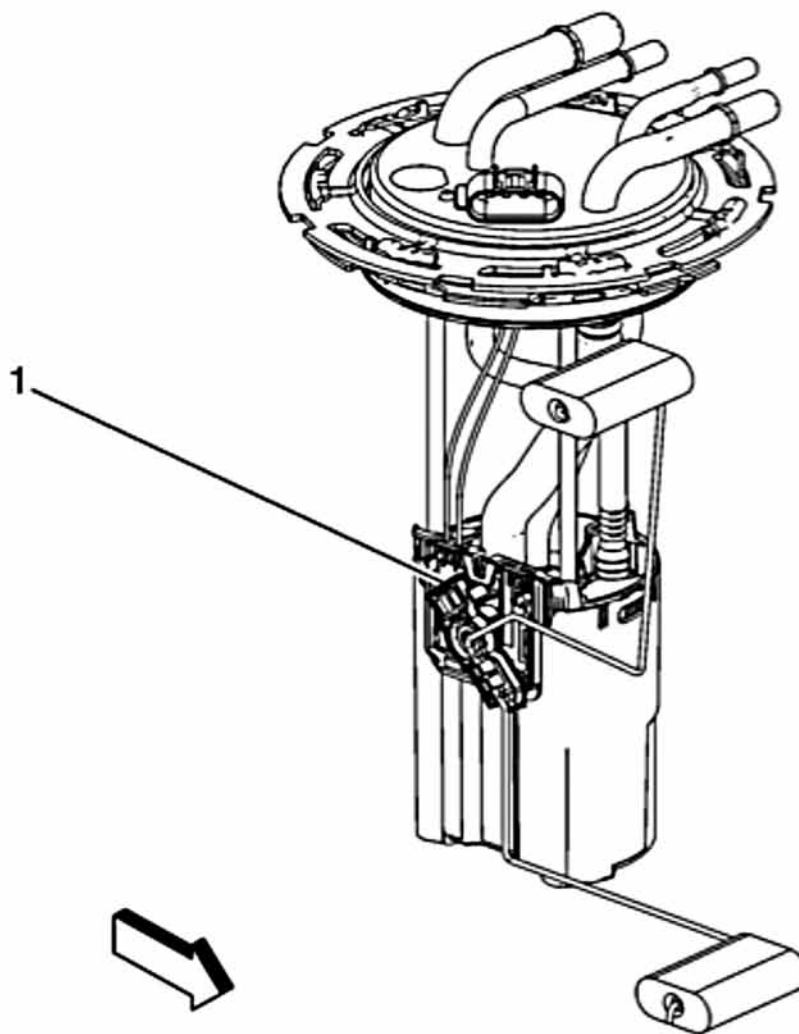


Front Wheel Speed Sensor Components (LGH)

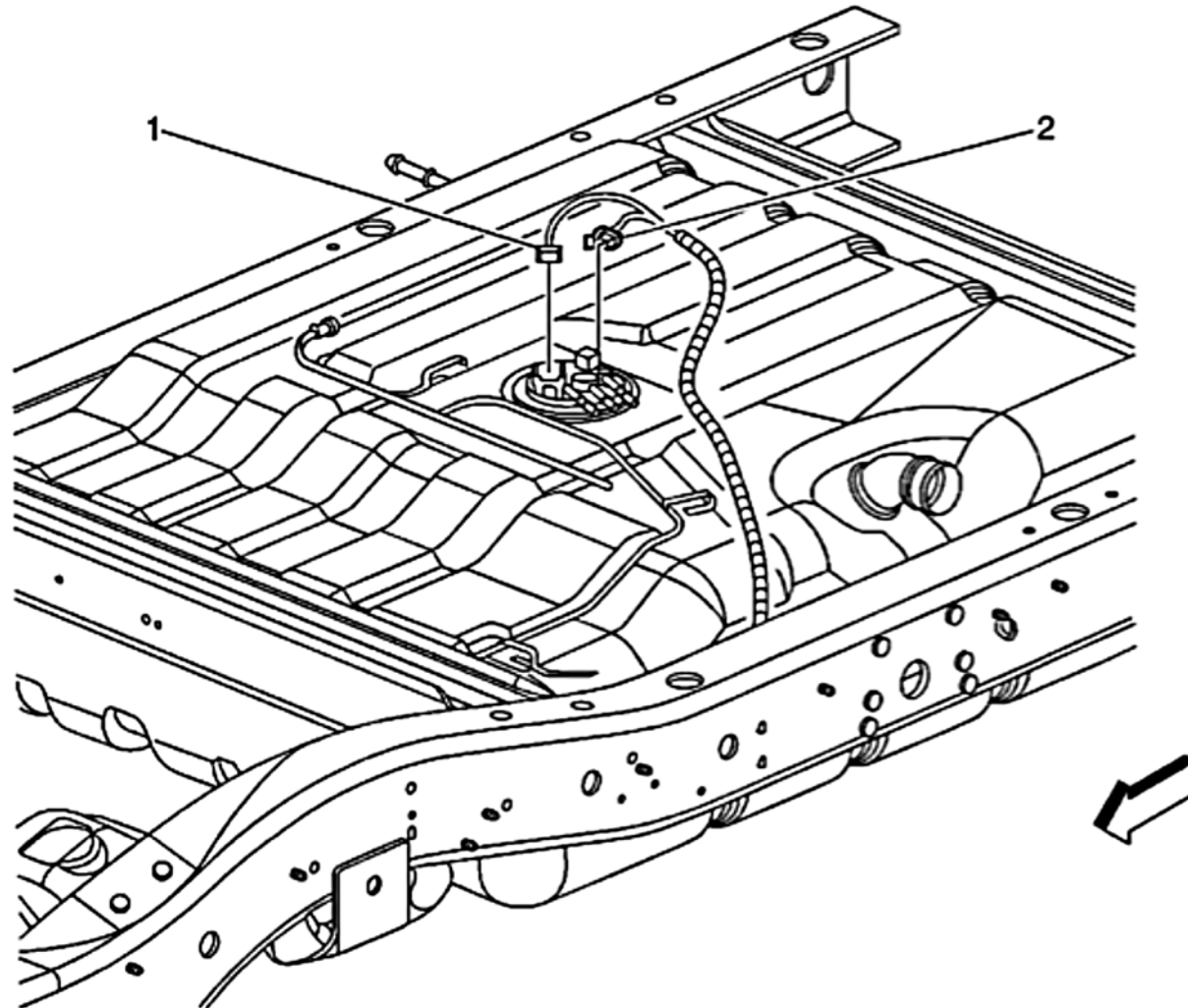


Inside of Fuel Tank Components (LGH)

(1) Fuel Level Sensor

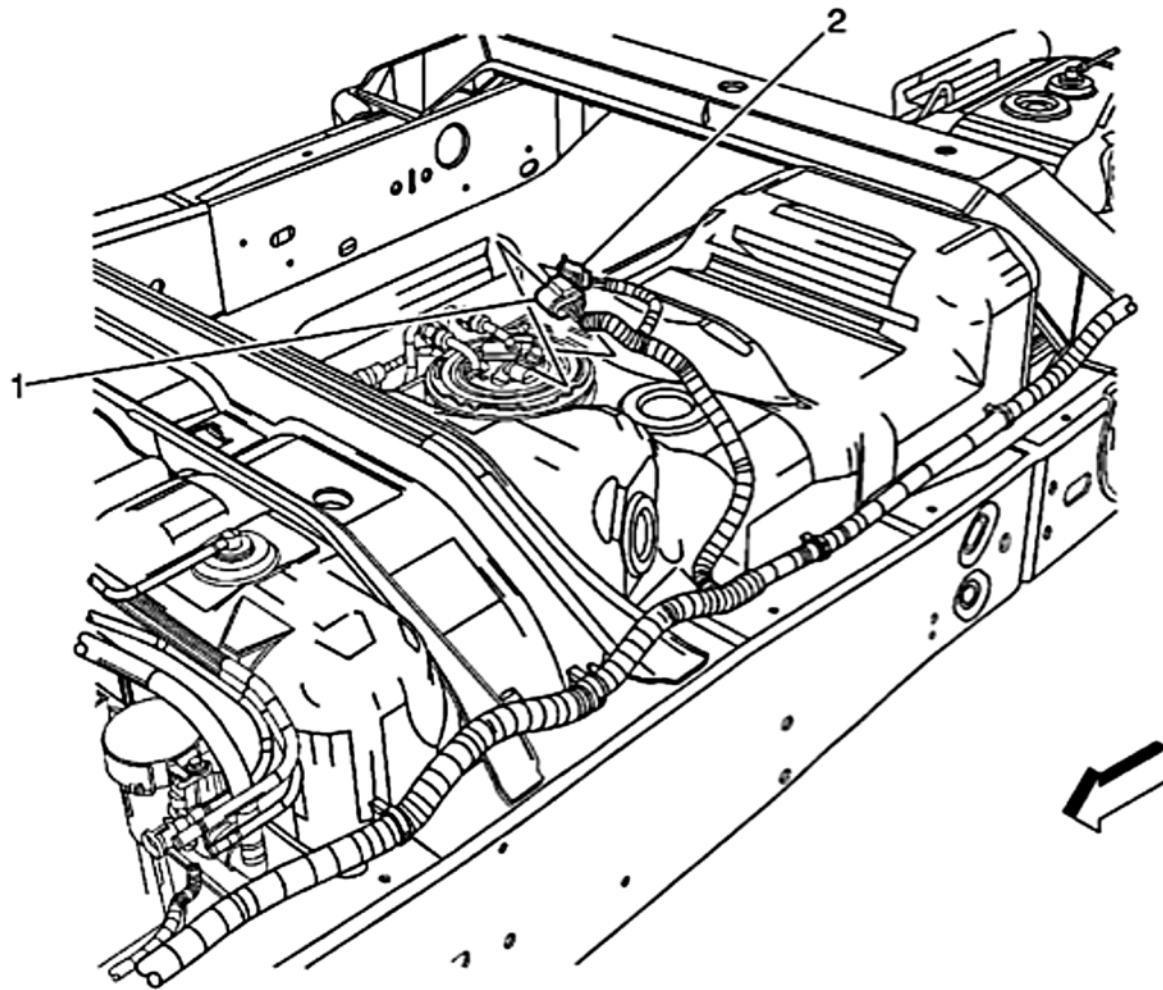


Fuel Tank (NE7)



- (1) Fuel Tank Pressure (FTP) Sensor Connector (Gas)
- (2) Fuel Pump and Sender Assembly Connector (Gas)/Fuel Level Sensor (Diesel)

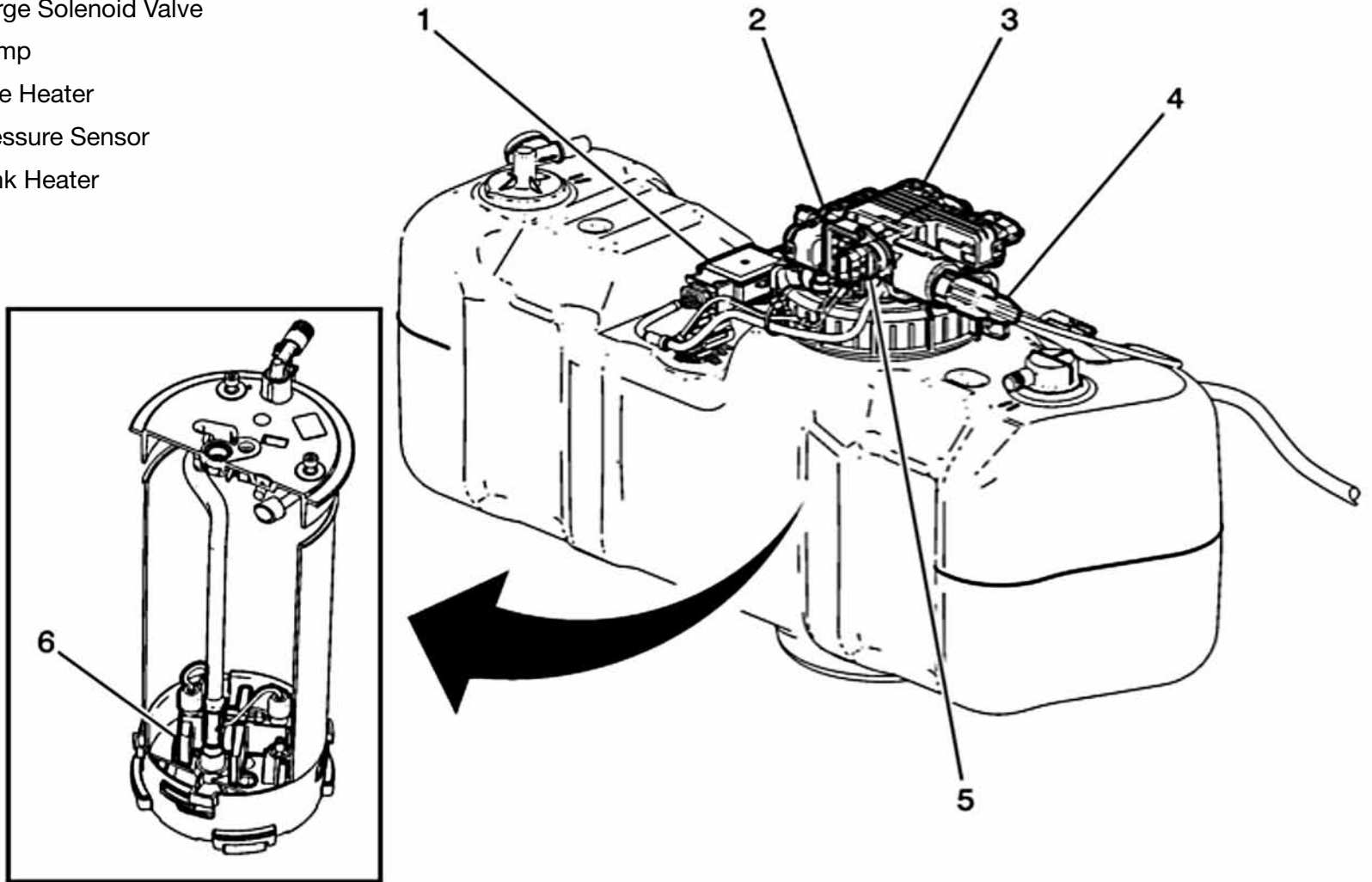
Fuel Tank (without NE7)



- (1) Fuel Pump and Sender Assembly Connector (Gas)/Fuel Level Sensor (Diesel)
- (2) Fuel Tank Pressure (FTP) Sensor Connector (Gas)

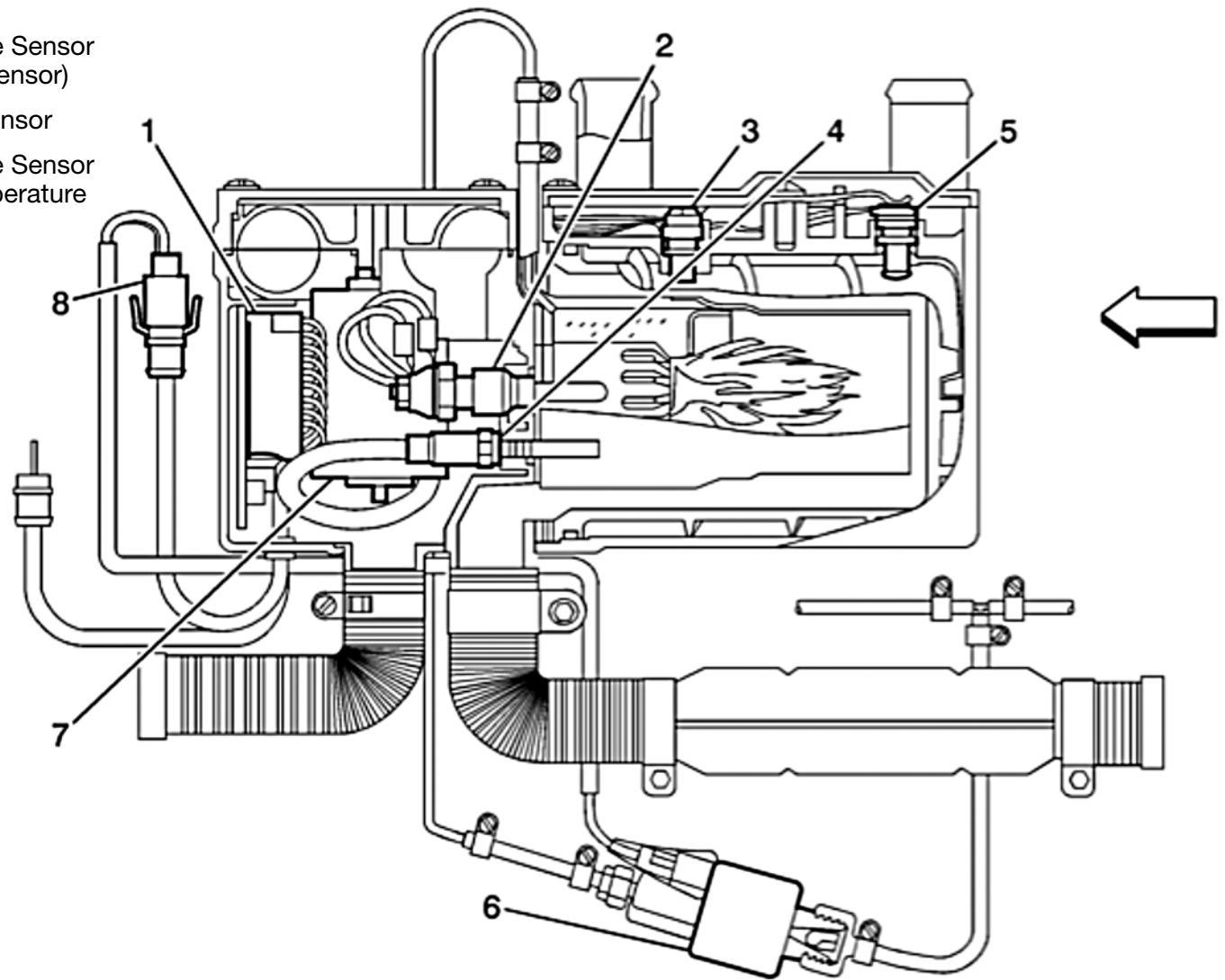
Reductant Tank Components (LGH)

- (1) Reductant Sensor Module
- (2) Reductant Purge Solenoid Valve
- (3) Reductant Pump
- (4) Reductant Line Heater
- (5) Reductant Pressure Sensor
- (6) Reductant Tank Heater



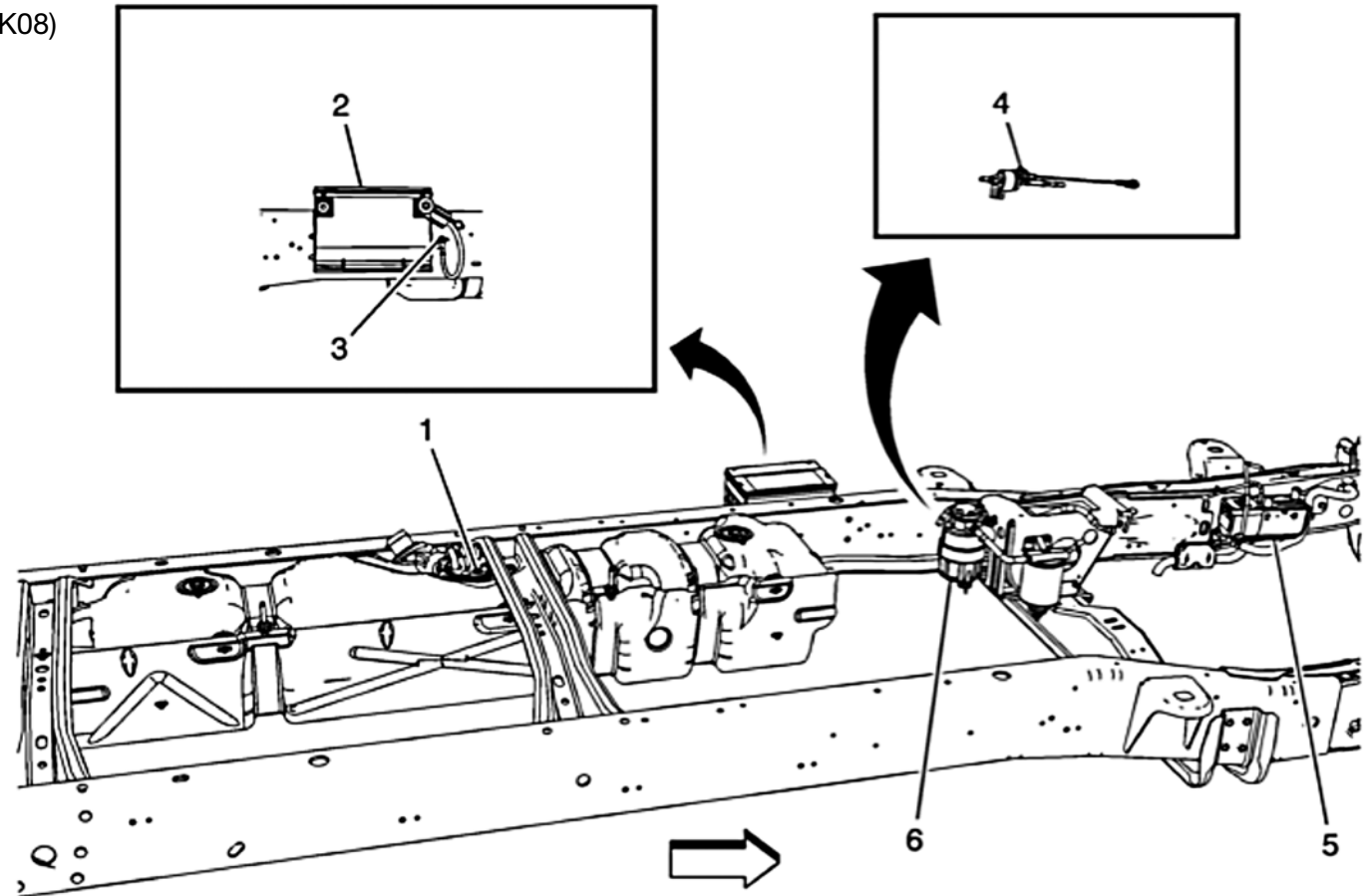
Coolant Heater (K08)

- (1) Coolant Heater Control Module
- (2) Coolant Heater Glow Plug
- (3) Coolant Heater Air Temperature Sensor (Coolant Heater Temperature Sensor)
- (4) Coolant Heater Combustion Sensor
- (5) Coolant Heater Air Temperature Sensor (Coolant Heater Overheat Temperature Sensor)
- (6) Coolant Heater Fuel Pump
- (7) Coolant Heater Blower Motor
- (8) Coolant Heater Connector



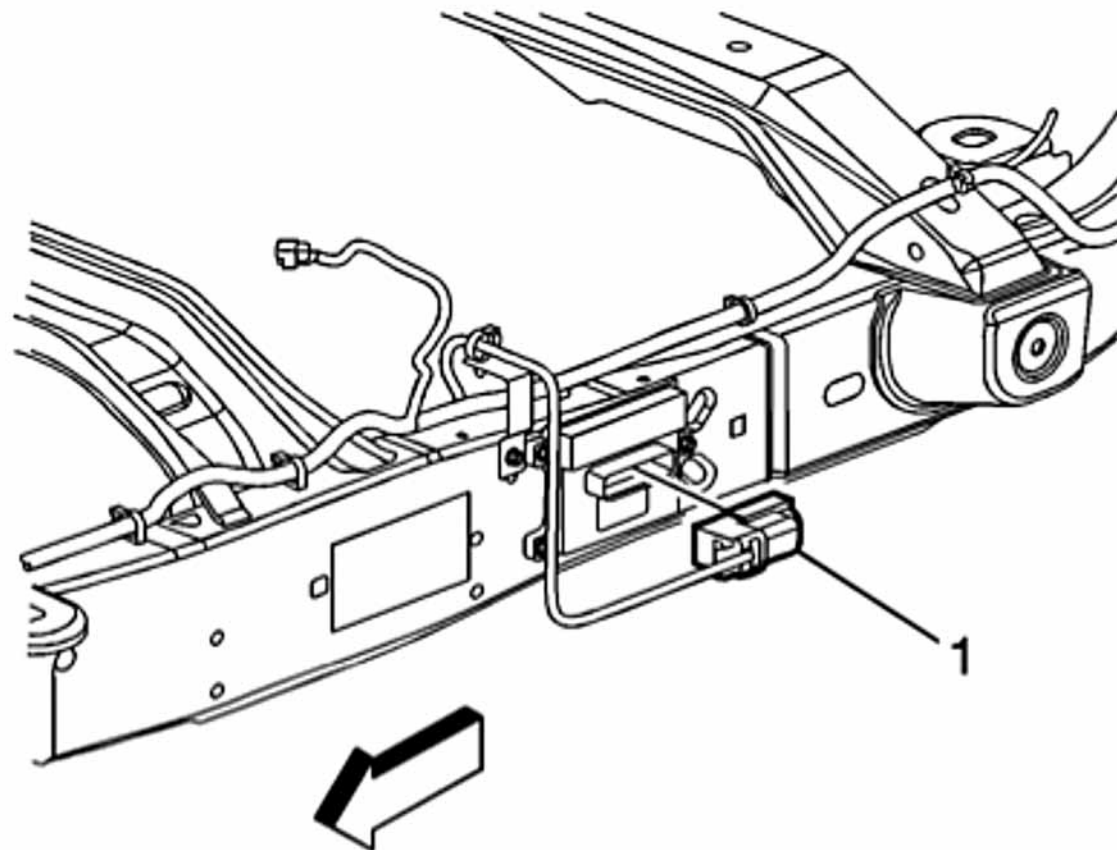
Left Side Frame (LMM or LGH)

- (1) Fuel Level Sensor Connector
- (2) Battery - Auxiliary
- (3) G305
- (4) Coolant Heater Fuel Pump (K08)
- (5) Coolant Heater (K08)
- (6) Fuel Pump



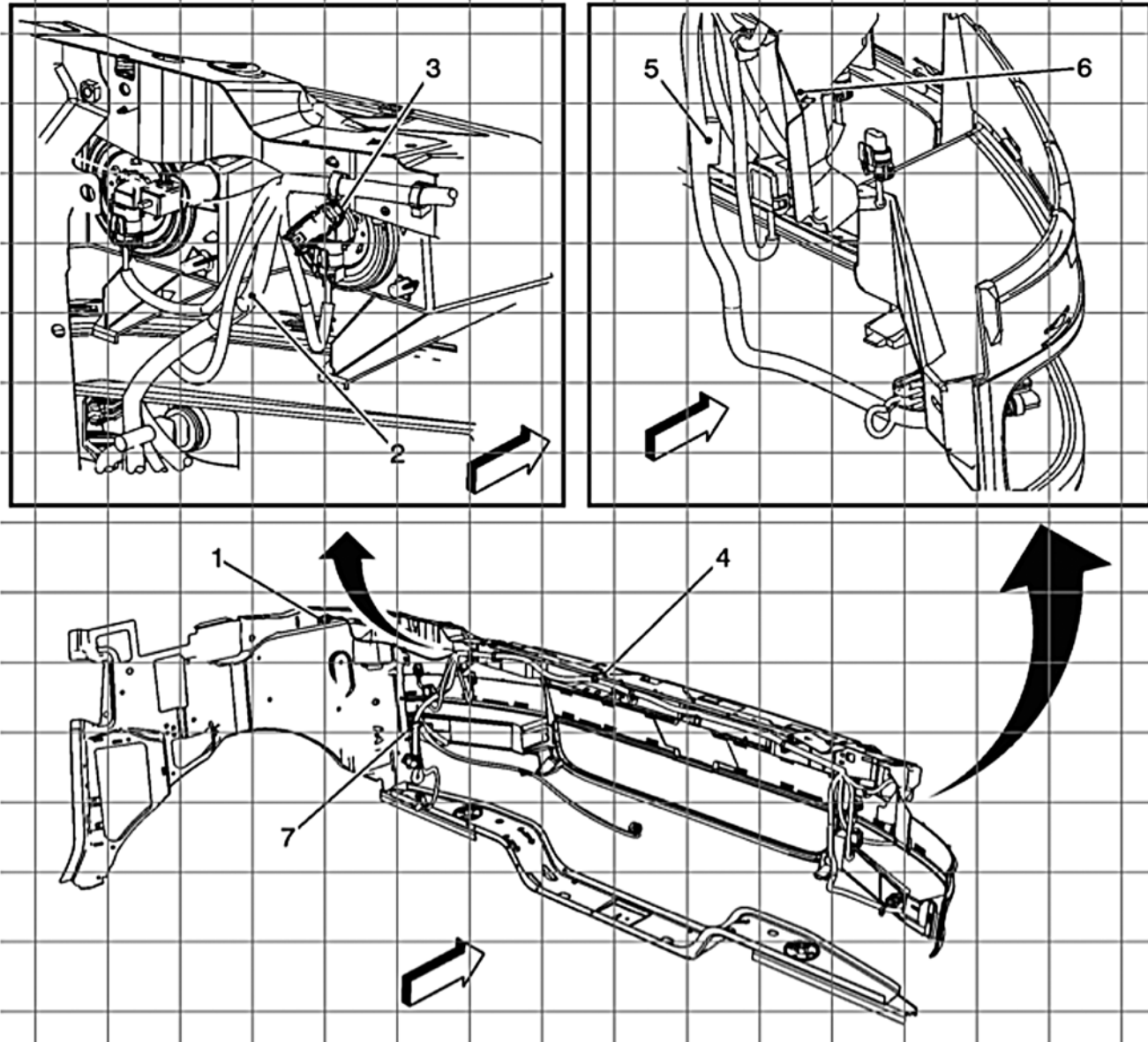
Left Rear Frame Rail (LMF)

(1) Fuel Pump Flow Control Module



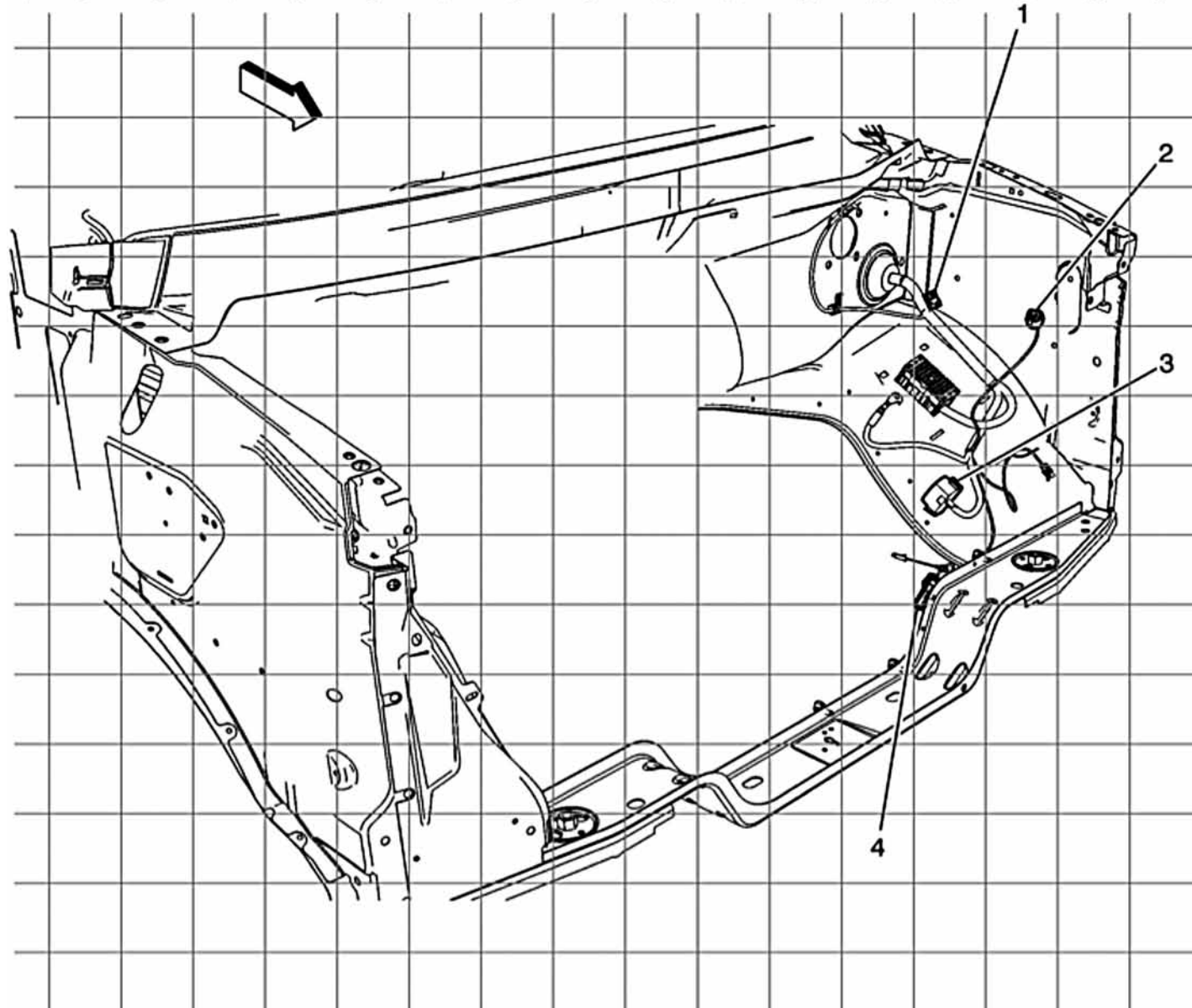
Forward Lamp Harness Routing

- (1) G100
- (2) J110
- (3) X150 (UFA)
- (4) J121
- (5) J118
- (6) G101
- (7) J122



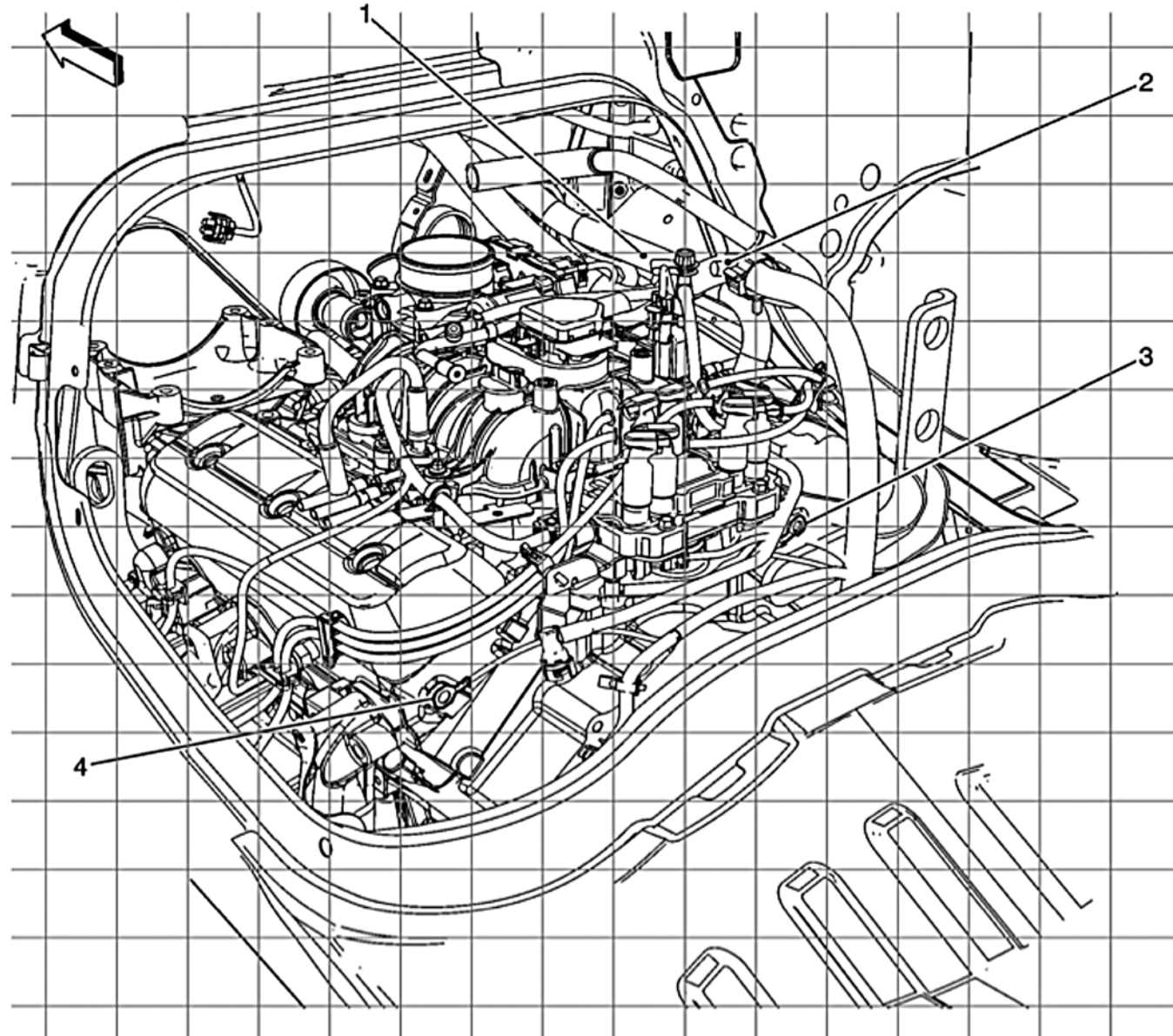
Instrument Panel Harness Routing - Front Engine Compartment

- (1) X141 (UJ1)
- (2) X150 (UFA)
- (3) X100
- (4) X104



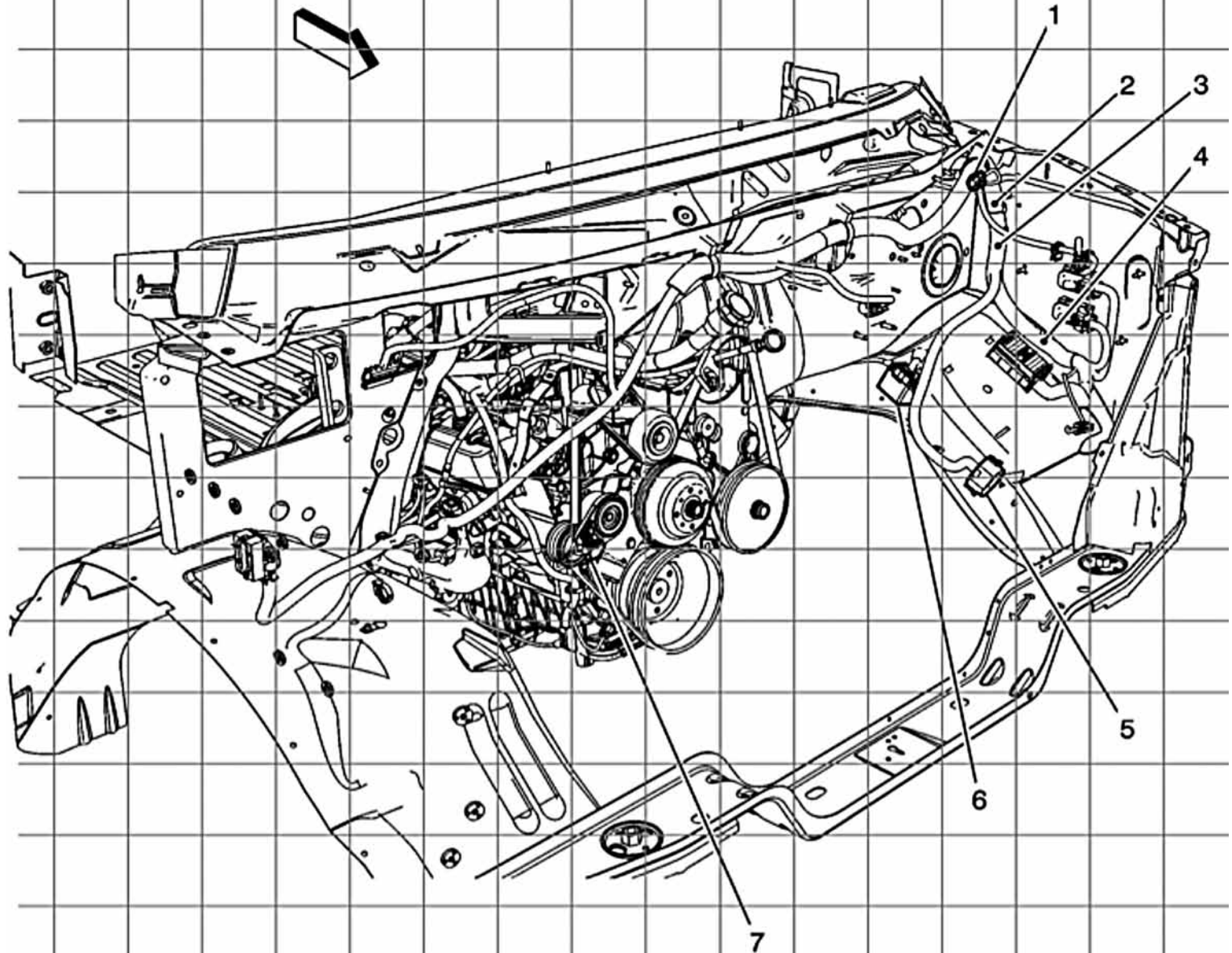
Engine Harness Routing - Left Rear (LU3)

- (1) J101
- (2) J102
- (3) G102
- (4) G103



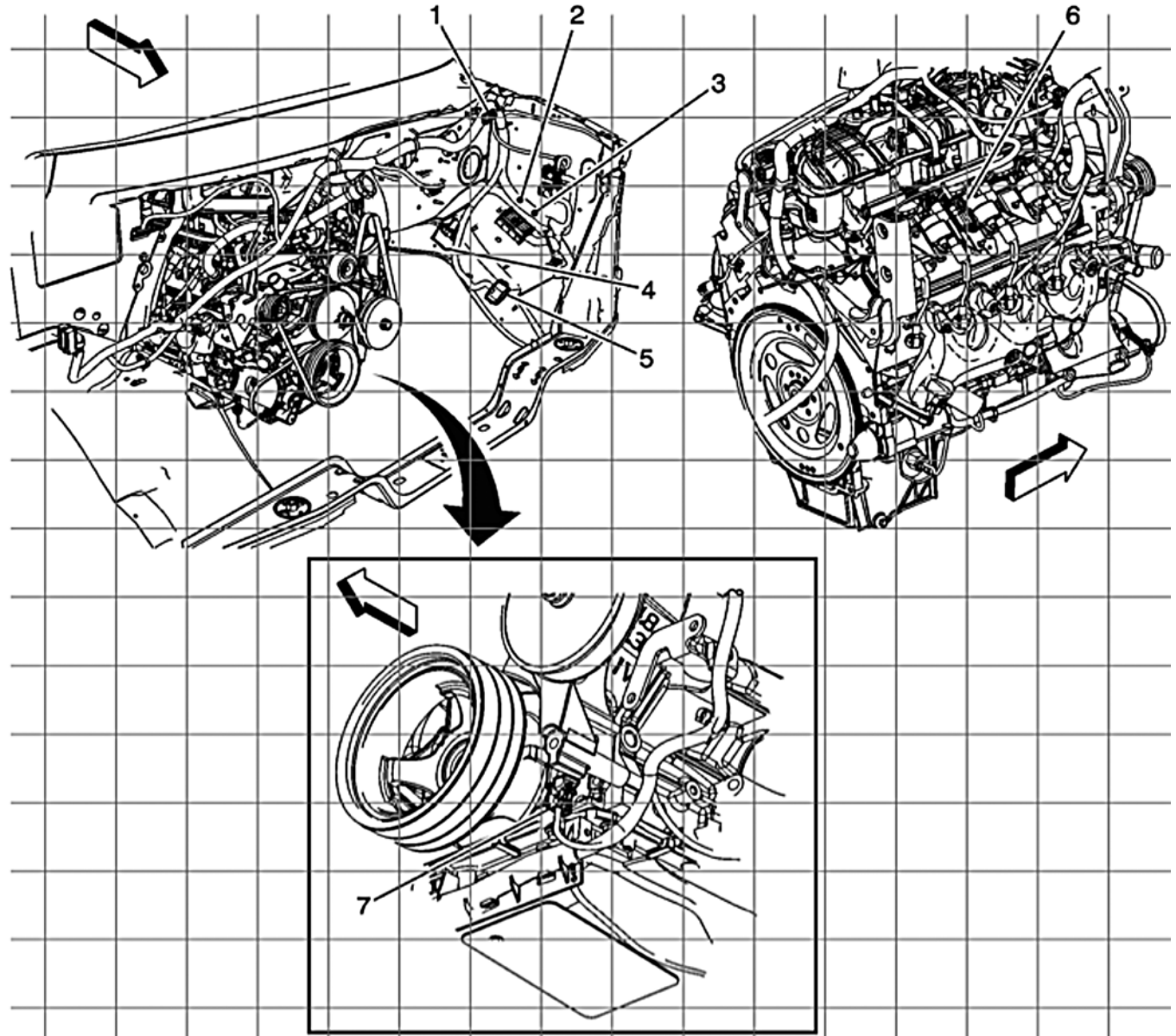
Engine Harness Routing - Front (LU3)

- (1) X109
- (2) J115
- (3) J120
- (4) J123
- (5) X100
- (6) X101
- (7) X176



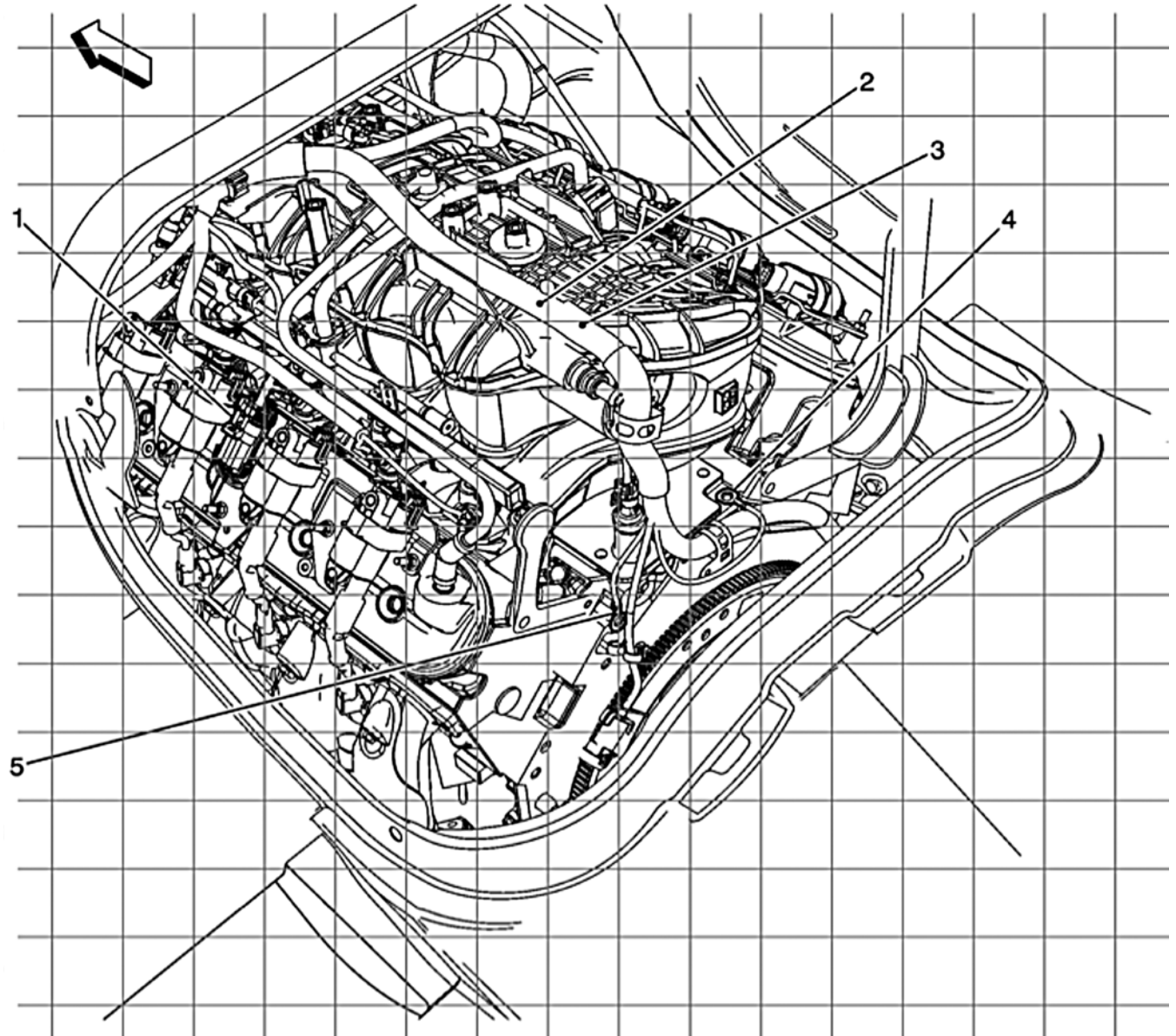
Engine Harness Routing - Front (LMF)

- (1) X109
- (2) J115
- (3) J123
- (4) X101
- (5) X100
- (6) X127
- (7) X177



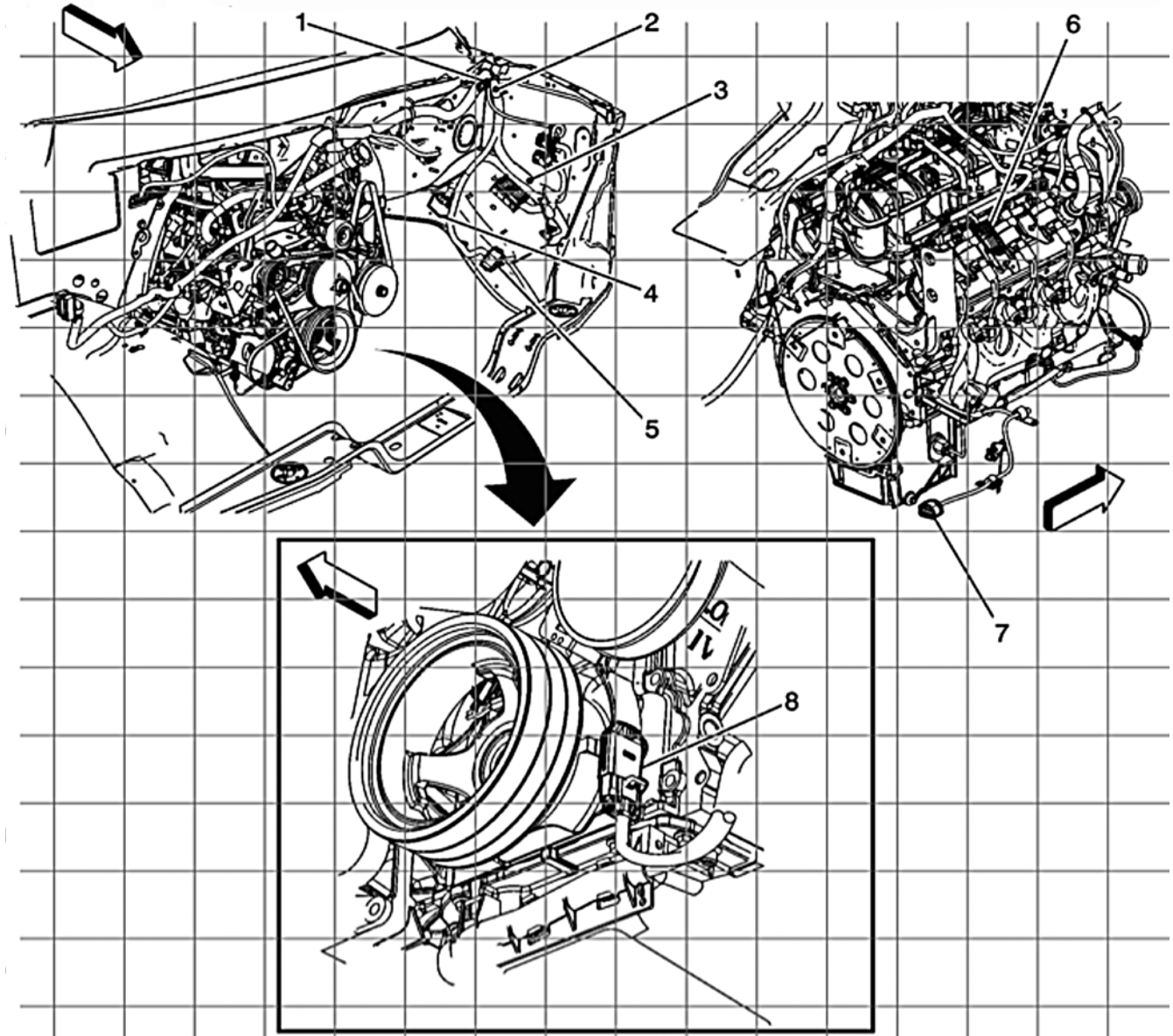
Engine Harness Routing - Left Rear (LMF)

- (1) X126
- (2) J102
- (3) J101
- (4) G102
- (5) G103



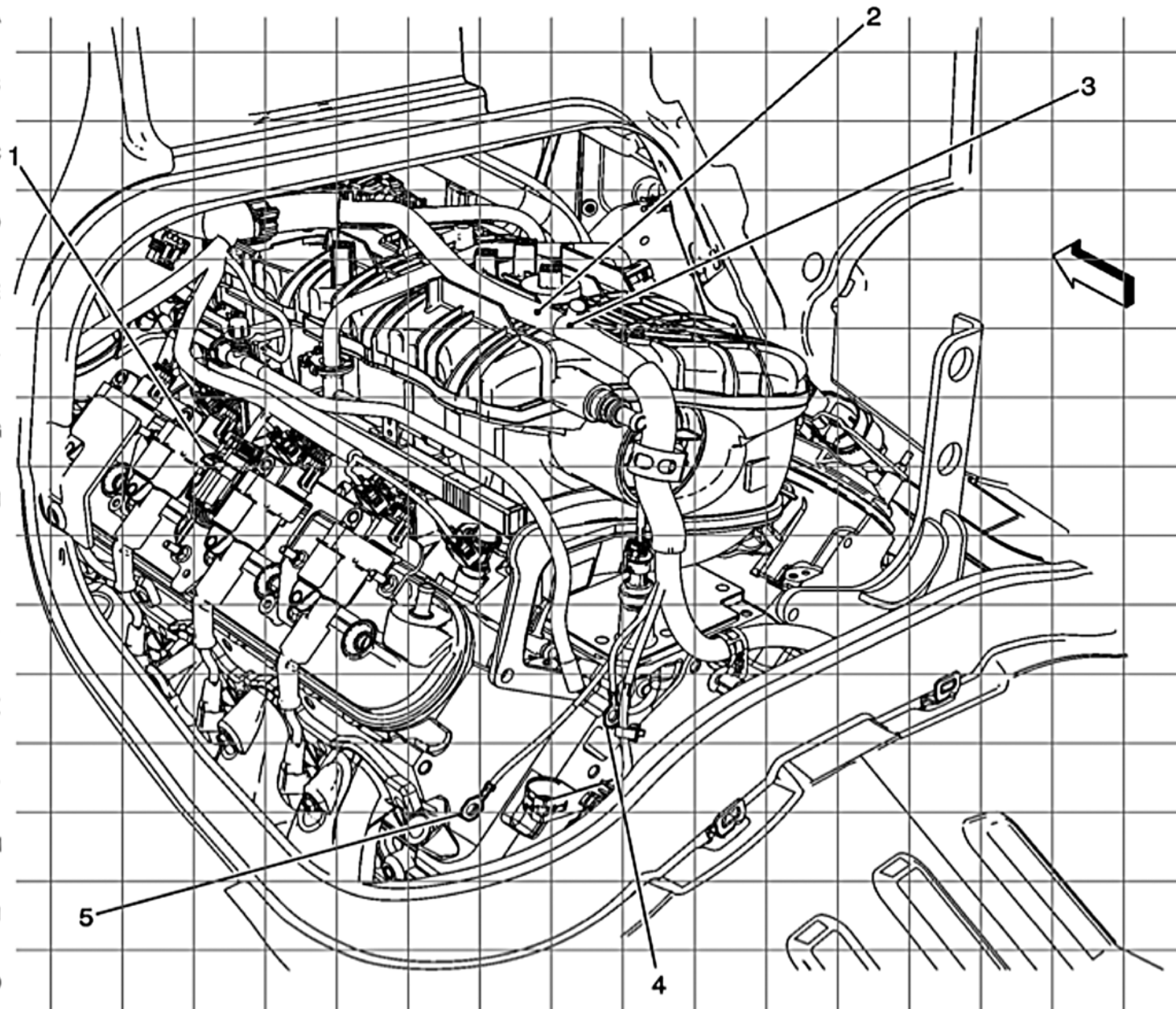
Engine Harness Routing - Front (LC8, L20, or L96)

- (1) X109
- (2) J115
- (3) J123
- (4) X101
- (5) X100
- (6) X126
- (7) X128 (Cutaway)
- (8) X177



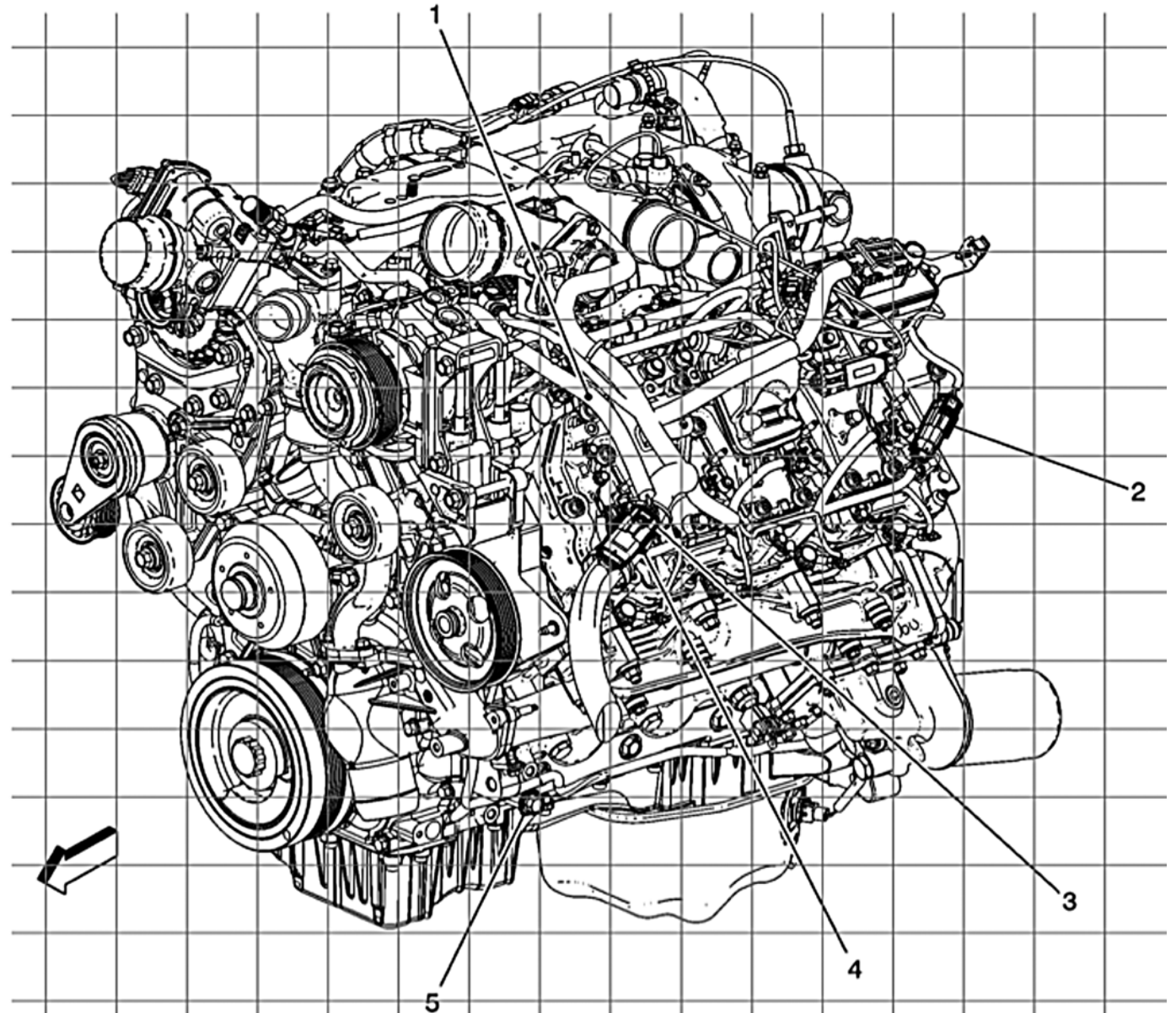
Engine Harness Routing - Left Rear (LC8, L20, or L96)

- (1) X126
- (2) J101
- (3) J102
- (4) G103
- (5) G102



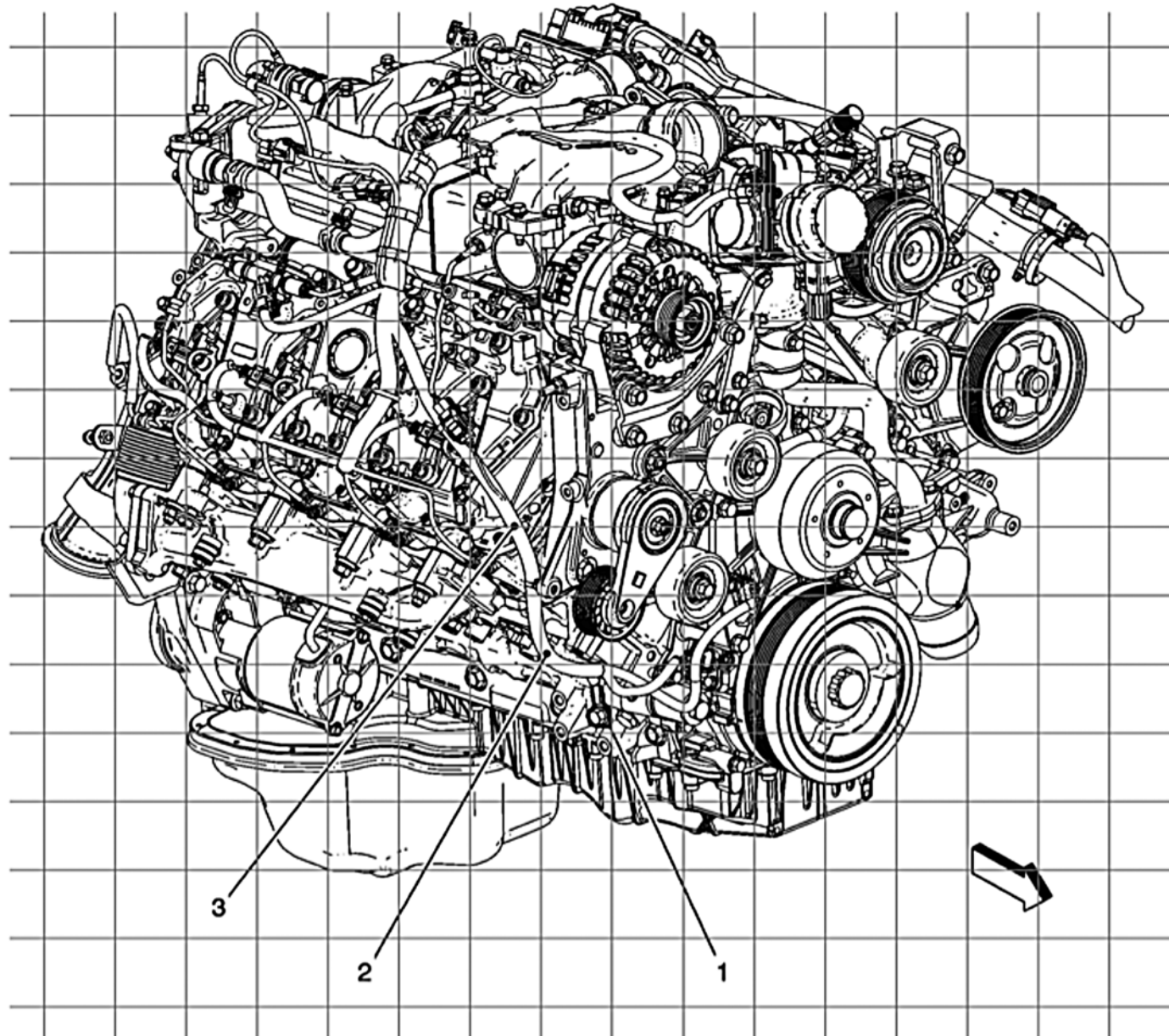
Left Front of Engine Harness Routing (LGH)

- (1) J164
- (2) X112
- (3) X110
- (4) J160
- (5) G110

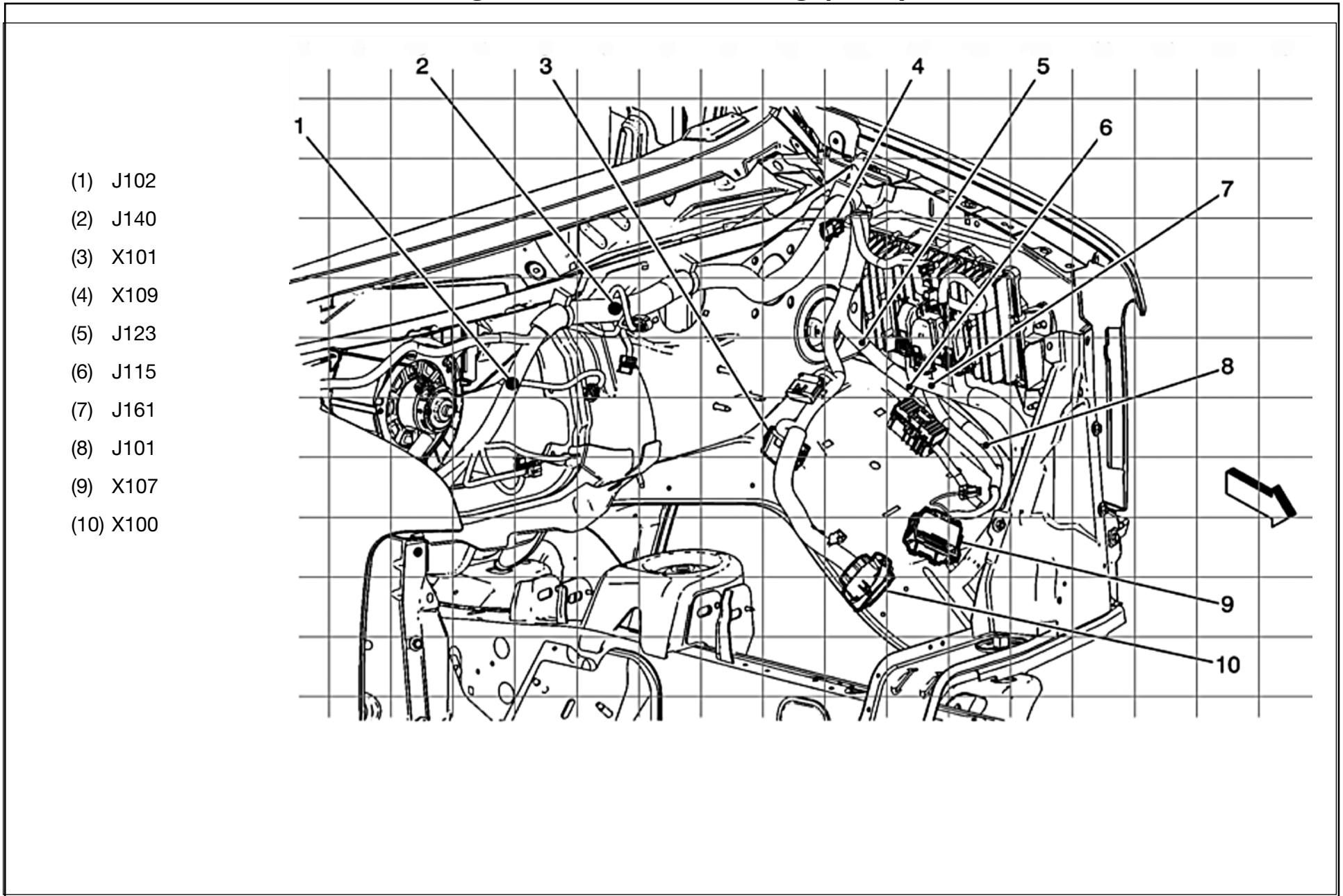


Right Front of Engine Harness Routing (LGH)

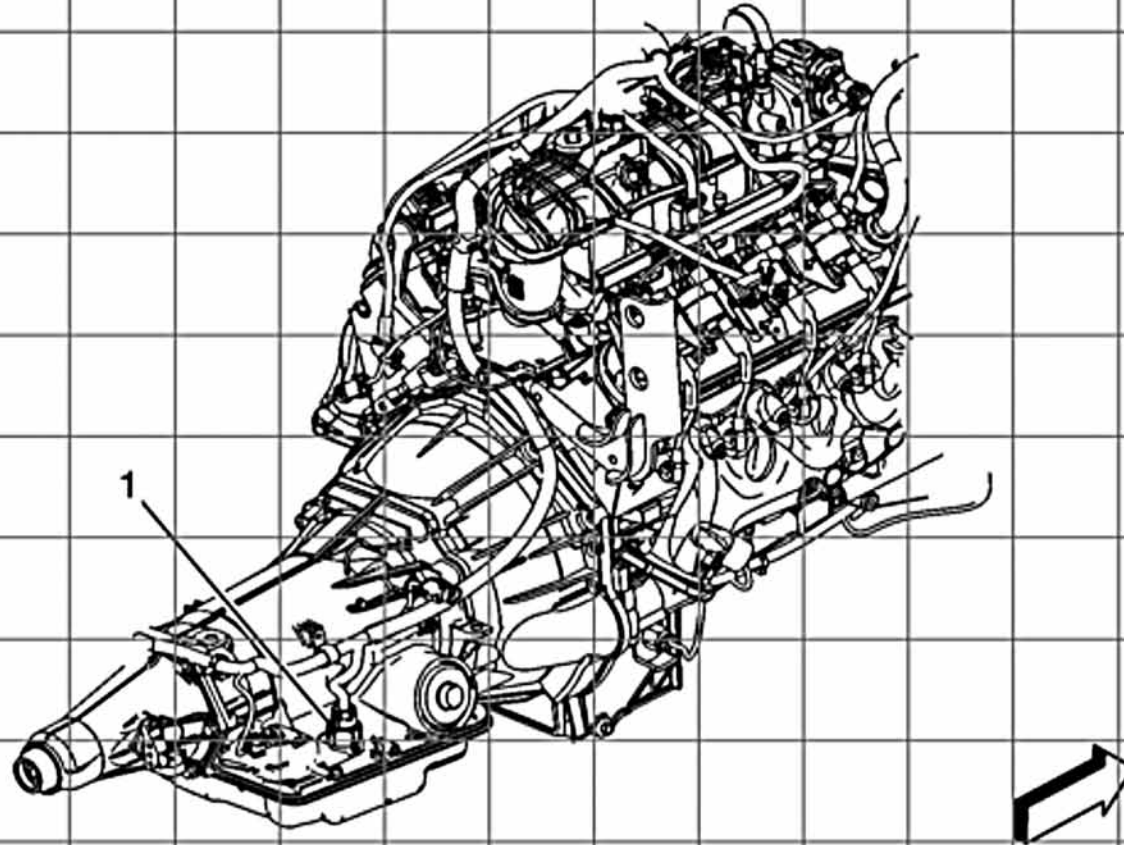
- (1) G109
- (2) J163
- (3) J162



Engine Harness Routing (LGH)

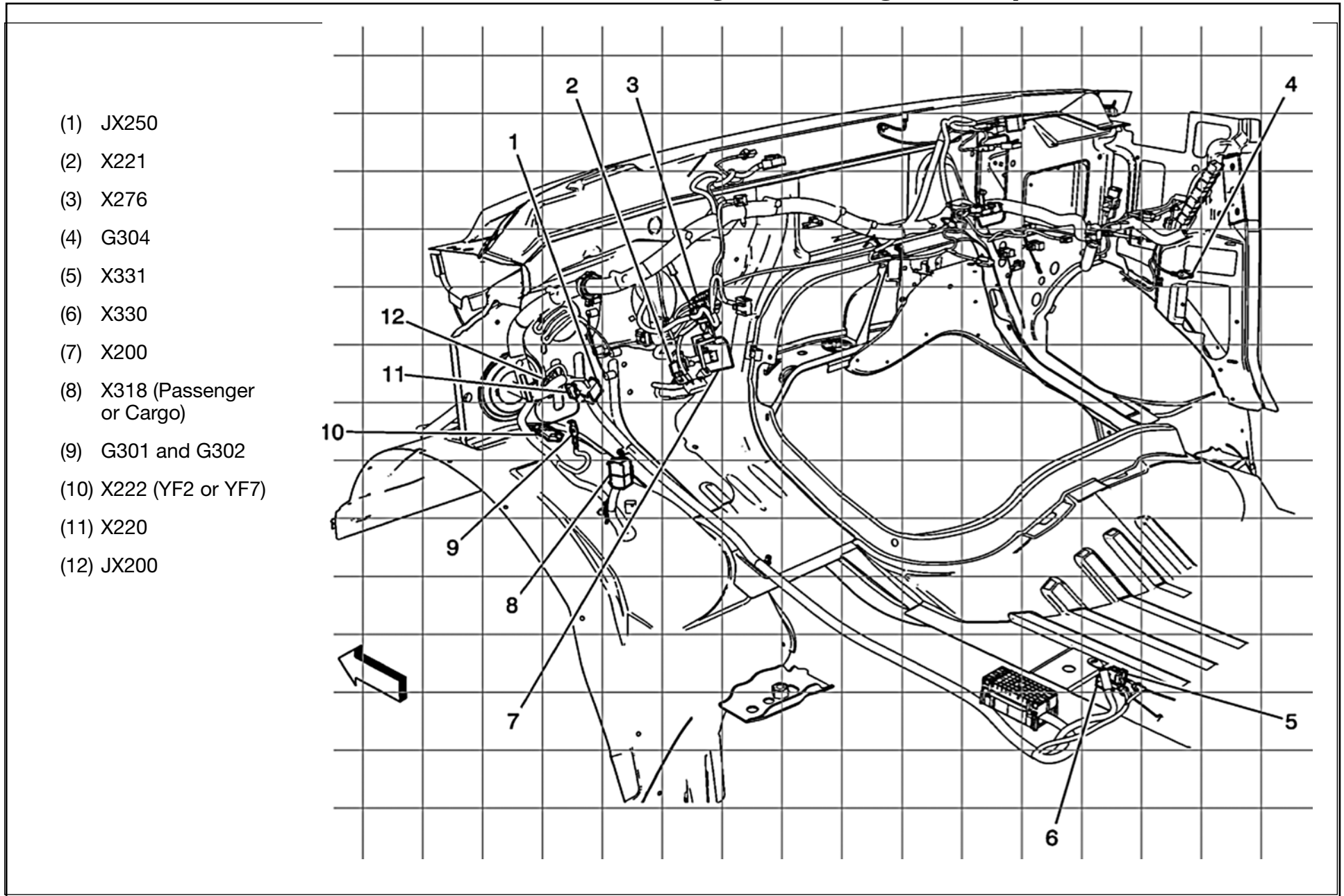


Automatic Transmission Harness Routing (M30)



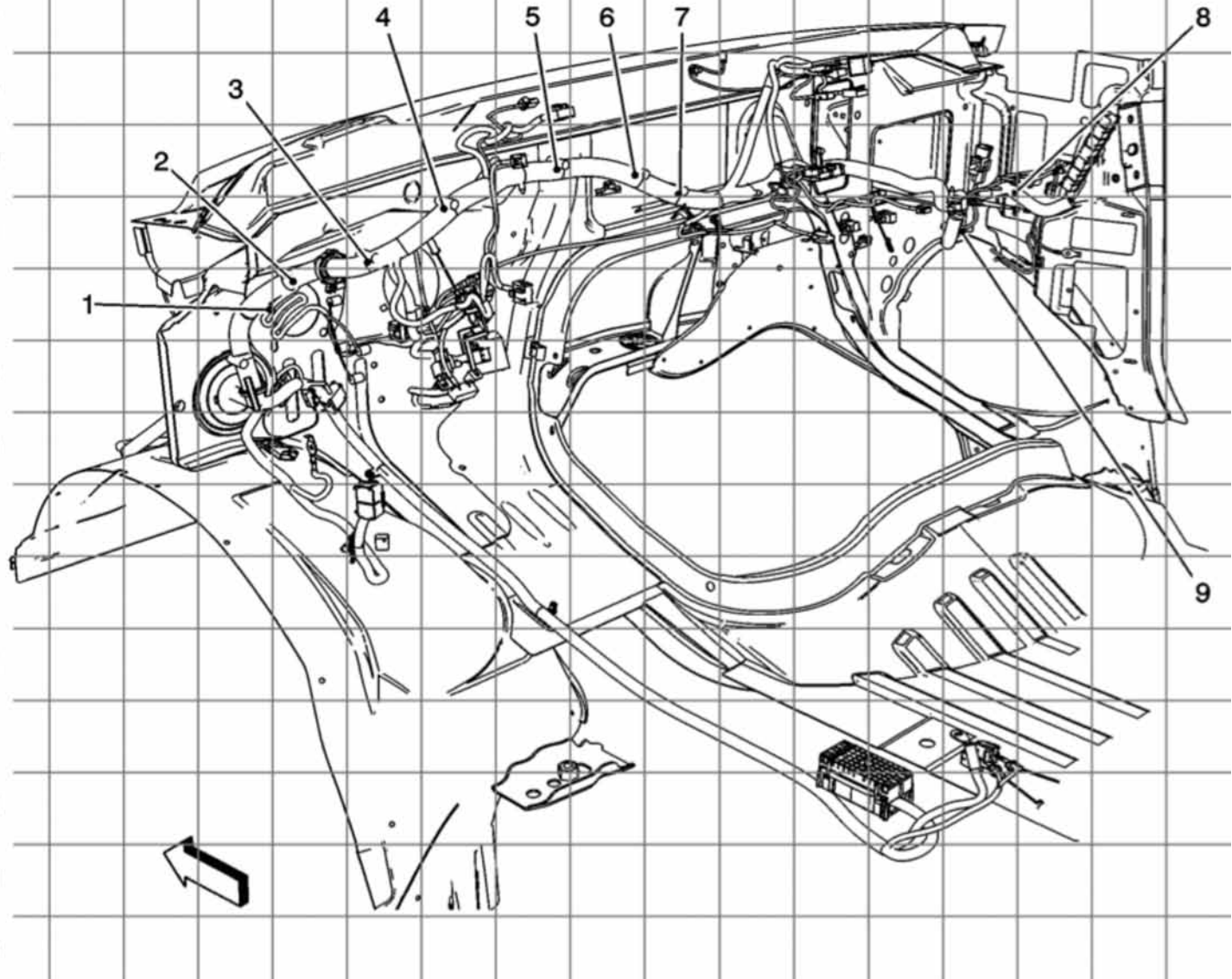
(1) X175 (M30)

Instrument Panel Harness Routing - Passenger Compartment



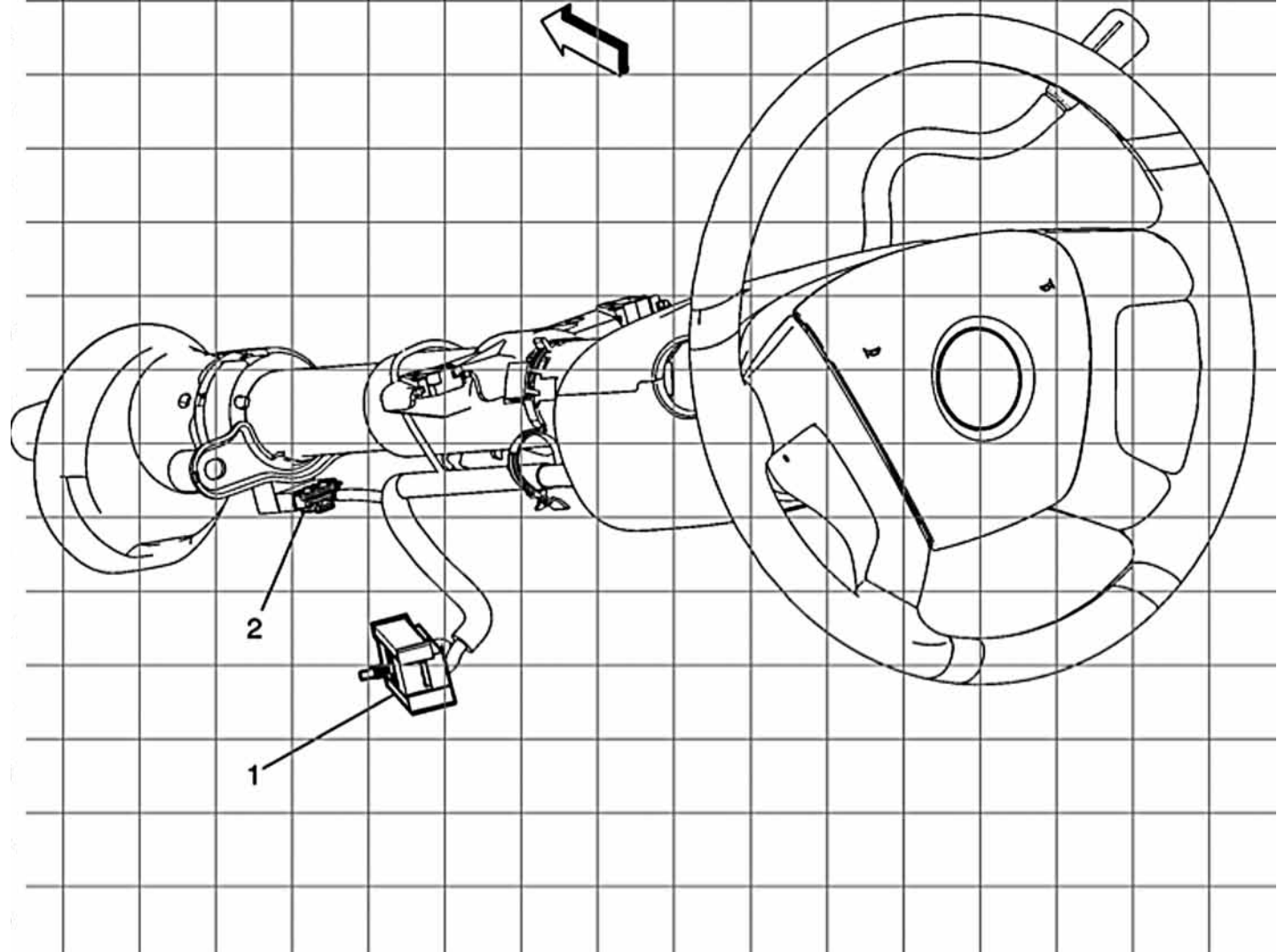
Instrument Panel Harness Routing - Splices

- (1) J247
- (2) J244
- (3) J231
- (4) J248
- (5) J207
- (6) J246 (DE7)
- (7) J245 (DE7)
- (8) J249
- (9) J250

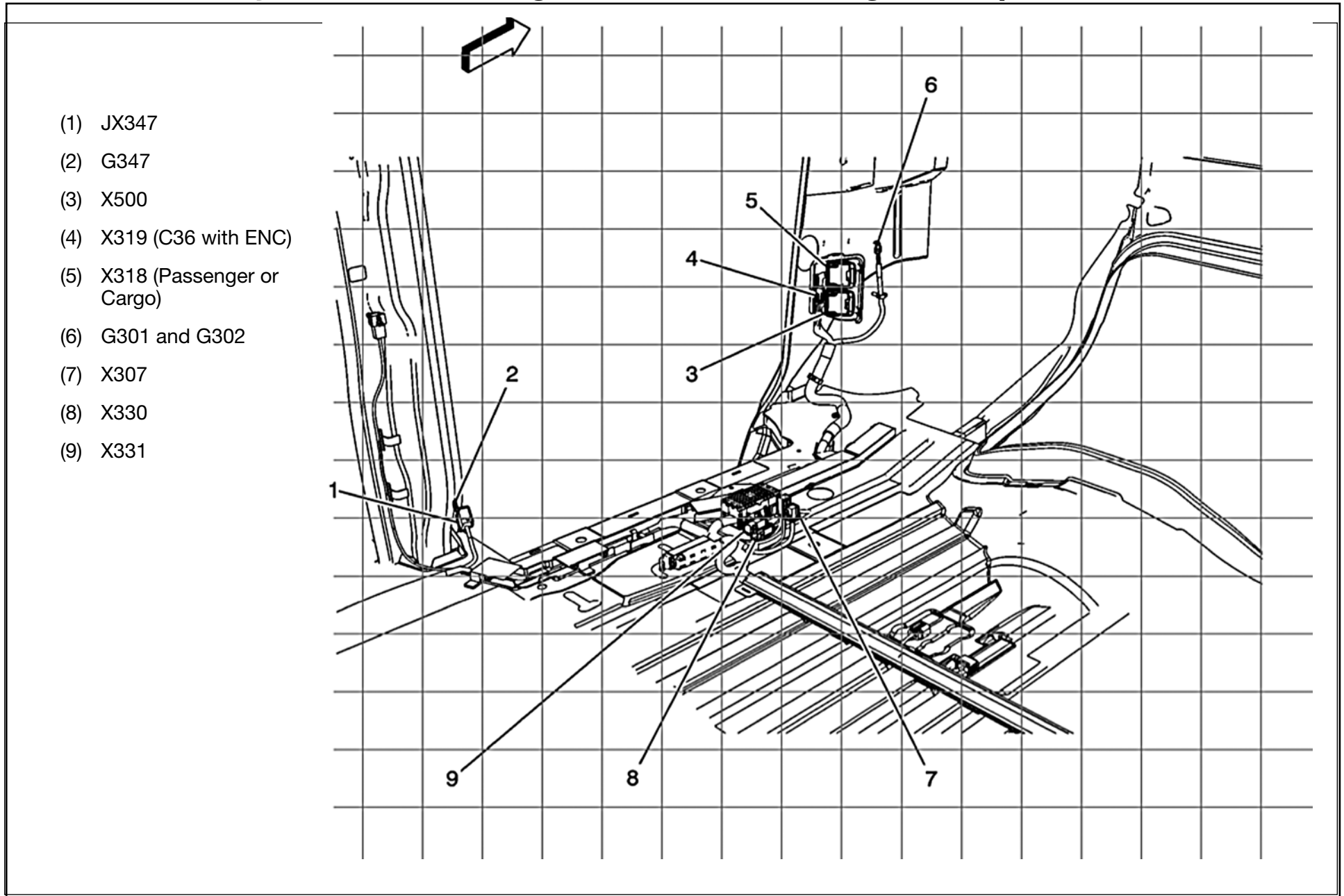


Steering Column Harness Routing

- (1) X200
- (2) Steering Wheel Speed/Position Sensor (JL4)

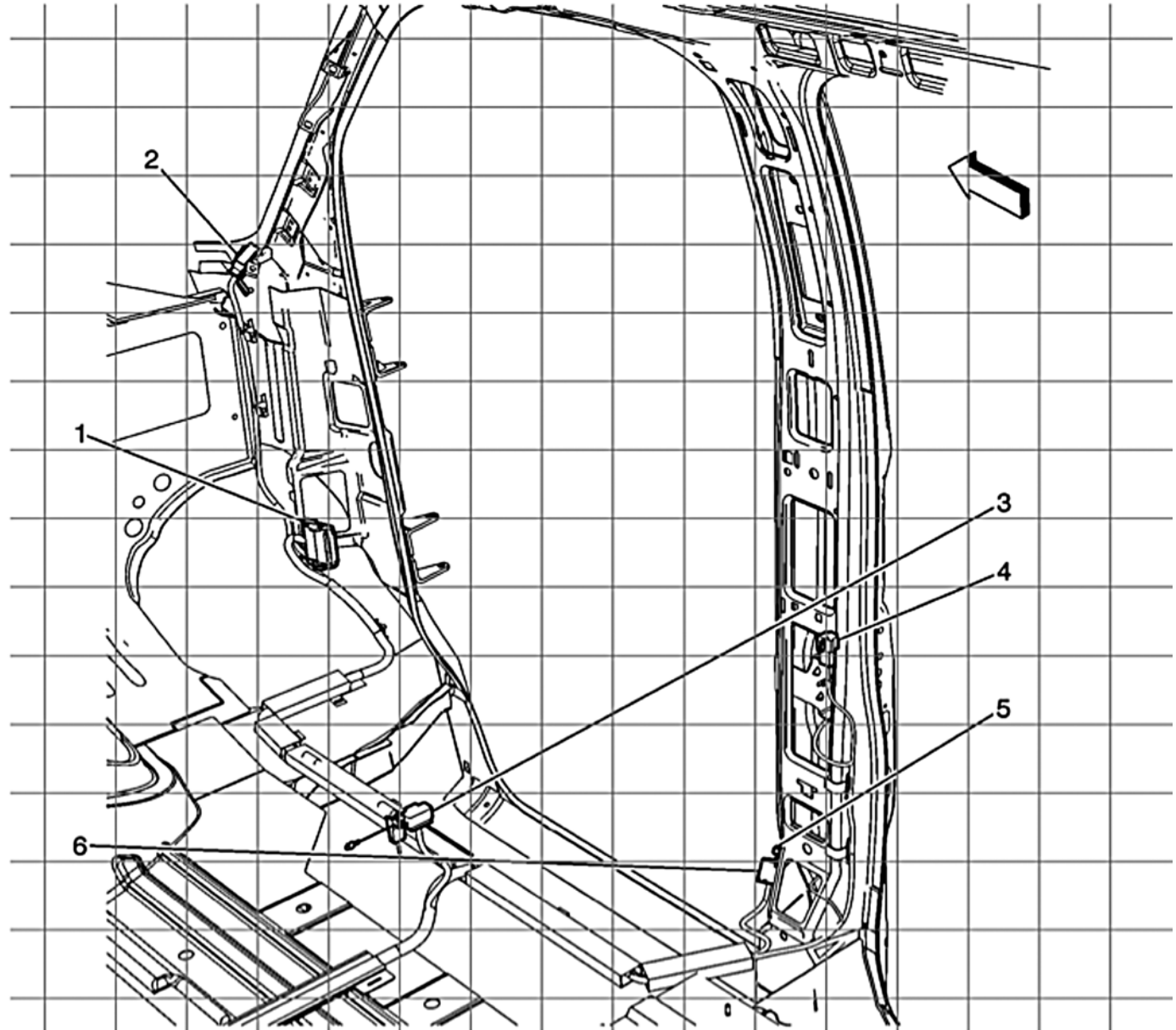


Body Harness Routing - Left Front Passenger Compartment



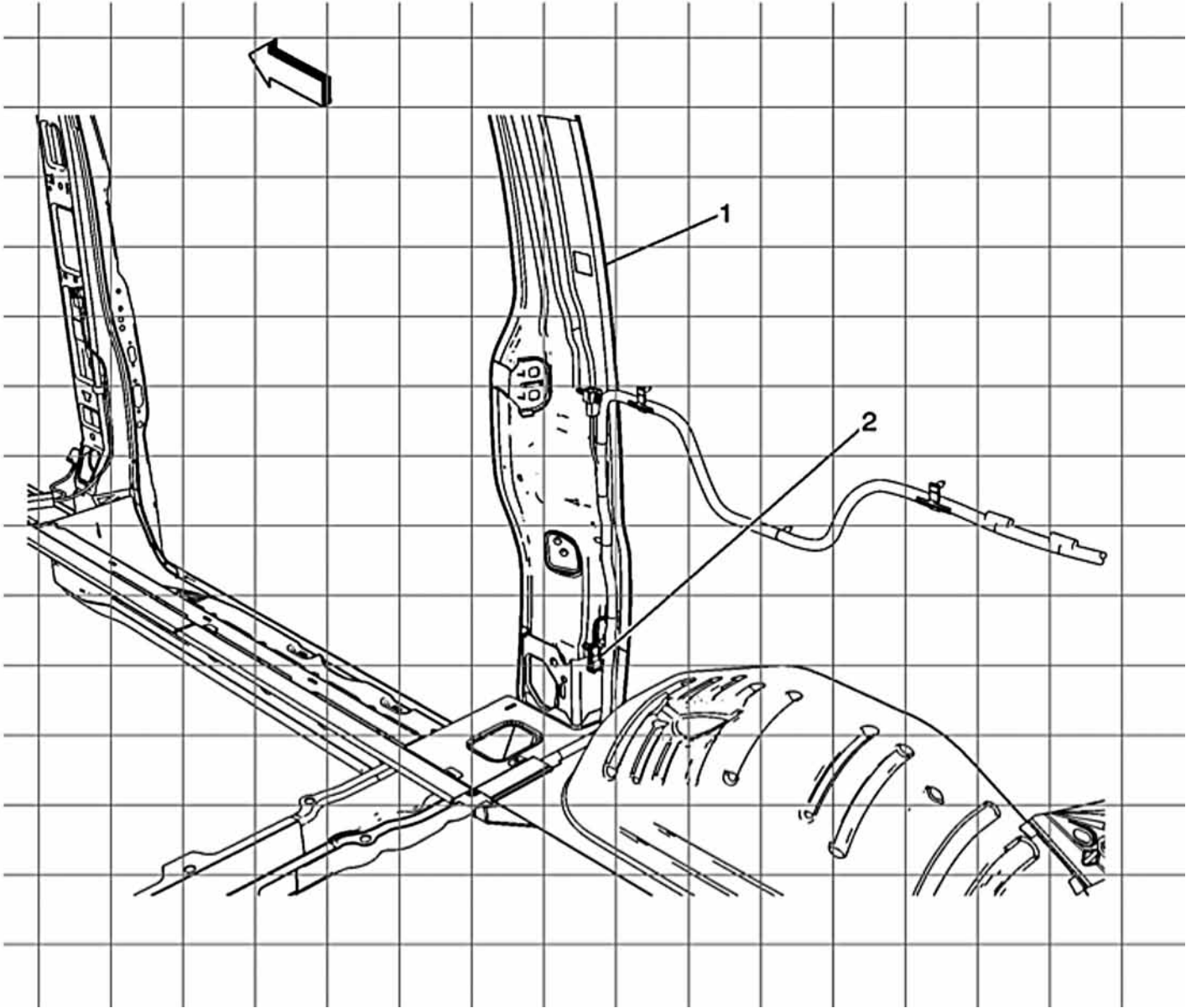
Body Harness Routing - Right Front Passenger Compartment

- (1) X600
- (2) X205
- (3) X306
- (4) X324 (ASF)
- (5) G348
- (6) JX348



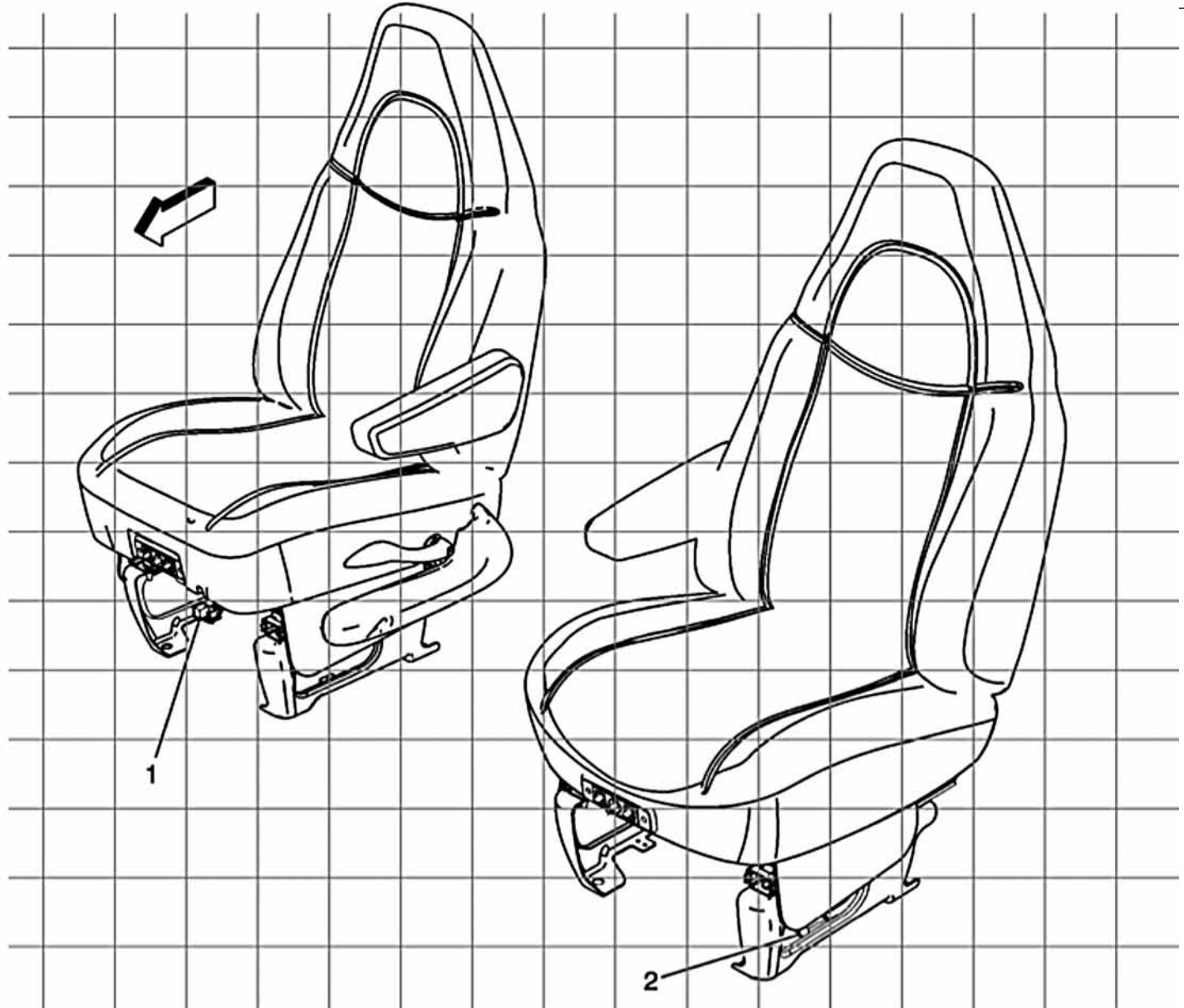
Body Harness Routing - Right C-Pillar

- (1) C-Pillar - Right Side
- (2) X324 (ASF)



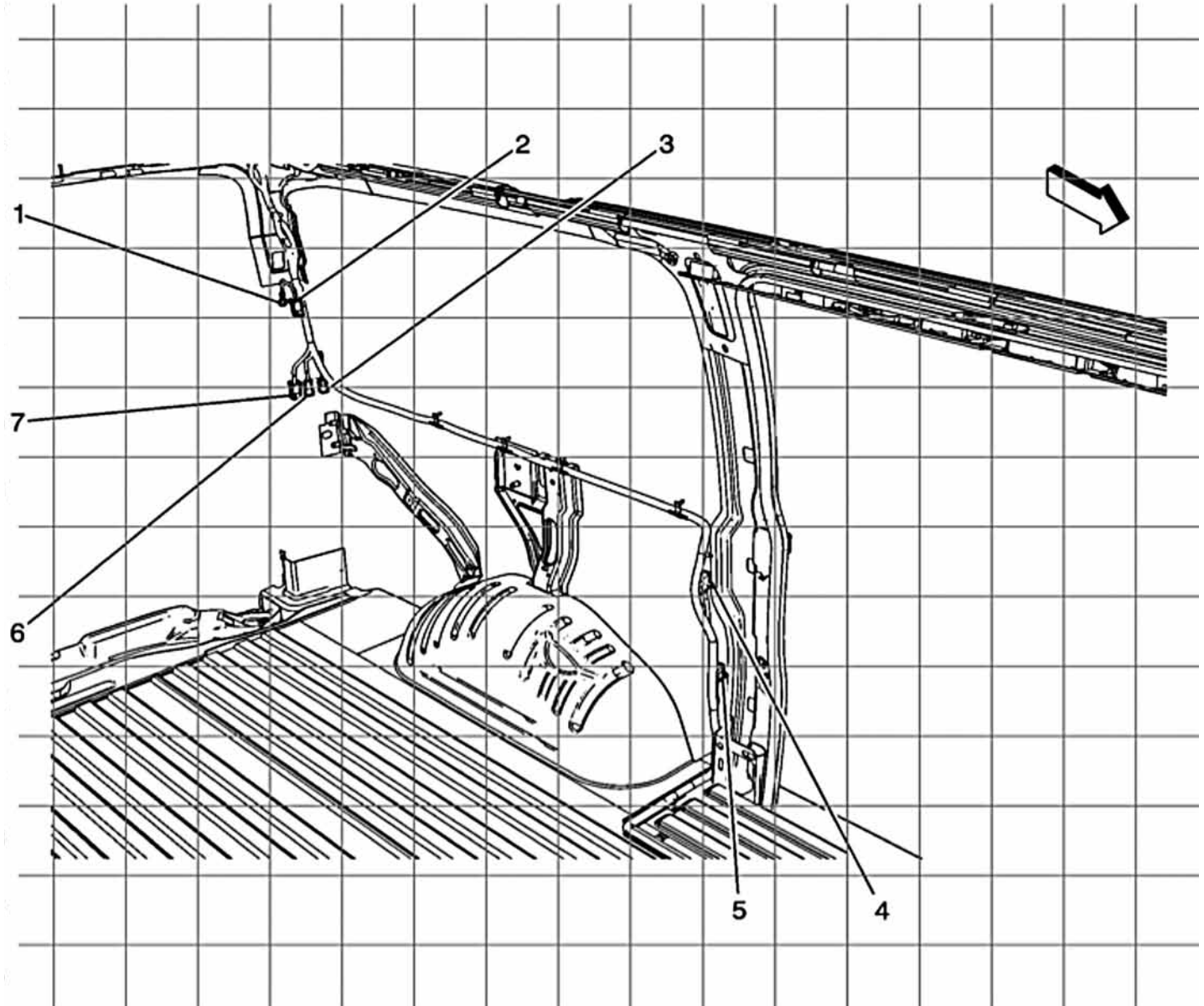
Driver and Front Passenger Seats Harness Routing

- (1) X306
- (2) X307

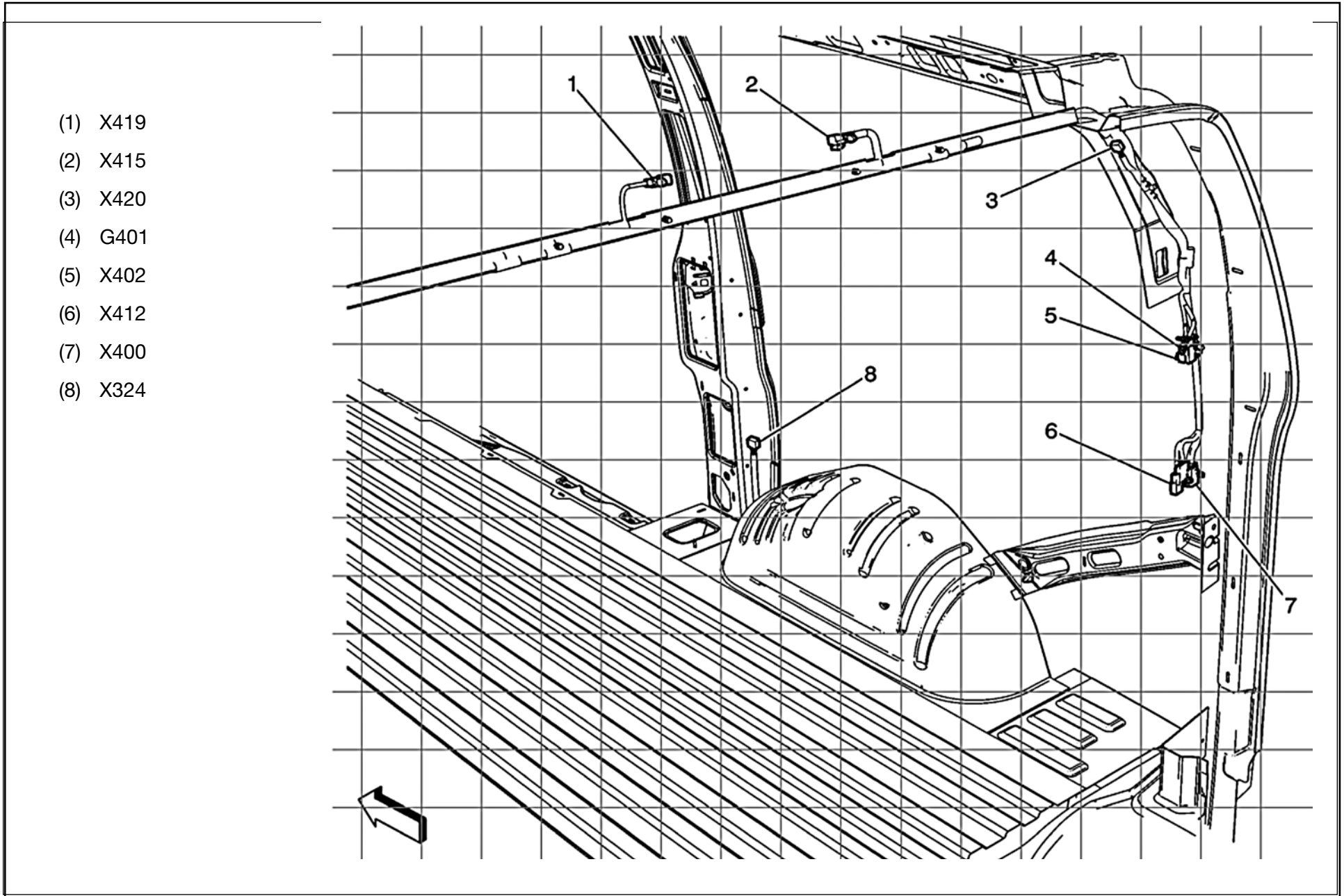


Body Harness Routing - Left Rear (Passenger or Cargo)

- (1) G402
- (2) X401
- (3) X411
- (4) X321 (YF2 or YF7)
- (5) X320 (YF2 or YF7)
- (6) X407 (C36 or C69)
- (7) X409 (C36 or C69)

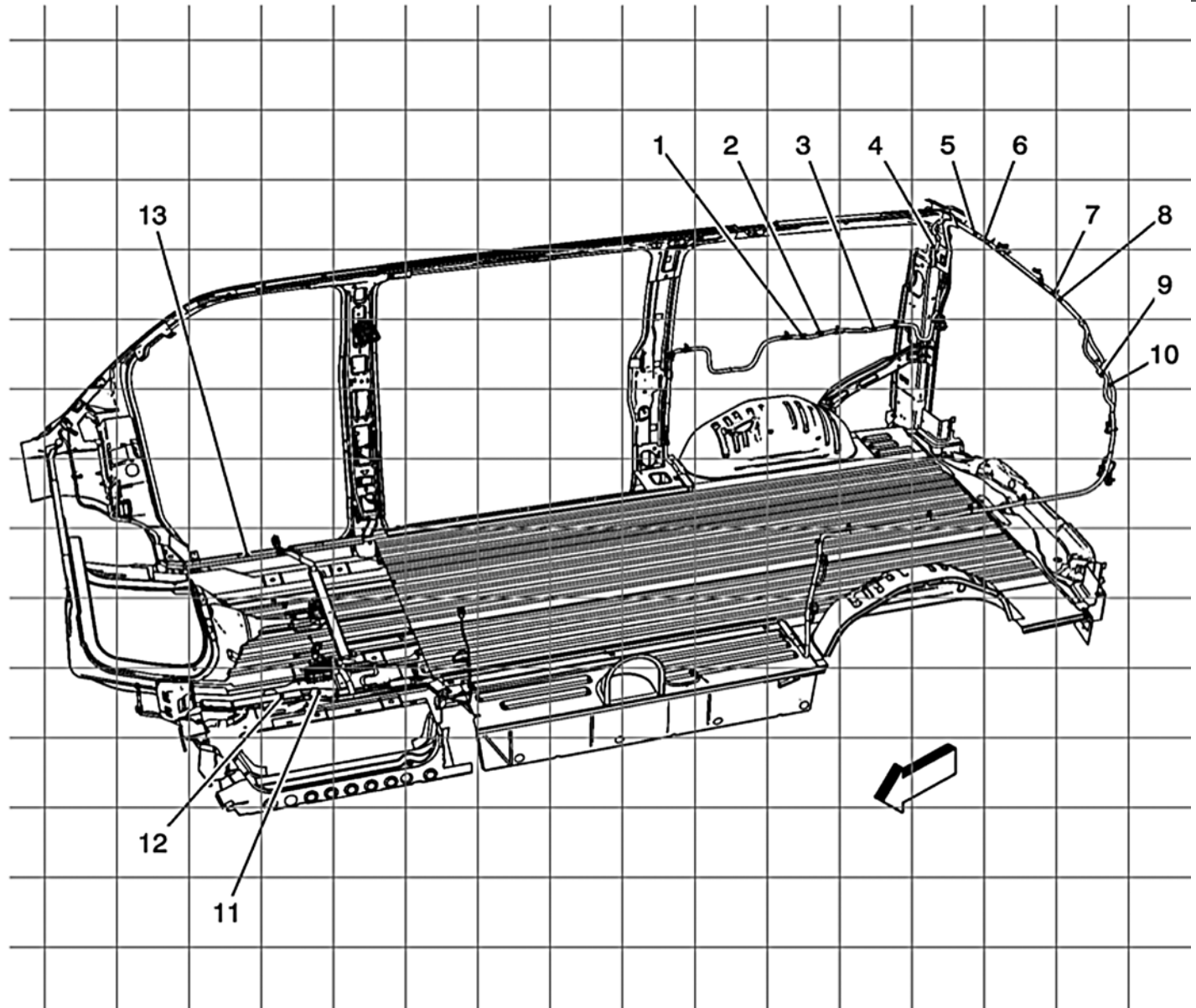


Body Harness Routing - Right Rear (Passenger or Cargo)



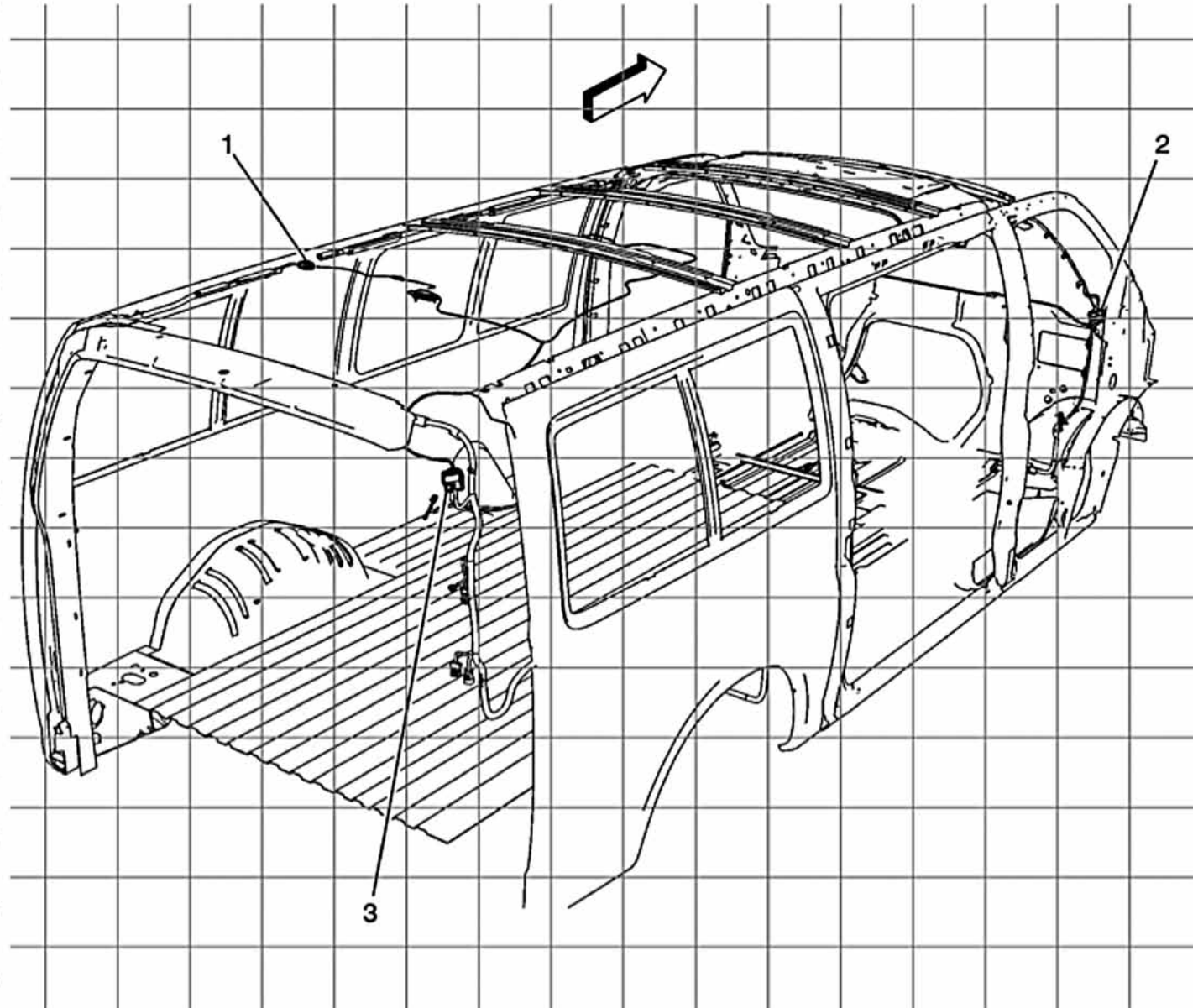
Body Harness Routing - Splices (Passenger or Cargo)

- (1) J308 (C69 without YF7)
- (2) J310 (C69 without YF7)
- (3) J311 (C69 without YF7)
- (4) J403
- (5) J451
- (6) J450
- (7) J453
- (8) J452
- (9) J410
- (10) J401 (C36 with C49)
- (11) J356 (C69 with AU3)
- (12) J318 (ASF)
- (13) J331



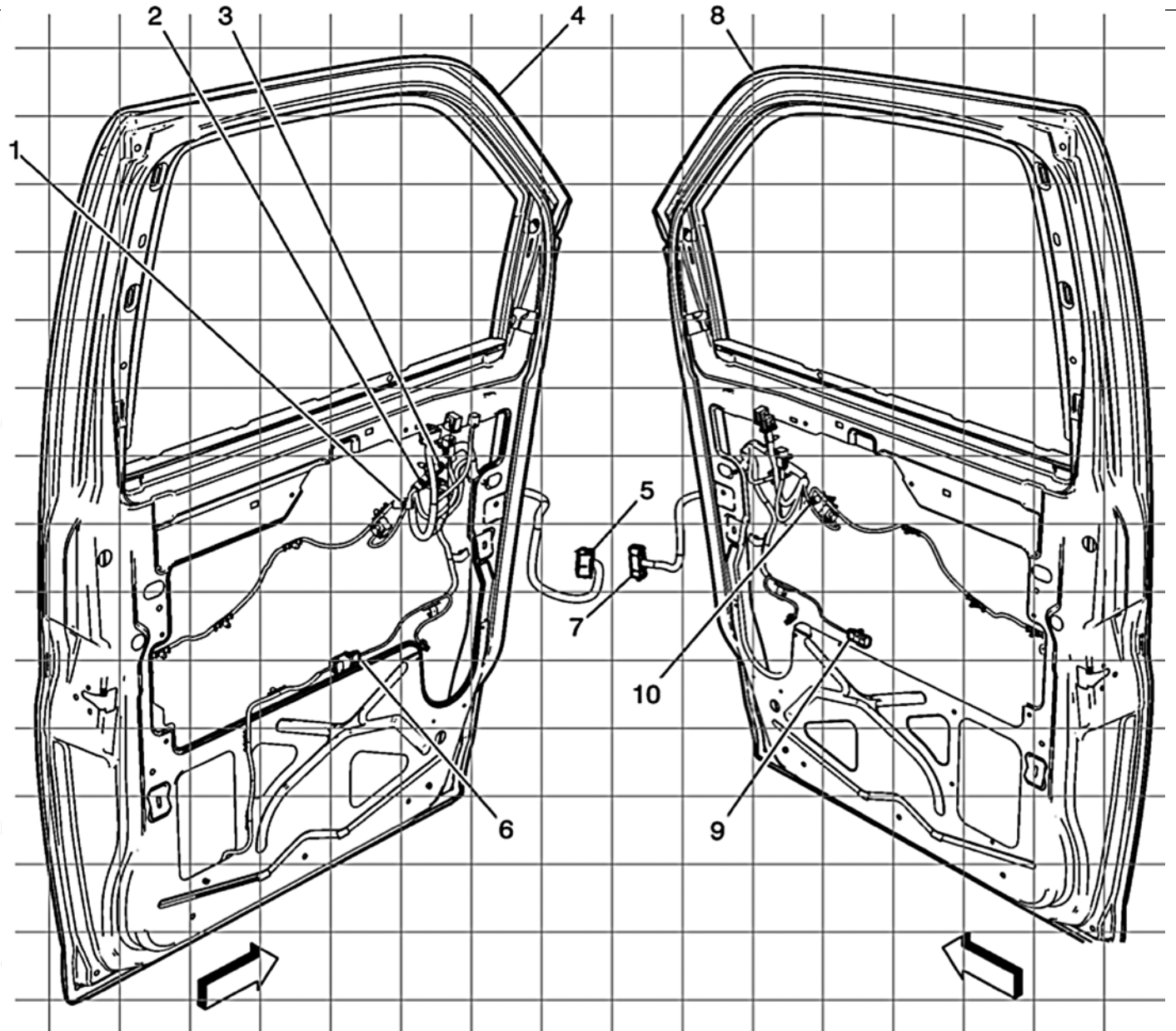
Front and Rear Headliner Harness Routing

- (1) X417 (Cargo without YF7)
- (2) X205
- (3) X420 (Passenger)



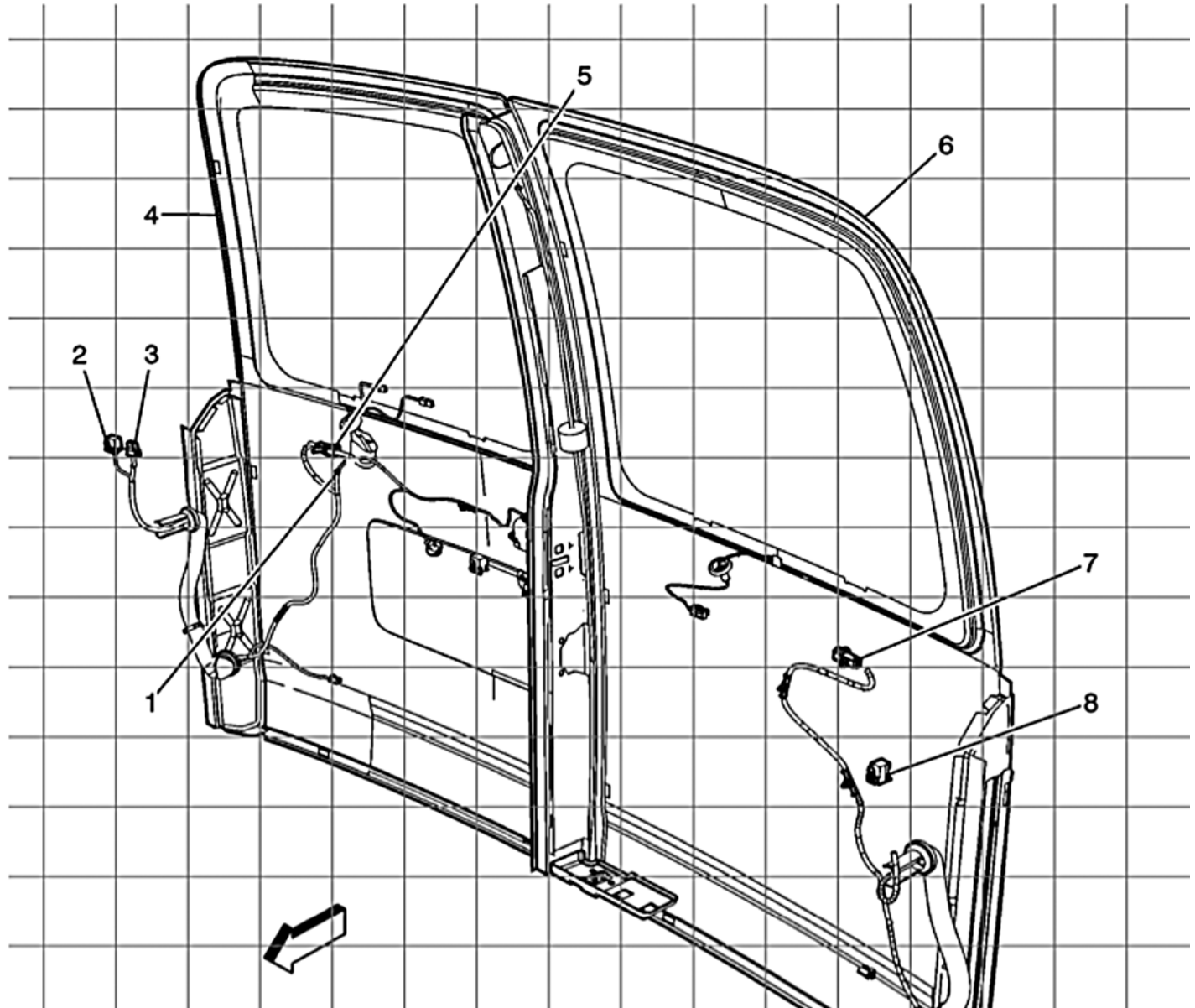
Driver and Front Passenger Doors Harness Routing

- (1) J501 (AU3)
- (2) J502 (DE5 or DE7)
- (3) J500 (A31, DE5 or DE7)
- (4) Driver Door
- (5) X500
- (6) X501 (ASF)
- (7) X600
- (8) Passenger Door
- (9) X601 (ASF)
- (10) J600 (A31, DE5 or DE7)



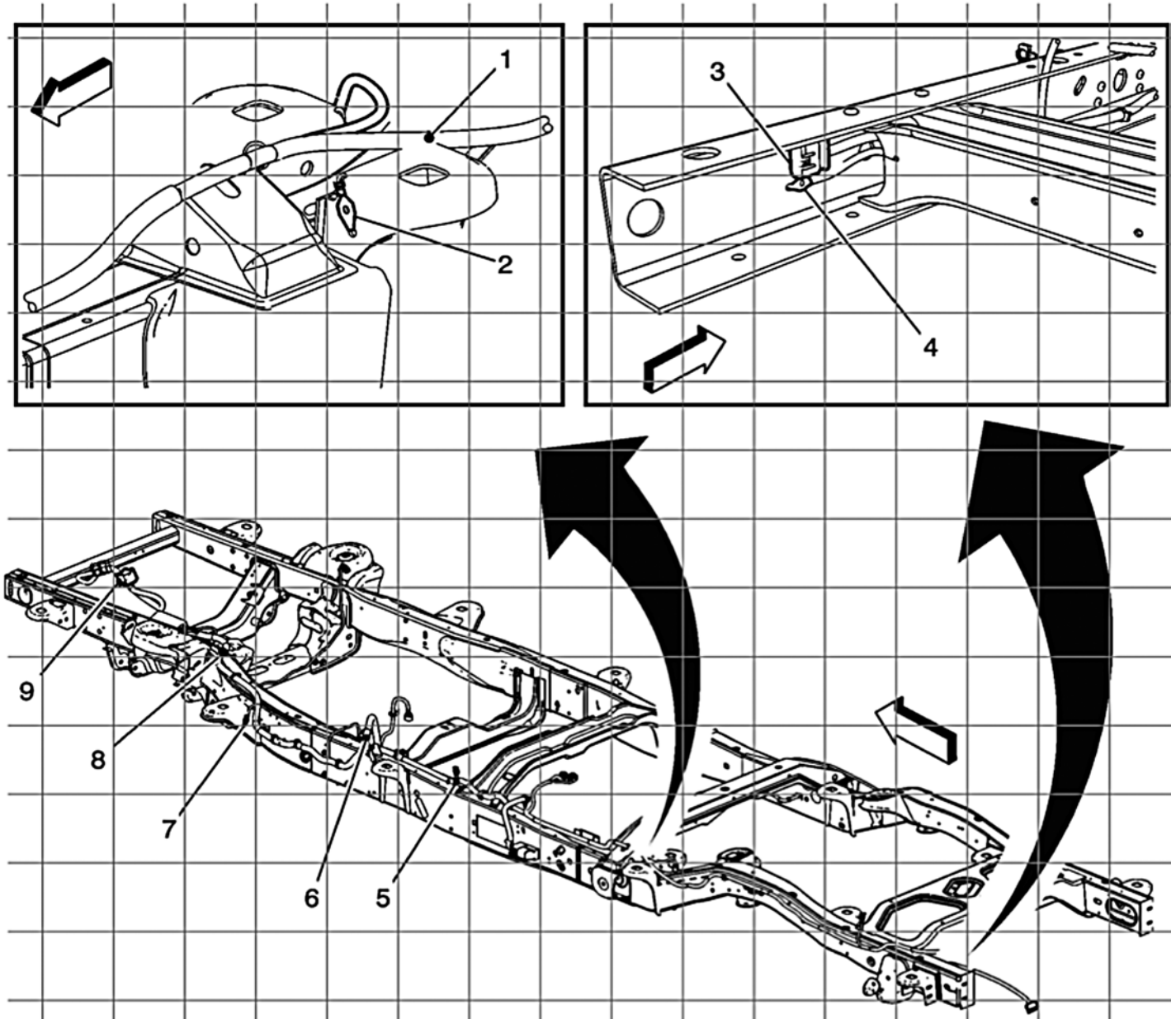
Rear Cargo Doors Harness Routing (Passenger or Cargo)

- (1) J902
- (2) X400
- (3) X412
- (4) Cargo Door - Right Rear
- (5) X902 (C49 with A12)
- (6) Cargo Door - Left Rear
- (7) X901 (C49 with A12)
- (8) X411



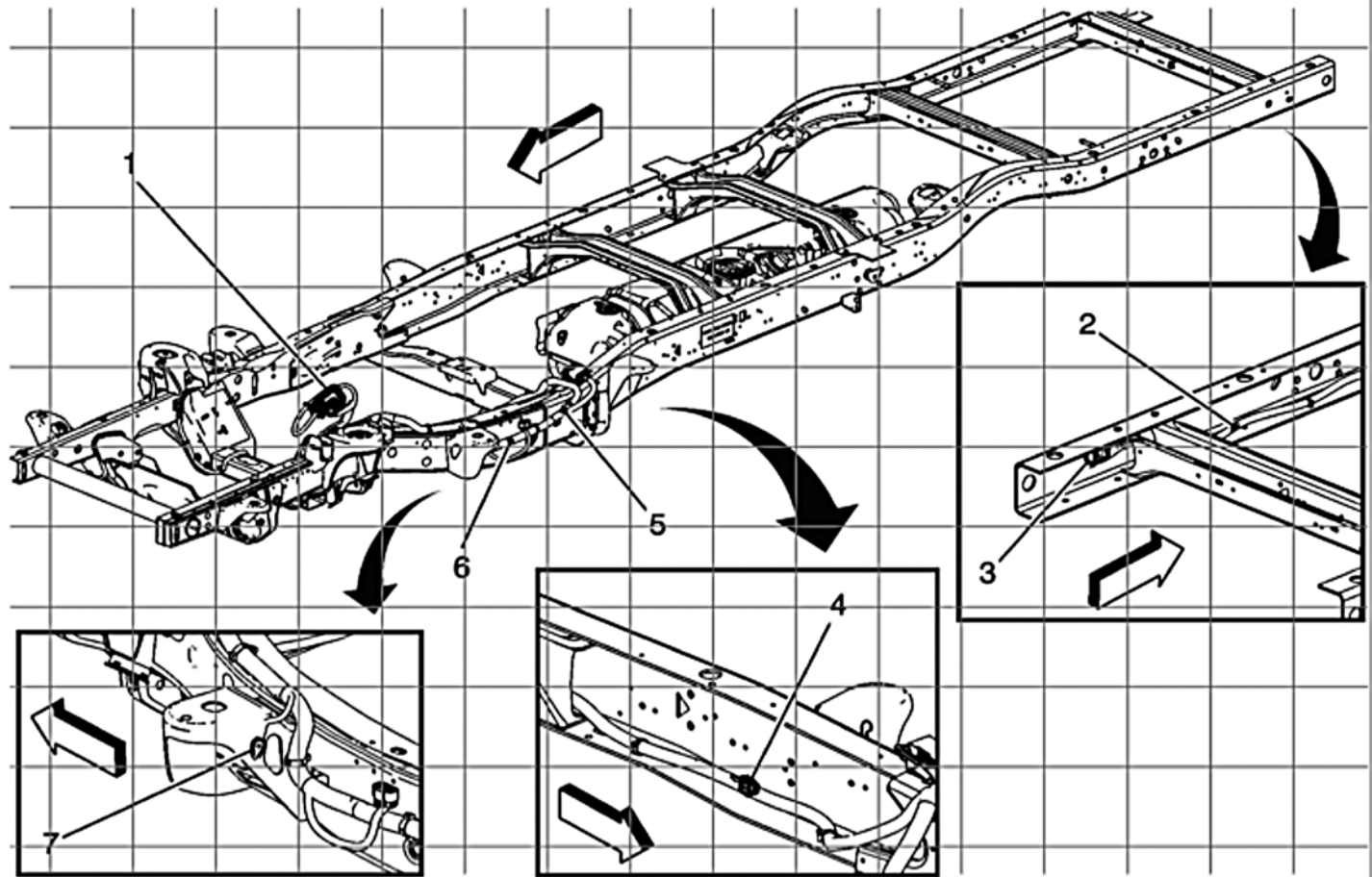
Chassis Harness Routing (LC8, LMF, LU3, L20, or L96)

- (1) J402
- (2) G400 (Passenger or Cargo)
- (3) X405 (Cutaway)
- (4) G400 (Cutaway)
- (5) J301
- (6) J315 (LMF)
- (7) G300
- (8) J315 (LU3, L20 or L96)
- (9) X101



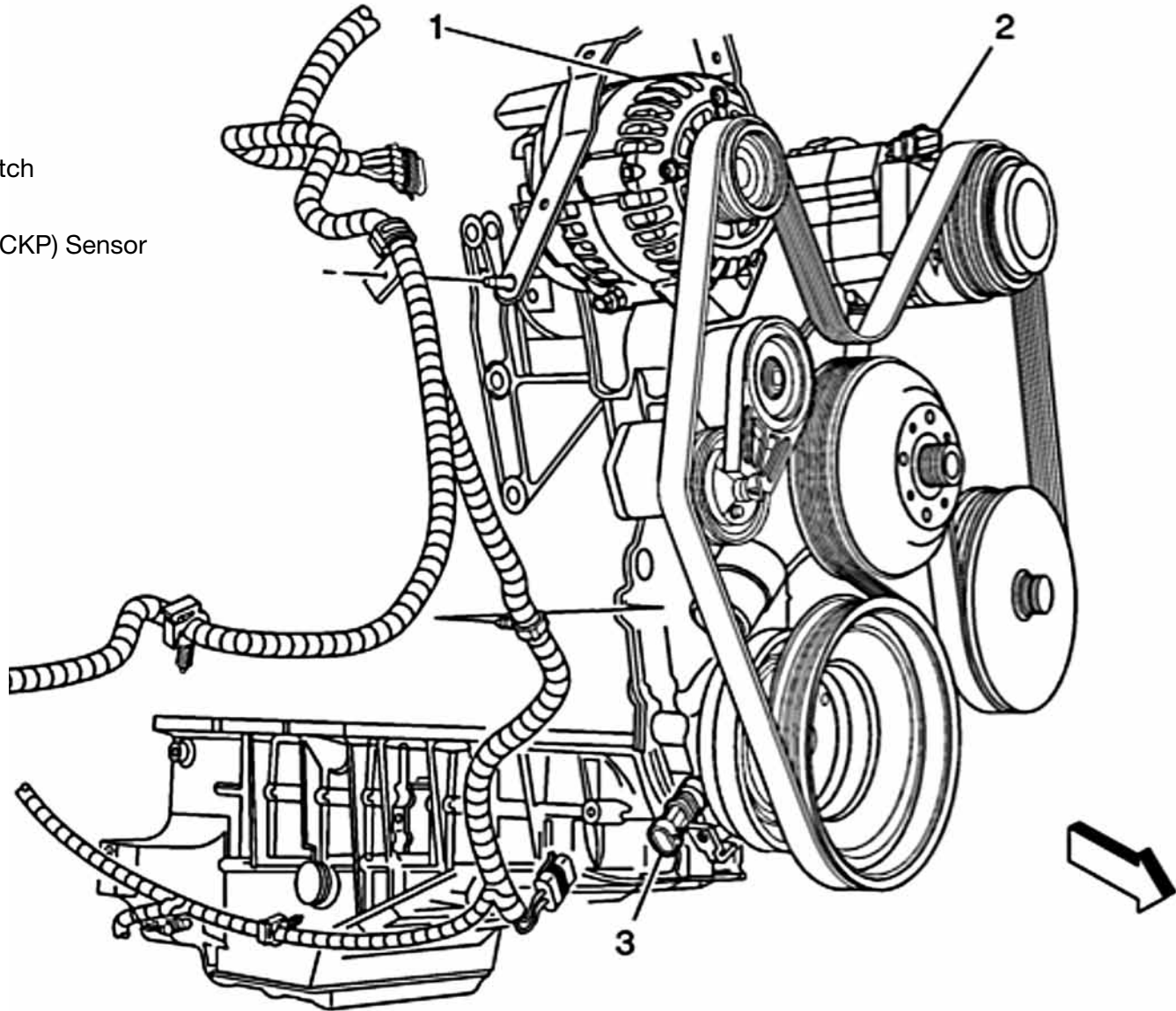
Chassis Harness Routing (LGH)

- (1) X101
- (2) J404
- (3) X395
- (4) X305
- (5) J315
- (6) J119
- (7) G300

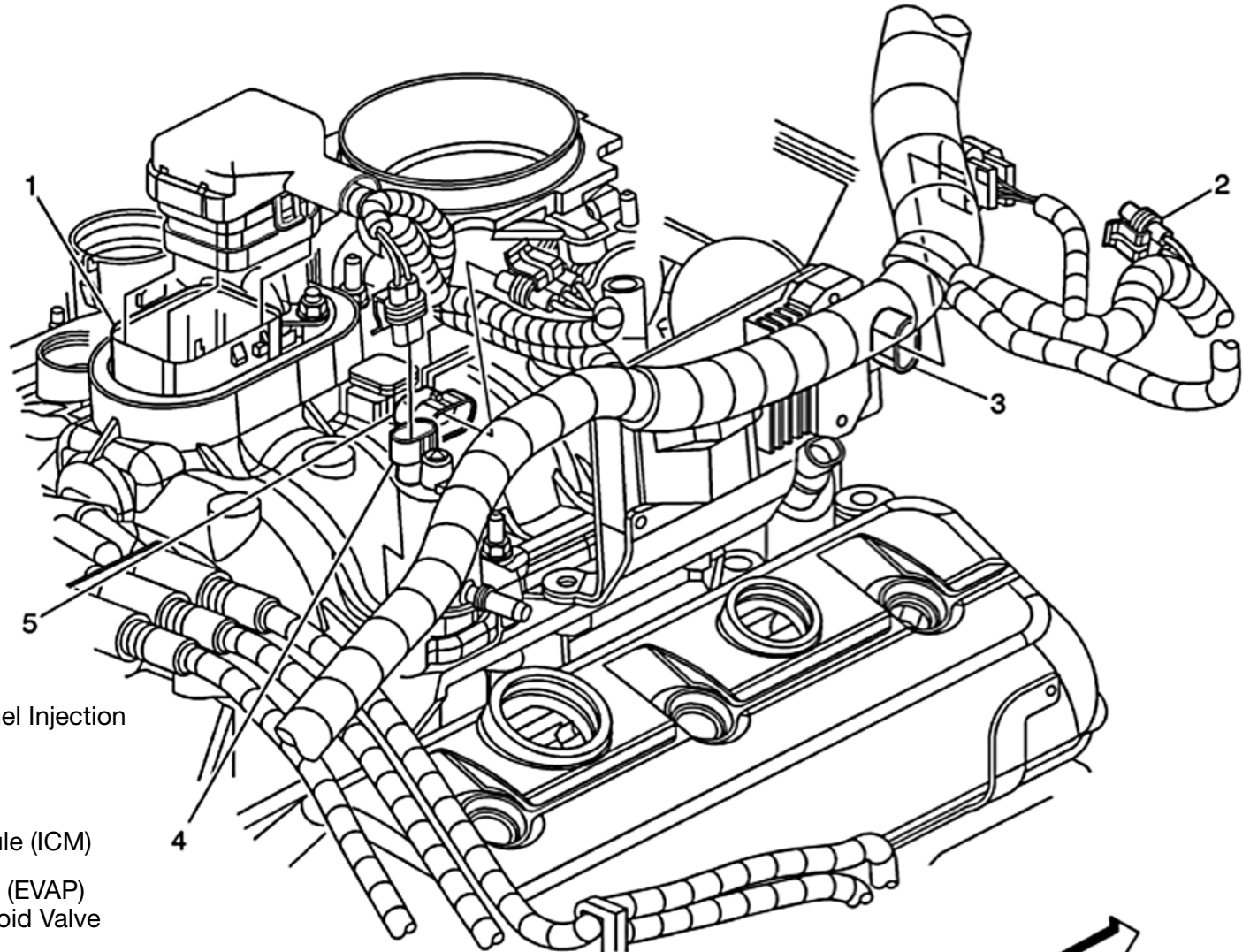


Front of the Engine (LU3)

- (1) Generator
- (2) A/C Compressor Clutch Connector (C60)
- (3) Crankshaft Position (CKP) Sensor



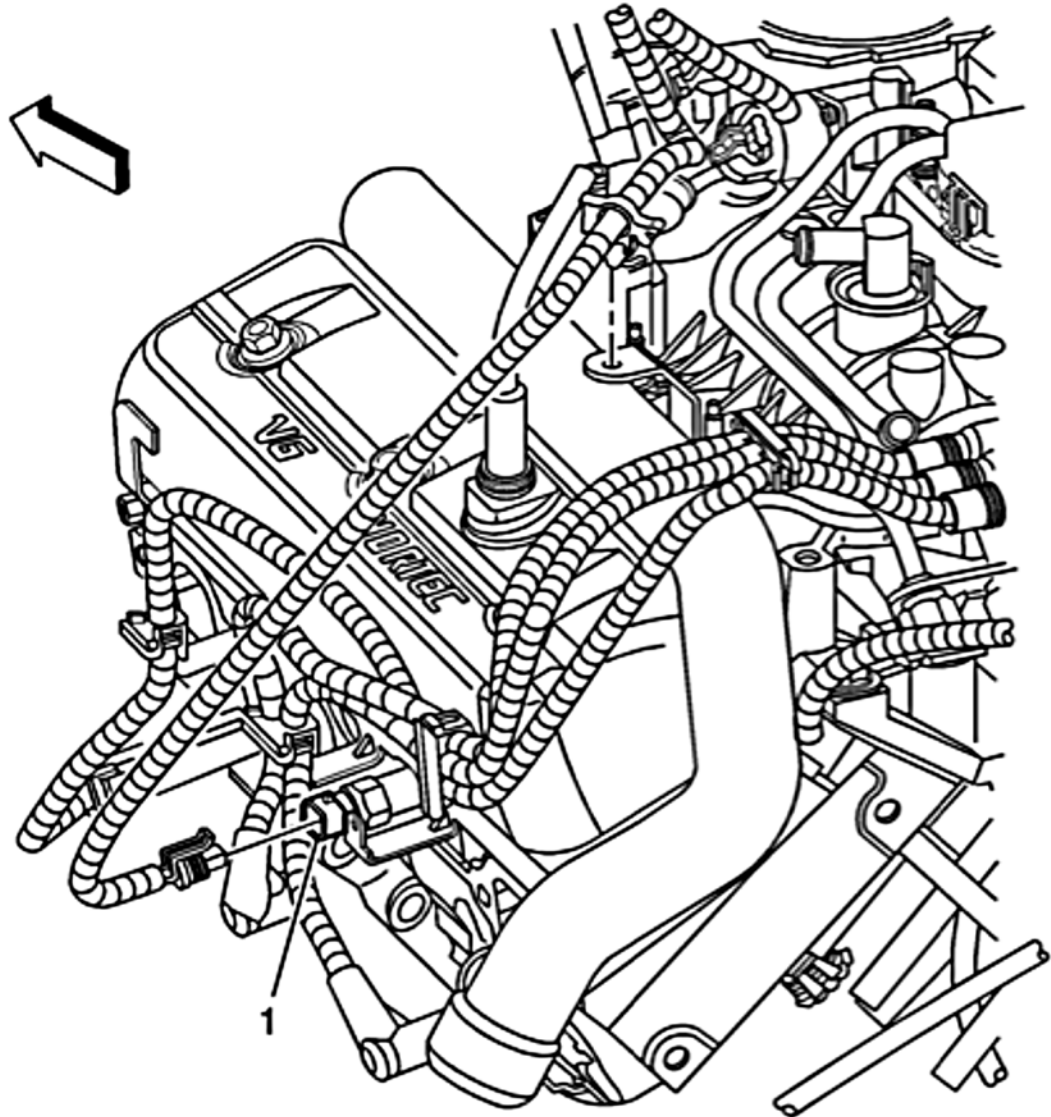
Right Side of the Engine (LU3)



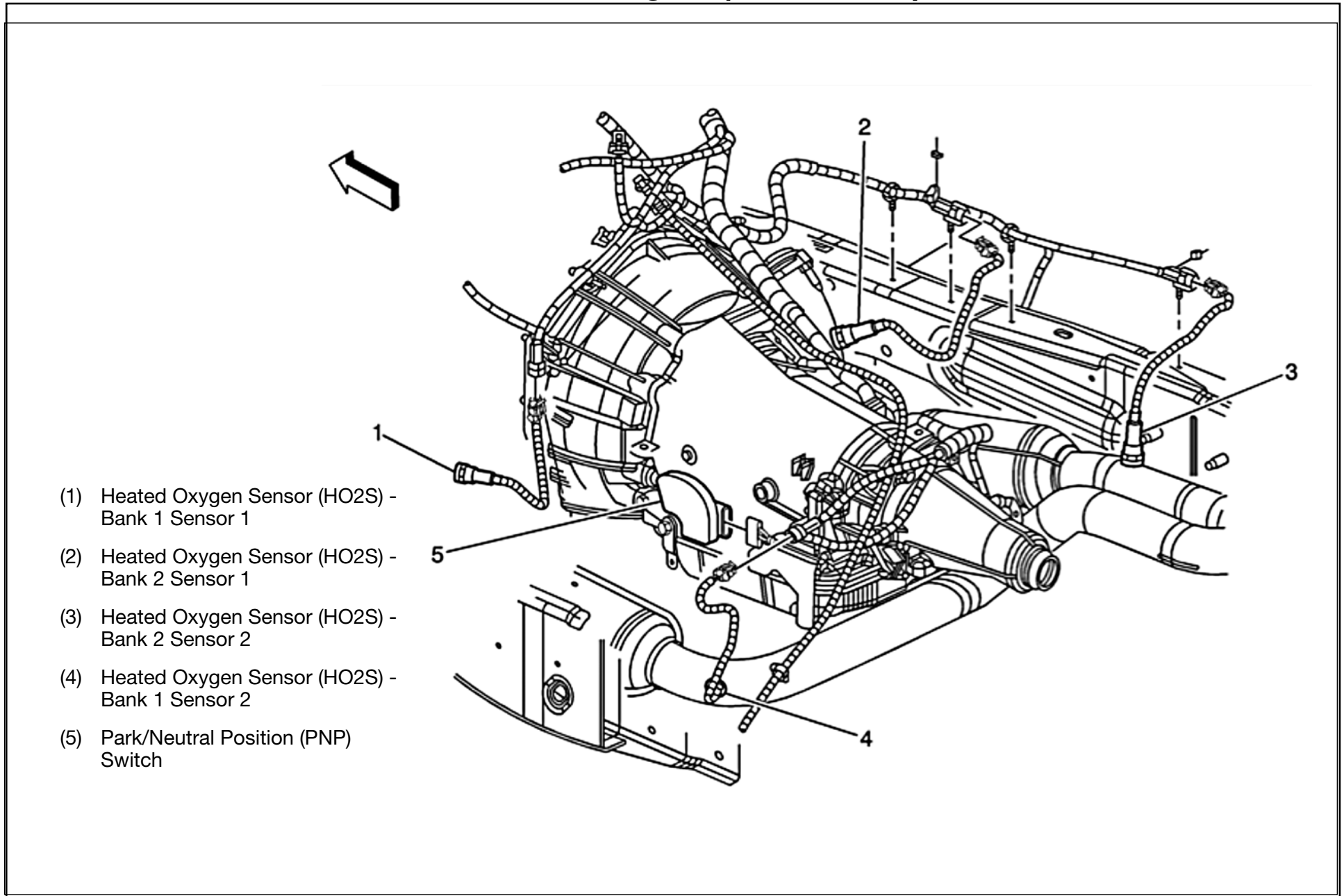
- (1) Central Sequential Fuel Injection (Central SFI)
- (2) Generator Connector
- (3) Ignition Control Module (ICM)
- (4) Evaporative Emission (EVAP) Canister Purge Solenoid Valve
- (5) Manifold Absolute Pressure (MAP) Sensor

Left Rear of the Engine (LU3)

- (1) Engine Coolant Temperature (ECT) Sensor

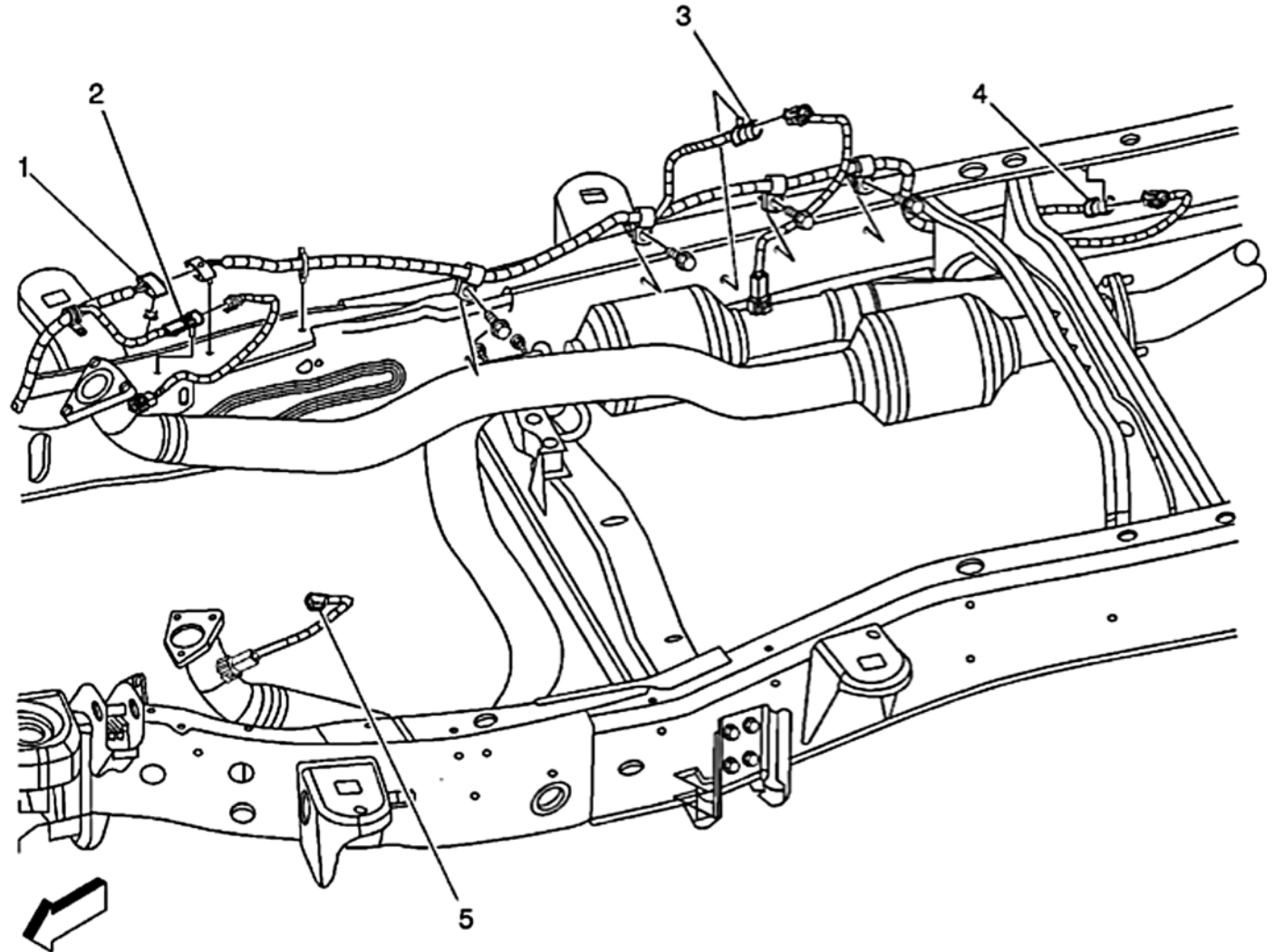


Rear of the Engine (LU3 or LMF)



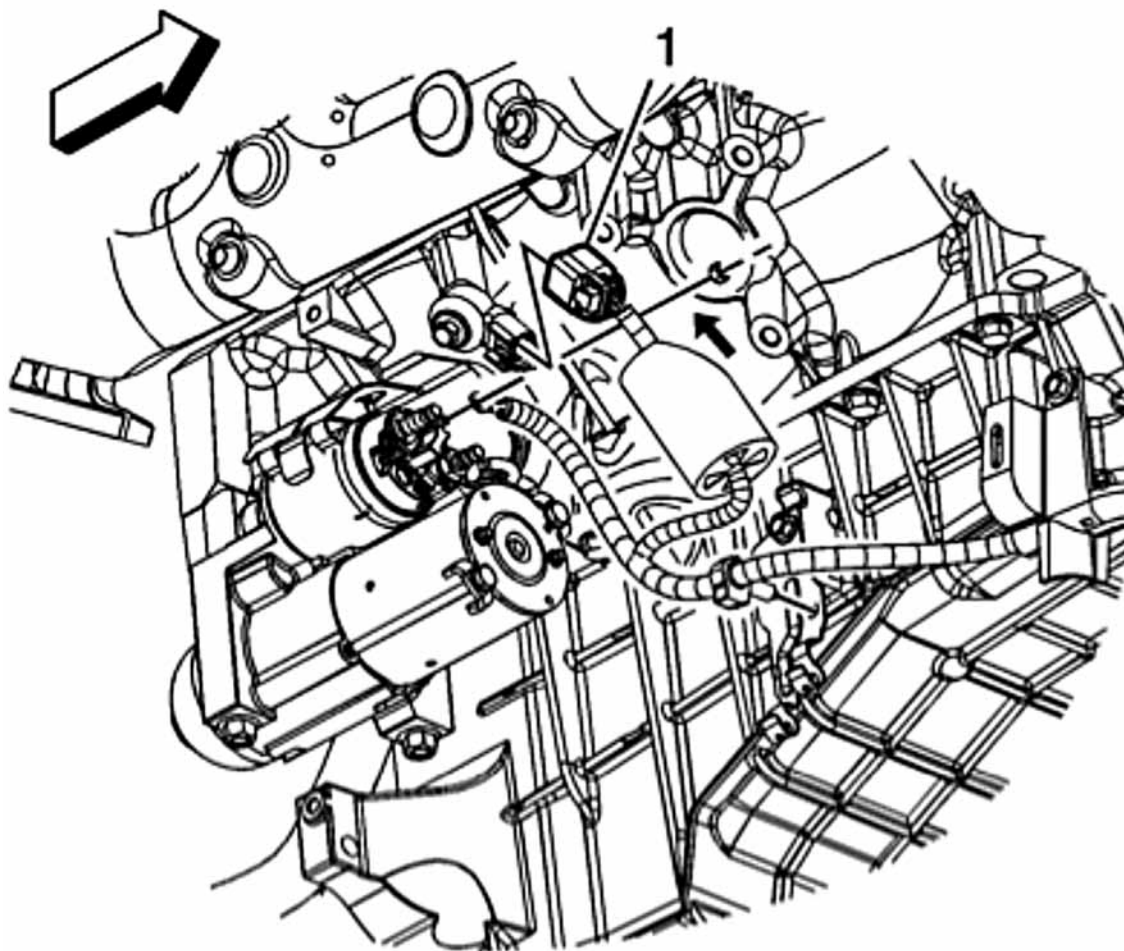
Oxygen Sensors (LC8, L20, or L96)

- (1) X128 (Cutaway)
- (2) Heated Oxygen Sensor (HO2S) - Bank 2 Sensor 1 Connector
- (3) Heated Oxygen Sensor (HO2S) - Bank 1 Sensor 2 Connector
- (4) Heated Oxygen Sensor (HO2S) - Bank 2 Sensor 2 Connector
- (5) Heated Oxygen Sensor (HO2S) - Bank 1 Sensor 1 Connector



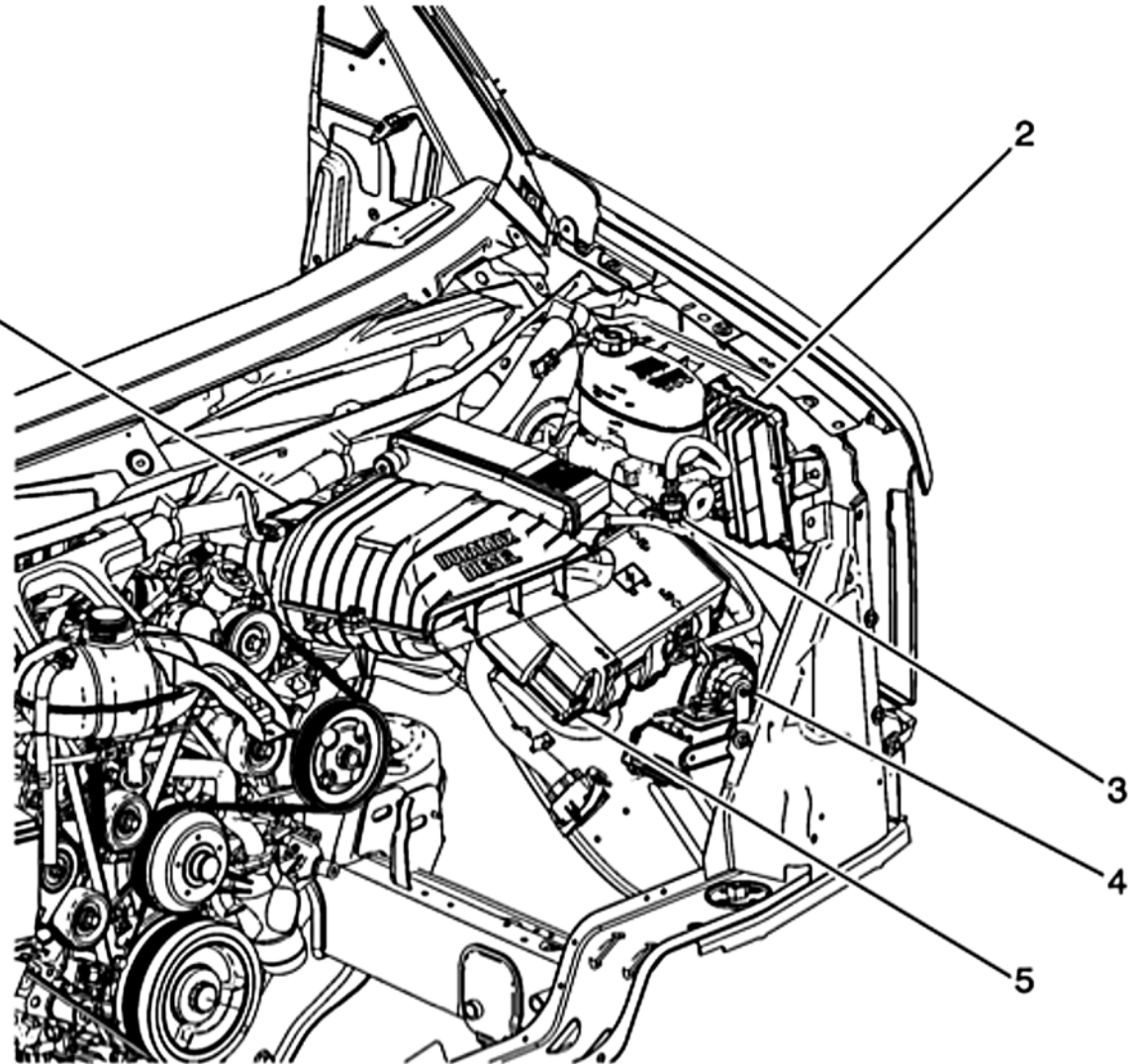
Lower Right of Engine (LU3)

(1) Knock Sensor (KS) 2

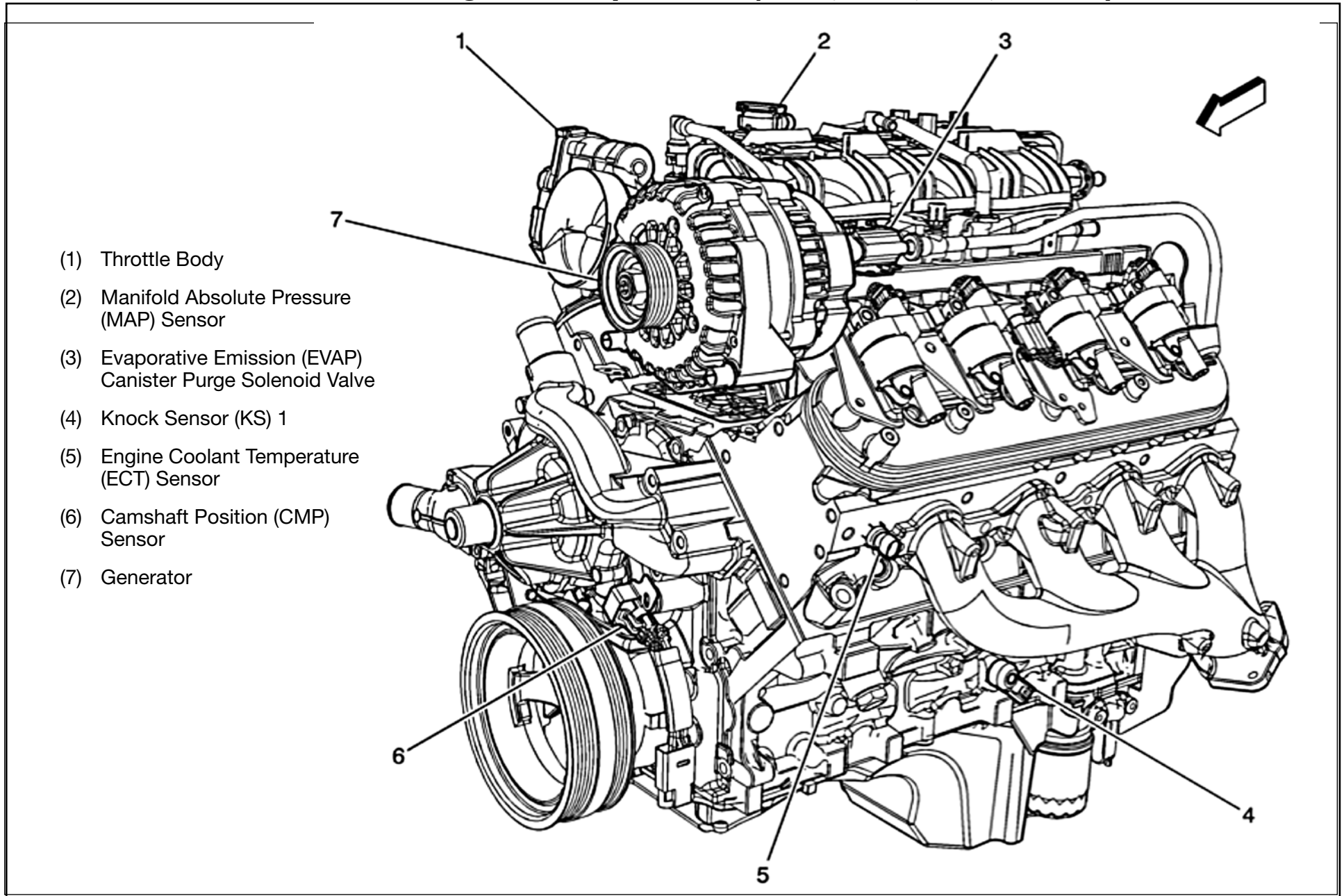


Engine Components (LGH)

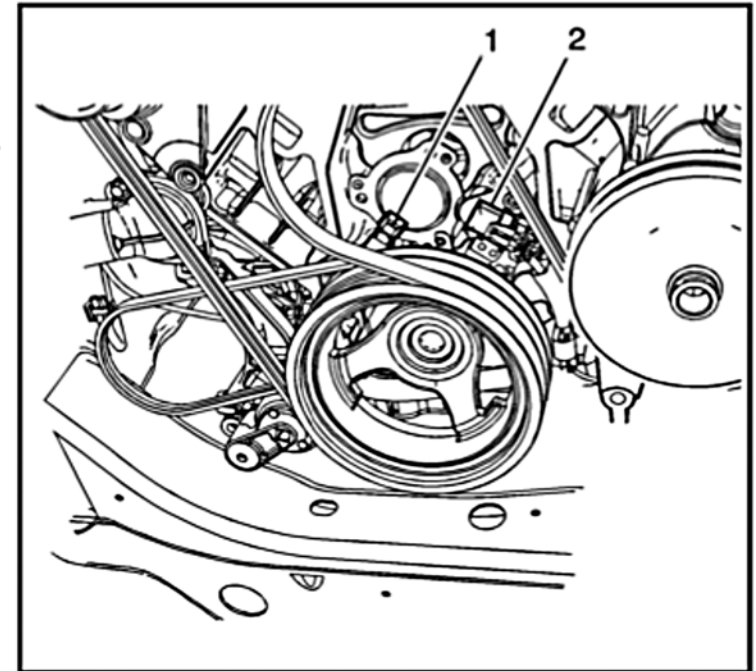
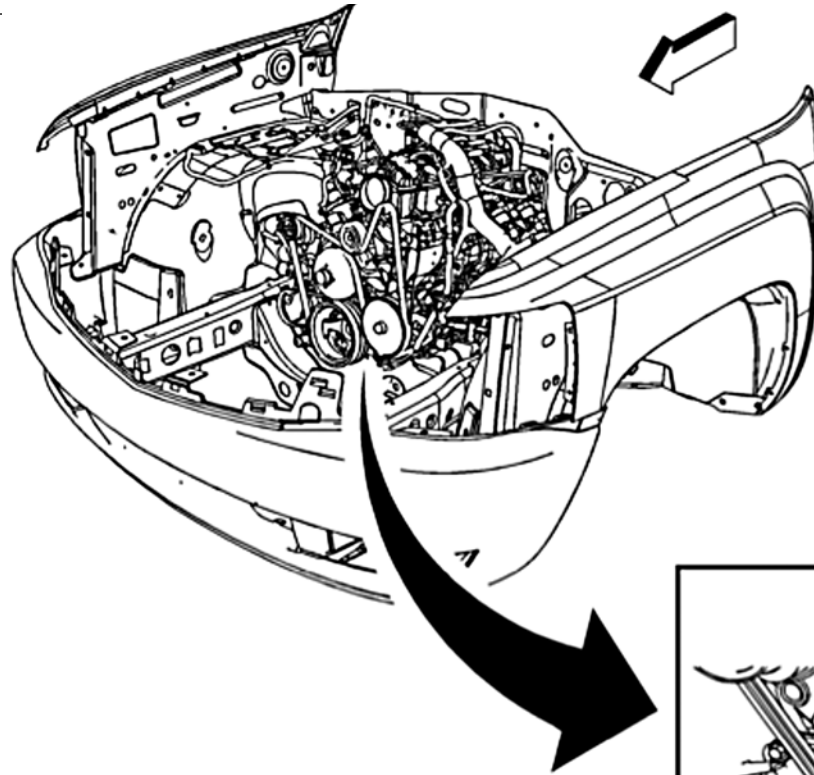
- (1) Mass Air Flow (MAF) Sensor/Intake Air Temperature (IAT) Sensor
- (2) Engine Control Module (ECM)
- (3) A/C Refrigerant Pressure Sensor
- (4) Horn Assembly
- (5) Fuse Block - Underhood



Front of the Engine Components (LC8, LMF, L20, or L96)



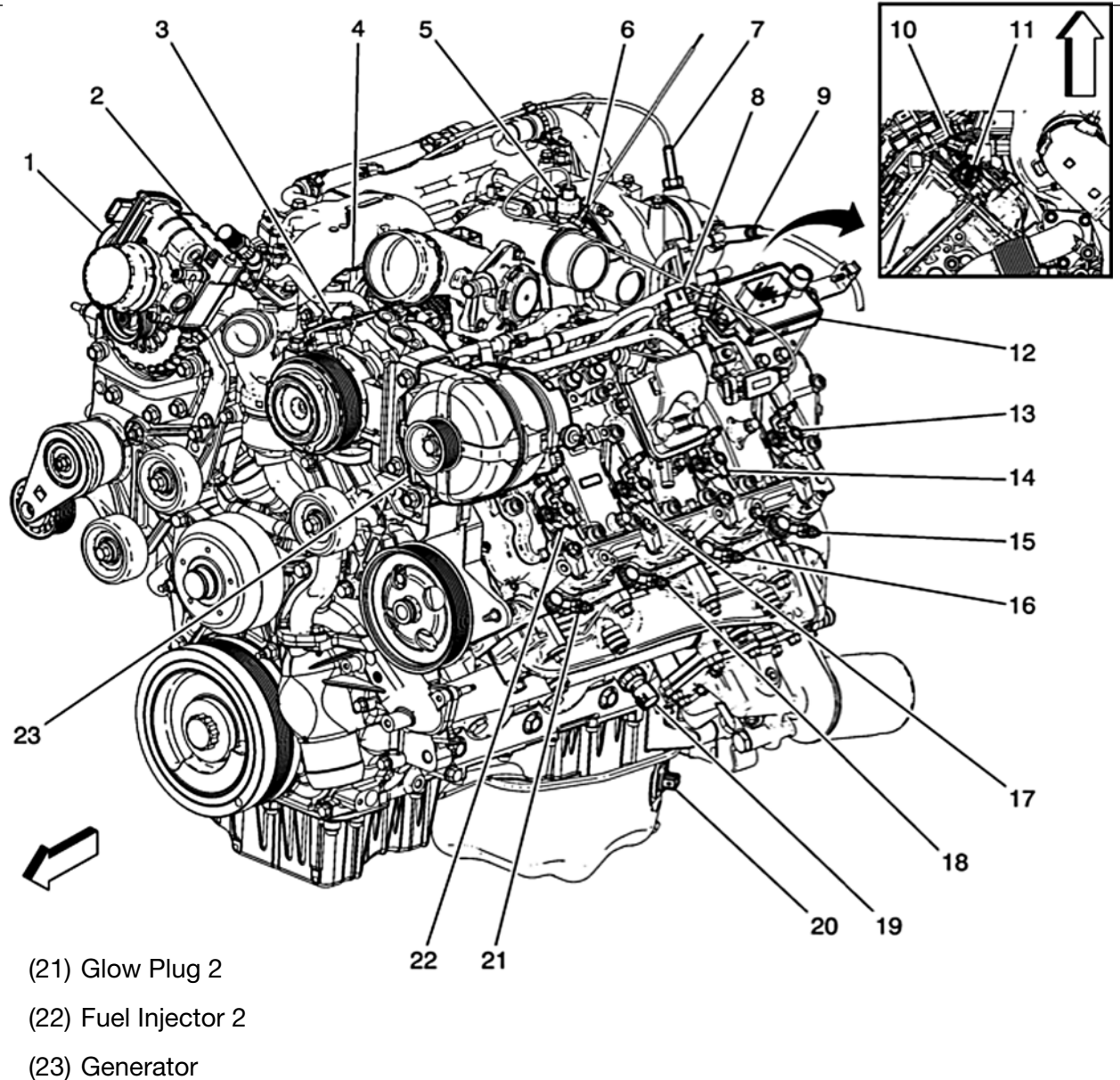
Left Front Side of the Engine Components (LC8, LMF, L20, or L96)



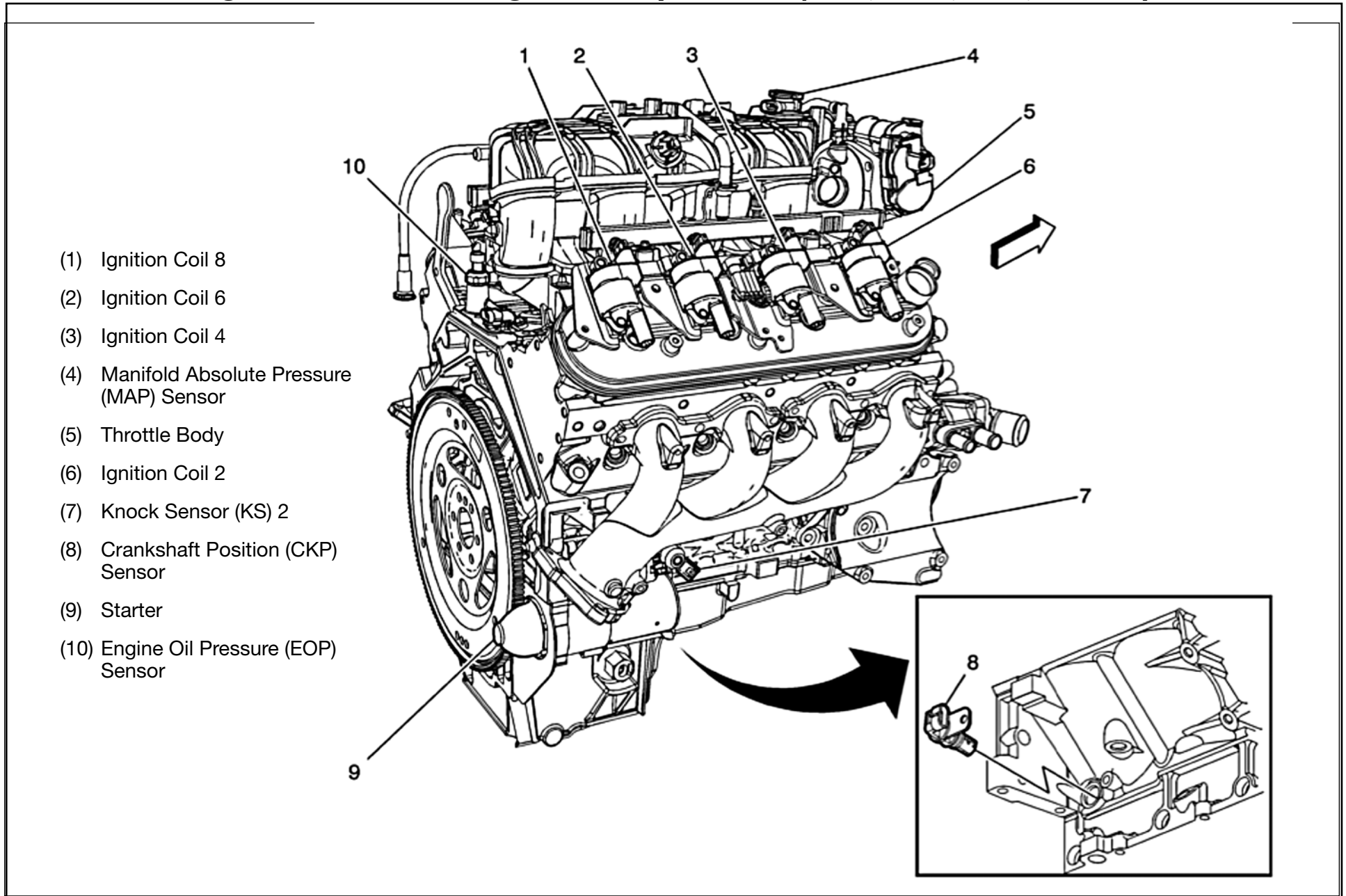
- (1) Camshaft Position (CMP) Actuator Solenoid Valve (L96)
- (2) Camshaft Position (CMP) Sensor

Left Front of Engine Components (LGH)

- (1) Intake Air Valve
- (2) Intake Air Heater (IAH)
- (3) A/C Compressor Clutch
- (4) Exhaust Gas Recirculation (EGR) Valve
- (5) Turbocharger Vane Position Sensor
- (6) Charge Air Cooler Inlet Temperature Sensor
- (7) Exhaust Gas Recirculation (EGR) Temperature Sensor 1
- (8) Fuel Filter Pressure Switch
- (9) Nitrogen Oxides Sensor 1
- (10) Fuel Temperature Sensor 2
- (11) Fuel Rail Pressure (FRP) Sensor
- (12) Glow Plug Control Module (GPCM)
- (13) Fuel Injector 8
- (14) Fuel Injector 6
- (15) Glow Plug 8
- (16) Glow Plug 6
- (17) Fuel Injector 4
- (18) Glow Plug 4
- (19) Engine Oil Pressure (EOP) Sensor
- (20) Engine Oil Level (EOL) Switch

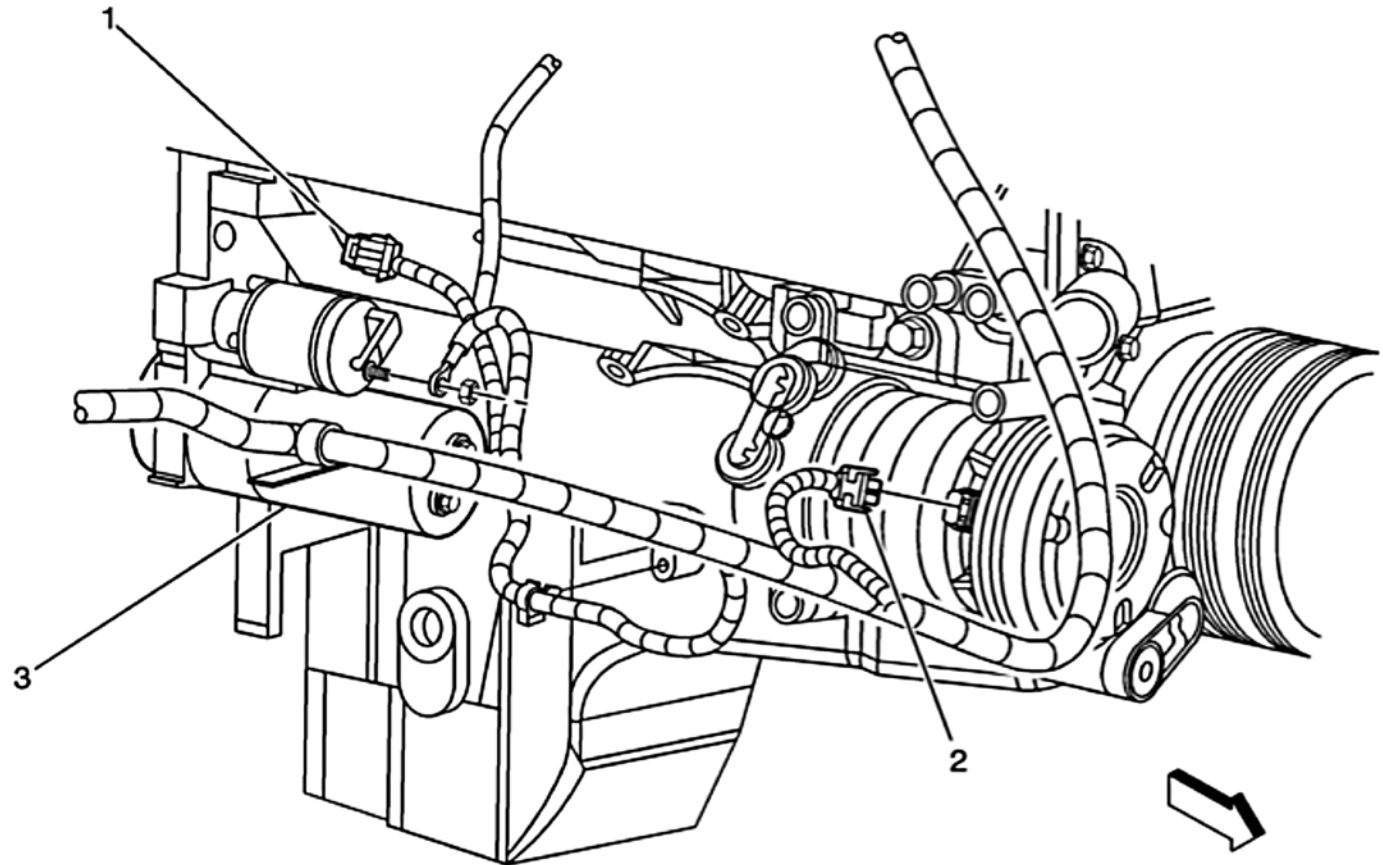


Right Side of the Engine Components (LC8, LMF, L20, or L96)



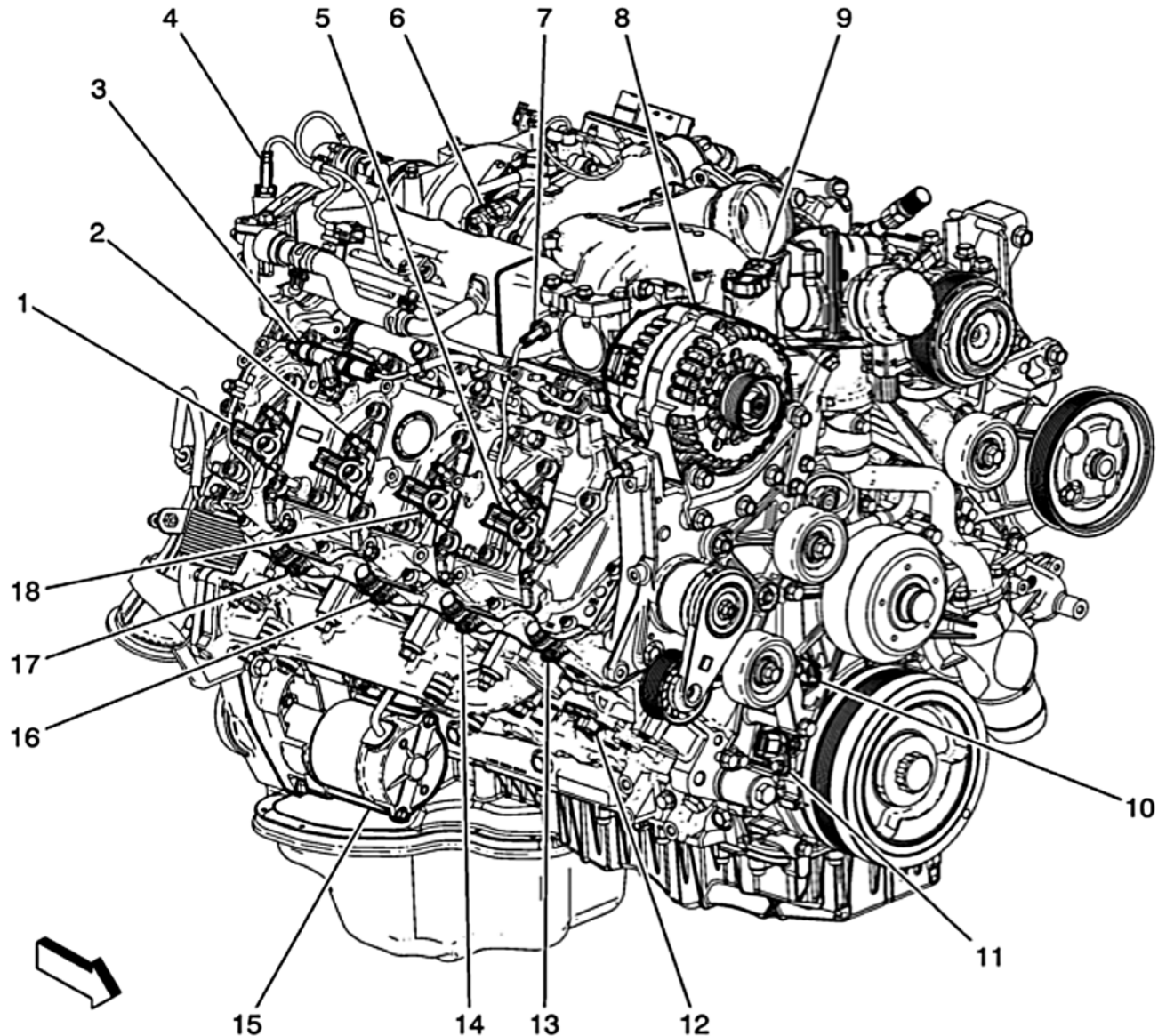
Right Side of the Engine (LC8, LMF, L20, or L96)

- (1) Crankshaft Position (CKP) Sensor Connector
- (2) A/C Compressor Clutch Connector (C60)
- (3) Starter Motor



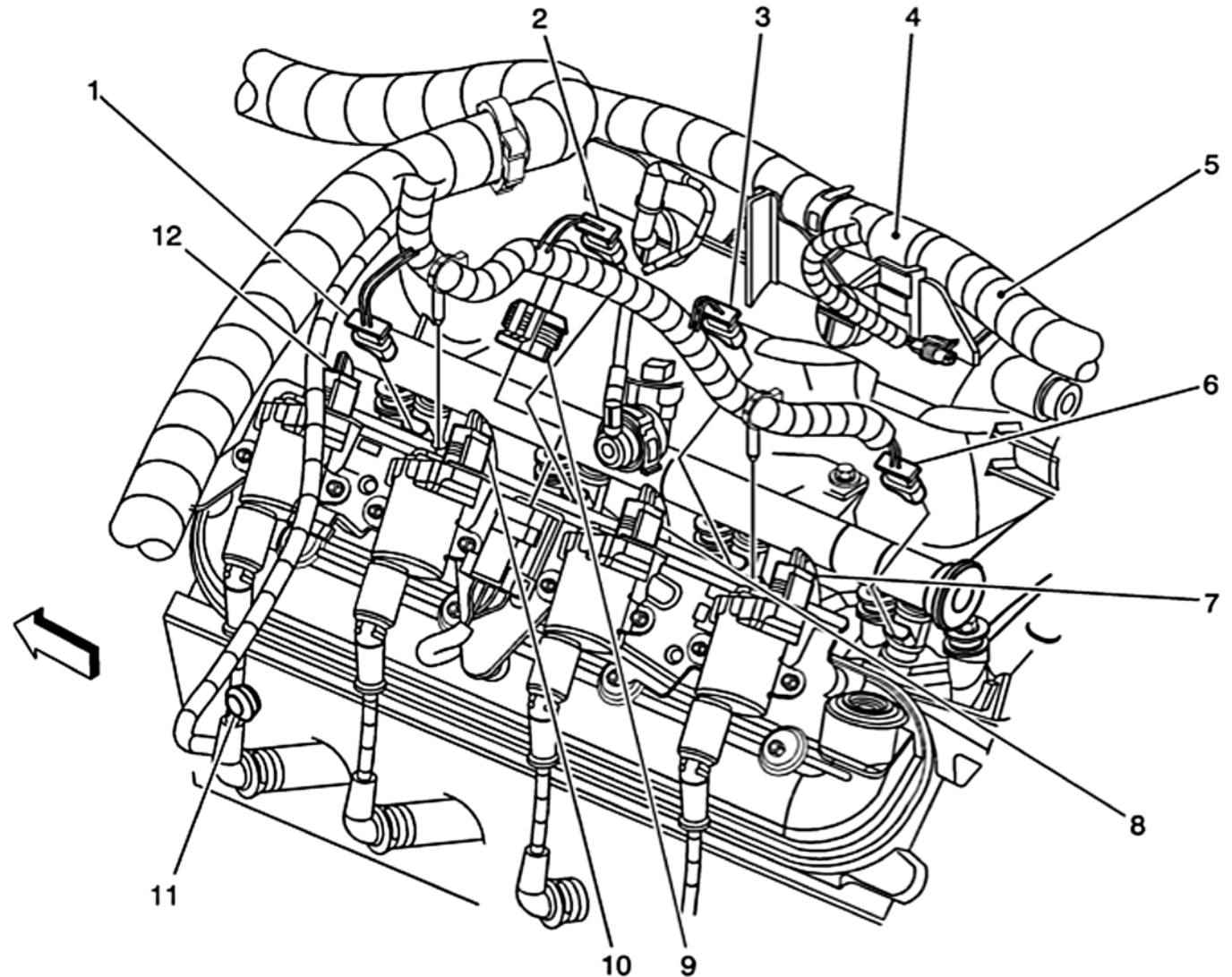
Right Front of Engine Components (LGH)

- (1) Fuel Injector 7
- (2) Fuel Injector 5
- (3) Exhaust Aftertreatment Fuel Injector
- (4) Exhaust Temperature Sensor 1
- (5) Fuel Injector 1
- (6) Turbocharger Vane Position Control Solenoid Valve
- (7) Exhaust Gas Recirculation (EGR) Temperature Sensor 2
- (8) Generator
- (9) Manifold Absolute Pressure (MAP) Sensor
- (10) Camshaft Position (CMP) Sensor
- (11) Crankshaft Position (CKP) Sensor
- (12) Engine Block Heater
- (13) Glow Plug 1
- (14) Glow Plug 3
- (15) Starter Motor
- (16) Glow Plug 5
- (17) Glow Plug 7
- (18) Fuel Injector 3



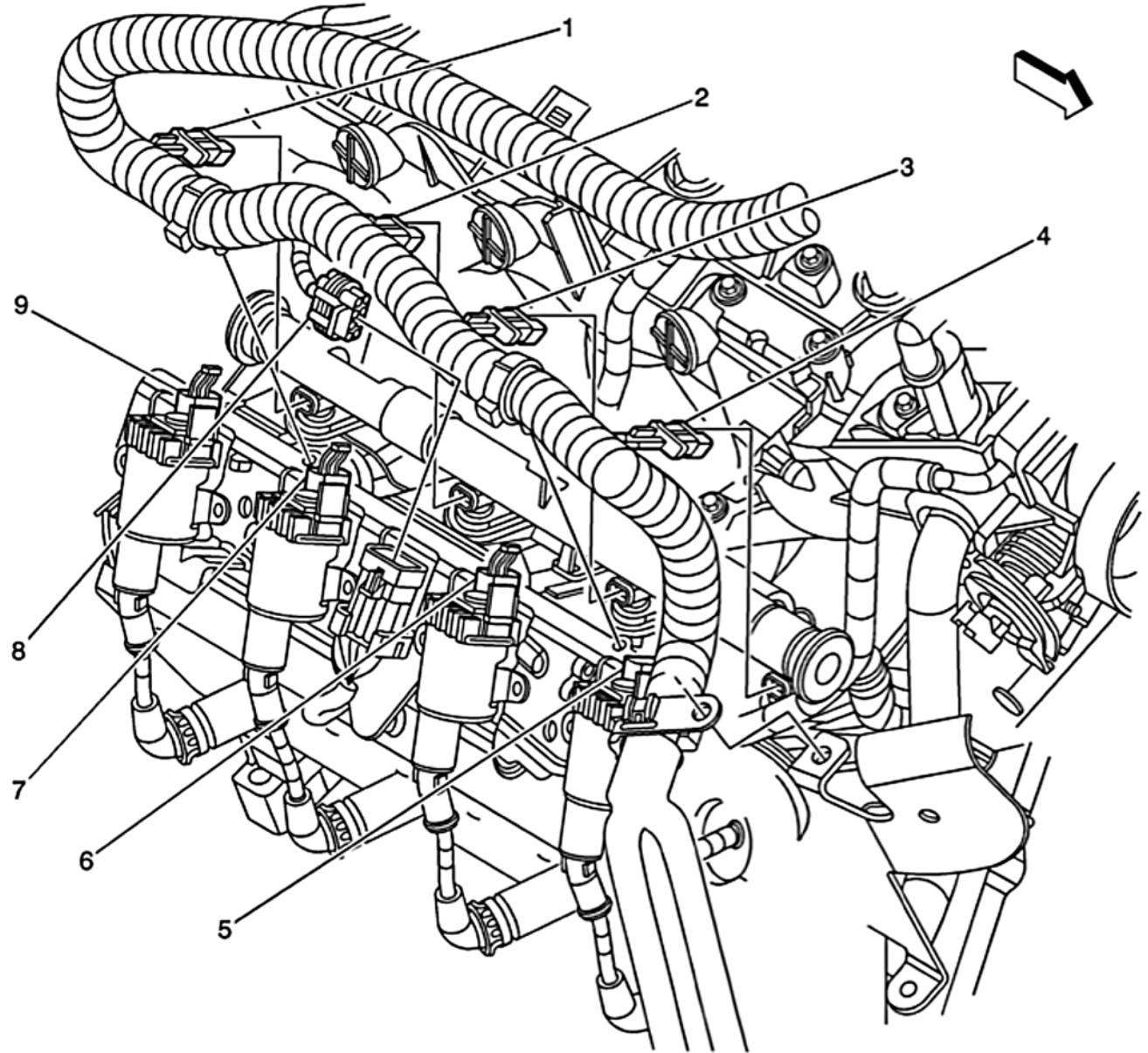
Upper Left Side of the Engine (LC8, LMF, L20, or L96)

- (1) Fuel Injector 1 Connector
- (2) Fuel Injector 3 Connector
- (3) Fuel Injector 5 Connector
- (4) J101
- (5) J102
- (6) Fuel Injector 7 Connector
- (7) Ignition Coil 7 Connector
- (8) Ignition Coil 5 Connector
- (9) X126
- (10) Ignition Coil 3 Connector
- (11) Engine Coolant Temperature (ECT) Sensor Connector
- (12) Ignition Coil 1 Connector

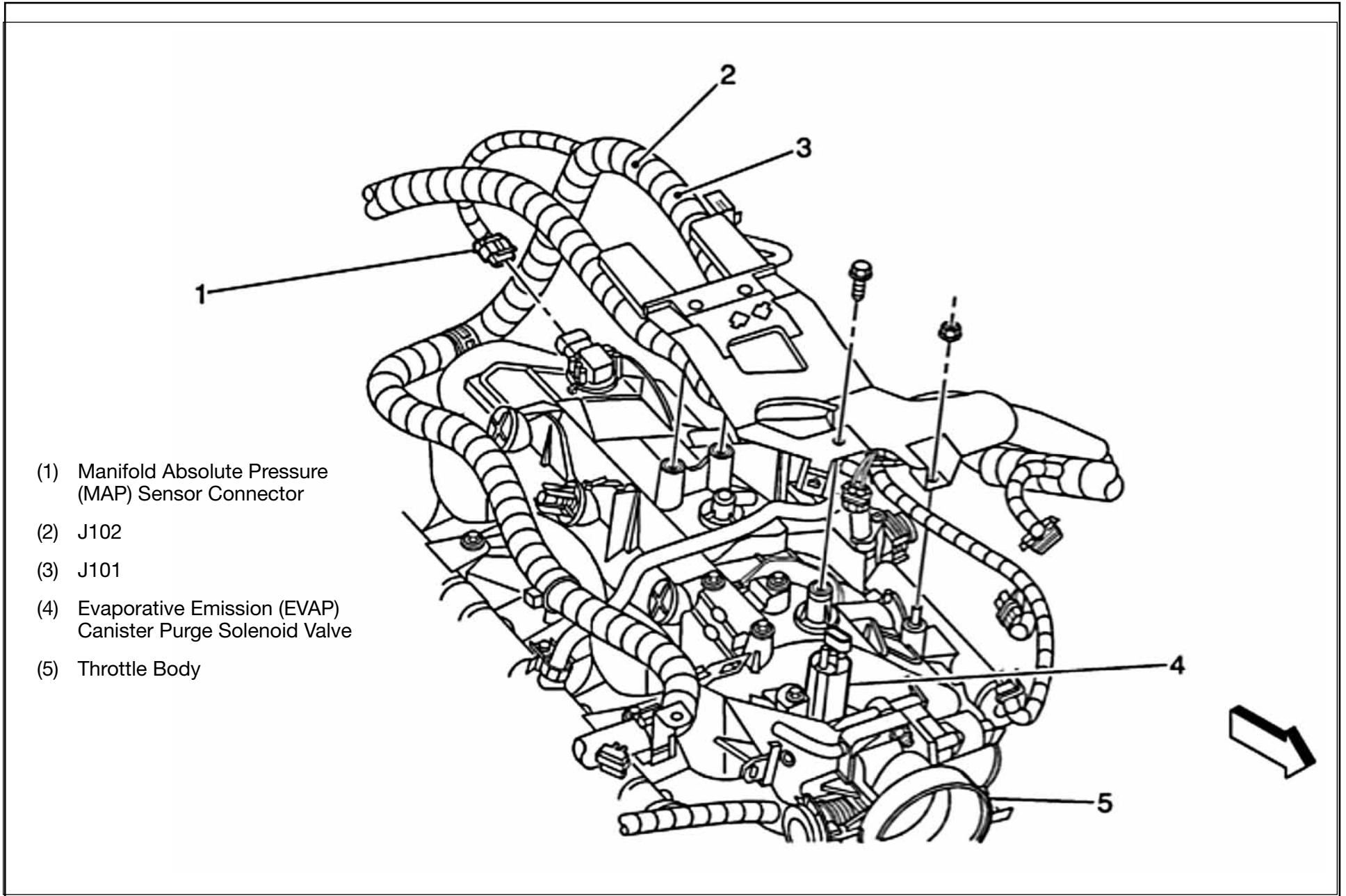


Upper Right Side of the Engine (LC8, LMF, L20, or L96)

- (1) Fuel Injector 8 Connector
- (2) Fuel Injector 6 Connector
- (3) Fuel Injector 4 Connector
- (4) Fuel Injector 2 Connector
- (5) Ignition Coil 2 Connector
- (6) Ignition Coil 4 Connector
- (7) Ignition Coil 6 Connector
- (8) X127
- (9) Ignition Coil 8 Connector

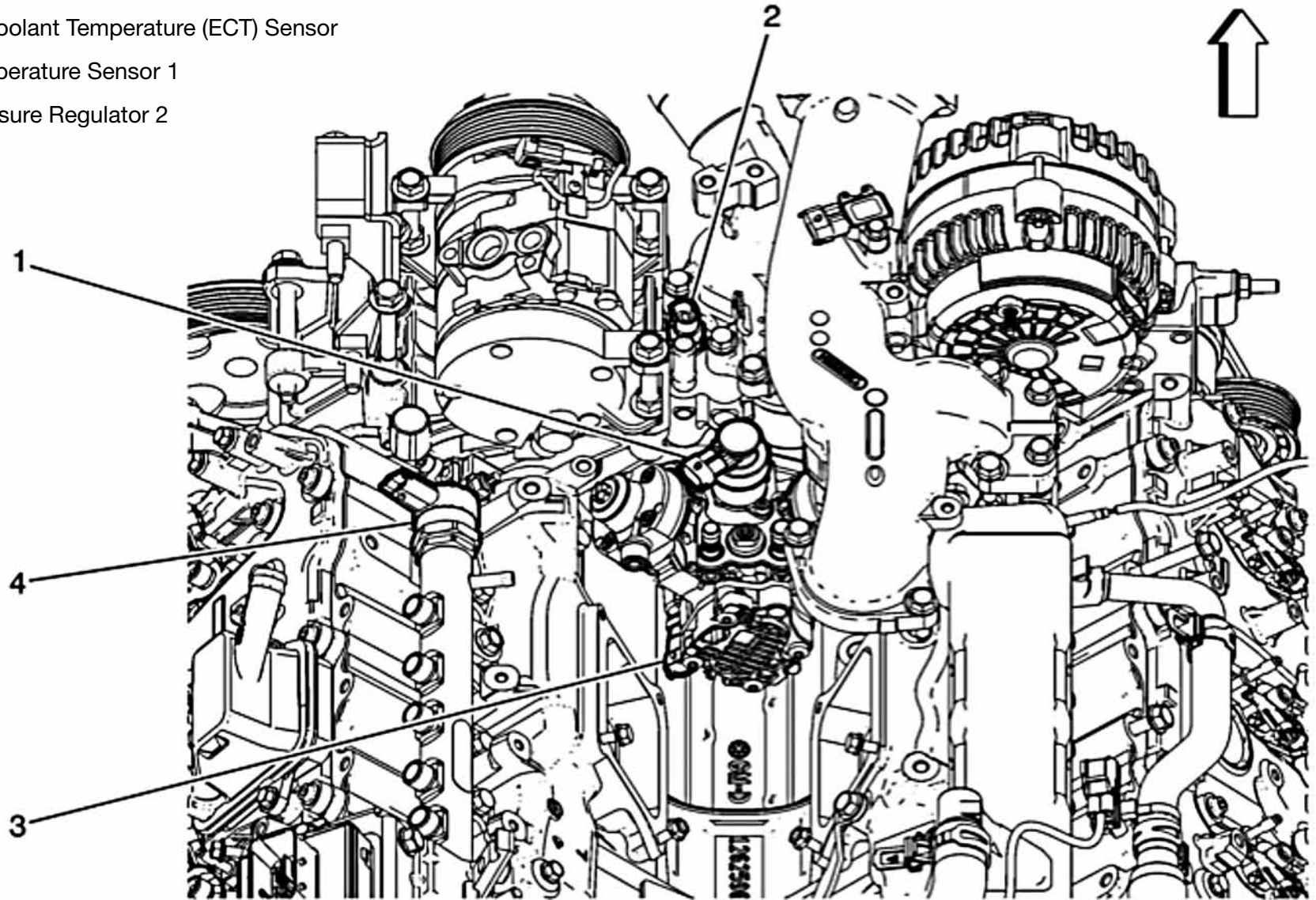


Top of the Engine (LC8, LMF, L20, or L96)



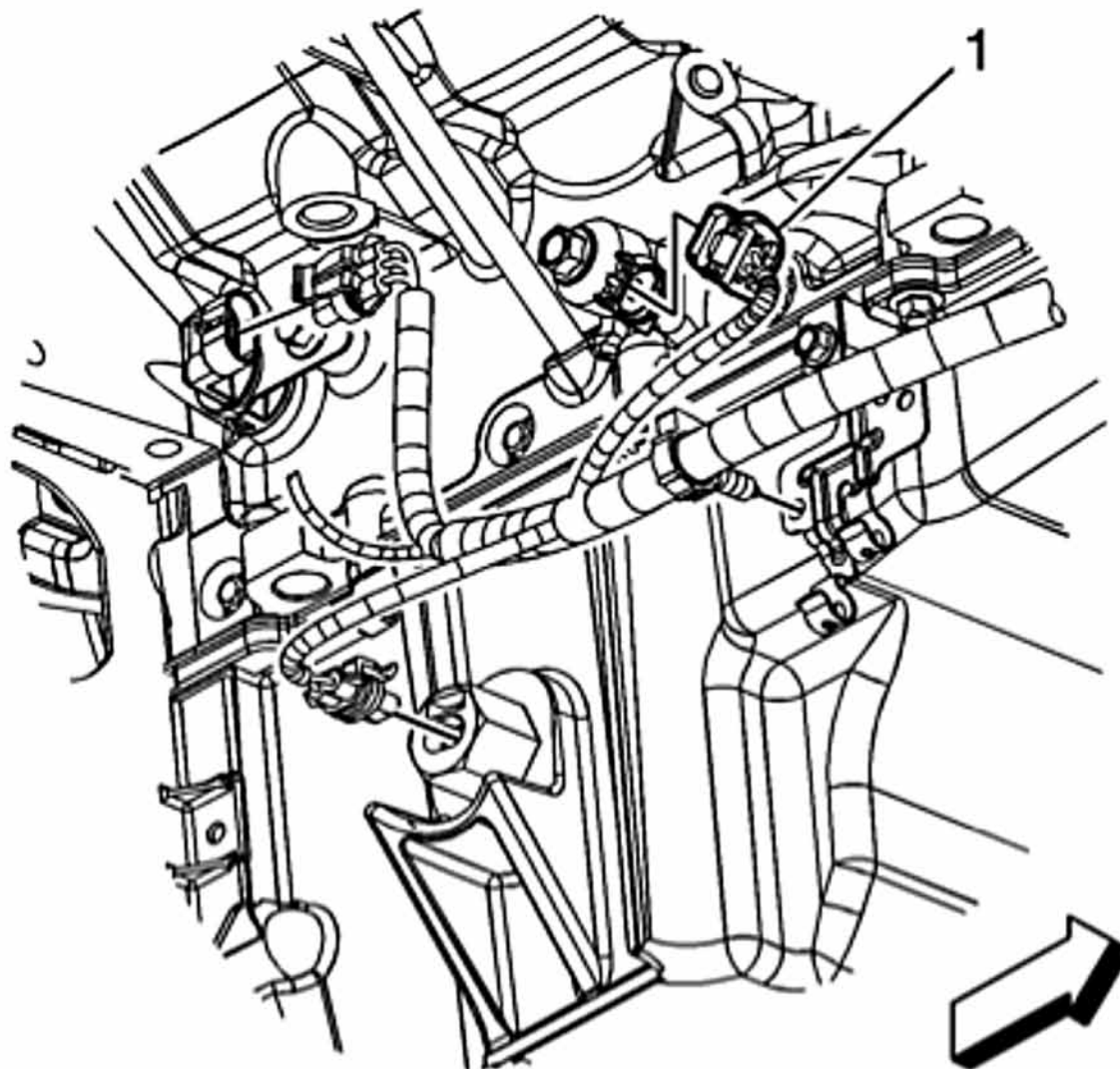
Top of the Engine Components (LGH)

- (1) Fuel Pressure Regulator 1
- (2) Engine Coolant Temperature (ECT) Sensor
- (3) Fuel Temperature Sensor 1
- (4) Fuel Pressure Regulator 2



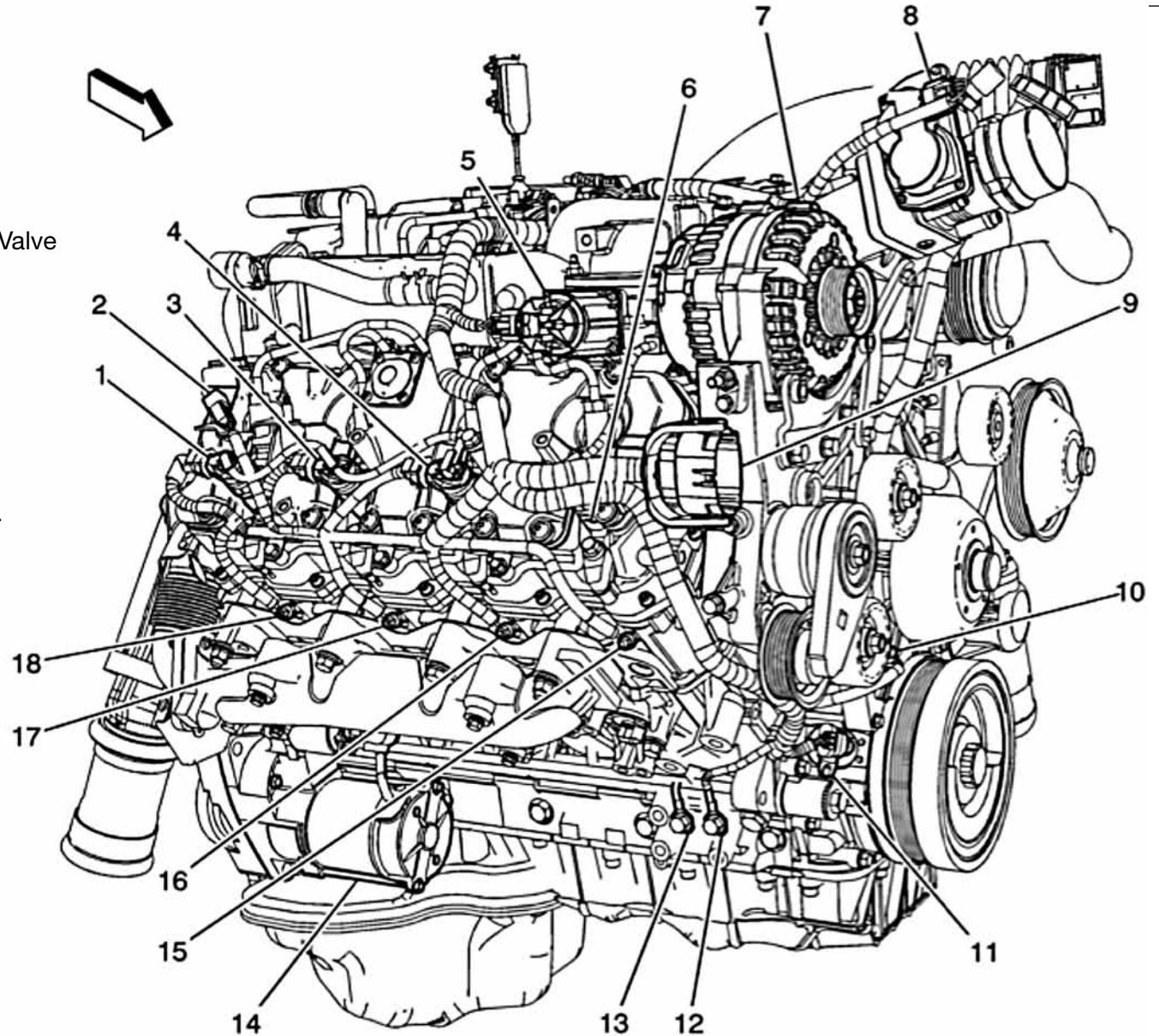
Lower Right of Engine (LC8, LMF, L20, or L96)

(1) Knock Sensor (KS) 2



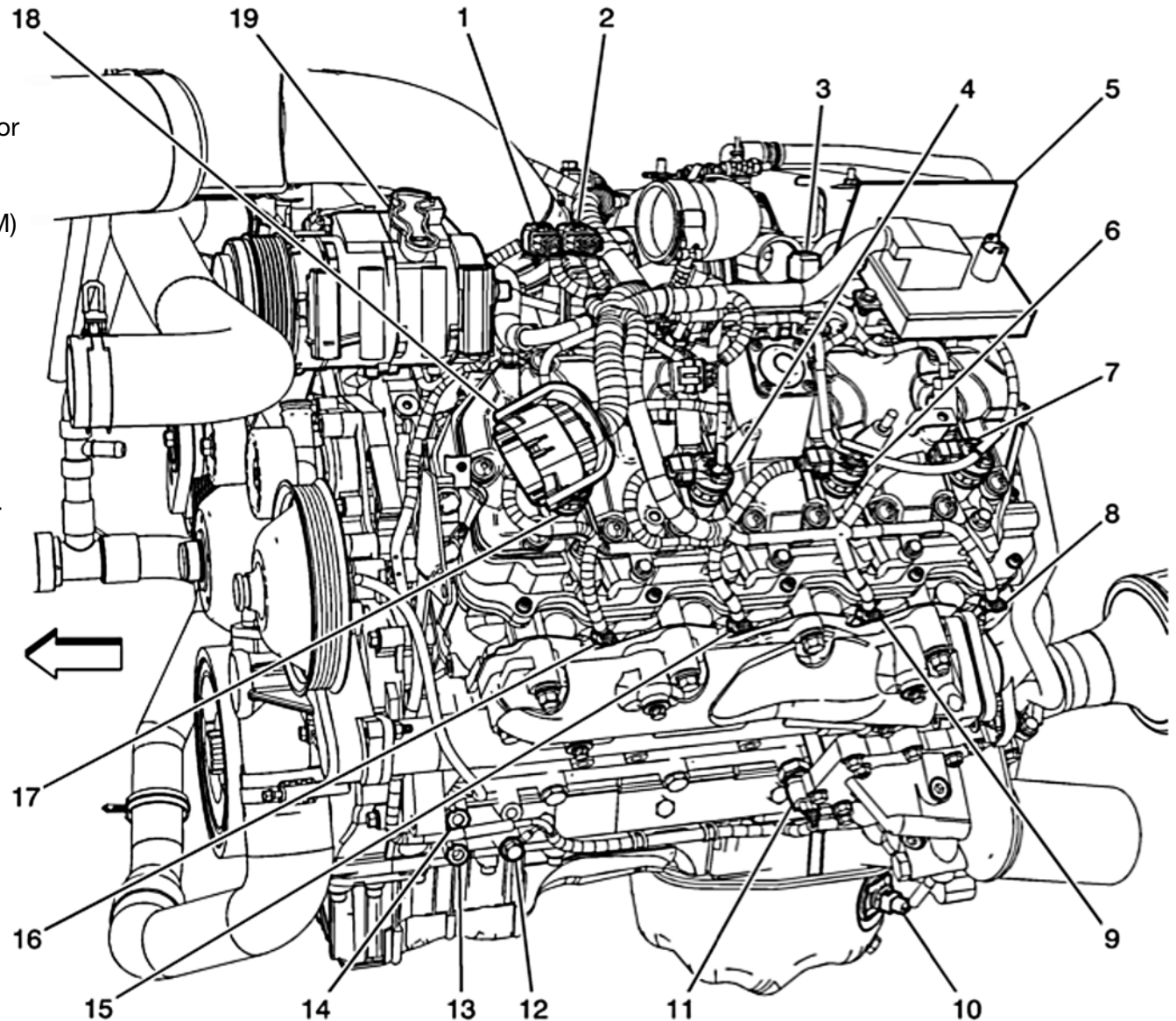
Right Side of the Engine (LMM)

- (1) Fuel Injector 7
- (2) X112
- (3) Fuel Injector 5
- (4) Fuel Injector 3
- (5) Exhaust Gas Recirculation (EGR) Valve
- (6) Fuel Injector 1
- (7) Generator
- (8) Intake Air Valve
- (9) X108
- (10) Camshaft Position (CMP) Sensor
- (11) Crankshaft Position (CKP) Sensor
- (12) G108
- (13) G104
- (14) Starter Motor
- (15) Glow Plug 1
- (16) Glow Plug 3
- (17) Glow Plug 5
- (18) Glow Plug 7

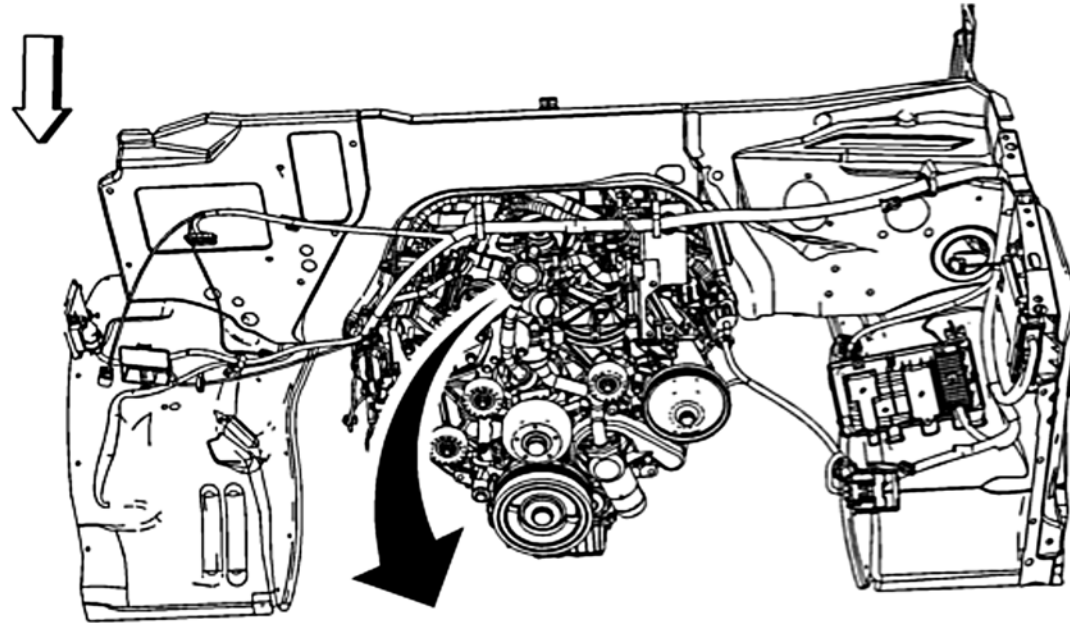


Left Side of the Engine (LMM)

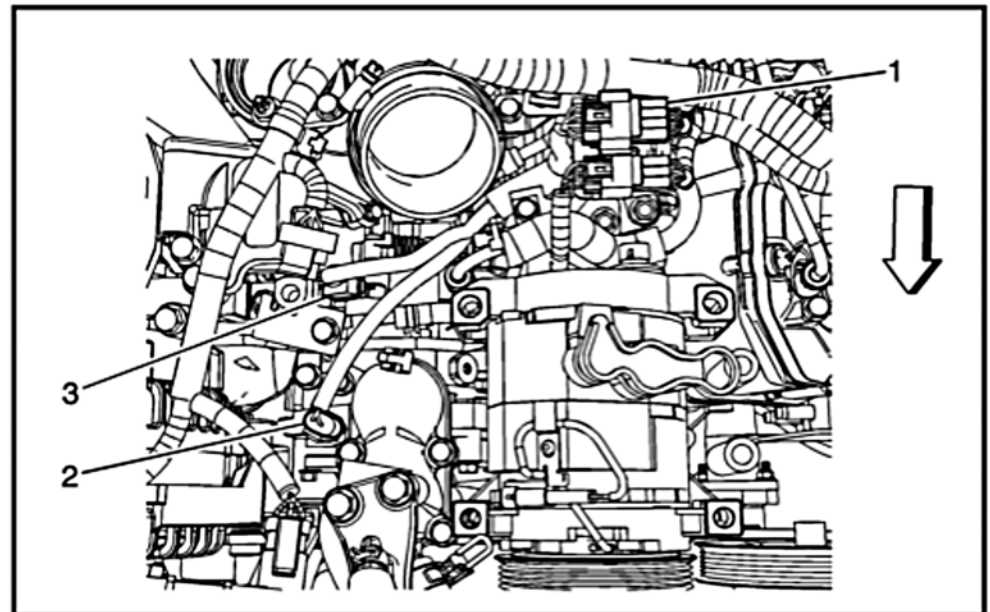
- (1) X110
- (2) X111
- (3) Intake Air Temperature (IAT) Sensor
- (4) Fuel Injector 4
- (5) Glow Plug Control Module (GPCM)
- (6) Fuel Injector 6
- (7) Fuel Injector 8
- (8) Glow Plug 8
- (9) Glow Plug 6
- (10) Engine Oil Level (EOL) Switch
- (11) Engine Oil Pressure (EOP) Sensor
- (12) G107
- (13) G102
- (14) G103
- (15) Glow Plug 4
- (16) Glow Plug 2
- (17) Fuel Injector 2
- (18) X101
- (19) A/C Compressor
- (18) Glow Plug 7



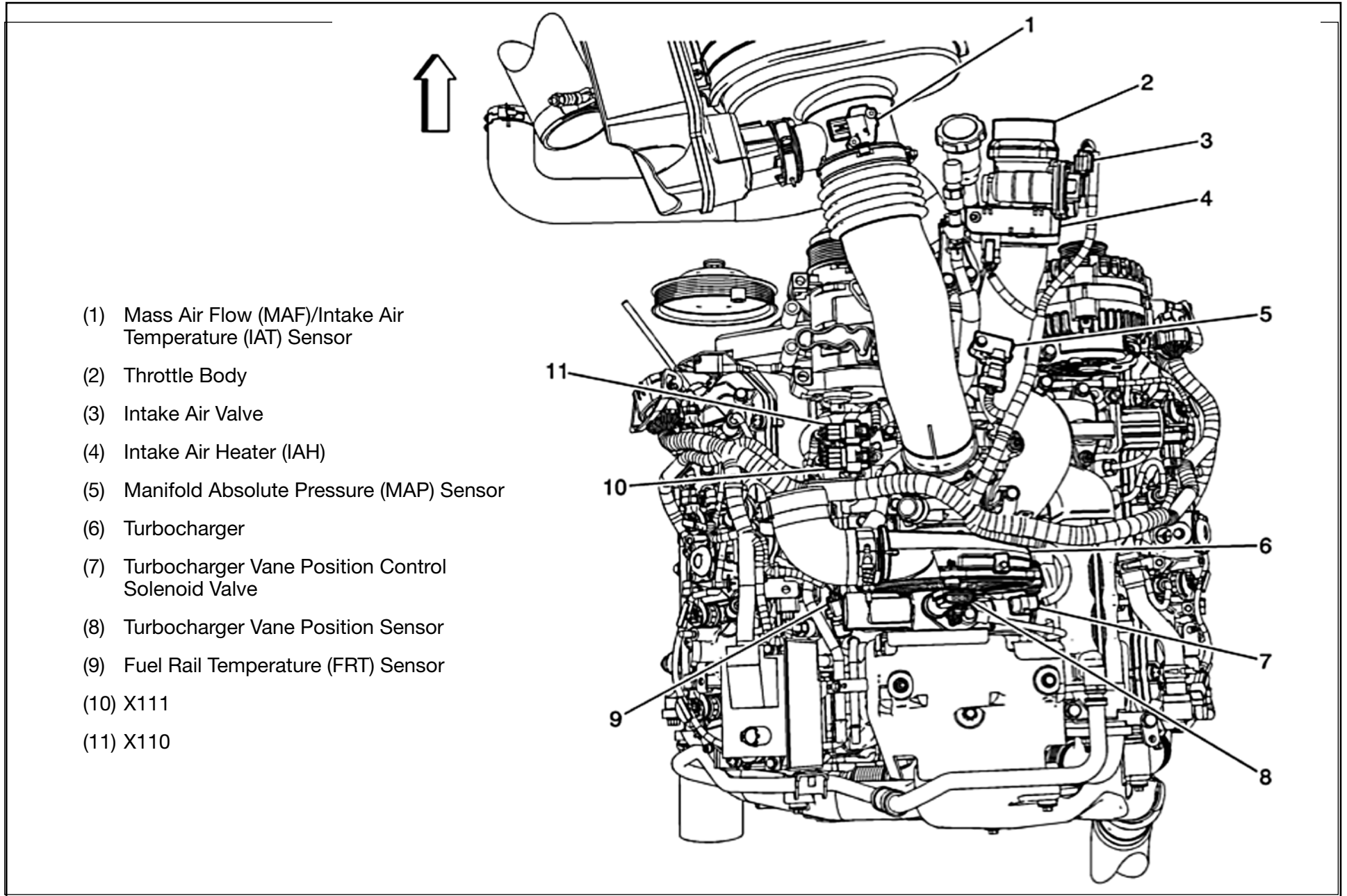
Top of Engine (LMM)



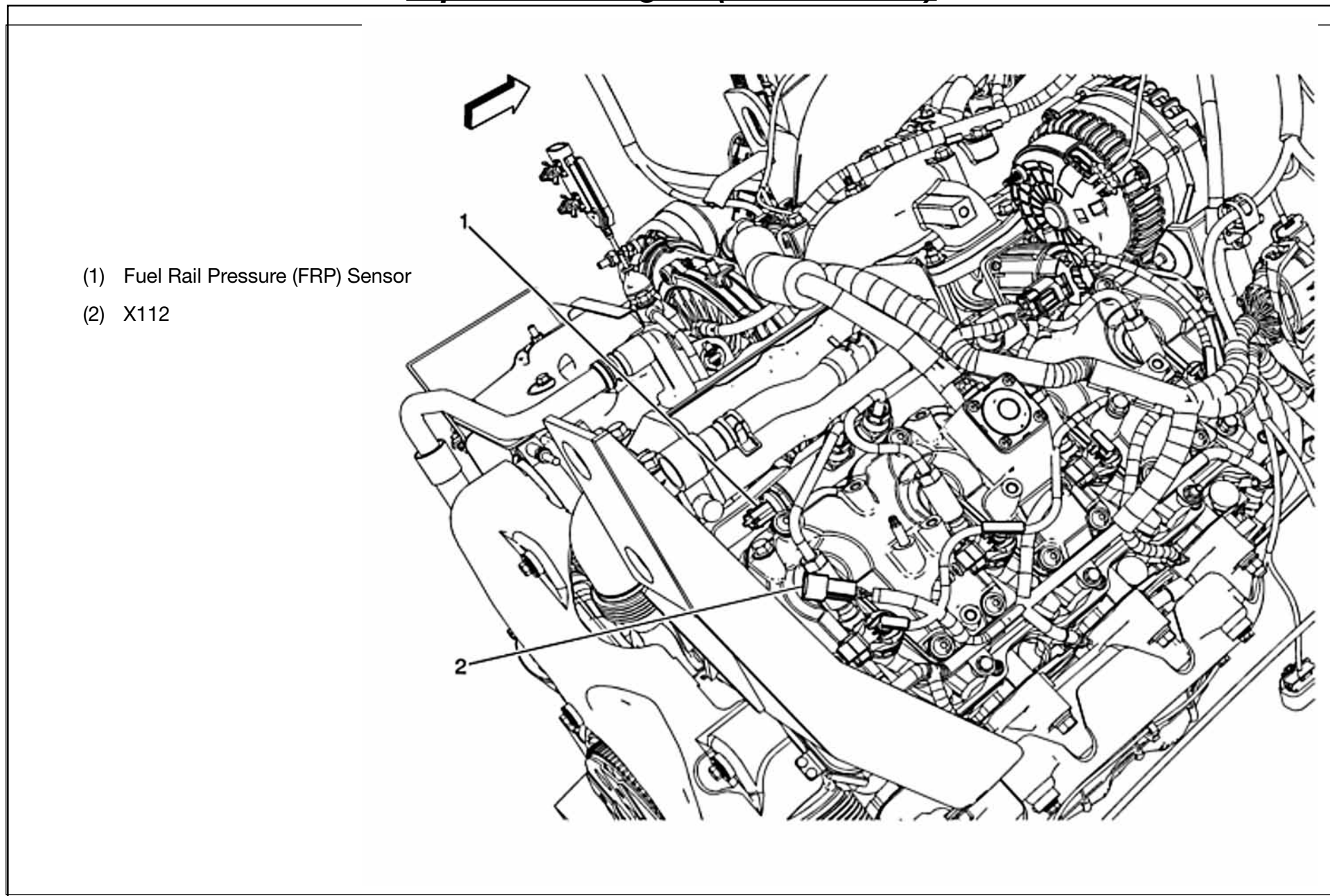
- (1) X111
- (2) Engine Coolant Temperature (ECT) Sensor
- (3) Fuel Pressure Regulator



Upper Engine (LMM or LGH)



Top Rear of Engine (LMM or LGH)



(1) Fuel Rail Pressure (FRP) Sensor

(2) X112

Automatic Transmission Internal Electronic Components (M30)

(36) Automatic Transmission Output Shaft Speed (OSS) Sensor

(66) Torque Converter Clutch (TCC) Solenoid Valve

(69) Automatic Transmission Fluid Pressure (TFP) Manual Valve Position Switch

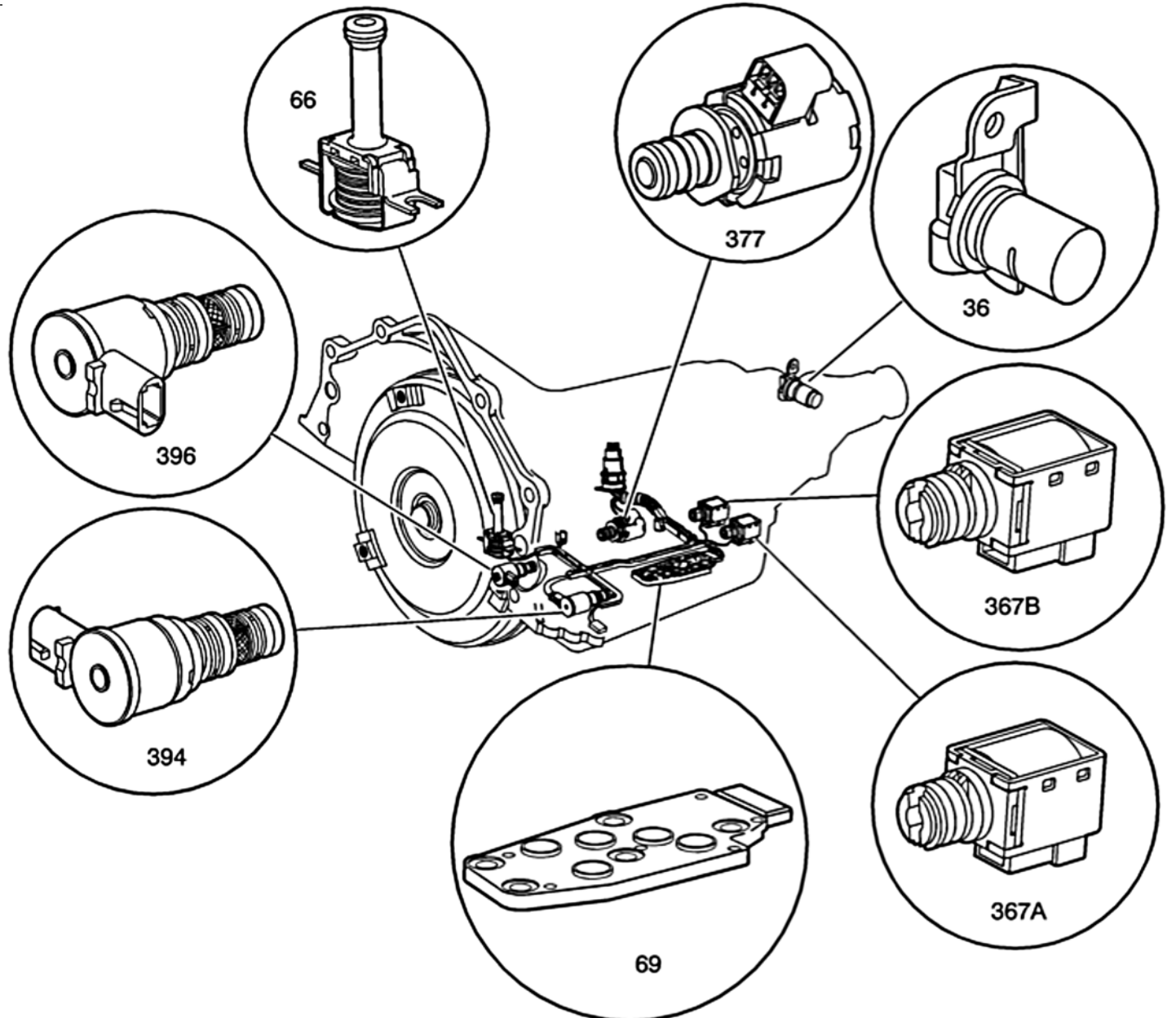
(367a) 1-2 Shift Solenoid (SS) Valve

(367b) 2-3 Shift Solenoid (SS) Valve

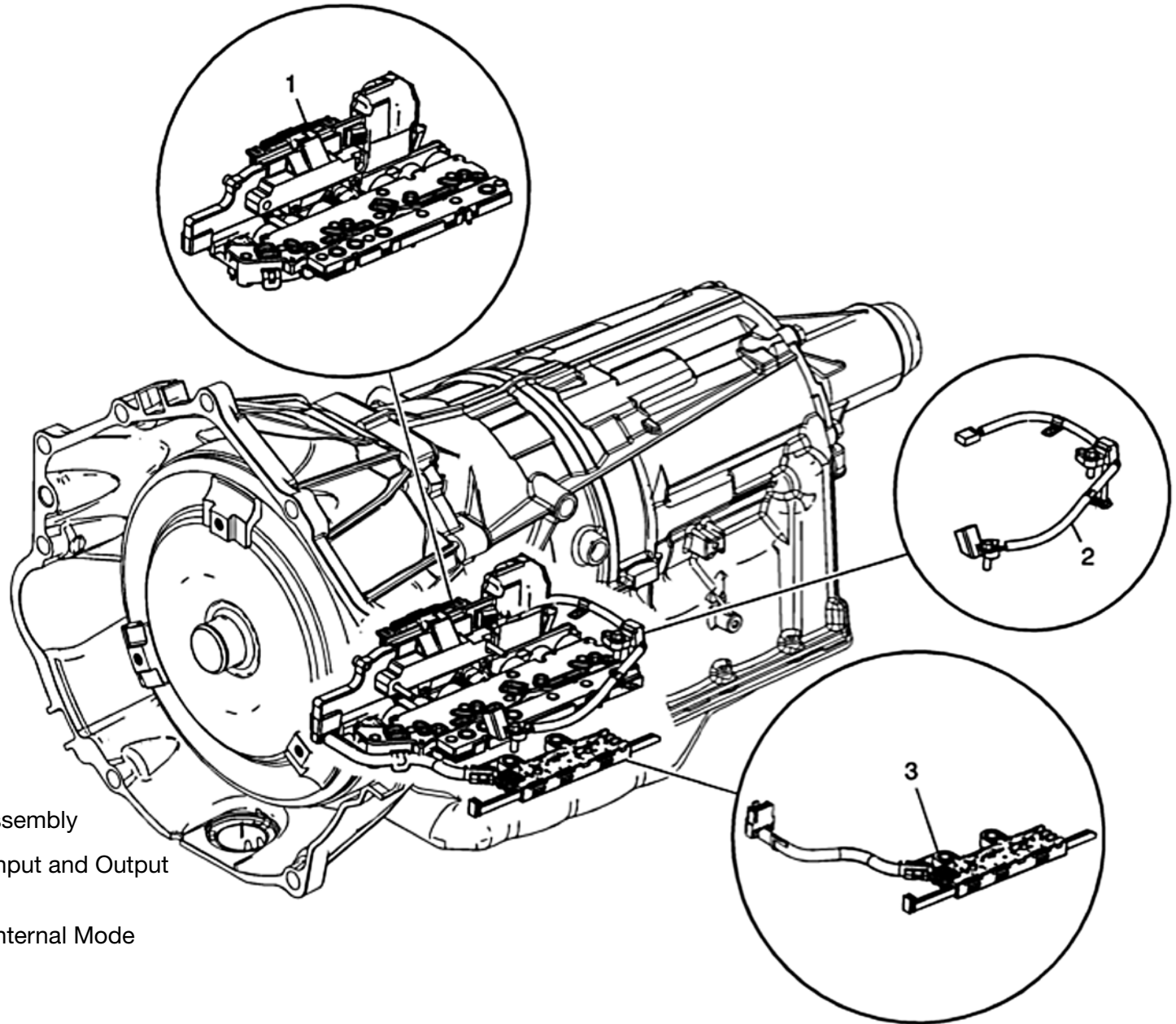
(377) Pressure Control (PC) Solenoid Valve

(394) 3-2 Shift Solenoid (SS) Valve

(396) Torque Converter Clutch (TCC) Pulse Width Modulation (PWM) Solenoid Valve



Automatic Transmission Internal Electronic Components (MYD)



- (1) Control Solenoid Valve Assembly
- (2) Automatic Transmission Input and Output Speed Sensors Assembly
- (3) Automatic Transmission Internal Mode Switch (IMS)