

2004 ACCESSORIES & EQUIPMENT

Wiring Systems - Vue

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Battery Positive Cable-to-Underhood Junction Block Nut	17 N.m	13 lb ft
Ground Wire-to-I/P Junction Block Screw	10 N.m	89 lb in
Underhood Junction Block-to-Harness Retaining Bolts	4 N.m	35 lb in

DIAGNOSTIC INFORMATION AND PROCEDURES

UTILITY/VAN ZONING

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

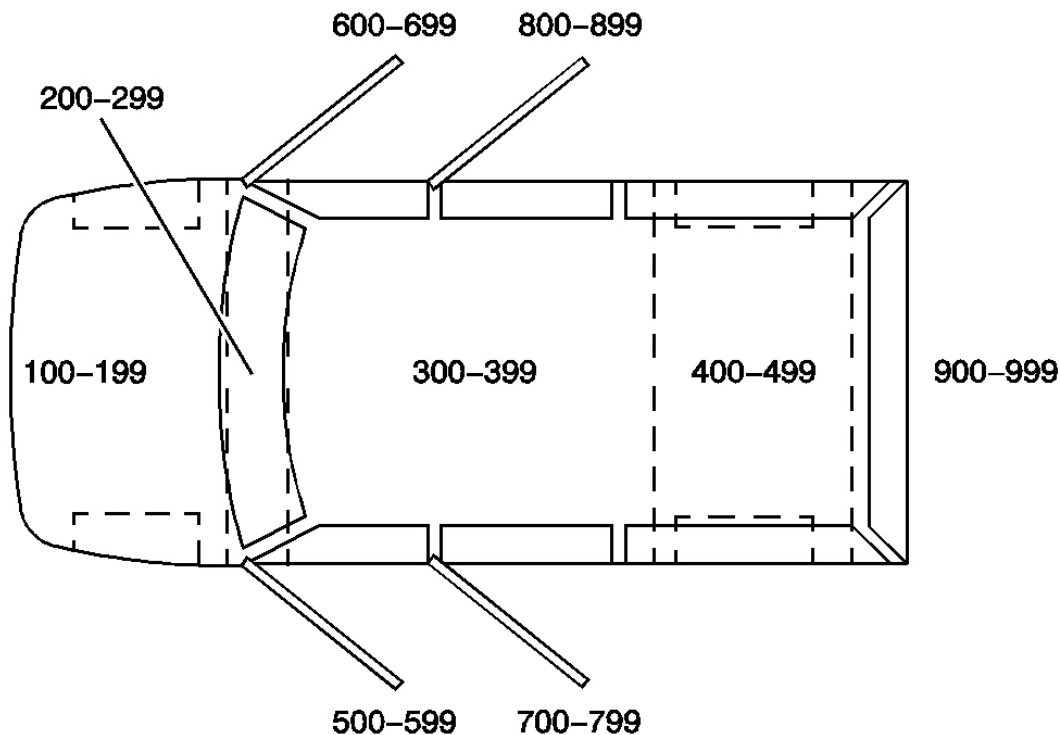


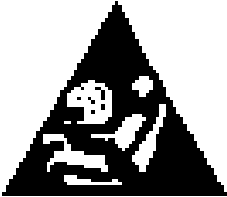
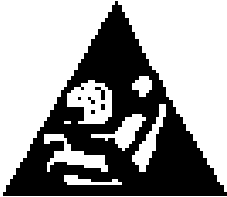
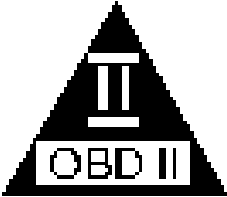
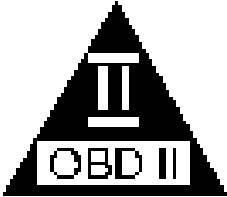
Fig. 1: Utility/Van Zoning
 Courtesy of GENERAL MOTORS CORP.

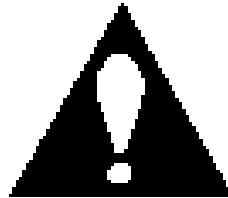
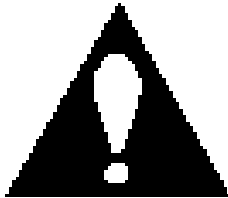
Utility/Van Zoning

Callout Numbers	Zone Description
100-199	Engine compartment (All forward of the dash panel) 001-099 are additional for the engine compartment (Only to be used if all 100-199 items are used)
200-299	Within the instrument panel area
300-399	Passenger compartment (From instrument panel to the rear wheelhouse)
400-499	Luggage compartment (From the rear wheelhouse to the rear of the vehicle)
500-599	Within the left front door
600-699	Within the right front door
700-799	Within the left rear door
800-899	Within the right rear door
900-999	Within the liftgate or endgate door

ELECTRICAL SYMBOLS

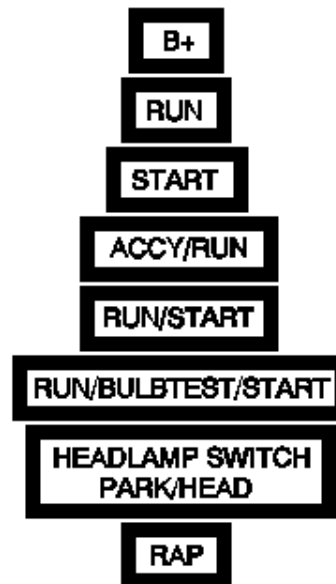
Electrical Symbols

OLD Symbol	NEW Symbol	Description
		<p>Supplemental Inflatable Restraint (SIR) or Supplemental Restraint System (SRS) Icon</p> <p>This icon is used to alert the technician that the system contains SIR/SRS components that require certain precautions before servicing.</p>
		<p>On-Board Diagnostic (OBD II) Icon</p> <p>This icon is used to alert the technician that the circuit is essential for proper OBD II emission controls circuit operation. Any circuit which, if it fails, causes the malfunction indicator lamp (MIL) to turn on, is identified as an OBD II circuit.</p>

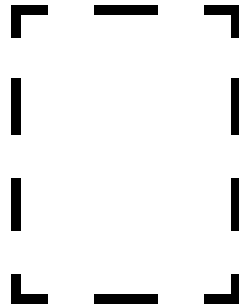
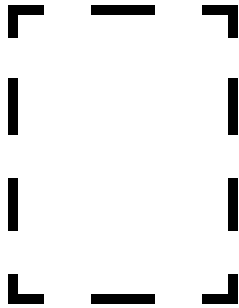


Important Icon
This icon is used to alert the technician that there is additional information that will aid in servicing a system.

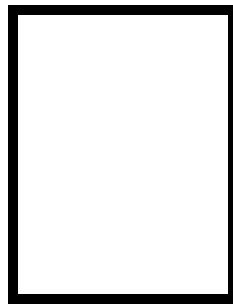
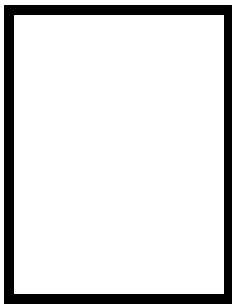
Hot At All Times
Hot In Run
Hot In Start
Hot In Acc And Run
Hot In Run And Start
Hot In Run, Bulb Test And Start
Hot With Headlamp
Switch In Park Or Head
Hot In Retained
Accessory Power (RAP)



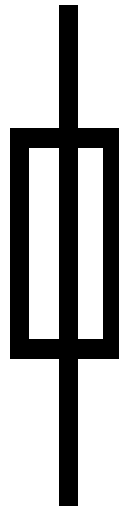
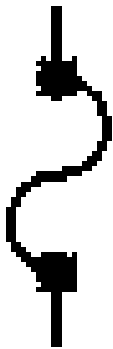
Voltage Indicator Boxes
These boxes are used on schematics to indicate when voltage is present at a fuse.



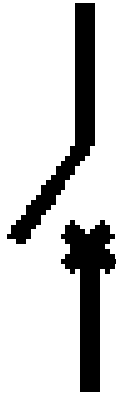
Partial Component
When a component is represented in a dashed box, the component or its wiring is not shown in its entirety.



Entire Component
When a component is represented in a solid box the component or its wiring is shown in its entirety.



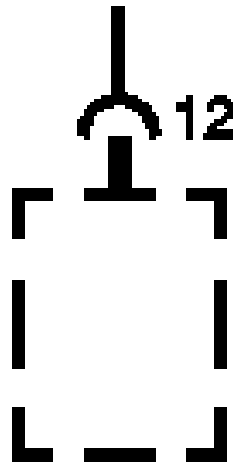
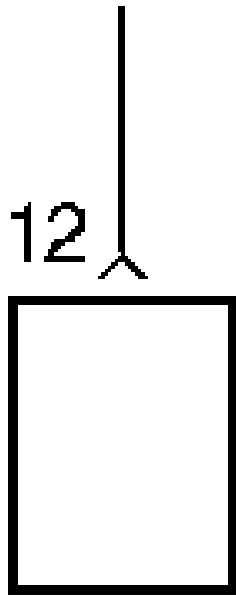
Fuse



Circuit Breaker

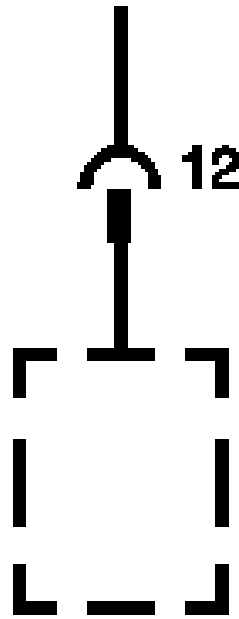
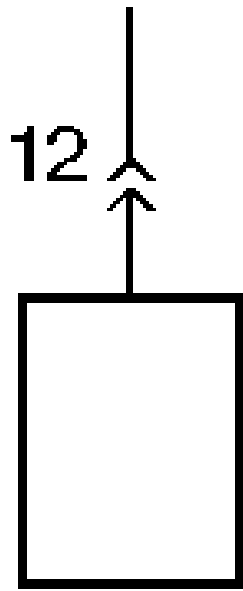


Fusible Link

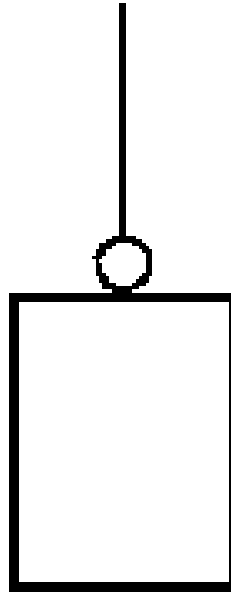
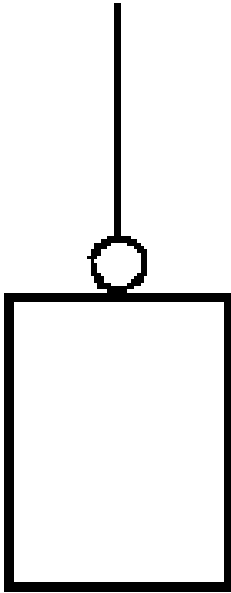


Connector Attached to
Component

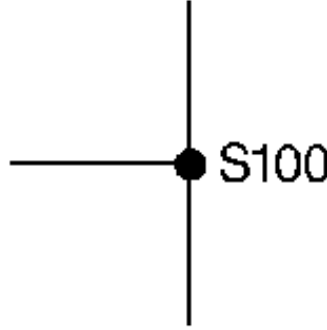
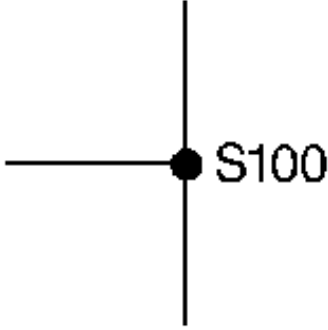
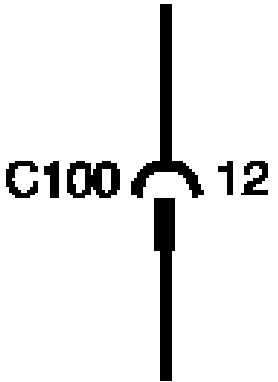
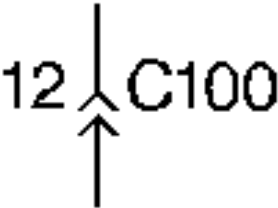
Pigtail Connector



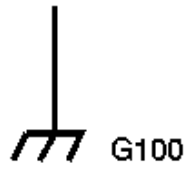
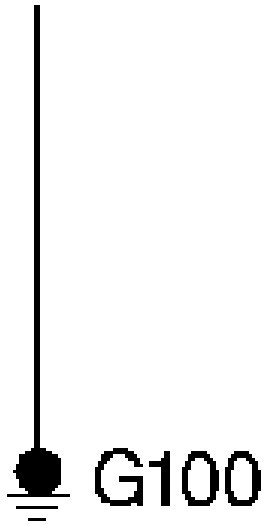
Terminal



Inline Harness Connector

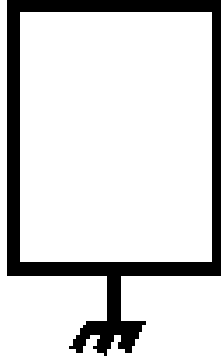
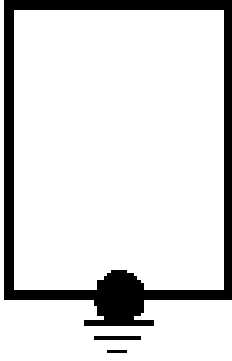


Splice



Chassis Ground

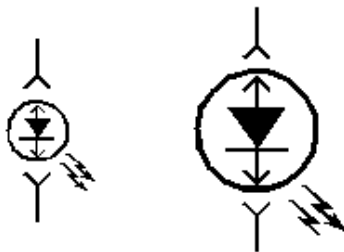
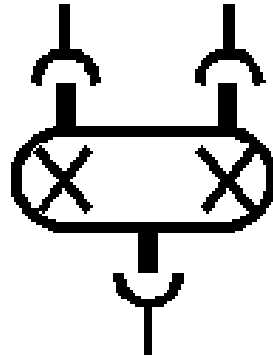
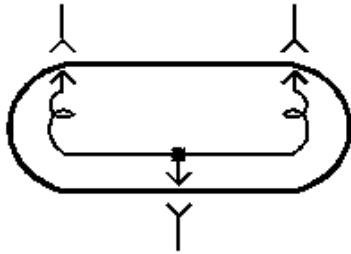
Case Ground



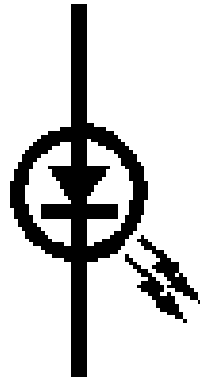
Single Filament Light Bulbs



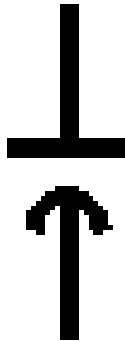
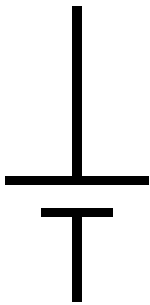
Double Filament Light Bulb



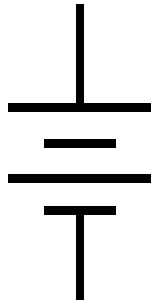
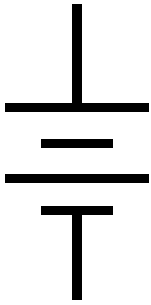
Light Emitting Diodes



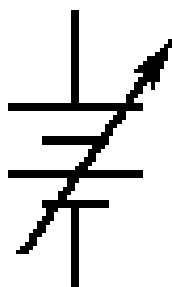
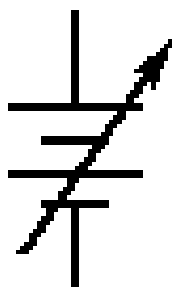
Capacitor



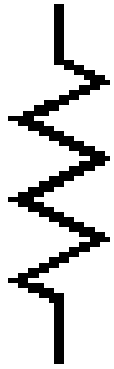
Battery

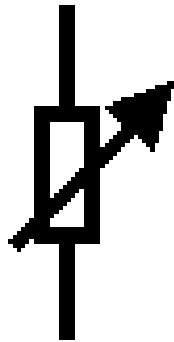
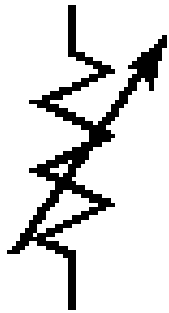


Variable Battery

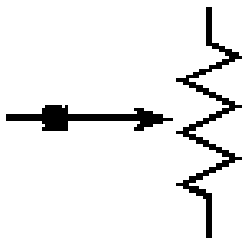


Resistor

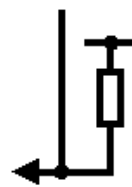




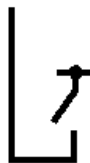
Variable Resistor



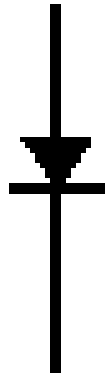
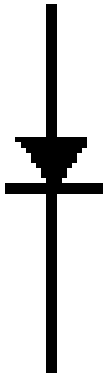
Position Sensor



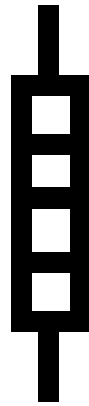
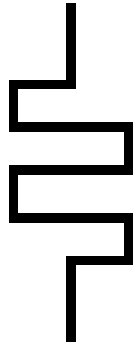
I/O Resistors



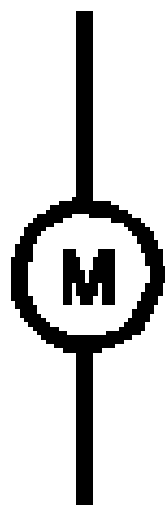
I/O Switches



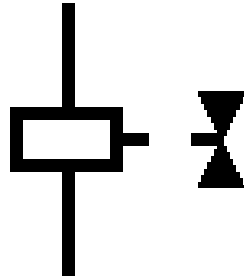
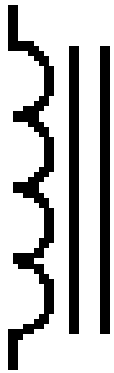
Diode



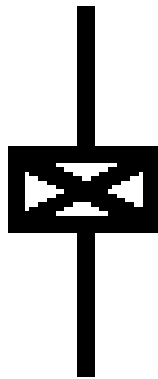
Heating Element



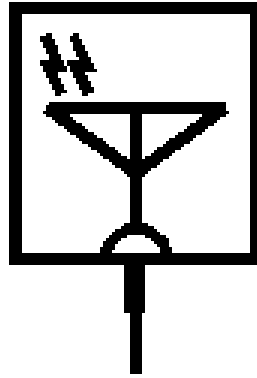
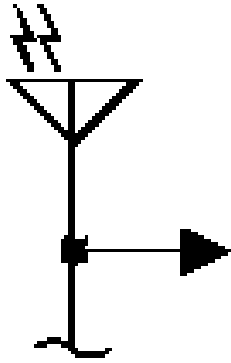
Motor



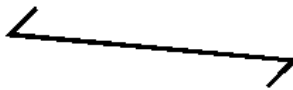
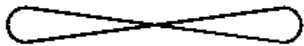
Solenoid



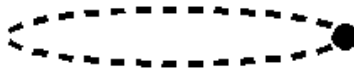
Coil



Antenna



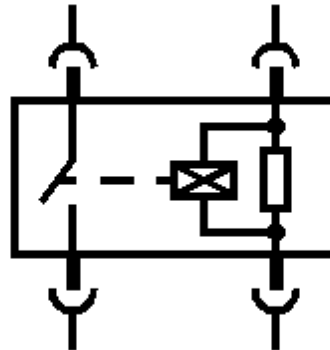
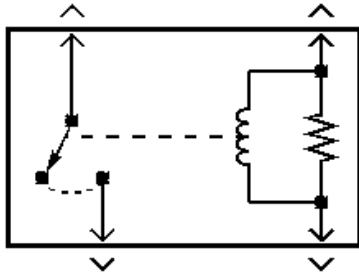
Twisted Wires



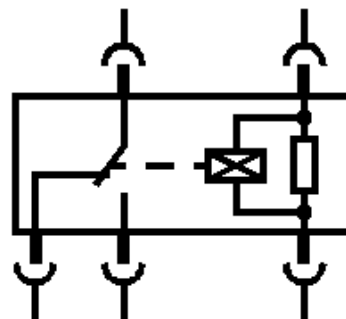
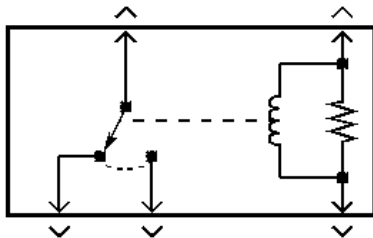
Shield



Switches



Single Pole/Throw Relay -
Normally Open



Single Pole/Throw Relay -
Normally Closed

GENERAL ELECTRICAL DIAGNOSIS PROCEDURES

Basic Knowledge Required

Without a basic knowledge of electricity, it will be difficult to use the diagnostic procedures contained in the service manual. You should understand the basic theory of electricity, and know the meaning of voltage (volts), current (amps), and resistance (ohms). You should also be able to read and understand a wiring diagram, as well as understand what happens in a circuit with an open or a shorted wire.

CHECKING AFTERMARKET ACCESSORIES

Do not connect aftermarket accessories into the following circuits:

CAUTION: Refer to SIR Caution in Cautions and Notices.

- SIR circuits, all such circuits are indicated on circuit diagrams with the SIR symbol.

NOTE: Refer to OBD II Symbol Description Notice in Cautions and Notices.

- OBD II circuits, all such circuits are indicated on circuit diagrams with the OBD II symbol.

Always check for aftermarket accessories (non-OEM) as the first step in diagnosing electrical problems. If the vehicle is so equipped, disconnect the system to verify that these add-on accessories are not the cause of the problems.

Possible causes of vehicle problems related to aftermarket accessories include:

- Power feeds connected to points other than the battery
- Antenna location
- Transceiver wiring located too close to vehicle electronic modules or wiring
- Poor shielding or poor connectors on antenna feed line
- Check for recent service bulletins detailing installation guidelines for aftermarket accessories.

CIRCUIT TESTING

The Circuit Testing section contains the following diagnostic testing information. Using this information along with the diagnostic procedures will identify the cause of the electrical malfunction.

- Using Connector Test Adapters
- Probing Electrical Connectors
- Troubleshooting with a Digital Multimeter
- Troubleshooting with a Test Lamp

- Using Fused Jumper Wires
- Measuring Voltage
- Measuring Voltage Drop
- Measuring Frequency
- Testing for Continuity
- Testing for Short to Ground
- Testing for a Short to Voltage

USING CONNECTOR TEST ADAPTERS

NOTE: Do not insert test equipment probes into any connector or fuse block terminal. The diameter of the test probes will deform most terminals. A deformed terminal can cause a poor connection, which can result in system failures. Always use the J 35616 GM-Approved Terminal Test Kit in order to frontprobe terminals. Do not use paper clips or other substitutes as they can damage terminals and cause incorrect measurements.

PROBING ELECTRICAL CONNECTORS

IMPORTANT: Always be sure to reinstall the connector position assurance (CPA) and terminal position assurance (TPA) when reconnecting connectors or replacing terminals.

Frontprobe

Disconnect the connector and probe the terminals from the mating side (front) of the connector.

NOTE: Do not insert test equipment probes into any connector or fuse block terminal. The diameter of the test probes will deform most terminals. A deformed terminal can cause a poor connection, which can result in system failures. Always use the J 35616 GM-Approved Terminal Test Kit in order to frontprobe terminals. Do not use paper clips or other substitutes as they can damage terminals and cause incorrect measurements.

Backprobe

IMPORTANT:

- Backprobe connector terminals only when specifically required in diagnostic procedures.
- Do not backprobe a sealed (Weather Pack(R)) connector, less than a 280 series Metri-Pack connector, a Micro-Pack connector, or a flat wire (dock and lock) connector.
- Backprobing can be a source of damage to connector terminals. Use care in order to avoid deforming the terminal, either by forcing the test probe

too far into the cavity or by using too large of a test probe.

- After backprobing any connector, inspect for terminal damage. If terminal damage is suspected, test for proper terminal contact.

Do not disconnect the connector and probe the terminals from the harness side (back) of the connector.

TROUBLESHOOTING WITH A DIGITAL MULTIMETER

NOTE: Refer to Test Probe Notice in Cautions and Notices.

IMPORTANT: Circuits which include any solid state control modules, such as the ECM, should only be tested with a 10 megohm or higher impedance digital multimeter such as the J 39200 . See Special Tools and Equipment .

The J 39200 instruction manual is a good source of information and should be read thoroughly upon receipt of the DMM as well as kept on hand for future reference. See Special Tools and Equipment .

A DMM should be used instead of a test lamp in order to test for voltage in high impedance circuits. While a test lamp shows whether voltage is present, a DMM indicates how much voltage is present.

The ohmmeter function on a DMM shows how much resistance exists between 2 points along a circuit. Low resistance in a circuit means good continuity.

IMPORTANT: Disconnect the power feed from the suspect circuit when measuring resistance with a DMM. This prevents incorrect readings. DMMs apply such a small voltage to measure resistance that the presence of voltages can upset a resistance reading.

Diodes and solid state components in a circuit can cause a DMM to display a false reading. To find out if a component is affecting a measurement take a reading once, then reverse the leads and take a second reading. If the readings differ the solid state component is affecting the measurement.

Following are examples of the various methods of connecting the DMM to the circuit to be tested:

- Backprobe both ends of the connector and either hold the leads in place while manipulating the connector or tape the leads to the harness for continuous monitoring while you perform other operations or test driving. Refer to Probing Electrical Connectors .
- Disconnect the harness at both ends of the suspected circuit where it connects either to a component or to other harnesses.
- If the system that is being diagnosed has a specified pinout or breakout box, it may be used in order to simplify connecting the DMM to the circuit or for testing multiple circuits quickly.

TROUBLESHOOTING WITH A TEST LAMP

NOTE: Do not insert test equipment probes into any connector or fuse block terminal. The diameter of the test probes will deform most terminals. A deformed terminal can cause a poor connection, which can result in system failures. Always use the J 35616 GM-Approved Terminal Test Kit in order to frontprobe terminals. Do not use paper clips or other substitutes as they can damage terminals and cause incorrect measurements.

A test lamp can simply and quickly test a low impedance circuit for voltage.

To properly operate this tool use the following procedure.

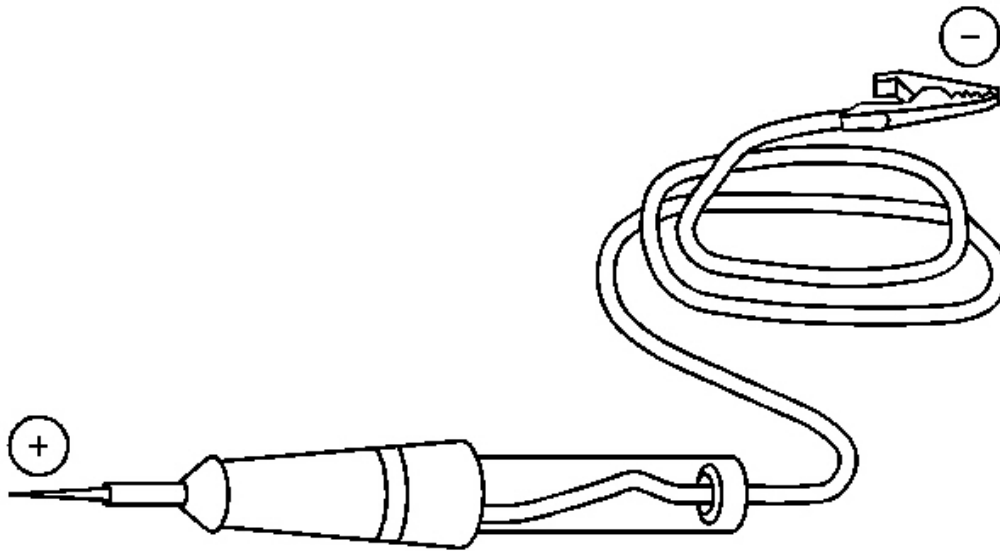


Fig. 2: View Of Test Lamp
Courtesy of GENERAL MOTORS CORP.

1. Attach one lead to ground.
2. Touch the other lead to various points along the circuit where voltage should be present.
3. When the bulb illuminates, there is voltage at the point being tested.

USING FUSED JUMPER WIRES

Tools Required

J 36169-A Fused Jumper Wire. See Special Tools and Equipment .

IMPORTANT: A fused jumper may not protect solid state components from being damaged.

The **J 36169-A** includes small clamp connectors that provide adaptation to most connectors without damage. See **Special Tools and Equipment** . This fused jumper wire is supplied with a 20-A fuse which may not be suitable for some circuits. Do not use a fuse with a higher rating than the fuse that protects the circuit being tested.

MEASURING VOLTAGE

NOTE: Refer to Test Probe Notice in Cautions and Notices.

The following procedure measures the voltage at a selected point in a circuit.

1. Disconnect the electrical harness connector for the circuit being tested, if necessary.
2. Enable the circuit and/or system being tested. Use the following methods:
 - Turn ON the ignition, with the engine OFF.
 - Turn ON the engine.
 - Turn ON the circuit and/or system with a scan tool in Output Controls.
 - Turn ON the switch for the circuit and/or system being tested.
3. Select the V (AC) or V (DC) position on the DMM.
4. Connect the positive lead of the DMM to the point of the circuit to be tested.
5. Connect the negative lead of the DMM to a good ground.
6. The DMM displays the voltage measured at that point.

MEASURING VOLTAGE DROP

NOTE: Refer to Test Probe Notice in Cautions and Notices.

The following procedure determines the difference in voltage potential between 2 points.

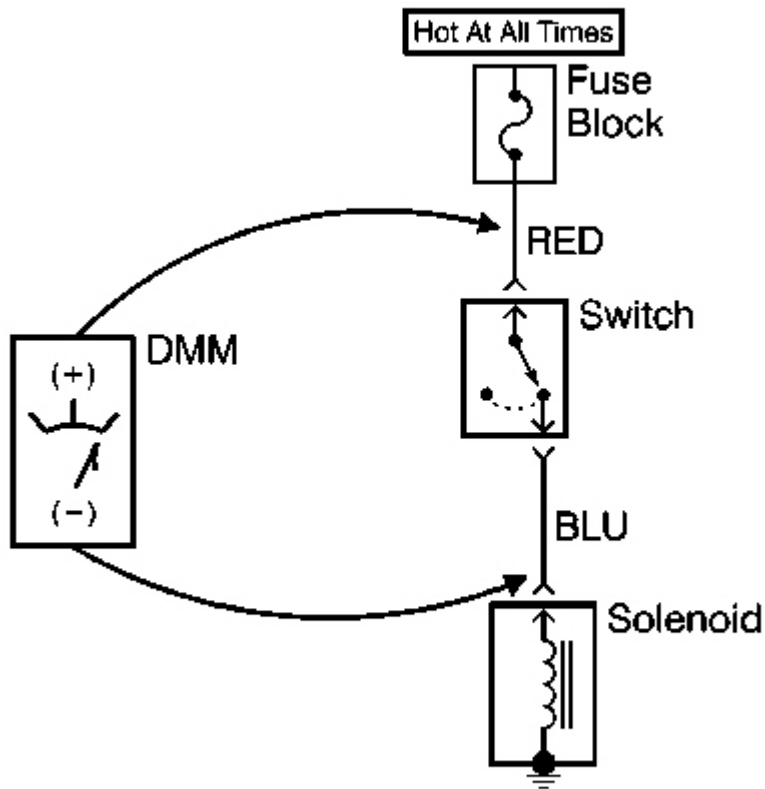


Fig. 3: Measuring Voltage Drop
 Courtesy of GENERAL MOTORS CORP.

1. Set the rotary dial of the DMM to the V (DC) position.
2. Connect the positive lead of the DMM to 1 point of the circuit to be tested.
3. Connect the negative lead of the DMM to the other point of the circuit.
4. Operate the circuit.
5. The DMM displays the difference in voltage between the 2 points.

MEASURING FREQUENCY

NOTE: Refer to Test Probe Notice in Cautions and Notices.

The following procedure determines the frequency of a signal.

IMPORTANT: Connecting the DMM to the circuit before pressing the Hz button will allow the DMM to autorange to an appropriate range.

1. Apply power to the circuit.
2. Set the rotary dial of the DMM to the V (AC) position.
3. Connect the positive lead of the DMM to the circuit to be tested.
4. Connect the negative lead of the DMM to a good ground.
5. Press the Hz button on the DMM.
6. The DMM will display the frequency measured.

TESTING FOR CONTINUITY

NOTE: Refer to Test Probe Notice in Cautions and Notices.

The following procedures verify good continuity in a circuit.

With a DMM

1. Set the rotary dial of the DMM to the ohm position.
2. Disconnect the power feed (i.e. fuse, control module) from the suspect circuit.
3. Disconnect the load.
4. Press the MIN MAX button on the DMM.
5. Connect one lead of the DMM to one end of the circuit to be tested.
6. Connect the other lead of the DMM to the other end of the circuit.
7. If the DMM displays low or no resistance and a tone is heard, the circuit has good continuity.

With a Test Lamp

IMPORTANT: Only use the test lamp procedure on low impedance power and ground circuits.

1. Remove the power feed (i.e. fuse, control module) from the suspect circuit.
2. Disconnect the load.
3. Connect 1 lead of the test lamp to 1 end of the circuit to be tested.
4. Connect the other lead of the test lamp to battery positive voltage.
5. Connect the other end of the circuit to ground.
6. If the test lamp illuminates (full intensity), then the circuit has good continuity.

TESTING FOR SHORT TO GROUND

NOTE: Refer to Test Probe Notice in Cautions and Notices.

The following procedures test for a short to ground in a circuit.

With a DMM

1. Remove the power feed (i.e. fuse, control module) from the suspect circuit.
2. Disconnect the load.
3. Set the rotary dial of the DMM to the ohm position.
4. Connect 1 lead of the DMM to 1 end of the circuit to be tested.
5. Connect the other lead of the DMM to a good ground.
6. If the DMM does NOT display infinite resistance (OL), there is a short to ground in the circuit.

With a Test Lamp

1. Remove the power feed (i.e. fuse, control module) from the suspect circuit.
2. Disconnect the load.
3. Connect 1 lead of the test lamp to battery positive voltage.
4. Connect the other lead of the test lamp to 1 end of the circuit to be tested.
5. If the test lamp illuminates, there is a short to ground in the circuit.

Fuse Powering Several Loads

1. Review the system schematic and locate the fuse that is open.
2. Open the first connector or switch leading from the fuse to each load.
3. Connect a DMM across the fuse terminals (be sure that the fuse is powered).
 - When the DMM displays voltage the short is in the wiring leading to the first connector or switch.
 - If the DMM does not display voltage refer to the next step.
4. Close each connector or switch until the DMM displays voltage in order to find which circuit is shorted.

TESTING FOR A SHORT TO VOLTAGE

NOTE: Refer to Test Probe Notice in Cautions and Notices.

The following procedure tests for a short to voltage in a circuit.

1. Set the rotary dial of the DMM to the V (DC) position.
2. Connect the positive lead of the DMM to 1 end of the circuit to be tested.
3. Connect the negative lead of the DMM to a good ground.
4. Turn ON the ignition and operate all accessories.
5. If the voltage measured is greater than 1 volt, there is a short to voltage in the circuit.

TESTING FOR INTERMITTENT CONDITIONS AND POOR CONNECTIONS

Tools Required

J-35616 Connector Test Adapter Kit. See **Special Tools and Equipment** .

Most intermittent conditions are caused by faulty electrical connections or wiring. Inspect for the following items:

- Wiring that is broken inside the insulation
- A poor connection between the male and female terminal at a connector
- A poor terminal to wire connection-Some conditions which fall under this description are poor crimps, poor solder joints, crimping over the wire insulation rather than the wire itself and corrosion in the wire to terminal contact area, etc.
- Wire insulation that is rubbed through-This causes an intermittent short as the bare area touches other wiring or parts of the vehicle.
- Refer to **Inducing Intermittent Fault Conditions** in order to duplicate the conditions required in order to verify the complaint.
- Refer to **Testing for Electrical Intermittents** for test procedures to detect intermittent open, high resistance, short to ground, and short to voltage conditions.
- Refer to **Scan Tool Snapshot Procedure** for advanced intermittent diagnosis.

Testing for Proper Terminal Contact

It is important to test terminal contact at the component and any in-line connectors before replacing a suspect component. Mating terminals must be inspected to ensure good terminal contact. A poor connection between the male and female terminal at a connector may be the result of contamination or deformation.

Contamination may be caused by the connector halves being improperly connected. A missing or damaged connector seal, damage to the connector itself, or exposing the terminals to moisture and dirt can also cause contamination. Contamination, usually in the underhood or underbody connectors, leads to terminal corrosion, causing an open circuit or intermittently open circuit.

Deformation is caused by probing the mating side of a connector terminal without the proper adapter, improperly joining the connector halves, or repeatedly separating and joining the connector halves. Deformation, usually to the female terminal contact tang, can result in poor terminal contact causing an open or intermittently open circuit.

Round Wire Connectors

Follow the procedure below to test terminal contact of Metri-Pack or 56 series terminals. Refer to the **J-35616** Instruction Manual for terminal identification. See **Special Tools and Equipment** .

Follow the procedure below in order to test terminal contact.

1. Separate the connector halves.
2. Visually inspect the connector halves for contamination. Contamination may result in a white or green

build-up within the connector body or between terminals. This causes high terminal resistance, intermittent contact, or an open circuit. An underhood or underbody connector that shows signs of contamination should be replaced in its entirety, for example, the terminals, the seals, or the connector body.

3. Using an equivalent male terminal from the **J-35616** , test that the retention force is significantly different between a good terminal and a suspect terminal. See **Special Tools and Equipment** . Replace the female terminal in question.

INDUCING INTERMITTENT FAULT CONDITIONS

In order to duplicate the customer's concern, it may be necessary to manipulate the wiring harness if the malfunction appears to be vibration related. Manipulation of a circuit can consist of a wide variety of actions, including:

- Wiggling the harness
- Disconnecting a connector and reconnecting
- Stressing the mechanical connection of a connector
- Pulling on the harness or wire in order to identify a separation/break inside the insulation
- Relocating a harness or wires

All these actions should be performed with some goal in mind. For instance, with a scan tool connected, wiggling the wires may uncover a faulty input to the control module. The snapshot option would be appropriate here. Refer to **Scan Tool Snapshot Procedure** . You may need to load the vehicle in order to duplicate the concern. This may require the use of weights, floorjacks, jackstands, frame machines, etc. In these cases you are attempting to duplicate the concern by manipulating the suspension or frame. This method is useful in finding harnesses that are too short and their connectors pull apart enough to cause a poor connection. A DMM set to Peak Min/Max mode and connected to the suspect circuit while testing can yield desirable results. Refer to **Testing for Electrical Intermittents** .

Certainly, using the senses of sight, smell, and hearing while manipulating the circuit can provide good results as well.

There may be instances where circuit manipulation alone will not meet the required criteria for the fault condition to appear. In such cases it may be necessary to expose the suspect circuit to other conditions while manipulating the harness. Such conditions would include high moisture conditions, along with exceptionally high or low temperatures. The following discusses how to expose the circuit to these kinds of conditions.

Salt Water Spray

Some compounds possess the ability to conduct electricity when dissolved in water such as ordinary salt. By mixing table salt with water in sufficient quantities, you can enhance the conductive properties of water so that any circuit which may be sensitive to moisture will more readily fail when liberally sprayed with this mixture.

Mixing 0.35L (12 oz) of water with approximately 1 tablespoon of salt will yield a salt solution of 5 percent. Fill a normal spray bottle with this mixture. This mixture is sufficient to enhance the water's own conductivity. This may cause the circuit to fail more easily when sprayed. Once the mixture is completed, spray the suspect

area liberally with the solution. Then, while monitoring either a scan tool or DMM, manipulate the harness as discussed previously.

High Temperature Conditions

Tools Required

J 44020-6 Heat Gun. See **Special Tools and Equipment** .

If the complaint tends to be heat related, you can simulate the condition using the **J 44020-6** . See **Special Tools and Equipment** .

Using the heat gun, you can heat up the suspected area or component. Manipulate the harnesses under high temperature conditions while monitoring the scan tool or DMM to locate the fault condition.

The high temperature condition may be achieved simply by test driving the vehicle at normal operating temperature. If a heat gun is unavailable, consider this option to enhance your diagnosis. This option does not allow for the same control, however.

Low Temperature Conditions

Depending on the nature of the fault condition, placing a fan in front of the vehicle while the vehicle is in the shade can have the desired effect.

If this is unsuccessful, use local cooling treatments such as ice or a venturi type nozzle (one that provides hot or cold air). This type of tool is capable of producing air stream temperatures down to -18°C (0°F) from one end and 71°C (160°F) from the other. This is ideally suited for localized cooling needs.

Once the vehicle, component, or harness has been sufficiently cooled, manipulate the harness or components in an effort to duplicate the concern.

TESTING FOR ELECTRICAL INTERMITTENTS

Perform the following procedures while wiggling the harness from side to side. Continue this at convenient points (about 6 inches apart) while watching the test equipment.

- **Testing for Short to Ground**
- **Testing for Continuity**
- **Testing for a Short to Voltage**

If the fault is not identified, perform the procedure below using the MIN MAX feature on the **J 39200** DMM. See **Special Tools and Equipment** . This feature allows you to manipulate the circuit without having to watch the **J 39200** . See **Special Tools and Equipment** . The **J 39200** will generate an audible tone when a change is detected. See **Special Tools and Equipment** .

IMPORTANT: The **J 39200** must be used in order to perform the following procedure since

the **J 39200** can monitor current, resistance or voltage while recording the minimum (MIN), and maximum (MAX) values measured. See Special Tools and Equipment .

1. Connect the **J 39200** to both sides of a suspected connector (still connected), or from one end of a suspected circuit to the other. See Special Tools and Equipment . Refer to Troubleshooting with a Digital Multimeter for information on connecting the **J 39200** to the circuit. See Special Tools and Equipment .
2. Set the rotary dial of the **J 39200** to the V (AC) or V (DC) position. See Special Tools and Equipment .
3. Press the range button of the **J 39200** in order to select the desired voltage range. See Special Tools and Equipment .
4. Press the MIN MAX button of the **J 39200** . See Special Tools and Equipment . The **J 39200** displays 100 ms RECORD and emits an audible tone (beep). See Special Tools and Equipment .

IMPORTANT: The 100 ms RECORD mode is the length of time an input must stay at a new value in order to record the full change.

5. Simulate the condition that is potentially causing the intermittent connection, either by wiggling the connections or the wiring, test driving, or performing other operations. Refer to Inducing Intermittent Fault Conditions .
6. Listen for the audible Min Max Alert which indicates that a new minimum or maximum value has been recorded.
7. Press the MIN MAX button once in order to display the MAX value and note the value.
8. Press the MIN MAX button again in order to display the MIN value and note the value.
9. Determine the difference between the MIN and MAX values.
 - If the variation between the recorded MIN and MAX voltage values is 1 volt or greater an intermittent open or high resistance condition exists. Repair the condition as necessary.
 - If the variation between the recorded MIN and MAX voltage values is less than 1 volt an intermittent open or high resistance condition does not exist.

SCAN TOOL SNAPSHOT PROCEDURE

Snapshot is a recording of what a control module on the vehicle was receiving for information while the snapshot is being made. A snapshot may be used to analyze the data during the time a vehicle condition is current. This allows you to concentrate on making the condition occur, rather than trying to view all the data in anticipation of the fault. The snapshot contains information around a trigger point that you have determined. Only a single data list may be recorded in each snapshot. The **Scan Tool** has the ability to store 2 snapshots. The ability to record 2 snapshots allows comparing hot versus cold and good versus bad vehicle scenarios. The snapshots are stored on a first-in, first-out basis. If a third snapshot is taken, the first snapshot stored in the memory will be lost.

Snapshots can be 1 of 2 types:

- Snapshot - taken from the Snapshot menu choice

- Quick Snapshot - taken from the Data Display soft key choice, does not contain DTC information

When a snapshot is taken, it is recorded on the memory card and may contain as many as 1200 frames of information. Because the snapshot is recorded onto the memory card, snapshots are not lost if the **Scan Tool** is powered down.

The snapshot replay screen has a plot soft key that can be of great value for intermittent diagnosis. The snapshot plot feature can help you to quickly determine if a sensor is outside of its expected values by plotting 3 parameters at a time. The data will be displayed both graphically and numerically showing the minimum and maximum values for all frames captured. This is helpful, especially if the fault occurs only once and does not set a DTC.

CIRCUIT PROTECTION - FUSES

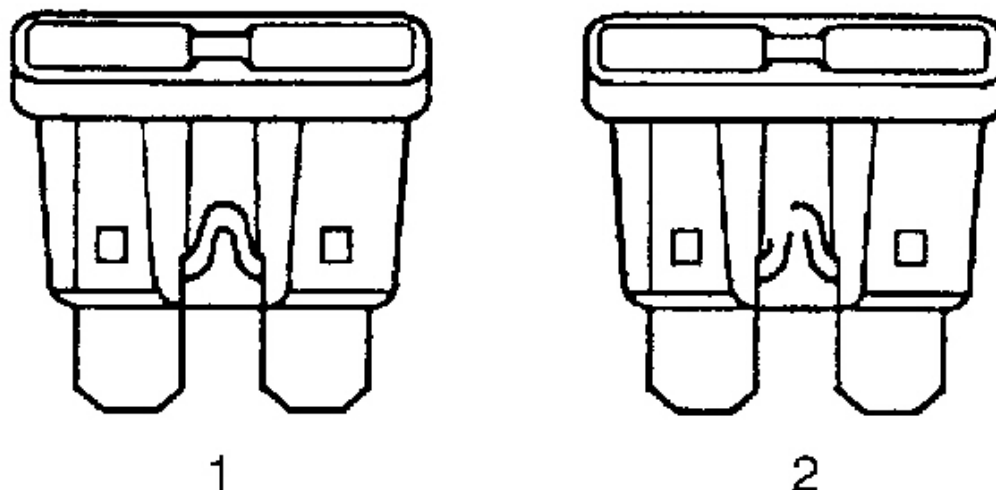


Fig. 4: View Of Good Fuse & Open (Melted) Fuse
 Courtesy of GENERAL MOTORS CORP.

The fuse is the most common method of an automotive wiring circuit protection. Whenever there is an excessive amount of current flowing through a circuit the fusible element will melt and create an open or incomplete circuit. Fuses are an one time protection device and must be replaced each time the circuit is overloaded. To determine if a fuse is open, remove the suspected fuse and examine the element in the fuse for an open (2). If not broken (1), also check for continuity using a DMM or a continuity tester. If the element is open or continuity is suspect, replace the fuse with one of equal current rating.

Fuse Types Circuit Protection

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Current Rating Amperes	Color
Auto Fuses, Mini Fuses	
2	Gray
3	Violet
5	Tan
7.5	Brown
10	Red
15	Blue
20	Yellow
25	White or Natural
30	Green
Maxi Fuses	
20	Yellow
30	Light Green
40	Orange or Amber
60	Blue
50	Red

CIRCUIT PROTECTION - CIRCUIT BREAKERS

A circuit breaker is a protective device that is designed to open the circuit when a current load is in excess of the rated breaker capacity. If there is a short or other type of overload condition in the circuit, the excessive current will open the circuit between the circuit breaker terminals. Two types of circuit breakers are used.

Circuit Breaker

This type opens when excessive current passes through it for a period of time. It closes again after a few seconds, and if the cause of the high current is still present, it will open again. The circuit breaker will continue to cycle open and closed until the condition causing the high current is removed.

Positive Temperature Coefficient (PTC) Circuit Breaker

This type greatly increases its resistance when excessive current passes through it. The excessive current heats the PTC device, as the device heats its resistance increases. Eventually the resistance gets so high that the circuit is effectively open. Unlike the ordinary circuit breaker the PTC unit will not reset until the circuit is opened, by removing the voltage from its terminals. Once the voltage is removed the circuit breaker will re-close within a second or 2.

CIRCUIT PROTECTION - FUSIBLE LINKS

Fusible link is wire designed to melt and break continuity when excessive current is applied. It is often located between or near the battery and starter or electrical center. Use a continuity tester or a DMM at each end of the wire containing the fusible link in order to determine if it is broken. If broken, it must be replaced with fusible link of the same gage size.

Repairing a Fusible Link

Fusible link wire assemblies are available through Saturn Service Parts. Repair the fusible link by replacing the entire fusible link assembly from generator to the starter.

WIRING REPAIRS

The Wiring Repairs section contains the following types of wiring repair information. Using these elements together will make wiring repair faster and easier:

- **Circuit Protection - Fuses**
- **Circuit Protection - Circuit Breakers**
- **Circuit Protection - Fusible Links**
- **Repairing Damaged Wire Insulation**
- **Splicing Copper Wire Using Splice Sleeves**
- **Splicing Twisted or Shielded Cable**
- **SIR/SRS Wiring Repairs**

REPAIRING DAMAGED WIRE INSULATION

If the conductive portion of the wire is not damaged, locate the problem and apply tape around the wire. If the damage is more extensive, replace the faulty segment of the wire. Refer to **Splicing Copper Wire Using Splice Sleeves** and follow the instruction to repair the wire.

Wire Size Conversion Repairing Damaged Wire Insulation

Metric Wire Sizes (mm 2)	AWG Sizes
0.22	24
0.35	22
0.5	20
0.8	18
1.0	16
2.0	14
3.0	12
5.0	10
8.0	8
13.0	6
19.0	4
32.0	2
50.0	1/0

SPLICING COPPER WIRE USING SPLICE SLEEVES

Tools Required

- Crimp tool
- Heat torch

IMPORTANT: Use only duraseal splice sleeves. Other splice sleeves may not protect the splice from moisture or provide a good electrical connection.

Use duraseal splice sleeves to form a one-to-one splice on all types of insulation except tefzel and coaxial. Use duraseal splice sleeves where there is special requirements such as moisture sealing. Follow the instructions below in order to splice copper wire using crimp and seal splice sleeves.

Splicing Copper Wire Using Splice Sleeves

Splice Sleeve Color	Crimp Tool Nest Color	Wire Gage AWG/(Metric)
Salmon 12089189	Red	22, 20, 18 / (0.35, 0.5, 0.8)
Blue 12089190	Blue	16, 14 / (1.0, 2.0)
Yellow 12089191	Yellow	12, 10 / (3.0, 5.0)

1. Open the harness.
 - If the harness is taped, remove the tape.
 - To avoid wiring insulation damage, use a sewing ripper in order to cut open the harness.
 - If the harness has a black plastic conduit, pull out the desired wire.
2. Cut the wire.
 - Cut as little wire off the harness as possible.
 - Ensure that each splice is at least 40 mm (1.5 in) away from other splices, harness branches and connectors. This helps prevent moisture from bridging adjacent splices and causing damage.

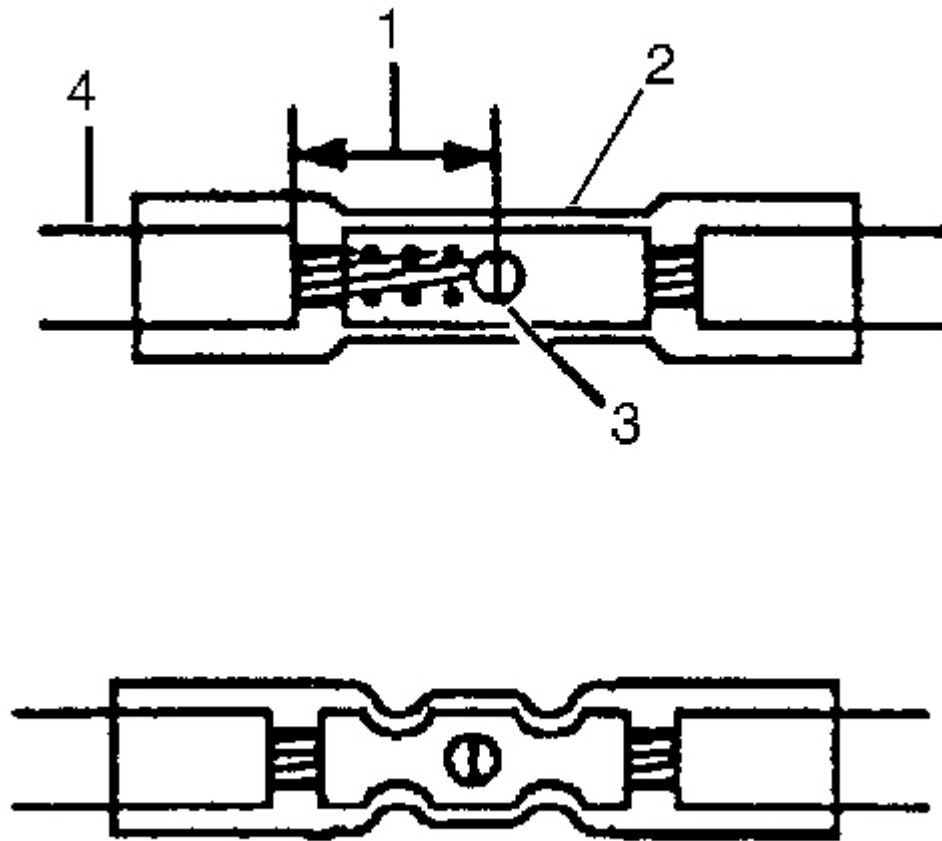


Fig. 5: Proper Crimping Of Solderless Connector
 Courtesy of GENERAL MOTORS CORP.

3. Select the proper size and type of wire.
 - The wire must be of equal or greater size than the original.
 - The wire's insulation must have the same or higher temperature rating (4).
 - Use general purpose insulation for areas that are not subject to high temperatures.
 - Use a cross-linked polyethylene insulated wire for areas where high temperatures are expected.

IMPORTANT: Use cross-linked polyethylene wire to replace PVC, but do not replace cross-linked polyethylene with PVC. Cross-linked polyethylene wire is not fuel resistant. Do not use to replace wire where there is the possibility of fuel contact.

4. Strip the insulation.
 - Select the correct size opening in the wire stripper or work down from the largest size.
 - Strip approximately 7.5 mm (5/16 in) of insulation from each wire to be spliced (1).
5. Select the proper duraseal splice sleeve according to the wire size. Refer to the table provided.
6. Place the duraseal splice sleeve in the Crimp tool nest so that the crimp falls at point 1 on the splice.
7. Close the hand crimper handles slightly in order to hold the duraseal splice sleeve firmly in the proper crimp tool nest.
8. Insert the wires into the duraseal splice sleeve until the wire hits the barrel stop. The duraseal splice sleeve has a stop in the middle of the barrel in order to prevent the wire from passing through the splice (3).
9. Close the handles of the crimp tool until the crimper handles open when released. The crimper handles will not open until the proper amount of pressure is applied to the duraseal splice sleeve.
10. Shrink the insulation around the splice.
 - Using the Heat torch apply heat to the crimped area of the barrel.
 - Gradually move the heat barrel to the open end of the tubing.
 - The tubing will shrink completely as the heat is moved along the insulation.
 - A small amount of sealant will come out of the end of the tubing when sufficient shrinkage is achieved.

SPLICING TWISTED OR SHIELDED CABLE

A twisted/shielded cable is used in order to protect the wiring from electrical noise. A 2-conductor cable of this construction is used between the radio and the speaker/amplifier units and other applications where low level, sensitive signals must be carried. Follow the instructions below in order to repair the twisted/shielded cable.

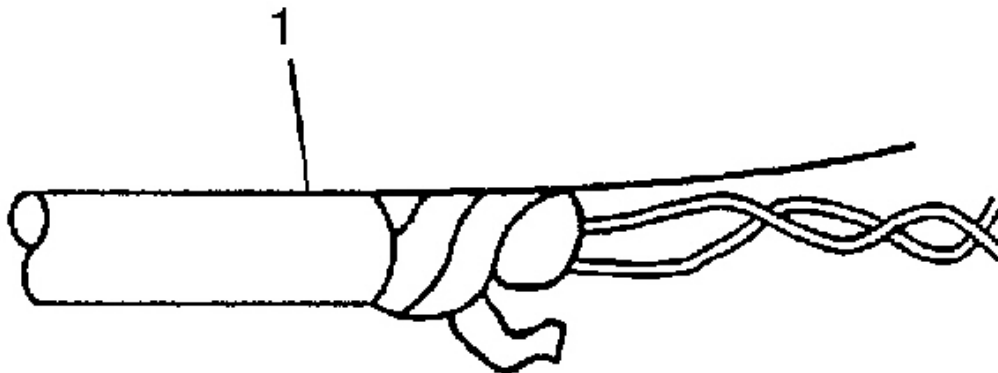


Fig. 6: Outer Wiring Jacket

Courtesy of **GENERAL MOTORS CORP.**

1. Remove the outer jacket (1). Use care not to cut into the drain wire of the mylar tape.
2. Unwrap the tape. Do not remove the tape. Use the tape in order to rewrap the twisted conductors after the splice is made.



Fig. 7: Inspecting Wiring Connections
Courtesy of **GENERAL MOTORS CORP.**

3. Prepare the splice. Untwist the conductors and follow the splicing instructions for copper wire. Staggering the splices by 65 mm (2.5 in) is recommended.

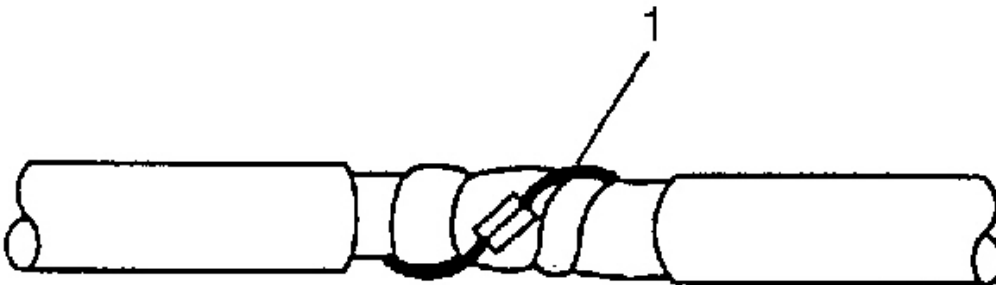


Fig. 8: View Of Diode On Wire
Courtesy of **GENERAL MOTORS CORP.**

IMPORTANT: Apply the mylar tape with the aluminum side inward. This ensures good electrical contact with the drain wire.

4. Re-assemble the cable.

- Rewrap the conductors with the mylar tape.
- Use caution not to wrap the drain wire in the tape (1).
- Follow the splicing instructions for copper wire and splice the drain wire.
- Wrap the drain wire around the conductors and tape with mylar tape.



Fig. 9: Repaired Wire Covered With Electrical Tape
Courtesy of GENERAL MOTORS CORP.

5. Tape over the entire cable. Use a winding motion when you apply the tape.

SIR/SRS WIRING REPAIRS

Tools Required

J 44020 Terminal Repair Kit. See **Special Tools and Equipment** .

The Supplemental Inflatable Restraint (SIR) System/Supplemental Restraint System (SRS) requires special wiring repair procedures due to the sensitive nature of the circuitry. Follow the specific procedures and instructions when working with the SIR/SRS system wiring, and the wiring components, such as connectors and terminals.

SIR/SRS Connector (Plastic Body and Terminal Metal Pin) Repair

Use the connector and wire repair assembly packs, available through Saturn Service Parts, to repair the damaged SIR/SRS wire harness connectors and the terminals. These kits include an instruction sheet and the duraseal spliced sleeves. Use the duraseal splice sleeves in order to splice the new wires, connectors, and terminals to the harness. The splice crimping tool is color keyed in order to match the splices from **J 44020** . See **Special Tools and Equipment** . You must use the splice crimping tool in order to apply these splices.

If the individual terminals are damaged on the sensing and diagnostic module (SDM) harness connector, use 1 of the following 2 components in order to replace the SDM harness connector:

- The SDM harness connector pigtail assembly

- The SDM harness connector replacement kit

If the individual terminals are damaged on any other SIR/SRS connection, use the appropriate connector repair assembly pack in order to replace the entire connection. Replace the entire SIR/SRS wiring harness, if needed, in order to maintain SIR/SRS circuit integrity.

SIR/SRS Wire Pigtail Repair

IMPORTANT: Do not make wire, connector, or terminal repairs on components with wire pigtails.

A wire pigtail is a wire or wires attached directly to the device, not by a connector. If a wiring pigtail is damaged, you must replace the entire component, with pigtail. The inflatable restraint steering wheel module coil is an example of a pigtail component.

SIR/SRS Wire Repair

IMPORTANT: Refer to Wiring Repairs in order to determine the correct wire size for the circuit you are repairing. You must obtain this information in order to ensure circuit integrity.

If any wire except the pigtail is damaged, repair the wire by splicing in a new section of wire. Use the duraseal splice sleeves and splice crimping tool from the **J 44020** . See **Special Tools and Equipment** . Use the following wiring repair procedures in order to ensure the integrity of the duraseal splice sleeves.

SIR/SRS Wiring Repairs

Splice Sleeve Color	Crimp Tool Nest Color	Wire Gage mm ² / (AWG)
Salmon (Yellow-Pink) 12089189	Red (1)	0.035-0.8 / (18-20)
Blue 12089190	Blue (2)	1.0-2.0 / (14-16)
Yellow 12089191	Yellow (3)	3.0-5.0 / (10-12)

IMPORTANT: You must perform the following procedures in the listed order. Repeat the procedure if any wire strands are damaged. You must obtain a clean strip with all of the wire strands intact.

1. Open the harness by removing any tape:
 - Use a sewing seam ripper, available from sewing supply stores, in order to cut open the harness in order to avoid wire insulation damage.
 - Use the duraseal splice sleeves on all types of insulation except tefzel and coaxial.
 - Do not use the duraseal splice sleeve to form a splice with more than 2 wires coming together.
2. Cut as little wire off the harness as possible. You may need the extra length of wire in order to change the

location of a splice.

Adjust splice locations so that each splice is at least 40 mm (1.5 in) away from the other splices, harness branches, or connectors.

3. Strip the insulation:

- Perform one of the following items in order to find the correct wire size:
 - Find the wire on the schematic and convert the metric size to the equivalent AWG size.
 - Use an AWG wire gage.
 - If you are unsure of the wire size, begin with the largest opening in the wire stripper and work down until achieving a clean strip of the insulation.
- Strip approximately 7.5 mm (0.313 in) of insulation from each wire to be spliced.
- Do not nick or cut any of the strands. Inspect the stripped wire for nicks or cut strands.
- If the wire is damaged, repeat this procedure after removing the damaged section.

4. Select the proper duraseal splice sleeve according to the wire size. Refer to the above table at the beginning of the repair procedure for the color coding of the duraseal splice sleeves and the crimp tool nests.

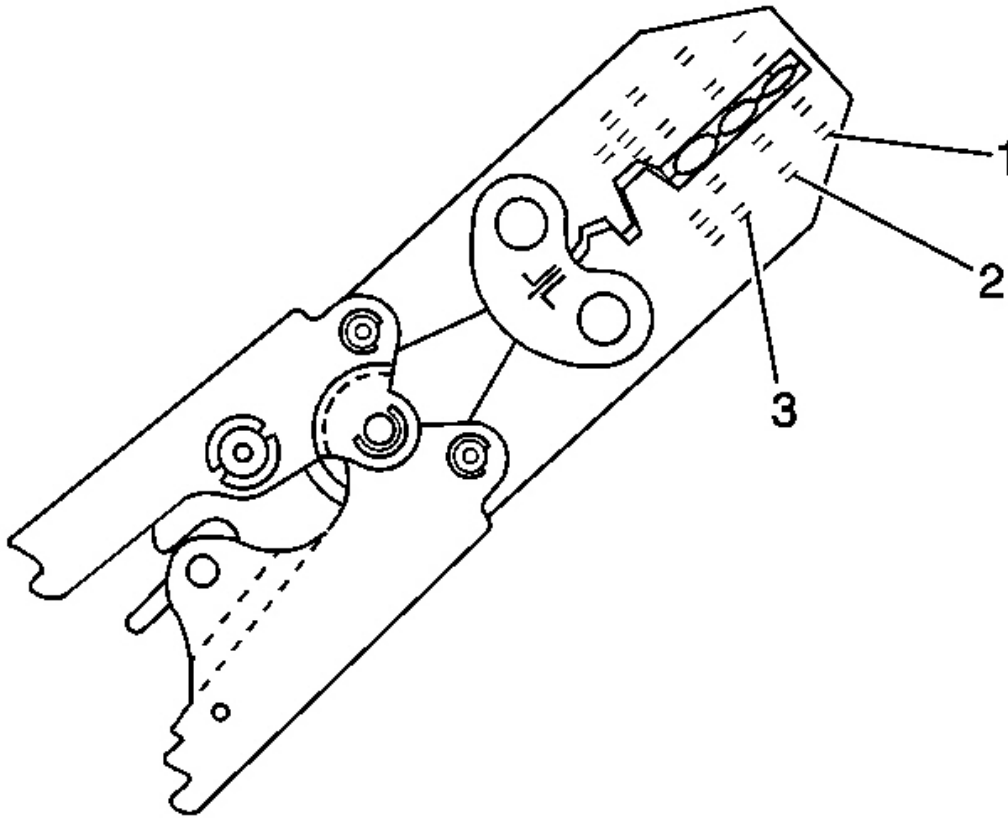


Fig. 10: Identifying Splice Crimp Tool Nests
Courtesy of GENERAL MOTORS CORP.

5. Use the splice crimp tool from the **J 44020** to crimp the duraseal splice sleeves. See **Special Tools and Equipment** . In order to position the duraseal splice sleeve in the proper color nest of the splice crimp tool, refer to the table at the beginning of this procedure.

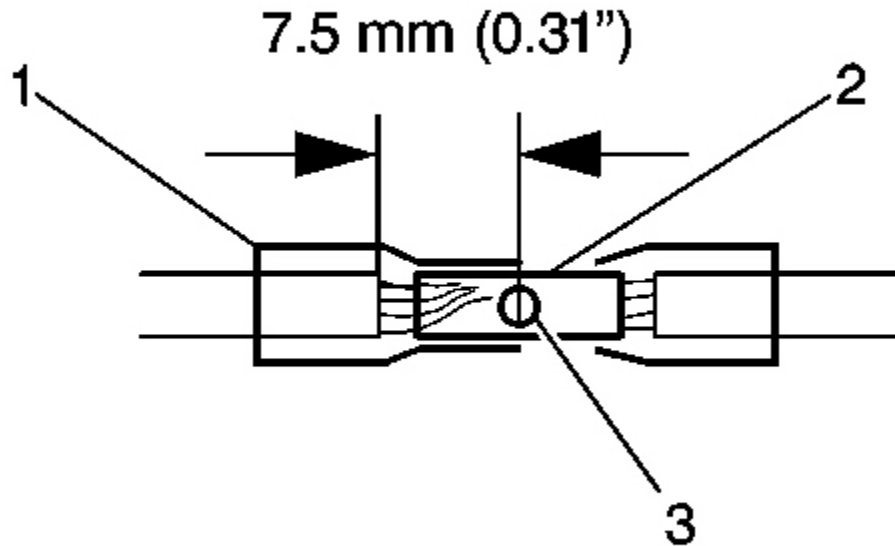


Fig. 11: Identifying Durasteel Splice Sleeve
Courtesy of GENERAL MOTORS CORP.

6. Place the duraseal splice sleeve in the nest. Ensure that the crimp falls midway between the end of the barrel and the stop. The sleeve has a stop (3) in the middle of the barrel (2) in order to prevent the wire (1) from going further. Close the hand crimper handles slightly in order to firmly hold the duraseal splice sleeve in the proper nest.



Fig. 12: Crimped Duraseal Splice Sleeve
Courtesy of GENERAL MOTORS CORP.

7. Insert the wire into the duraseal splice sleeve barrel until the wire hits the barrel stop.
8. Tightly close the handles of the crimp tool until the crimper handles open when released.

The crimper handles will not open until you apply the proper amount of pressure to the duraseal splice sleeve. Repeat steps 4 and 5 for the opposite end of the splice.



Fig. 13: Identifying Heated Splice Sleeve
Courtesy of GENERAL MOTORS CORP.

9. Using the heat torch, apply heat to the crimped area of the barrel.
10. Gradually move the heat barrel to the open end of the tubing:
 - The tubing will shrink completely as the heat is moved along the insulation.
 - A small amount of sealant will come out of the end of the tubing when sufficient shrinkage is achieved.

Connector Position Assurance (CPA)

The connector position assurance (CPA) is a small plastic insert that fits through the locking tabs of all the SIR/SRS system electrical connectors. The CPA ensures that the connector halves cannot vibrate apart. You must have the CPA in place in order to ensure good contact between the SIR/SRS mating terminals.

Terminal Position Assurance (TPA)

The terminal position assurance (TPA) insert resembles the plastic combs used in the control module connectors. The TPA keeps the terminal securely seated in the connector body. Do not remove the TPA from the connector body unless you remove a terminal for replacement.

CONNECTOR REPAIRS

The Connector Repairs section contains the following types of connector repair information. Using these elements together will make connector repair faster and easier:

- **Connector Position Assurance Locks**
- **Terminal Position Assurance Locks**

- Push to Seat Connectors
- Pull to Seat Connectors
- Micro-Pack 100W Connectors
- Micro.64 Connectors

CONNECTOR POSITION ASSURANCE LOCKS

The connector position assurance (CPA) is a small plastic insert that fits through the locking tabs of the connector. CPAs are used in various connectors throughout the vehicle. CPAs are also used in all SIR system electrical connectors. The CPA ensures that the connector halves cannot vibrate apart. You must have the CPA in place in order to ensure good contact between the mating terminals, of the connector.

TERMINAL POSITION ASSURANCE LOCKS

The terminal position assurance (TPA) insert resembles the plastic combs used in the control module connectors. The TPA keeps the terminal securely seated in the connector body. Do not remove the TPA from the connector body unless you remove a terminal for replacement.

PUSH TO SEAT CONNECTORS

Terminal Removal Procedure

Follow the steps below in order to repair push to seat connectors.

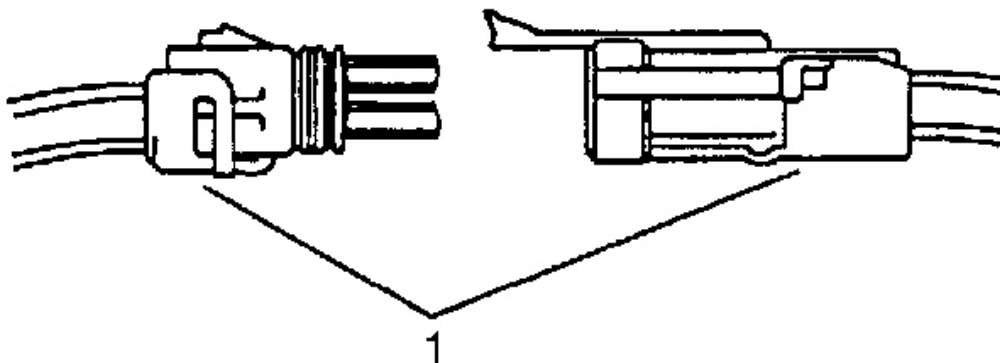


Fig. 14: Separating Weather Pack Connector Halves
Courtesy of GENERAL MOTORS CORP.

1. Remove the terminal position assurance (TPA) device, the connector position assurance (CPA) device, and/or the secondary lock.

2. Separate the connector halves (1).

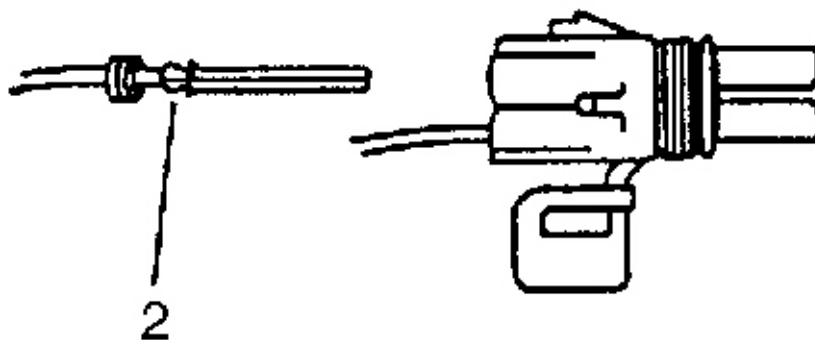
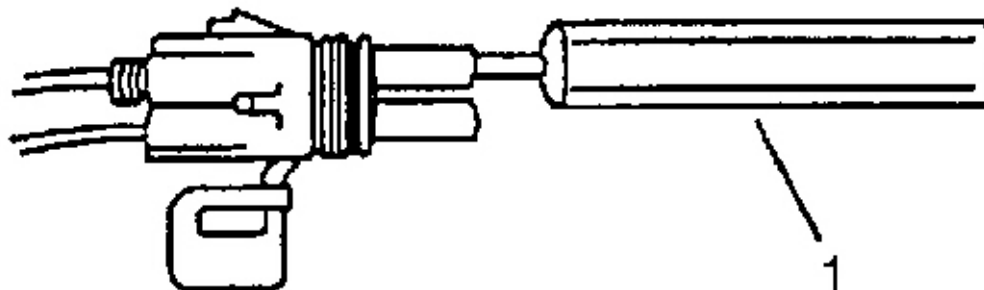


Fig. 15: Removing Cable & Terminal From Connector
Courtesy of GENERAL MOTORS CORP.

3. Use the proper pick or removal tool (1) in order to release the terminal.
4. Gently pull the cable and the terminal (2) out of the back of the connector.

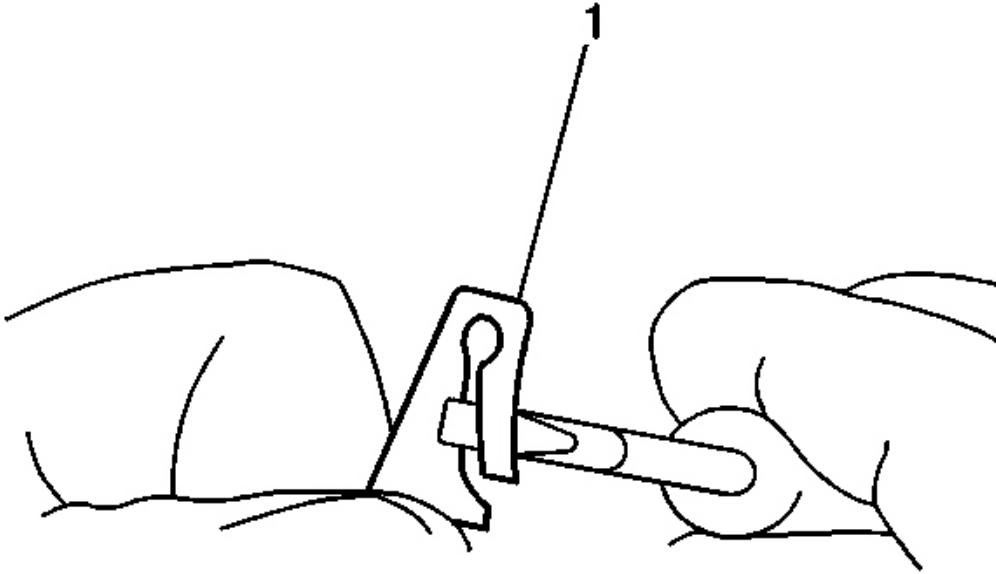


Fig. 16: Aligning Locking Device
Courtesy of GENERAL MOTORS CORP.

5. Re-form the locking device if you are going to reuse the terminal (1).
6. To repair the terminal, refer to Terminal Repair.

Terminal Installation Procedure

1. In order to reuse a terminal or lead assembly. Refer to **Wiring Repairs** .
2. Ensure that the cable seal is kept on the terminal side of the splice.
3. Insert the lead from the back until it catches.
4. Install the TPA, CPA and/or the secondary locks.

PULL TO SEAT CONNECTORS

Terminal Removal Procedure

If the terminal is visibly damaged or is suspected of having a faulty connection, the terminal should be replaced.

Follow the steps below in order to repair pull-to-seat connectors.

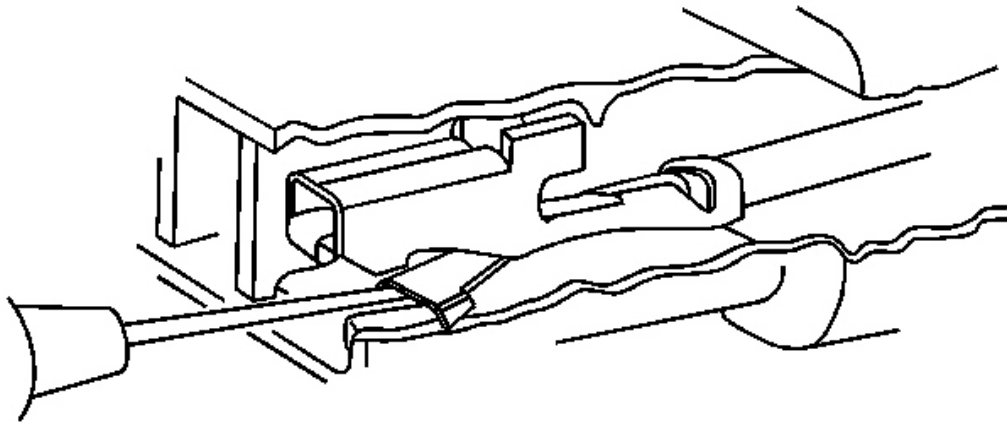


Fig. 17: Aligning Removal Tool
Courtesy of GENERAL MOTORS CORP.

1. Remove the connector position assurance (CPA) device and/or the secondary lock.
2. Disconnect the connector from the component or separate the connectors for in-line connectors.
3. Remove the terminal position assurance (TPA) device.
4. Insert the proper pick or removal tool into the front of the connector body.

Terminal Repair Procedure

Pull-to-seat connector repair kits are available through Saturn Service Parts. The repair kits include the connector with terminals attached to a short length of the wire and splice sleeves. Use these kits if the pull-to-seat connectors need to be repaired.

MICRO-PACK 100W CONNECTORS

Terminal Removal Procedure

1. Disconnect the connector from the component or separate the connector halves for in-line connectors.

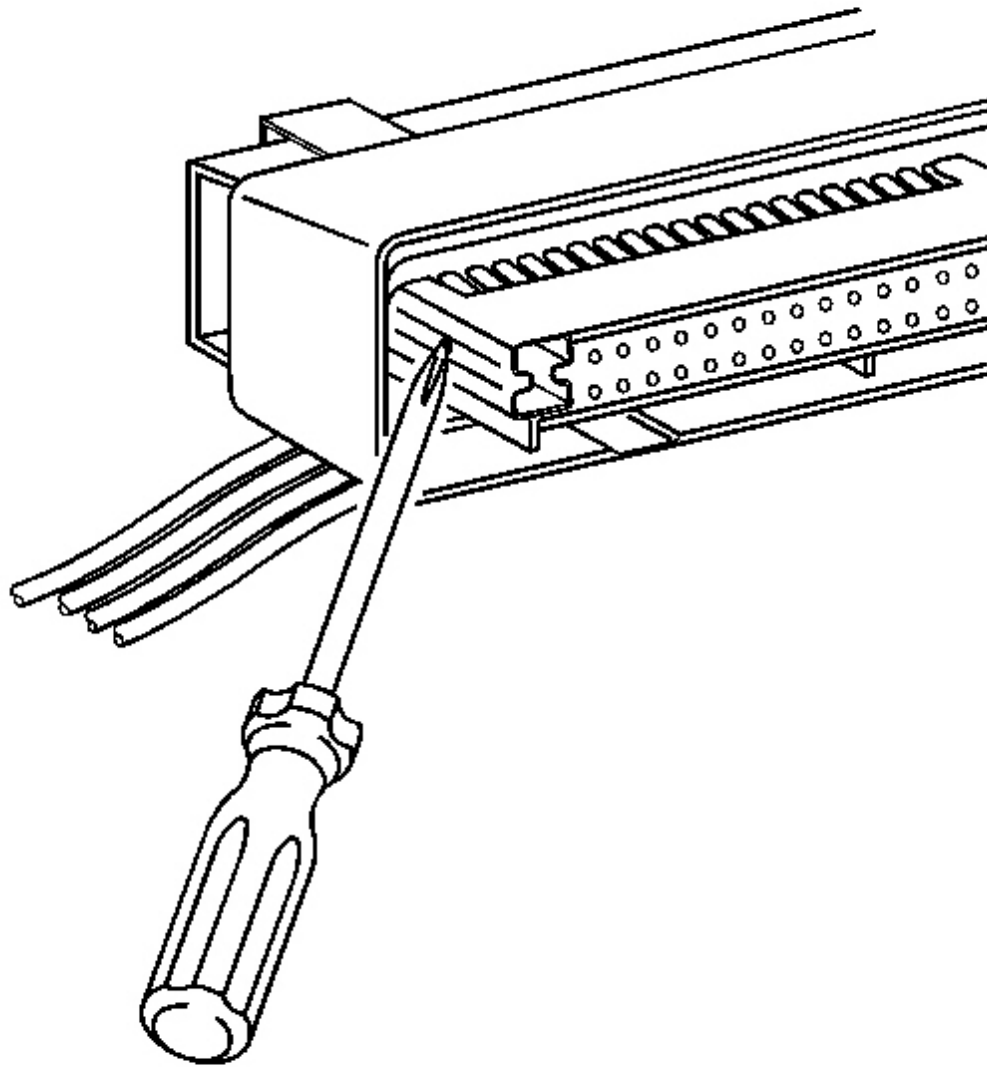


Fig. 18: Locating Nose Piece Locking Tabs
Courtesy of GENERAL MOTORS CORP.

2. Locate the nose piece locking tabs that are positioned on the side of the connector nose piece.

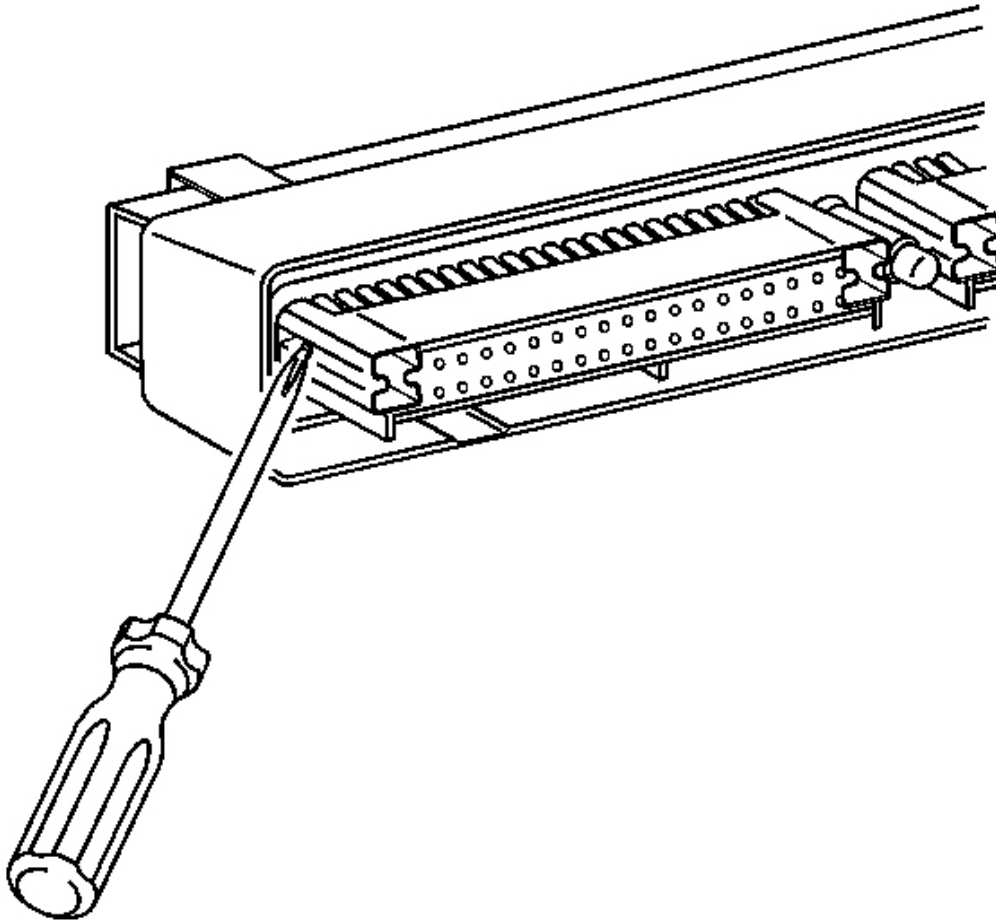


Fig. 19: Pushing In Locking Tabs
Courtesy of GENERAL MOTORS CORP.

3. Use a small flat-bladed tool to push in one of the locking tabs while gently pushing on the same side of the nose piece.
4. Repeat the procedure for the other locking tab and remove the nose piece.
5. Remove the wire dress cover. The following is a general procedure for wire dress cover removal. Use this procedure as a guide, some dress cover removal procedures may vary.

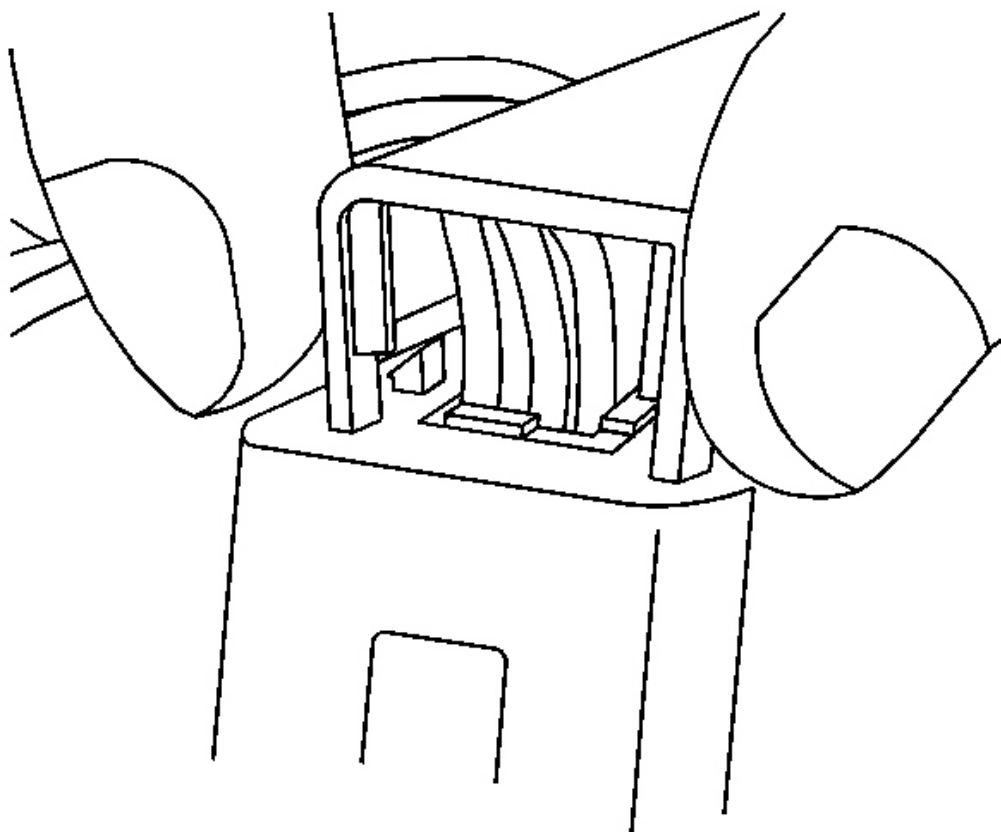


Fig. 20: Squeezing Cover Locking Legs
Courtesy of GENERAL MOTORS CORP.

6. Use fingers to squeeze the 2 locking legs of the cover.

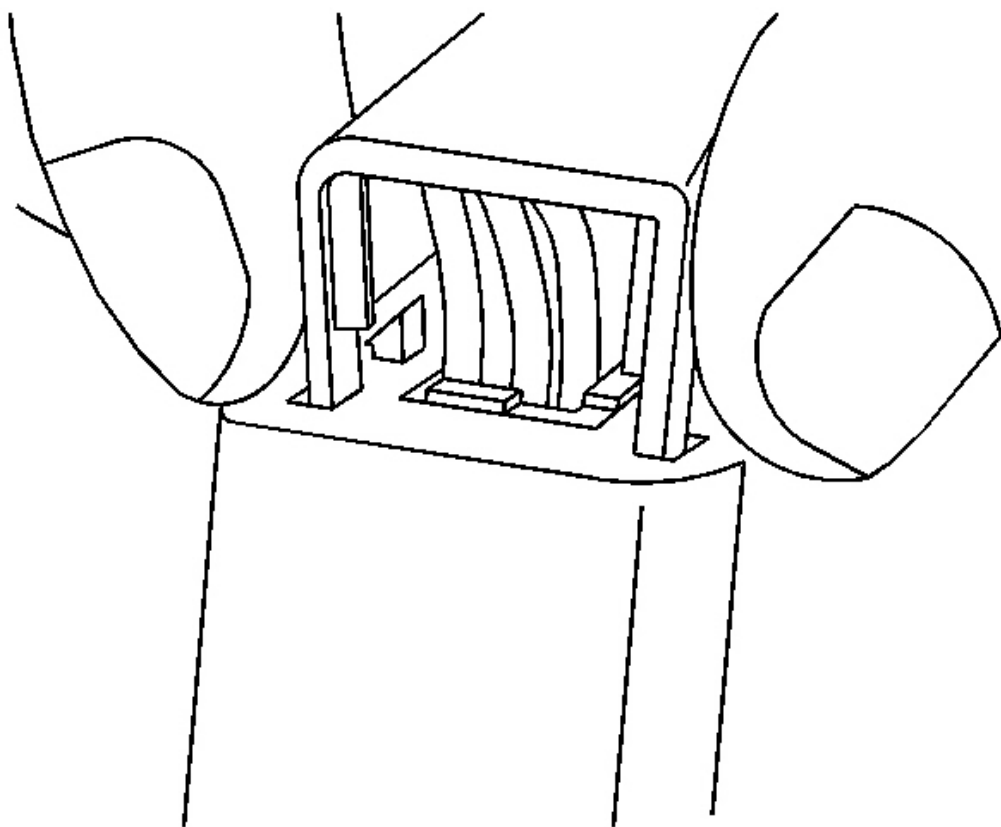


Fig. 21: Unseating Locking Legs
Courtesy of GENERAL MOTORS CORP.

7. Apply pressure and gently rock the cover until one locking leg is unseated.

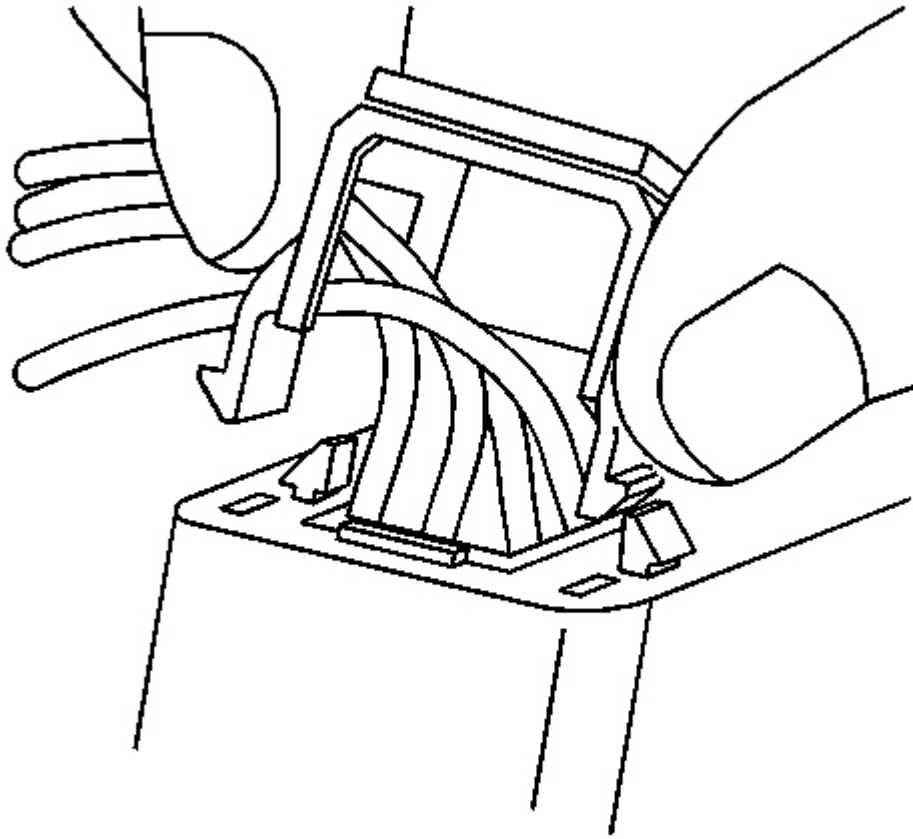


Fig. 22: Removing Wire Dress Cover
Courtesy of GENERAL MOTORS CORP.

8. Continue to apply pressure and rock the cover until the second locking leg is unseated. Repeat procedure for the other side of the dress cover and remove the cover.

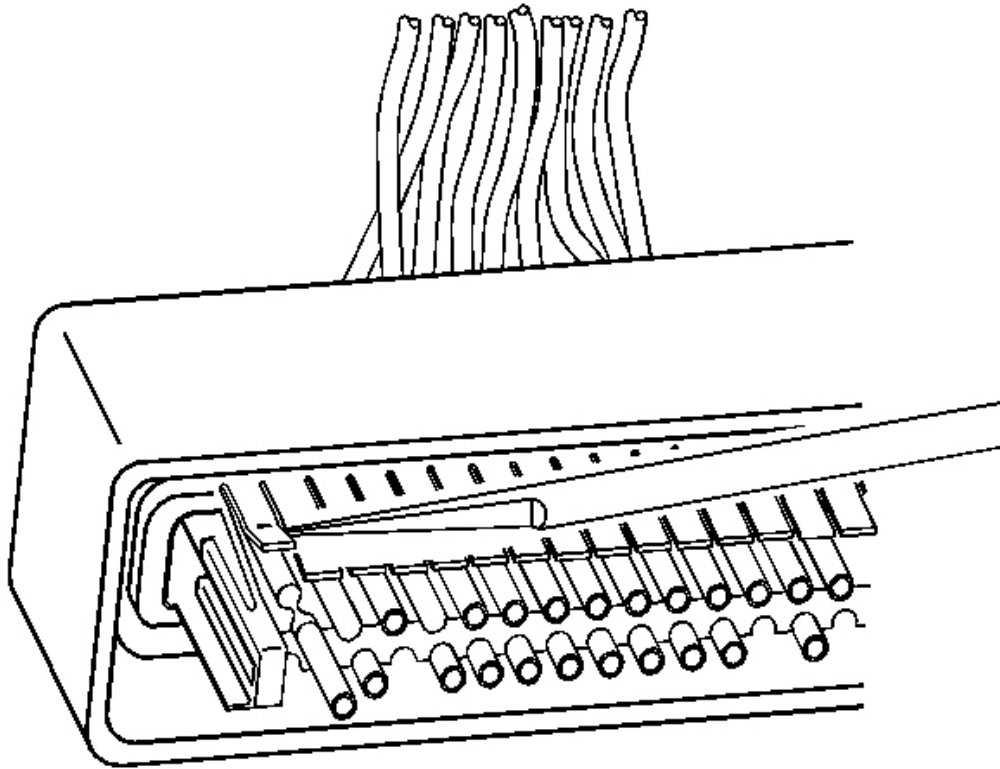


Fig. 23: Lifting Terminal Retaining Tab
Courtesy of GENERAL MOTORS CORP.

9. Use J 38125-12A tool to gently lift the terminal retaining tab while gently pulling the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector. If the terminal is severely bent or damaged, push the wire out of the front of the connector instead of pulling it through. This will prevent damage to the internal seals of the connector. Once the terminal is pushed out of the connector, cut the wire as close to the terminal as possible and pull the wire through the connector.

Terminal Repair Procedure

Use the appropriate wire assembly kit available through Saturn Service Parts.

1. Slide the new terminal into the correct cavity at the back of the connector.
2. Push the terminal into the connector until it locks into place. The new terminal should be even with the other terminals. Insure that the terminal is locked in place by gently pulling on the wire.
3. Replace the nose piece.
4. Replace the dress cover.

MICRO .64 CONNECTORS

Tools Required

J-38125 Terminal Repair Kit

Terminal Removal Procedure

Follow the steps below in order to remove terminals from Micro 64 connectors.

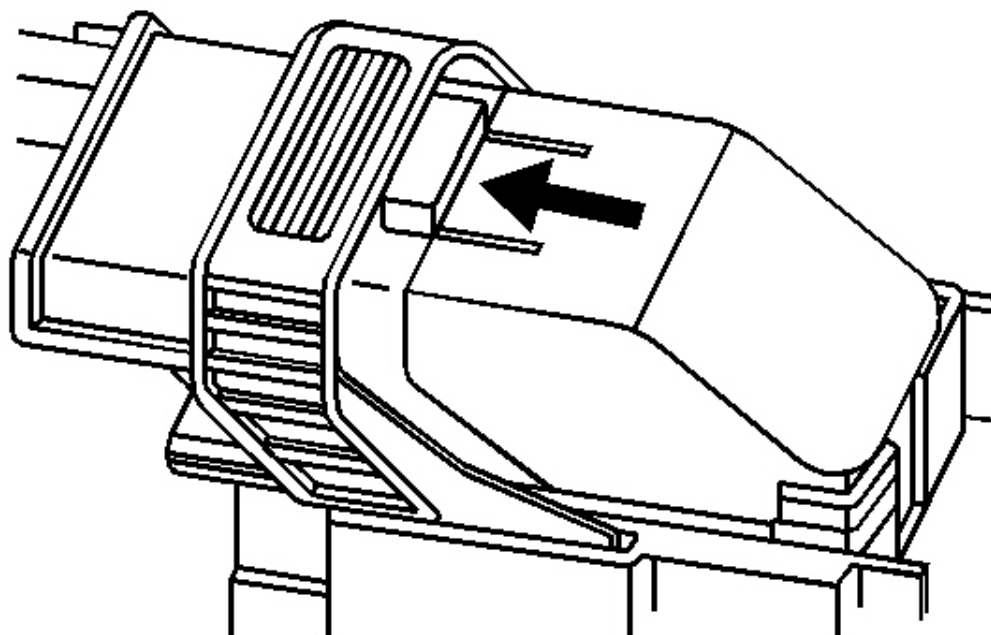


Fig. 24: Disengaging Lever Lock
Courtesy of GENERAL MOTORS CORP.

1. Locate the lever lock on the wire dress cover. While depressing the lock, pull the lever over and past the lock.
2. Disconnect the connector from the component.

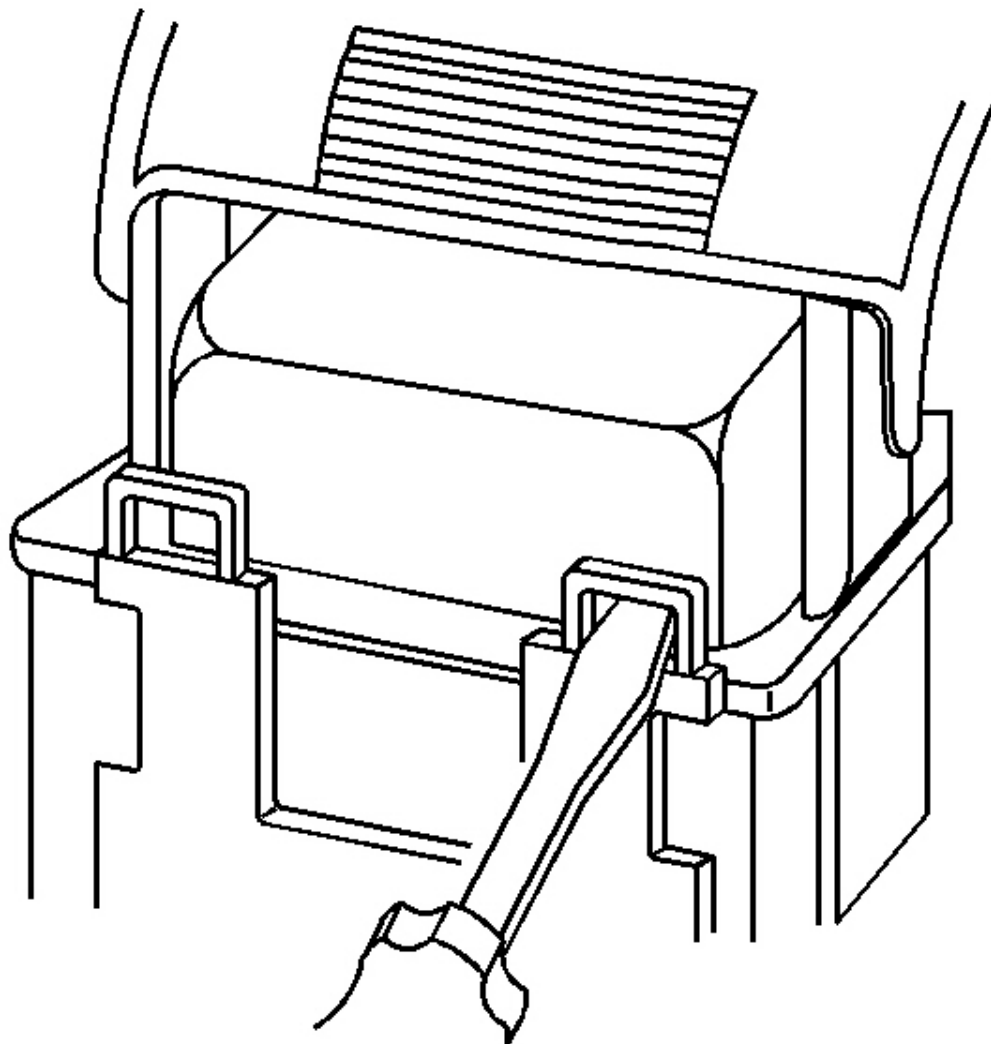


Fig. 25: Releasing Locking Tabs
Courtesy of GENERAL MOTORS CORP.

3. Locate the dress cover locking tabs at the front of the connector. Using a small flat-blade tool push down on one of the locking tabs and pull the cover up until the dress cover releases. Repeat this procedure for the other locking tab.
4. Once the front 2 locks are unlocked, lift the front of the dress cover and pull it forward.

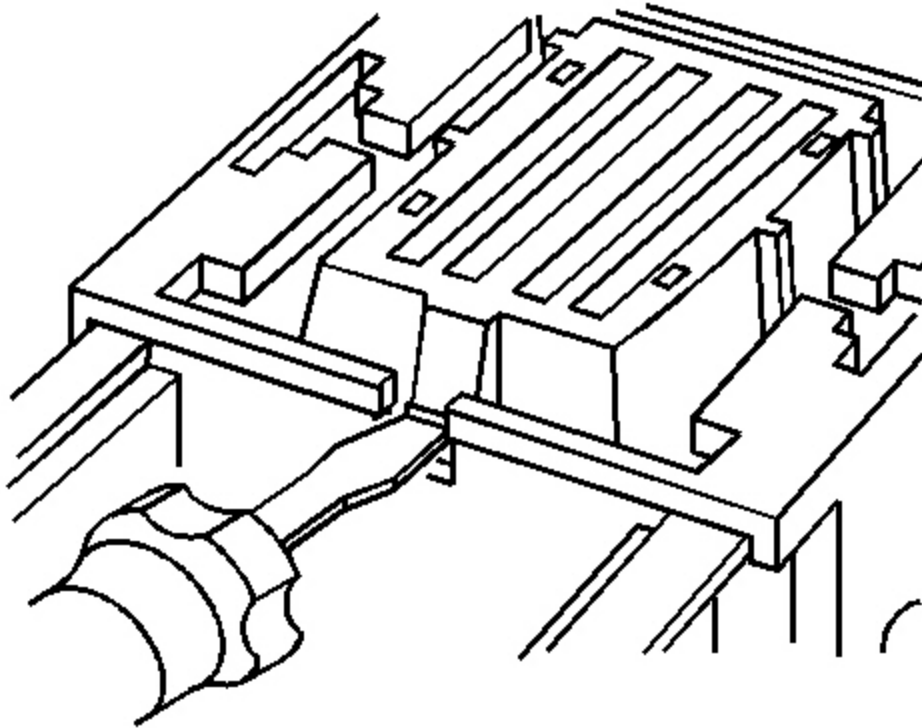


Fig. 26: Removing Nose Piece
Courtesy of GENERAL MOTORS CORP.

5. If the connector has a nose piece, use a small flat-blade tool to remove the nose piece by inserting the blade into the slot on the front of the connector and prying up on the nose piece.

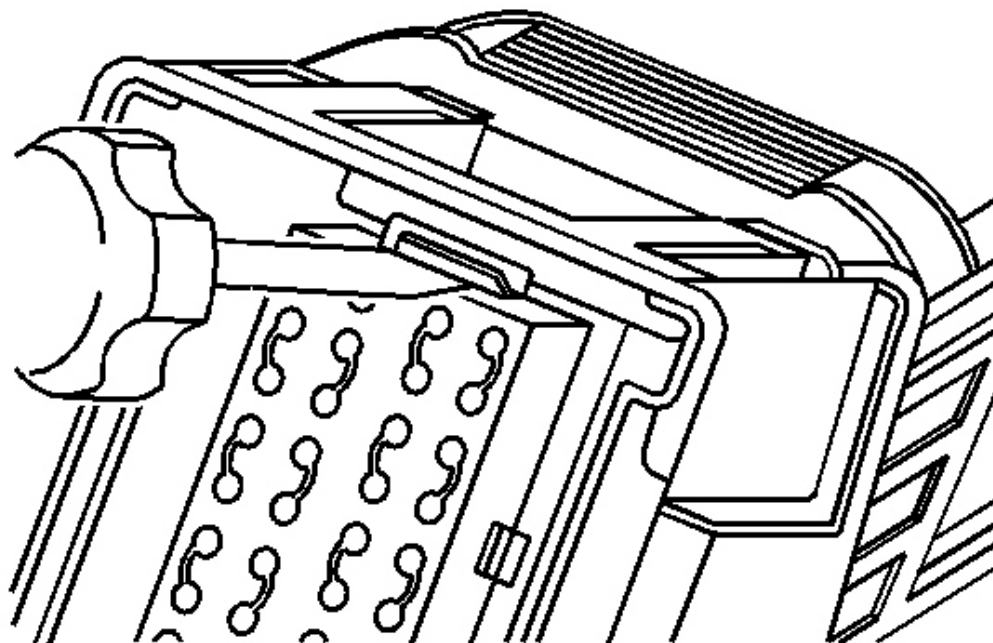


Fig. 27: Removing Terminal Position Assurance
Courtesy of GENERAL MOTORS CORP.

IMPORTANT: Always use care when removing a terminal position assurance (TPA) in order to avoid damaging it.

6. Remove the TPA by inserting a small flat-blade tool into the small slot on the TPA and pushing down until the TPA releases. Gently pry the TPA out of the connector.

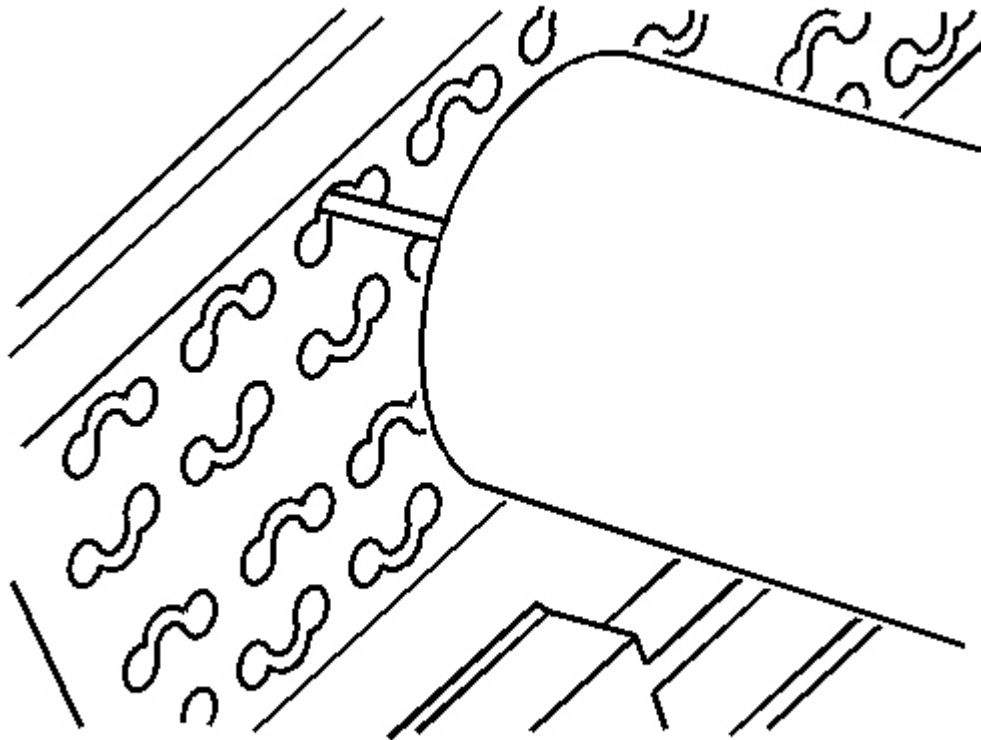


Fig. 28: Inserting J 38125-13A Into Terminal Cavities Canal
Courtesy of GENERAL MOTORS CORP.

IMPORTANT: Be careful not to angle or rock the J 38125-13A tool when inserting it into the connector or the tool may break.

7. Insert the J 38125-13A (GM P/N 12031876-1) tool into the round canal between the terminals cavities at the front of the connector. See the release tool cross reference in the Reference Guide of the Terminal Repair Kit to ensure that the correct release tool is used.

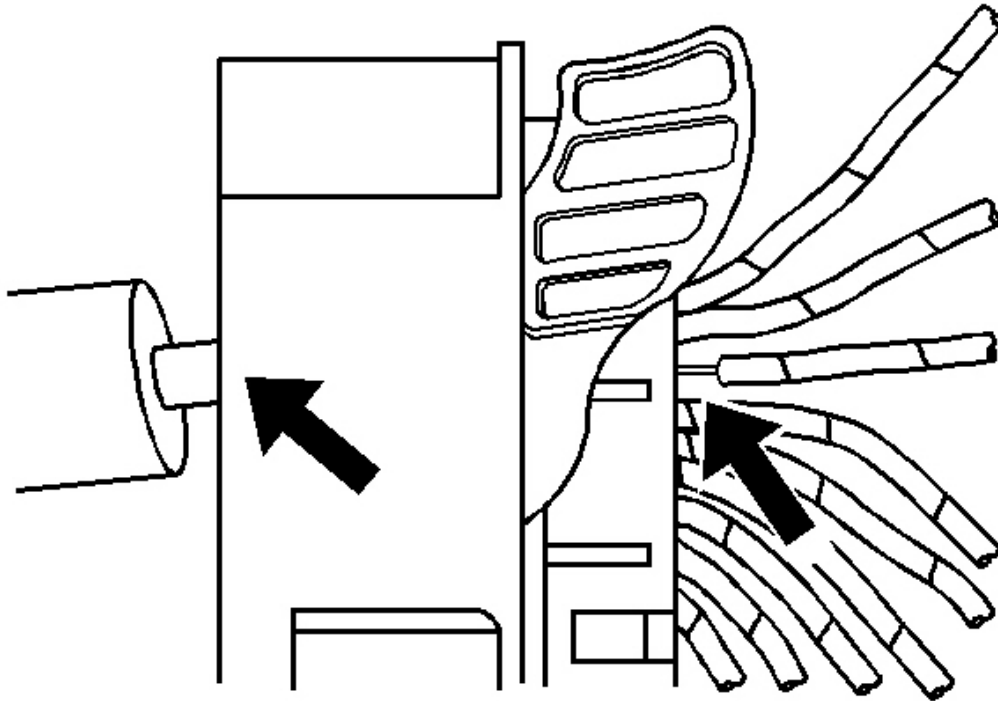


Fig. 29: Removing Wire From Back Of Connector
Courtesy of GENERAL MOTORS CORP.

8. While holding the removal tool in place, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.

Terminal Repair Procedure

Follow the steps below in order to repair Micro 64 connector terminals.

The Micro 64 connectors have small terminals that are difficult to handle and hold when crimping. In order to aid the technician when crimping these terminals, a new crimping tool was developed. The J 38125-64 (M jaw) was developed to crimp Micro 64 terminals. The J 38125-64 crimping tool has a terminal holding block that will hold the terminal in place while the terminal is being crimped. The J 38125-64 crimping tool is also designed to crimp both the wire and the insulation at the same time.

After the terminal is removed from the connector perform the following procedure in order to repair Micro 64 terminals.

IMPORTANT: After cutting the damaged terminal from the wire, determine if the remaining

wire is long enough to reach the connector without putting a strain on the wire. If the wire is not long enough, splice a small length of the same gage wire to the existing wire, then crimp the new terminal on the added wire.

1. Cut the wire as close to the damaged terminal as possible.
2. Strip 5 mm (3/16 in) of insulation from the wire.

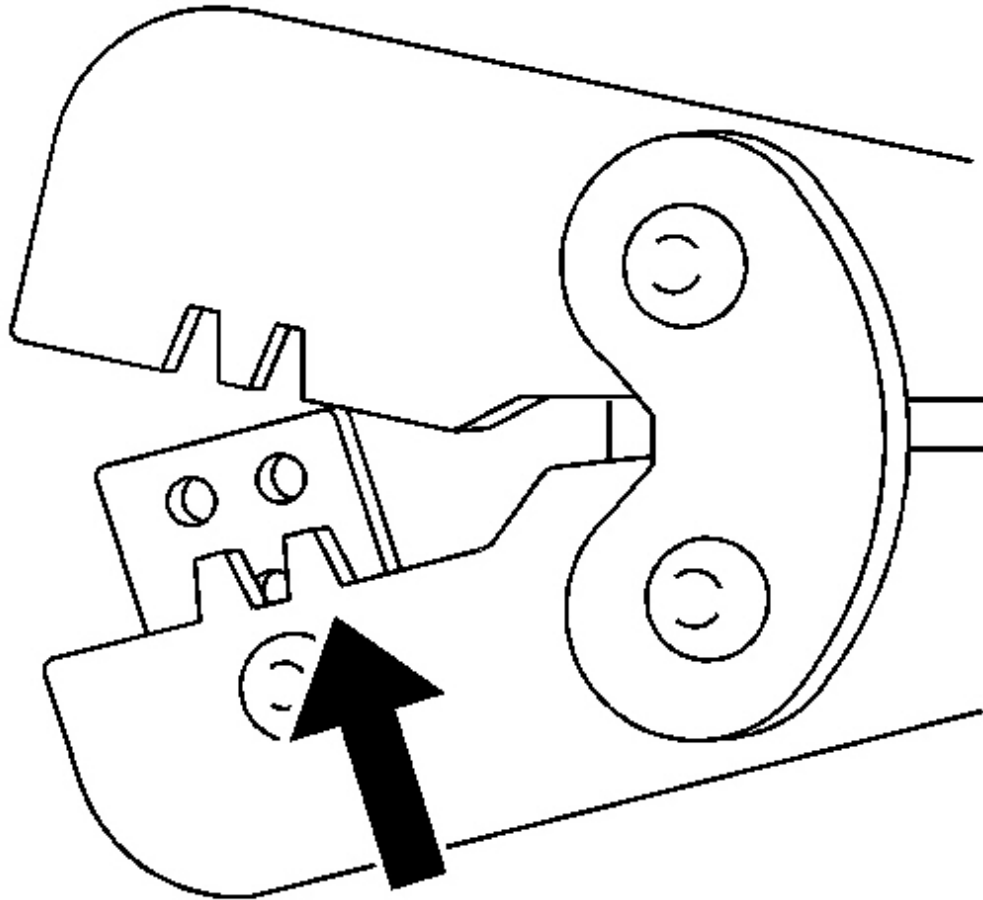


Fig. 30: Identifying Crimping Tool Spring Loaded Locator
Courtesy of GENERAL MOTORS CORP.

3. Depress the spring loaded locator of the crimping tool until the terminal holder is completely visible.

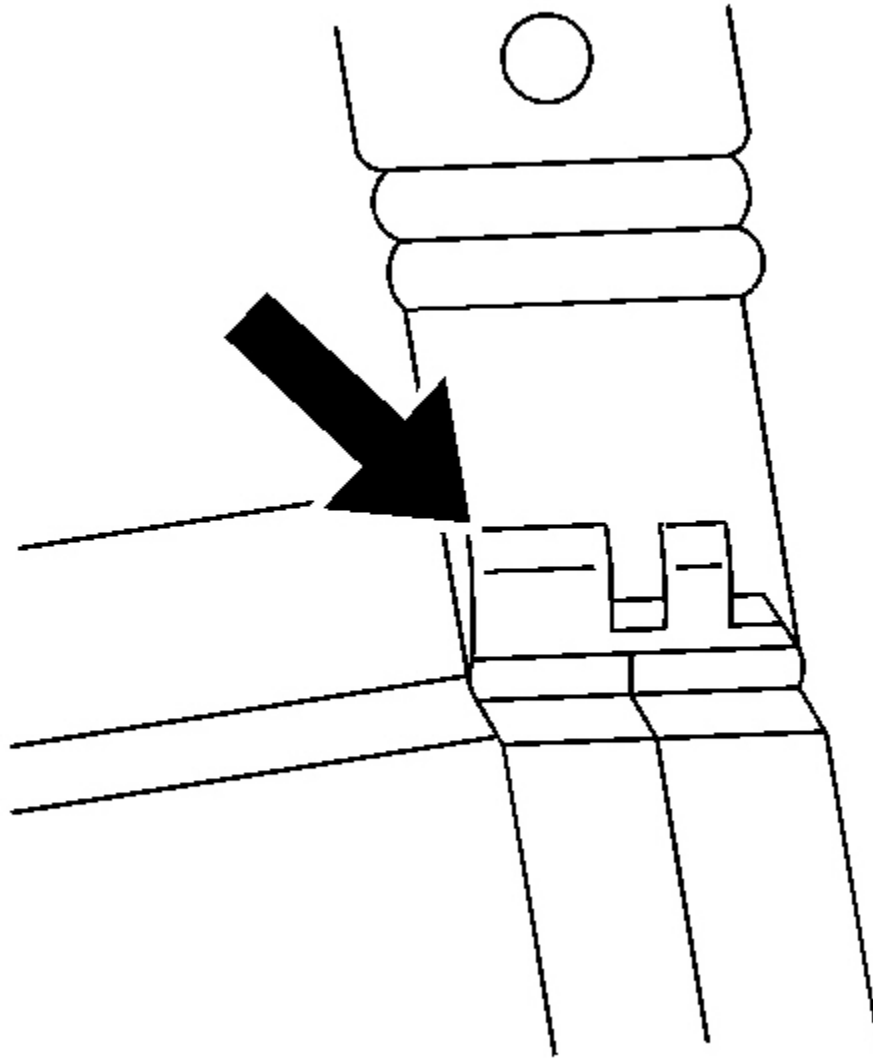


Fig. 31: Inserting Terminal Into Terminal Holder
Courtesy of GENERAL MOTORS CORP.


4. Insert terminal into the appropriate terminal holder until it hits bottom and stops. The correct terminal holder is determined by the wire size. Also ensure that the terminal wings are pointing towards the former on the tool and the release locator.
5. Insert the stripped cable into the terminal. Insulation should be visible on both sides of the terminal insulation wings.
6. Compress the handles until the ratchet automatically releases.

7. Place the terminal into the appropriate cavity and assemble the connector.

SCHEMATIC AND ROUTING DIAGRAMS

POWER AND GROUNDING SCHEMATIC ICONS

Power and Grounding Schematic Icons

Icon	Icon Definition
	<p>CAUTION: When performing service on or near the SIR components or the SIR wiring, the SIR system must be disabled. Refer to SIR Disabling and Enabling Zones. Failure to observe the correct procedure could cause deployment of the SIR components, personal injury, or unnecessary SIR system repairs.</p>

POWER DISTRIBUTION SCHEMATICS

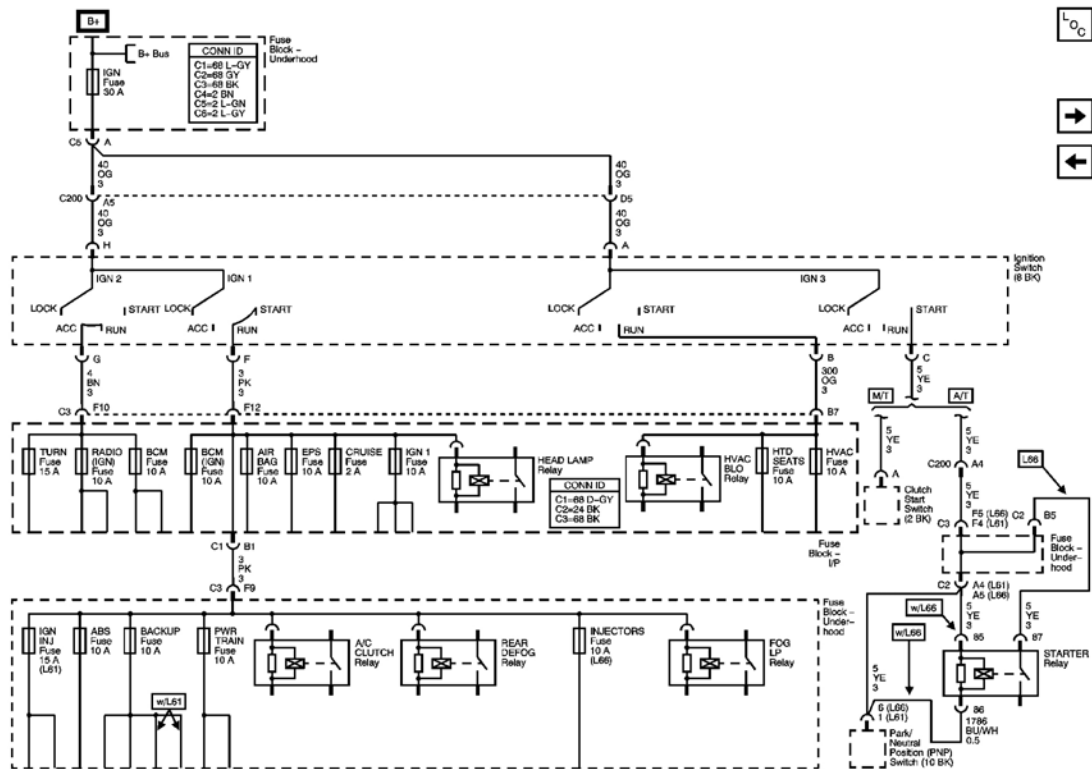


Fig. 33: IGN Fuse, Ignition Switch, and Ignition Switch Position Feed Circuits
 Courtesy of GENERAL MOTORS CORP.

L O C

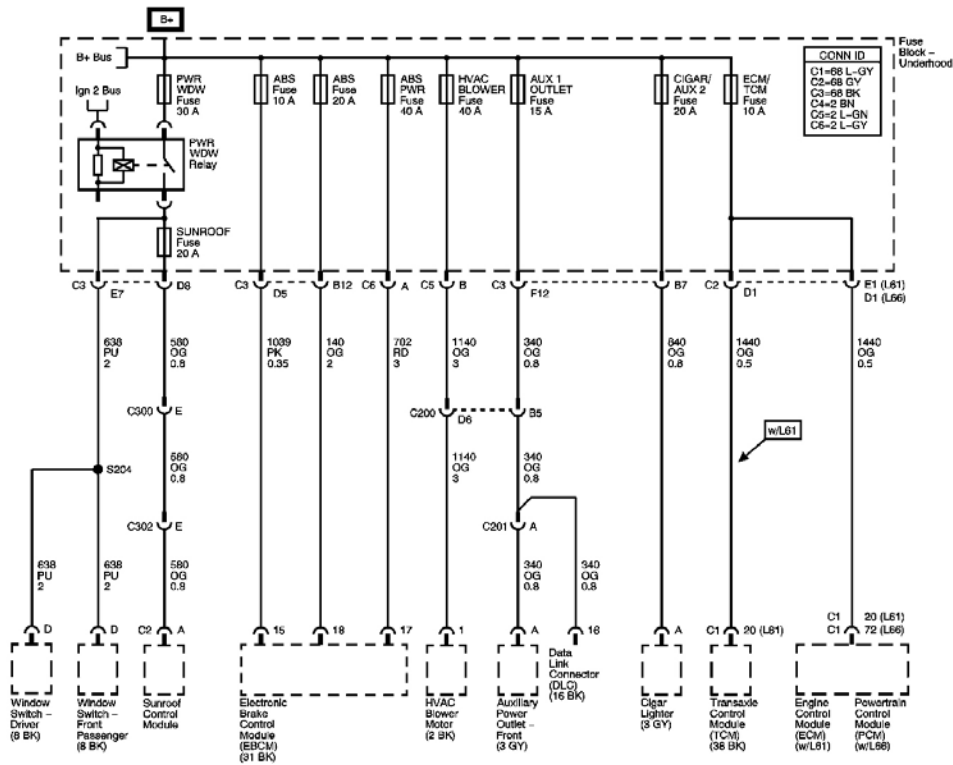


Fig. 34: Pwr Wdw Relay, Pwr Wdw, Sunroof, ABS, ABS Pwr, HVAC Blower, Aux 1 Outlet, Cigar/Aux 2, and ECM/TCM Fuses
 Courtesy of GENERAL MOTORS CORP.

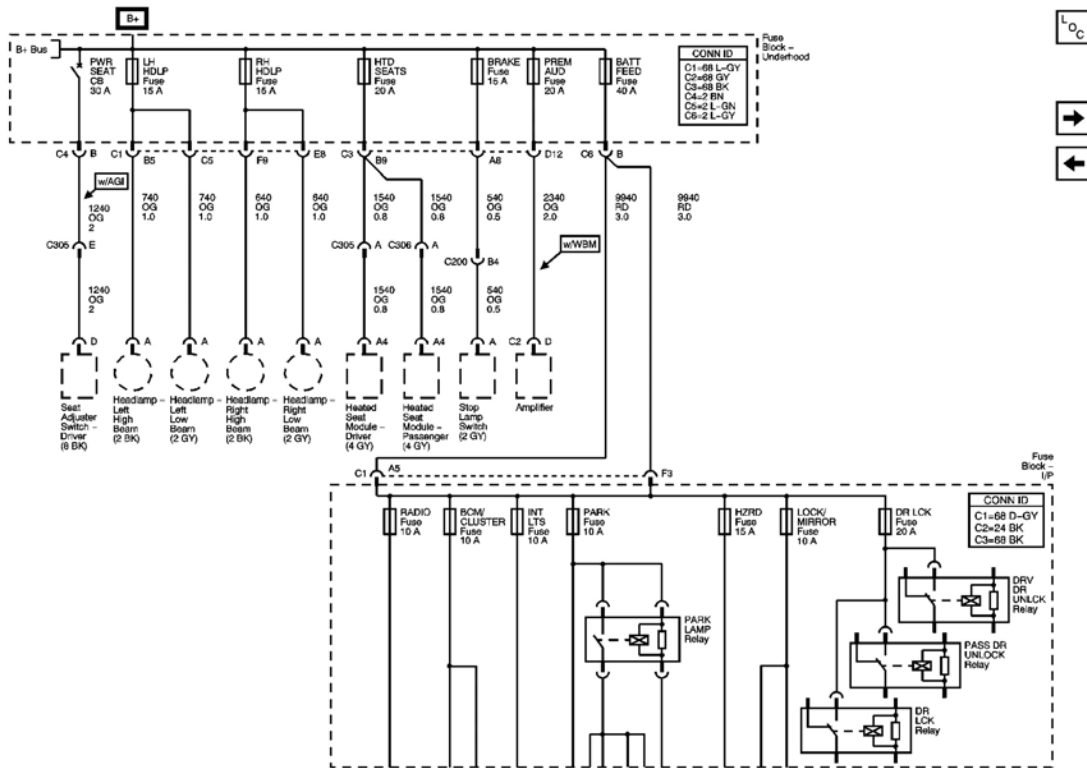


Fig. 35: Pwr Seat CB, LH HDLP, RH HDLP, HTD Seats, Brake, Prem Aud, and BAtt Feed Fuses, and the B+ Circuits to the I/P Fuse Block Fuses
 Courtesy of GENERAL MOTORS CORP.

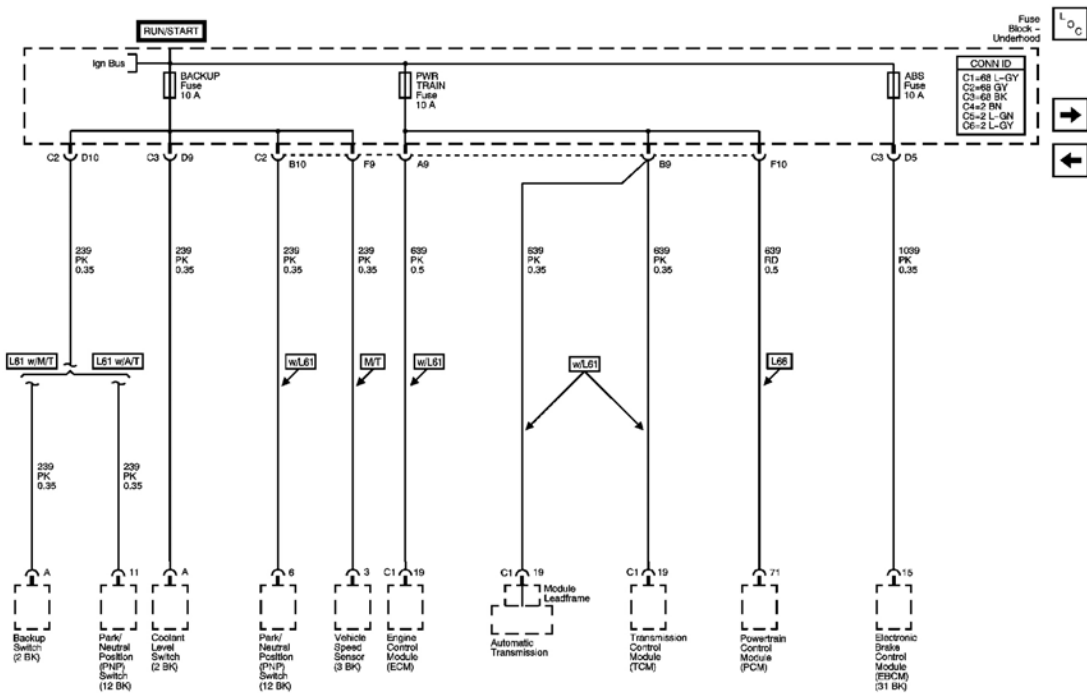


Fig. 36: Backup, Pwr Train, and ABS Fuses
 Courtesy of GENERAL MOTORS CORP.

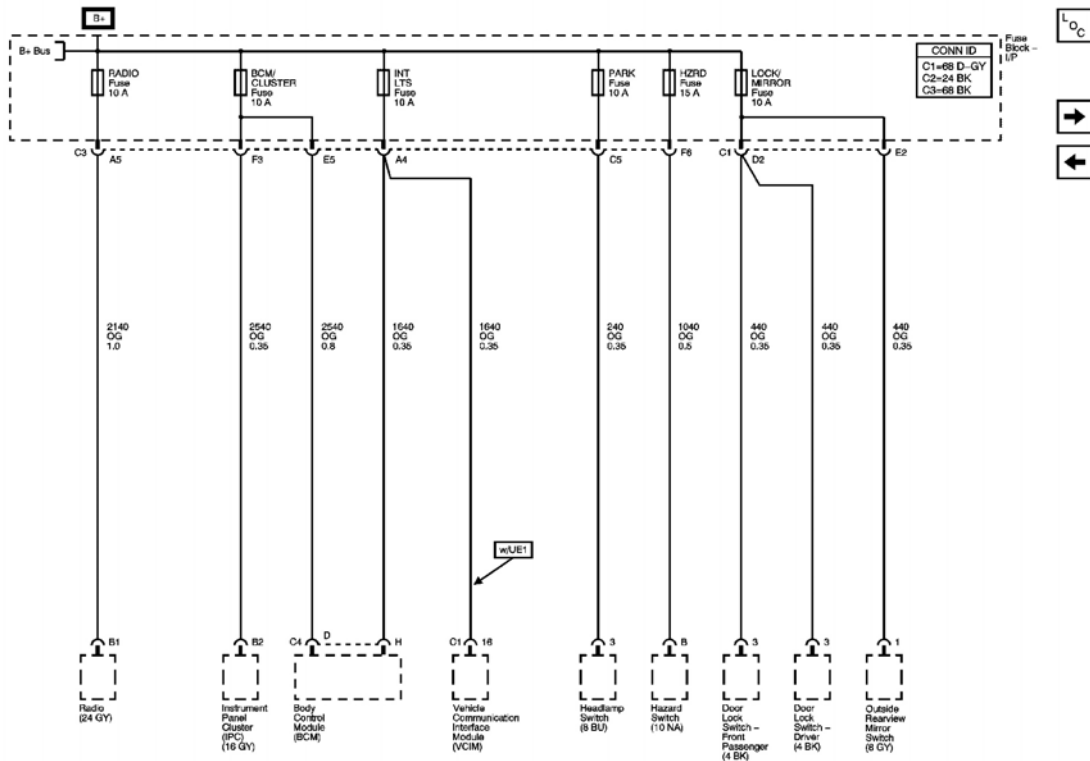


Fig. 40: Radio, BCM/Cluster, INT LTS, Park, Hzrd, and Lock/Mirror Fuses (I/P Fuse Block)
 Courtesy of GENERAL MOTORS CORP.

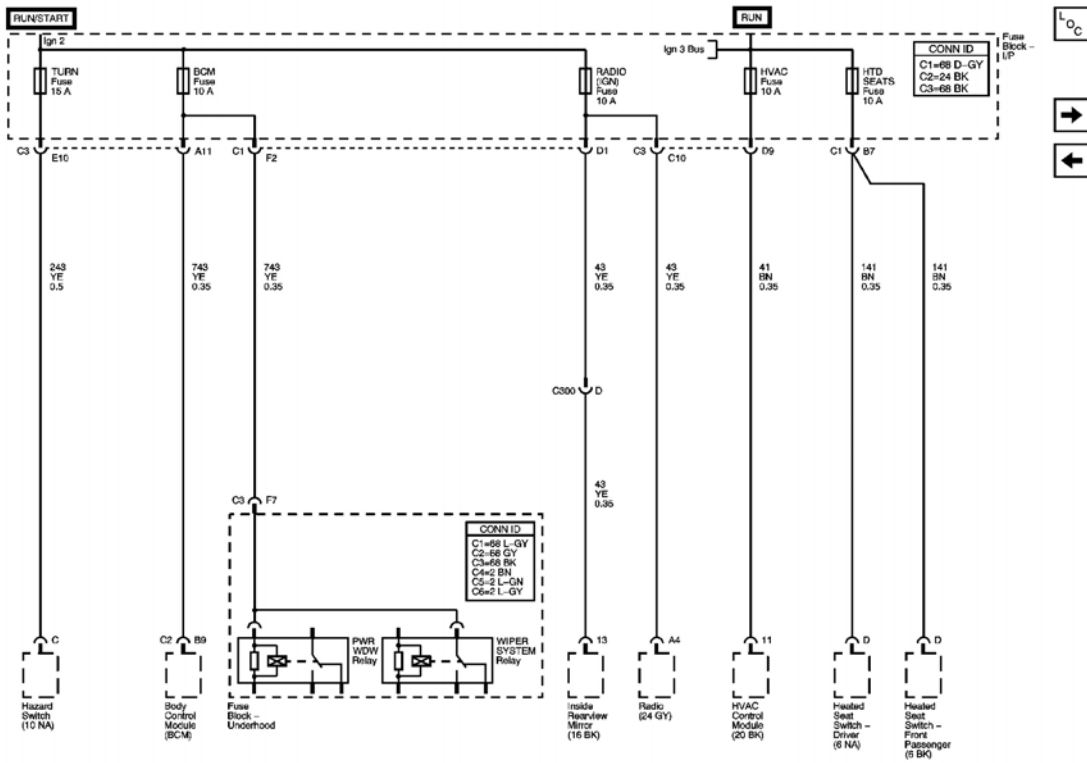
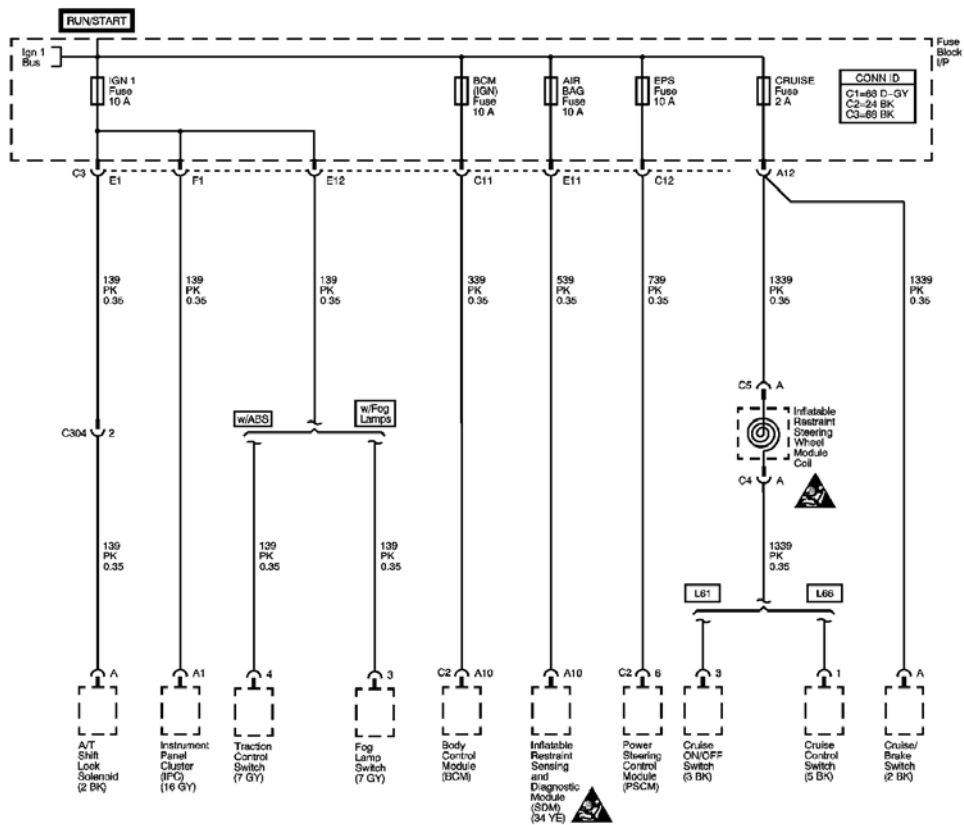


Fig. 41: Turn, BCM, Radio (IGN), HVAC, and HTD Seats Fuses (I/P Fuse Block)
 Courtesy of GENERAL MOTORS CORP.



L
O
C



Fig. 42: IGN 1, BCM (IGN), Air Bag, EPS, and Cruise Fuses (I/P Fuse Block)
 Courtesy of GENERAL MOTORS CORP.

GROUND DISTRIBUTION SCHEMATICS

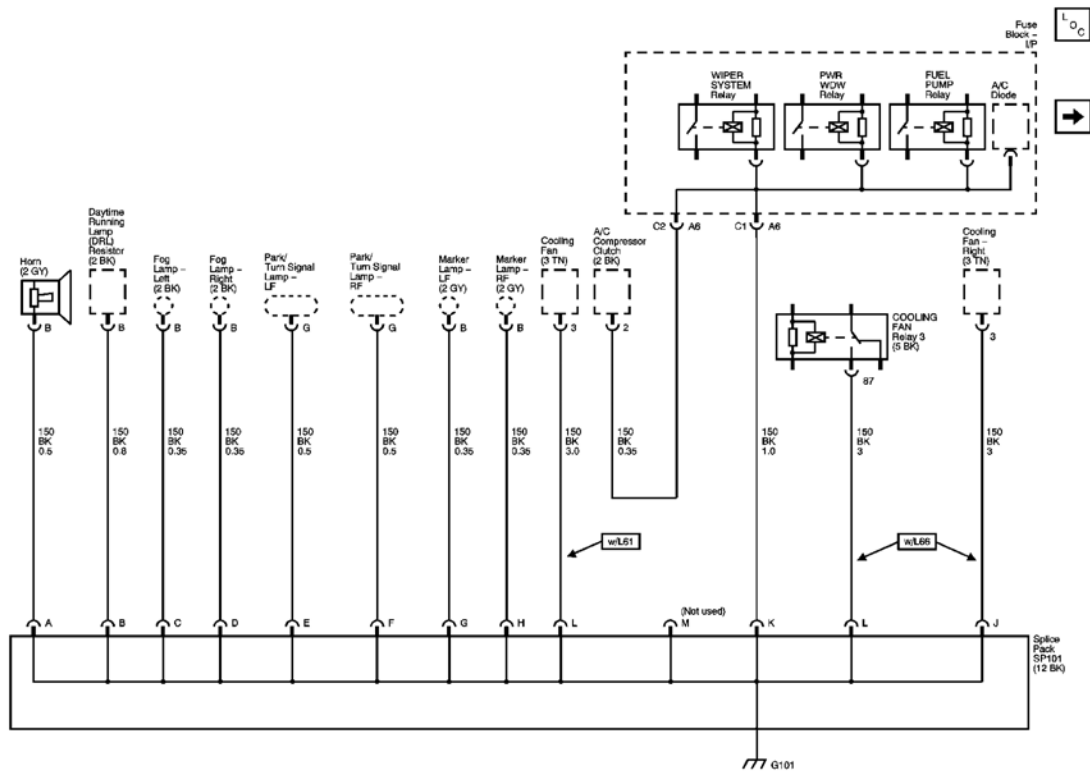


Fig. 43: View Of Ground Schematics
 Courtesy of GENERAL MOTORS CORP.

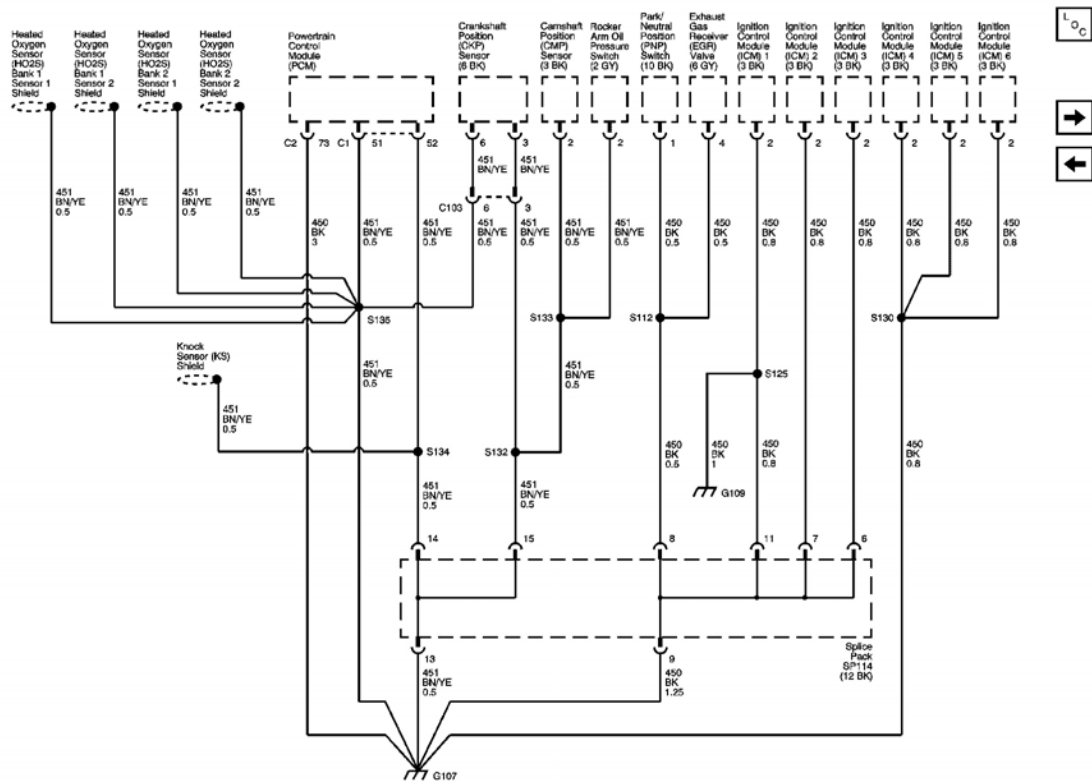


Fig. 44: w/L66 - G103, G105, G107, G109, and G207 Schematics
Courtesy of GENERAL MOTORS CORP.

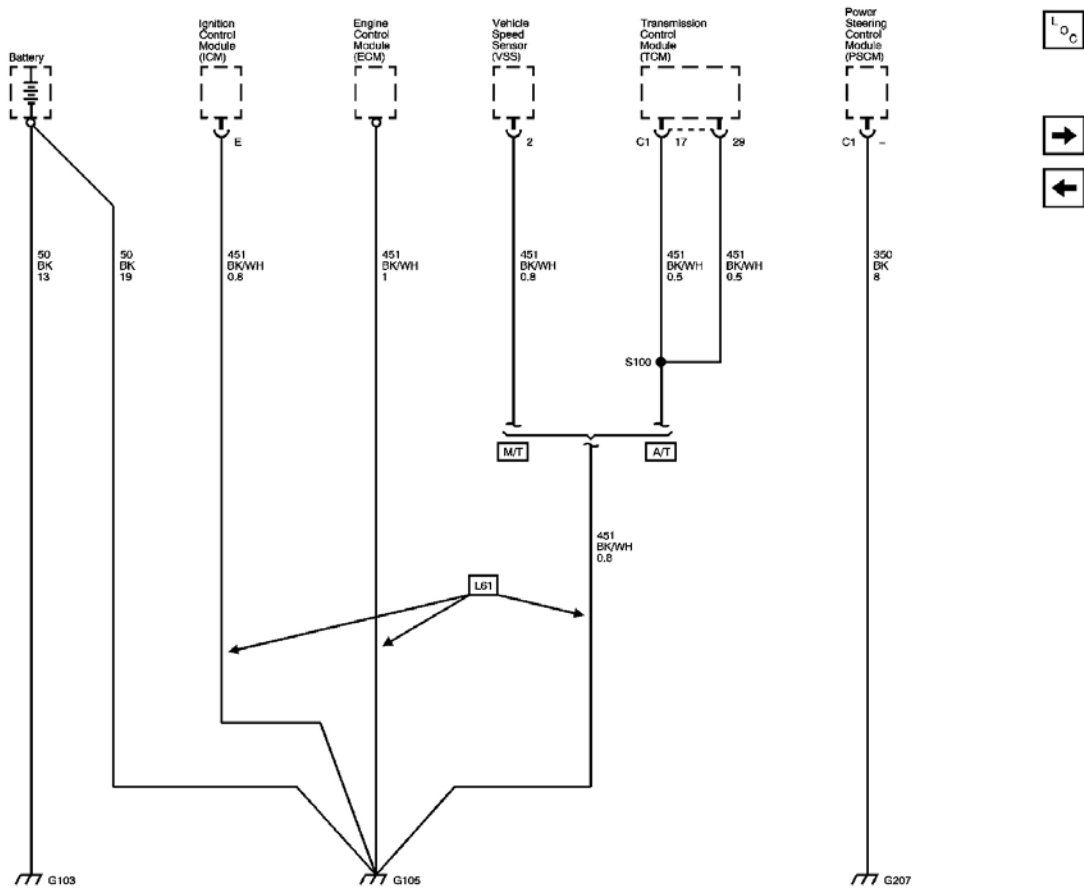


Fig. 45: w/L61 - G103, G105, and G207 Schematics
 Courtesy of GENERAL MOTORS CORP.

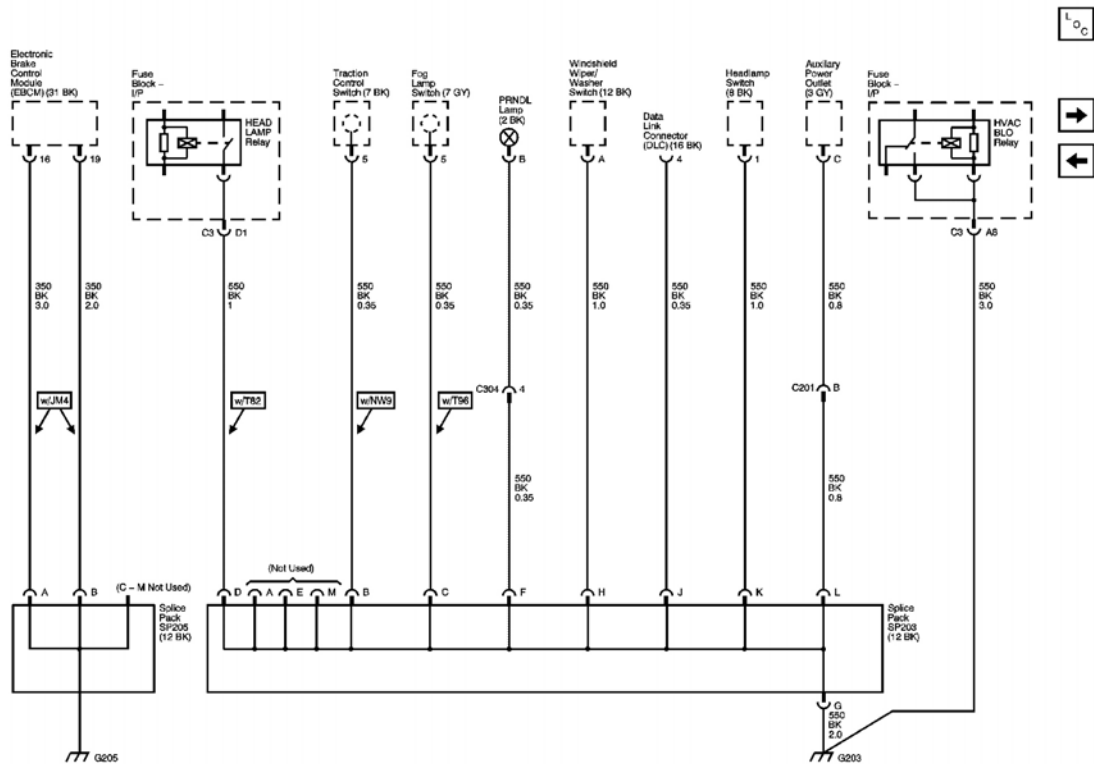


Fig. 47: G203 and G205 Schematics
 Courtesy of GENERAL MOTORS CORP.

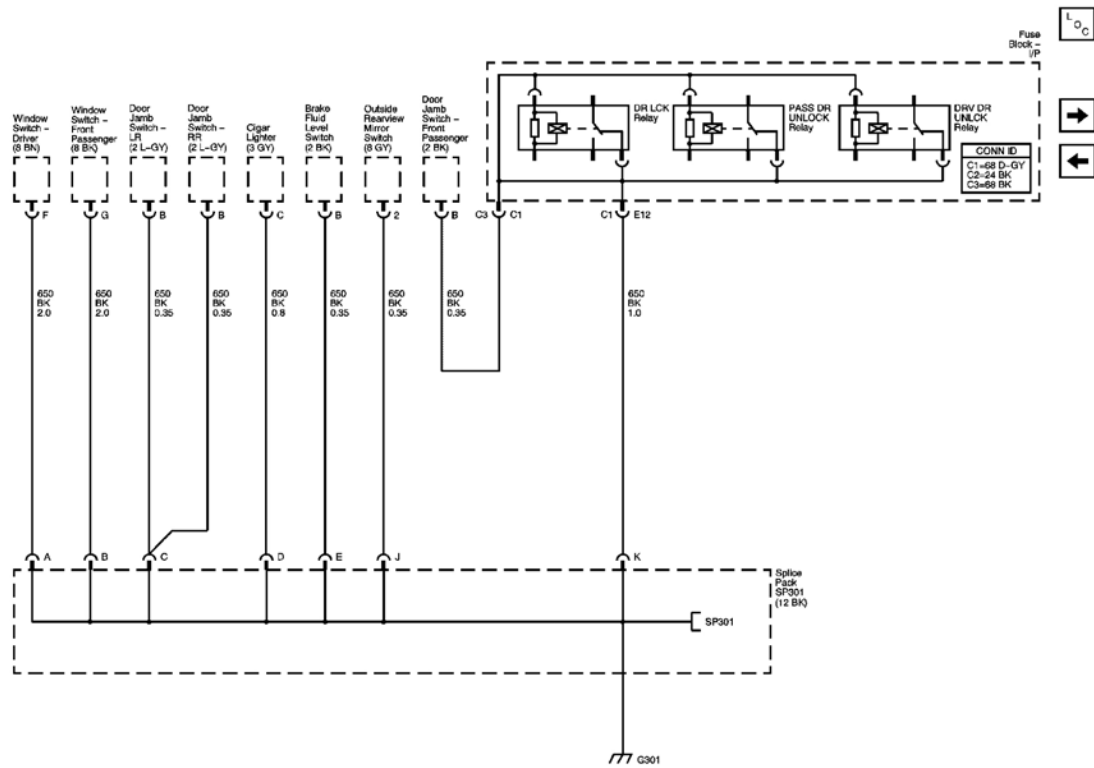


Fig. 48: G301 1 of 2 Schematics
 Courtesy of GENERAL MOTORS CORP.

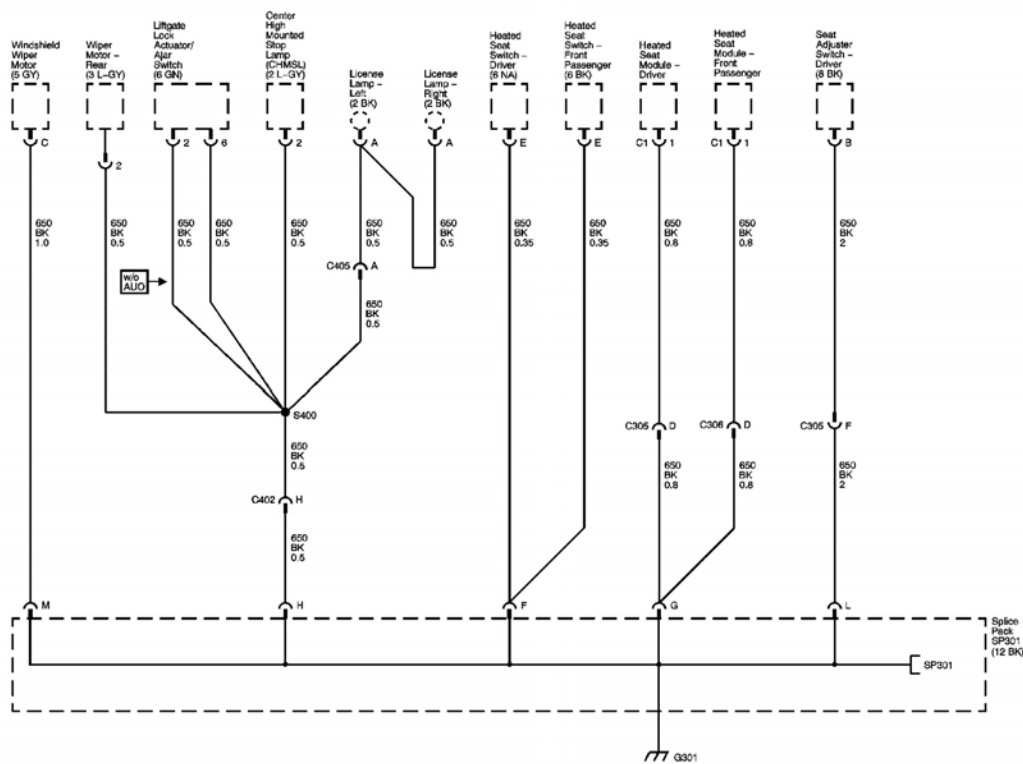


Fig. 49: G301 2 of 2 Schematics
Courtesy of GENERAL MOTORS CORP.

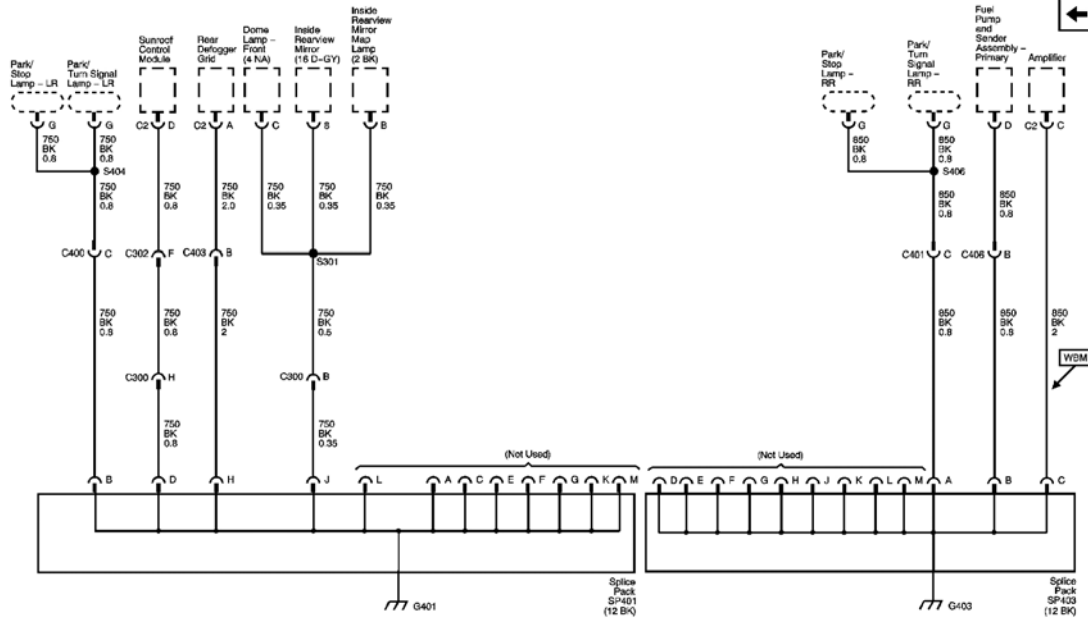


Fig. 50: G401 and G403 Schematics
 Courtesy of GENERAL MOTORS CORP.

HARNESS ROUTING VIEWS

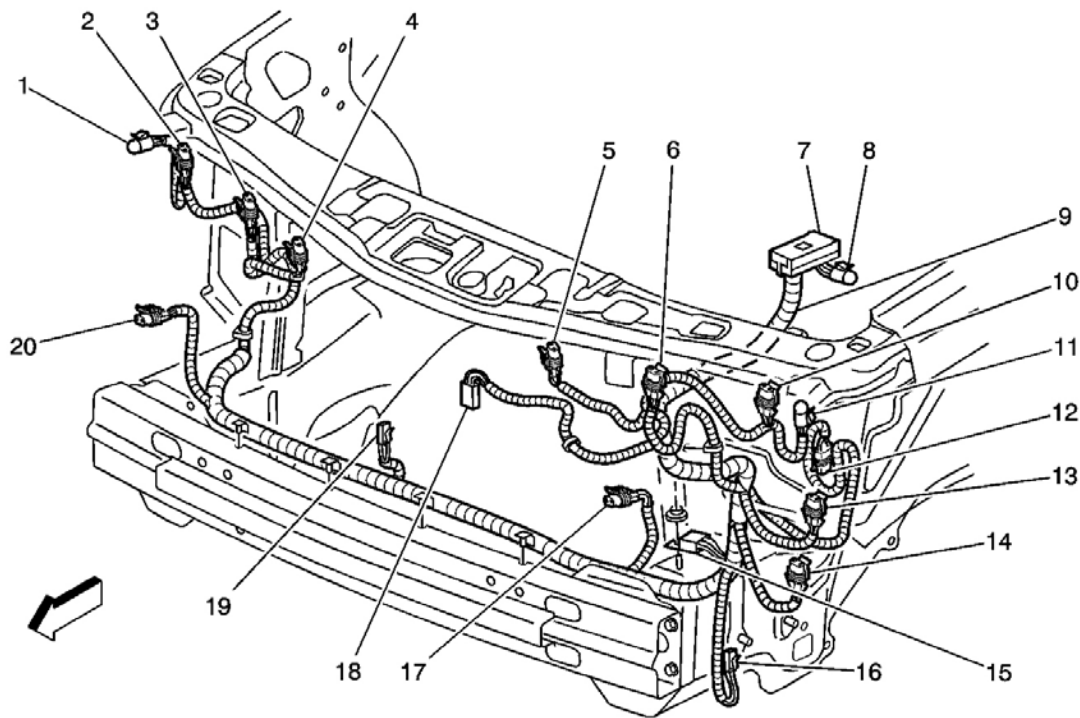


Fig. 51: Forward Lamp Harness (L61)
Courtesy of GENERAL MOTORS CORP.

Callouts For Fig. 51 Harness Routing View

Callout	Component Name
1	Marker Lamp - RF (2 GY)
2	Park/Turn Signal Lamp - RF (3 GY)
3	Headlamp - Right Low Beam (2 BK)
4	Headlamp - Right High Beam (2 BK)
5	Headlamp - Left High Beam (2 BK)
6	Headlamp - Left Low Beam (2 BK)
7	Fuse Block - Underhood C1
8	C106
9	S111
10	Park/Turn Signal Lamp - LF (3 GY)
11	Marker Lamp - LF (2 GY)
12	Windshield Washer Fluid Pump (2 BK)
13	Horn (2 GY)
14	Cooling Fan Resistor (2 GY)
15	Splice Pack SP301, G101
16	Daytime Running Lamp (DRL) Resistor (2 BK)

17	Fog Lamp - Left (2 BK) (w/T96)
18	Cooling Fan (3 TN)
19	Ambient Air Temperature Sensor (2 L-GN) (w/HAA)
20	Fog Lamp - Right (2 BK) (w/T96)

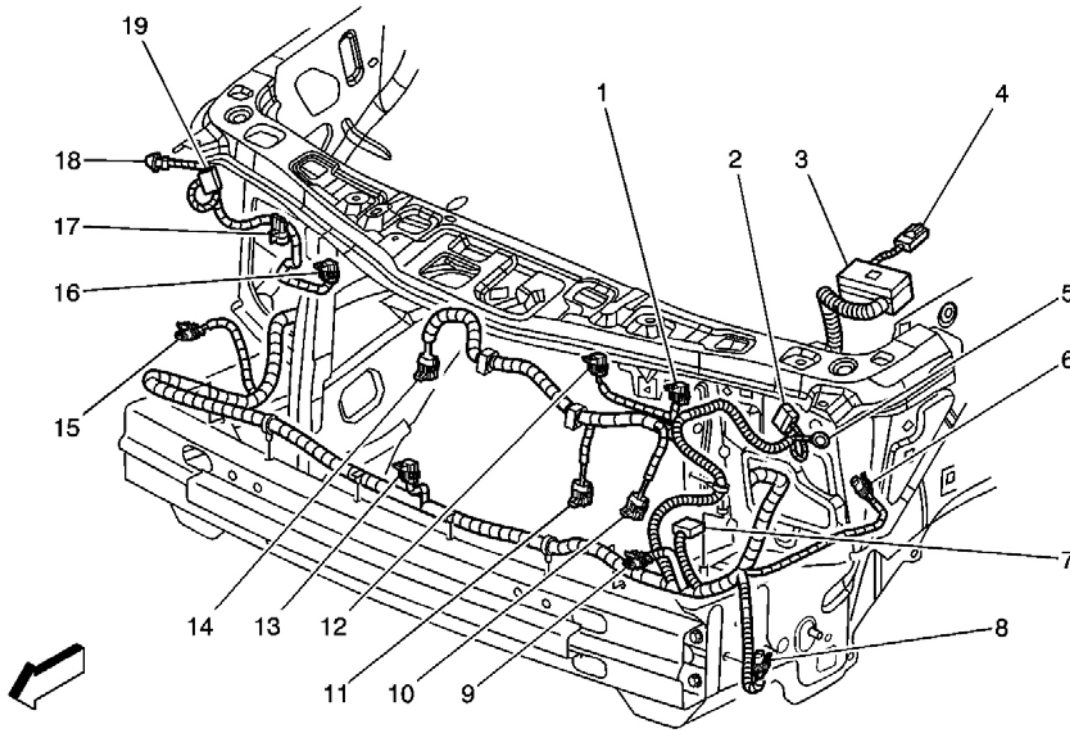


Fig. 52: Forward Lamp Harness (L66)
 Courtesy of GENERAL MOTORS CORP.

Callouts For Fig. 52 Harness Routing View

Callout	Component Name
1	Headlamp - Left Low Beam (2 BK)
2	Park/Turn Signal Lamp - LF (3 GY)
3	Fuse Block - Underhood C1
4	C106
5	Marker Lamp - LF (2 GY)
6	Horn (2 GY)
7	Splice Pack SP301, G101
8	Daytime Running Lamp (DRL) Resistor (2 BK)
9	Fog Lamp - Left (2 BK)
10	Cooling Fan Relay 3 (5 BK)

11	Cooling Fan - Left (3 TN)
12	Headlamp - Left High Beam (2 BK)
13	Ambient Air Temperature Sensor (2 L-GN)
14	Cooling Fan - Right (3 TN)
15	Fog Lamp - Right (2 BK)
16	Headlamp - Right High Beam (2 BK)
17	Headlamp - Right Low Beam (2 BK)
18	Marker Lamp - RF (2 GY)
19	Park/Turn Signal Lamp - RF (3 GY)

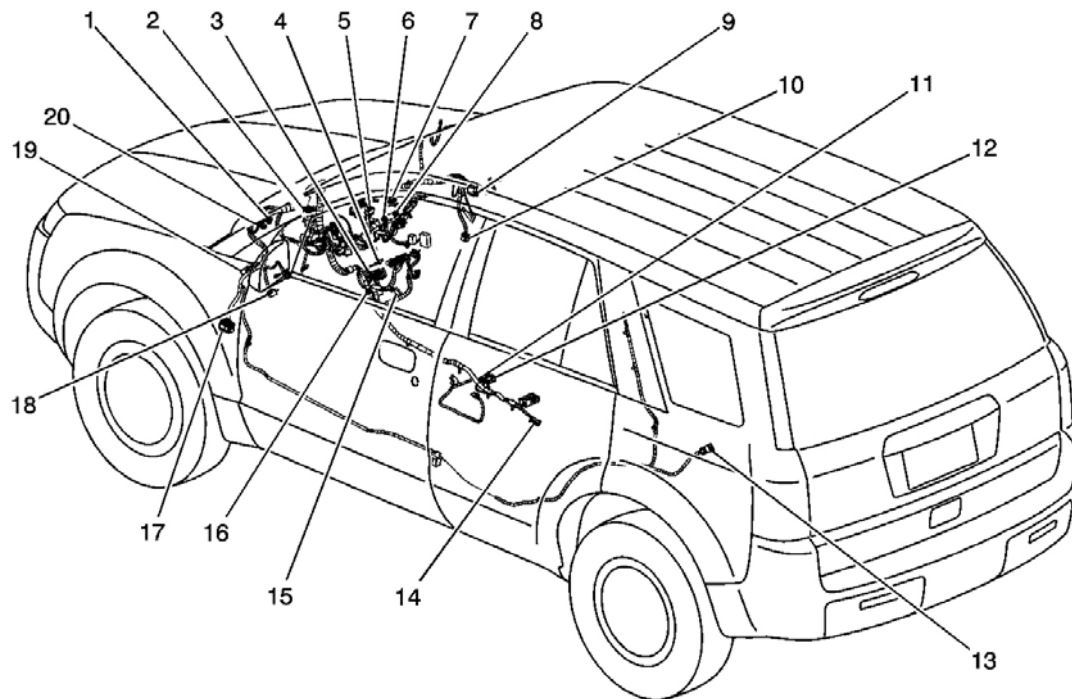


Fig. 53: I/P Harness Routing
 Courtesy of GENERAL MOTORS CORP.

Callouts For Fig. 53 Harness Routing View

Callout	Component Name
1	Inflatable Restraint Steering Wheel Module Coil C3
2	Instrument Panel Cluster (IPC)
3	I/P Fuse Block C2,C3
4	G203
5	C202 - HVAC Harness to the I/P Harness Connector
6	S201

7	C203 - I/P Harness to the Inflatable Restraint I/P Module Jumper Harness Connector
8	S205
9	Splice Pack SP201, G201
10	C311 - Body Harness to the I/P Harness Connector
11	C308 - SDM Harness to the SIS Harness Connector
12	C307 - Roof Rail Module Harness to the SDM Harness Connector
13	C303 - Headliner Harness to the I/P Harness Connector
14	C201 - Auxiliary Outlet Harness to the I/P Harness Connector
15	C204 - I/P Harness to the Digital Radio Harness Connector
16	S203
17	C200 - I/P Harness to the Body Harness Connector
18	Data Link Connector (DLC)
19	Splice Pack SP203
20	Inflatable Restraint Steering Wheel Module Coil C5

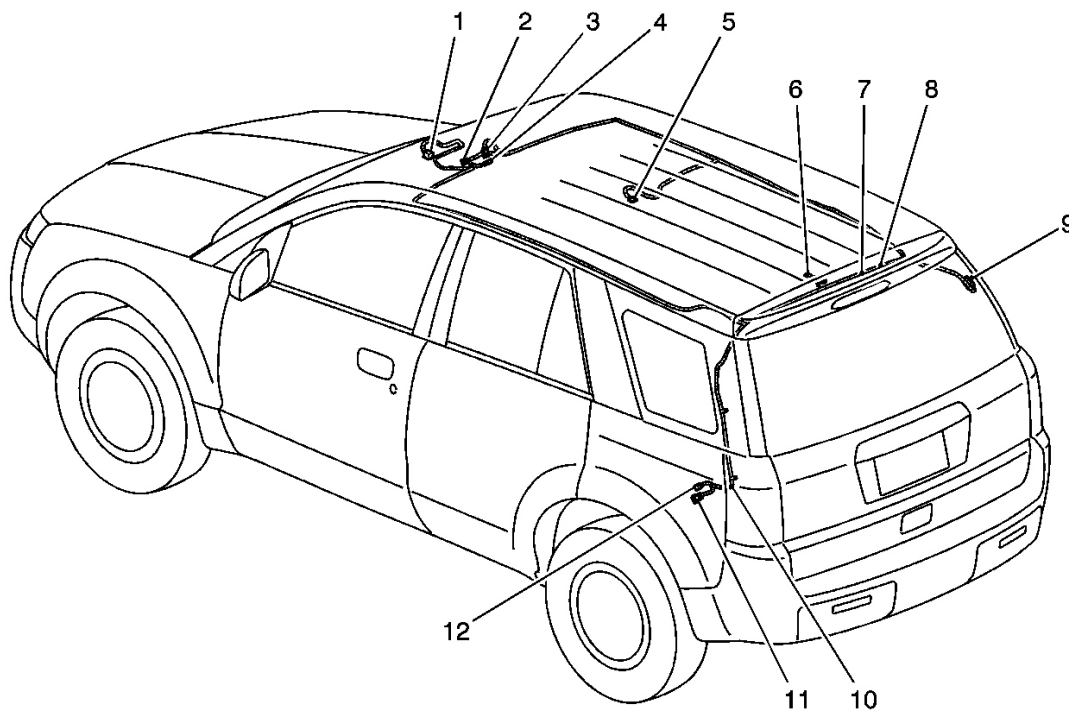


Fig. 54: Headliner Harness Routing
 Courtesy of GENERAL MOTORS CORP.

Callouts For Fig. 54 Harness Routing View

Callout	Component Name
1	Inside Rearview Mirror (ISRM)

2	Courtesy/Map Lamps
3	Sunroof Switch
4	Cellular Telephone Microphone
5	Dome Lamp - Front
6	Dome Lamp - Rear
7	S302
8	S303
9	C302 - Sunroof Harness to Headliner Harness Connector
10	S301
11	C300 - Body Harness to Headliner Harness Connector
12	C303 - Headliner Harness to I/P Harness Connector

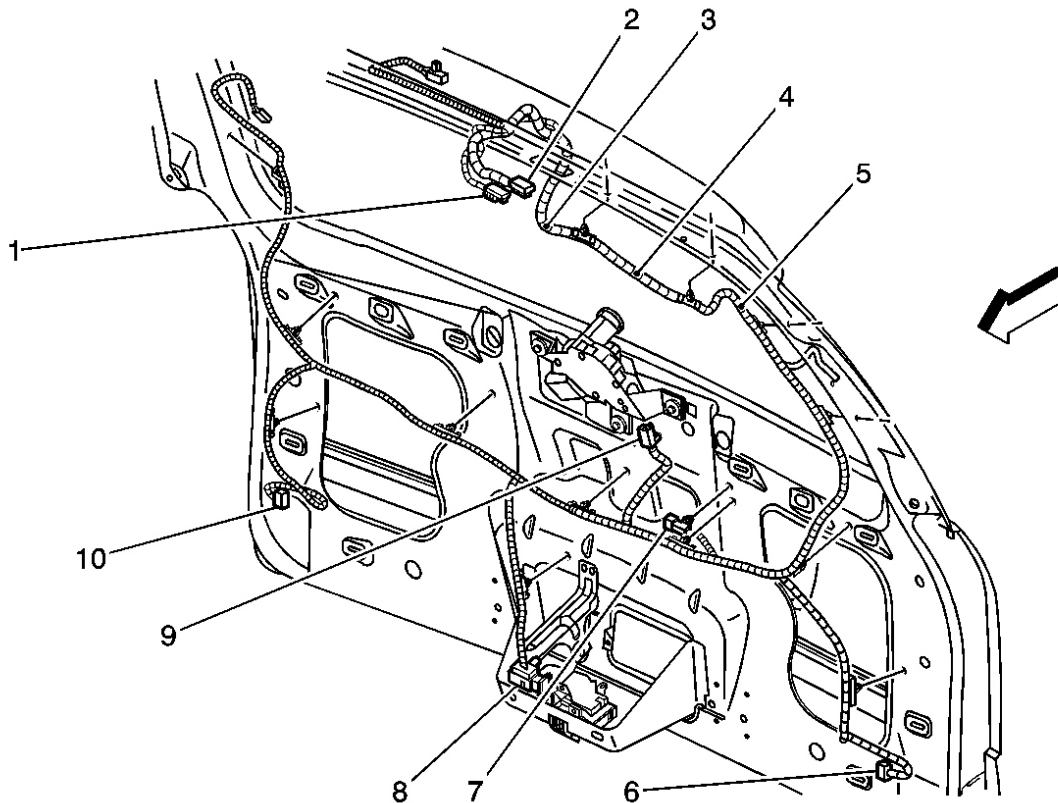


Fig. 55: Liftgate Harness
 Courtesy of GENERAL MOTORS CORP.

Callouts For Fig. 55 Harness Routing View

Callout	Component Name
1	Body Harness to the Liftgate Harness Connector C403

2	Body Harness to the Liftgate Harness Connector C402
3	S402
4	S400
5	S407
6	Liftgate Lamp - Left
7	License Lamp Harness to the Liftgate Harness Connector C405
8	Liftgate Lock Actuator/Ajar Switch
9	Wiper Motor - Rear
10	Liftgate Lamp - Right

COMPONENT LOCATOR

MASTER ELECTRICAL COMPONENT LIST

Master Electrical Component List

Name	Location	Locator View	Connector End View
3rd Clutch Pressure Switch (w/L66)	In the engine compartment, on the front side of the automatic transmission	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - 5AT	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - 5AT
4th Clutch Pressure Switch (w/L66)	In the engine compartment, on the top of the automatic transmission	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - 5AT	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - 5AT
A/C Compressor Clutch	At the lower right side of the engine, on the side of the A/C compressor	-	<u>HVAC Connector End Views</u> in HVAC - Manual
A/C Refrigerant Pressure Sensor	At the back side of the A/C compressor, on the dual line connector	-	<u>HVAC Connector End Views</u> in HVAC - Manual
Accelerator Pedal Position (APP) Sensor	Under the left side of the I/P, mounted on the pedal assembly	-	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L <u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Ambient Air Temperature Sensor (w/DH3)	At the front of the vehicle, behind the front grille	-	<u>Instrument Panel, Gages, and Console Connector End Views</u> in Instrument Panel, Gages and Console

Amplifier (w/ WBM)	In the passenger compartment, under the rear seat	<u>Entertainment Component Views</u> in Entertainment	<u>Entertainment Connector End Views</u> in Entertainment
Automatic Transmission Fluid Temperature (TFT) Sensor (w/L61)	In the engine compartment, at the top front corner of the automatic transmission	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - VT25-E	<u>Automatic Transmission Internal Connector End Views</u> in Automatic Transmission - VT25-E
Automatic Transmission Fluid Temperature (TFT) Sensor (w/L66)	In the engine compartment, on the lower left front corner of the automatic transmission	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - 5AT	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - 5AT
Automatic Transmission Input Shaft Speed Sensor (AT ISS) (w/ L61)	On the top left side of the transmission, near the PNP switch	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - VT25-E	<u>Automatic Transmission Internal Connector End Views</u> in Automatic Transmission - VT25-E
Automatic Transmission Input Shaft Speed Sensor (AT ISS) Diode (Late Production L61)	On the top left side of the transmission, near the A/T C1 connector	-	-
Automatic Transmission Input Shaft Speed Sensor (AT ISS) (w/L66)	On the front side of the transmission	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - 5AT	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - 5AT
Automatic Transmission Output Speed Sensor (OSS) (w/ L66)	On the front side of the transmission	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - 5AT	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - 5AT
Automatic Transmission Ratio Control Motor (w/ L61)	On the front top side of the transmission, near the module leadframe	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - VT25-E	<u>Automatic Transmission Internal Connector End Views</u> in Automatic Transmission - VT25-E
	In the front center console,	<u>Automatic</u>	

Automatic Transmission Shift Lock Solenoid (w/A/T)	part of the shifter assembly	<u>Transmission Shift Lock Control Component Views</u> in Shift Lock Control	<u>Automatic Transmission Shift Lock Control Connector End Views</u> in Shift Lock Control
Auxiliary Jack Switch Board (w/U32)	In the center of the headliner, part of the video display	<u>Entertainment Component Views</u> in Entertainment	-
Auxiliary Power Outlet	In the center of the passenger compartment, at the rear of the center console	<u>Power Outlet Component Views</u> in Power Outlets	<u>Power Outlet Connector End Views</u> in Power Outlets
Backup Lamp - Left	At the LR corner of the vehicle, the lower bulb socket in the tail lamp housing	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Backup Lamp - Right	At the RR corner of the vehicle, the lower bulb socket in the tail lamp housing	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Backup Switch (w/M/T)	On the left side of the transmission	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Battery	In the LF corner of the engine compartment	<u>Power and Grounding Component Views</u>	-
Blower Motor Resistor	On the HVAC module assembly, on the right side	<u>HVAC Component Views</u> in HVAC - Manual	<u>HVAC Connector End Views</u> in HVAC - Manual
Body Control Module (BCM)	In the center of the I/P, behind the HVAC control module	-	<u>Body Control System Connector End Views</u> in Body Control Systems
Brake Fluid Level Switch	At the LR of the engine compartment, at the base of the brake fluid reservoir	<u>Hydraulic Brakes Component Views</u> in Hydraulic Brakes	<u>Hydraulic Brakes Connector End Views</u> in Hydraulic Brakes
Brake Pressure Modulator Valve (BPMV)	In the LR corner of the engine compartment, below the brake master cylinder, attached to the EBCM	-	-
Camshaft Position Sensor (CMP) (w/L66)	On the top right corner of the engine	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
Cellular Antenna (w/UE1)	In the rear of the passenger compartment, near the LR quarter	<u>Cellular Communication Component Views</u> in	-

	window	Cellular Communication	
Cellular Telephone Microphone (w/UE1)	In the headliner, near the front courtesy lamps	<u>Cellular Communication Component Views</u> in Cellular Communication	<u>Cellular Communication Connector End Views</u> in Cellular Communication
Center High Mounted Stop Lamp (CHMSL)	At the rear of the roof, near the liftgate	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Cigar Lighter	In the front center console, to the right of the shifter assembly	<u>Power Outlet Component Views</u> in Power Outlets	<u>Power Outlet Connector End Views</u> in Power Outlets
Clutch Start Switch (w/ M/T)	Under the left side of the I/P, attached to the clutch pedal bracket	-	<u>Engine Electrical Connector End Views</u> in Engine Electrical
Clutch Pressure Control Solenoid Valve 1 (w/L66)	In the engine compartment, on the side of the automatic transmission	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - 5AT	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - 5AT
Clutch Pressure Control Solenoid Valve 2 (w/L66)	In the engine compartment, on the side of the automatic transmission	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - 5AT	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - 5AT
Coolant Level Switch	At the front of the engine compartment, mounted on the radiator	-	<u>Cooling System Connector End Views</u> in Engine Cooling
Cooling Fan (w/L61)	At the front of the engine compartment, mounted to the back of the radiator	<u>Cooling System Component Views</u> in Engine Cooling	<u>Cooling System Connector End Views</u> in Engine Cooling
Cooling Fan - Left (w/L66)	At the front of the engine compartment	<u>Cooling System Component Views</u> in Engine Cooling	<u>Cooling System Connector End Views</u> in Engine Cooling
Cooling Fan Relay 3 (w/L66)	At the left front corner of the engine compartment, clipped to the core support	<u>Cooling System Component Views</u> in Engine Cooling	<u>Cooling System Connector End Views</u> in Engine Cooling
Cooling Fan Resistor (w/L61)	At the LF corner of the vehicle, behind the headlamp assembly attached to the frame rail	<u>Cooling System Component Views</u> in Engine Cooling	<u>Cooling System Connector End Views</u> in Engine Cooling
Cooling Fan - Right	At the front of the engine	<u>Cooling System</u>	<u>Cooling System Connector</u>

(w/L66)	compartment	<u>Component Views</u> in Engine Cooling	<u>End Views</u> in Engine Cooling
Courtesy/Map Lamps (w/HAA)	At the front of the headliner, above the inside rearview mirror	-	-
Crankshaft Position (CKP) Sensor (w/L61)	At the rear of the engine, above the starter motor	<u>Engine Controls Component Views</u> in Engine Controls - 2.2L	<u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Crankshaft Position (CKP) Sensor (w/L66)	On the lower LF corner of the engine, behind the front engine cover	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
Cruise On/Off Switch (w/L61)	On the left steering wheel spoke	<u>Cruise Control Component Views</u> in Cruise Control	<u>Cruise Control Connector End Views</u> in Cruise Control
Cruise Set/Resume Switch (w/L61)	On the right steering wheel spoke	<u>Cruise Control Component Views</u> in Cruise Control	<u>Cruise Control Connector End Views</u> in Cruise Control
Cruise Control Switch (w/L66)	On the bottom steering wheel spoke	<u>Cruise Control Component Views</u> in Cruise Control	<u>Cruise Control Connector End Views</u> in Cruise Control
Cruise/Brake Switch	On the brake pedal assembly	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Data Link Connector (DLC)	At the left side of the I/P, near the kick panel	<u>Data Link Communications Component Views</u> in Data Link Communications	<u>Data Link Communications Connector End Views</u> in Data Link Communications
Daytime Running Lamps (DRL) Resistor	At the LF corner of the vehicle, behind the headlamp assembly attached to the frame rail	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Digital Radio Receiver (w/U2K)	In the passenger compartment, under the left side of the rear seat	-	<u>Entertainment Connector End Views</u> in Entertainment
Digital Radio Antenna (w/U2K)	On the roof of the vehicle, near the windshield	-	-
Dimmer Switch	In the center of the I/P, above the radio	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Dome Lamp - Front	In the center of the headliner, above the rear seats	<u>Harness Routing Views</u>	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Dome Lamp - Rear	At the rear of the headliner, near the liftgate	<u>Harness Routing</u>	<u>Lighting Systems Connector End Views</u> in Lighting

		<u>Views</u>	Systems
Door Jamb Switch - Driver	At the LF corner of the I/P, in the side access panel	-	<u>Power Door Systems Connector End Views</u> in Doors
Door Jamb Switch - Front Passenger	At the RF corner of the I/P, in the side access panel	-	<u>Power Door Systems Connector End Views</u> in Doors
Door Jamb Switch - LR	Near the base of the left center door pillar	-	<u>Power Door Systems Connector End Views</u> in Doors
Door Jamb Switch - RR	Near the base of the right center door pillar	-	<u>Power Door Systems Connector End Views</u> in Doors
Door Lock Actuator - Driver	Inside the LF door, part of the door lock mechanism	-	<u>Power Door Systems Connector End Views</u> in Doors
Door Lock Actuator - Front Passenger	Inside the RF door, part of the door lock mechanism	-	<u>Power Door Systems Connector End Views</u> in Doors
Door Lock Actuator - LR	Inside the LR door, part of the door lock mechanism	-	<u>Power Door Systems Connector End Views</u> in Doors
Door Lock Actuator - RR	Inside the RR door, part of the door lock mechanism	-	<u>Power Door Systems Connector End Views</u> in Doors
Door Lock Switch - Driver	In the LF door, mounted in the door trim panel	-	<u>Power Door Systems Connector End Views</u> in Doors
Door Lock Switch - Front Passenger	In the RF door, mounted in the door trim panel	-	<u>Power Door Systems Connector End Views</u> in Doors
Electronic Brake Control Module (EBCM) (w/JM4)	In the LR corner of the engine compartment, below the brake master cylinder	<u>ABS Component Views</u> in Antilock Brake System	<u>ABS Connector End Views</u> in Antilock Brake System
Engine Control Module (ECM) (w/L61)	On the engine, at the right front corner	<u>Engine Controls Component Views</u> in Engine Controls - 2.2L	<u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Engine Coolant Temperature (ECT) Sensor (w/L61)	On the back of the engine, by cylinder 4 exhaust manifold port	<u>Engine Controls Component Views</u> in Engine Controls - 2.2L	<u>Engine Control Module (ECM) Connector End Views</u> in Engine Controls - 2.2L
Engine Coolant Temperature (ECT) Sensor (w/L66)	On the upper left side of the engine, below the throttle body	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L

Engine Oil Pressure (EOP) Switch (w/L61)	On the engine, above the starter motor	-	<u>Instrument Panel, Gages, and Console Connector End Views</u> in Instrument Panel, Gages and Console
Engine Oil Pressure (EOP) Switch (w/L66)	At the lower right rear corner of the engine	-	<u>Instrument Panel, Gages, and Console Connector End Views</u> in Instrument Panel, Gages and Console
EPS Inline Fuse Holder	In the engine compartment, on the left strut tower, near the a/c line	-	-
EPS Motor	Under the left side of the I/P, attached to the PSCM, part of the steering column	-	-
Evaporative Emissions (EVAP) Canister Purge Solenoid (w/L61)	On the left side of the engine, below the ignition control module	<u>Engine Controls Component Views</u> in Engine Controls - 2.2L	<u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Evaporative Emissions (EVAP) Canister Purge Solenoid (w/L66)	At the top rear of the engine, near the rear valve cover	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
Evaporative Emissions (EVAP) Canister Vent Solenoid	Under the rear of the vehicle, on the EVAP canister in front of the fuel tank	-	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L <u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Evaporator Temperature Sensor	In the engine compartment, on the expansion valve block	-	<u>HVAC Connector End Views</u> in HVAC - Manual
Exhaust Gas Recirculation (EGR) Valve (w/L66)	On the LF side of the engine	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Powertrain Control Module (PCM) Connector End Views</u> in Engine Controls - 3.5L
Fog Lamp - Left (w/T96)	At the LF corner of the vehicle, below the headlamp assembly	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Fog Lamp - Right (w/T96)	At the RF corner of the vehicle, below the headlamp assembly	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Fog Lamp Switch (w/T96)	In the front center console, near the radio	-	<u>Lighting Systems Connector End Views</u> in Lighting

			Systems
Fuel Injectors	On top of the engine, under the fuel rail	-	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L <u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Fuel Pump and Sender Assembly - Primary	At the rear of the vehicle, inside the fuel tank, on the right side	-	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L <u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Fuel Pump and Sender Assembly - Secondary	At the rear of the vehicle, inside the fuel tank, on the left side	-	-
Fuel Tank Pressure (FTP) Sensor	At the rear of the vehicle, on top of the primary fuel pump and sender assembly	-	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L <u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Fuse Block - I/P	In the center of the I/P, on the right front side of the center console	<u>Power and Grounding Component Views</u>	<u>Power and Grounding Connector End Views</u>
Fuse Block - Underhood	At the LR corner of the engine compartment	<u>Power and Grounding Component Views</u>	<u>Power and Grounding Connector End Views</u>
Generator	At the lower right side of the engine	<u>Engine Electrical Component Views</u> in Engine Electrical	<u>Engine Electrical Connector End Views</u> in Engine Electrical
GPS Antenna	In the headliner, near the windshield	<u>Cellular Communication Component Views</u> in Cellular Communication	-
Hazard Switch	In the center of the I/P, above and to the left of the radio	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Headlamp - High Beams	At the front corners of the vehicle, the inboard cavity of the headlamp assembly	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Headlamp - Low Beams	At the front corners of the vehicle, the outboard cavity of the headlamp	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems

	assembly		
Headlamp Switch	On the left side of the steering column	<u>Lighting Systems Component Views</u> in Lighting Systems	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Heated Oxygen Sensor (HO2S) 1 (w/L61)	At the rear of the engine, in the exhaust manifold	<u>Engine Controls Component Views</u> in Engine Controls - 2.2L	<u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Heated Oxygen Sensor (HO2S) 2 (w/L61)	Under the vehicle, in the exhaust manifold behind the catalytic convertor, connector located on the right frame near the strut tower	<u>Engine Controls Component Views</u> in Engine Controls - 2.2L	<u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Heated Oxygen Sensor (HO2S) Bank 1 Sensor 1 (w/L66)	In the rear exhaust manifold	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
Heated Oxygen Sensor (HO2S) Bank 1 Sensor 2 (w/L66)	In the rear exhaust pipe, after the catalytic convertor, before the resonator	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
Heated Oxygen Sensor (HO2S) Bank 2 Sensor 1 (w/L66)	In the front exhaust manifold	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
Heated Oxygen Sensor (HO2S) Bank 2 Sensor 2 (w/L66)	In the front exhaust pipe, just beyond the catalytic convertor, near the A/C compressor	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
Heated Seat Back (w/KA1)	Inside the seat back, connects directly to the heated seat module	-	-
Heated Seat Cushion (w/KA1)	Inside the seat cushion, connects directly to the heated seat module	-	-
Heated Seat Module - Driver (w/KA1)	Under the LF seat, mounted on the seat bracket	-	<u>Power Seat Systems Connector End Views</u> in Seats
Heated Seat Module - Front Passenger (w/KA1)	Under the RF seat, mounted on the seat bracket	-	<u>Power Seat Systems Connector End Views</u> in Seats
Heated Seat Switch - Driver (w/KA1)	In the front center console, near the shifter assembly	<u>Power Seat Systems Component Views</u> in Seats	<u>Power Seat Systems Connector End Views</u> in Seats
Heated Seat Switch - Front Passenger (w/KA1)	In the front center console, near the shifter assembly	<u>Power Seat Systems Component Views</u> in Seats	<u>Power Seat Systems Connector End Views</u> in Seats

Horn	At the front of the vehicle, behind the left headlamp	-	<u>Horns Connector End Views</u> in Horns
Horn Switch	On the steering column, part of the inflatable restraint steering wheel module	-	<u>Horns Connector End Views</u> in Horns
HVAC Blower Motor	On the HVAC module assembly, on the right side	<u>HVAC Component Views</u> in HVAC - Manual	<u>HVAC Connector End Views</u> in HVAC - Manual
HVAC Control Module	In the center of the I/P, below the radio, contains the HVAC controls	-	<u>HVAC Connector End Views</u> in HVAC Systems - Manual
Ignition Coil Module (ICM) (w/L61)	On the top of the engine, in the center of the valve cover, connects above cylinder 4	<u>Engine Controls Component Views</u> in Engine Controls - 2.2L	<u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Ignition Control Modules (ICM) (w/L66)	On the top of the engine, above the corresponding cylinder	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
Ignition Switch	On the right side of the steering column	-	<u>Power and Grounding Connector End Views</u>
Inflatable Restraint I/P Module	In the right side of the I/P, above the I/P compartment	<u>SIR Component Views</u> in SIR	<u>SIR Connector End Views</u> in SIR
Inflatable Restraint Roof Rail Module - Left (w/ASF)	Behind the left side of the headliner, above the left doors	<u>SIR Component Views</u> in SIR	<u>SIR Connector End Views</u> in SIR
Inflatable Restraint Roof Rail Module - Right (w/ASF)	Behind the right side of the headliner, above the right doors	<u>SIR Component Views</u> in SIR	<u>SIR Connector End Views</u> in SIR
Inflatable Restraint Sensing and Diagnostic Module (SDM)	In the center of the passenger compartment, under the rear of the center console	<u>SIR Component Views</u> in SIR	<u>SIR Connector End Views</u> in SIR
Inflatable Restraint Side Impact Sensor (SIS) - Left (w/ASF)	At the left side of the passenger compartment, at the base of the left center door pillar	<u>SIR Component Views</u> in SIR	<u>SIR Connector End Views</u> in SIR
Inflatable Restraint Side Impact Sensor (SIS) - Right (w/ASF)	At the right side of the passenger compartment, at the base of the right center door pillar	<u>SIR Component Views</u> in SIR	<u>SIR Connector End Views</u> in SIR
Inflatable Restraint Steering Wheel Module	In the center of the steering wheel	<u>SIR Component Views</u> in SIR	<u>SIR Connector End Views</u> in SIR

Inflatable Restraint Steering Wheel Module Coil	At the top of the steering column, behind the steering wheel	<u>SIR Component Views</u> in SIR	<u>SIR Connector End Views</u> in SIR
Inflatable Restraint Steering Wheel Module Coil C1	Coil pigtail to the steering wheel module connector, at the top of the steering column, behind the steering wheel	-	-
Inflatable Restraint Steering Wheel Module Coil C2	Coil pigtail to the steering wheel module connector, at the top of the steering column, behind the steering wheel	-	-
Inflatable Restraint Steering Wheel Module Coil C3	Coil pigtail to the I/P harness, at the base of the steering column	-	-
Inflatable Restraint Steering Wheel Module Coil C4	Coil pigtail to the cruise control switch(s) connector, at the top of the steering column, behind the steering wheel	-	-
Inflatable Restraint Steering Wheel Module Coil C5	Coil pigtail to the I/P harness, at the base of the steering column	-	-
Inside Rearview Mirror (ISRVM)	At the center front of the headliner, mounted on the windshield	-	<u>Stationary Windows Connector End Views</u> in Stationary Windows
Inside Rearview Mirror Lamp (Courtesy/Map Lamps - Front) (w/HAA)	At the front center of the headliner	<u>Harness Routing Views</u>	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Instrument Panel Cluster (IPC)	At the top left side of the I/P	-	<u>Instrument Panel, Gages, and Console Connector End Views</u> in Instrument Panel, Gages and Console
Intake Air Temperature (IAT) Sensor (w/L61)	In the engine compartment, in the air cleaner duct	<u>Engine Controls Component Views</u> in Engine Controls - 2.2L	<u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Intake Air Temperature (IAT) Sensor 1 (w/L66)	At the right side of the engine compartment, on the lower left side of the air cleaner housing, near the PCM	-	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
	On the left side of the		

Intake Air Temperature (IAT) Sensor 2 (w/L66)	engine, attached to the front of the intake manifold, near the throttle body	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
Knock Sensor (KS) (w/L61)	Behind the starter, connector fastened to the engine oil dipstick bracket	-	<u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Knock Sensor (KS) (w/L66)	At the top center of the engine, beneath the intake manifold	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
License Lamps	On the outside of the liftgate	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Liftgate Lamps	On the liftgate trim panel, at the lower rear corners	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Liftgate Lock Actuator/Ajar Switch	At the bottom center of the liftgate	-	<u>Body Rear End Connector End Views</u> in Body Rear End
Marker Lamp - LF	At the LF corner of the vehicle, attached next to the headlamp housing assembly	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Marker Lamp - RF	At the RF corner of the vehicle, attached next to the headlamp housing assembly	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Manifold Absolute Pressure (MAP) Sensor (w/L61)	On the engine, under the fuel rail, in the intake manifold, at cylinder 3	-	<u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Manifold Absolute Pressure (MAP) Sensor (w/L66)	On the left side of the engine, on top of the throttle body	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
Mode Actuator - Defrost	On the left side of the HVAC module assembly, near the accelerator pedal	<u>HVAC Component Views</u> in HVAC Systems - Manual	<u>HVAC Connector End Views</u> in HVAC Systems - Manual
Mode Actuator - Floor	On the upper left side of the HVAC module assembly, near the accelerator pedal	<u>HVAC Component Views</u> in HVAC Systems - Manual	<u>HVAC Connector End Views</u> in HVAC Systems - Manual
Mode Actuator - Panel	On the right side of the HVAC module assembly, behind the I/P compartment	<u>HVAC Component Views</u> in HVAC Systems - Manual	<u>HVAC Connector End Views</u> in HVAC Systems - Manual
Outside Rearview Mirror - Driver	Mounted on the outside of the LF door	<u>Power Door Systems Component Views</u> in	<u>Power Door Systems Connector End Views</u> in

		Doors	Doors
Outside Rearview Mirror - Front Passenger	Mounted on the outside of the RF door	<u>Power Door Systems Component Views</u> in Doors	<u>Power Door Systems Connector End Views</u> in Doors
Outside Rearview Mirror Switch	Mounted in the front center console, on the left side of the shifter assembly	-	<u>Power Door Systems Connector End Views</u> in Doors
Park Brake Switch	In the center of the passenger compartment, in the center console, at the base of the park brake bracket	<u>Hydraulic Brakes Component Views</u> in Hydraulic Brakes	<u>Hydraulic Brakes Connector End Views</u> in Hydraulic Brakes
Park/Neutral Position (PNP) Switch (w/ A/T)	In the engine compartment, on the top of the automatic transmission	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - VT25-E <u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - 5AT	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - 5AT <u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - VT25-E
Park/Stop Lamp - LR	At the LR corner of the vehicle, the top bulb socket in the tail lamp housing	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Park/Stop Lamp - RR	At the RR corner of the vehicle, the top bulb socket in the tail lamp housing	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Park/Turn Signal Lamp - LF	At the LF corner of the vehicle, in the headlamp assembly	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Park/Turn Signal Lamp - LR	At the LR corner of the vehicle, the middle bulb socket in the tail lamp housing	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Park/Turn Signal Lamp - RF	At the RF corner of the vehicle, in the headlamp assembly	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Park/Turn Signal Lamp - RR	At the RR corner of the vehicle, the middle bulb socket in the tail lamp	-	<u>Lighting Systems Connector End Views</u> in Lighting

	housing		Systems
Passlock Sensor (w/UA6)	In the steering column, part of the ignition lock cylinder case	-	<u>Theft Deterrent System Connector End Views</u> in Theft Deterrent
Power Steering Control Module (PSCM)	Under the left side of the I/P, behind the knee bolster, serviced as part of the steering column	-	<u>Power Steering System Connector End Views</u> in Power Steering System
Powertrain Control Module (PCM) (w/L66)	In the engine compartment, mounted near the right strut tower, beneath the air duct	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Powertrain Control Module (PCM) Connector End Views</u> in Engine Controls - 3.5L
PRNDL Lamp	In the center console, near the shift control assembly	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Radio	In the I/P, above the HVAC control module	<u>Entertainment Component Views</u> in Entertainment	<u>Entertainment Connector End Views</u> in Entertainment
Rear Defogger Grid	In the liftgate, on the rear window	<u>Stationary Windows Component Views</u> in Stationary Windows	<u>Stationary Windows Connector End Views</u> in Stationary Windows
Recirculation Actuator	On the HVAC module assembly, at the upper right corner	<u>HVAC Component Views</u> in HVAC Systems - Manual	<u>HVAC Connector End Views</u> in HVAC Systems - Manual
Rocker Arm Oil Pressure Switch	On the lower RR side of the engine, near the oil filter	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Powertrain Control Module (PCM) Connector End Views</u> in Engine Controls - 3.5L
Rocker Arm Oil Control Solenoid	On the lower RR side of the engine, near the oil filter	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Powertrain Control Module (PCM) Connector End Views</u> in Engine Controls - 3.5L
Seat Adjuster Switch - Driver (w/AG1)	On the left side of the driver seat cushion	-	<u>Power Seat Systems Connector End Views</u> in Seats
Seat Horizontal Motor - Driver (w/AG1)	Under the driver seat cushion, connected directly to the seat adjuster switch	-	-
Seat Recline Motor - Driver (w/AG1)	Under the driver seat	-	<u>Power Seat Systems Connector End Views</u> in Seats
Seat Vertical Motor - Driver (w/AG1)	Under the driver seat	-	<u>Power Seat Systems Connector End Views</u> in Seats

Seat Belt Switch - Left	Part of the seat buckle assembly, under the drivers seat, clipped to the seat frame	<u>Seat Belt Component Views</u> in Seat Belts	<u>Seat Belt Connector End Views</u> in Seat Belts
Shift Solenoid 1,2,3 (w/L66)	Internal to the automatic transmission, at the LF corner	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - 5AT	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - 5AT
Speaker - LF	In the LF door, at the lower front corner behind the door trim	<u>Entertainment Component Views</u> in Entertainment	<u>Entertainment Connector End Views</u> in Entertainment
Speaker - LF (Tweeter) (w/ UW6 or WBM)	In the LF door, at the top corner	<u>Entertainment Component Views</u> in Entertainment	<u>Entertainment Connector End Views</u> in Entertainment
Speaker - LR	In the LR door, at the lower front corner behind the door trim	<u>Entertainment Component Views</u> in Entertainment	<u>Entertainment Connector End Views</u> in Entertainment
Speaker - RF	In the RF door, at the lower front corner behind the door trim	<u>Entertainment Component Views</u> in Entertainment	<u>Entertainment Connector End Views</u> in Entertainment
Speaker - RF (Tweeter) (w/ UW6 or WBM)	In the RF door, at the top corner	<u>Entertainment Component Views</u> in Entertainment	<u>Entertainment Connector End Views</u> in Entertainment
Speaker - RR	In the RR door, at the lower front corner behind the door trim	<u>Entertainment Component Views</u> in Entertainment	<u>Entertainment Connector End Views</u> in Entertainment
Speaker - Subwoofer (w/WBM)	In the passenger compartment, in the RR corner behind the quarter trim panel	<u>Entertainment Component Views</u> in Entertainment	<u>Entertainment Connector End Views</u> in Entertainment
Starter Motor	At the lower left front corner of the engine, near the transmission	-	-
Starter Relay	At the lower left front corner of the engine compartment, near the tie bar	-	<u>Engine Electrical Connector End Views</u> in Engine Electrical
Starter Solenoid	At the lower left front corner of the engine, attached to the start motor	-	-
Steering Shaft Torque Sensor	Under the left side of the I/P, attached to the PSCM, part of the steering	-	-

	column		
Stop Lamp Switch	Under the left side of the I/P, on the brake pedal assembly	-	<u>Lighting Systems Connector End Views</u> in Lighting Systems
Sunroof Control Module (w/CF5)	Under the headliner, at the left front of the sunroof module assembly	-	<u>Power Roof Systems Connector End Views</u> in Roof
Sunroof Motor (w/CF5)	Under the headliner, at the right front of the sunroof module assembly	-	<u>Power Roof Systems Connector End Views</u> in Roof
Sunroof Switch (w/CF5)	In the center front of the headliner, near the front courtesy/map lamps	<u>Harness Routing Views</u>	<u>Power Roof Systems Connector End Views</u> in Roof
Throttle Actuator Control (TAC) Module (w/L61)	At the front of the engine, part of the throttle body assembly	<u>Engine Controls Component Views</u> in Engine Controls - 2.2L	<u>Engine Controls Connector End Views</u> in Engine Controls - 2.2L
Throttle Actuator Control (TAC) Module (w/L66)	At the top right side of the engine, part of the throttle body assembly	<u>Engine Controls Component Views</u> in Engine Controls - 3.5L	<u>Engine Controls Connector End Views</u> in Engine Controls - 3.5L
Torque Converter Clutch (TCC) Pressure Control (PC) Solenoid Valve (w/L61)	In the engine compartment, on the top of the automatic transmission	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - VT25-E	<u>Automatic Transmission Internal Connector End Views</u> in Automatic Transmission - VT25-E
Torque Converter Clutch Pressure Control Solenoid Valve (w/L66)	In the engine compartment, on the top of the automatic transmission	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - 5AT	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - 5AT
Torque Converter Clutch (TCC) Enable Solenoid Valve (w/L66)	Internal to the automatic transmission, at the LF corner	<u>Automatic Transmission Electronic Component Views</u> in Automatic Transmission - 5AT	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - 5AT
Traction Control Switch (w/NW9)	In the center of the I/P, above and to the right of the radio	-	<u>ABS Connector End Views</u> in Antilock Brake System
Transmission Control Module (TCM) (w/L61)	At the LR corner of the engine compartment, near the LF strut tower	-	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - VT25-E
	In the engine		<u>Automatic Transmission</u>

Transmission Range Switch (PNP Switch) (w/ A/T)	compartment, on the top of the automatic transmission	-	<u>Related Connector End Views</u> in Automatic Transmission - 5AT <u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - VT25-E
Vehicle Communication Interface Module (VCIM) (w/UE1)	Under the left side of the I/P, attached to the accelerator pedal bracket	<u>Cellular Communication Component Views</u> in Cellular Communication	<u>Cellular Communication Connector End Views</u> in Cellular Communication
Vehicle Speed Sensor (VSS) (L61 w/M/T)	On the side of the transmission case	-	<u>Cellular Communication Connector End Views</u> in Manual Transmission - Getrag 5 Speed
Vehicle Speed Sensor (VSS) (L61 w/A/T)	On the top of the automatic transmission, near the PNP switch, part of the A/T input and output speed sensor assembly	-	<u>Automatic Transmission Related Connector End Views</u> in Automatic Transmission - VT25-E
Video Display (w/U32)	In the center of the headliner, part of the video display console assembly	<u>Entertainment Component Views</u> in Entertainment	<u>Entertainment Connector End Views</u> in Entertainment
Wheel Speed Sensor (WSS) - LF	On the LF wheel steering knuckle	<u>ABS Component Views</u> in Antilock Brake System	<u>ABS Connector End Views</u> in Antilock Brake System
Wheel Speed Sensor (WSS) - LR	On the LR wheel hub	<u>ABS Component Views</u> in Antilock Brake System	<u>ABS Connector End Views</u> in Antilock Brake System
Wheel Speed Sensor (WSS) - RF	On the RF wheel steering knuckle	<u>ABS Component Views</u> in Antilock Brake System	<u>ABS Connector End Views</u> in Antilock Brake System
Wheel Speed Sensor (WSS) - RR	On the RR wheel hub	<u>ABS Component Views</u> in Antilock Brake System	<u>ABS Connector End Views</u> in Antilock Brake System
Window Motor - Driver (w/HAA)	In the LF door	-	<u>Power Door Systems Connector End Views</u> in Doors
Window Motor - Front Passenger (w/HAA)	In the RF door	-	<u>Power Door Systems Connector End Views</u> in Doors
Window Motor - LR	In the LR door	<u>Power Door Systems</u>	<u>Power Door Systems</u>

(w/HAA)		<u>Component Views</u> in Doors	<u>Connector End Views</u> in Doors
Window Motor - RR (w/HAA)	In the RR door	<u>Power Door Systems Component Views</u> in Doors	<u>Power Door Systems Connector End Views</u> in Doors
Window Switch - Driver (w/HAA)	In the front center console, on the left side of the shifter assembly	<u>Power Door Systems Component Views</u> in Doors	<u>Power Door Systems Connector End Views</u> in Doors
Window Switch - Front Passenger	In the front center console, on the right side of the shifter assembly	<u>Power Door Systems Component Views</u> in Doors	<u>Power Door Systems Connector End Views</u> in Doors
Window Switch - LR (w/HAA)	In the LR door, on the door trim panel	<u>Power Door Systems Component Views</u> in Doors	<u>Power Door Systems Connector End Views</u> in Doors
Window Switch - RR (w/HAA)	In the RR door, on the door trim panel	<u>Power Door Systems Component Views</u> in Doors	<u>Power Door Systems Connector End Views</u> in Doors
Windshield Washer Fluid Pump	In the LF corner of the engine compartment, at the base of the washer fluid reservoir	-	<u>Wiper/Washer System Connector End Views</u> in Wiper/Washer Systems
Windshield Wiper Motor	Under the left side of the cowl, part of the front wiper module assembly	-	<u>Wiper/Washer System Connector End Views</u> in Wiper/Washer Systems
Windshield Wiper/Washer Switch	On the steering column, on the right side	-	<u>Wiper/Washer System Connector End Views</u> in Wiper/Washer Systems
Wiper Motor - Rear	In the liftgate, behind the liftgate trim panel, part of the rear wiper module assembly	-	<u>Wiper/Washer System Connector End Views</u> in Wiper/Washer Systems
C100 (14 cavities)	Engine harness to the transmission harness, on the top front side of the transmission	-	<u>Automatic Transmission Inline Harness Connector End View</u> in Automatic Transmission - 5AT <u>Automatic Transmission Inline Harness Connector End View</u> in Automatic Transmission - VT25-E
C102 (10 cavities) (w/L61)	Engine harness to the body harness, at the LR of the engine compartment, behind the fuse block	-	<u>Inline Harness Connector End Views</u>
C102 (10 cavities)	Engine harness to the body harness, at the RR of		<u>Inline Harness Connector</u>

(L66)	the engine compartment, near the top of the strut tower	-	<u>End Views</u>
C103 (6 cavities) (L66)	Engine harness to the crankshaft position sensor harness, at the right rear corner of the engine, near the timing belt cover	-	<u>Inline Harness Connector</u> <u>End Views</u>
C104 (2 cavities)	LF WSS harness to the body harness, near the LF wheel opening, clipped on the steering knuckle	-	<u>Inline Harness Connector</u> <u>End Views</u>
C105 (2 cavities)	RF WSS harness to the body harness, near the RF wheel opening, clipped on the steering knuckle	-	<u>Inline Harness Connector</u> <u>End Views</u>
C106 (3 cavities) (w/HAA)	Body harness to the forward lamp harness, at the LR corner of the engine compartment, behind the underhood fuse block	<u>Harness Routing Views</u>	<u>Inline Harness Connector</u> <u>End Views</u>
C107 (1 cavity) (L66)	Engine harness to the knock sensor harness, near the intake manifold	-	-
C150 (8 cavities) (w/L61)	Injector harness to the engine harness, at the top front side of the engine, under the ECM	-	<u>Inline Harness Connector</u> <u>End Views</u>
C200 (40 cavities)	I/P harness to the body harness, under the left side of the I/P, behind the LF kick panel	<u>Harness Routing Views</u>	<u>Inline Harness Connector</u> <u>End Views</u>
C201 (2 cavities)	Auxiliary outlet harness to the I/P harness, at the center of the passenger compartment, under the center console	<u>Harness Routing Views</u>	<u>Inline Harness Connector</u> <u>End Views</u>
C202 (16 cavities)	HVAC harness to the I/P harness, under the right side of the I/P, near the blower motor	<u>Harness Routing Views</u>	<u>Inline Harness Connector</u> <u>End Views</u>
C203 (4 cavities)	I/P harness to the I/P passenger inflatable restraint module harness, under the right side of the	-	<u>Inline Harness Connector</u> <u>End Views</u>

	I/P		
C204 (6 cavities)	I/P harness to the body harness, inline to the digital radio receiver	-	-
C300 (10 cavities)	Body harness to the headliner harness, in the passenger compartment, behind the LR quarter trim, attached to the wheel well	<u>Harness Routing Views</u>	<u>Inline Harness Connector End Views</u>
C302 (8 cavities) (w/CF5)	Sunroof harness to the headliner harness, in the passenger compartment, at the RR corner behind the rear pillar trim panel	<u>Harness Routing Views</u>	<u>Inline Harness Connector End Views</u>
C303 (8 cavities) (w/UE1)	I/P harness to the headliner harness, behind the LR quarter trim, attached to the wheel well, near C300	<u>Harness Routing Views</u>	<u>Inline Harness Connector End Views</u>
C304 (4 cavities)	Shifter harness to the I/P harness, near the shifter assembly, under the front center console	<u>Harness Routing Views</u>	<u>Inline Harness Connector End Views</u>
C305 (4 cavities) (w/HAA)	Body harness to the driver seat harness, under the drivers seat	<u>Power Seat Systems Component Views</u> in Seats	<u>Inline Harness Connector End Views</u>
C306 (4 cavities) (w/HAA)	Body harness to the passenger seat harness, under the passengers seat	<u>Power Seat Systems Component Views</u> in Seats	<u>Inline Harness Connector End Views</u>
C307 (4 cavities)	SDM harness to the SIS harness, in the center of the passenger compartment, under the center console near the SDM	-	<u>Inline Harness Connector End Views</u>
C308 (4 cavities)	Roof rail module harness to the SDM harness, in the center of the passenger compartment, under the center console near the SDM	-	<u>Inline Harness Connector End Views</u>
C309 (2 cavities)	Body harness to the left seat belt pretensioner harness, under the driver seat	-	-

C310 (2 cavities)	Body harness to the right seat belt pretensioner harness, under the front passenger seat	-	-
C311 (4 cavities)	I/P harness to the body harness, in the right side of the passenger compartment, near the right sill body harness channel	-	-
C400 (6 cavities)	Body harness to the left tail lamp harness, at the LR of the vehicle, behind the LR tail lamp	-	<u>Inline Harness Connector End Views</u>
C401 (6 cavities)	Body harness to the right tail lamp harness, at the RR of the vehicle, behind the RR tail lamp	-	<u>Inline Harness Connector End Views</u>
C402 (10 cavities)	Liftgate harness to the body harness, at the center rear of the headliner, under the upper trim panel	<u>Harness Routing Views</u>	<u>Inline Harness Connector End Views</u>
C403 (2 cavities)	Liftgate harness to the body harness, at the center rear of the headliner, under the upper trim panel	<u>Harness Routing Views</u>	<u>Inline Harness Connector End Views</u>
C404 (4 cavities)	Rear WSS harness to the body harness, under the rear of the vehicle, at the right wheel cross frame	-	<u>Inline Harness Connector End Views</u>
C405 (2 cavities)	License lamp harness to the liftgate harness, in the center of the liftgate behind the trim panel	<u>Harness Routing Views</u>	<u>Inline Harness Connector End Views</u>
C406 (10 cavities)	Fuel tank harness to the body harness, under the rear of the vehicle, at the right wheel cross frame	-	<u>Inline Harness Connector End Views</u>
C700 (2 cavities)	Body harness to the LR door harness, in the LR door	-	<u>Inline Harness Connector End Views</u>
C800 (2 cavities)	Body harness to the RR door harness, in the RR door	-	<u>Inline Harness Connector End Views</u>
	At the LF corner of the	Power and	

G101	vehicle, behind the headlamp mounted on the frame	<u>Grounding Component Views</u>	-
G103	At the left side of the engine compartment, near the LF strut tower	<u>Power and Grounding Component Views</u>	-
G105	On the engine, at the LF corner	<u>Power and Grounding Component Views</u>	-
G107	On the engine, at the top left front corner, under the throttle body	<u>Power and Grounding Component Views</u>	-
G109 (w/L66)	On the RF corner of the engine, near the generator mounting location	<u>Power and Grounding Component Views</u>	-
G201	At the RF corner of the passenger compartment, behind the RF kick panel	<u>Power and Grounding Component Views</u>	-
G203	At the lower center of the I/P, attached to the upper front side of the I/P fuse block	<u>Power and Grounding Component Views</u>	-
G205	At the lower left front corner of the passenger compartment, behind the lower LF trim panel, near the I/P harness to body harness connector C200	<u>Power and Grounding Component Views</u>	-
G207	Under the lower left side of the I/P, attached near the base of the steering column	<u>Power and Grounding Component Views</u>	-
G301	Beneath the LF seat, under the carpet	<u>Power and Grounding Component Views</u>	-
G401	At the LR corner of the vehicle, under the LR inside storage compartment	<u>Power and Grounding Component Views</u>	-
G403	At the RR corner of the vehicle, under the RR trim panel	<u>Power and Grounding Component Views</u>	-
S100 (w/L61)	In the engine harness, between the ICM and TCM connector harness	-	-

	breakouts		
S101 (w/L61)	In the fuel injector harness, near C150	-	-
S103 (Late Production L61)	In the engine harness, near the A/T C1 connector, near the ISS diode	-	-
S104 (Late Production L61)	In the engine harness, near the A/T C1 connector, near the ISS diode	-	-
S109 (w/ L61)	In the engine harness, in the TAC module connector harness breakout, approximately 8 cm (3.151 in) from the ECM connector harness breakout point	-	-
S110 (w/ L61)	In the engine harness, in the TAC module connector harness breakout, approximately 16 cm (6.3 in) from the ECM connector harness breakout point	-	-
S111	In the forward lamp harness, approximately 7.5 cm (2.95 in) from the underhood fuse block connector C1	-	-
S111	In the forward lamp harness, approximately 7.5 cm (2.95 in) from the underhood fuse block connector C1	-	-
S112 (w/L66)	In the engine harness, in the EGR valve circuit	-	-
S115 (w/L66)	In the engine harness, in the MAP sensor circuit	-	-
S119 (w/L66)	In the engine harness, in the bank 2 HO2 sensors circuit	-	-
S120 (w/L66)	In the engine harness, in the A/C pressure sensor circuit	-	-
S121 (w/L66)	In the engine harness, in the bank 1 HO2 sensors	-	-

	circuit		
S122 (w/L66)	In the engine harness, in the bank 1 HO2 sensors circuit	-	-
S123 (w/L66)	In the engine harness, in the TFT sensor circuit	-	-
S124 (w/L66)	In the engine harness, in the EGR valve circuit	-	-
S125 (w/L66)	In the engine harness, in the ICM 1 circuit	-	-
S129 (w/L66)	In the engine harness, in the TAC module circuit	-	-
S130 (w/L66)	In the engine harness, in the ICM 4 circuit	-	-
S131 (w/L66)	In the engine harness, in the ICM 6 circuit	-	-
S132 (w/L66)	In the engine harness, in the CKP sensor circuit	-	-
S133 (w/L66)	In the engine harness, in the valve timing switch circuit	-	-
S134 (w/L66)	In the engine harness, in the PCM data sensors low reference circuit	-	-
S135 (w/L66)	In the engine harness, in the CKP sensor circuit	-	-
S200	In the I/P harness, between the radio harness and I/P fuse block harness breakouts, approximately 10 cm (3.94 in) from the radio breakout	<u>Harness Routing Views</u>	-
S201	In the I/P harness, between the hazard switch harness and radio harness connector breakouts, approximately 28 cm (11.02 in) from the radio breakout	-	-
S203	In the I/P harness, between the BCM harness and I/P fuse block harness connector breakouts, approximately 10 cm (3.94 in) from the fuse	<u>Harness Routing Views</u>	-

	block breakout		
S204	In the body harness, under the left side of the I/P, approximately 25 cm (9.84 in) from the pass-through grommet to the engine compartment	-	-
S205	In the I/P harness, between the HVAC harness and radio harness connector breakouts, approximately 10 cm (3.94 in) from the radio breakout	<u>Harness Routing Views</u>	-
S206	In the HVAC harness, between the defrost mode actuator and panel mode actuator harness connector breakouts, approximately 25 cm (9.84 in) from the defroster mode actuator breakout	-	-
S207	In the HVAC harness, between the C202 and panel mode actuator harness connector breakouts, approximately 7.5 cm (2.95 in) from the breakout for C202	-	-
S209	In the body harness, under the center of the I/P, approximately 35 cm (13.78 in) from the I/P fuse block connector C1	-	-
S301	In the headliner harness, at the front, near the breakouts for the mirror and front reading lamps	<u>Harness Routing Views</u>	-
S302	In the headliner harness, at the rear, approximately 10 cm (3.94 in) from the rear dome lamp switch connector harness breakout	<u>Harness Routing Views</u>	-
	In the headliner harness, at the rear, approximately 20		

S303	cm (7.88 in) from the rear dome lamp switch connector harness breakout	<u>Harness Routing Views</u>	-
S304	In the body harness, in the LF body harness channel, near the cross car harness breakout	-	-
S400	In the liftgate harness, near the passthrough to the headliner	-	-
S401	In the fuel tank jumper harness	-	-
S402	In the liftgate harness, approximately 37.5 cm (14.76 in) from the headliner to liftgate inline connector C402	<u>Harness Routing Views</u>	-
S403	In the left tail lamp harness	-	-
S404	In the left tail lamp harness	-	-
S405	In the right tail lamp harness	-	-
S406	In the right tail lamp harness	-	-
S407	In the liftgate harness, near the passthrough to the headliner	-	-
S500	In the body harness inside the LF door, approximately 15.5 cm (6.10 in) from the door passthrough	-	-
S501	In the body harness inside the LF door, approximately 9.0 cm (3.54 in) from the door passthrough	-	-
S600	In the body harness inside the RF door, approximately 15.5 cm (6.10 in) from the door passthrough	-	-
	In the body harness inside		

S601	the RF door, approximately 9.0 cm (3.54 in) from the door passthrough	-	-
SP101	Part of G101, at the LF corner of the vehicle, behind the headlamp mounted on the frame	<u>Power and Grounding Component Views</u>	<u>Splice Pack Connector End Views</u>
SP113 (w/L66)	At the rear of the engine, behind the intake air duct, attached to the top of the engine harness cross channel, on the right side of SP114	<u>Power and Grounding Component Views</u>	<u>Splice Pack Connector End Views</u>
SP114 (w/L66)	At the rear of the engine, behind the intake air duct, attached to the top of the engine harness cross channel, on the left side of SP113	<u>Power and Grounding Component Views</u>	<u>Splice Pack Connector End Views</u>
SP201	Part of G201, at the RF corner of the passenger compartment, behind the RF kick panel	<u>Power and Grounding Component Views</u>	<u>Splice Pack Connector End Views</u>
SP203	In the LF corner of the passenger compartment, taped to the I/P harness behind the DLC	<u>Power and Grounding Component Views</u>	<u>Splice Pack Connector End Views</u>
SP205	Part of G205, in the LF corner of the passenger compartment, in the body harness near the I/P harness to body harness connector C200	<u>Power and Grounding Component Views</u>	<u>Splice Pack Connector End Views</u>
SP301	Part of G301, beneath the LF seat, under the carpet	<u>Power and Grounding Component Views</u>	<u>Splice Pack Connector End Views</u>
SP401	Part of G401, at the LR corner of the vehicle, under the LR inside storage compartment	<u>Power and Grounding Component Views</u>	<u>Splice Pack Connector End Views</u>
SP403	Part of G403, at the RR corner of the vehicle, under the trim panel	<u>Power and Grounding Component Views</u>	<u>Splice Pack Connector End Views</u>

POWER AND GROUNDING COMPONENT VIEWS

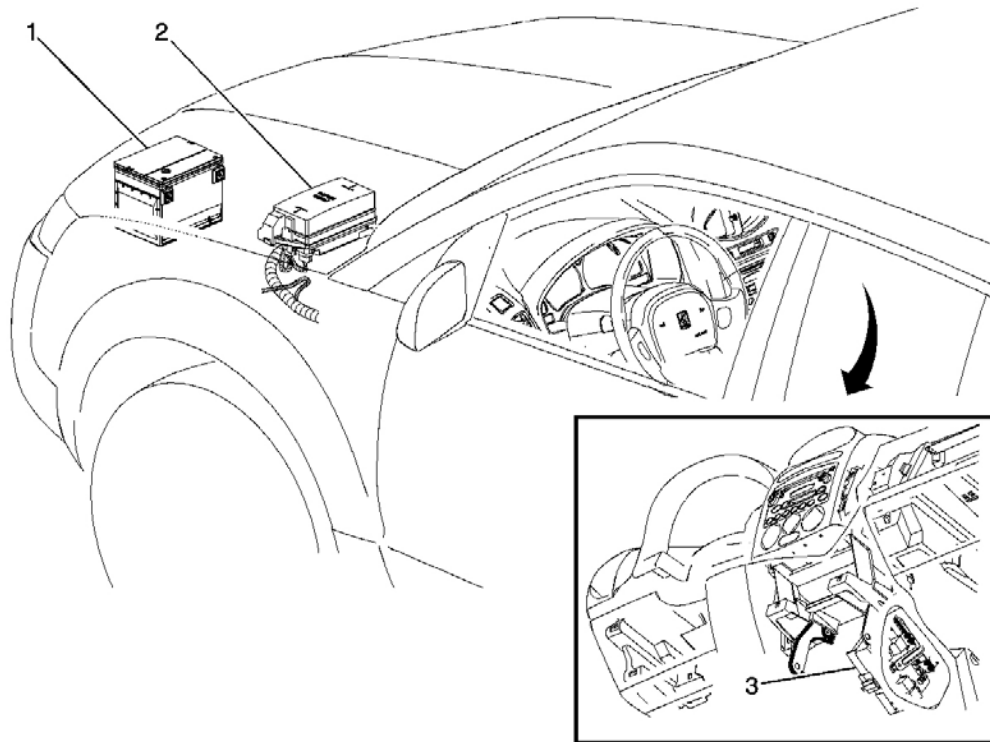


Fig. 56: Battery and Fuse Block Locations
 Courtesy of GENERAL MOTORS CORP.

Callouts For Fig. 56 Power & Grounding Component View

Callout	Component Name
1	Battery
2	Fuse Block-Underhood
3	Fuse Block-I/P

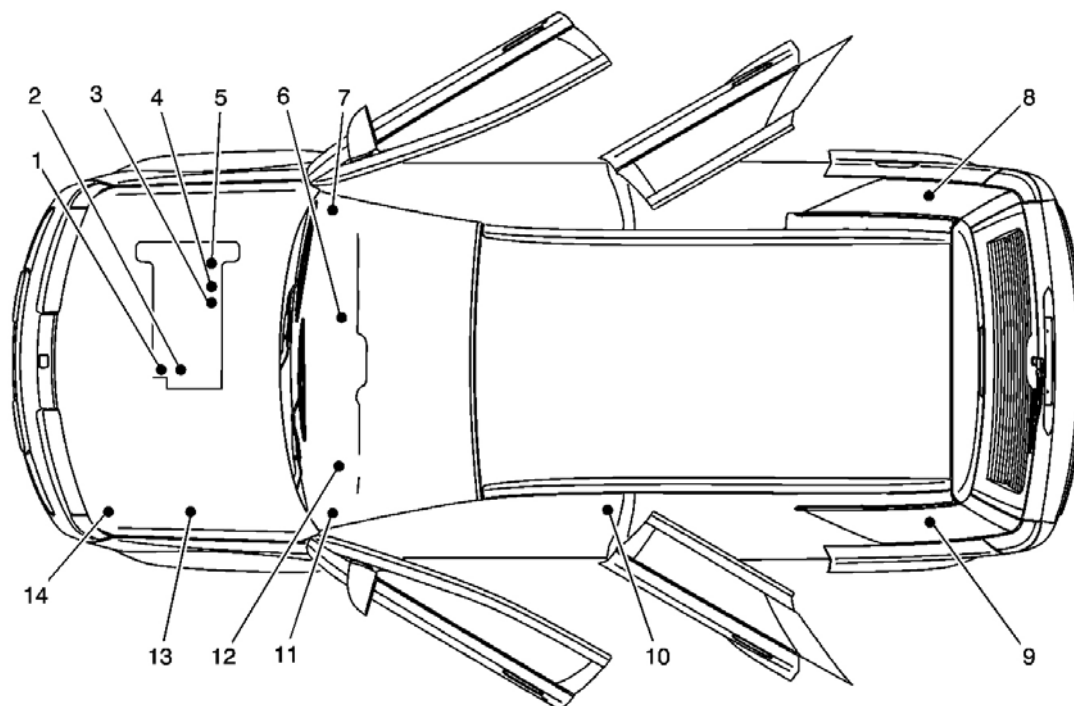


Fig. 57: Ground and Splice Pack Locations
 Courtesy of GENERAL MOTORS CORP.

Callouts For Fig. 57 Power & Grounding Component View

Callout	Component Name
1	G105
2	G107
3	Splice Pack SP114 (w/ L66 Only)
4	Splice Pack SP113 (w/ L66 Only)
5	G109 (w/ L66 Only)
6	G203 (Secured on I/P Fuse Block)
7	G201, Splice Pack SP201
8	G403, Splice Pack SP403
9	G401, Splice Pack SP401
10	G301, Splice Pack SP301
11	G205, Splice Pack SP205, Splice Pack SP203
12	G207
13	G103
14	G101, Splice Pack SP101

ELECTRICAL CENTER IDENTIFICATION VIEWS

Underhood Fuse Block Label

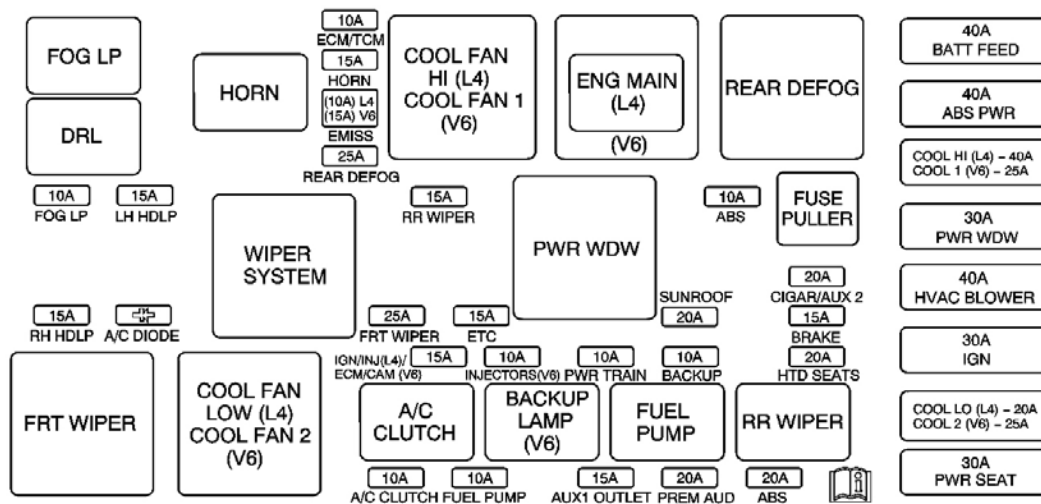


Fig. 58: View Of Electrical Center Identification
 Courtesy of GENERAL MOTORS CORP.

Underhood Fuse Block Label Usage

Device	Rating	Description
ABS Fuse	20 A	EBCM
ABS Fuse (L66)	10 A	EBCM
ABS PWR Fuse	40 A	EBCM
A/C CLUTCH Fuse	10 A	A/C CLUTCH Relay
A/C CLUTCH Relay	-	A/C Compressor Clutch
A/C DIODE	-	-
AUX 1 OUTLET Fuse	15 A	Auxiliary Power Outlet
BACKUP LAMP Relay	-	Not Used
BACKUP Fuse	10 A	Backup Switch (M/T), Coolant Level Switch, PNP Switch (A/T), Vehicle Speed Sensor (M/T)
BATT FEED Fuse	40 A	I/P Fuse Block B+ Fuses
BRAKE Fuse	15 A	Stop Lamp Switch
COOL 1 Fuse (L66)	25 A	COOL FAN 1 Relay
COOL 2 Fuse (L66)	25 A	COOL FAN 2 Relay
COOL FAN LOW Relay (L61)	-	ECM
COOL FAN HI Relay	-	Cooling Fan, Cooling Fan Resistor, ECM

(L61)		
COOL FAN 1 Relay (L66)	-	Left Cooling Fan, PCM
COOL FAN 2 Relay (L66)	-	Cooling Fan Relay 3, PCM, Right Cooling Fan
COOL HI Fuse (L61)	40 A	COOL FAN HI Relay
COOL LO Fuse (L61)	20 A	COOL FAN LOW Relay
CIGAR/AUX 2 Fuse	20 A	Cigar Lighter
DRL Relay	-	DRL Resistor
ECM/CAM Fuse (L66)	15 A	CMP Sensor, ECM
ECM/TCM Fuse	10 A	ECM, TCM
EMISS Fuse (L61)	10 A	Heated Oxygen Sensors, EVAP Purge Solenoid, EVAP Vent Solenoid
EMISS Fuse (L66)	15 A	Heated Oxygen Sensors, EVAP Purge Solenoid, EVAP Vent Solenoid
ENG MAIN Relay	-	EMISS Fuse, ETC Fuse (L61), ECM/CAM Fuse
ETC Fuse	15 A	ECM
FOG LP Relay	-	Fog Lamps
FOG LP Fuse	10 A	FOG LAMP Relay
FRT WIPER Relay	-	Windshield Wiper Motor, Windshield Wiper/Washer Switch
FRT WIPER Fuse	25 A	FRT WIPER Relay
FUEL PUMP Relay	-	Primary Fuel Pump and Sender Assembly
FUEL PUMP Fuse	10 A	FUEL PUMP Relay
HORN Relay	-	Horn
HORN Fuse	15 A	HORN Relay
HTD SEATS Fuse	20 A	Driver and Front Passenger Heated Seat Modules
HVAC BLOWER Fuse	40 A	HVAC Blower Motor
IGN Fuse	30 A	Ignition Switch
IGN/INJ Fuse (L61)	15 A	Fuel Injectors, ICM
INJECTORS Fuse (L66)	10 A	Fuel Injectors
LH HDLP Fuse	15 A	Left High and Low Beam Headlamps
PREM AUD Fuse	20 A	Amplifier (WBM)
PWR SEAT Circuit Breaker	30 A	Driver Seat Adjuster Switch
PWR TRAIN Fuse	10 A	ECM, Automatic Transmission (A/T), PNP Switch (L66)
PWR WDW Circuit Breaker	30 A	PWR WDW Relay
PWR WDW Relay	-	SUNROOF Fuse, Driver and Front Passenger Window Switches
REAR DEFOG Fuse	25 A	REAR DEFOG Relay
REAR DEFOG Relay	-	Rear Defogger Grid
RH HDLP Fuse	15 A	Right High and Low Beam Headlamps

RR WIPER Fuse	15 A	REAR WIPER Relay
RR WIPER Relay	-	Rear Wiper Motor
SUNROOF Fuse	20 A	Sunroof Control Module
WIPER SYSTEM Relay	-	FRT WIPER Fuse, RR WIPER Fuse

Underhood Fuse Block Top View

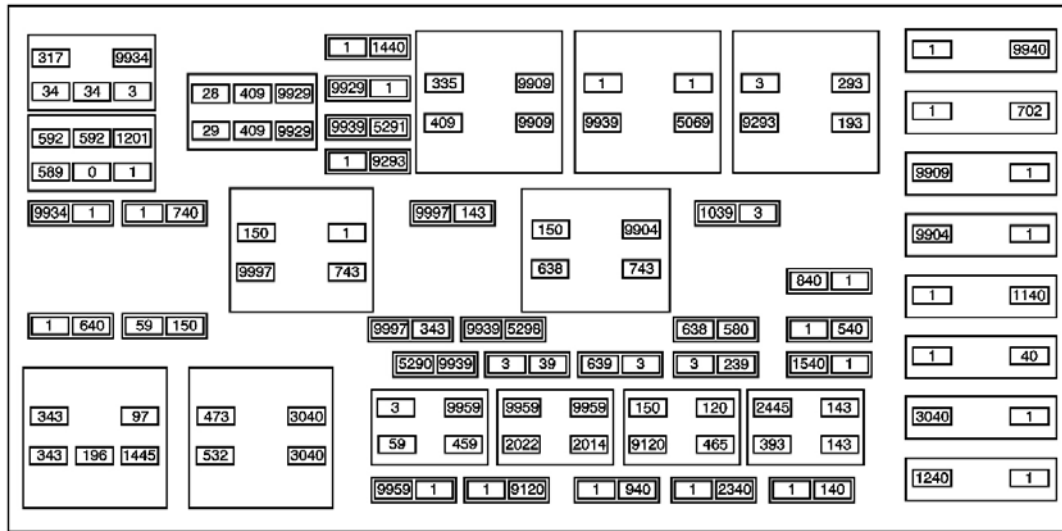


Fig. 59: View Of Underhood Fuse Block Top View
 Courtesy of GENERAL MOTORS CORP.

Underhood Fuse Block Bottom View

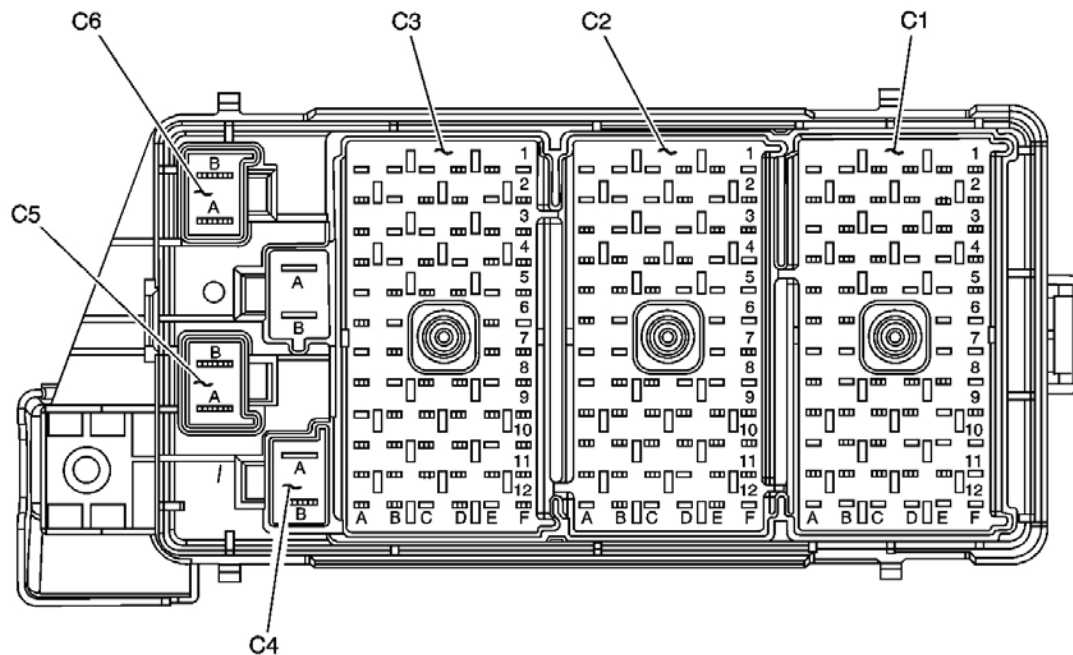
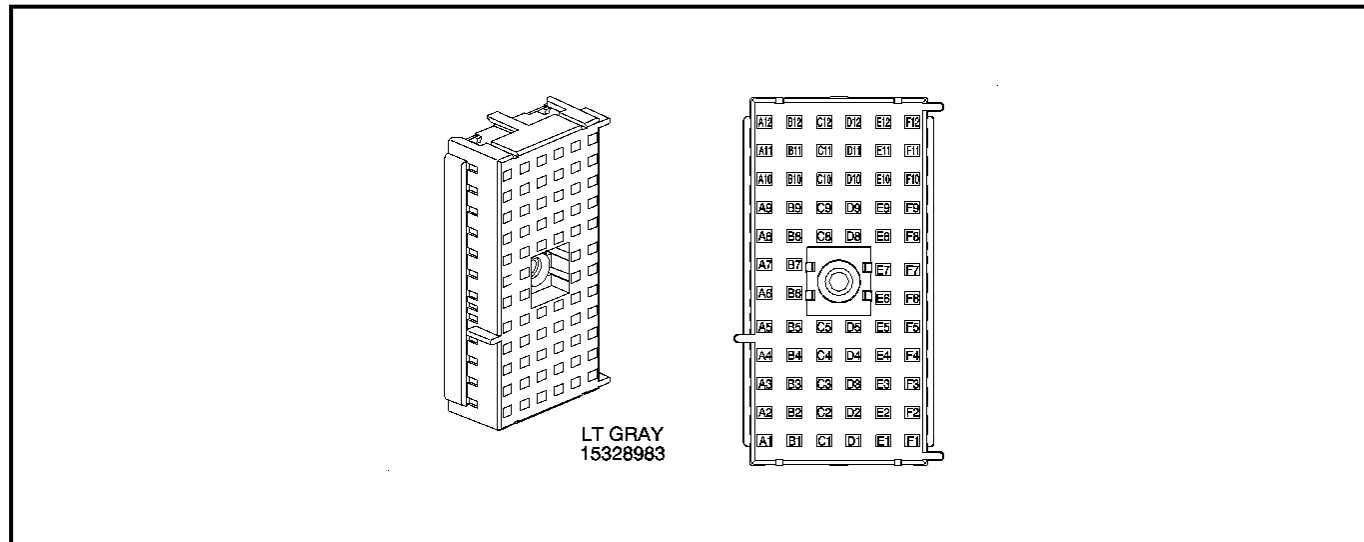


Fig. 60: View Of Underhood Fuse Block Bottom View
 Courtesy of GENERAL MOTORS CORP.

Fuse Block - Underhood C1 Bottom View



Connector Part Information

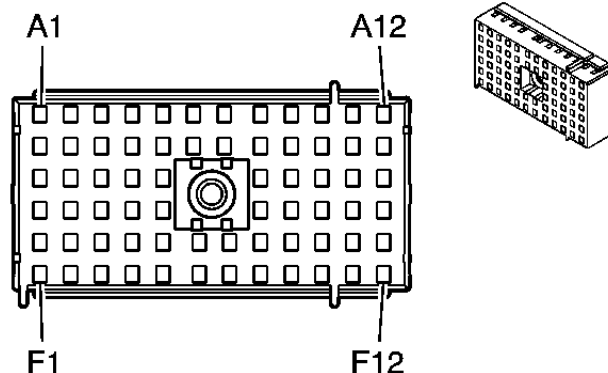
- 15328983
- 68-Way F Metri-Pack 280 Series Flexlock (L-GY)
- Forward Lamp Harness Connection
- Connector Wire Cover (NA)

Pin	Wire Color	Circuit No.	Function

A1	-	-	Not Used
A2	L-BU	409	Cooling Fan Motor Supply Voltage
A3	-	-	Not Used
A4	PK	1200	Headlamp High Beam Signal
A5	L-BU	14	Left Turn Signal Lamps Supply Voltage (L66)
	-	-	Not Used (L61)
A6	BK	150	Ground
A7	-	-	Not Used
A8	RD	228	Windshield Washer Pump Control
A9	BN	9	Park Lamp Supply Voltage
A10	-	-	Not Used (L66)
A10	GY	532	Cooling Fan Motor Supply Voltage (L61)
A11	GY	532	Cooling Fan Motor Supply Voltage (L66)
	-	-	Not Used (L61)
A12	-	-	Not Used
B1-B2	-	-	Not Used
B3	D-GN	29	Horn Control
B4	PK	1200	Headlamp High Beam Signal
B5	OG	740	Battery Positive Voltage
B6	D-BU	15	Right Turn Signal Lamps Supply Voltage
B7-B8	-	-	Not Used
B9	BN	9	Park Lamp Supply Voltage
B10	-	-	Not Used
B11	GY	532	Cooling Fan Motor Supply Voltage (L66)
	-	-	Not Used (L61)
B12	-	-	Not Used
C1	D-GN	392	Rear Window Washer Switch Signal
C2	-	-	Not Used (L66)
	L-BU	409	Cooling Fan Motor Supply Voltage (L61)
C3	-	-	Not Used (L66)
	L-BU	14	Left Turn Signal Lamps Supply Voltage (L61)
C4	D-BU	1201	Headlamp Low Beam Signal (L66)
	-	-	Not Used (L61)
C5	OG	740	Battery Positive Voltage
C8	-	-	Not Used
C9	BN	9	Park Lamp Supply Voltage
C10	OG	3040	Battery Positive Voltage (L66)
	-	-	Not Used (L61)
C11-C12	-	-	Not Used
D1-D2	-	-	Not Used
D3	D-BU	1201	Headlamp Low Beam Signal

D4-D5	-	-	Not Used
D8	-	-	Not Used
D9	BN	9	Park Lamp Supply Voltage
D10-D12	-	-	Not Used
E1	-	-	Not Used
E2	PU	34	Fog Lamps Supply Voltage (T96)
E3	-	-	Not Used (L66)
	D-BU	1201	Headlamp Low Beam Signal (L61)
E4-E7	-	-	Not Used
E8	OG	640	Battery Positive Voltage
E9-E12	-	-	Not Used
F1	-	-	Not Used
F2	PU	34	Fog Lamps Supply Voltage (T96)
F3	-	-	Not Used
F4	GY	589	DRL Resistor Supply Voltage
F5-F8	-	-	Not Used
F9	OG	640	Battery Positive Voltage
F10-F12	-	-	Not Used

Fuse Block - Underhood C2 (L61) Bottom View



Connector Part Information

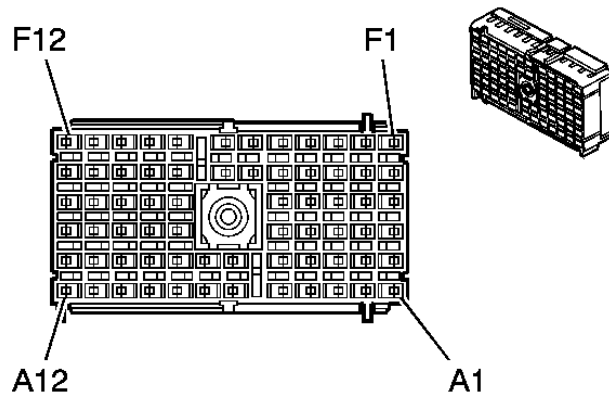
- Assembly - 15328985
- Connector - 15328977
- 68-Way F Metri-Pack 280 Series Flexlock (GY)
- Engine Harness Connection
- Connector Wire Cover (GY)

Pin	Wire Color	Circuit No.	Function
A1	BN/WH	2960	Keyword Serial Data

	BN/WH	2960	Keyword Serial Data
A2	-	-	Not Used
A3	BN	5069	Main Relay Control
A4	PU	6	Starter Solenoid Crank Voltage (M/T)
	YE	5	Crank Voltage (A/T)
A5	L-BU	20	Stop Lamp Switch Signal
	L-BU	20	Stop Lamp Switch Signal
A6	BK	150	Ground
A7	-	-	Not Used
A8	WH	5290	Ignition 1 Voltage
A9	PK	639	Ignition 1 Voltage
A10	D-GN/WH	465	Fuel Pump Relay
A11	GY	397	Cruise Control On Switch Signal
A12	L-GN	24	Backup Lamp Supply Voltage
B1-B3	-	-	Not Used
B4	D-BU	84	Cruise Control Set/Coast Switch Signal
B5	PU	1589	Fuel Level Sensor Signal
B6	PU	420	Brake Switch Signal
B7	GY/BK	87	Cruise Resume/Accel Switch Signal
B8	WH	5290	Ignition 1 Voltage
B9	PK	639	Ignition 1 Voltage
	PK	639	Ignition 1 Voltage
B10	PK	239	Ignition 1 Voltage
B11	WH	1310	EVAP Canister Vent Solenoid Control
B12	-	-	Not Used
C1	-	-	Not Used
C2	BK	2759	Low Reference
C3	-	-	Not Used
C4	WH	5291	Ignition 1 Voltage
C5-C12	-	-	Not Used
D1	OG	1440	Battery Positive Voltage
D2	D-GN	335	Low Speed Cooling Fan Relay Control
D3	-	-	Not Used
D4	WH	5291	Ignition 1 Voltage
D5-D8	-	-	Not Used
D9	PK	39	Ignition 1 Voltage
D10	PK	239	Ignition 1 Voltage
D11-D12	-	-	Not Used
E1	OG	1440	Battery Positive Voltage
E2	-	-	Not Used
E3	WH	5291	Ignition 1 Voltage

E4-E8	-	-	Not Used
E9	PK	39	Ignition 1 Voltage
E10	D-GN/WH	459	A/C Compressor Clutch Relay Control
E11	D-GN	59	A/C Compressor Clutch Supply Voltage
E12	-	-	Not Used
F1-F8	-	-	Not Used
F9	PK	239	Ignition 1 Voltage (M/T)
F10-F11	-	-	Not Used
F12	D-BU	473	High Speed Cooling Fan Relay Control

Fuse Block - Underhood C2 (L66) Bottom View



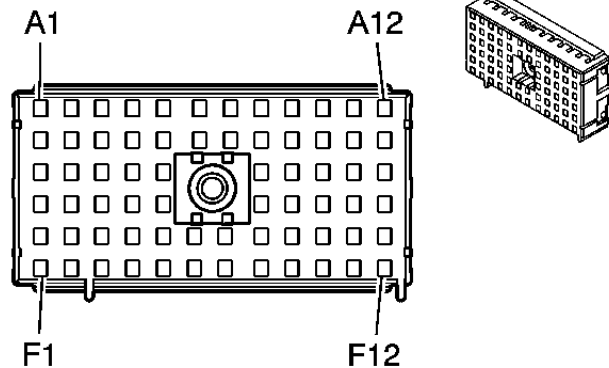
Connector Part Information

- 13008012
- 68-Way F Metri-Pack 280 Series Flexlock (GY)
- Engine Harness Connection
- Connector Wire Cover (GY)

Pin	Wire Color	Circuit No.	Function
A1-A3	-	-	Not Used
A4	YE/L-GN	24	Backup Lamps Supply Voltage
A5	YE	5	Crank Voltage
A6	BK	150	Ground
A7-A8	-	-	Not Used
A9	RD	39	Ignition 1 Voltage
A10	-	-	Not Used
A11	D-BU/WH	2182	Reverse Lamp Relay Control
A12	-	-	Not Used
B1-B4	-	-	Not Used
B5	YE	5	Crank Voltage

B6-B7	-	-	Not Used
B8	WH	5292	Ignition 1 Voltage
B9-B10	-	-	Not Used
B11	YE/L-GN	24	Backup Lamps Supply Voltage
B12	-	-	Not Used
C1-C3	-	-	Not Used
C4	WH	5291	Ignition 1 Voltage
C5	-	-	Not Used
C8-C10	-	-	Not Used
C11	GN/WH	459	A/C Clutch Relay Control
C12	-	-	Not Used
D1	BN	1440	Battery Positive Voltage
D2-D3	-	-	Not Used
D4	WH	5291	Ignition 1 Voltage
D5	-	-	Not Used
D8	-	-	Not Used
D9	WH	5290	Ignition 1 Voltage
D10-D12	-	-	Not Used
E1-E8	-	-	Not Used
E9	WH/GN	5290	Ignition 1 Voltage
E10	-	-	Not Used
E11	D-GN	59	A/C Compressor Clutch Supply Voltage
E12	-	-	Not Used
F1-F9	-	-	Not Used
F10	RD	639	Ignition 1 Voltage
F11-F12	-	-	Not Used

Fuse Block - Underhood C3 (L61) Bottom View



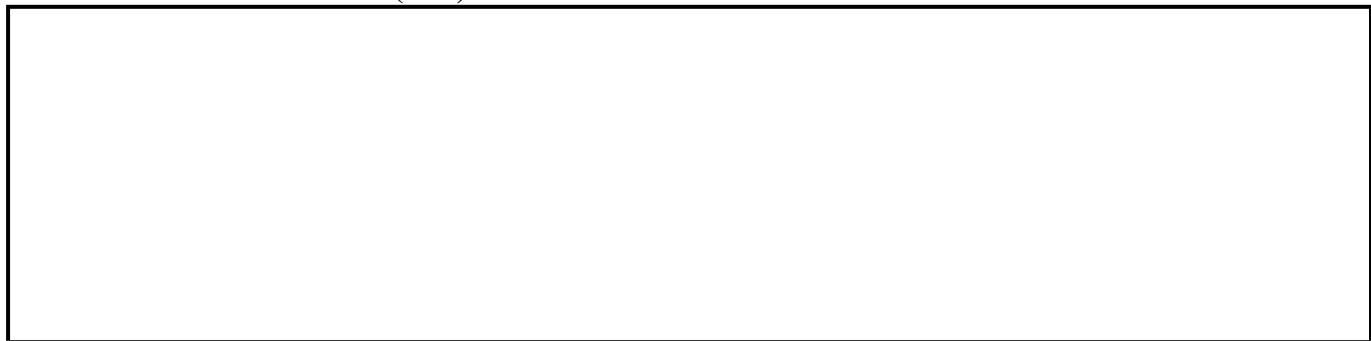
Connector Part Information

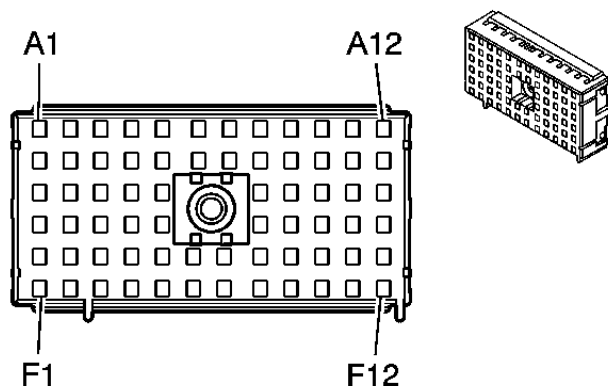
- **Assembly - 15328984**
- **Connector - 15328976**
- **68-Way F Metri-Pack 280 Flexlock Series (BK)**
- **Body Harness Connection**
- **Connector Wire Cover (GN)**

Pin	Wire Color	Circuit No.	Function
A1	L-GN	24	Backup Lamp Supply Voltage
A2	PU	293	Rear Defogger Element Supply Voltage
A3	WH	193	Rear Defogger Relay Control
A4	PK	1200	Right Headlamp High Beam Signal
A5	L-GN	24	Backup Lamp Supply Voltage
	L-GN	24	Backup Lamp Supply Voltage
A6	OG/BK	1445	Front Wiper Relay Control
A7	-	-	Not Used
A8	OG	540	Battery Positive Voltage
A9	-	-	Not Used
A10	YE	143	Accessory Voltage
A11-A12	-	-	Not Used
B1	BK	28	Horn Switch Signal
B2	-	-	Not Used
B3	YE	196	Windshield Wiper Motor Park Switch Signal
B4	D-BU	84	Cruise Control Set/Coast Switch Signal
B5	-	-	Not Used
B6	PU	420	Brake Switch Signal
B7	OG	840	Battery Positive Voltage
B8	-	-	Not Used
B9	OG	1540	Battery Positive Voltage (HCO)
B10	L-BU	97	Windshield Wiper Switch Mist/Off/Low Signal
B11	WH	1310	EVAP Canister Vent Solenoid Control
B12	OG	140	Battery Positive Voltage (JM4)
C1	D-GN	392	Rear Window Washer Switch Signal
C2-C3	-	-	Not Used
C4	RD	228	Windshield Washer Switch Signal
C5	-	-	Not Used
C8	YE	343	Rear Wiper Switch Signal
C9	BN	9	Park Lamp Supply Voltage
C10	RD	2445	Rear Wiper Signal
C11	WH	393	Rear Wiper Switch Signal
C12	-	-	Not Used
D1	YE	18	Left Rear Stop/Turn Lamp Supply Voltage

D2	BK	2759	Low Reference
	BK	2759	Low Reference
D3	WH	5291	Ignition 1 Voltage
D4	PU	1589	Fuel Level Sensor Signal
D5	PK	1039	Ignition 1 Voltage (JM4)
D8	OG	580	Accessory Voltage
D9	PK	239	Ignition 1 Voltage
D10-D11	-	-	Not Used
D12	OG	2340	Battery Positive Voltage (WBM)
E1	YE	317	Fog Lamp Relay Coil Supply Voltage
E2-E3	-	-	Not Used
E4	D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage
	D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage
E5	-	-	Not Used
E6	GY/BK	87	Cruise Control Resume/Accel Switch Signal
E7	PU	638	Power Window Motor Driver Down Control
E8-E10	-	-	Not Used
E11	GY	397	Cruise Control On Switch Signal
E12	-	-	Not Used
F1	BN/WH	2960	Keyword Serial Data
F2	D-BU	1201	Left Headlamp Low Beam Signal
F3	L-GN/BK	592	DRL Relay Control
F4	YE	5	Crank Voltage
F5	L-BU	20	Stop Lamp Switch Signal
F6	-	-	Not Used
F7	YE	743	Accessory Voltage
F8	YE	343	Accessory Voltage
F9	PK	3	Ignition 1 Voltage
F10	-	-	Not Used
F11	GY	120	Fuel Pump Supply Voltage
F12	OG	340	Battery Positive Voltage

Fuse Block - Underhood C3 (L66) Bottom View





Connector Part Information

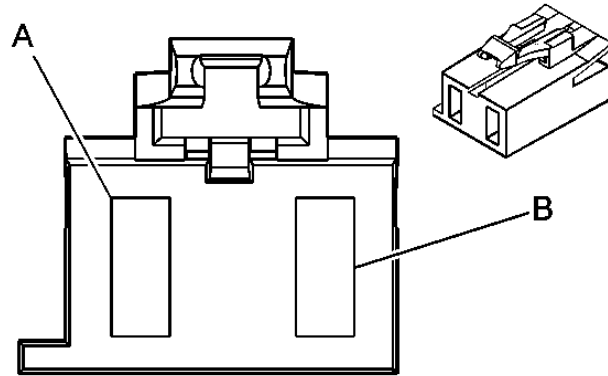
- Assembly - 15328984
- Connector - 15328976
- 68-Way F Metri-Pack 280 Flexlock Series (BK)
- Body Harness Connection
- Connector Wire Cover (GN)

Pin	Wire Color	Circuit No.	Function
A1	-	-	Not Used
A2	PU	293	Rear Defogger Element Supply Voltage
A3	WH	193	Rear Defogger Relay Control
A4	YE	196	Windshield Wiper Motor Park Switch Signal
A5	-	-	Not Used
A6	WH	5291	Ignition 1 Voltage
A7	-	-	Not Used
A8	OG	540	Battery Positive Voltage
A9	-	-	Not Used
A10	YE	143	Accessory Voltage
A11	-	-	Not Used
A12	D-BU	473	High Speed Cooling Fan Relay Control
	D-BU	473	High Speed Cooling Fan Relay Control
B1-B4	-	-	Not Used
B5	PK	1200	Right Headlamp High Beam Signal
B6	-	-	Not Used
B7	OG	840	Battery Positive Voltage
B8	-	-	Not Used
B9	OG	1540	Battery Positive Voltage (HCO)
	OG	1540	Battery Positive Voltage (HCO)

B10	L-BU	97	Windshield Wiper Switch Mist/Off/Low Signal
B11	OG/BK	1445	Front Wiper Relay Control
B12	OG	140	Battery Positive Voltage
C1-C3	-	-	Not Used
C4	D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage
	D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage
C5	-	-	Not Used
C8	YE	343	Accessory Voltage
C9	RD	228	Windshield Washer Pump Control
C10	RD	2445	Rear Wiper Switch Signal
C11	WH	393	Rear Window Wiper Motor Control
C12	-	-	Not Used
D1	BK	28	Horn Relay Control
D2	YE	317	Fog Lamp Relay Coil Supply Voltage
D3	D-BU	1201	Headlamp Low Beam Signal
D4	-	-	Not Used
D5	PK	1039	Ignition 1 Voltage
D8	OG	580	Accessory Voltage
D9	PK	239	Ignition 1 Voltage
D10	GY	120	Fuel Pump Supply Voltage
D11	D-GN/WH	465	Fuel Pump Relay Control - Primary
D12	OG	2340	Battery Positive Voltage (WBM)
E1	D-GN	392	Rear Washer Switch Signal
E2	-	-	Not Used
E3	BN	5069	Main Relay Control
E4	L-GN	24	Backup Lamp Supply Voltage
	L-GN	24	Backup Lamp Supply Voltage
E5	-	-	Not Used
E6	YE	18	Left Rear Stop/Turn Lamp Supply Voltage
E7	PU	638	Power Window Motor Driver Down Control
E8-E10	-	-	Not Used
E11	BN	9	Park Lamp Supply Voltage
E12	-	-	Not Used
F1	-	-	Not Used
F2	D-GN	335	Low Speed Cooling Fan Relay Control
F3	L-GN/BK	592	DRL Relay Control
F4	L-GN	24	Backup Lamp Supply Voltage
F5	YE	5	Crank Voltage
F6	-	-	Not Used
F7	YE	743	Accessory Voltage
F8	YE	343	Ignition 3 Voltage

F9	PK	3	Ignition 1 Voltage
F10-F11	-	-	Not Used
F12	OG	340	Battery Positive Voltage

Fuse Block - Underhood C4 Bottom View

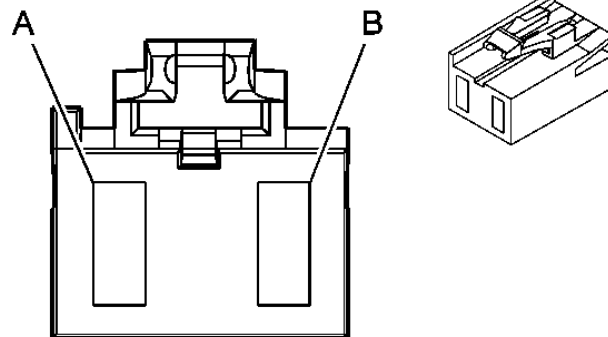


Connector Part Information

- 15319800
- 2-Way F Maxi-Fuse (BN)
- Body Harness Connection

Pin	Wire Color	Circuit No.	Function
A	-	-	Not Used
B	OG	1240	Battery Positive Voltage

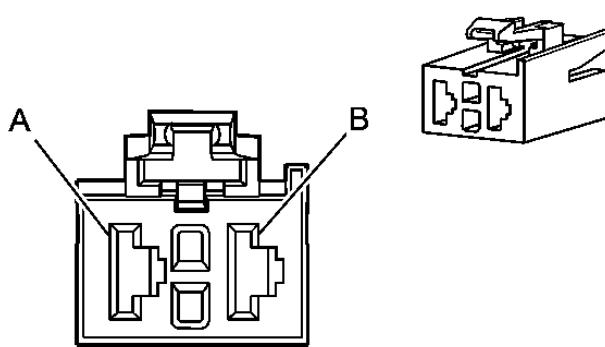
Fuse Block - Underhood C5 Bottom View



- 15319799

Connector Part Information		<ul style="list-style-type: none"> • 2-Way F Maxi-Fuse (L-GN) • Body Harness Connection 	
Pin	Wire Color	Circuit No.	Function
A	OG	40	Battery Positive Voltage
	OG	40	Battery Positive Voltage
B	OG	1140	Battery Positive Voltage (Early Production)
	RD	1140	Battery Positive Voltage (Late Production)

Fuse Block - Underhood C6 Bottom View

		<ul style="list-style-type: none"> • 15319797 • 2-Way F Maxi-Fuse (L-GY) • Body Harness Connection 	
Connector Part Information			
Pin	Wire Color	Circuit No.	Function
A	RD	702	Battery Positive Voltage
B	RD	9940	Battery Positive Voltage
	RD	9940	Battery Positive Voltage

I/P Fuse Block Label

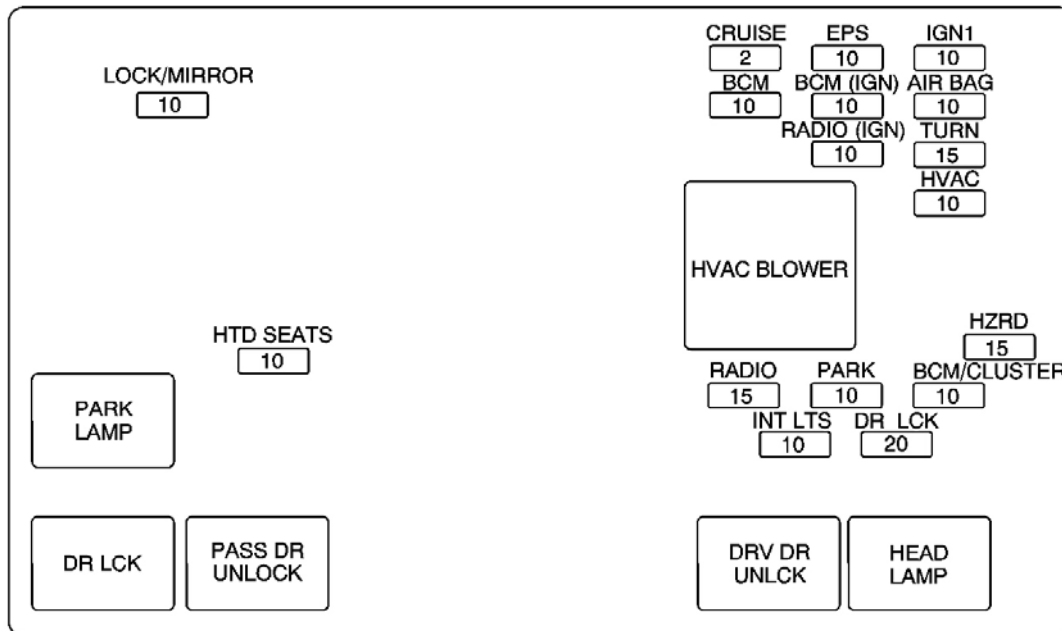


Fig. 61: View Of I/P Fuse Block Label
 Courtesy of GENERAL MOTORS CORP.

I/P Fuse Block Label Usage

Device	Rating	Description
AIR BAG Fuse	10 A	SDM
BCM Fuse	10 A	BCM, PWR WDW Relay - Underhood Fuse Bock, WIPER SYSTEM Relay - Underhood Fuse Block
BCM/CLUSTER Fuse	10 A	BCM, IPC
BCM (IGN) Fuse	10 A	BCM
CRUISE Fuse	2 A	Cruise Control Switch(es), Cruise/Brake Switch
DR LCK Fuse	20 A	DR LCK, PASS DR UNLOCK, and DRV DR UNLCK Relays
DR LCK Relay	-	BCM, Door Lock Actuators
DRV DR UNLCK Relay	-	BCM, Driver Door Lock Actuator
EPS Fuse	10 A	PSCM
HEAD LAMP Relay (T82)	-	BCM
HTD SEATS	10 A	Heated Seat Switches
HVAC BLOWER Relay	-	HVAC Control Module
HVAC Fuse	10 A	HVAC Control Module
HZRD Fuse	15 A	Hazard Switch

IGN 1 Fuse	10 A	A/T Shift Lock Solenoid, IPC, Traction Control Switch
INT LTS Fuse	10 A	BCM, VCIM (UE1)
LOCK/MIRROR	10 A	Door Lock Switches, Outside Rearview Mirror Switch
PARK Fuse	15 A	Headlamp Switch
PARK LAMP Relay	-	BCM
PASS DR UNLOCK Relay	-	BCM, Front Passenger Door Lock Actuator, Rear Door Lock Actuators, and the Liftgate Lock Actuator/ Ajar Switch
RADIO Fuse	10 A	Radio
RADIO (IGN) Fuse	10 A	Inside Rearview Mirror, Radio
TURN Fuse	15 A	Hazard Switch

I/P Fuse Block Top View

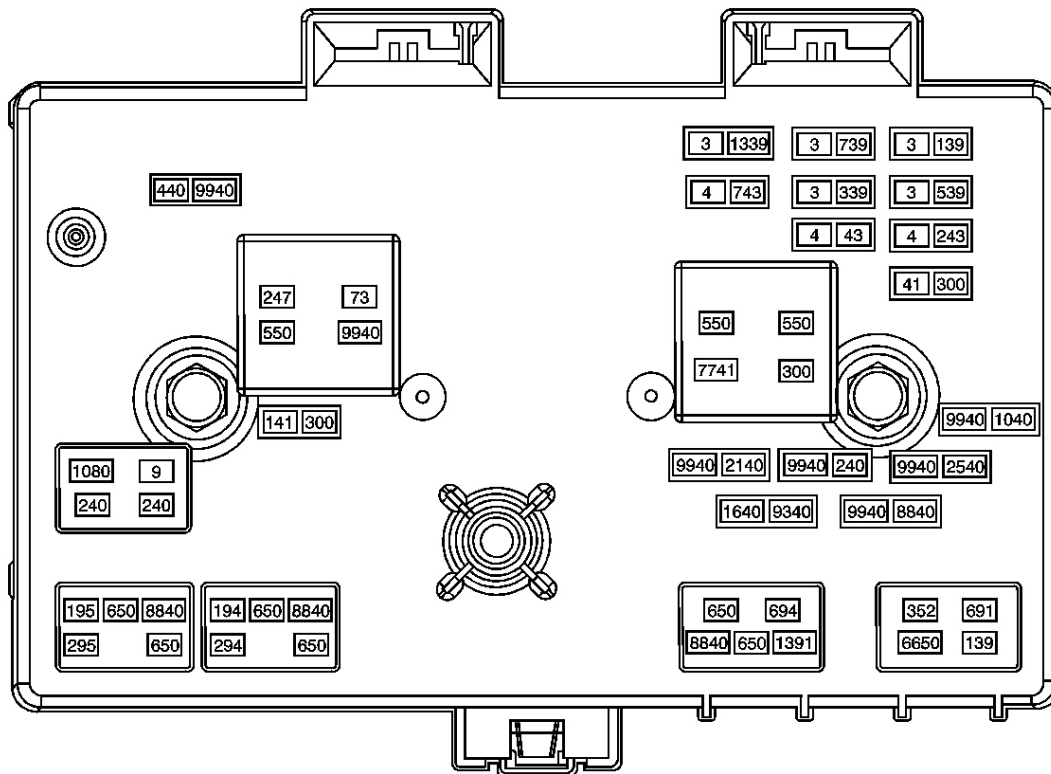


Fig. 62: I/P Fuse Block Top View
 Courtesy of GENERAL MOTORS CORP.

I/P Fuse Block Bottom View

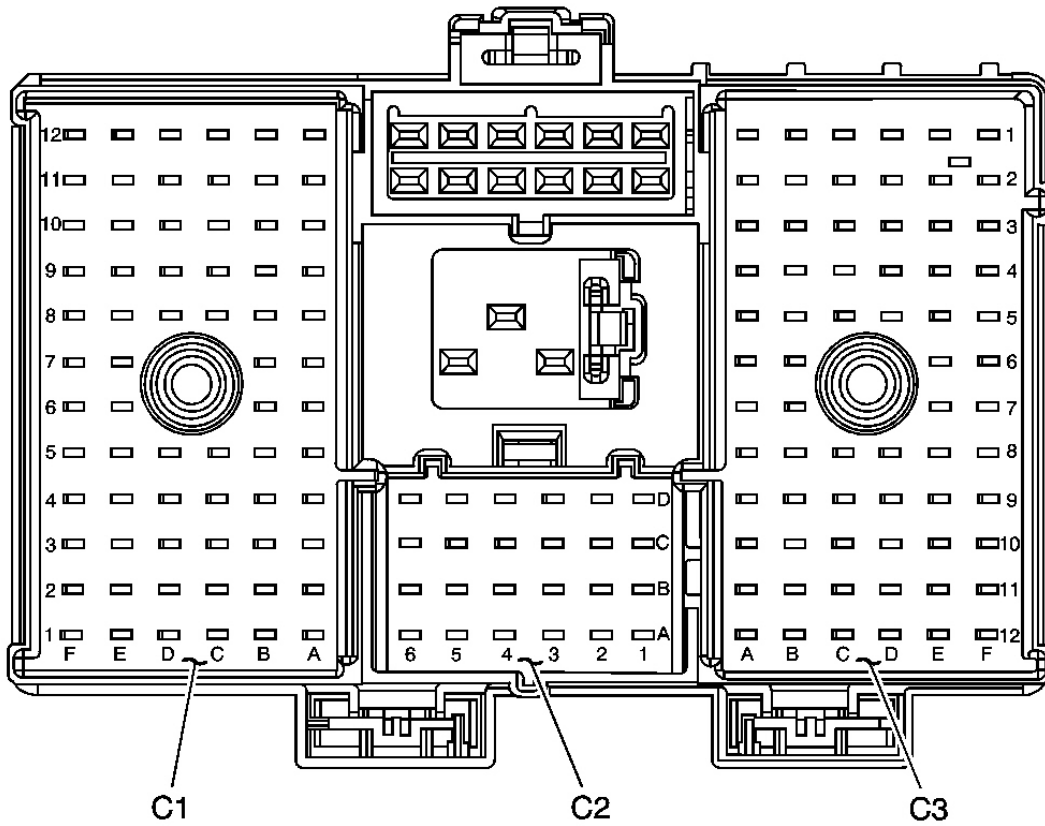
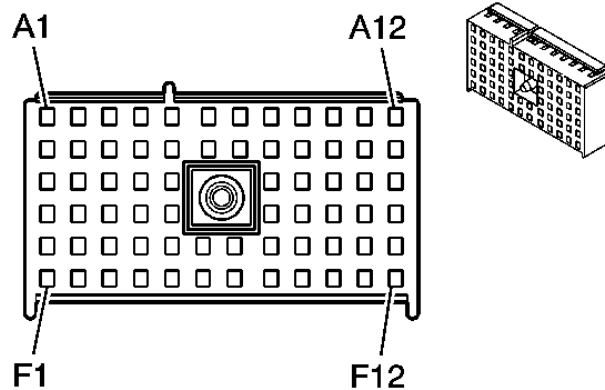


Fig. 63: I/P Fuse Block Bottom View
 Courtesy of GENERAL MOTORS CORP.

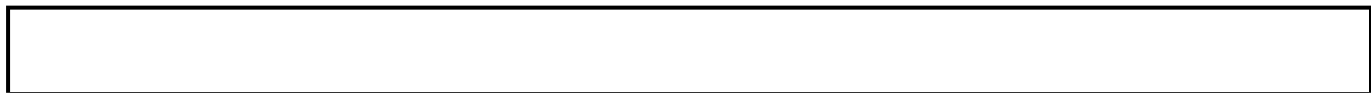
Fuse Block - I/P C1 Bottom View

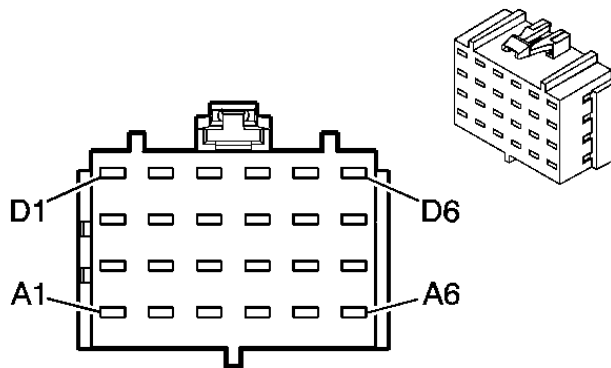


Connector Part Information		<ul style="list-style-type: none"> • 12129592 Asm, 12129527 Conn • 68-Way F Metri-Pack 280 Series (D-GY) 	
Pin	Wire Color	Circuit No.	Function
A1	GY	8	Instrument Panel Lamp Supply Voltage (HCO)
	GY	8	Instrument Panel Lamp Supply Voltage (HCO)
A2-A3	-	-	Not Used
A4	RD/BK	780	Driver Door Lock Switch Lock Signal
	RD/BK	780	Driver Door Lock Switch Lock Signal
A5	RD	9940	Battery Positive Voltage
A6	RD/BK	744	Liftgate Ajar Switch Signal
A7	-	-	Not Used
A8	PK	1200	Headlamp High Beam Signal
A9	RD	2445	Left Rear Passenger Heated Seat Cushion Element Supply Voltage
A10	D-BU	1201	Headlamp Low Beam Signal
A11-A12	-	-	Not Used
B1	PK	3	Ignition 1 Voltage
B2	-	-	Not Used
B3	RD	228	Washer Motor - Front
B4-B5	-	-	Not Used
B6	BK	28	Horn Relay Control
B7	BN	141	Ignition 3 Voltage (KA1)
	BN	141	Ignition 3 Voltage (KA1)
B8	-	-	Not Used
B9	D-GN	392	Rear Window Washer Pump Control
B10	BK/WH	746	Passenger Doors Ajar Switch Signal
	BK/WH	746	Passenger Doors Ajar Switch Signal
B11	-	-	Not Used
B12	TN	294	Door Lock Actuator Unlock Control
	TN	294	Door Lock Actuator Unlock Control
C1-C2	-	-	Not Used
C3	D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage
	D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage
C4	BN/WH	1571	Traction Control Switch Signal (NW9)
C5	PU	333	Brake Fluid Level Sensor Signal
C6-C7	-	-	Not Used
C8	BN	9	Park Lamp Supply Voltage
	BN	9	Park Lamp Supply Voltage
C9	-	-	Not Used
C10	TN/WH	694	Driver Door Lock Actuator Unlock Control

C11	-	-	Not Used
C12	TN	294	Door Lock Actuator Unlock Control
D1	YE	43	Accessory Voltage
D2	OG	440	Battery Positive Voltage
	OG	440	Battery Positive Voltage
D3	YE	18	Left Rear Stop/Turn Lamp Supply Voltage
	YE	18	Left Rear Stop/Turn Lamp Supply Voltage
D4	OG/BK	781	Driver Door Lock Switch Unlock Signal
	OG/BK	781	Driver Door Lock Switch Unlock Signal
D5-D7	-	-	Not Used
D8	BN	9	Park Lamp Supply Voltage
	BN	9	Park Lamp Supply Voltage
D9	-	-	Not Used
D10	TN	294	Door Lock Actuator Unlock Control
D11-D12	-	-	Not Used
E1	WH	156	Courtesy Lamp Switch Signal
E2	OG	440	Battery Positive Voltage (HAA/HCO)
	OG	440	Battery Positive Voltage (U2K)
E3-E8	-	-	Not Used
E9	L-GN/BK	592	DRL Relay Control
E10	GY	295	Door Lock Actuator Lock Control
E11	-	-	Not Used
E12	BK	650	Ground
F1	WH	193	Rear Defogger Relay Control
F2	YE	743	Accessory Voltage
F3	RD	9940	Battery Positive Voltage
F4	L-GN	1478	Coolant Level Switch Signal
F5	-	-	Not Used
F6	OG	1732	Courtesy Lamps Supply Voltage
	OG	1732	Courtesy Lamps Supply Voltage
F7	YE	317	Fog Lamp Relay Coil Supply Voltage
F8-F9	-	-	Not Used
F10	GY	295	Door Lock Actuator Lock Control
	GY	295	Door Lock Actuator Lock Control
F11	-	-	Not Used
F12	GY	295	Door Lock Actuator Lock Control
	GY	295	Door Lock Actuator Lock Control

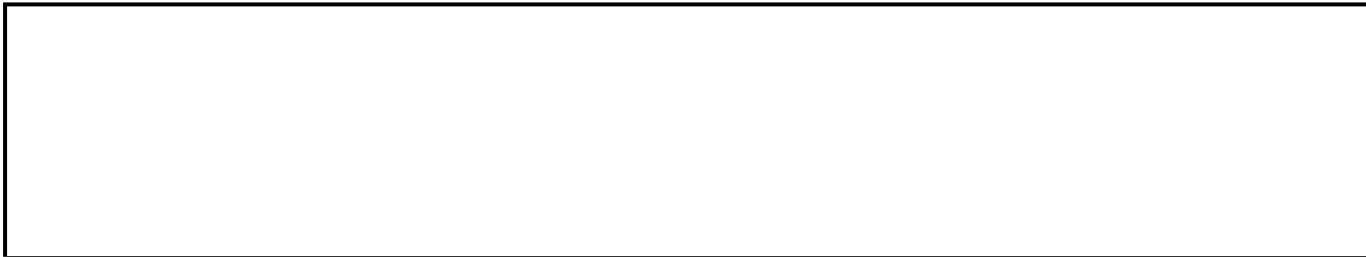
Fuse Block - I/P C2 Bottom View

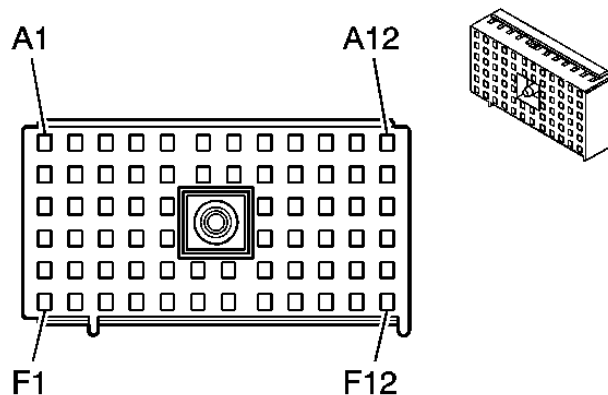




Connector Part Information		<ul style="list-style-type: none"> • 12129535 • 24-Way F ACT 280 Series (BK) 	
Pin	Wire Color	Circuit No.	Function
A1-A2	-	-	Not Used
A3	GY	8	Instrument Panel Lamp Supply Voltage
A4	GY	8	Instrument Panel Lamp Supply Voltage
	GY	8	Instrument Panel Lamp Supply Voltage (w/o T82)
A5	GY	8	Instrument Panel Lamp Supply Voltage
	GY	8	Instrument Panel Lamp Supply Voltage
A6	GY	8	Instrument Panel Lamp Supply Voltage
	GY	8	Instrument Panel Lamp Supply Voltage
B1-B6	-	-	Not Used
C1	-	-	Not Used
C2	BN	9	Park Lamp Supply Voltage
	BN	9	Park Lamp Supply Voltage (w/o T82)
C3	BN	9	Park Lamp Supply Voltage
C4	OG	1732	Inadvertent Power Supply Voltage
C5	BN/WH	1571	Traction Control Switch Signal
C6	L-BU	195	Door Lock Control
D1-D6	-	-	Not Used

Fuse Block - I/P C3 Bottom View





Connector Part Information

- 12146036 Asm, 12146035 Conn
- 68-Way F Metri-Pack 280 Series (BK)

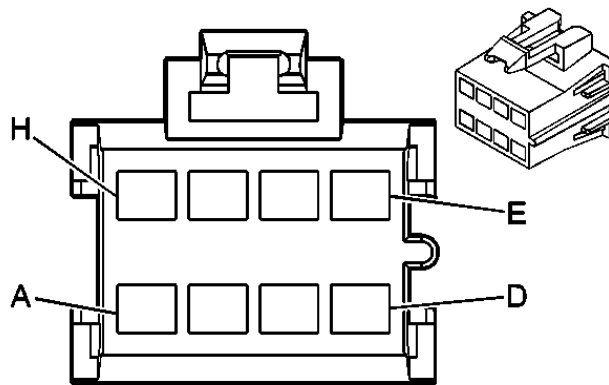
Pin	Wire Color	Circuit No.	Function
A1	-	-	Not Used
A2	BK/WH	746	Passenger Door Ajar Switch Signal
	BK/WH	746	Passenger Door Ajar Switch Signal
A3	L-GN/BK	592	DRL Relay Control
A4	OG	1640	Battery Positive Voltage
	OG	1640	Battery Positive Voltage (UE1)
A5	OG	2140	Battery Positive Voltage
A6	PK	1200	Headlamp High Beam Signal
	PK	1200	Headlamp High Beam Signal
A7	BN	7741	HVAC Blower Relay Control
A8	BK	550	Ground
A9	RD/BK	780	Driver Door Lock Switch Lock Signal
A10	RD	228	Windshield Washer Pump Control
	RD	228	Windshield Washer Pump Control
A11	YE	743	Accessory Voltage
A12	PK	1339	Ignition 1 Voltage
	PK	1339	Ignition 1 Voltage
B1	L-GN	1391	Driver Door Unlock Relay Control
B2-B5	-	-	Not Used
B6	RD/BK	744	Liftgate Ajar Switch
B7	OG	300	Ignition 3 Voltage
B8	-	-	Not Used
B9	OG/BK	781	Driver Door Unlock Switch
B10-B12	-	-	Not Used

C1	BK	650	Ground
C2	D-BU	1201	Headlamp Low Beam Signal
	D-BU	1201	Headlamp Low Beam Signal
C3	RD	2445	Rear Wiper Relay Control
C4	-	-	Not Used
C5	OG	240	Battery Positive Voltage (w/o T82)
C6-C7	-	-	Not Used
C8	PU	333	Brake Fluid Level Sensor Signal
C9	BK	28	Horn Relay Control
	BK	28	Horn Relay Control
C10	YE	43	Accessory Voltage
C11	PK	339	Ignition 1 Voltage
C12	PK	739	Ignition 1 Voltage
D1	BK	550	Ground (T82)
D2	WH	352	Headlamp Relay Control (T82)
D3	WH	1080	Park Lamp Relay Control (T82)
D4-D8	-	-	Not Used
D9	BN	41	Ignition 3 Voltage
D10-D12	-	-	Not Used
E1	PK	139	Ignition 1 Voltage (A/T)
E2	WH	194	Door Unlock Control
E3	D-GN	392	Rear Window Washer Pump Control
	D-GN	392	Rear Window Washer Pump Control
E4	YE	317	Fog Lamp Relay Coil Supply Voltage (T96)
	YE	317	Fog Lamp Relay Coil Supply Voltage (T96)
E5	OG	2540	Battery Positive Voltage
E6	-	-	Not Used
E7	D-BU	15	Right Turn Signal Lamps Supply Voltage
E8	L-BU	14	Left Turn Signal Lamps Supply Voltage
E9	-	-	Not Used
E10	YE	243	Accessory Voltage
E11	PK	539	Ignition 1 Voltage
E12	PK	139	Ignition 1 Voltage
F1	PK	139	Ignition 1 Voltage
F2	GY	691	Headlamp Relay Output (T82)
F3	OG	2540	Battery Positive Voltage
F4	WH	156	Courtesy Lamp Switch Signal
F5	-	-	Not Used
F6	OG	1040	Battery Positive Voltage
F7	D-BU	15	Right Turn Signal Lamps Supply Voltage
	D-BU	15	Right Turn Signal Lamps Supply Voltage

F8	L-BU	14	Left Turn Signal Lamps Supply Voltage
	L-BU	14	Left Turn Signal Lamps Supply Voltage
F9	L-GN	1478	Coolant Level Switch Signal
F10	BN	4	Ignition Switch
F11	WH	193	Rear Defogger Relay Control
	WH	193	Rear Defogger Relay Control
F12	PK	3	Ignition 1 Voltage

POWER AND GROUNDING CONNECTOR END VIEWS

Ignition Switch Connector End View

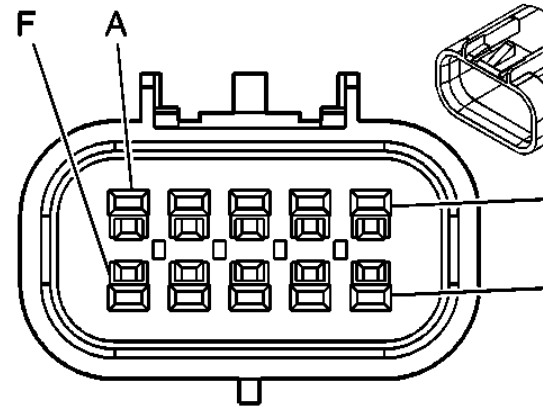
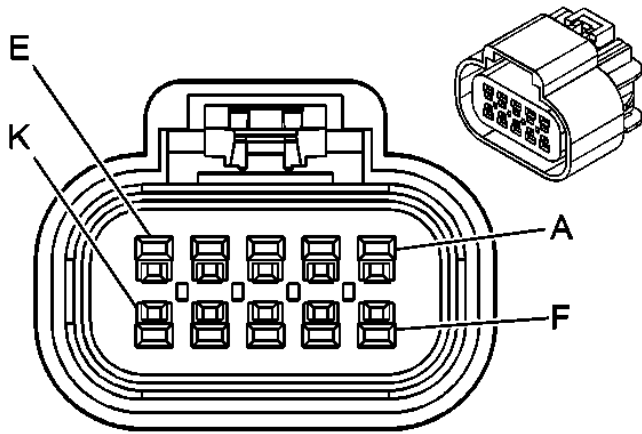


Connector Part Information		<ul style="list-style-type: none"> • 12064998 • 8-Way F Metri-Pack 280 Series (BK) 	
Pin	Wire Color	Circuit No.	Function
A	OG	40	Battery Positive Voltage
B	OG	300	Ignition 3 Voltage
C	YE	5	Crank Voltage
D	L-GN	80	Key In Ignition Switch Signal
E	BK/WH	151	Ground
F	PK	3	Ignition 1 Voltage
G	BN	4	Accessory Voltage
H	OG	40	Battery Positive Voltage

INLINE HARNESS CONNECTOR END VIEWS

C102 - Engine Harness to the Body Harness (L66) Connector End View

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Connector Part Information

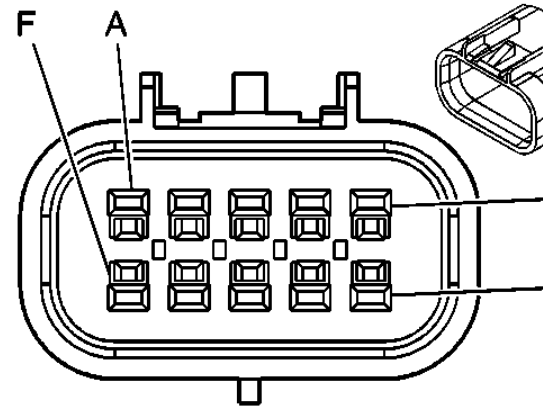
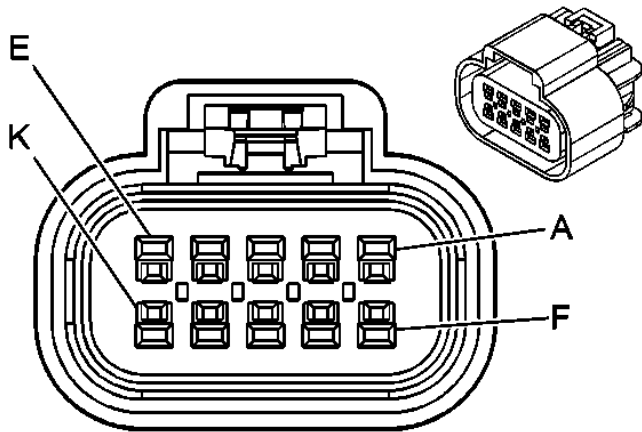
- 15326842
- 10-Way F 150 Series Sealed (BK)

Connector Part Information

Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	RD	6743	A/T Drive Signal	A	RD	6743	A/T Dr
B	YE/GN	6744	A/T Intermediate Signal	B	YE/GN	6744	A/T Int
C	BU	6742	A/T Low Signal	C	BU	6742	A/T Lo
D	GN/WH	1932	A/T Park Signal	D	GN/WH	1932	A/T Pa
E	YE	1479	A/T Neutral Signal	E	RD/BK	1479	A/T Ne
F	L-BU	2182	A/T Reverse Signal	F	D-BU/WH	2182	A/T Re
G	D-BU/YE	6745	A/T Forward Signal	G	D-BU/YE	6745	A/T Fo
H	D-GN/WH	459	A/C Compressor Clutch Relay Control	H	D-GN/WH	459	A/C Co Control
J-K	-	-	Not Used	J-K	-	-	Not Us

C102 - Engine Harness to the Body Harness (L61) Connector End View

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Connector Part Information

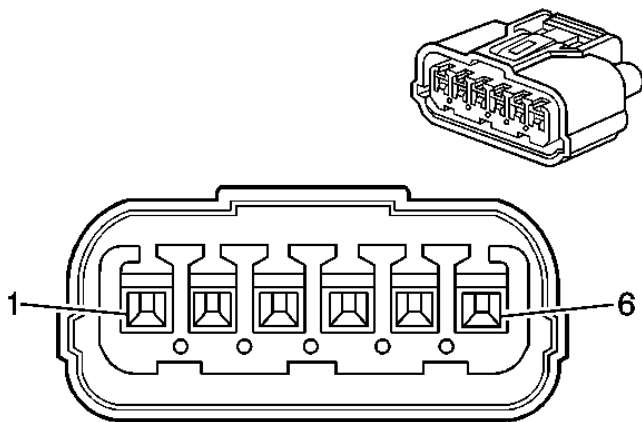
- 15326842
- 10-Way F 150 Series Sealed (BK)

Connector Part Information

Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	BN	1271	Low Reference	A	BN	1271	Low
B	WH/BK	1164	5-Volt Reference	B	WH/BK	1164	5-Vc
C	L-BU	1162	APP Sensor 2 Signal	C	L-BU	1162	APP
D	TN	1274	5-Volt Reference	D	TN	1274	5-Vc
E	PU	1272	Low Reference	E	PU	1272	Low
F	D-BU	1161	APP Sensor 1 Signal	F	D-BU	1161	APP
G	TN	2501	CAN Low	G	TN	2501	CAN
H	TN/WH	2500	CAN High	H	TN/WH	2500	CAN
J	D-GN	890	Fuel Tank Pressure Sensor Signal	J	D-GN	890	Fuel Sign
K	GY	2709	5-Volt Reference	K	GY	2709	5-Vc

C103 - Engine Harness to the Crankshaft Position Sensor Harness (L66) Connector End View

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Connector Part Information

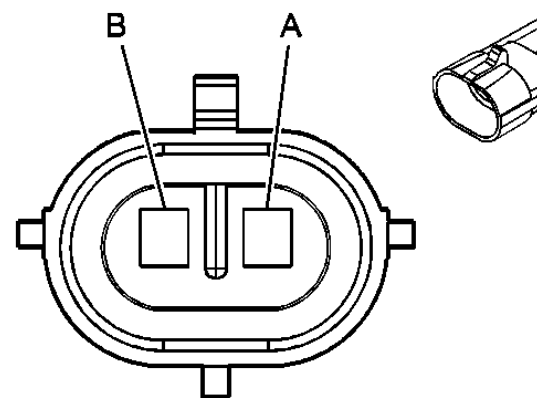
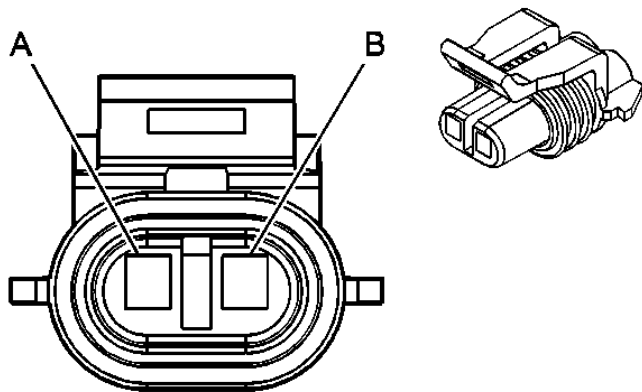
- 6189-1012
- 6-Way F HX Series (BK)

Connector Part Information

Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	Fun
1	WH	5290	Ignition 1 Voltage	1	YE/BK	5290	Ignitor Voltage
2	BU	573	CKP Sensor A Signal	2	BU	573	CKP Se Signal
3	BN/YE	451	Ground	3	BN/YE	451	Ground
4	WH	5290	Ignition 1 Voltage	4	YE/BK	5290	Ignitor Voltage
5	BU/RD	1800	CKP Sensor B Signal	5	BU/RD	1800	CKP Se Signal
6	BN/YE	451	Ground	6	BN/YE	451	Ground

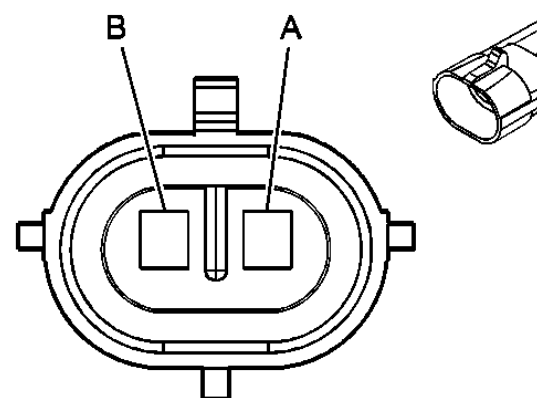
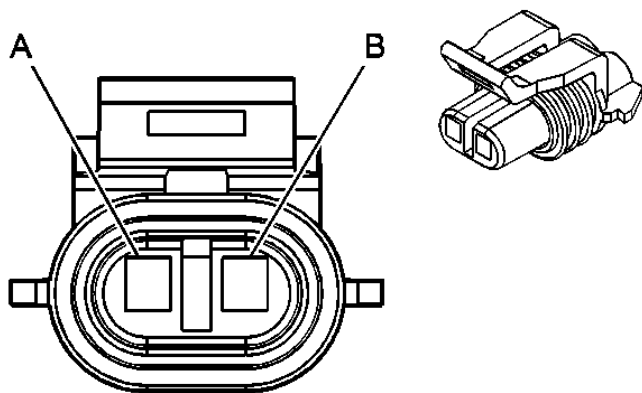
C104 - LF WSS Harness to the Body Harness Connector End View

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Connector Part Information				Connector Part Information			
<ul style="list-style-type: none"> • 12052641 • 2-Way F Metri-Pack 150 Series (L-GY) 							
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	L-BU	830	Left Front Wheel Speed Sensor Signal	A	L-BU	830	Left Fro
B	YE	873	Left Front Wheel Speed Sensor Low Reference	B	YE	873	Left Fro Referen

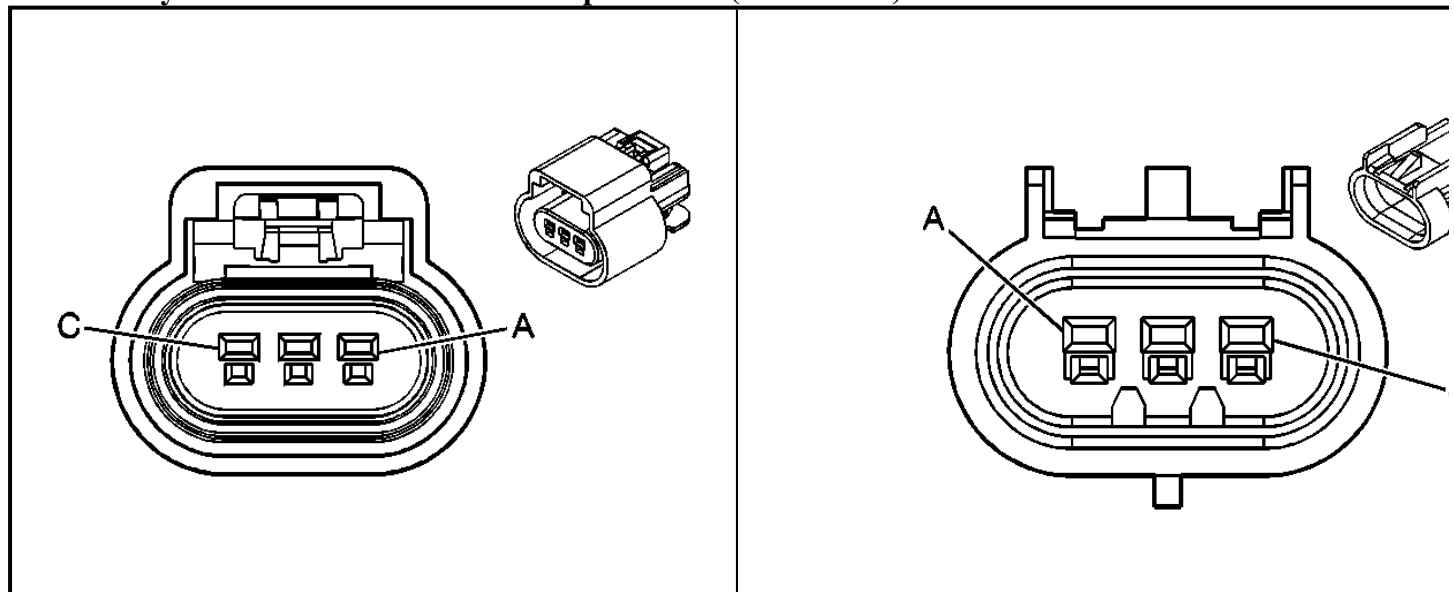
C105 - RF WSS Harness to the Body Harness Connector End View



Connector Part Information				Connector Part Information			
<ul style="list-style-type: none"> • 12052641 • 2-Way F Metri-Pack 150 							
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	L-BU	830	Left Front Wheel Speed Sensor Signal	A	L-BU	830	Left Fro
B	YE	873	Left Front Wheel Speed Sensor Low Reference	B	YE	873	Left Fro Referen

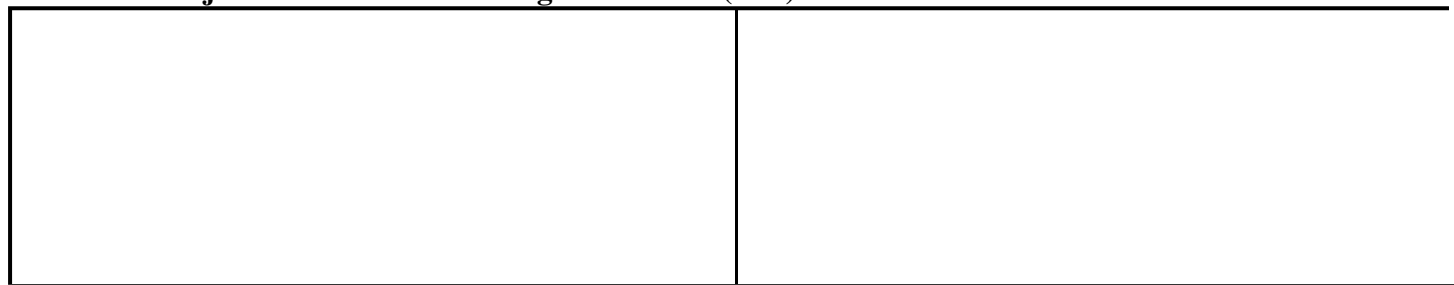
Information		Series (L-GY)		Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	TN	833	Right Front Wheel Speed Sensor Low Reference	A	TN	833	Right Fr Referenc
B	D-GN	872	Right Front Wheel Speed Sensor Signal	B	D-GN	872	Right Fr Signal

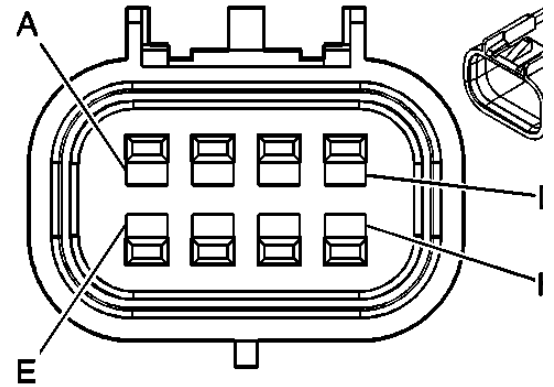
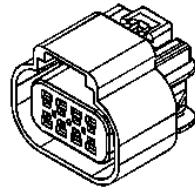
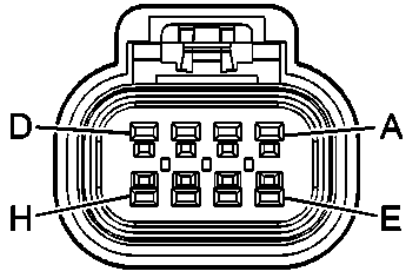
C106 - Body Harness to the Forward Lamp Harness (HAA/HCO) Connector End View



Connector Part Information		<ul style="list-style-type: none"> • 15326808 • 3-Way F GT 150 Series Sealed 4.5 (BK) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	L-GN/BK	735	Ambient Air Temperature Sensor Signal	A	L-GN/BK	735	Ambient Signal
B	GY	720	Low Reference	B	GY	720	Low Ref
C	D-BU	473	High Speed Cooling Fan (2) Relay Control (L66)	C	D-BU	473	High Sp Control

C150 - Fuel Injector Harness to the Engine Harness (L61) Connector End View





Connector Part Information

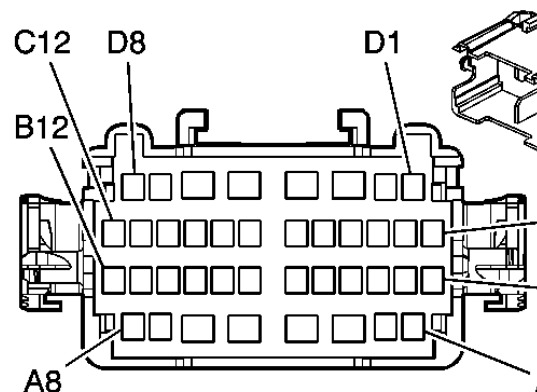
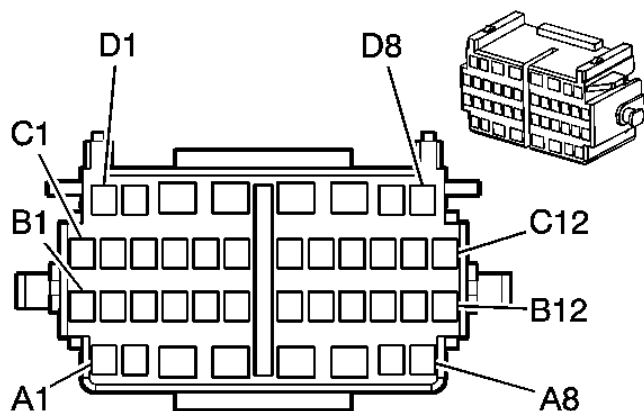
- 15326835
- 8-Way F GT 150 Series Sealed 4.0 (BK)

Connector Part Information

Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	BK	1744	Fuel Injector 1 Control	A	BK	1744	Fue
B	L-GN/BK	1745	Fuel Injector 2 Control	B	L-GN/BK	1745	Fue
C	PK/BK	1746	Fuel Injector 3 Control	C	PK/BK	1746	Fue
D	L-BU/BK	844	Fuel Injector 4 Control	D	L-BU/BK	844	Fue
E	PK	39	Ignition 1 Voltage	E	PK	39	Ign
F	OG/BK	469	Low Reference	F	OG/BK	469	Lo
G	L-GN	432	MAP Sensor Signal	G	L-GN	432	M/
H	GY	2704	5-Volt Reference B	H	GY	2704	5-V

C200 - I/P Harness to the Body Harness Connector End View

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Connector Part Information

- 15304837
- 40-Way F GT 150 280 Series (BK)

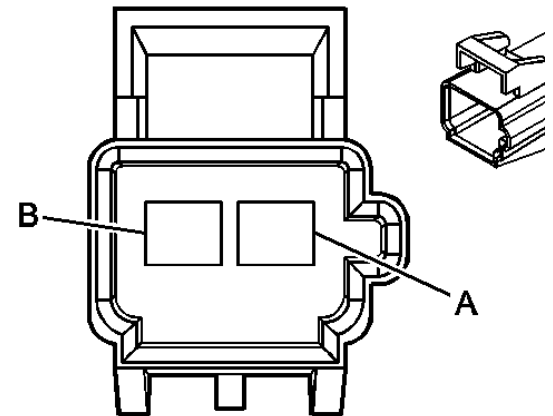
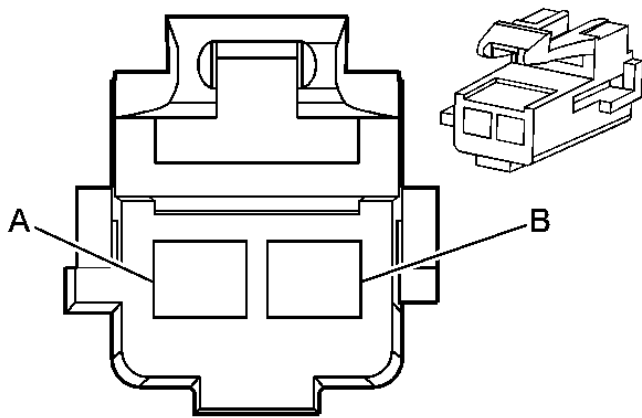
Connector Part Information

Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	Function
A1	L-BU	115	Right Rear Speaker Output (-)	A1	L-BU	115	Right Rear Speaker Output (-)
A2	D-BU	46	Right Rear Speaker Output (+)	A2	D-BU	46	Right Rear Speaker Output (+)
A3	YE	343	Accessory Voltage	A3	YE	343	Accessory Voltage
A4	YE	5	Crank Voltage (A/T)	A4	YE	5	Crank Voltage (A/T)
A4	PU	6	Starter Solenoid Crank Voltage (M/T)	A4	YE	6	Starter Solenoid Crank Voltage (M/T)
A5	OG	40	Battery Positive Voltage	A5	OG	40	Battery Positive Voltage
A6	D-GN	95	Windshield Wiper Motor Low Speed	A6	D-GN	95	Windshield Wiper Motor Low Speed
A7	OG	1950	Amplifier Sense	A7	OG	1950	Amplifier Sense
A8	PU	719	Low Reference	A8	PU	719	Low Reference
B1	GY	118	Left Front Speaker Output (-)	B1	GY	118	Left Front Speaker Output (-)
B2	TN	201	Left Front Speaker Output (+)	B2	TN	201	Left Front Speaker Output (+)
B3	YE	116	Left Rear Speaker Output (-)	B3	YE	116	Left Rear Speaker Output (-)
B4	OG	540	Battery Positive Voltage	B4	OG	540	Battery Positive Voltage
B5	OG	340	Battery Positive Voltage	B5	OG	340	Battery Positive Voltage
B6	GY/BK	87	Cruise Control Resume/Accel Switch Signal	B6	GY/BK	87	Cruise Control Resume/Accel Switch Signal
B7	GY	731	Evaporator Temperature Sensor Signal	B7	GY	731	Evaporator Temperature Sensor Signal

B8	GY	397	Cruise Control On Switch Signal	B8	GY	397	Cruise C
B9	L-GN	200	Right Front Speaker Output (+)	B9	L-GN	200	Right Fr
B10	PU	1272	Low Reference	B10	PU	1272	Low Ref
B11	TN	1274	5-Volt Reference	B11	TN	1274	5-Volt R
B12	D-BU	1161	APP Sensor 1 Signal	B12	D-BU	1161	APP Ser
C1	D-GN	117	Right Front Speaker Output (-)	C1	D-GN	117	Right Fr
C2	D-BU	84	Cruise Control Set/Coast Switch Signal	C2	D-BU	84	Cruise C Signal
C3	BN	199	Left Rear Speaker Output (+)	C3	BN	199	Left Rea
C4	OG	360	Amplifier Control	C4	OG	360	Amplifie
C5	-	-	Not Used	C5	-	-	Not Use
C6	PU	420	Brake Switch Signal	C6	PU	420	Brake S'
C7	BN/WH	2960	Keyword Serial Data	C7	BN/WH	2960	Keywor
C8	D-BU	1660	Traction Control Indicator Control	C8	D-BU	1660	Traction
C9	L-BU	20	Stop Lamp Switch Signal	C9	L-BU	20	Stop Lam
C10	WH/BK	1164	5-Volt Reference	C10	WH/BK	1164	5-Volt R
C11	BN	1271	Low Reference	C11	BN	1271	Low Ref
C12	L-BU	1162	APP Sensor 2 Signal	C12	L-BU	1162	APP Ser
D1	TN	2501	CAN Low	D1	TN	2501	CAN Lc
D2	TN/WH	2500	CAN High	D2	TN/WH	2500	CAN Hi
D3	PU	92	Windshield Wiper Motor High Speed	D3	PU	92	Windshi
D4	L-BU	97	Windshield Wiper Switch Mist/Off/Low Signal	D4	L-BU	97	Windshi Mist/Of
D5	OG	40	Battery Positive Voltage	D5	OG	40	Battery l
D6	OG	1140	Battery Positive Voltage	D6	OG	1140	Battery l
D7	OG/BK	1445	Front Wiper Relay Control	D7	OG/BK	1445	Front W
D8	WH/BK	5043	Keyword Serial Data	D8	WH/BK	5043	Keywor

C201 - Auxiliary Outlet Harness to the I/P Harness Connector End View

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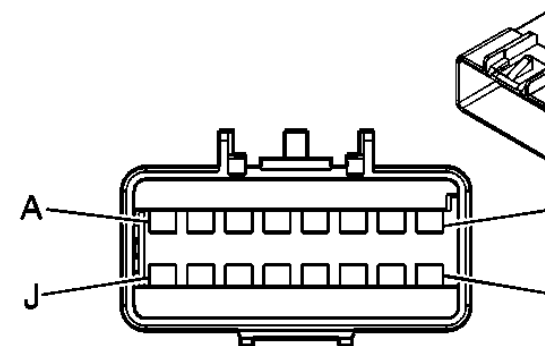
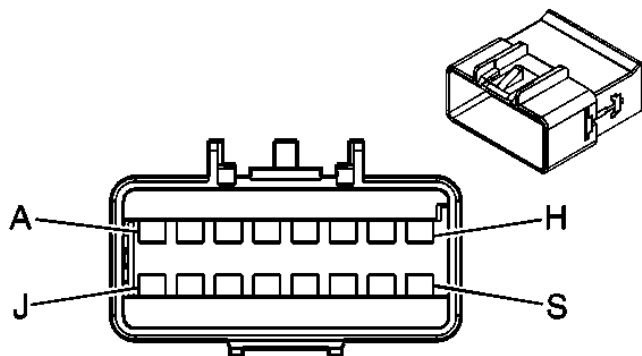
Connector Part Information

- 12129082
- 2-Way F Metri-Pack 280 Series (GY)

Connector Part Information

Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	OG	940	Battery Positive Voltage	A	OG	940	Ba
B	BK	550	Ground	B	BK	550	Gr

C202 - HVAC Harness to the I/P Harness Connector End View



Connector Part Information

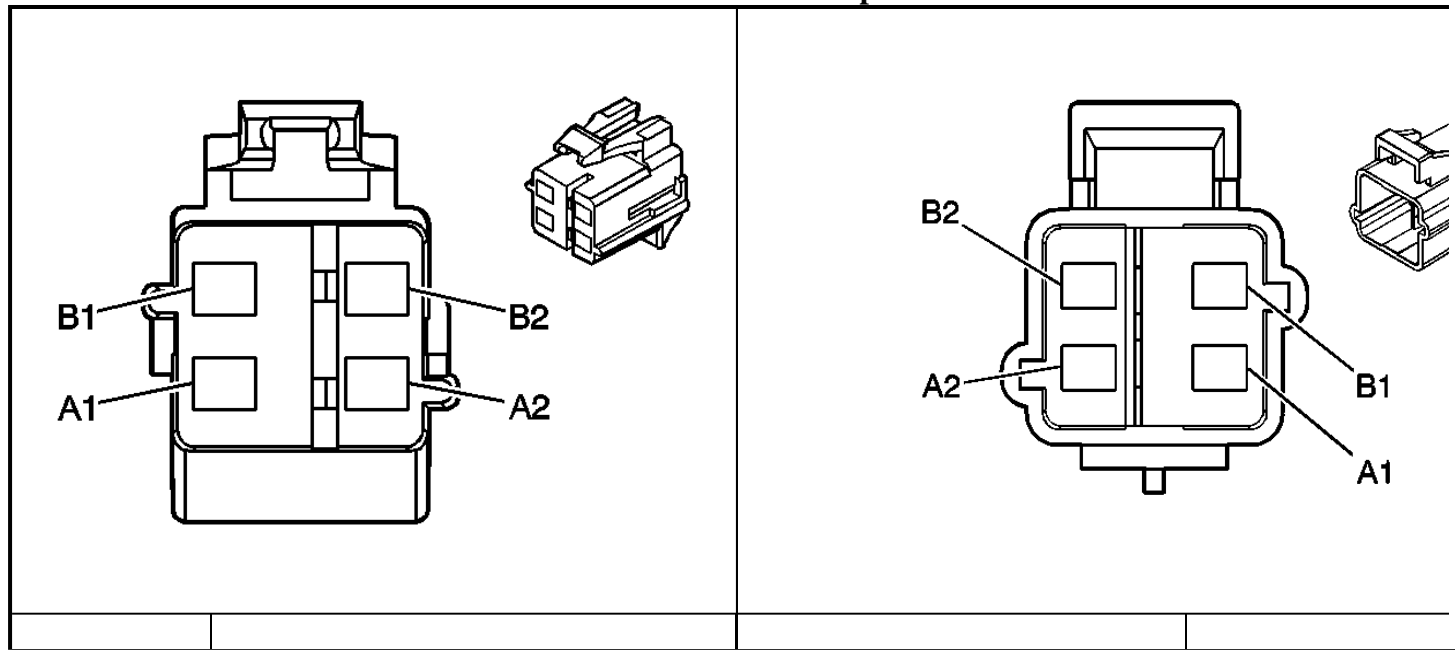
- 15332173
- 16-Way F GT 150 Series (BK)

Connector Part Information

Wire	Circuit			Circuit	

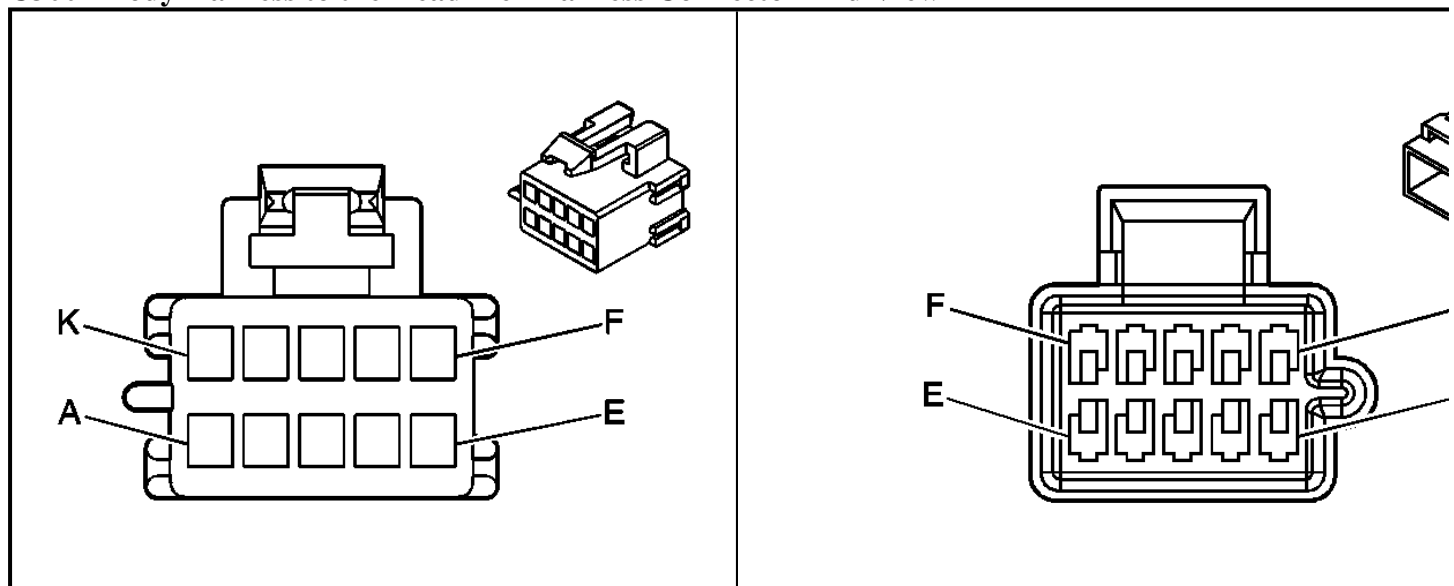
Pin	Color	No.	Function	Pin	Wire Color	No.	
A	PU/WH	3361	Defrost Mode Valve Solenoid Control B	A	PU/WH	3361	Defrost Control
B	RD	362	Upper Mode Valve Solenoid Control A	B	RD	362	Upper M A
C	PU	361	Defrost Mode Valve Solenoid Control A	C	PU	361	Defrost Control
D	PK/WH	1648	Recirculation Door Control B	D	PK/WH	1648	Recircu
E	L-GN/BK	1647	Recirculation Door Control A	E	L-GN/BK	1647	Recircu
F	BK	407	Low Reference	F	BK	407	Low Re
G	RD	708	Mode Door Position Signal	G	RD	708	Mode D
H	YE/BK	1814	Lower Mode Door Position Signal	H	YE/BK	1814	Lower M
J	YE/BK	713	Defrost Mode Valve Position Sensor Signal	J	YE/BK	713	Defrost Signal
K	OG/WH	3362	Upper Mode Valve Solenoid Control B	K	OG/WH	3362	Upper M B
L	L-GN/WH	366	Lower Mode Valve Solenoid Control A	L	L-GN/WH	366	Lower M A
M	L-GN/BK	3366	Lower Mode Valve Solenoid Control B	M	L-GN/BK	3366	Lower M B
N	GY	705	5-Volt Reference	N	GY	705	5-Volt F
P-S	-	-	Not Used	P-S	-	-	Not Use

C203 - I/P Harness to the Inflatable Restraint I/P Module Jumper Harness Connector End View



Connector Part Information		<ul style="list-style-type: none"> • 15336479 • 4-Way F Metri-Pack 280 Series (YE) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A1	YE	3025	I/P Module - Stage 1 - High Control	A1	YE	3025	I/P M Con
A2	OG	3024	I/P Module - Stage 1 - Low Control	A2	OG	3024	I/P M Con
B1	GY	3027	I/P Module - Stage 2 - High Control	B1	GY	3027	I/P M Con
B2	PU	3026	I/P Module - Stage 2 - Low Control	B2	PU	3026	I/P M Con

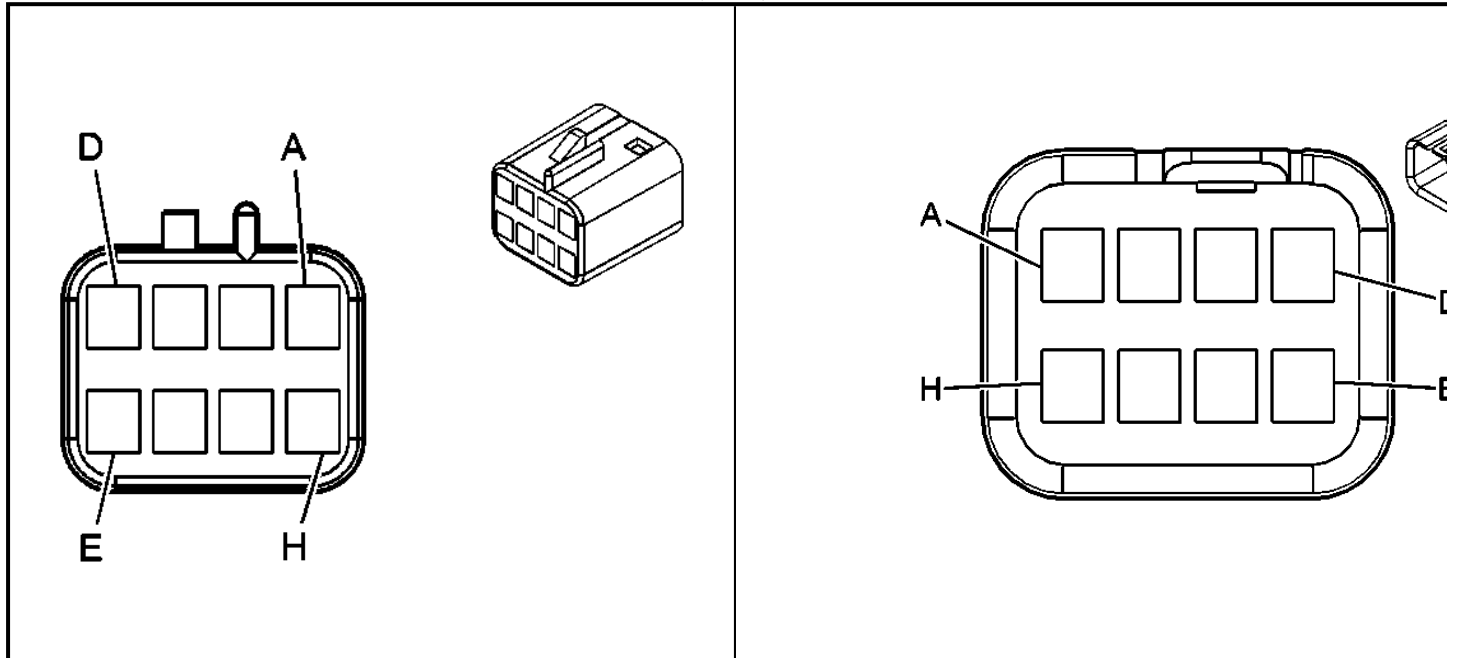
C300 - Body Harness to the Headliner Harness Connector End View



Connector Part Information		<ul style="list-style-type: none"> • 12064769 • 10-Way F Metri-Pack 150 Series (WH) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	WH	156	Courtesy Lamp Switch Signal	A	WH	156	Courtesy
B	BK	750	Ground	B	BK	750	Ground
C	OG	1732	Courtesy Lamps Supply Voltage	C	OG	1732	Courtesy
D	YE	43	Ignition 1 Voltage	D	YE	43	Ignition
E	OG	580	Accessory Voltage (CF5)	E	OG	580	Accesso
F	L-GN	24	Backup Lamp Supply Voltage	F	L-GN	24	Backup l

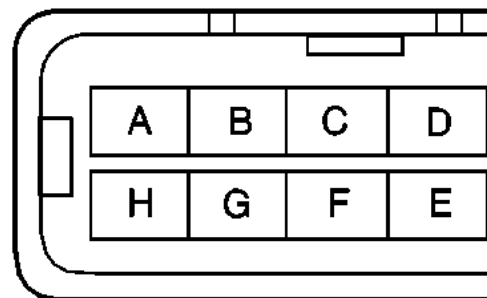
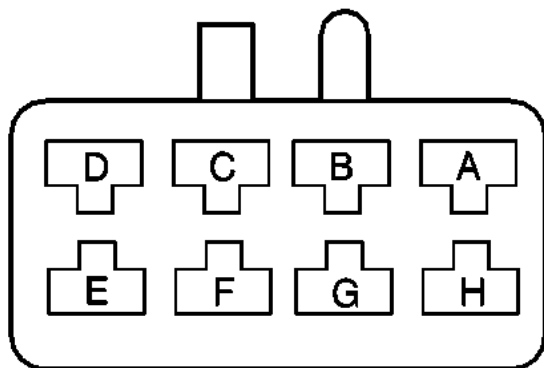
			(HAA/HCO)				(HAA/H
G	GY	157	Courtesy Lamps Control	G	GY	157	Courtesy
H	BK	750	Ground (CF5)	H	BK	750	Ground (
J	L-GN/BK	735	Ambient Air Temperature Sensor Signal (HAA/HCO)	J	L-GN/BK	735	Ambient Signal (F
K	GY	720	Low Reference (HAA/HCO)	K	GY	720	Low Ref

C302 - Sunroof Harness to the Headliner Harness (CF5) Connector End View



Connector Part Information		<ul style="list-style-type: none"> • 12047886 • 8-Way F Metri-Pack 150 Series (BK) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	BN	100	Sunroof Switch Open Signal	A	BN	100	Sunr
B	D-GN	2074	Sunroof Switch Express Signal	B	D-GN	2074	Sunr Sign
C	OG/BK	144	Sunroof Switch Open Vent Signal	C	OG/BK	144	Sunr Sign
D	D-BU	128	Low Reference	D	D-BU	128	Low
E	OG	580	Accessory Voltage	E	OG	580	Acce
F	BK	750	Ground	F	BK	750	Grou
G-H	-	-	Not Used	G-H	-	-	Not I

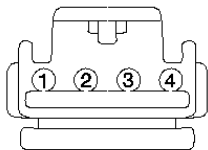
C303 - I/P Harness to the Headliner Harness (UE1) Connector End View



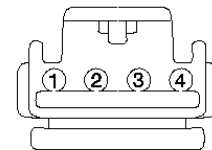
Connector Part Information		<ul style="list-style-type: none"> • 12065398 • 8-Way F Metri-Pack 150 Series (WH) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	YE/BK	2516	Keypad Green LED Signal	A	YE/BK	2516	Keypad G
B	L-GN/BK	2515	Keypad Supply Signal	B	L-GN/BK	2515	Keypad S
C	D-GN/WH	2514	Keypad Signal	C	D-GN/WH	2514	Keypad S
D	BN/WH	2517	Keypad Red LED Signal	D	BN/WH	2517	Keypad I
E	GY	655	Cellular Microphone Signal	E	GY	655	Cellular M Signal
F	BARE	654	Cellular Microphone Low Reference	F	BARE	654	Cellular M Referenc
G-H	-	-	Not Used	G-H	-	-	Not Usec

C304 - Shifter Assembly Harness to the I/P Harness Connector End View

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4-WAY
174922-1



4-WAY
174922-1

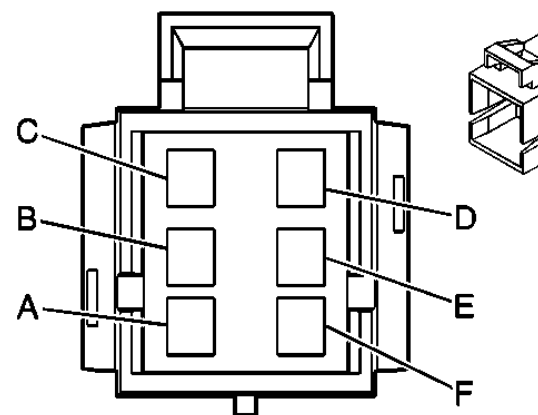
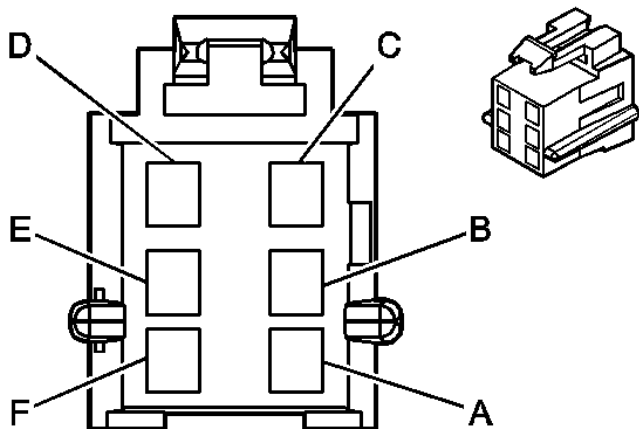
Connector Part Information

- 194929-1
- 4-Way F (WH)

Connector Part Information

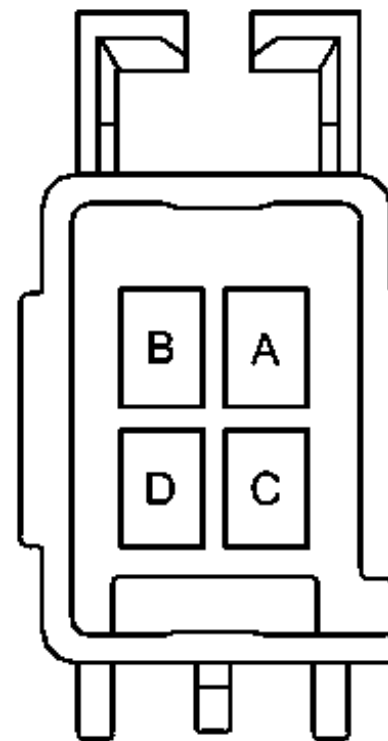
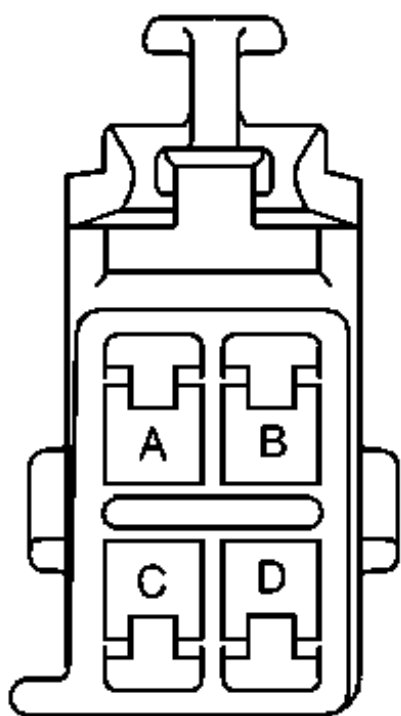
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	Function
1	TN/WH	816	A/T Shift Lock Solenoid Supply Voltage	1	WH	816	A/T Shi Voltage
2	PK	139	Ignition 1 Voltage	2	PK	139	Ignition
3	GY	8	Instrument Panel Lamp Supply Voltage	3	GY	8	Instrum Voltage
4	BK	550	Ground	4	BK	550	Ground

C305 - Body Harness to the Driver Seat Harness (HAA/HCO, KA1) Connector End View



Connector Part Information		<ul style="list-style-type: none"> • 12064752 • 6-Way F Metri-Pack 280 Series Flexlock (BK) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	OG	1540	Battery Positive Voltage	A	OG	1540	Battery
B	L-BU	1462	Heated Seat Switch Signal	B	L-BU	1462	Heated
C	PK	1501	Driver Heated Seat High/Low Signal	C	PK	1501	Driver Signal
D	BK	650	Ground	D	BK	650	Ground
E	OG	1240	Battery Positive Voltage	E	OG	1240	Battery
F	BK	650	Ground	F	BK	650	Ground

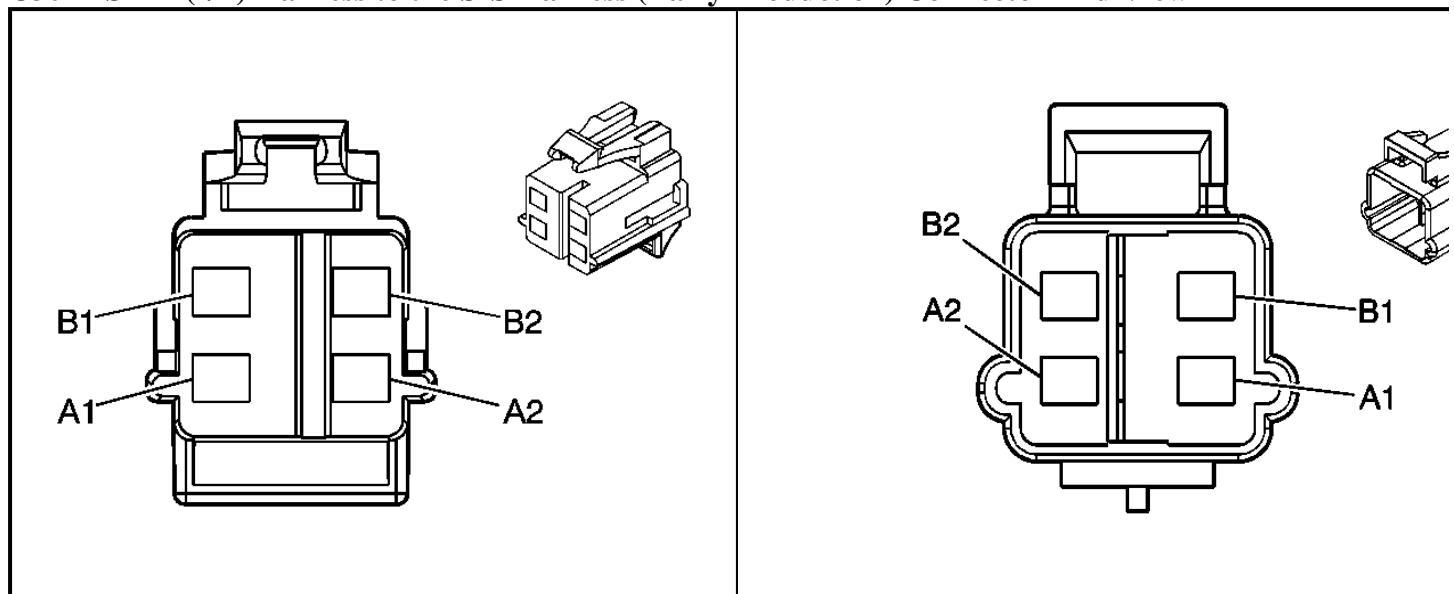
C306 - Body Harness to the Passenger Seat Harness (HAA/HCO, KA1) Connector End View



Connector	<ul style="list-style-type: none"> • 12129136 	Connector	
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Part Information		• 4-Way F Metri-Pack 280 Series Flexlock (BK)		Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	OG	1540	Battery Positive Voltage	A	OG	1540	Battery I
B	L-BU/BK	1505	Heated Seat Switch Signal	B	L-BU	1505	Heated S
C	PK/BK	1503	Passenger Heated Seat High/Low Signal	C	PK	1503	Passenge High/Lo'
D	BK	650	Ground	D	BK	650	Ground

C307 - SDM (I/P) Harness to the SIS Harness (Early Production) Connector End View

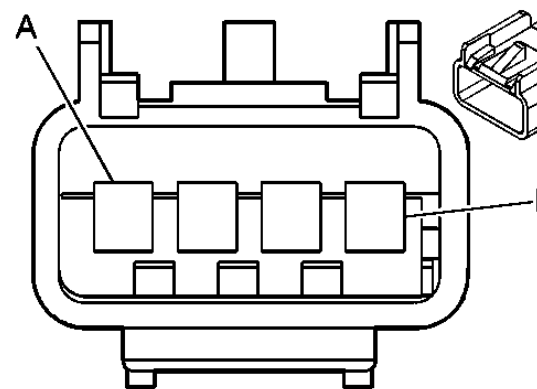
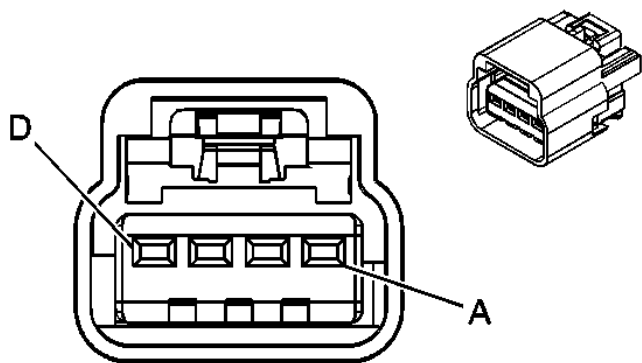


Connector Part Information		• 12191739 • 4-Way F Metri-Pack 280 Series (YE)		Connector Part Information			
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Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A1	YE	2131	Left SIS Module Voltage	A1	YE	2131	Lef
A2	WH	2132	Left SIS Module Signal	A2	WH	2132	Lef
B1	TN	2133	Right SIS Module Voltage	B1	TN	2133	Rig
B2	D-GN	2134	Right SIS Module Signal	B2	D-GN	2134	Rig

C307 - SDM (I/P) Harness to the SIS Harness (Late Production) Connector End View





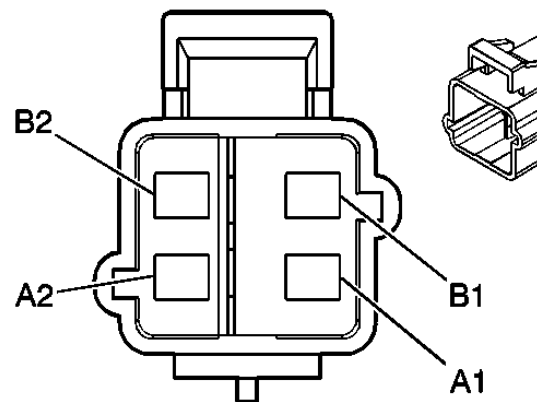
Connector Part Information

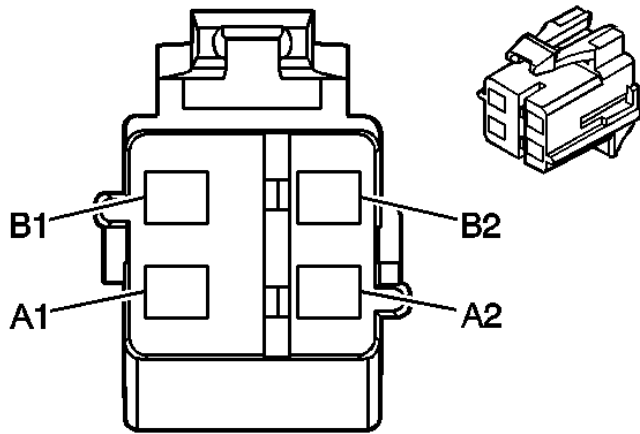
- 15332135
- 4-Way F Metri-Pack 280 Series (YE)

Connector Part Information

Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	YE	2131	Left SIS Module Voltage	A	YE	2131	Lef
B	WH	2132	Left SIS Module Signal	B	WH	2132	Lef
C	TN	2133	Right SIS Module Voltage	C	TN	2133	Rig
D	D-GN	2134	Right SIS Module Signal	D	D-GN	2134	Rig

C308 - Roof Rail Module Harness to the SDM (I/P) Harness (ASF) Connector End View

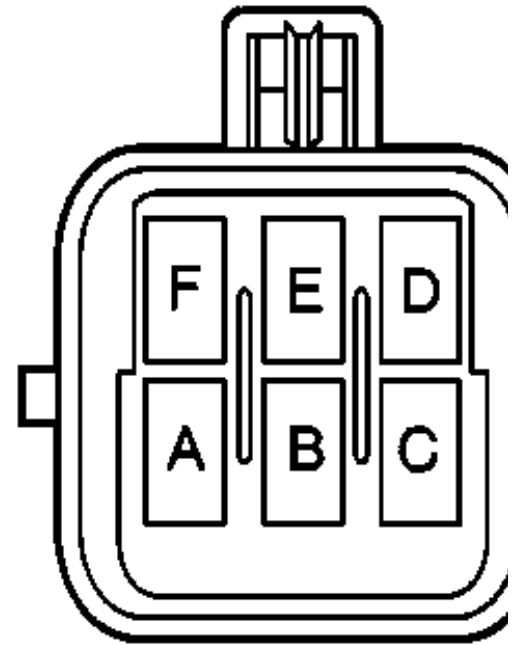
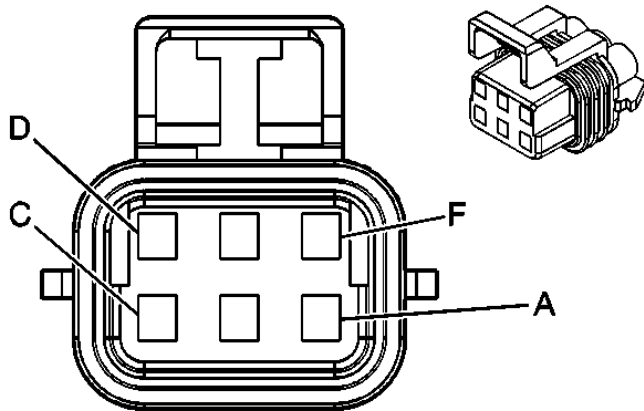




Connector Part Information		<ul style="list-style-type: none"> • 15336479 • 4-Way F Metri-Pack 280 Series (YE) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A1	BK/WH	2135	RF Side Impact Module High Control	A1	BK/WH	2135	RF Side Control
A2	L-GN	2136	RF Side Impact Module Low Control	A2	L-GN	2136	RF Side Control
B1	BN	2137	LF Side Impact Module High Control	B1	BN	2137	LF Side Control
B2	YE/BK	2138	LF Side Impact Module Low Control	B2	YE/BK	2138	LF Side Control

C400 - Body Harness to the Left Tail Lamp Harness Connector End View

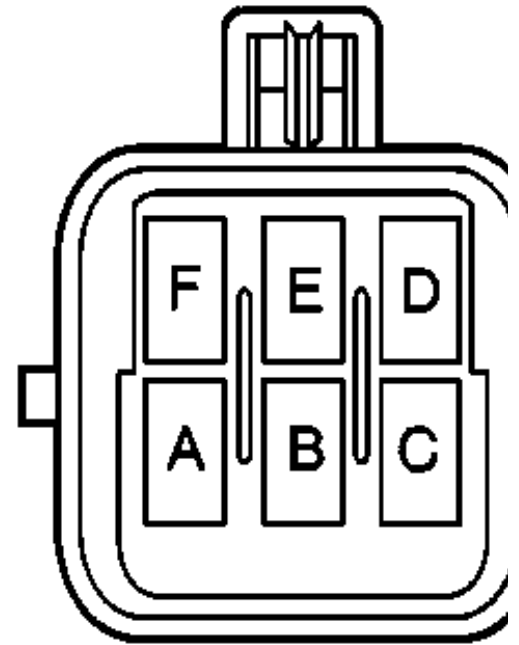
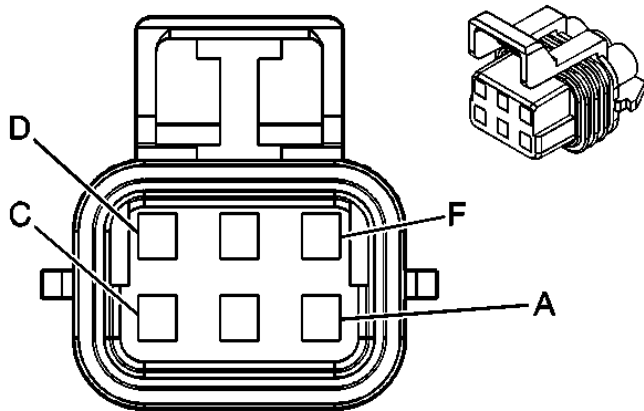
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Connector Part Information		<ul style="list-style-type: none"> 12052848 6-Way F Metri-Pack 150 Series Sealed (BK) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	YE	18	Left Rear Stop/Turn Lamp Supply Voltage	A	D-BU	18	Left Re: Voltage
B	BN	9	Park Lamp Supply Voltage	B	BN	9	Park La
C	BK	750	Ground	C	BK	750	Ground
D	L-GN	24	Backup Lamp Switch Signal	D	L-GN	24	Backup
E	-	-	Not Used	E	-	-	Not Use
F	L-BU	20	Stop Lamp Switch Signal	F	L-BU	20	Stop La

C401 - Body Harness to the Right Tail Lamp Harness Connector End View

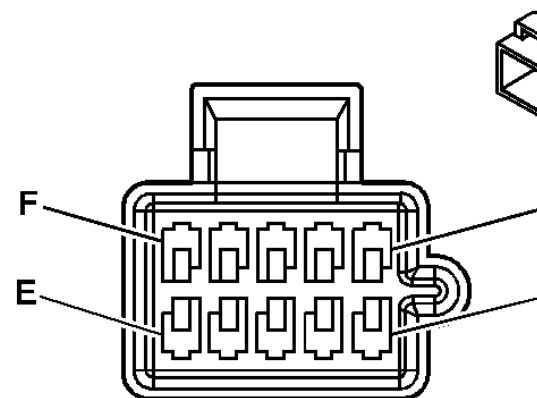
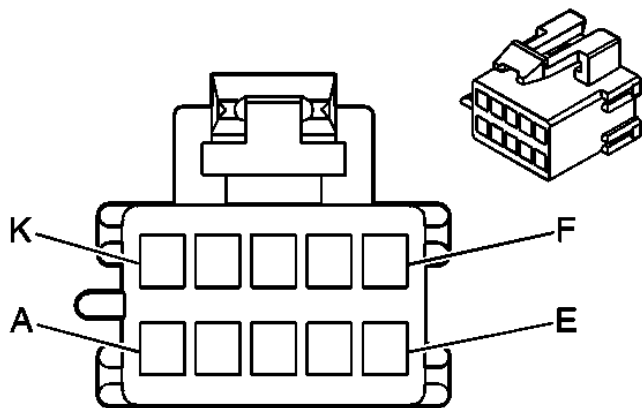
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Connector Part Information		<ul style="list-style-type: none"> • 12052848 • 6-Way F Metri-Pack 150 Series Sealed (BK) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage	A	D-BU	19	Right R Voltage
B	BN	9	Park Lamp Supply Voltage	B	BN	9	Park La
C	BK	850	Ground	C	BK	850	Ground
D	L-GN	24	Backup Lamp Switch Signal	D	L-GN	24	Backup
E	-	-	Not Used	E	-	-	Not Use
F	L-BU	20	Stop Lamp Switch Signal	F	L-BU	20	Stop La

C402 - Liftgate Harness to the Body Harness Connector End View

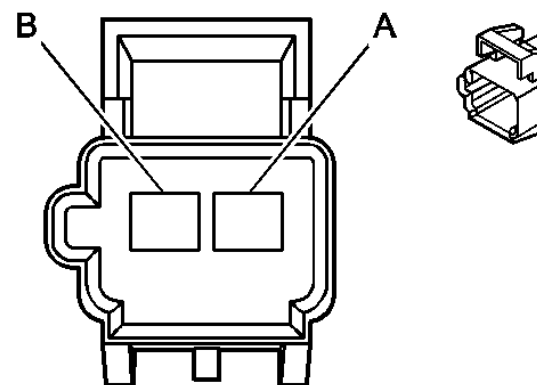
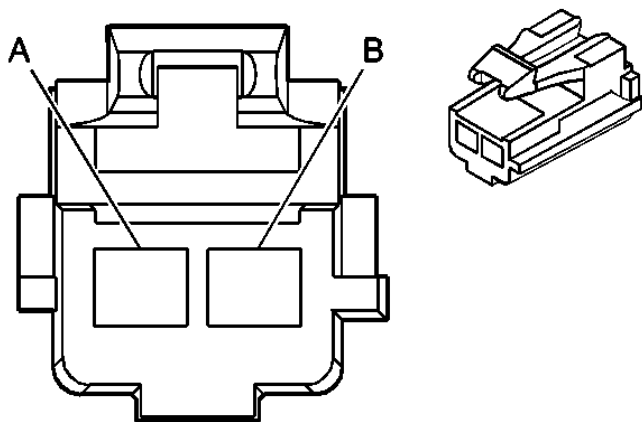
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Connector Part Information		<ul style="list-style-type: none"> • 12064769 • 10-Way F Metri-Pack 150 Series (WH) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	BN	9	Park Lamp Supply Voltage	A	BN	9	Park La
B	OG	1732	Courtesy Lamps Supply Voltage	B	OG	1732	Courtes
C	L-BU	20	Stop Lamp Switch Signal	C	L-BU	20	Stop La
D	GY	295	Door Lock Actuator Lock Control	D	GY	295	Door L
E	TN	294	Door Lock Actuator Unlock Control	E	TN	294	Door L Control
F	YE	143	Accessory Voltage	F	YE	143	Access
G	WH	393	Rear Window Wiper Motor Control	G	WH	393	Rear W
H	BK	650	Ground	H	BK	650	Ground
J	GY	157	Courtesy Lamp Control	J	GY	157	Courtes
K	RD/BK	744	Liftgate Ajar Switch Signal	K	RD/BK	744	Liftgate

C403 - Liftgate Harness to the Body Harness Connector End View

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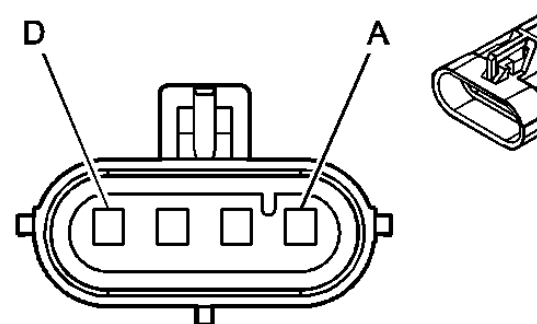
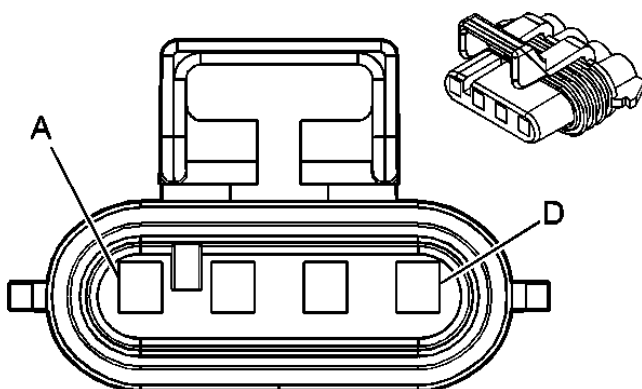
Connector Part Information

- 12129081
- 2-Way F Metri-Pack 280 Series (BK)

Connector Part Information

Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	Function
A	BK	293	Rear Defog Element Supply Voltage	A	PU	293	Rear Defog Element Supply Voltage
B	BK	750	Ground	B	BK	750	Ground

C404 - Rear WSS Harness to the Body Harness Connector End View



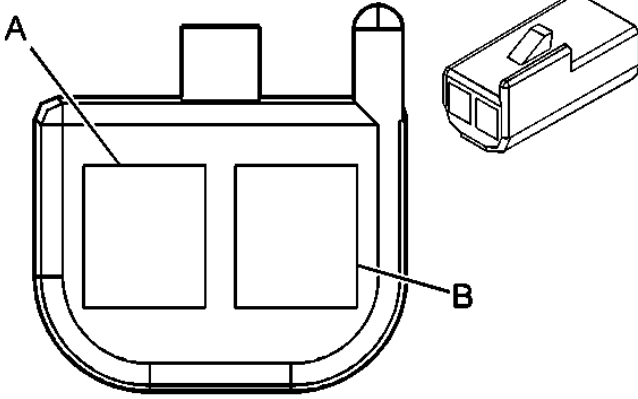
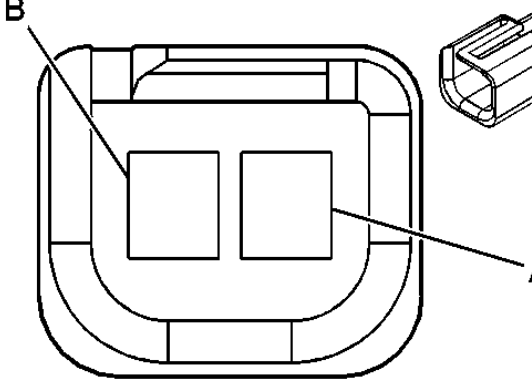
Connector Part Information

- 12162144
- 4-Way F Metri-Pack 150 Series (BK)

Connector Part Information

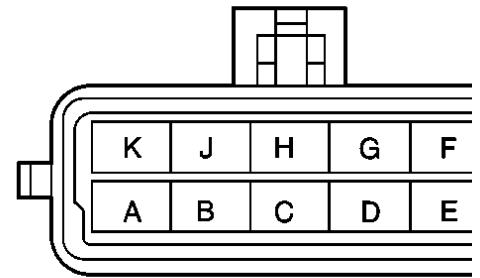
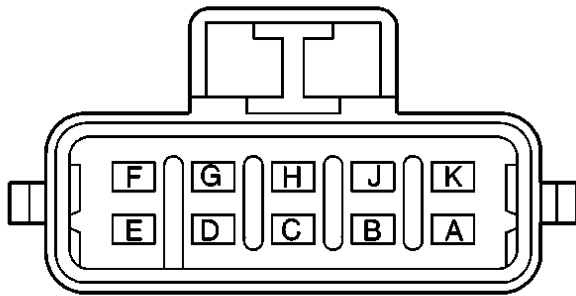
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	BN	882	RR WSS Signal	A	BN	882	R
B	WH	883	RR WSS Low Ref	B	WH	883	R
C	BK	884	LR WSS Signal	C	BK	884	L
D	RD	885	LR WSS Low Ref	D	RD	885	L

C405 - License Lamp Harness to the Liftgate Harness Connector End View

							
Connector Part Information		<ul style="list-style-type: none"> • 12047662 • 2-Way F Metri-Pack 150 Series (BK) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	BK	650	Ground	A	BK	650	Gr
B	WH	9	Park Lamp Supply Voltage	B	BN	9	Par

C406 - Fuel Tank Harness to the Body Harness Connector End View

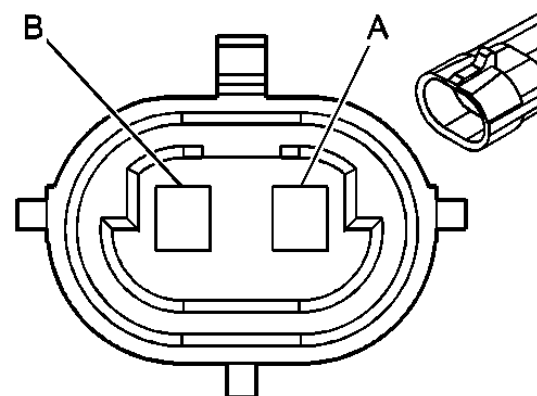
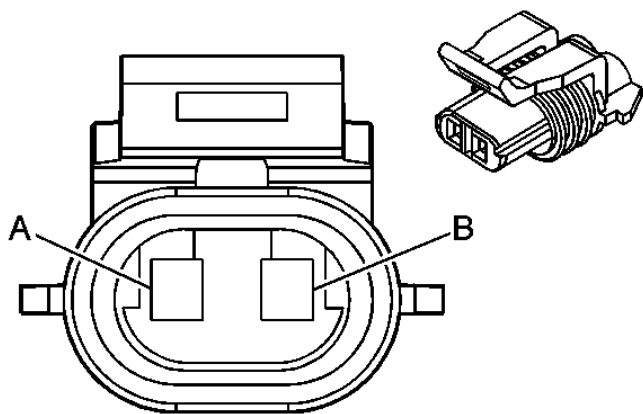
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Connector Part Information		<ul style="list-style-type: none"> • 12065425 • 10-Way F Metri-Pack 150 Series (BK) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	GY	120	Fuel Pump Supply Voltage	A	GY	120	Fuel Pu
B	BK	850	Ground	B	BK	850	Ground
C	PU	1589	Fuel Level Sensor Signal	C	PU	1589	Fuel Lev
D	-	-	Not Used (For Diagnostics)	D	D-BU	930	Fuel Lev
E	GY	2709	5-Volt Reference	E	GY	2709	5-Volt F
F	D-GN	890	Fuel Tank Pressure Sensor Signal	F	D-GN	890	Fuel Tai Signal
G	BK	2759	Low Reference	G	BK	2759	Low Re
H	BK	2759	Low Reference (L61)	H	BK	2759	Low Re
H	BN/WH	6281	Low Reference (L66)				
J	WH	5291	Ignition 1 Voltage	J	WH	5291	Ignition
K	WH	1310	EVAP Canister Vent Solenoid Control	K	WH	1310	EVAP C Solenoid

C700 - Body Harness to the LR Door Connector End View

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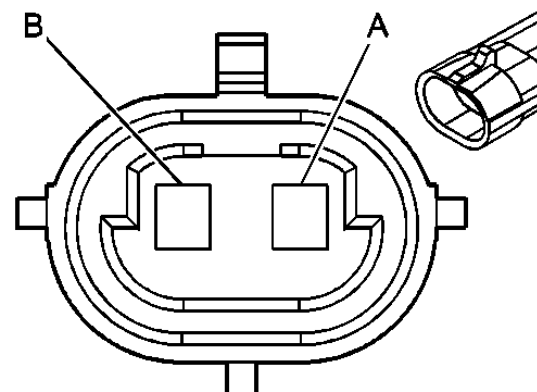
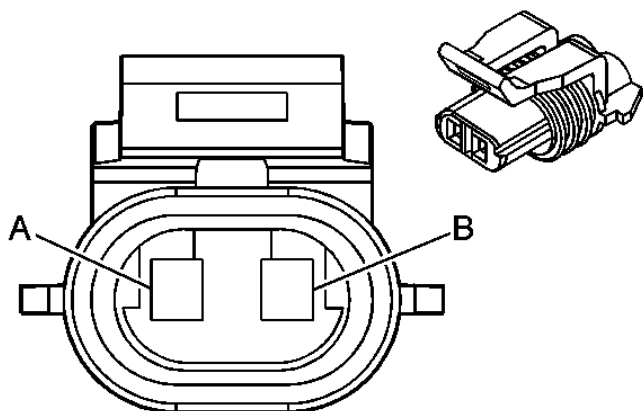
Connector Part Information

- 12052644
- 2-Way F Metri-Pack 150 Series Sealed (L-GY)

Connector Part Information

Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	GY	295	Door Lock Actuator Lock Control	A	GY	295	Door L
B	TN	294	Door Lock Actuator Unlock Control	B	TN	294	Door L Contro

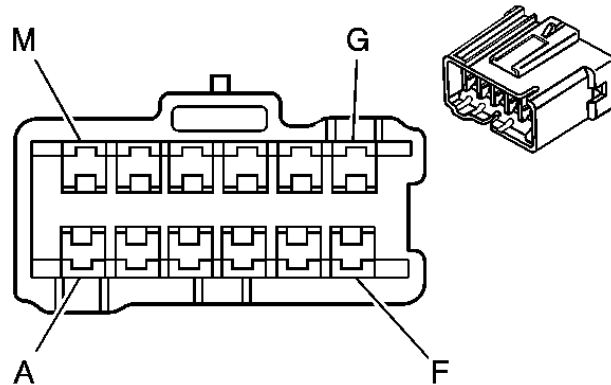
C800 - Body Harness to the RR Door Connector End View



Connector Part Information		<ul style="list-style-type: none"> • 12052644 • 2-Way F Metri-Pack 150 Series Sealed (L-GY) 		Connector Part Information			
Pin	Wire Color	Circuit No.	Function	Pin	Wire Color	Circuit No.	
A	GY	295	Door Lock Actuator Lock Control	A	GY	295	Door L
B	TN	294	Door Lock Actuator Unlock Control	B	TN	294	Door L Contro

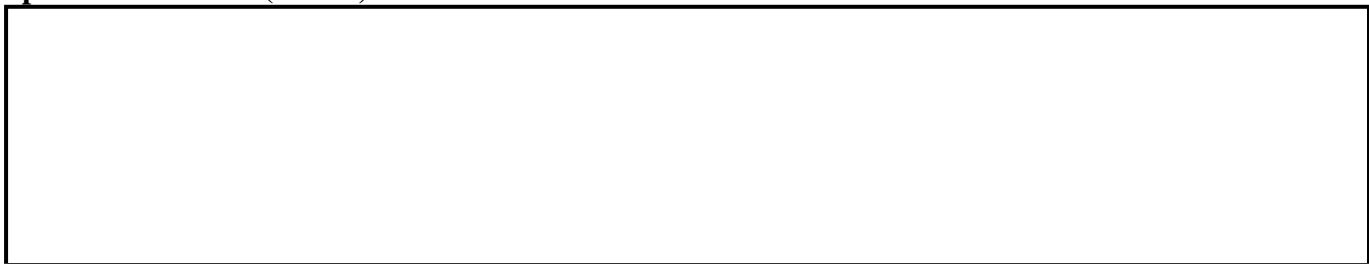
SPLICE PACK CONNECTOR END VIEWS

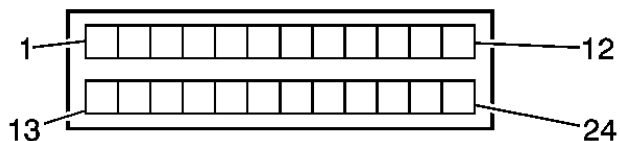
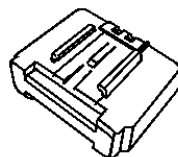
Splice Pack SP101 (G101) Connector End View



Connector Part Information		<ul style="list-style-type: none"> • 15305294 • 12-Way F Metri-Pack 280 Splice Saver Double (BK) 	
Pin	Wire Color	Circuit Number	Function
A-H	BK	150	Ground
J	-	-	Not Used (Ground)
K-L	BK	150	Ground
M	-	-	Not Used (Ground)

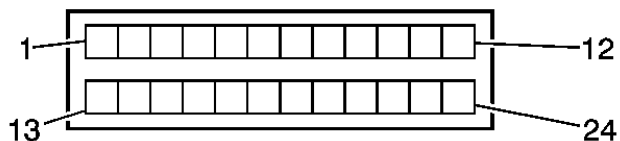
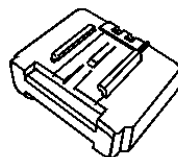
Splice Pack SP113 (w/L66) Connector End View





Connector Part Information		<ul style="list-style-type: none"> • 6189-0900 • 24-Way F HX Series (BK) 	
Pin	Wire Color	Circuit Number	Function
1-5	WH	5290	Ignition 1 Voltage
6-12	WH	5290	Ignition 1 Voltage
13-19	RD	39	Ignition 1 Voltage
20 -23	YE/BU	605	5-Volt Reference A
24	-	-	5-Volt Reference A - Not Used

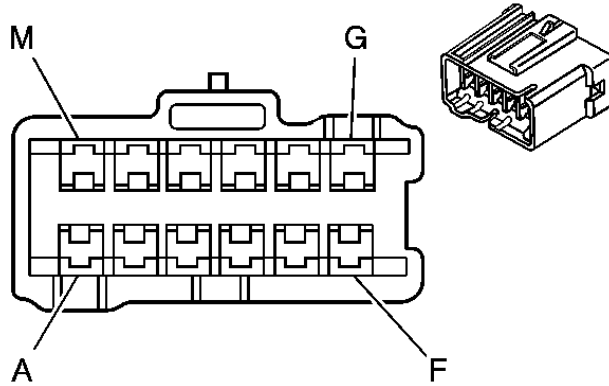
Splice Pack SP114 (w/L66) Connector End View



Connector Part Information		<ul style="list-style-type: none"> • 6189-0900 • 24-Way F HX Series (BK) 	
Pin	Wire Color	Circuit Number	Function

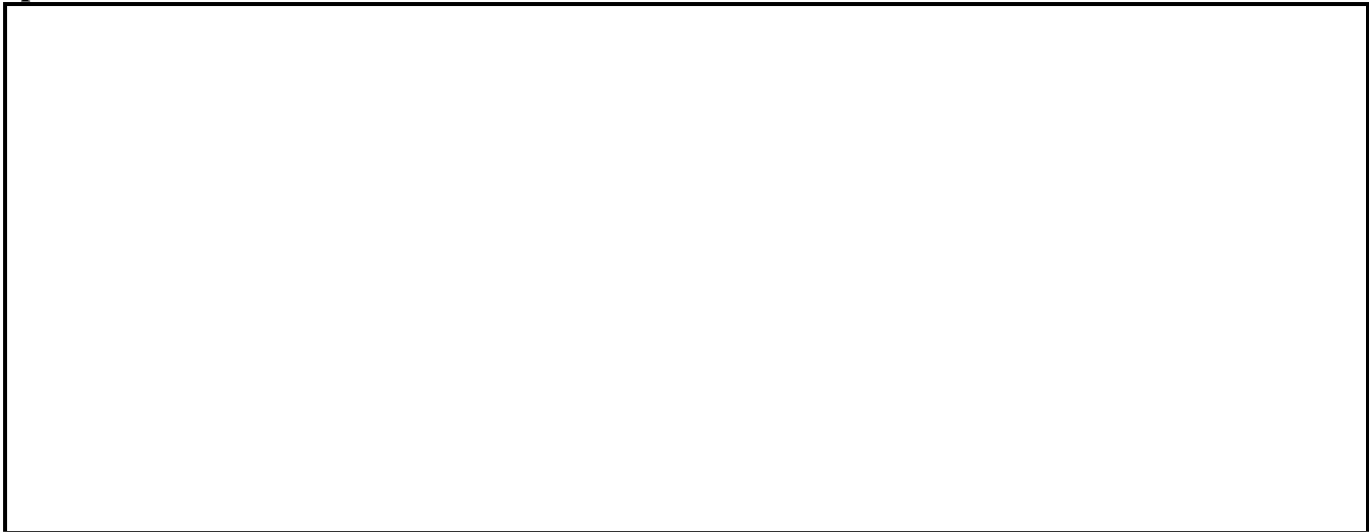
1-5	WH	5291	Ignition 1 Voltage
6-12	BK	450	Ground
13-15	BN/YE	451	Ground
16-18	GN/YE	2751	Low Reference
19-21	YE/RD	474	5-Volt Reference A
22-24	BU/WH	2182	Reverse Lamp Relay Control

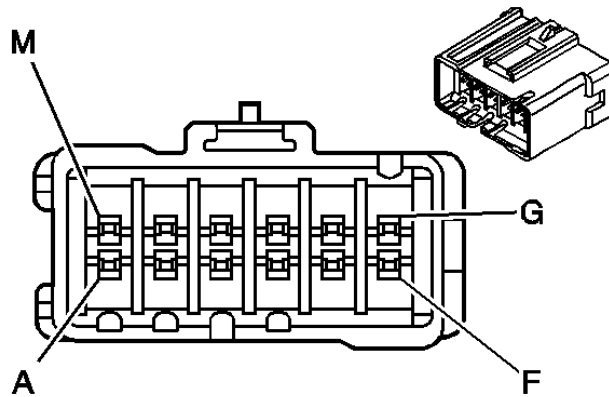
Splice Pack SP201 (G201) Connector End View



Connector Part Information		<ul style="list-style-type: none"> • 15305294 • 12-Way F Metri-Pack 280 Splice Saver Double (BK) 	
Pin	Wire Color	Circuit Number	Function
A-L	BK/WH	151	Ground
M	-	-	Not Used (Ground)

Splice Pack SP203 Connector End View



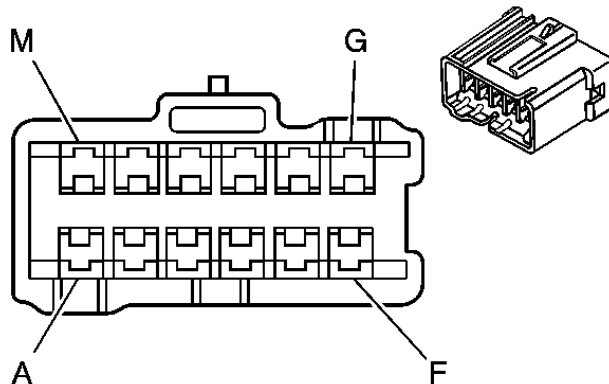


Connector Part Information

- 15305291
- 12-Way F Metri-Pack 280 Splice Saver Double (BK)

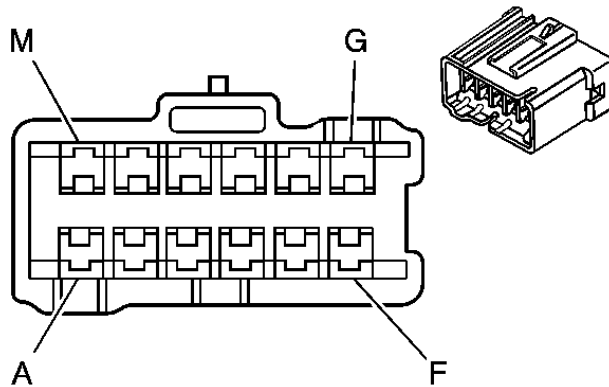
Pin	Wire Color	Circuit Number	Function
A	-	-	Not Used (Ground)
B	BK	550	Ground (w/NW9)
C	BK	550	Ground (w/T96/HAA)
D	BK	550	Ground (w/T82/HAA)
E	-	-	Not Used (Ground)
F	BK	550	Ground
G	BK	550	Ground (To Ring Terminal)
H-L	BK	550	Ground
M	-	-	Not Used (Ground)

Splice Pack SP205 (G205) (w/JM4) Connector End View



Connector Part Information		<ul style="list-style-type: none"> • 15305294 • 12-Way F Metri-Pack 280 Splice Saver Double (BK) 	
Pin	Wire Color	Circuit Number	Function
A-B	BK	350	Ground
C-M	-	-	Not Used (Ground)

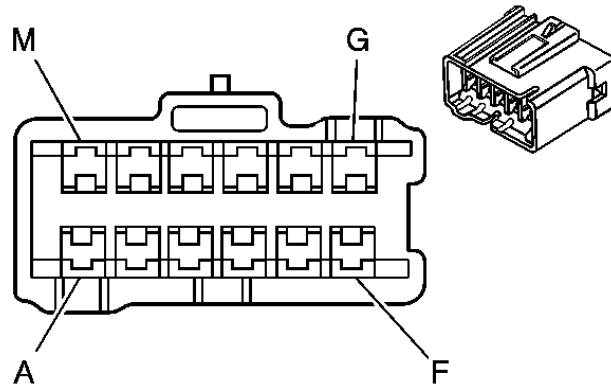
Splice Pack SP301 (G301) Connector End View



Connector Part Information		<ul style="list-style-type: none"> • 15305294 • 12-Way F Metri-Pack 280 Splice Saver Double (BK) 	
Pin	Wire Color	Circuit Number	Function
A-B	BK	650	Ground (w/HAA)
C	BK	650	Ground
	BK	650	Ground
D-E	BK	650	Ground
F	BK	650	Ground
	BK	650	Ground
G	BK	650	Ground
	BK	650	Ground
H	BK	650	Ground
J	BK	650	Ground (w/HAA)
K-M	BK	650	Ground

Splice Pack SP401 (G401) Connector End View



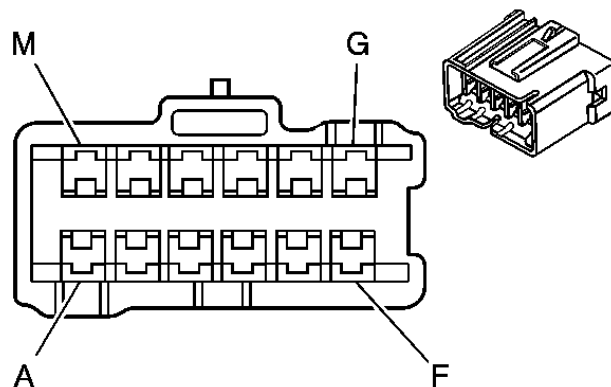


Connector Part Information

- 15305294
- 12-Way F Metri-Pack 280 Splice Saver Double (BK)

Pin	Wire Color	Circuit Number	Function
A	-	-	Not Used (Ground)
B	BK	750	Ground
C	-	-	Not Used (Ground)
D	BK	750	Ground (w/CF5)
E-G	-	-	Not Used (Ground)
H	BK	750	Ground
J	BK	750	Ground (w/HAA)
K-M	-	-	Not Used (Ground)

Splice Pack SP403 (G403) Connector End View



- 15305294

Connector Part Information		• 12-Way F Metri-Pack 280 Splice Saver Double (BK)	
Pin	Wire Color	Circuit Number	Function
A-B	BK	850	Ground
C	BK	850	Ground (w/UR9/UP0)
D-M	-	-	Not Used (Ground)

REPAIR INSTRUCTIONS

RELAY REPLACEMENT (WITHIN AN ELECTRICAL CENTER)

Removal Procedure

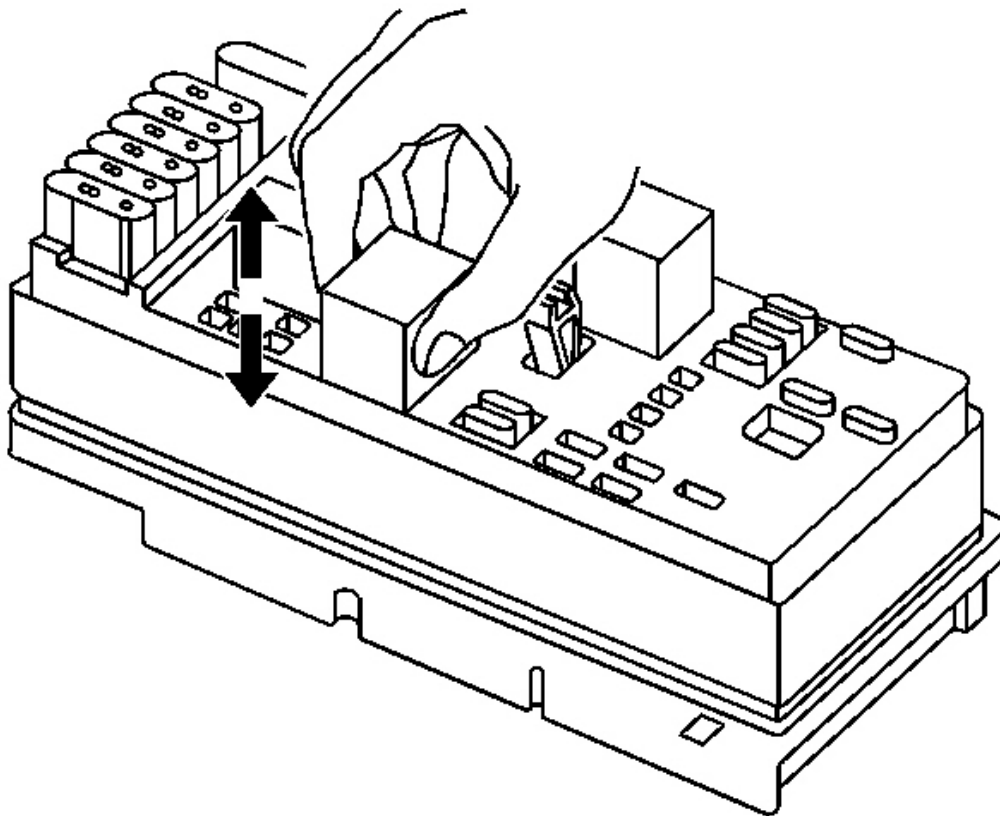


Fig. 64: Removing/Installing Relay From Electrical Center
 Courtesy of GENERAL MOTORS CORP.

1. Remove the electrical center cover.

2. Locate the relay. Refer to **Electrical Center Identification Views** to locate the electrical center where the relay exists.

IMPORTANT:

- Always note the orientation of the relay.
- Ensure that the electrical center is secure, as not to put added stress on the wires or terminals.

3. Remove the relay from the electrical center.

Installation Procedure

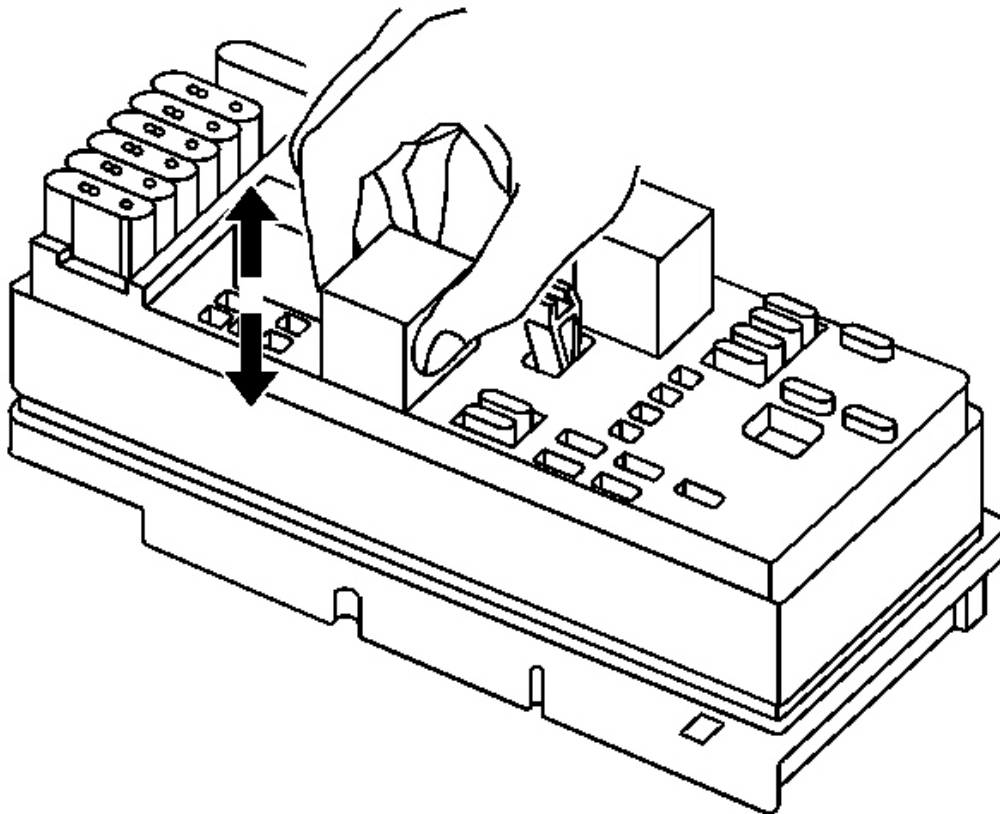


Fig. 65: Removing/Installing Relay From Electrical Center
Courtesy of GENERAL MOTORS CORP.

1. Install the relay in the same position as removed.
2. Install the electrical center cover.

RELAY REPLACEMENT (ATTACHED TO WIRE HARNESS)

Removal Procedure

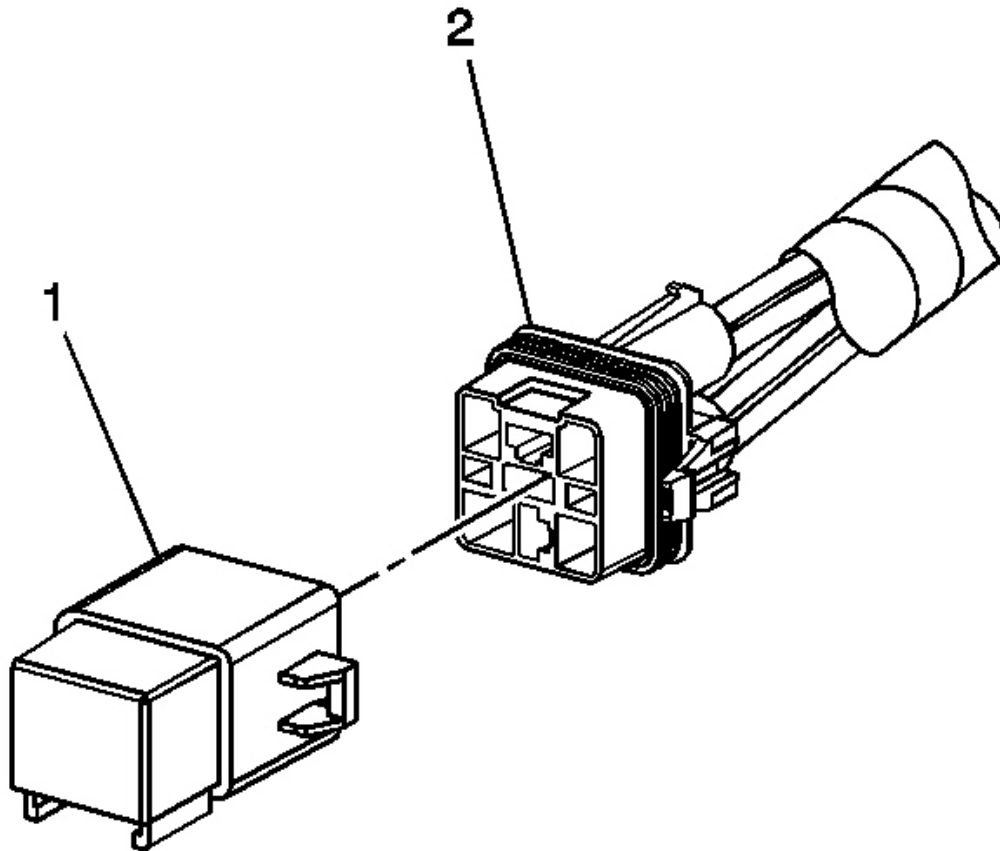


Fig. 66: Identifying Relay & Wire Harness Connector
Courtesy of GENERAL MOTORS CORP.

1. Locate the relay. Refer to the **Master Electrical Component List** to locate the relay in the vehicle.
2. Remove any fasteners which hold the relay in place.
3. Remove any connector position assurance (CPA) devices or secondary locks.

IMPORTANT: Use care when removing a relay in a wiring harness when the relay is secured by fasteners or tape.

4. Separate the relay (1) from the wire harness connector (2).

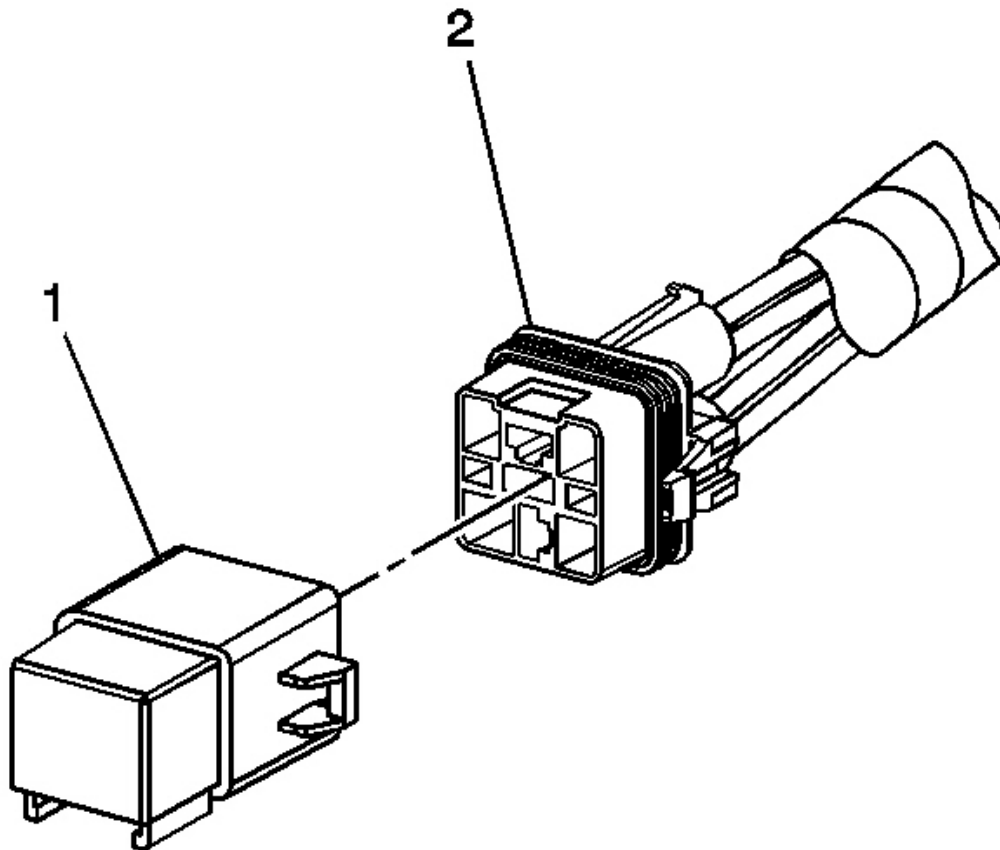


Fig. 67: Identifying Relay & Wire Harness Connector
Courtesy of GENERAL MOTORS CORP.

1. Connect the relay (1) to the wire harness connector (2).
2. Install any connector position assurance (CPA) devices or secondary locks.
3. Install the relay using any fasteners or tape that originally held the relay in place.

UNDERHOOD ELECTRICAL CENTER OR JUNCTION BLOCK REPLACEMENT

Removal Procedure

1. Disconnect the negative battery cable. Refer to **Battery Negative Cable Disconnect/Connect Procedure** in Engine Electrical.

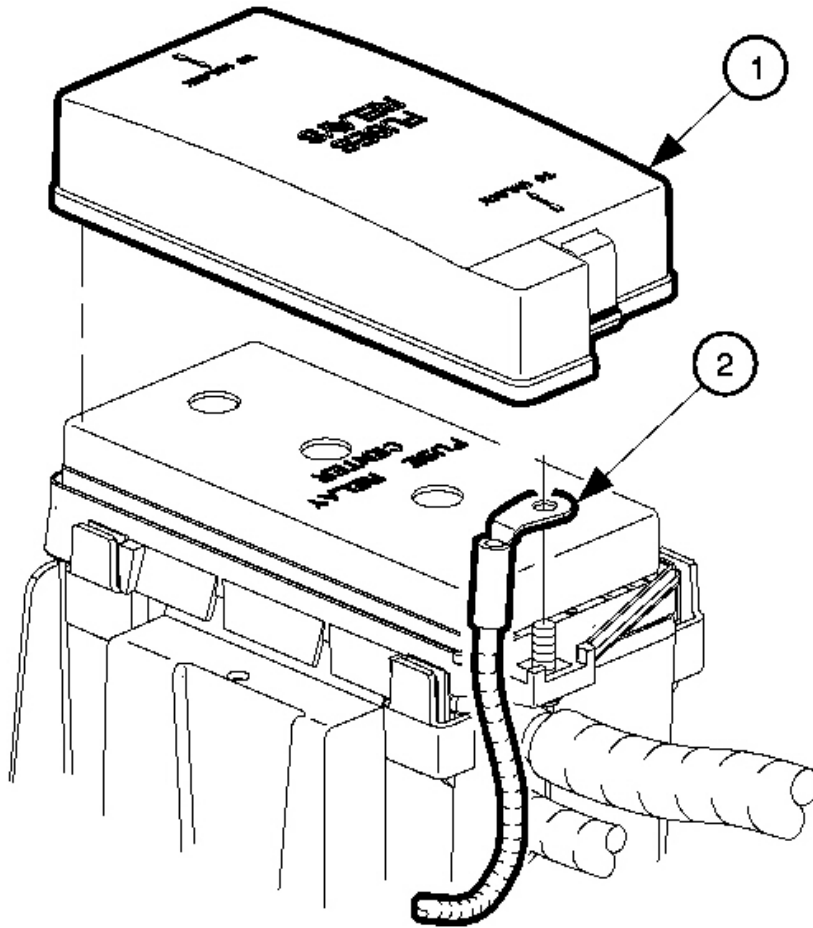


Fig. 68: Removing/Installing Underhood Electrical Wiring
Courtesy of GENERAL MOTORS CORP.

2. Remove the underhood accessory wiring junction block cover.
3. Remove the nut at the end of the fuse block and remove both the positive battery cable and the EPS cable.

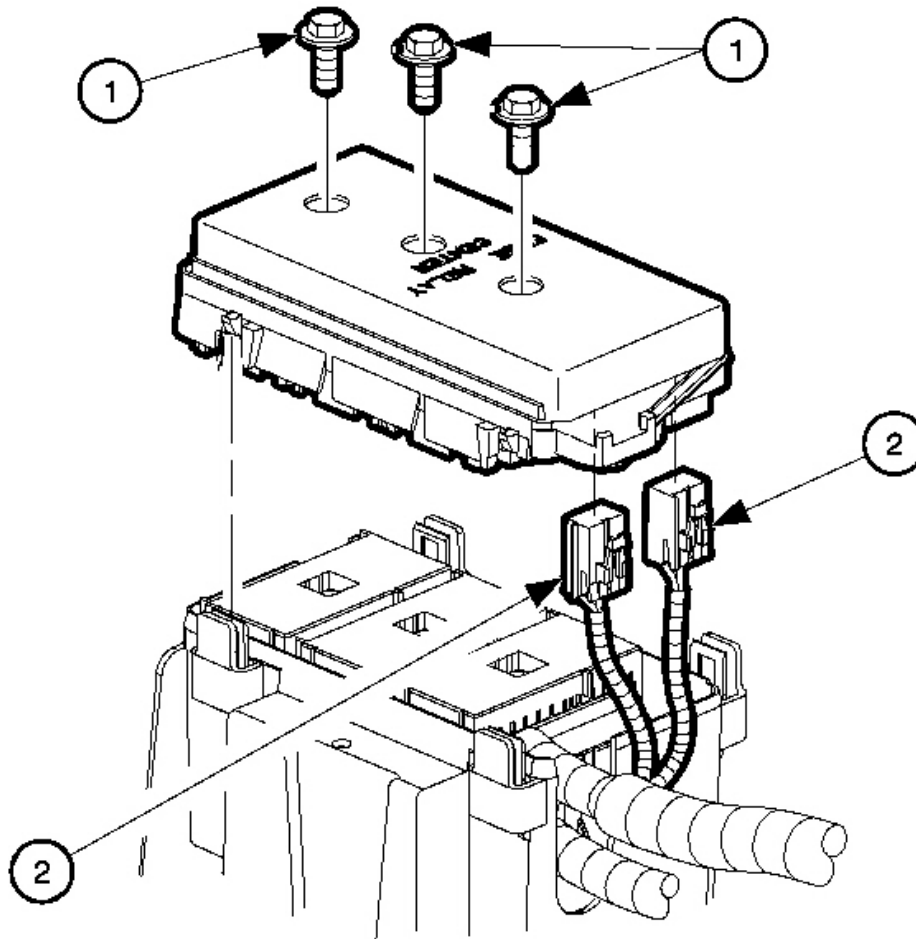


Fig. 69: Loosening Bolts On Top Of Fuse Block
Courtesy of GENERAL MOTORS CORP.

4. Loosen the bolts (1) on the top of the fuse block until the block can be lifted off the connectors.
5. Remove the IP connectors (2).

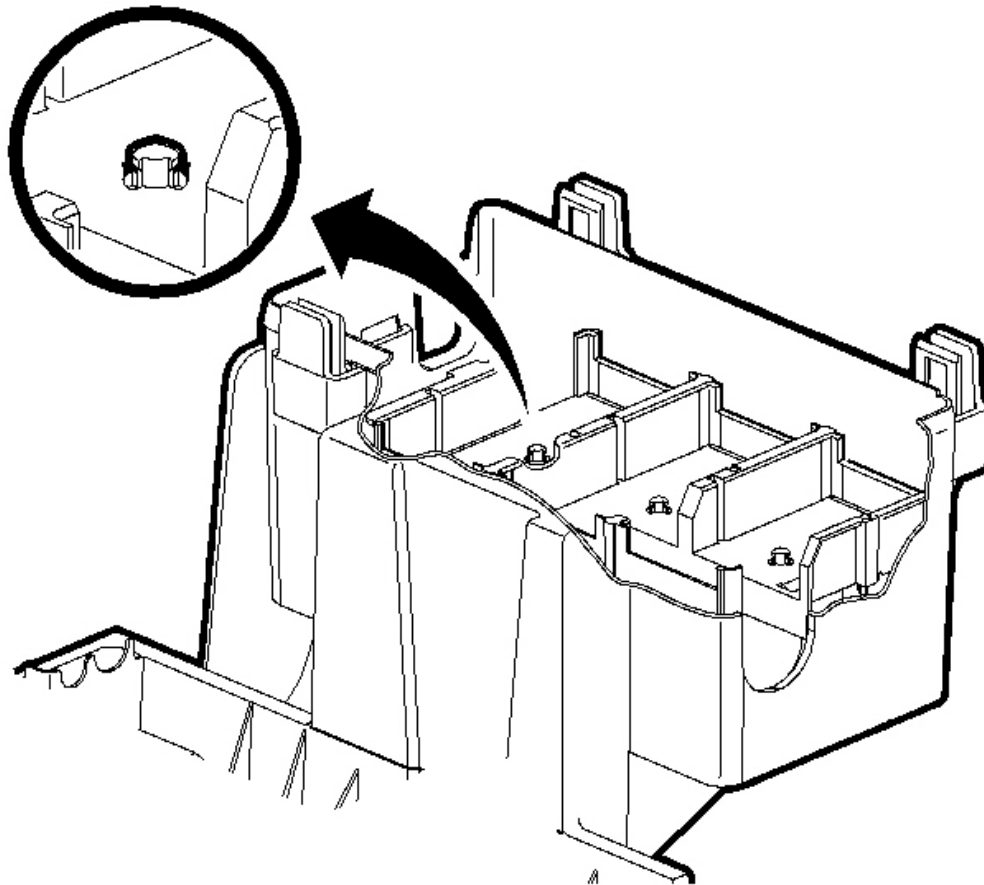


Fig. 70: Placing Connectors Into Fuse Block Case
Courtesy of GENERAL MOTORS CORP.

IMPORTANT: All 3-fuse block 68-way connectors are held into place to the fuse block case by push-in retainers.

6. Pull up on each of the following 68-way connectors until they come out.
 1. Fuse block case (1)
 2. Forward lamp 68-way connector (2)
 3. Engine 68-way connector (3)
 4. IP 68-way connector (4)

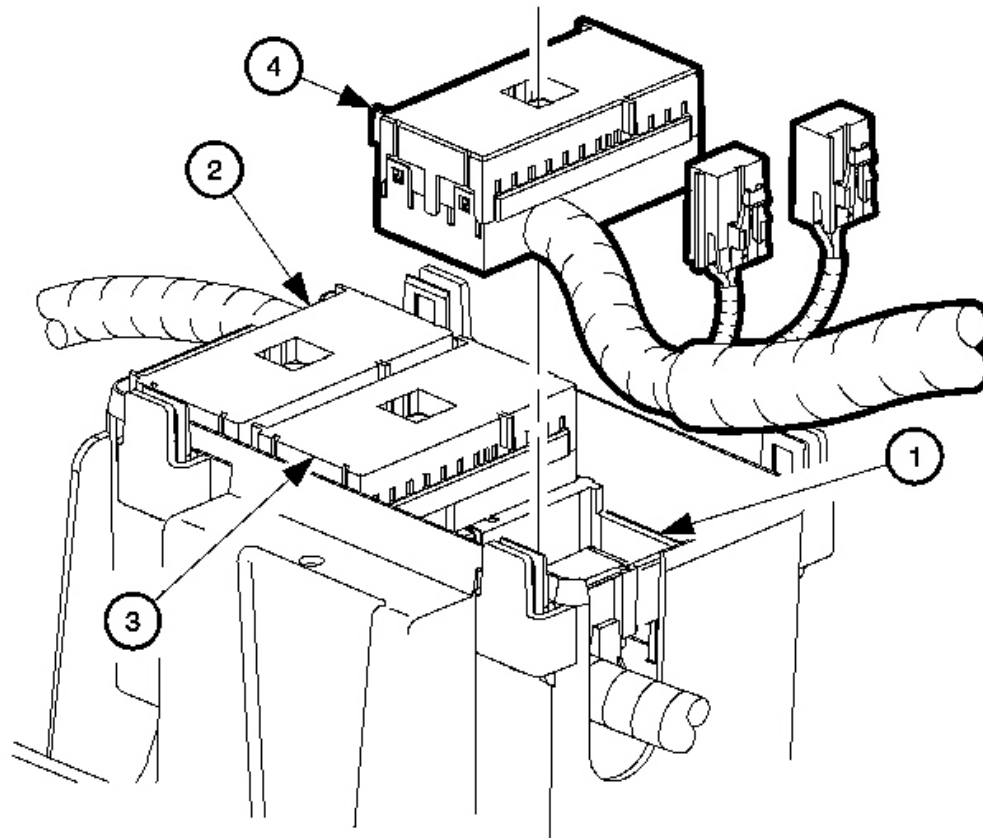


Fig. 71: Installing Connectors Into Proper Location
Courtesy of GENERAL MOTORS CORP.

1. Install each of the following 68-way connectors into its proper location.
 - Fuse block case (1)
 - Forward lamp 68-way connector (2)
 - Engine 68-way connector (3)
 - IP 68-way connector (4)
2. Push down on each connector until it is fully secured into the fuse block.

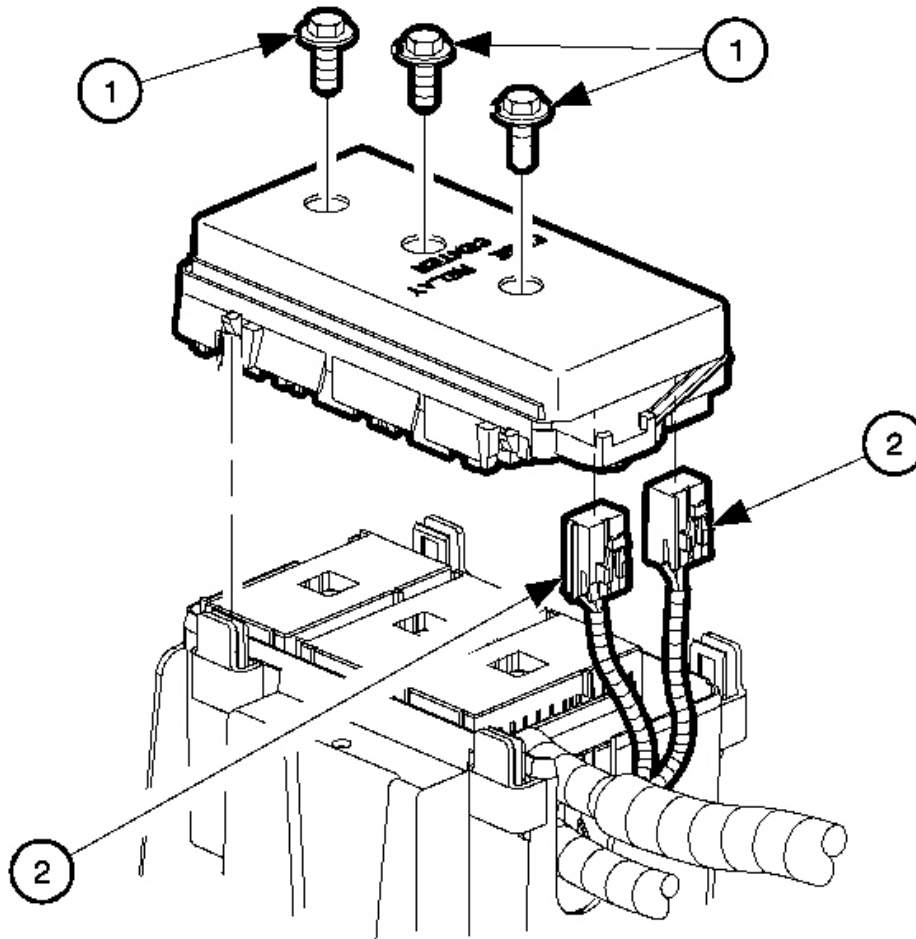


Fig. 72: Loosening Bolts On Top Of Fuse Block
Courtesy of GENERAL MOTORS CORP.

3. Connect the IP connectors (2)

NOTE: Refer to Fastener Notice in Cautions and Notices.

4. Tighten the bolts (1) on the top of the fuse block.

Tighten: Tighten the underhood accessory wiring junction block harness retaining bolts (1) to 4 N.m (35 lb in).

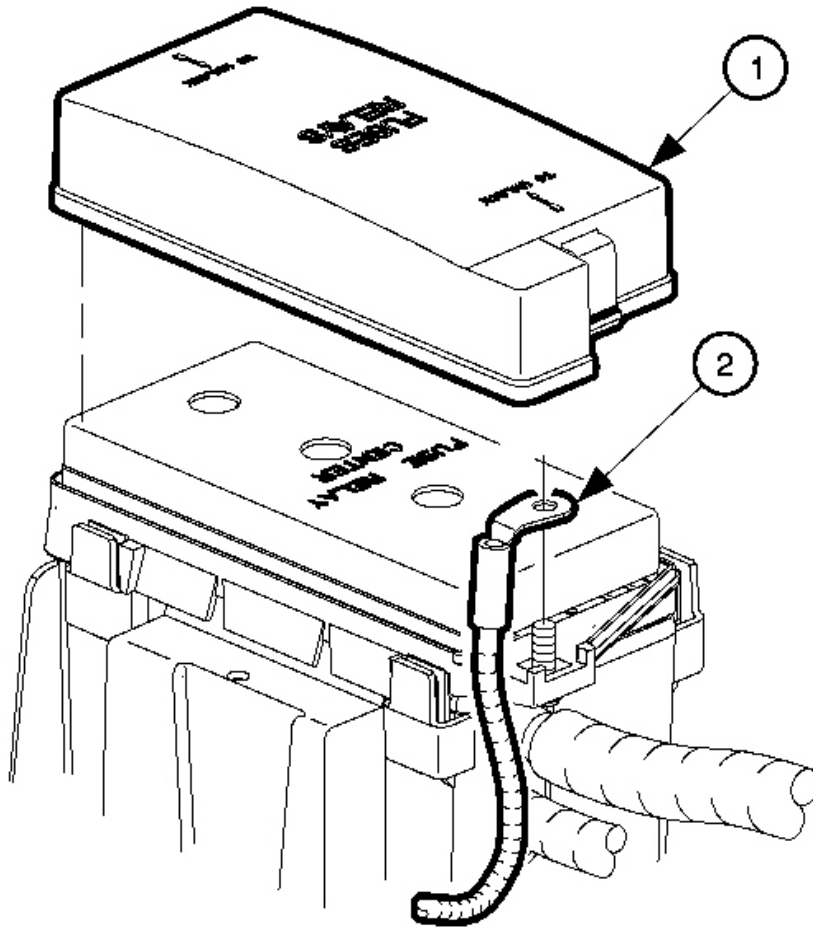


Fig. 73: Removing/Installing Underhood Electrical Wiring
Courtesy of GENERAL MOTORS CORP.

5. Reconnect the positive battery cable and EPS at the end of the fuse block with the nut.

Tighten: Tighten the positive battery cable nut to 17 N.m (13 lb ft).

6. Install the fuse box cover.
7. Connect the negative battery cable. Refer to **Battery Negative Cable Disconnect/Connect Procedure** in Engine Electrical.

Removal Procedure

IMPORTANT: Record all preset radio stations.

1. Turn the ignition OFF.
2. Remove the screws from the battery cooling box. Remove the battery cover.
3. Disconnect the negative battery cable. Refer to **Battery Negative Cable Disconnect/Connect Procedure** In Engine Electrical.
4. Disconnect the positive battery cable.
5. Remove the console. Refer to **Console Replacement - Front Floor** in Instrument Panel, Gages, and Console.

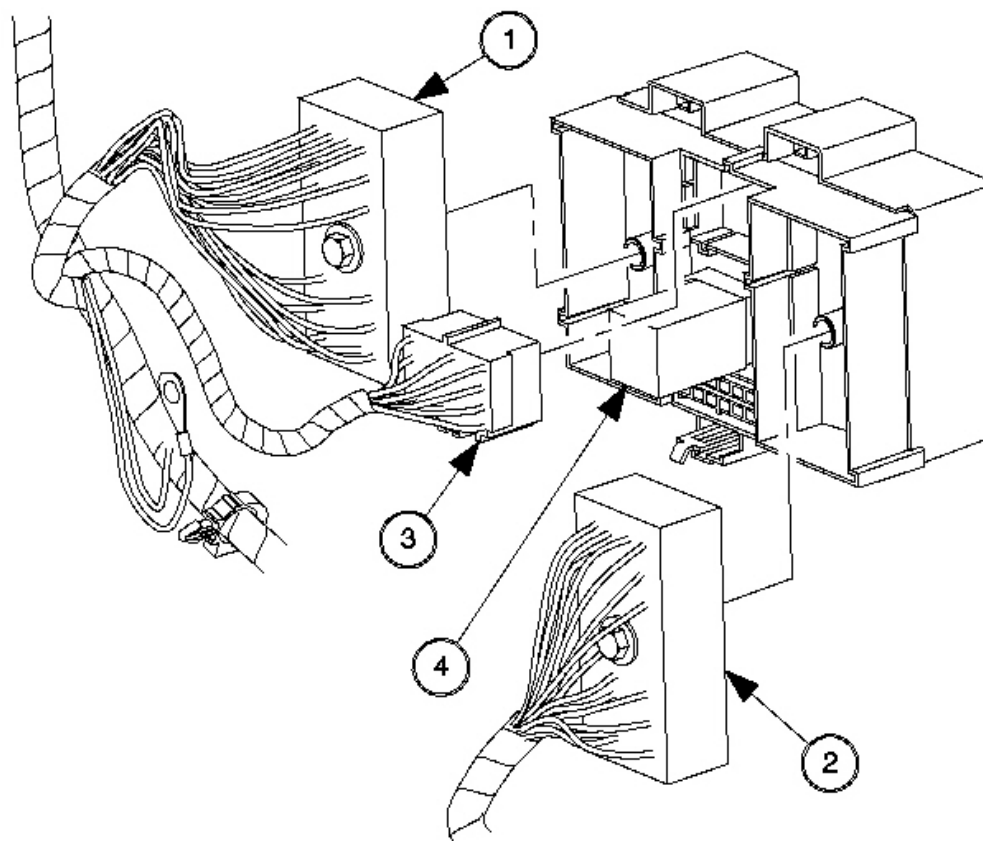


Fig. 74: Removing/Installing Harness Connectors
Courtesy of GENERAL MOTORS CORP.

6. Remove the nut holding the following fuse block connectors to the back of the I/P fuse block (4):
- The body 68-way connector (1)
 - The I/P 68-way connector (2)
 - The I/P 24-way connector (3)

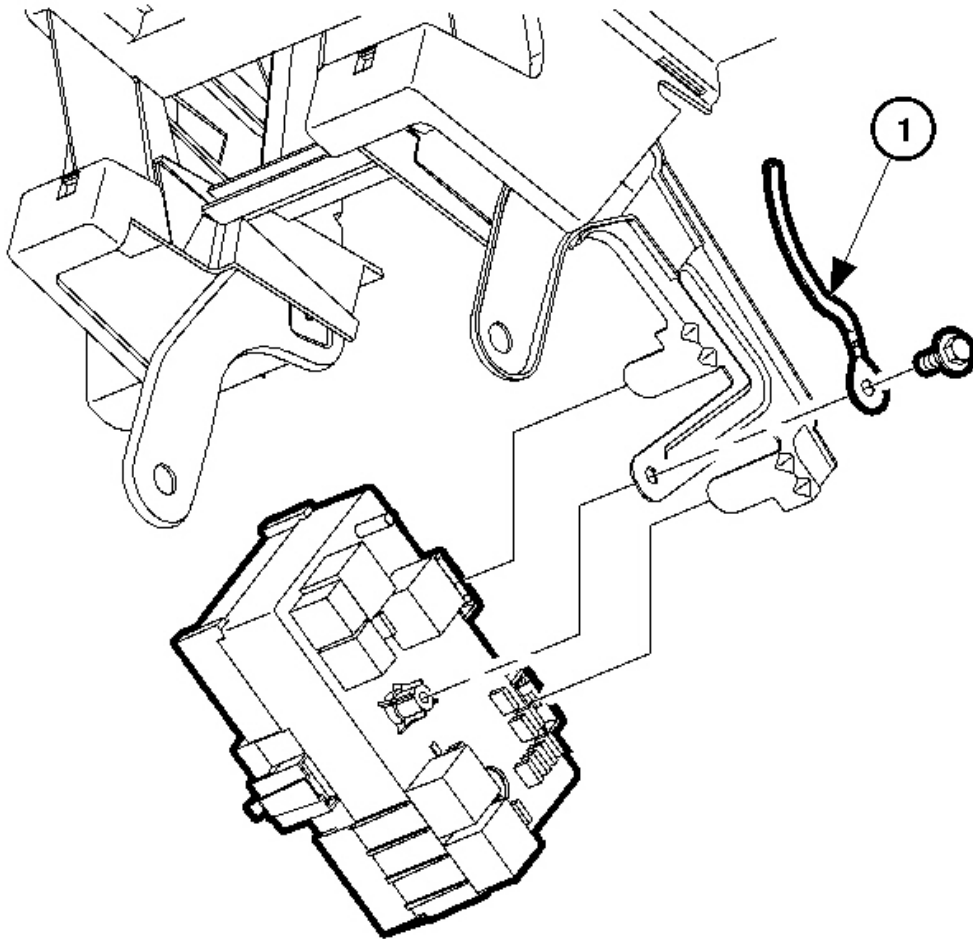


Fig. 75: Removing/Installing Fuse Block & Attaching Ground Wire & Bolt
Courtesy of GENERAL MOTORS CORP.

7. Remove the bolt holding the fuse block into place.

8. Remove the ground wire (1).
9. Remove the fuse block.

Installation Procedure

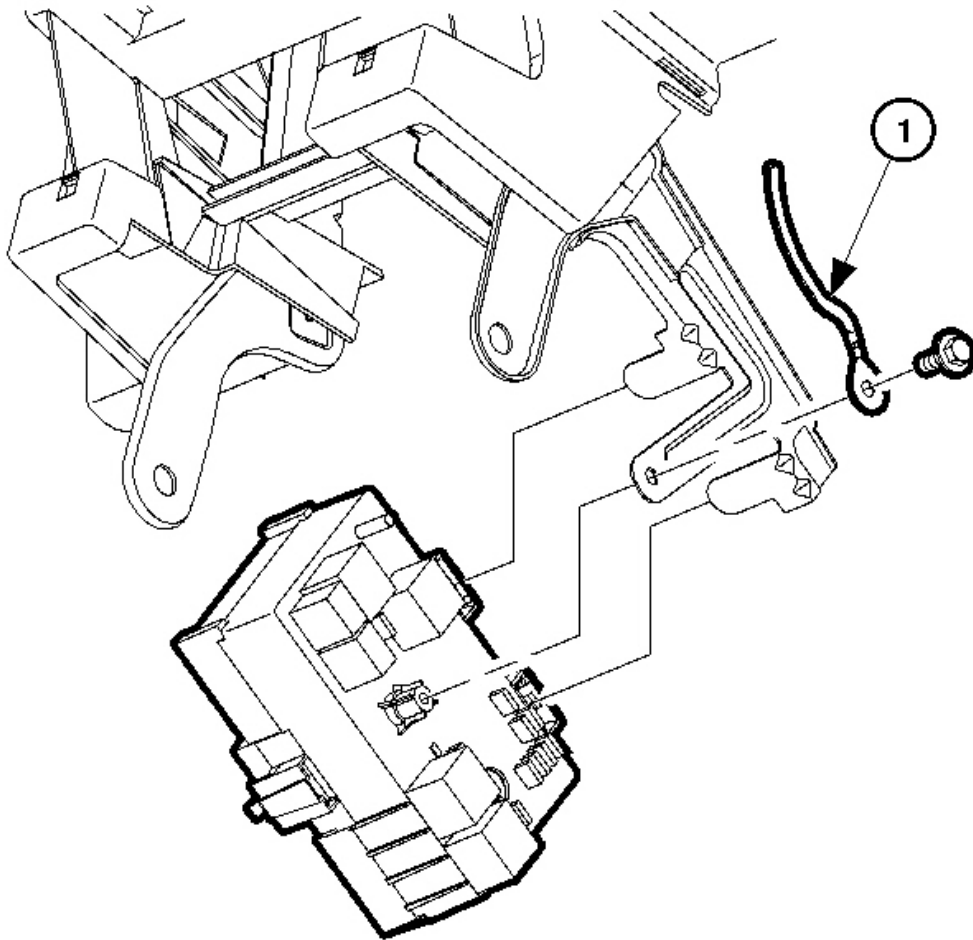


Fig. 76: Removing/Installing Fuse Block & Attached Ground Wire & Bolt
Courtesy of GENERAL MOTORS CORP.

NOTE: Refer to Fastener Notice in Cautions and Notices.

1. Install the fuse block and attach the ground wire (1) and attach the bolt.

Tighten: Tighten the bolt to 10 N.m (89 lb in).

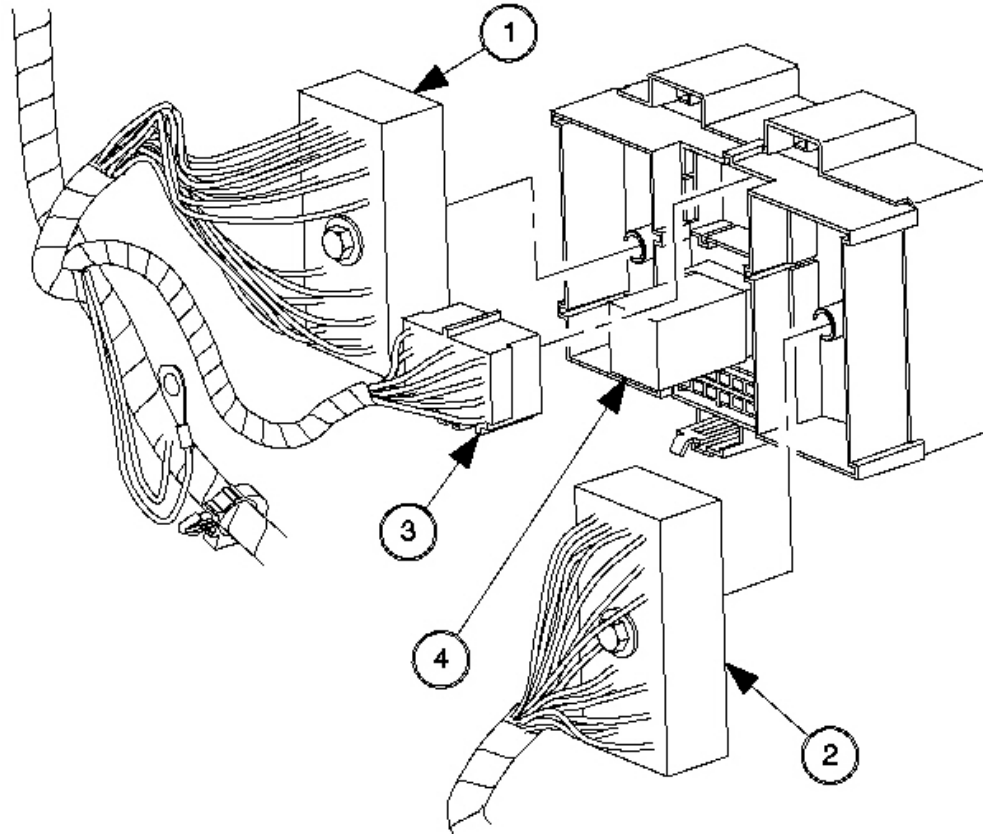


Fig. 77: Removing/Installing Harness Connectors
Courtesy of GENERAL MOTORS CORP.

2. Connect the harness connectors to the back of the I/P fuse block (4).

Tighten: Tighten the connectors to 4 N.m (35 lb in).

3. Install the console. Refer to **Console Replacement - Front Floor** in Instrument Panel, Gages, and Console.
4. Connect the positive battery cable.

Tighten: Tighten the bolt to 17 N.m (13 lb ft).

5. Connect the negative battery cable.

Tighten: Tighten the bolt to 17 N.m (13 lb ft).

6. Install the battery cooling box cover and install the screws.

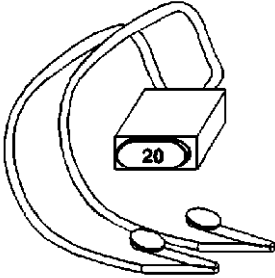
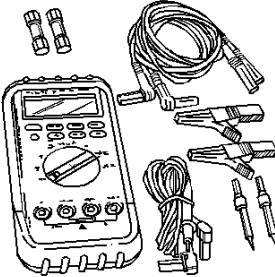
Tighten: Tighten the screws to 2 N.m (18 lb in).

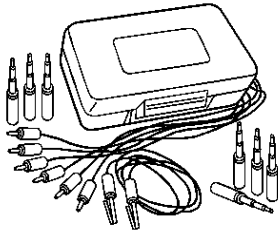
7. Set the radio stations to the preset selections.

SPECIAL TOOLS AND EQUIPMENT

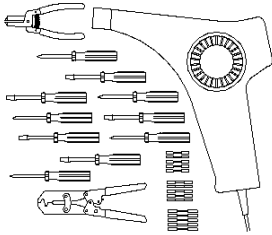
SPECIAL TOOLS

Special Tools

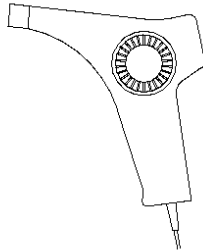
Illustration	Tool Number/ Description
	J 36169-A Fused Jumper Wire
	J 39200 Digital Multimeter



J 35616
GM-Approved Terminal Test Kit



J 44020
Terminal Repair Kit



J 44020-6
Heat Gun

2004 SYSTEM WIRING DIAGRAMS

Saturn - Vue

AIR CONDITIONING

2.2L VIN D

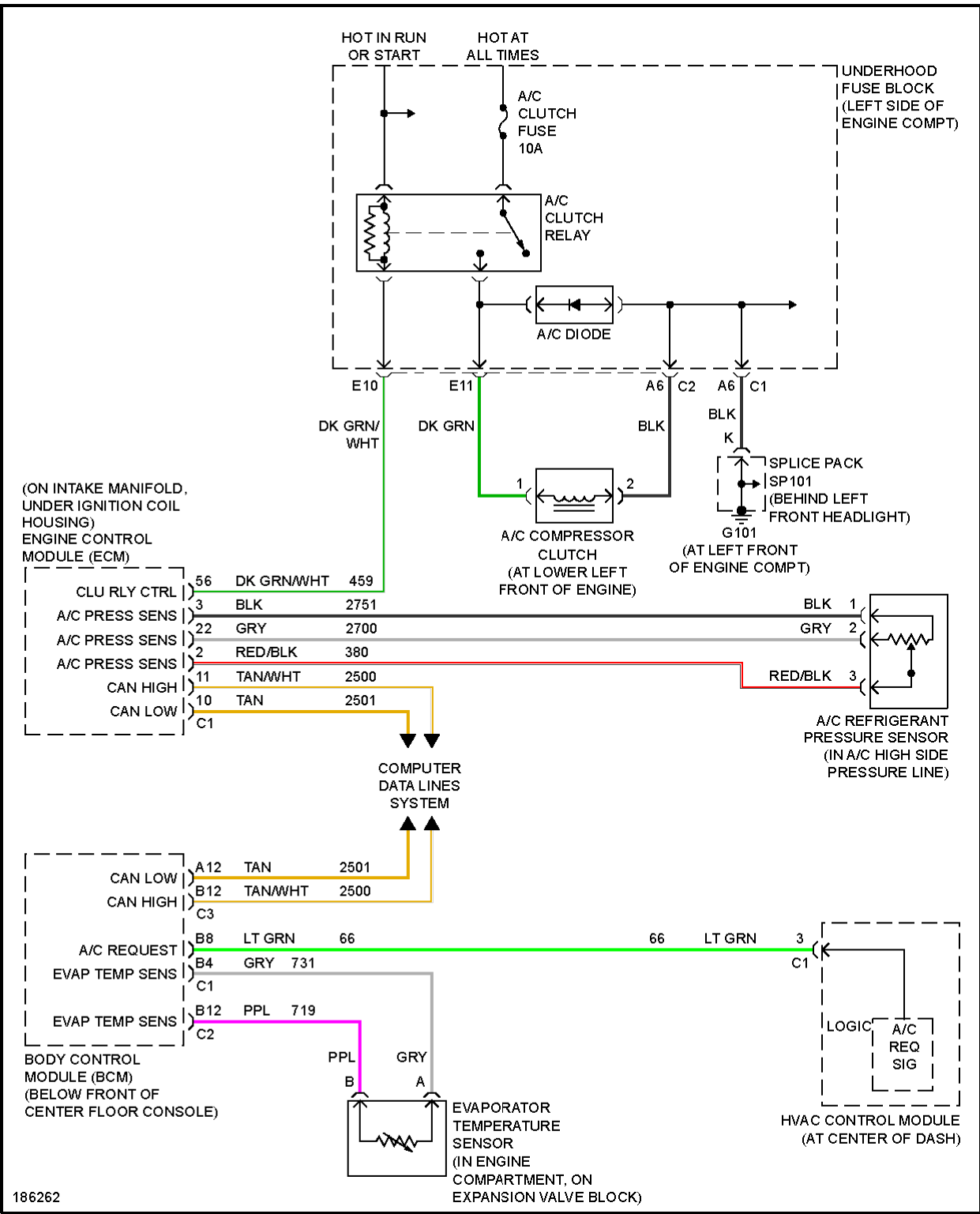


Fig. 1: 2.2L VIN D, Compressor Circuit

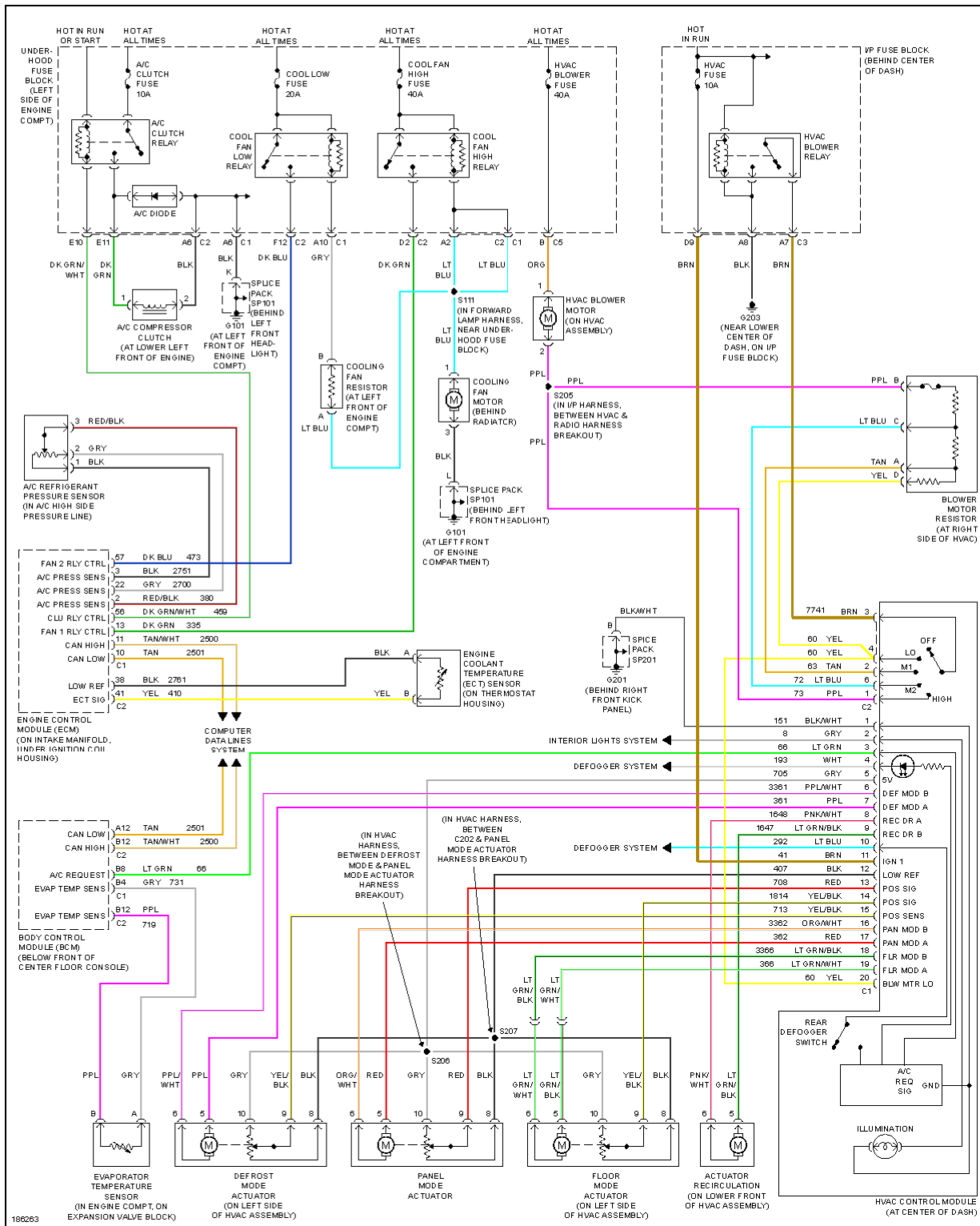


Fig. 2: 2.2L VIN D, Manual A/C Circuit

3.5L VIN 4

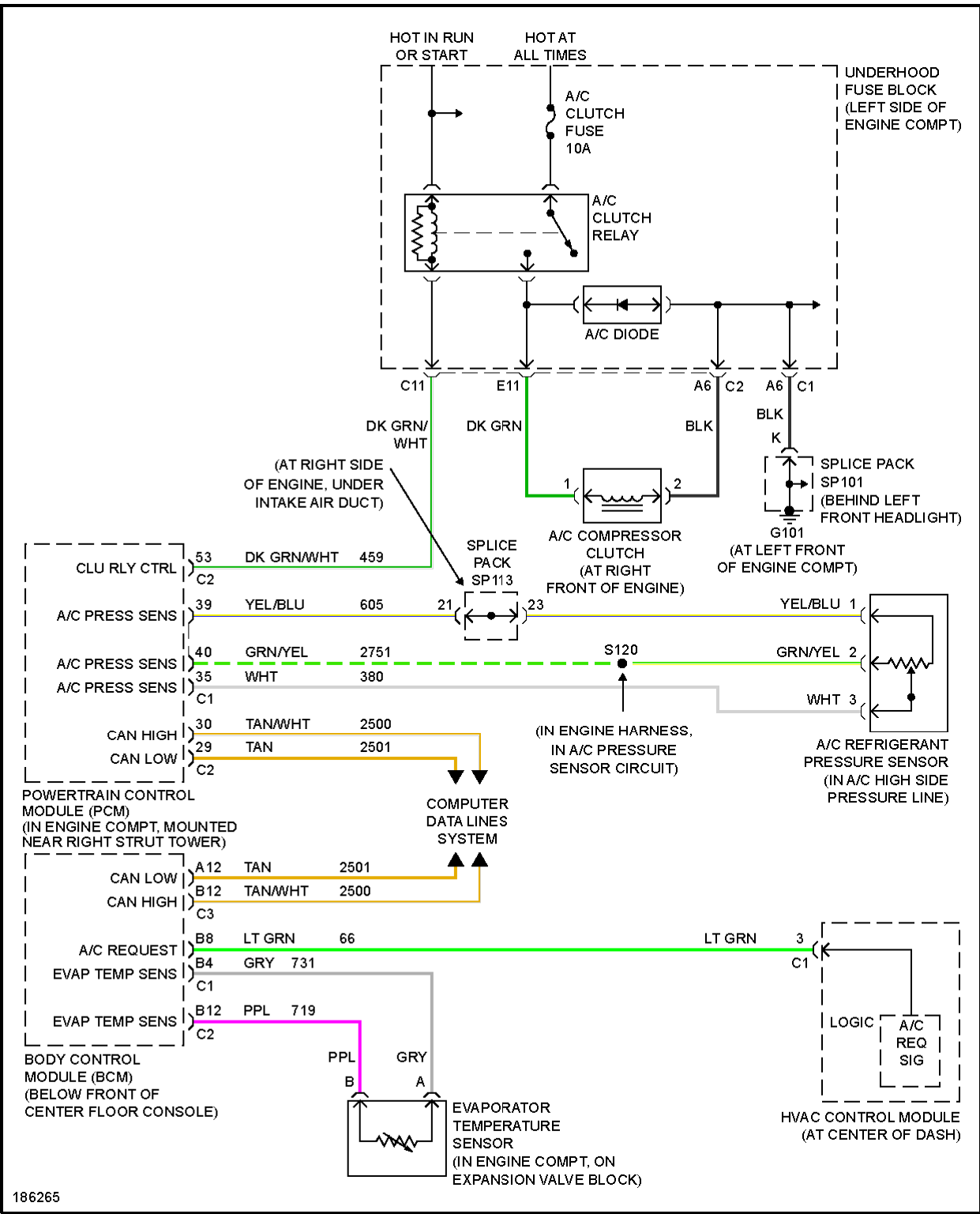


Fig. 3: 3.5L VIN 4, Compressor Circuit

Fig. 4: 3.5L VIN 4, Manual A/C Circuit

ANTI-LOCK BRAKES

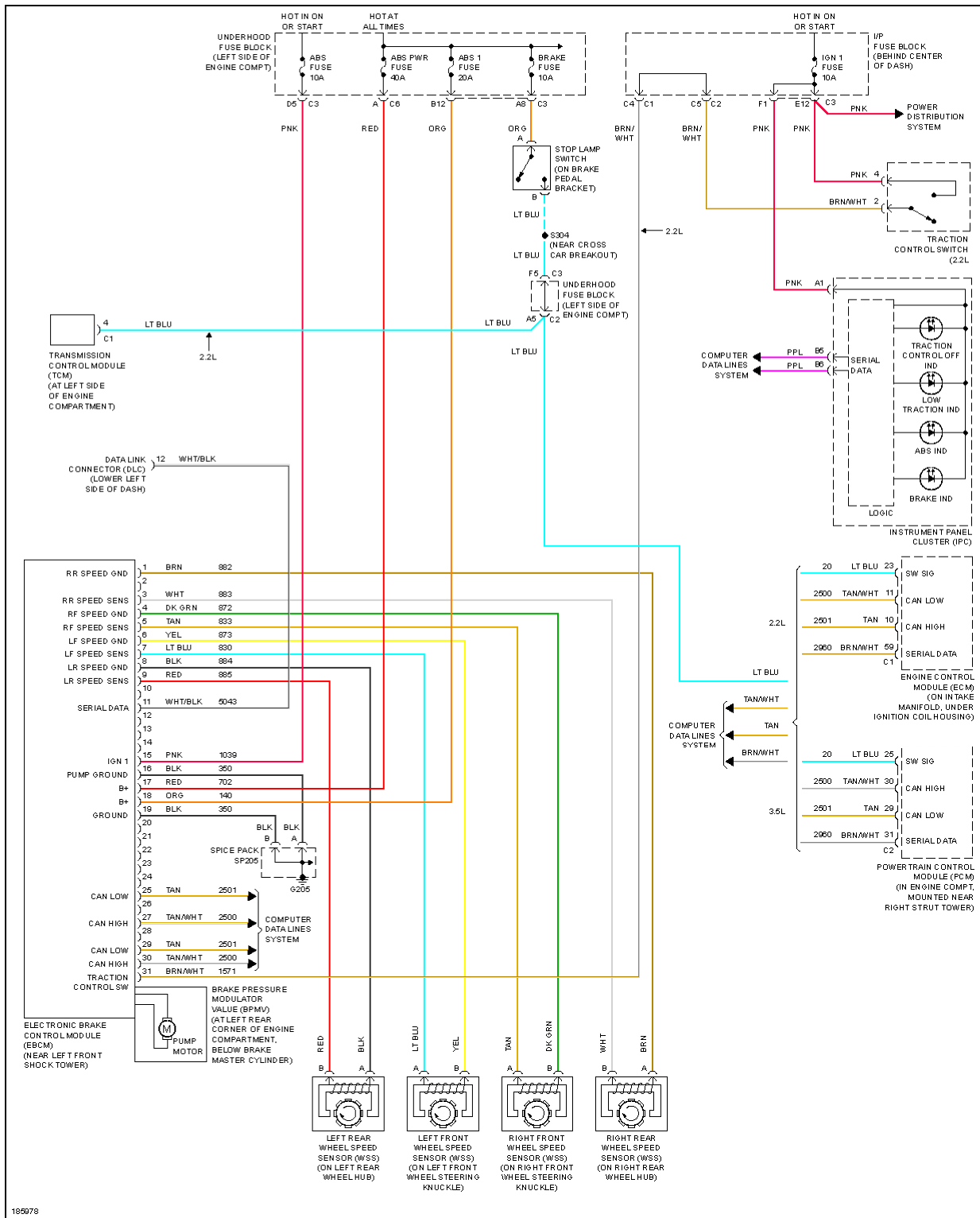


Fig. 5: Anti-lock Brakes Circuit

ANTI-THEFT

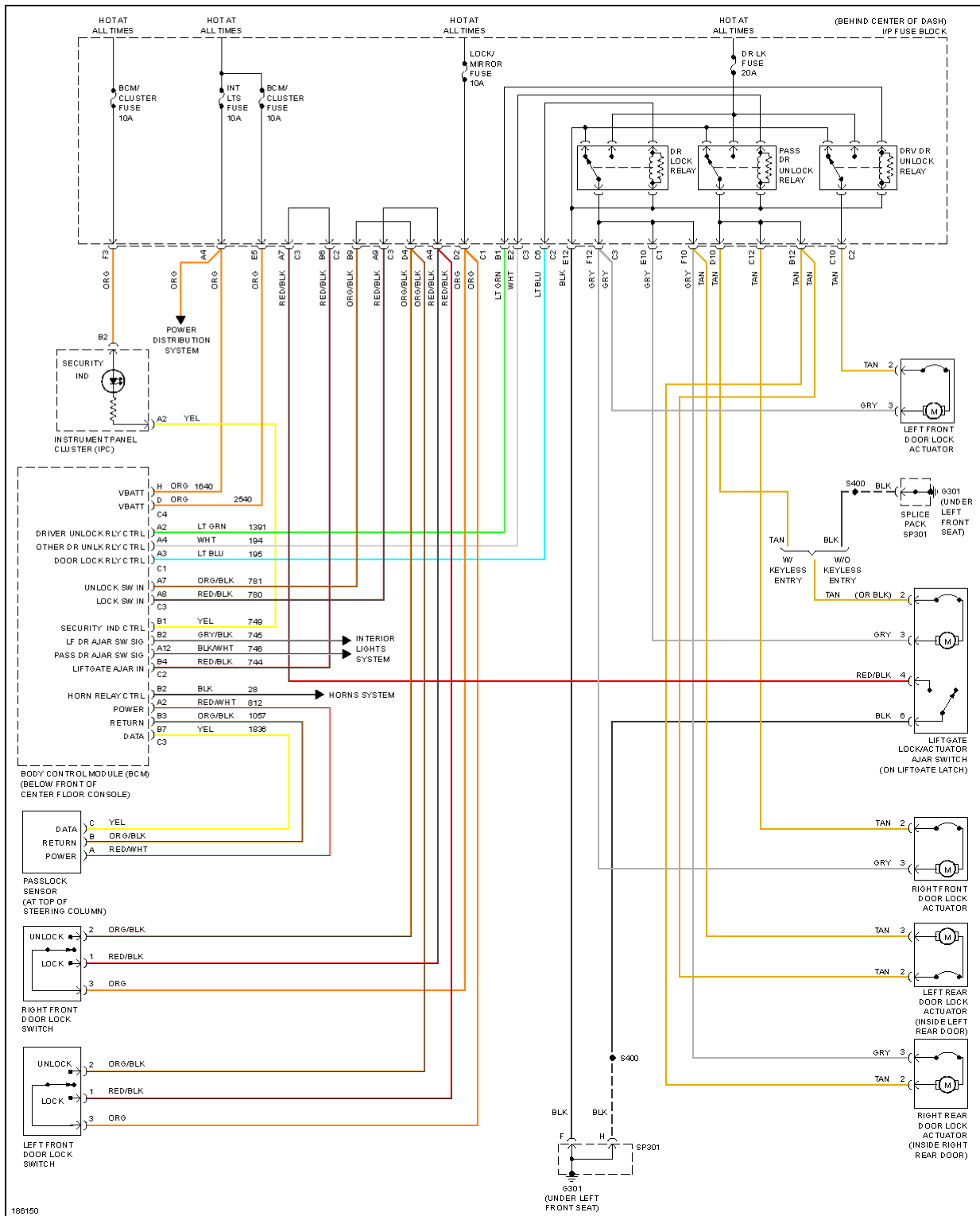


Fig. 6: Power Door Locks Circuit

BODY CONTROL MODULES

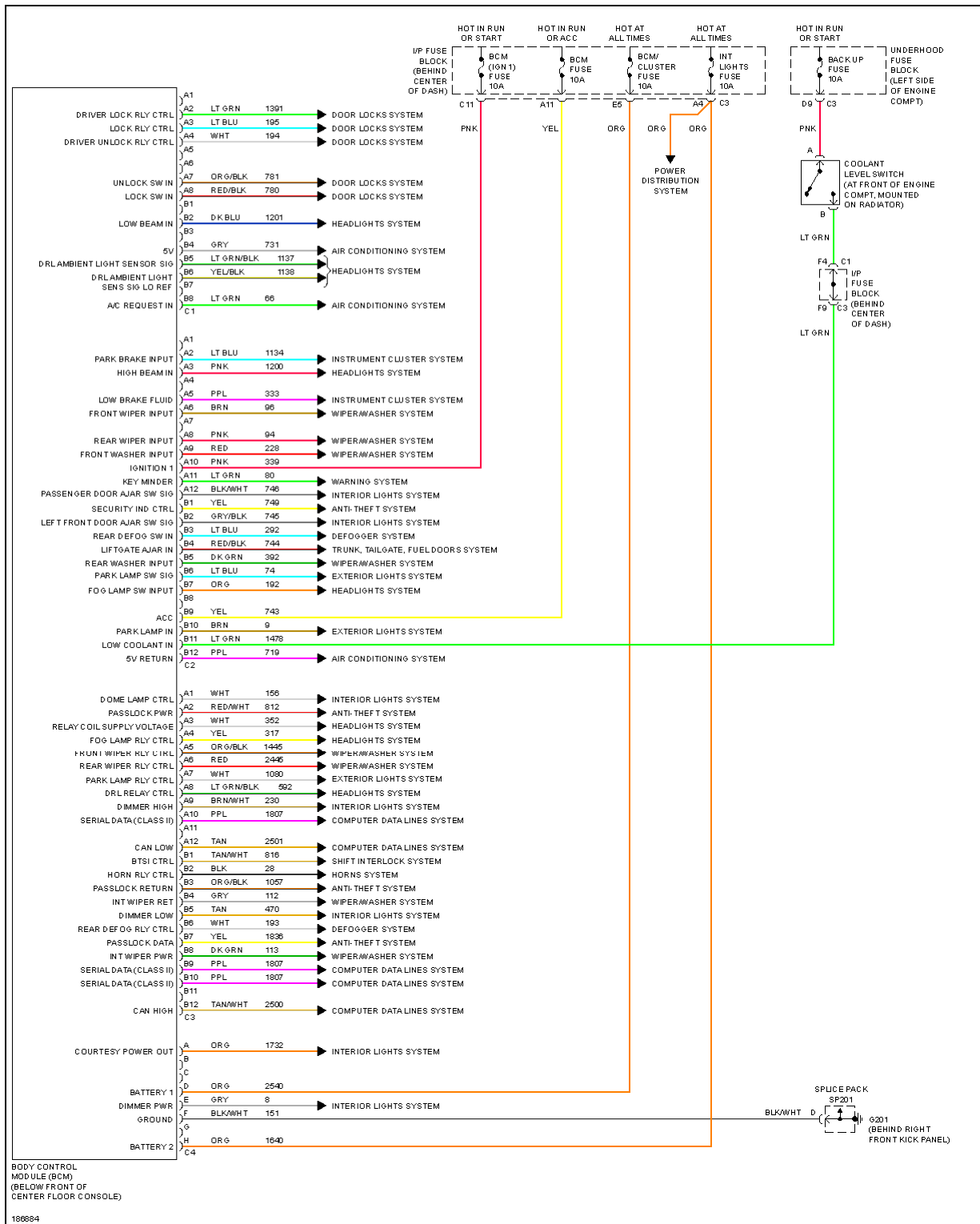


Fig. 7: Body Control Modules Circuit

COMPUTER DATA LINES

Fig. 8: Computer Data Lines Circuit, A/T

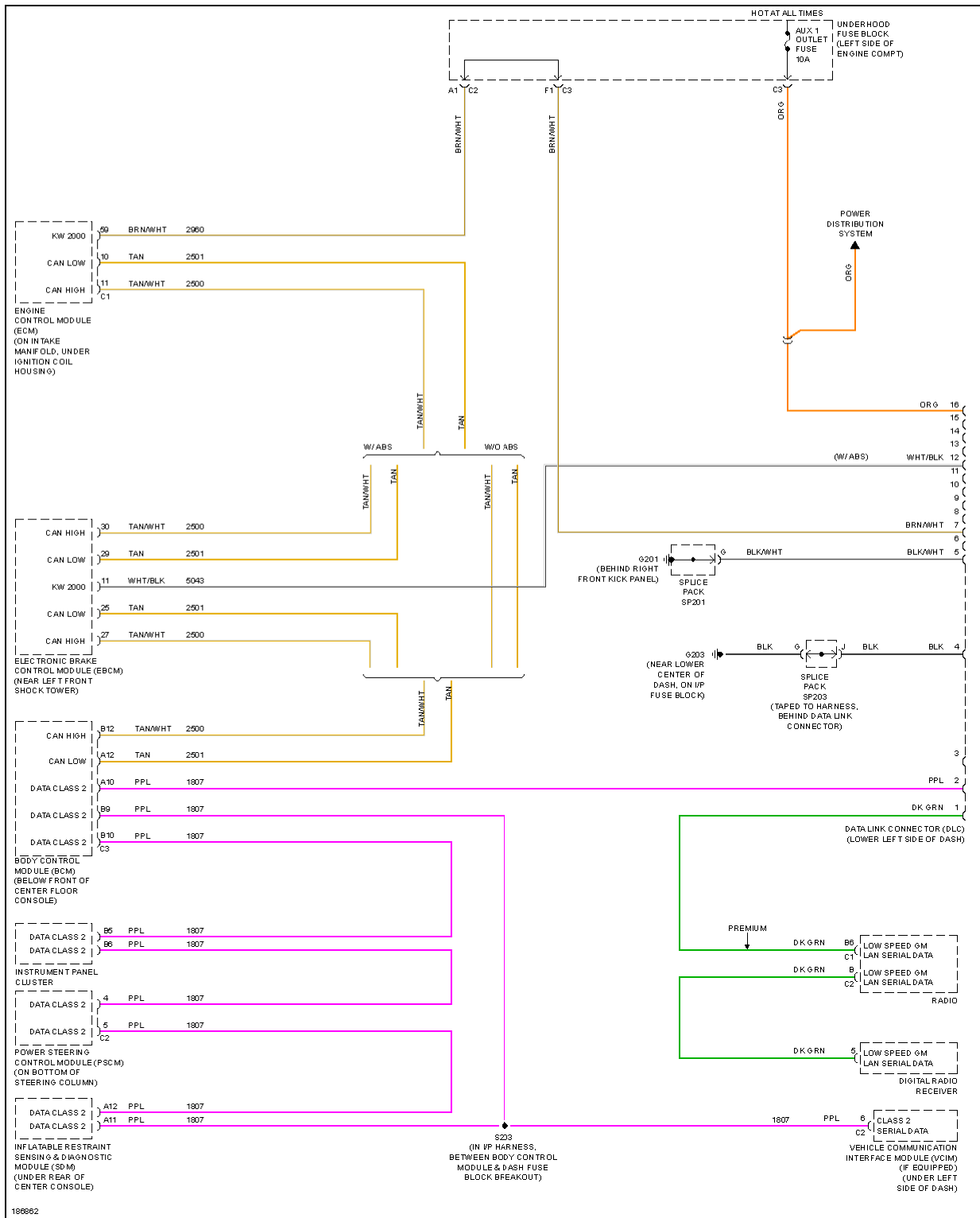


Fig. 9: Computer Data Lines Circuit, M/T

COOLING FAN

2.2L VIN D

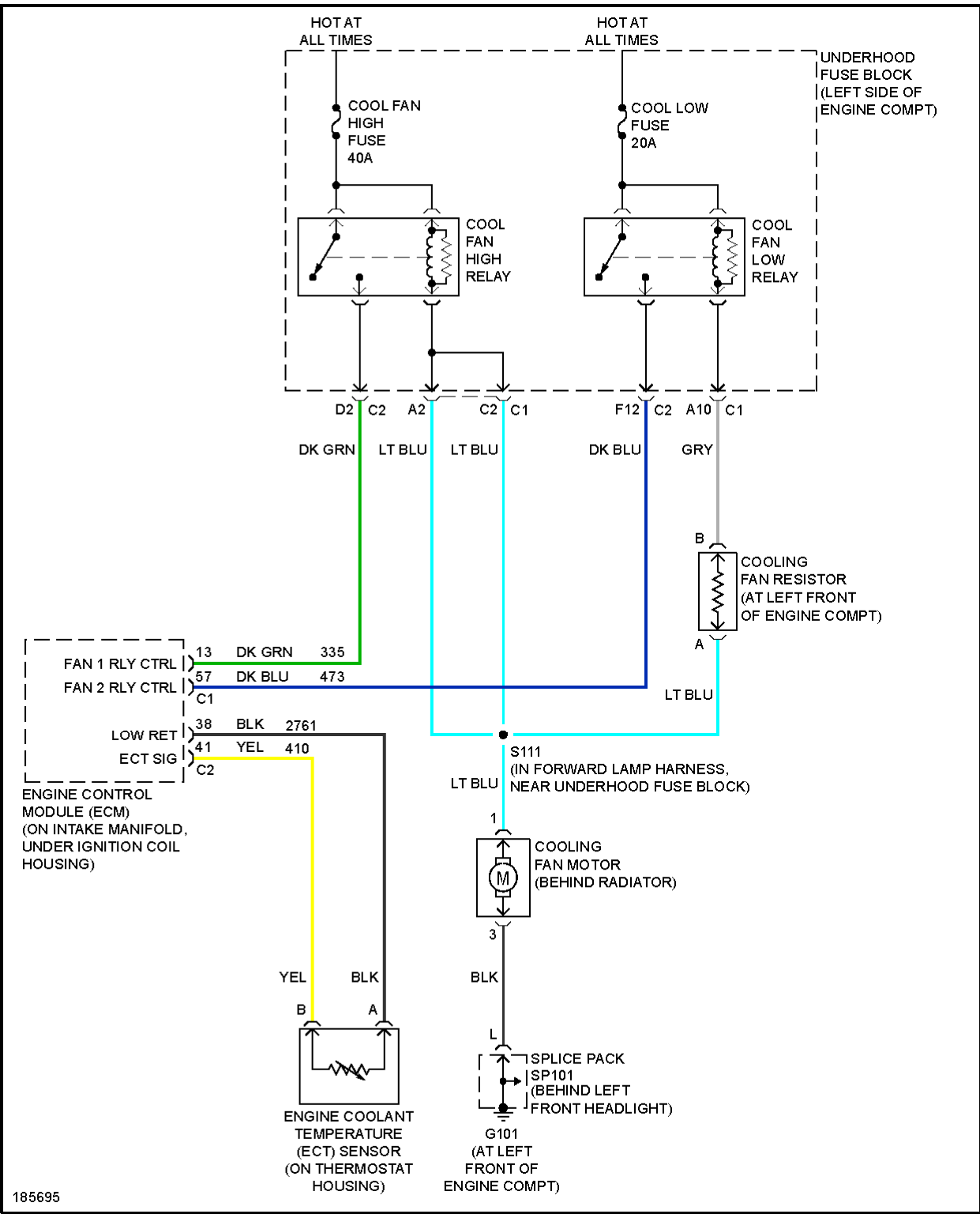


Fig. 10: 2.2L VIN D, Cooling Fan Circuit

3.5L VIN 4

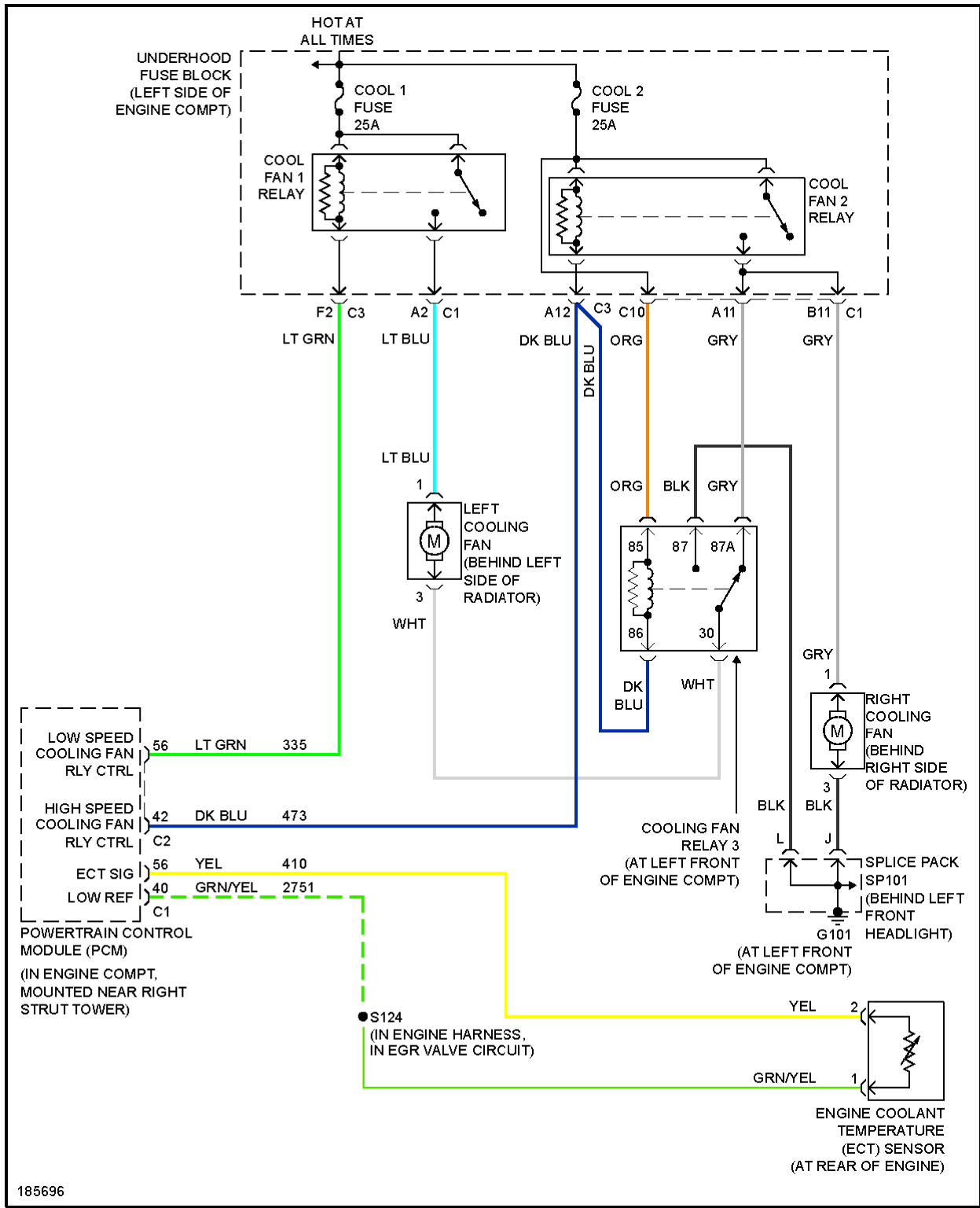


Fig. 11: 3.5L VIN 4, Cooling Fan Circuit

CRUISE CONTROL

2.2L VIN D

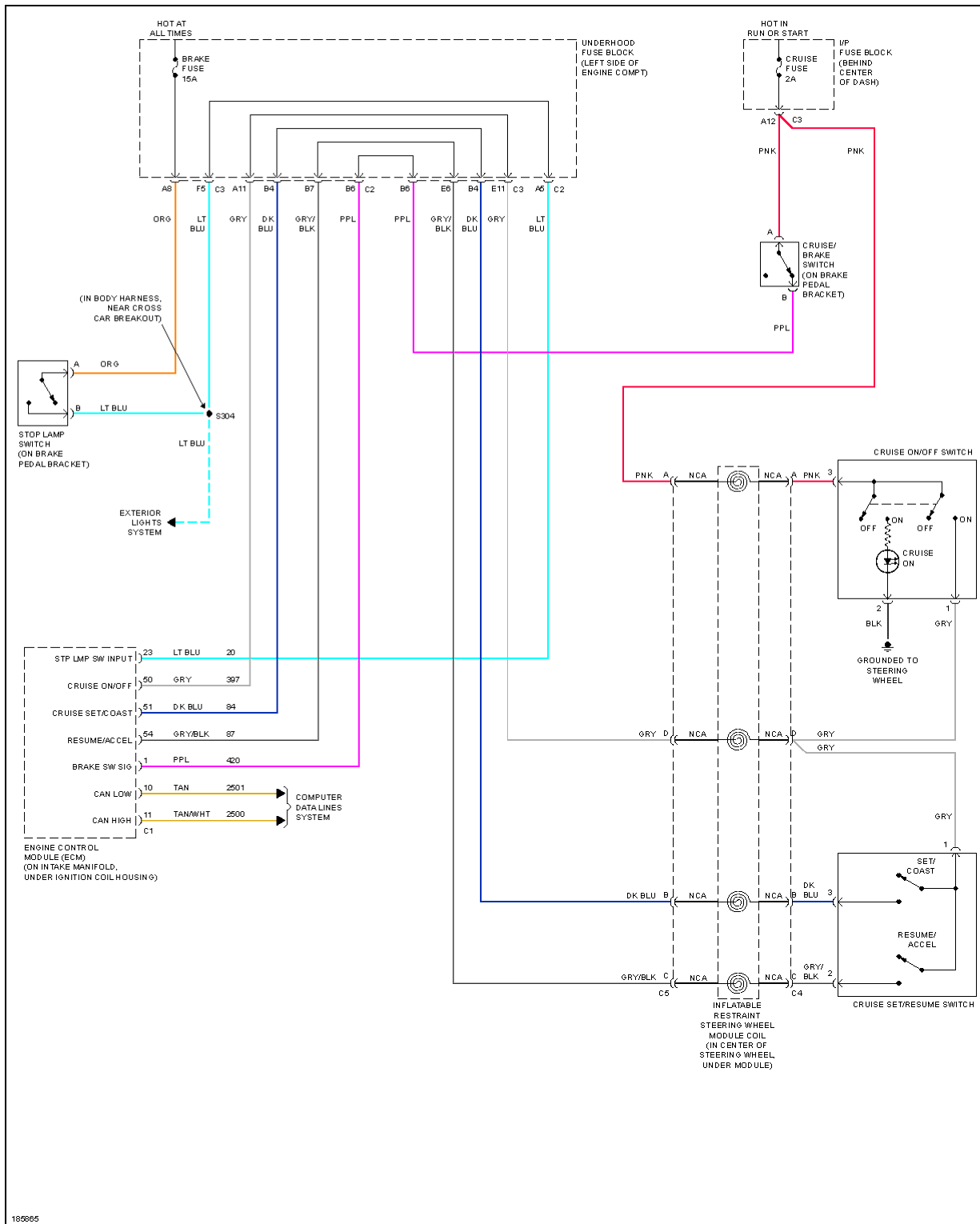


Fig. 12: 2.2L VIN D, Cruise Control Circuit

3.5L VIN 4

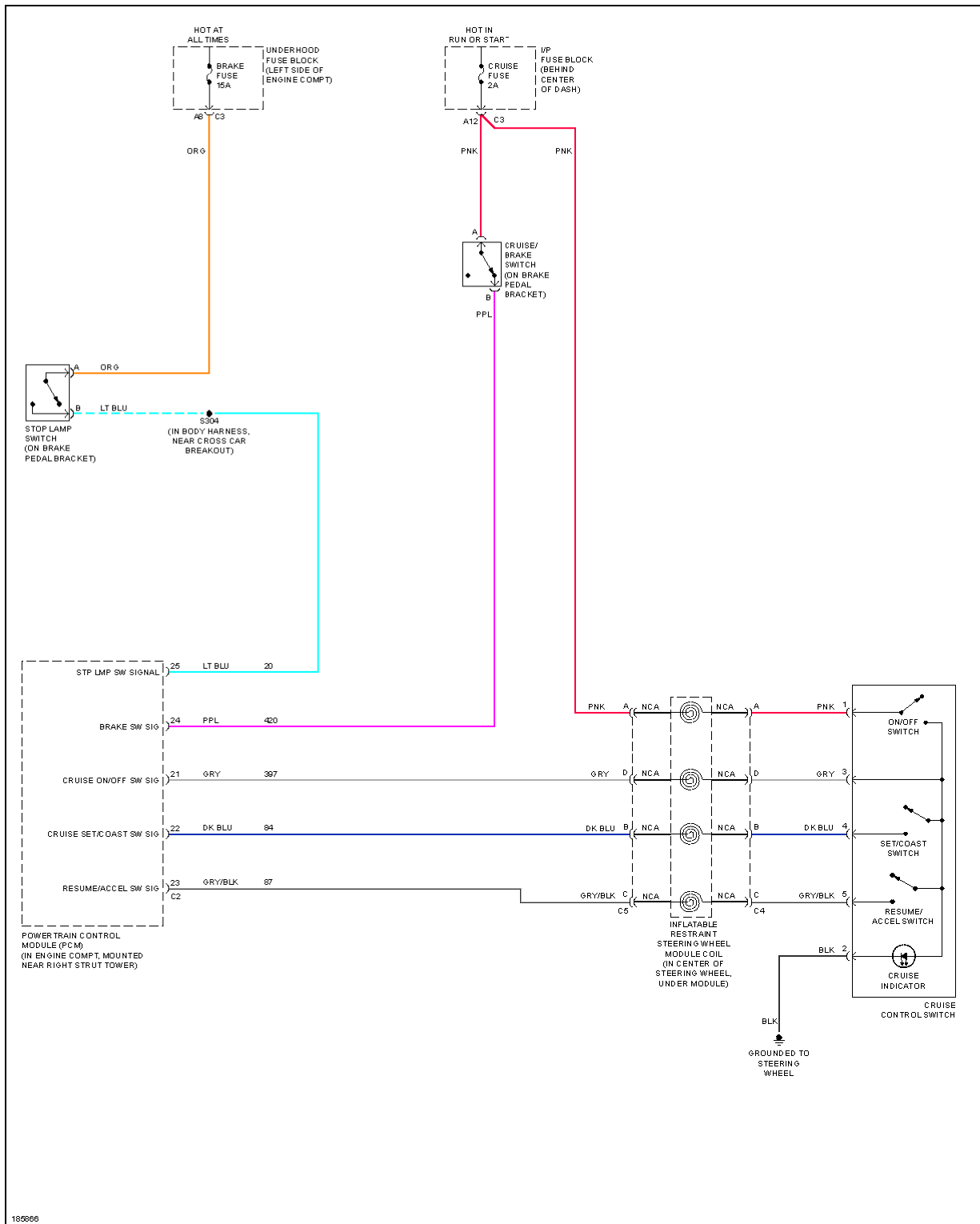


Fig. 13: 3.5L VIN 4, Cruise Control Circuit

DEFOGGERS

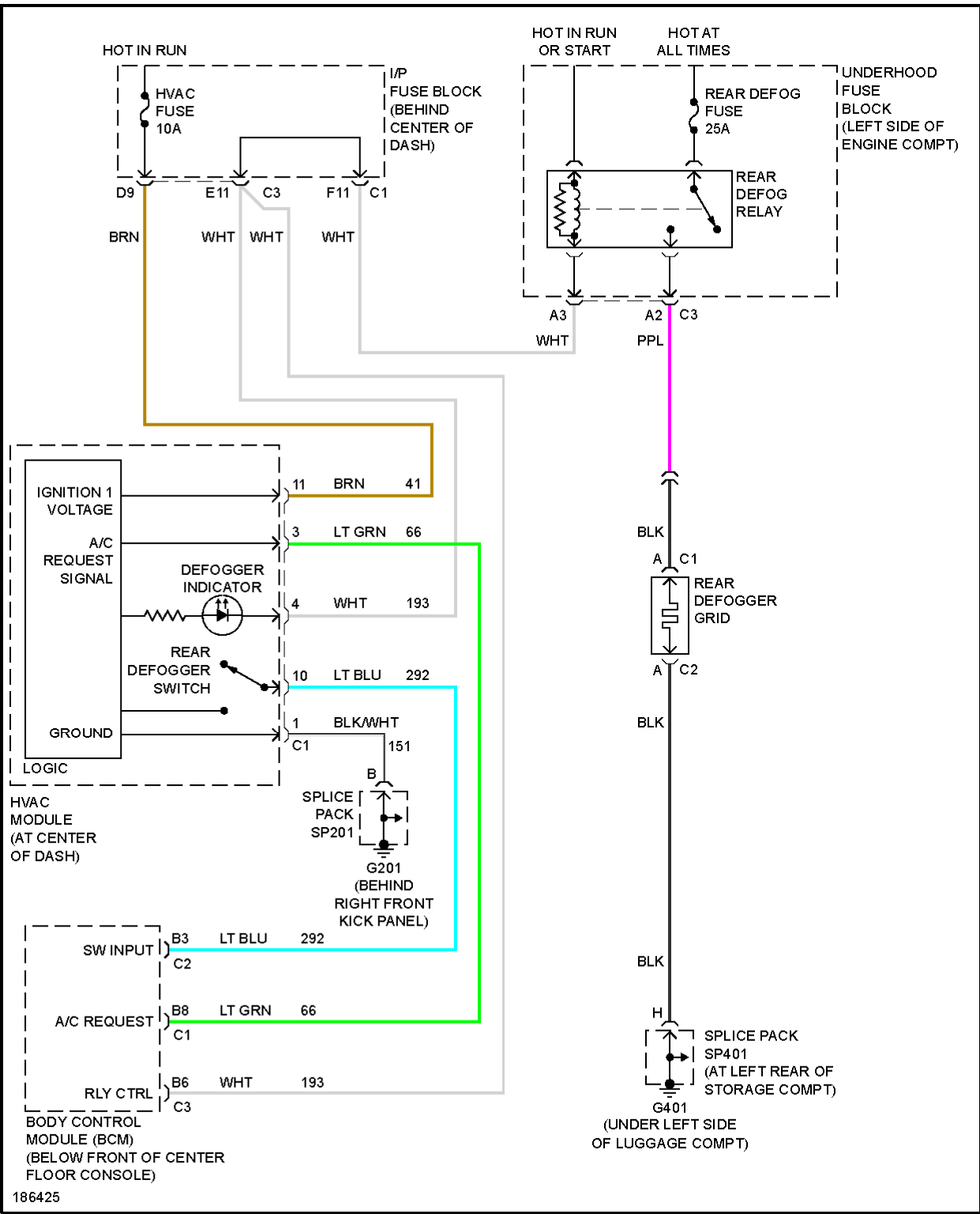


Fig. 14: Defoggers Circuit

ELECTRONIC POWER STEERING

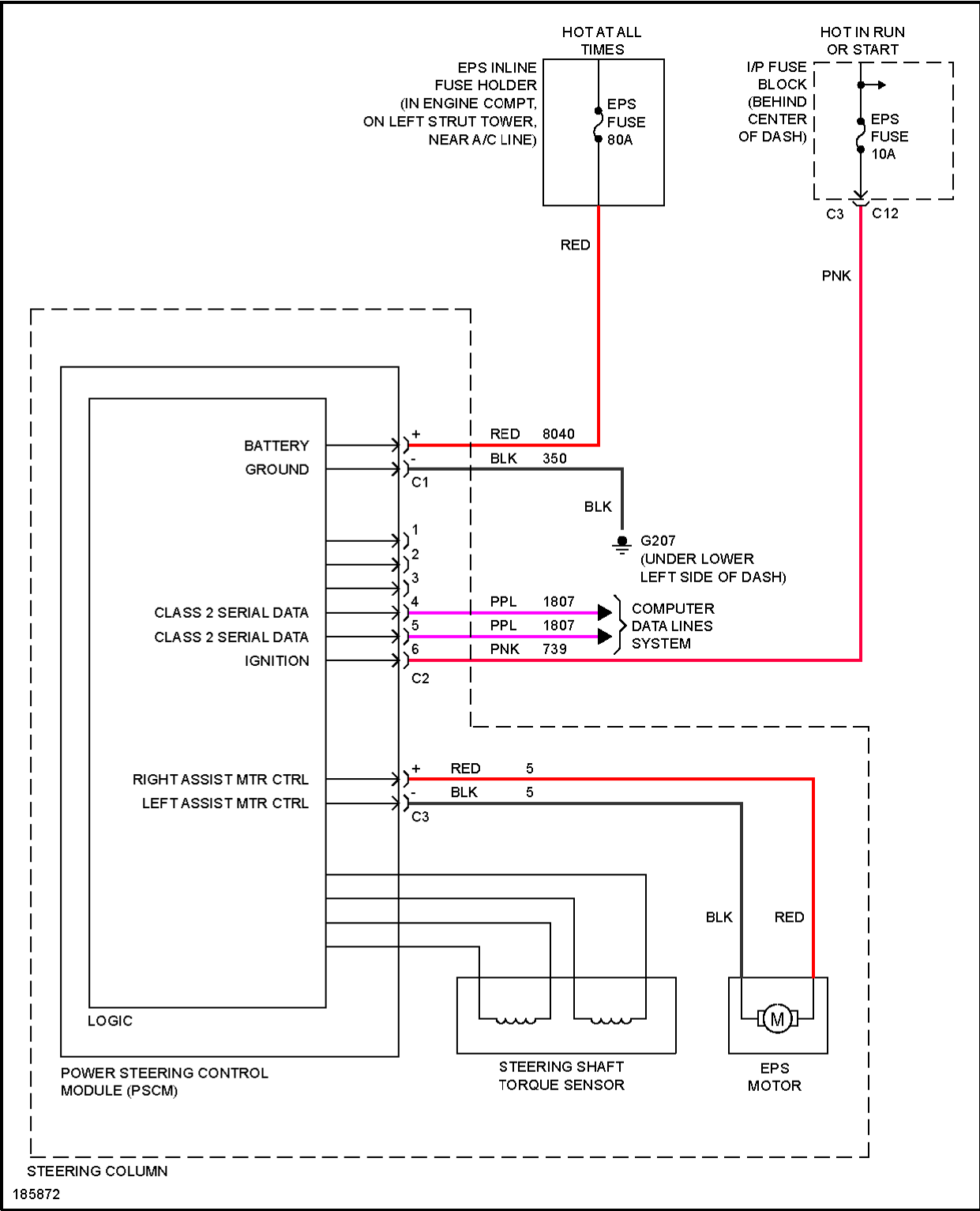


Fig. 15: Electronic Power Steering Circuit

ENGINE PERFORMANCE

2.2L VIN D

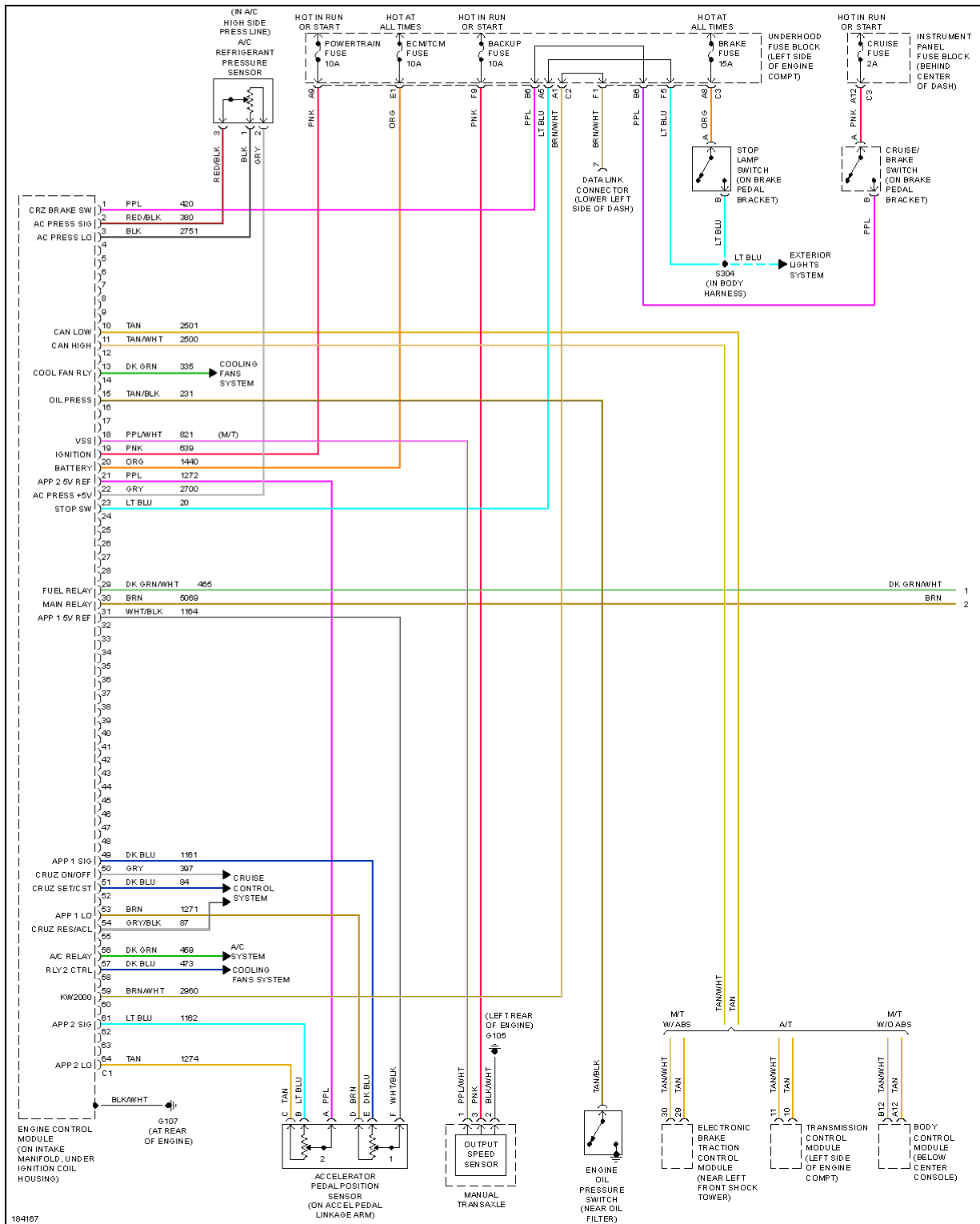


Fig. 16: 2.2L VIN D, Engine Performance Circuit (1 of 3)

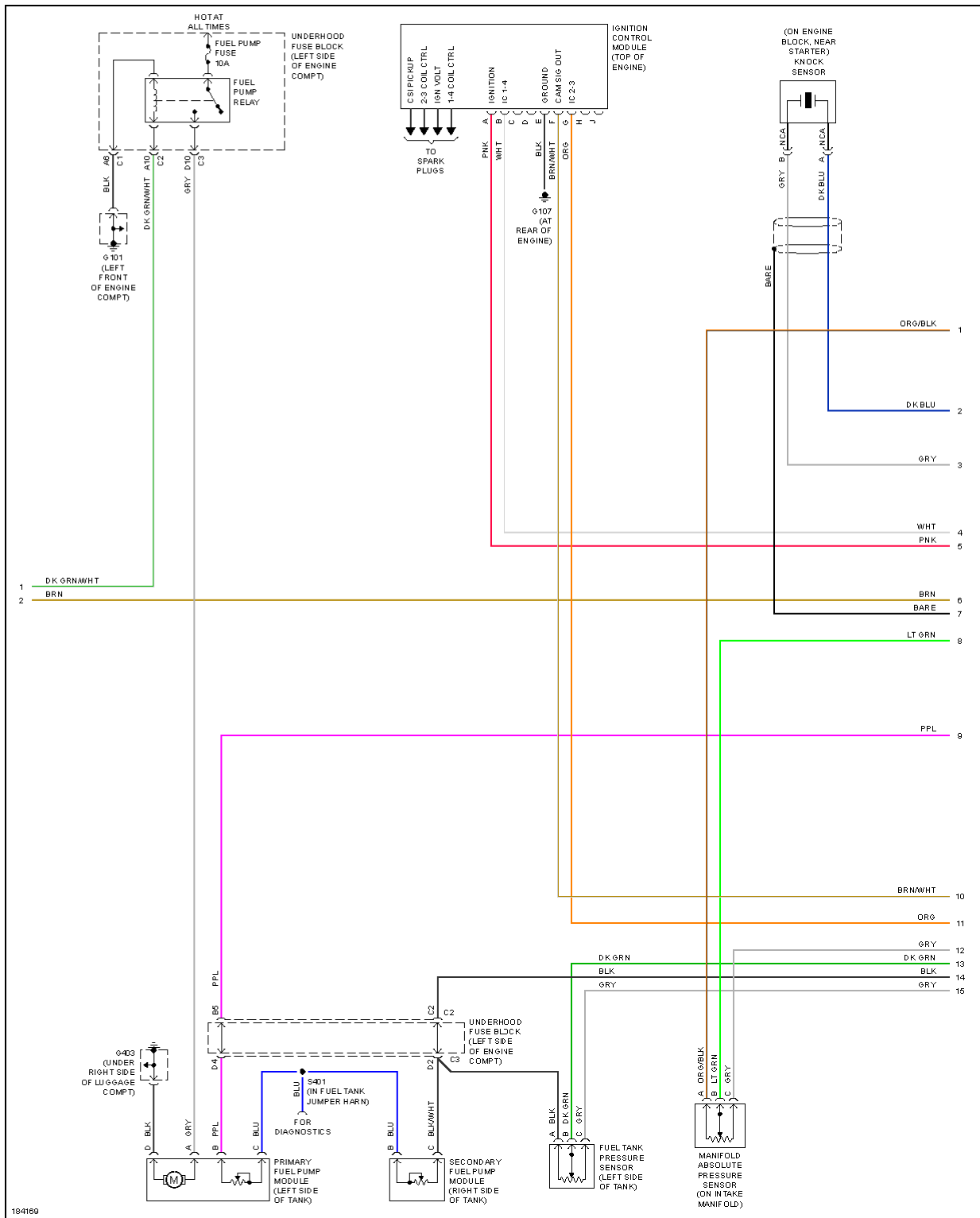


Fig. 17: 2.2L VIN D, Engine Performance Circuit (2 of 3)

Fig. 18: 2.2L VIN D, Engine Performance Circuit (3 of 3)

3.5L VIN 4

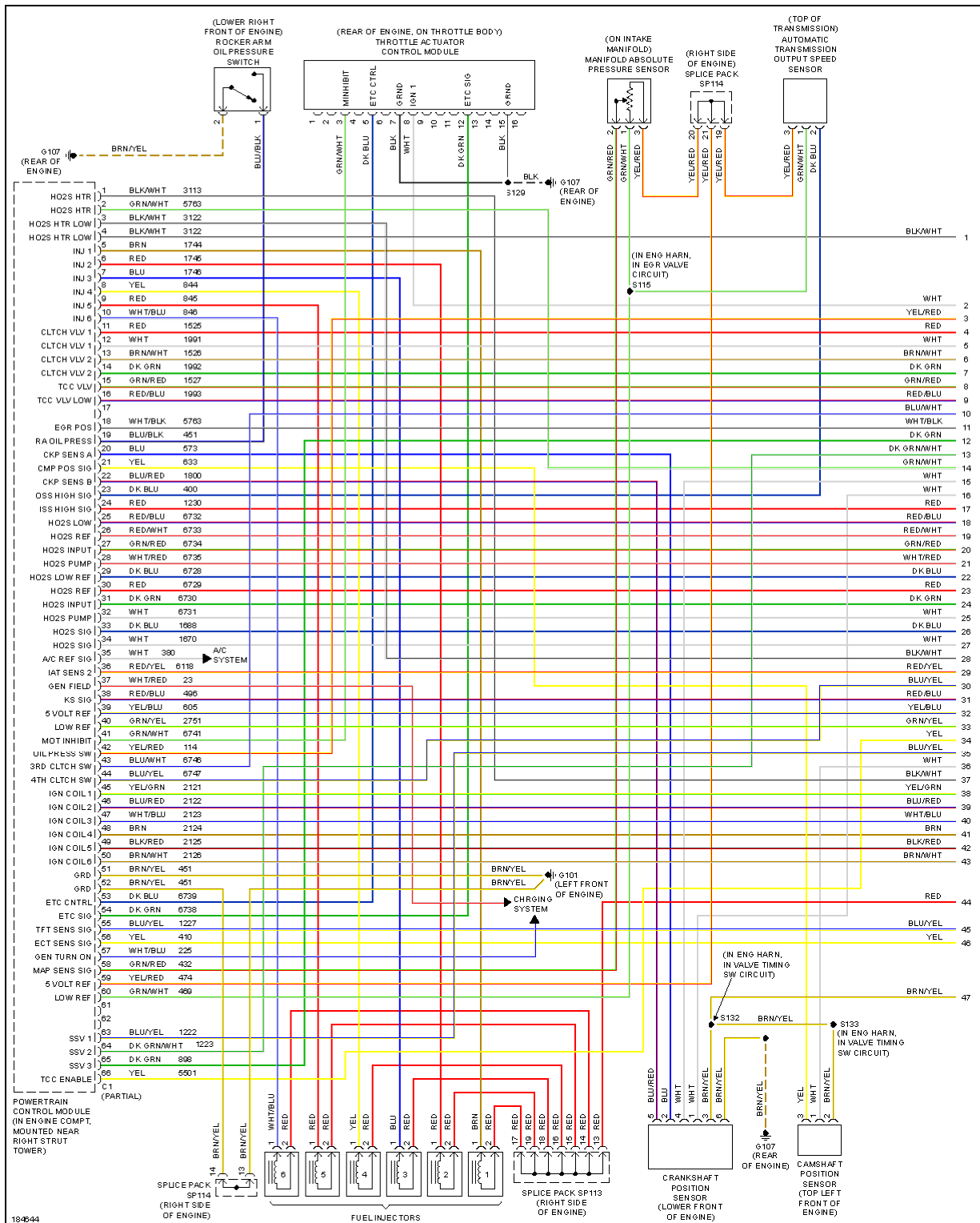


Fig. 19: 3.5L VIN 4, Engine Performance Circuit (1 of 5)

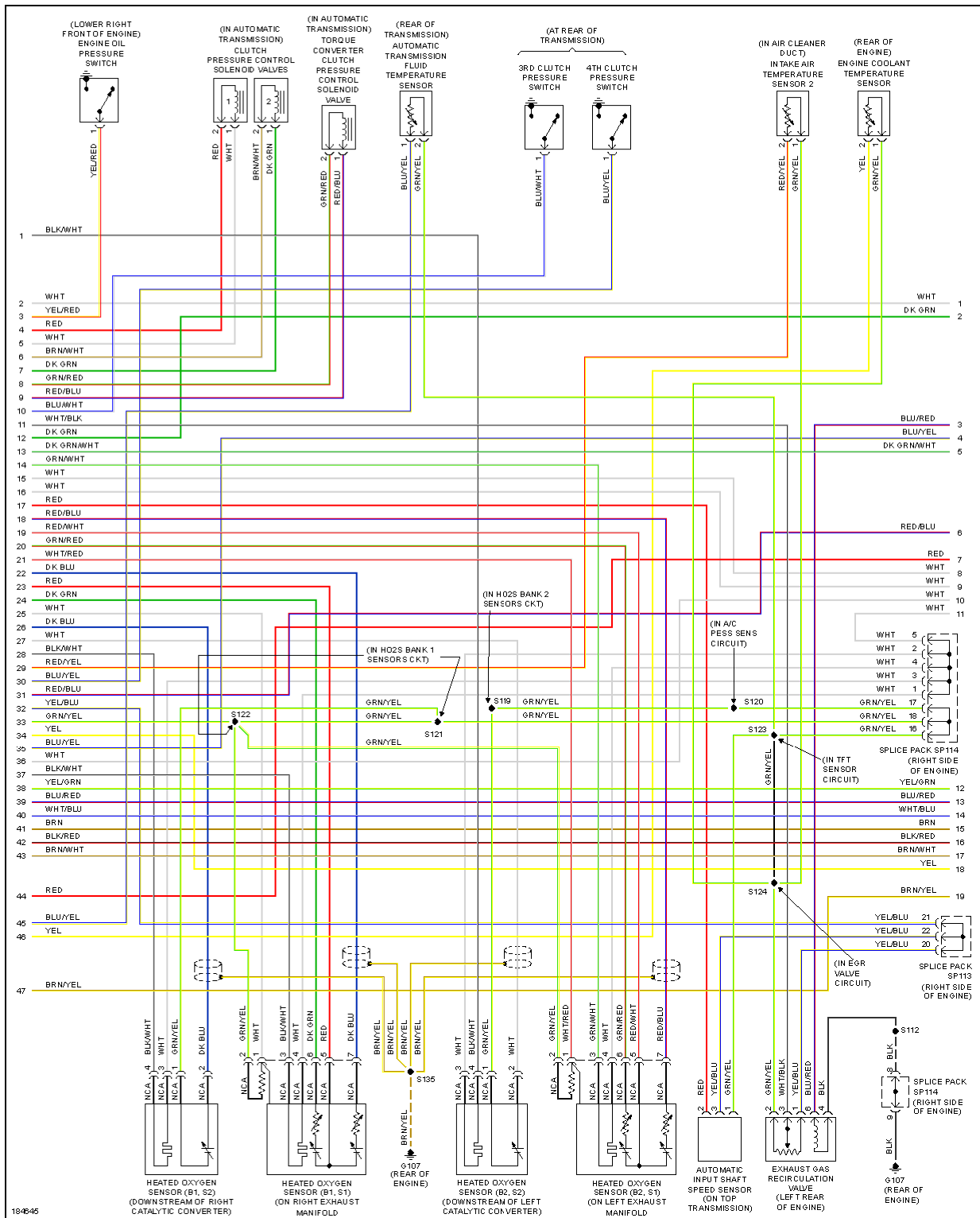


Fig. 20: 3.5L VIN 4, Engine Performance Circuit (2 of 5)

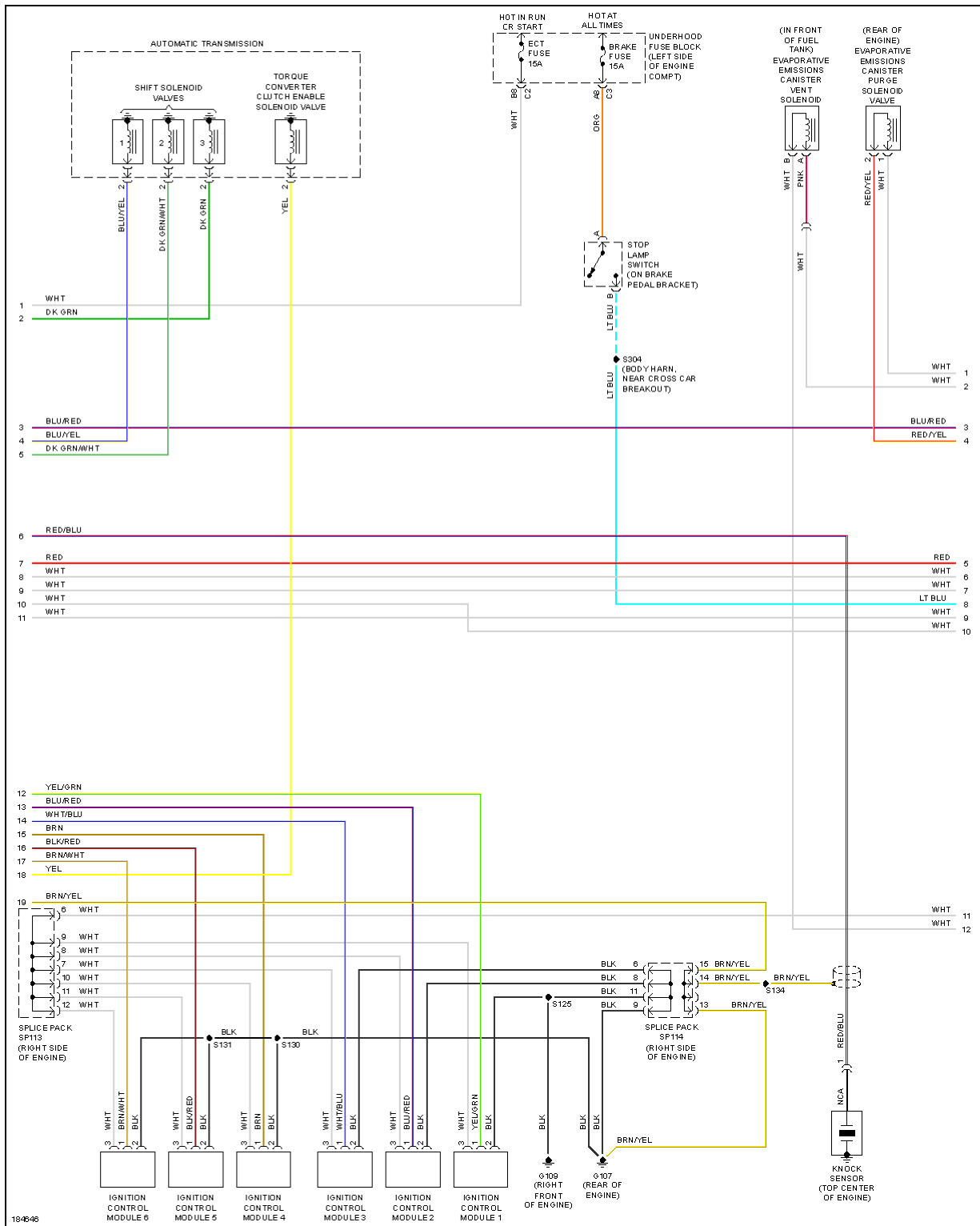


Fig. 21: 3.5L VIN 4, Engine Performance Circuit (3 of 5)

Fig. 22: 3.5L VIN 4, Engine Performance Circuit (4 of 5)

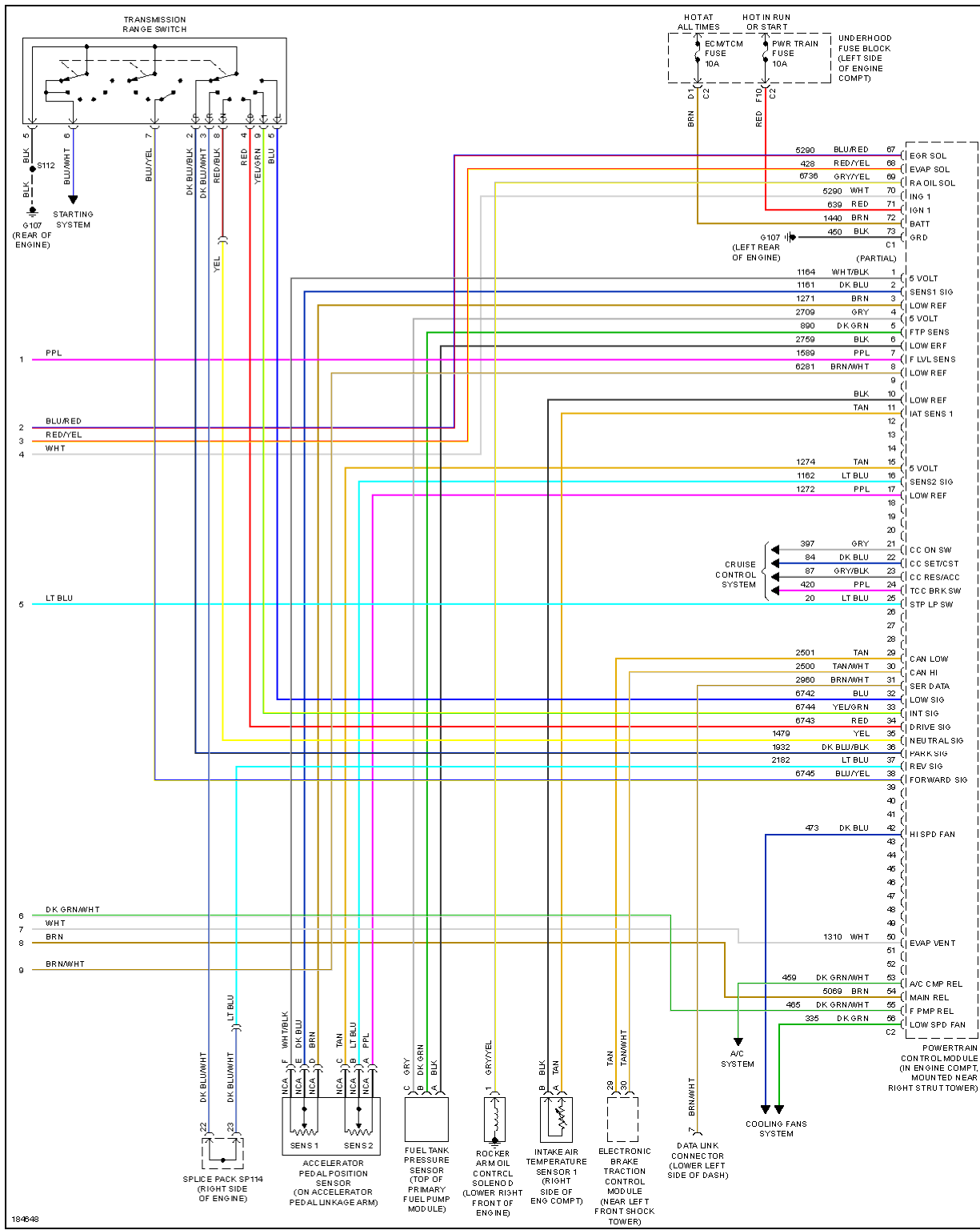


Fig. 23: 3.5L VIN 4, Engine Performance Circuit (5 of 5)

EXTERIOR LIGHTS

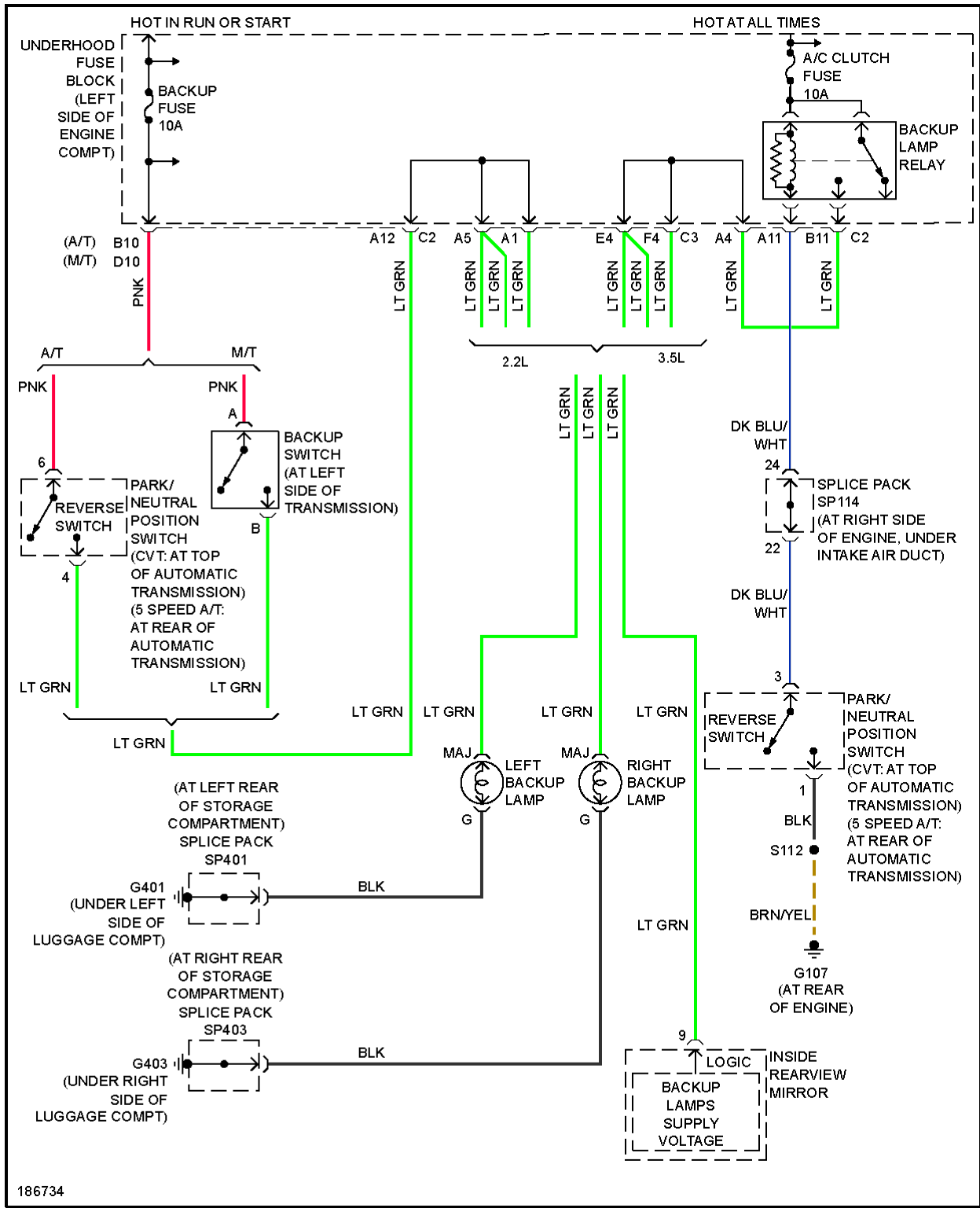


Fig. 24: Backup Lamps Circuit

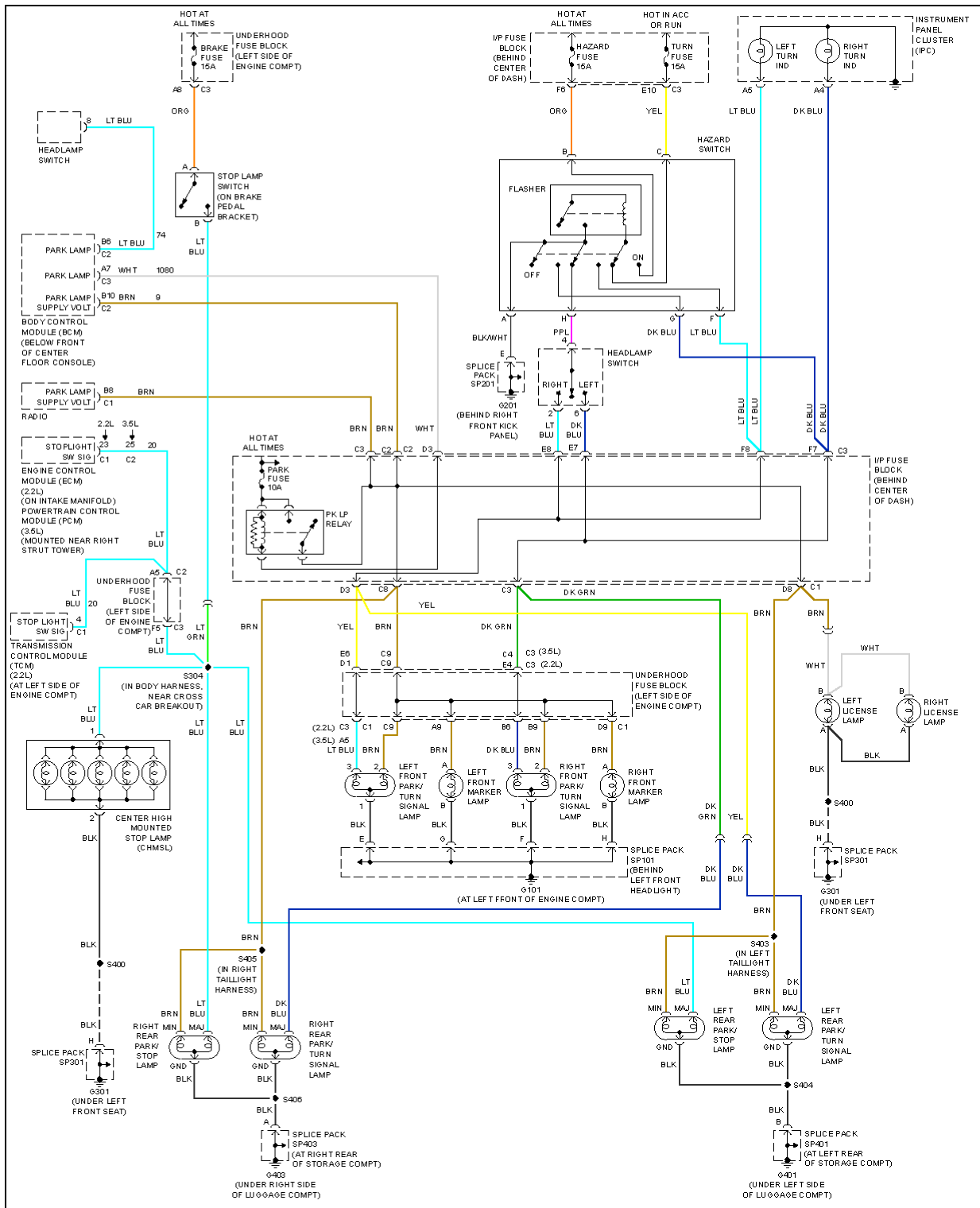


Fig. 25: Exterior Lamps Circuit, W/ Autolamps

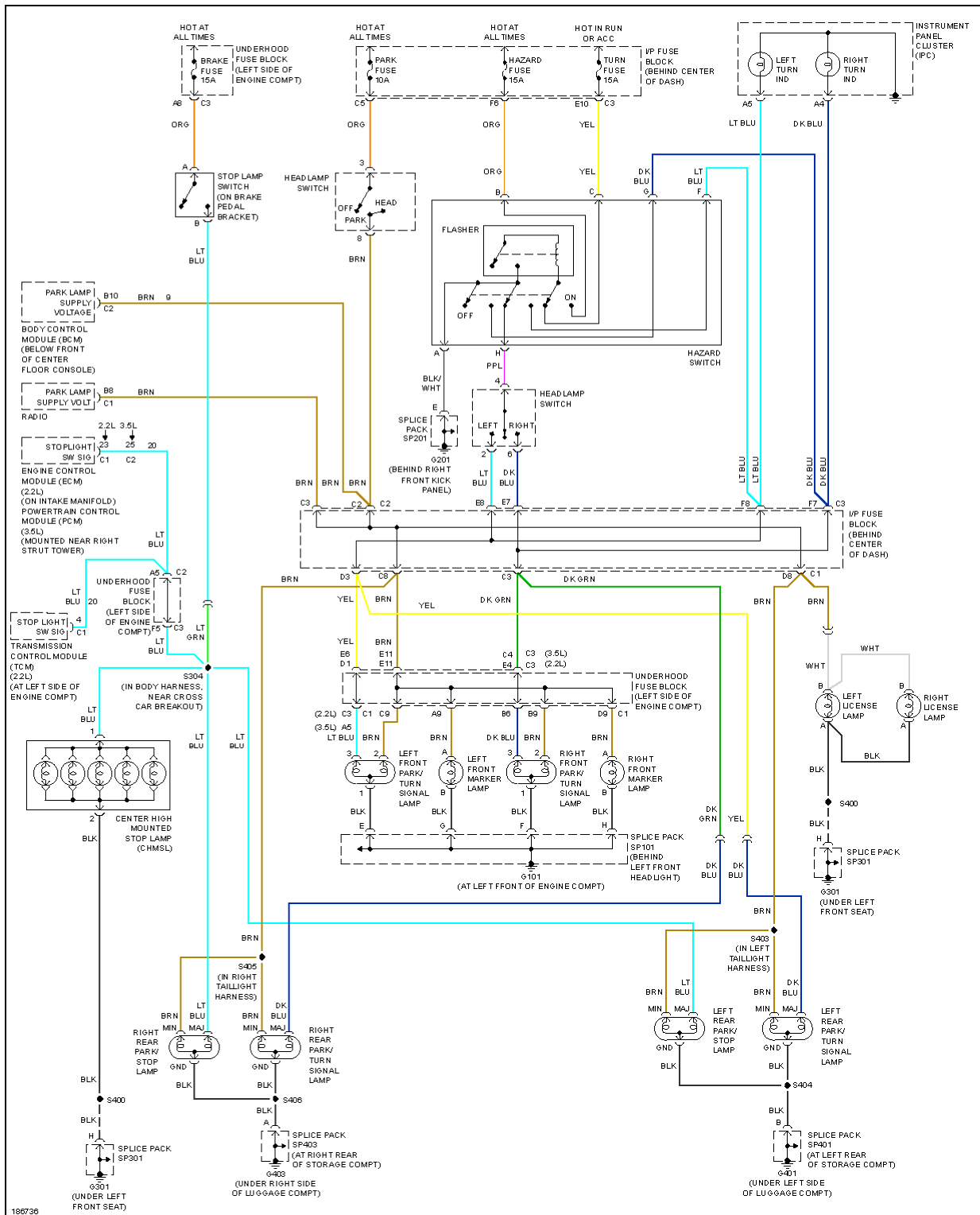


Fig. 26: Exterior Lamps Circuit, W/O Autolamps

GROUND DISTRIBUTION

Fig. 27: Ground Distribution Circuit (1 of 3)

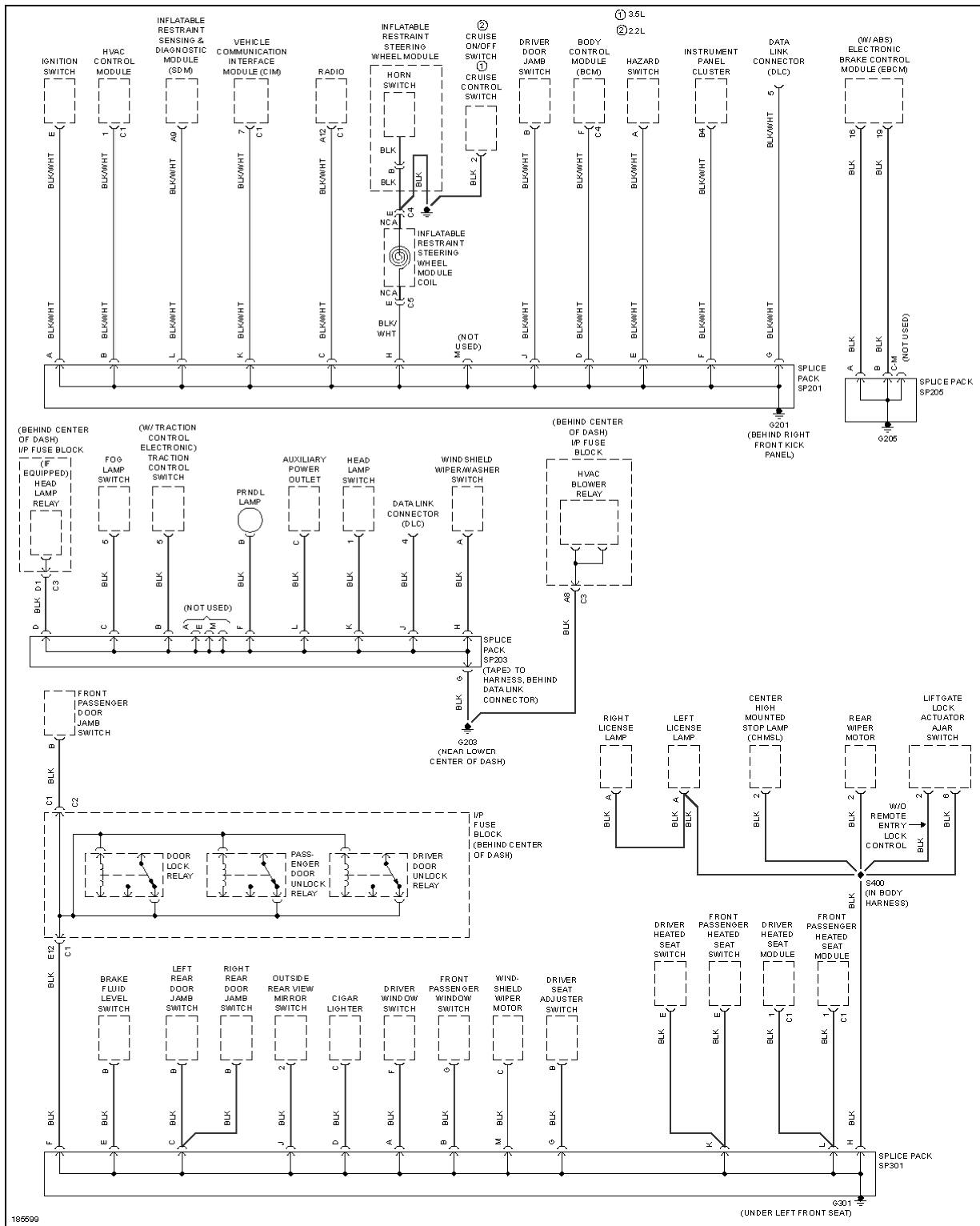


Fig. 28: Ground Distribution Circuit (2 of 3)

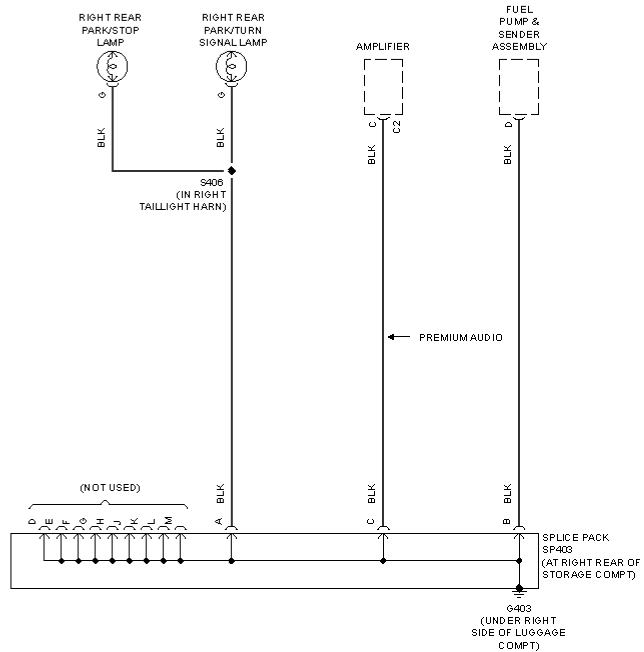
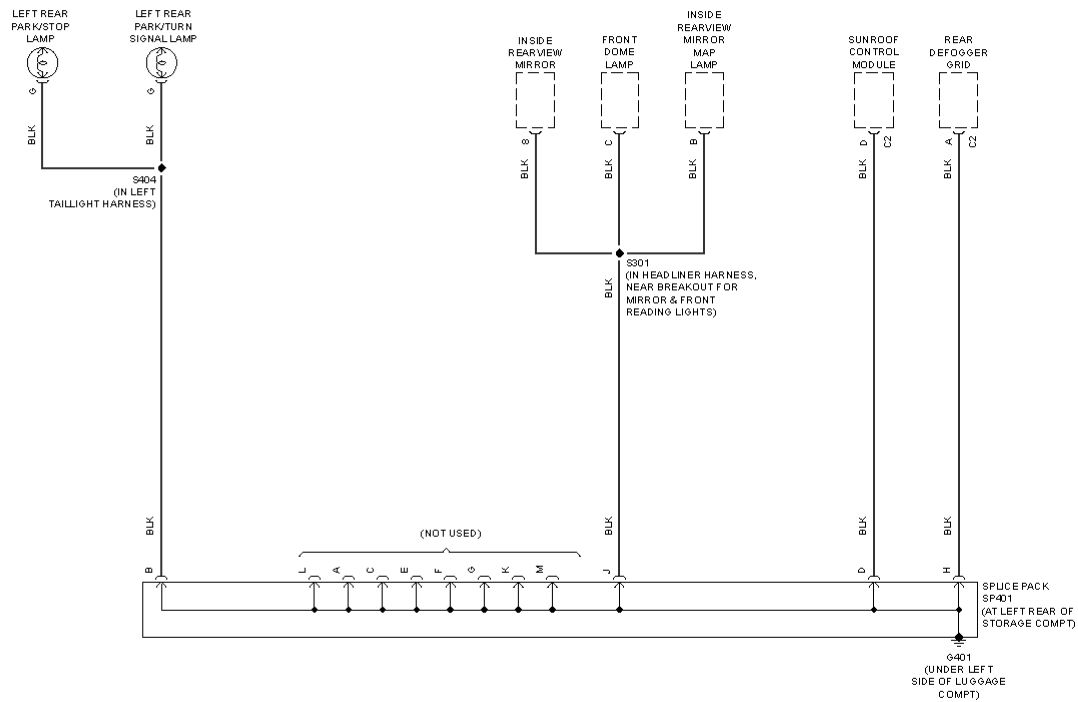


Fig. 29: Ground Distribution Circuit (3 of 3)

HEADLIGHTS

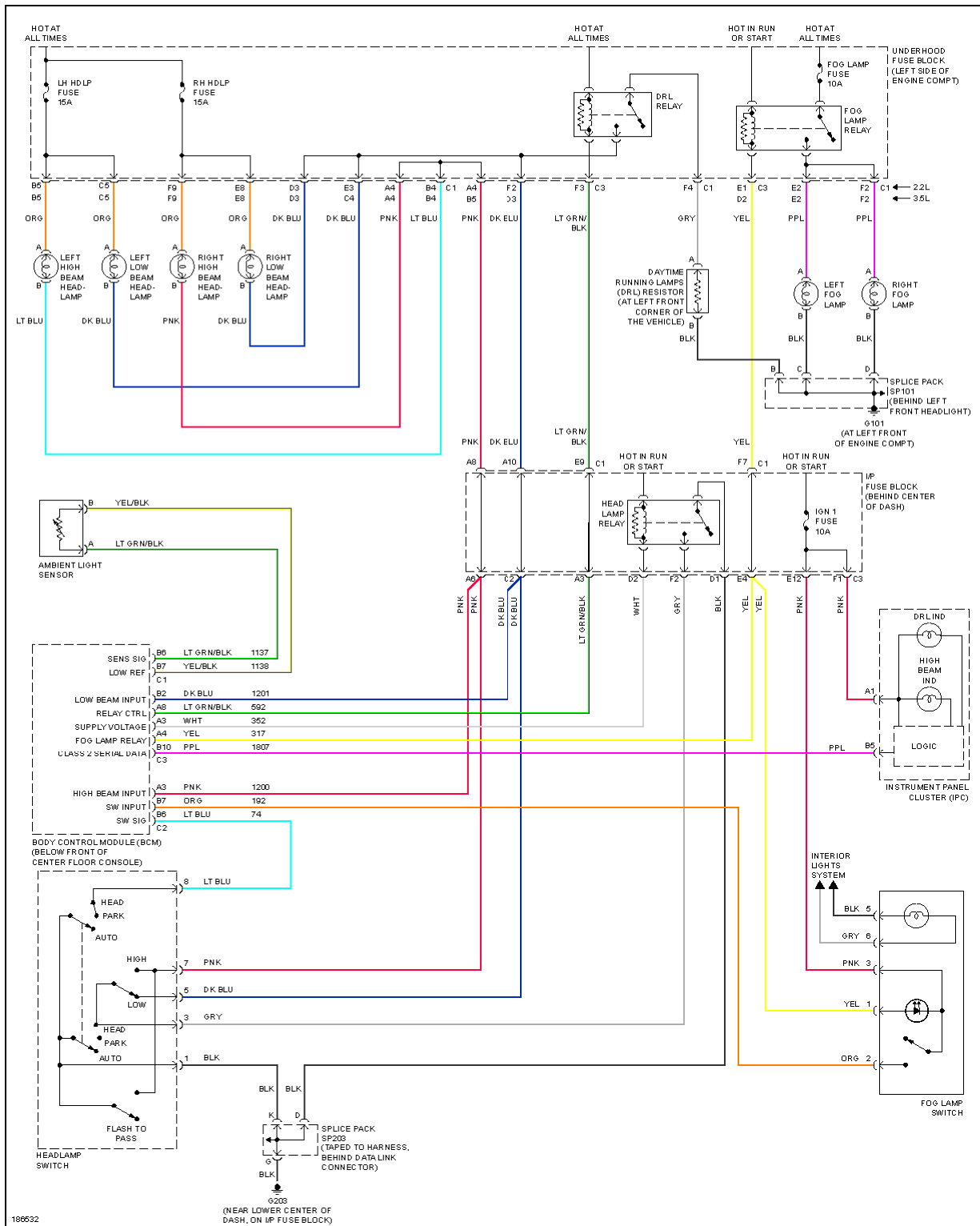


Fig. 30: Headlamps Circuit, W/ Autolamps

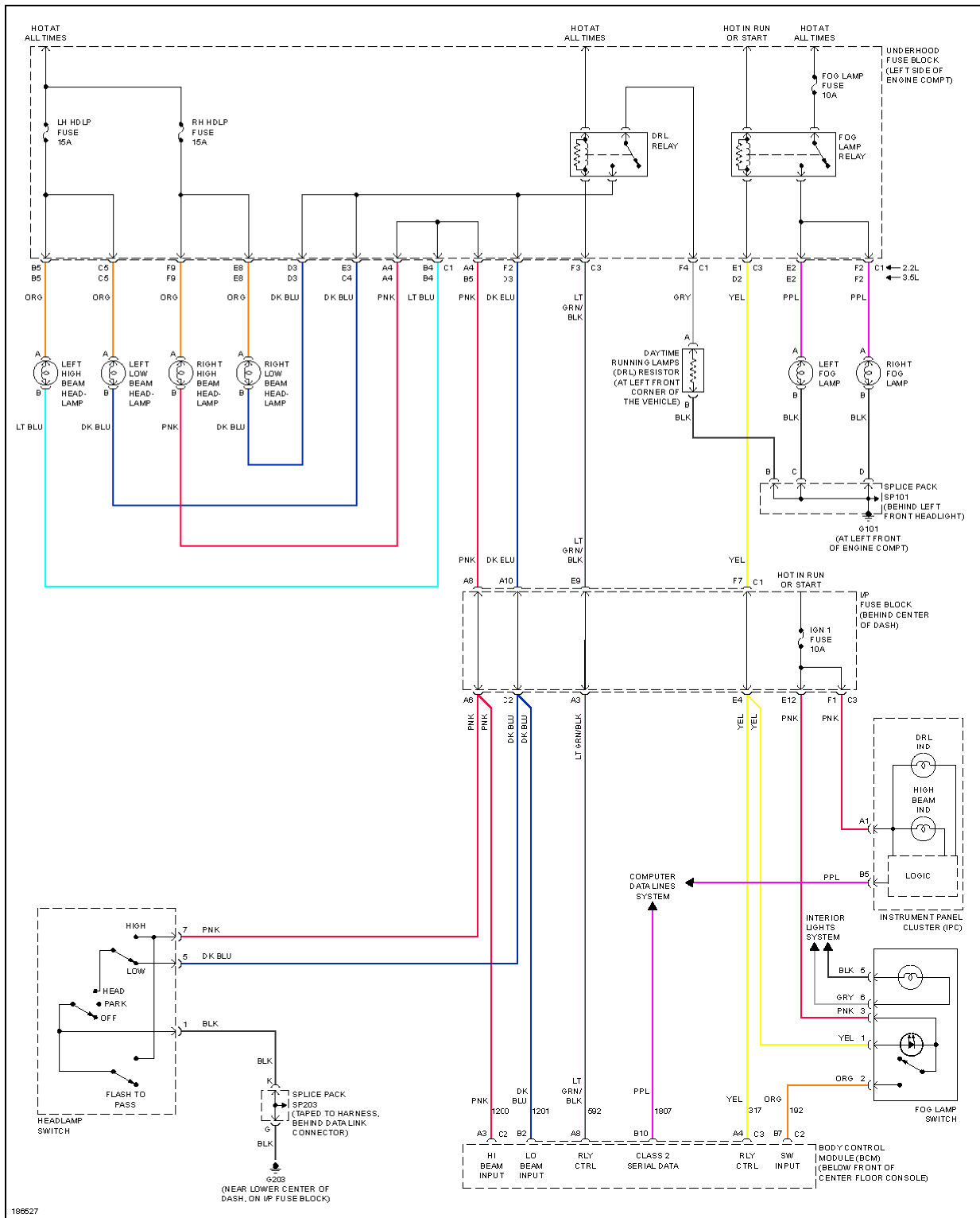


Fig. 31: Headlamps Circuit, W/O Autolamps

HORN

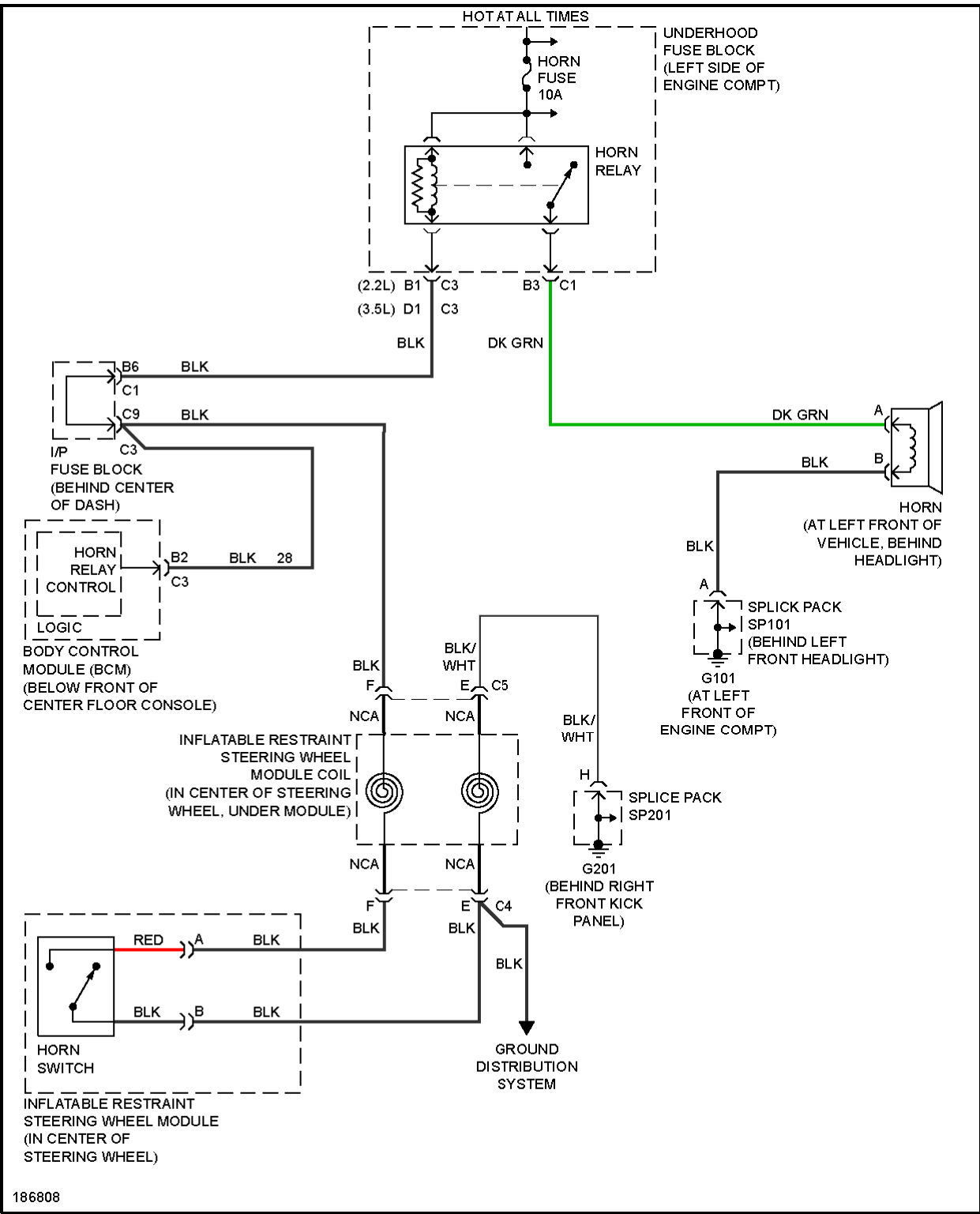


Fig. 32: Horn Circuit

INSTRUMENT CLUSTER

Fig. 33: Instrument Cluster Circuit

INTERIOR LIGHTS

Fig. 34: Interior Lights Circuit

POWER DISTRIBUTION

2.2L VIN D

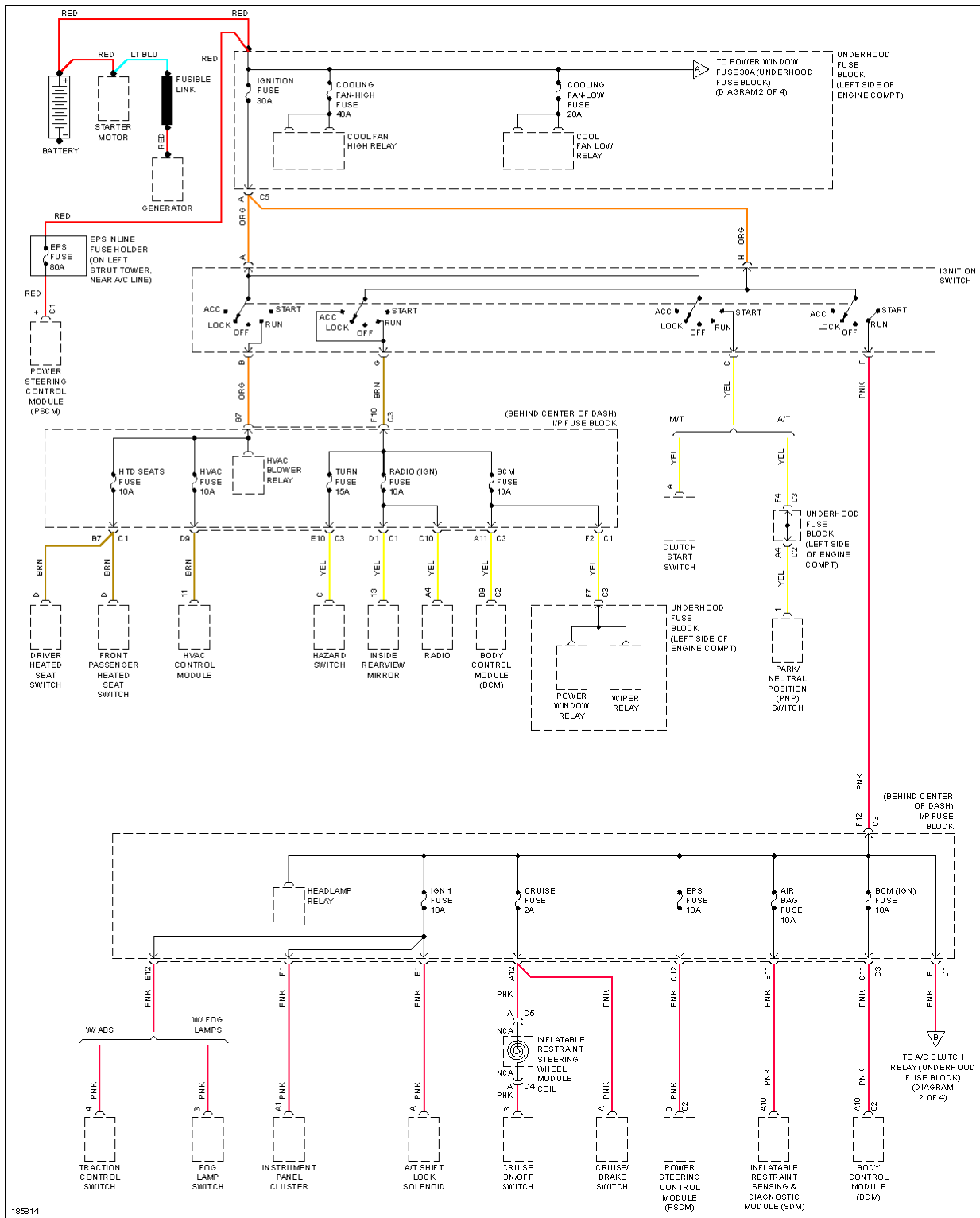


Fig. 35: 2.2L VIN D, Power Distribution Circuit (1 of 4)

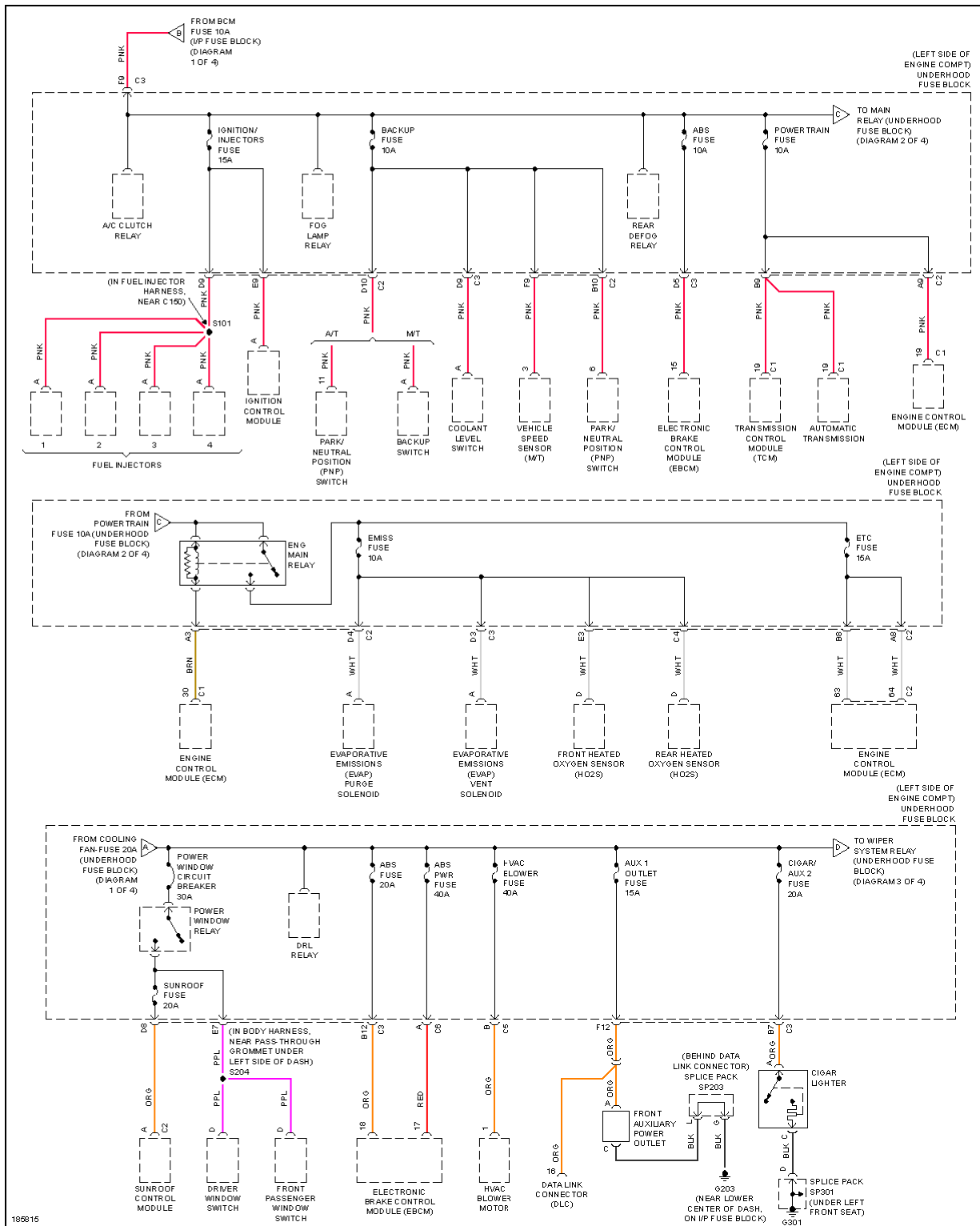


Fig. 36: 2.2L VIN D, Power Distribution Circuit (2 of 4)

Fig. 37: 2.2L VIN D, Power Distribution Circuit (3 of 4)

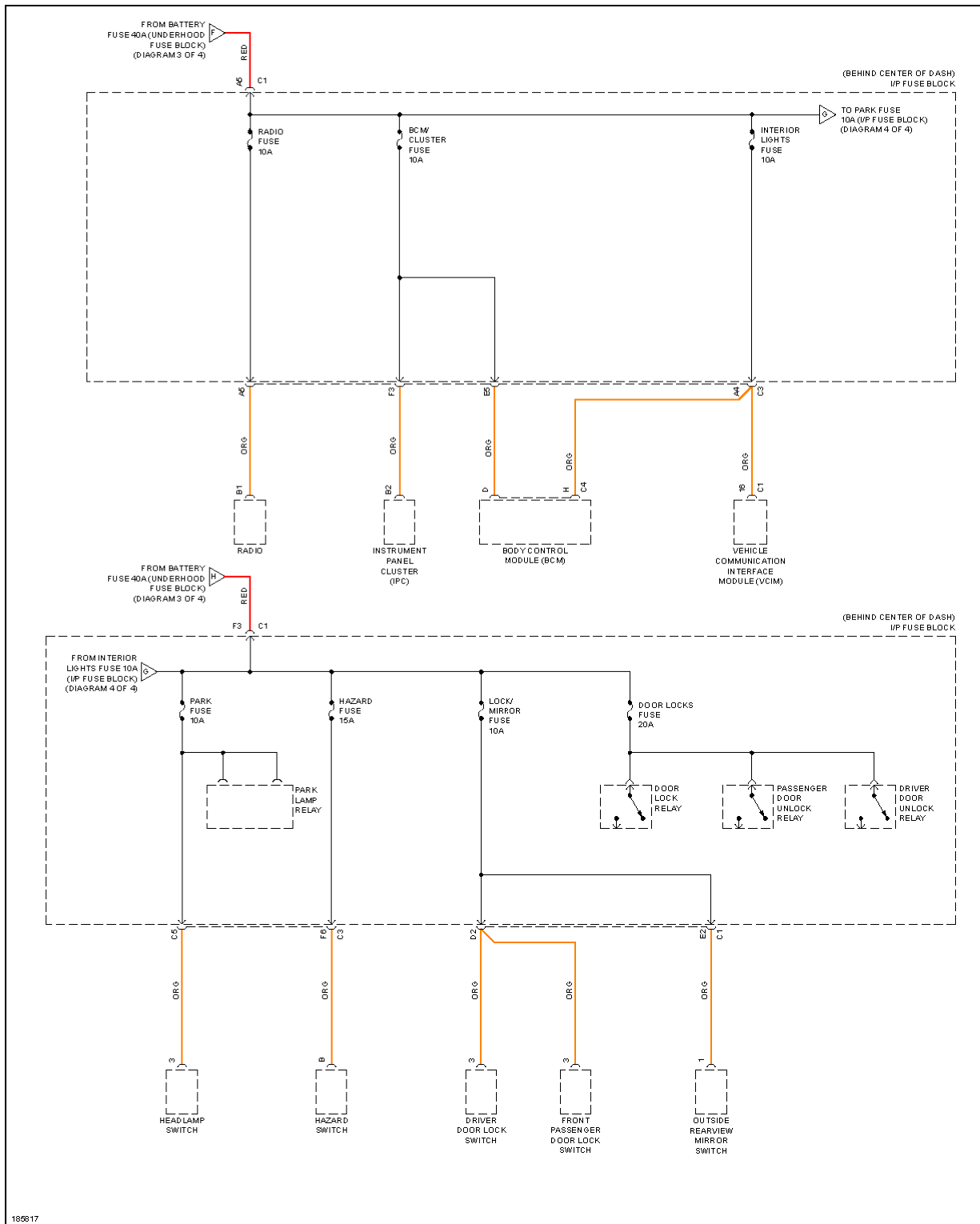


Fig. 38: 2.2L VIN D, Power Distribution Circuit (4 of 4)

2.2L VIN F

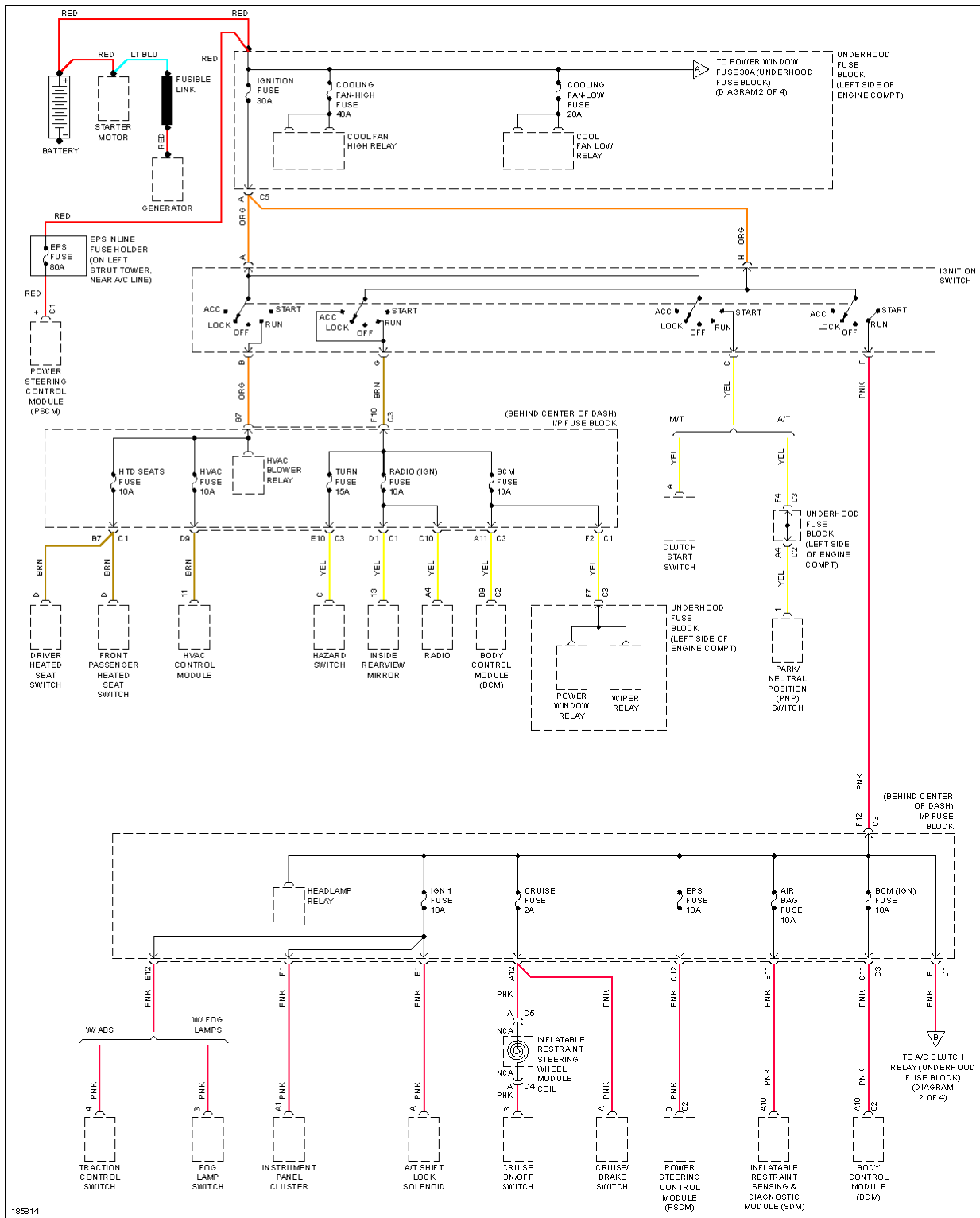


Fig. 39: 2.2L VIN F, Power Distribution Circuit (1 of 4)

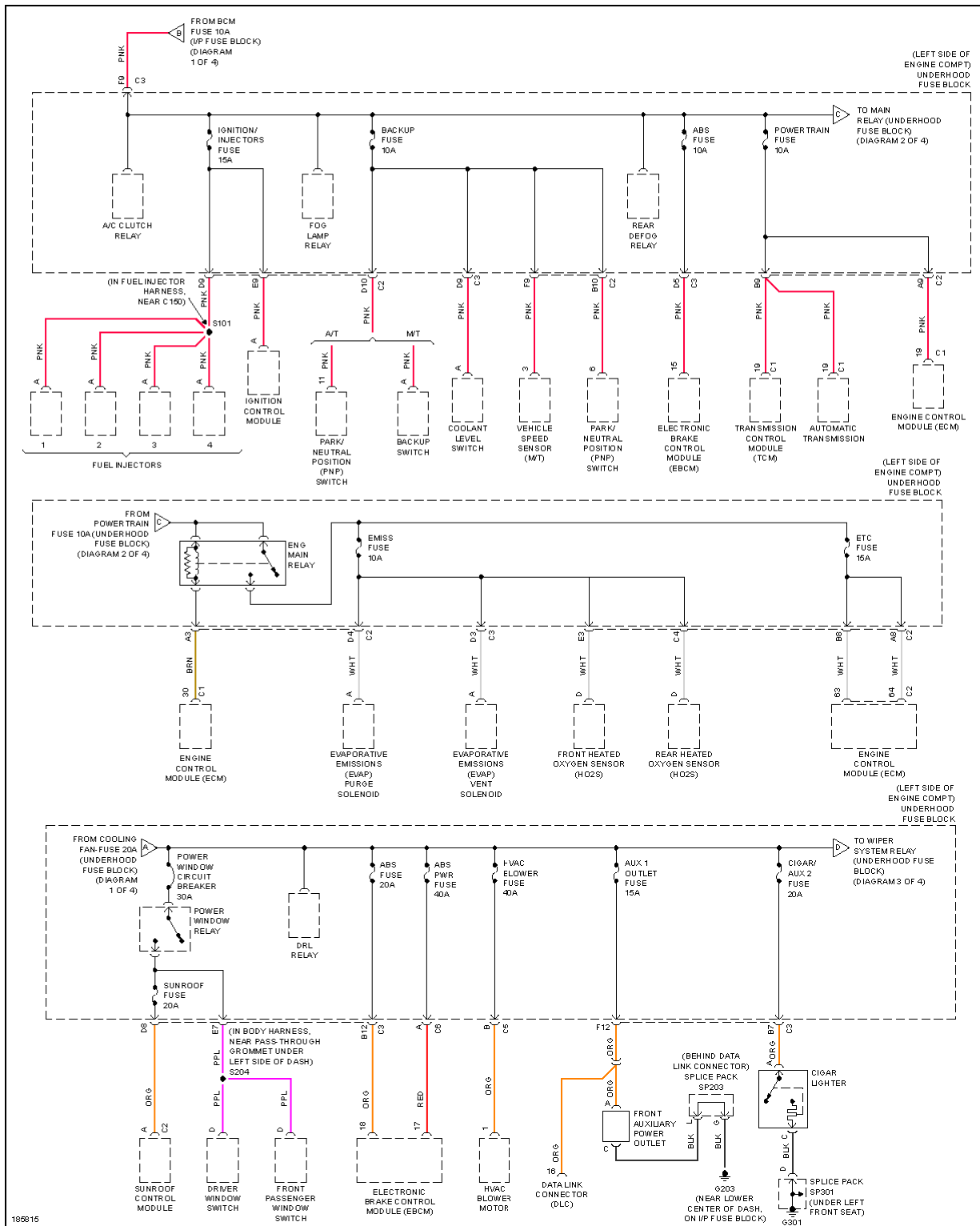


Fig. 40: 2.2L VIN F, Power Distribution Circuit (2 of 4)

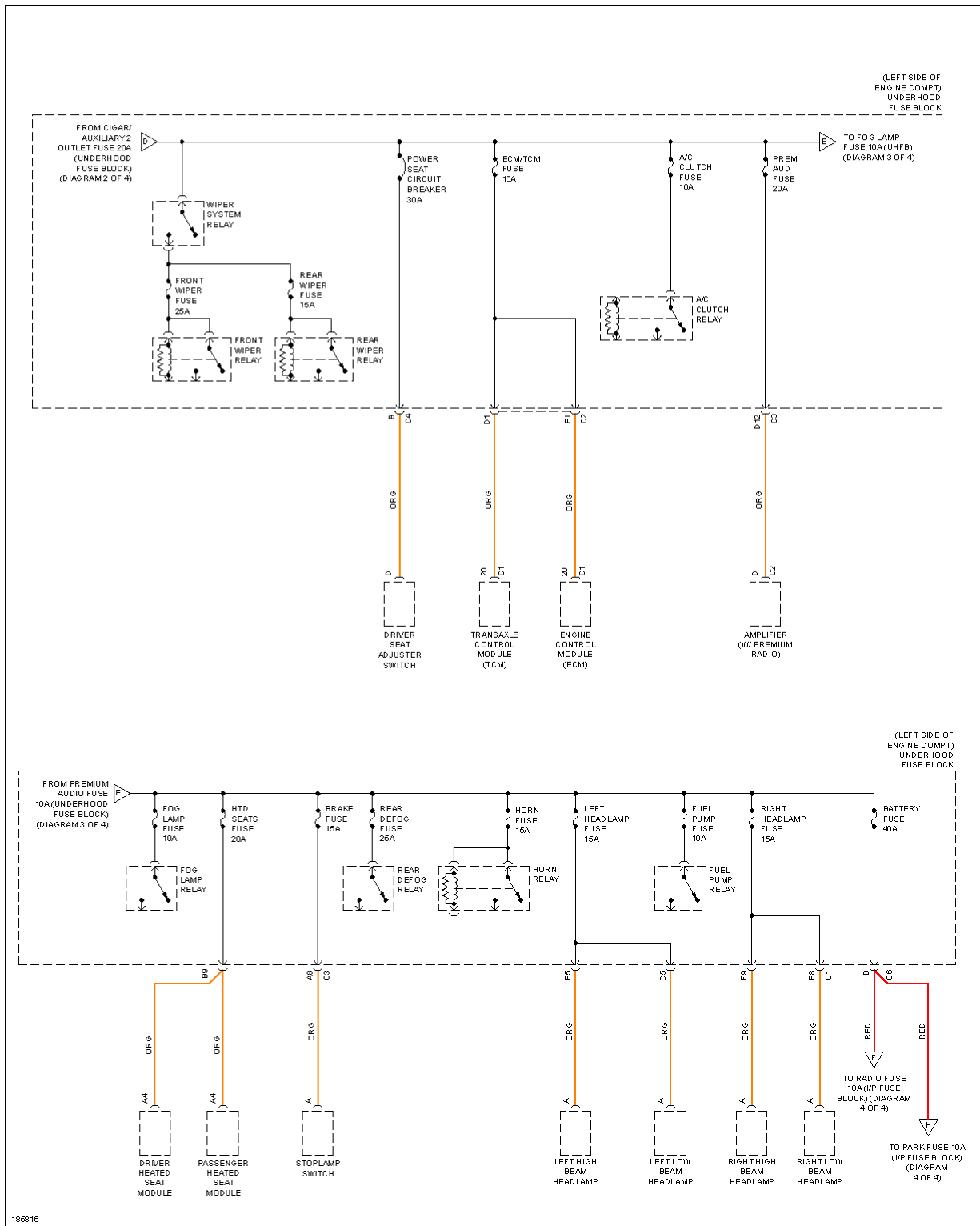


Fig. 41: 2.2L VIN F, Power Distribution Circuit (3 of 4)

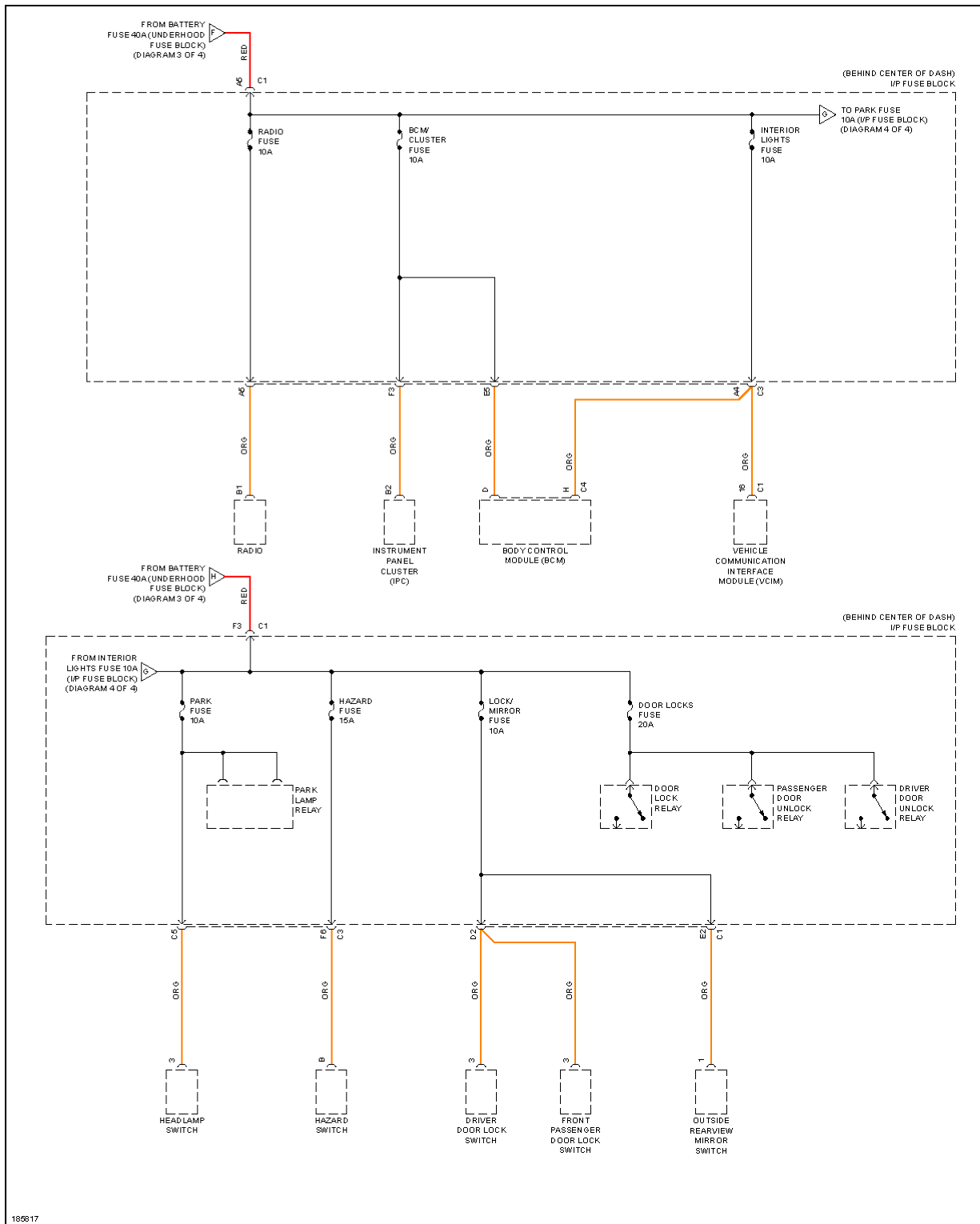


Fig. 42: 2.2L VIN F, Power Distribution Circuit (4 of 4)

3.0L VIN R

Fig. 43: 3.0L VIN R, Power Distribution Circuit (1 of 4)

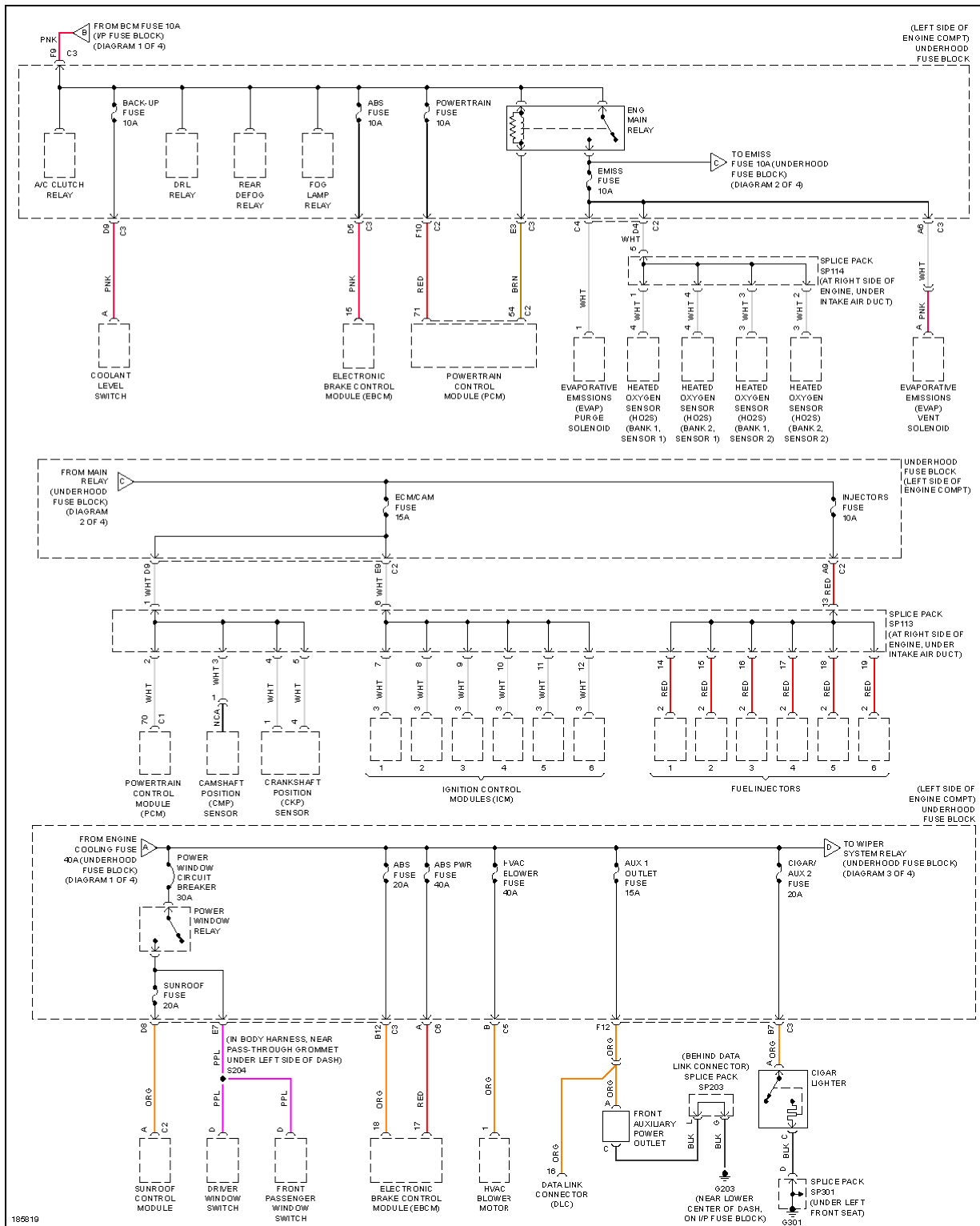


Fig. 44: 3.0L VIN R, Power Distribution Circuit (2 of 4)

Fig. 45: 3.0L VIN R, Power Distribution Circuit (3 of 4)

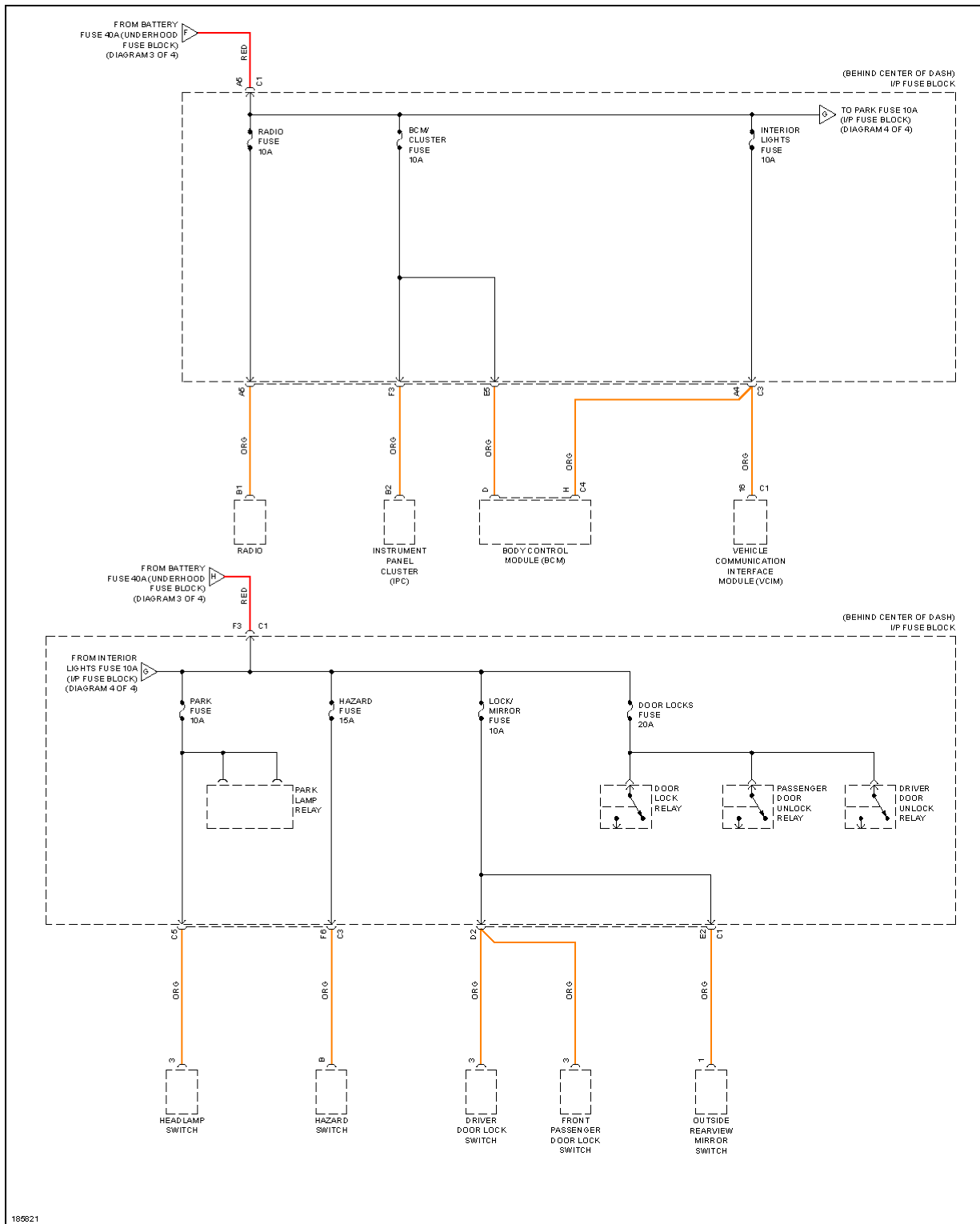


Fig. 46: 3.0L VIN R, Power Distribution Circuit (4 of 4)

3.5L VIN 4

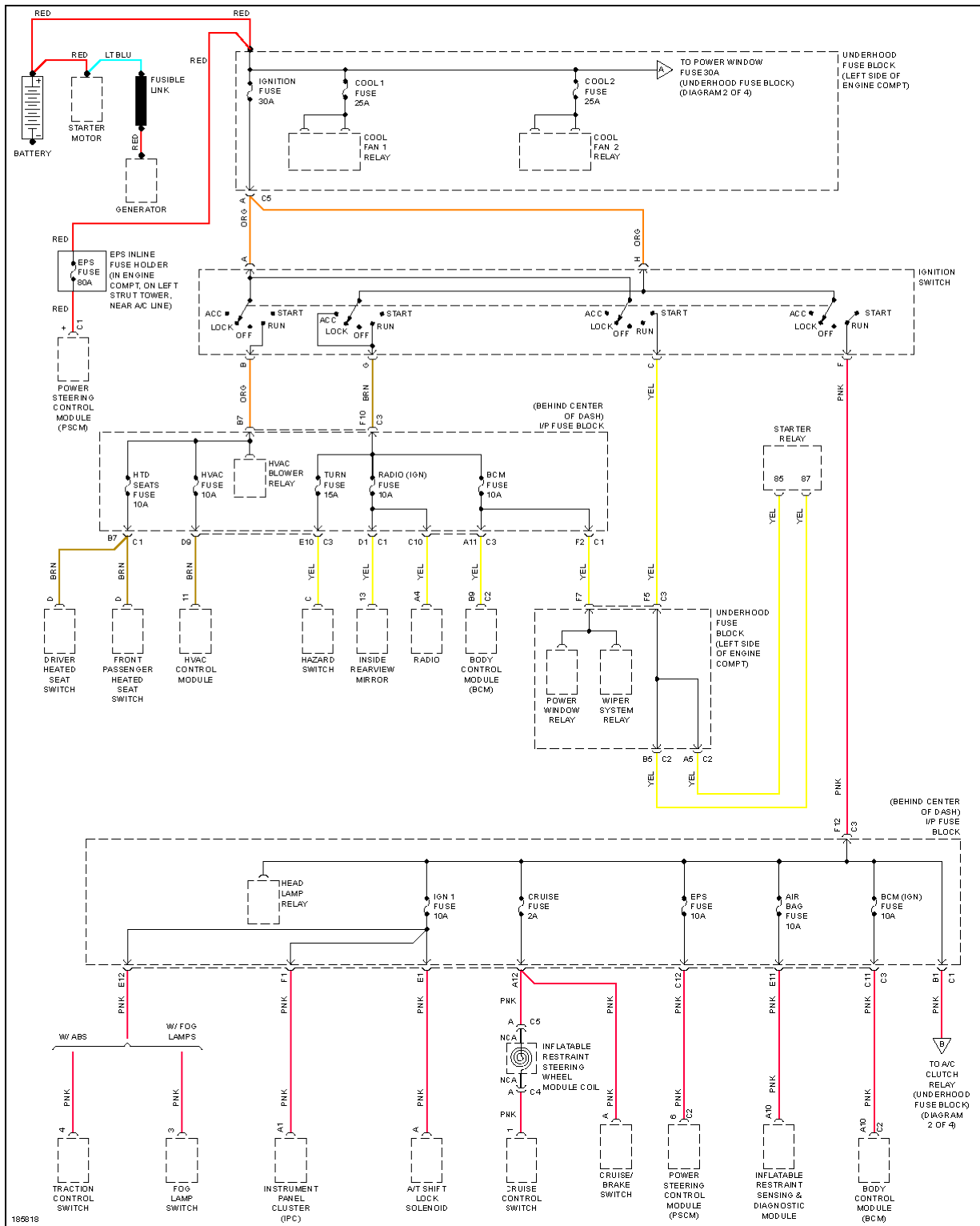


Fig. 47: 3.5L VIN 4, Power Distribution Circuit (1 of 4)

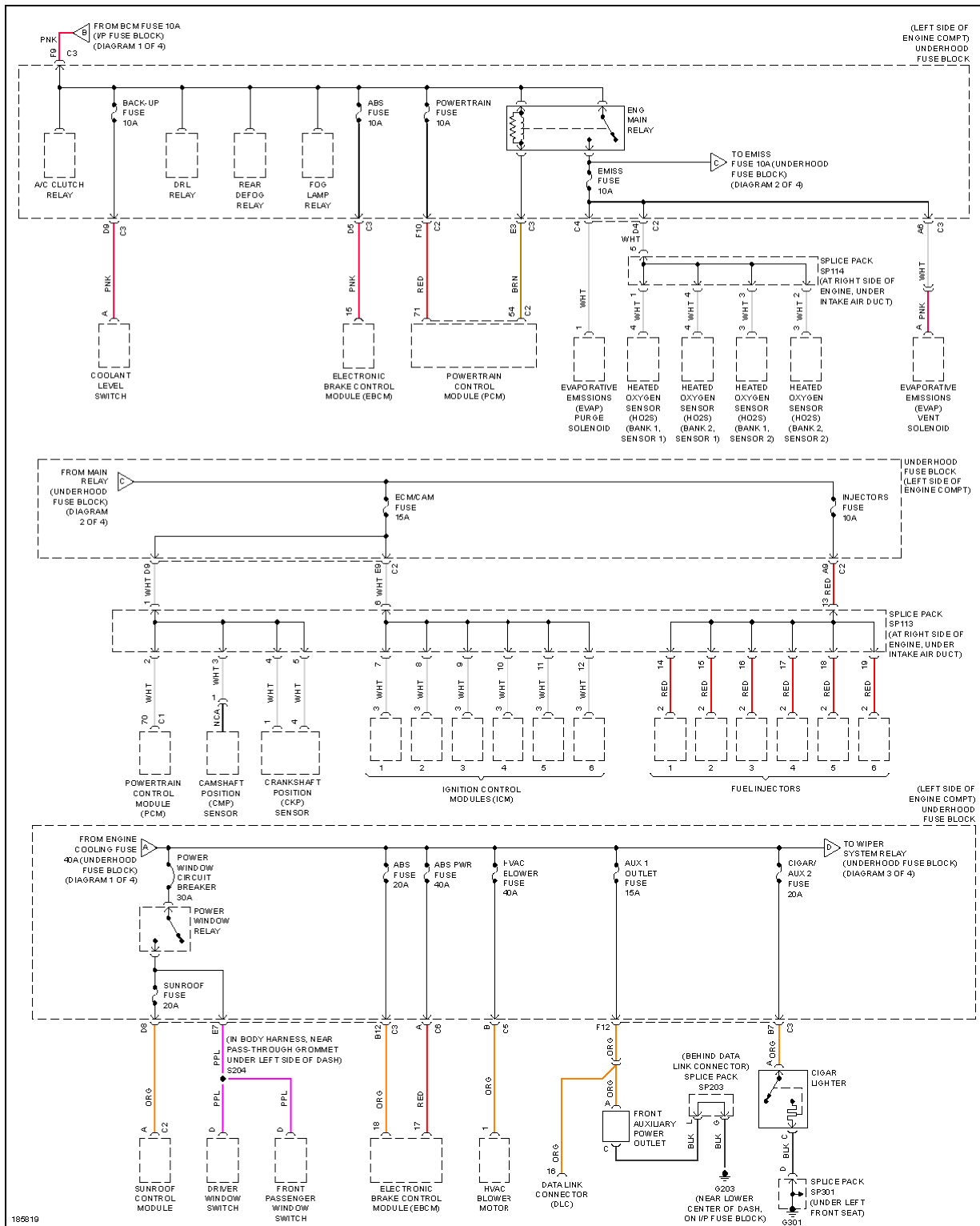


Fig. 48: 3.5L VIN 4, Power Distribution Circuit (2 of 4)

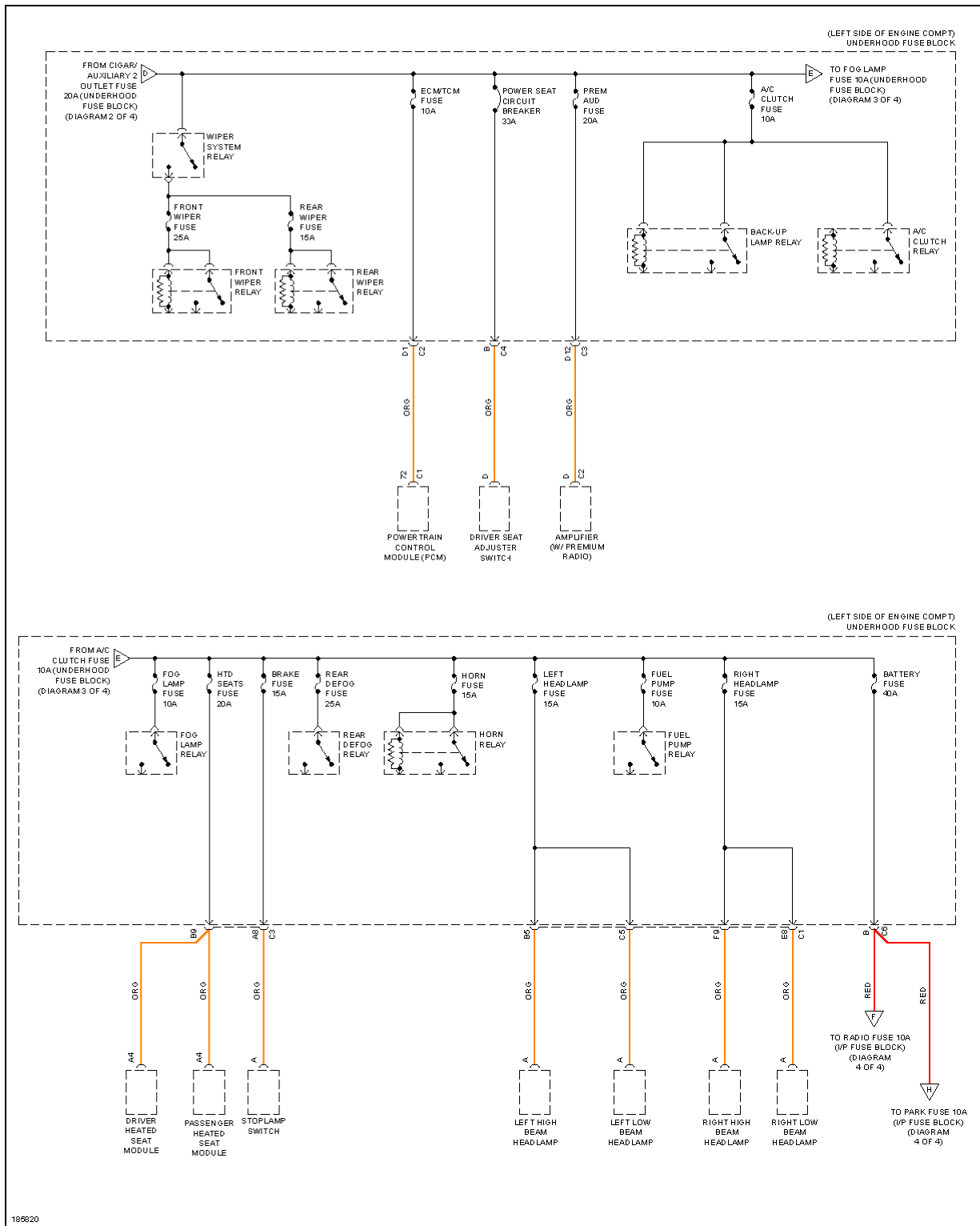


Fig. 49: 3.5L VIN 4, Power Distribution Circuit (3 of 4)

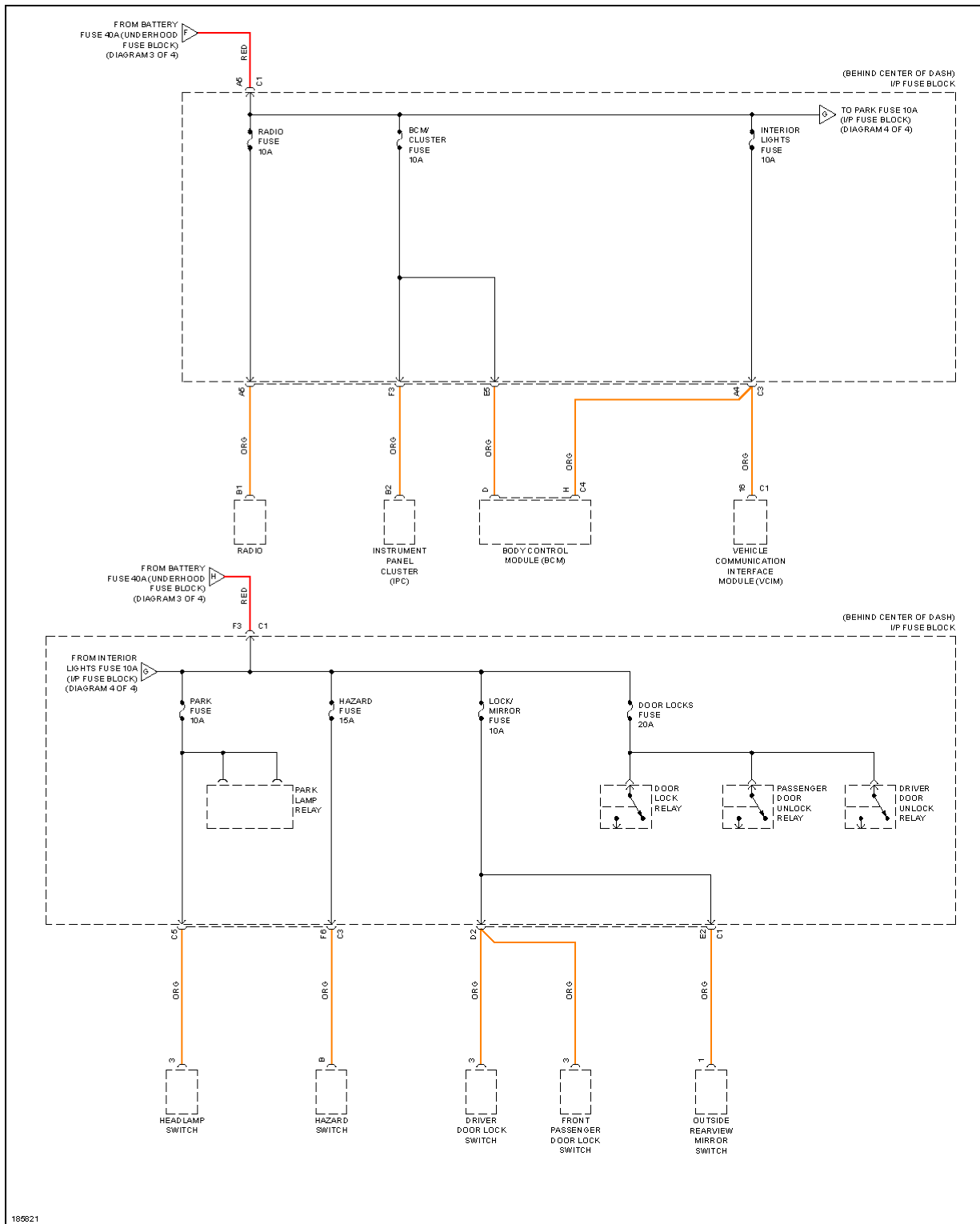


Fig. 50: 3.5L VIN 4, Power Distribution Circuit (4 of 4)

POWER MIRRORS

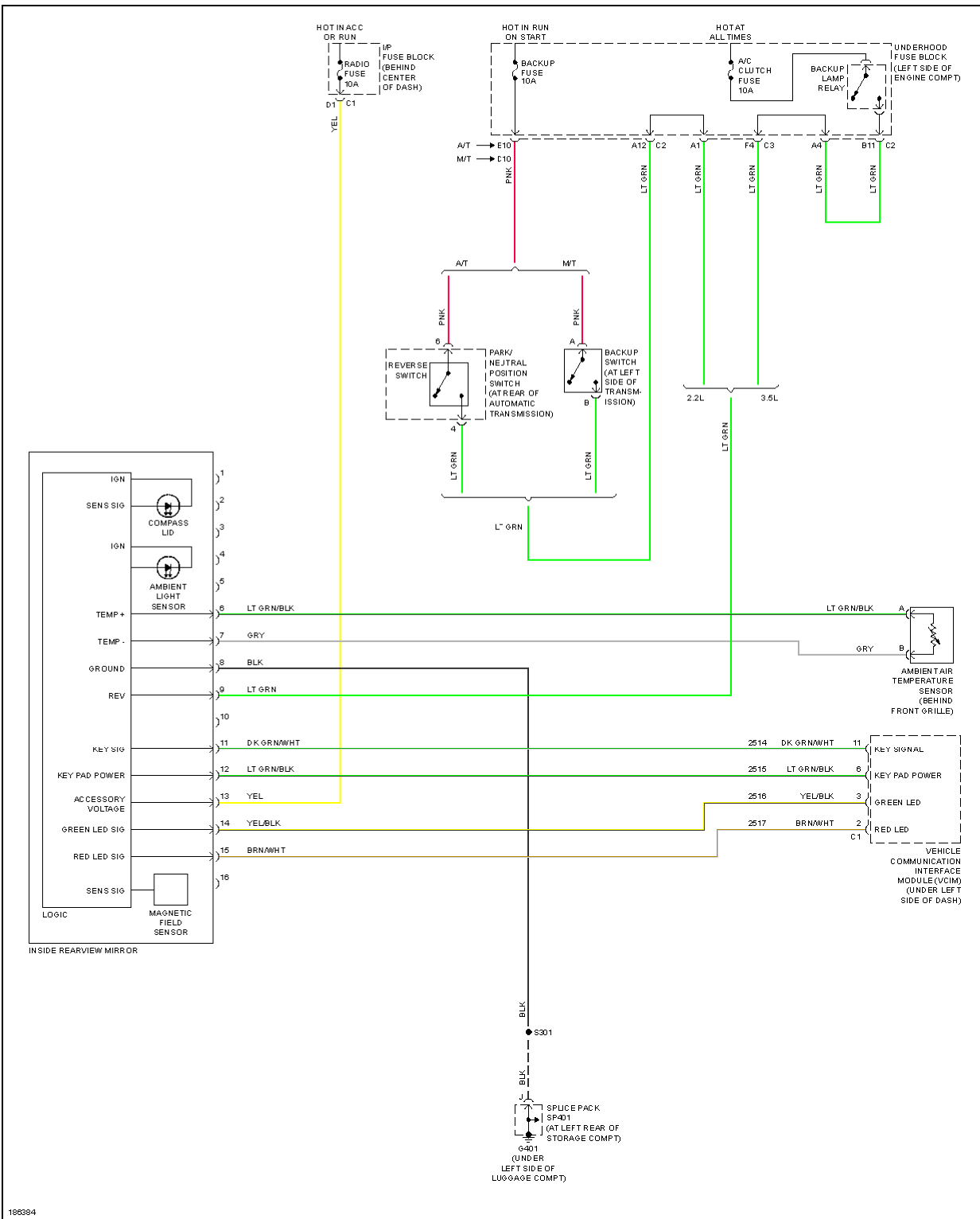


Fig. 51: Electrochromic Mirror Circuit

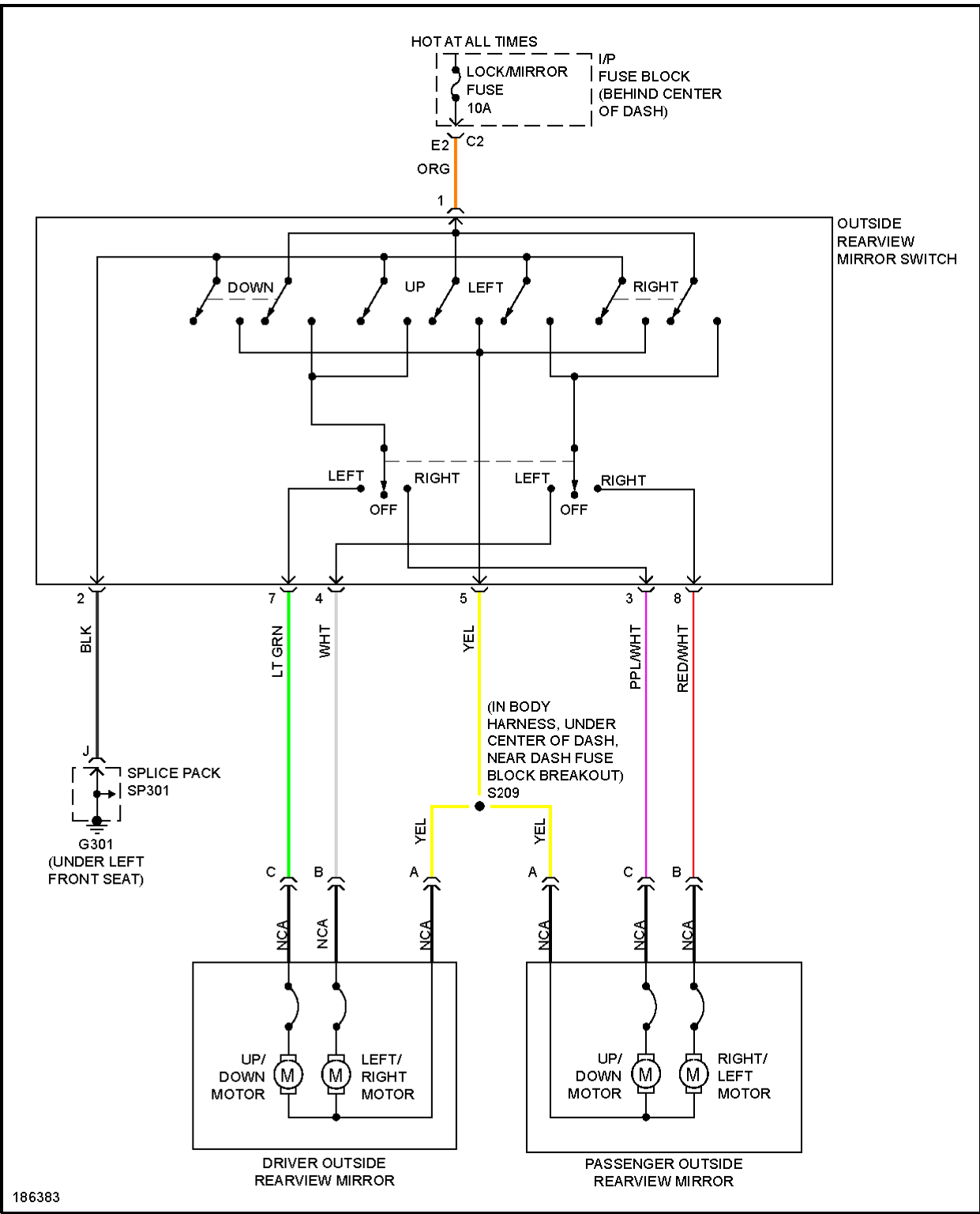
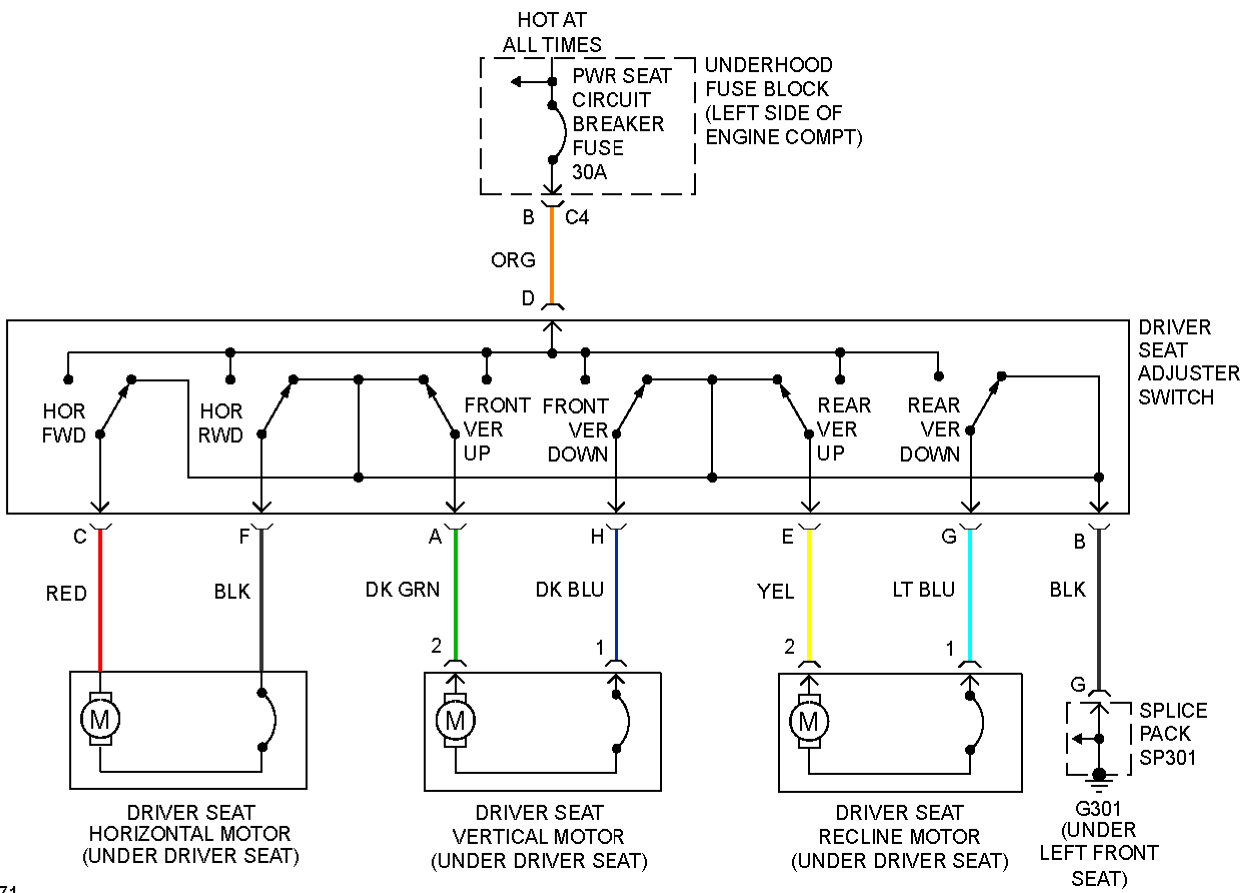


Fig. 52: Power Mirrors Circuit

POWER SEATS



186471

Fig. 53: Driver Seat Circuit

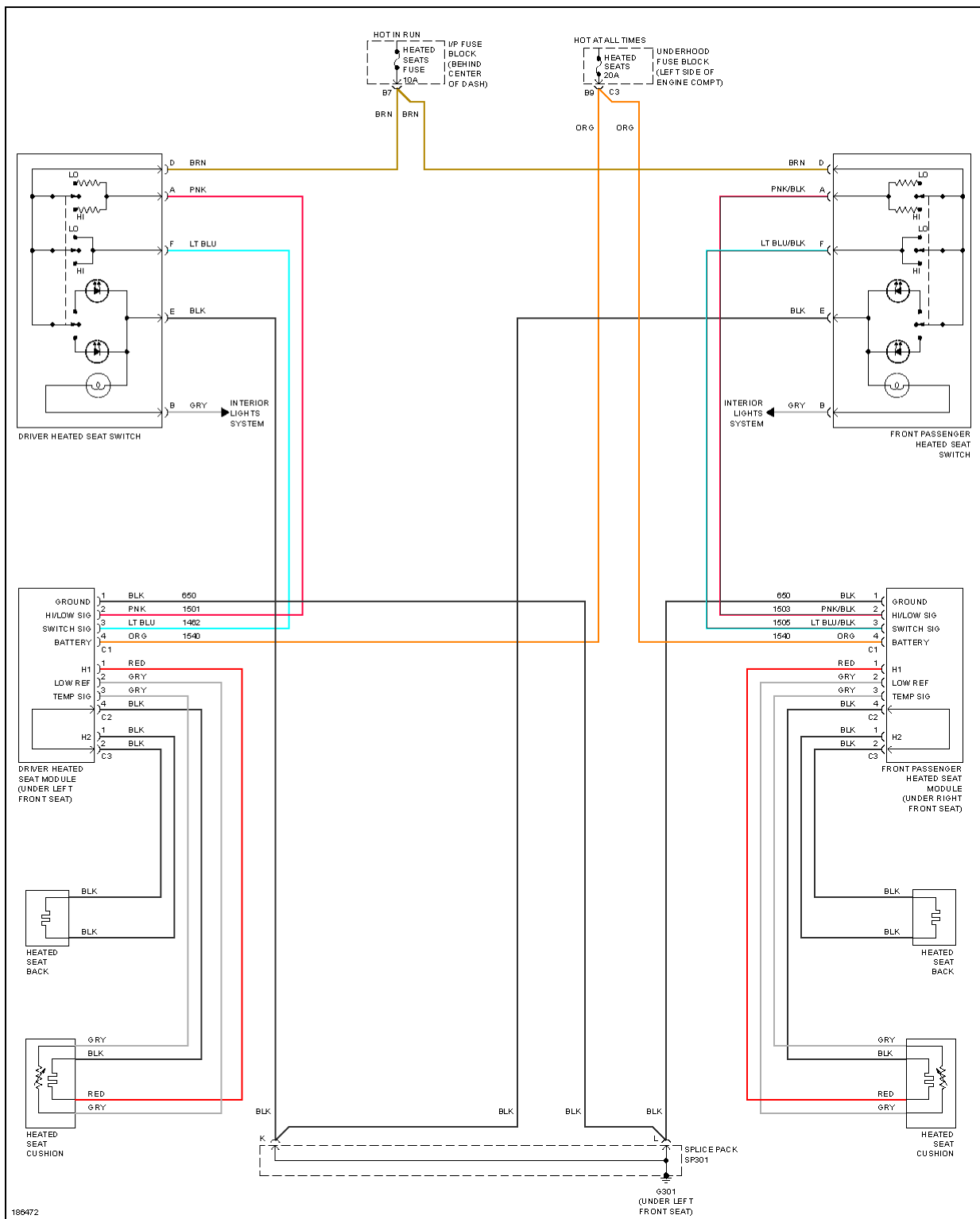


Fig. 54: Heated Seats Circuit

POWER TOP/SUNROOF

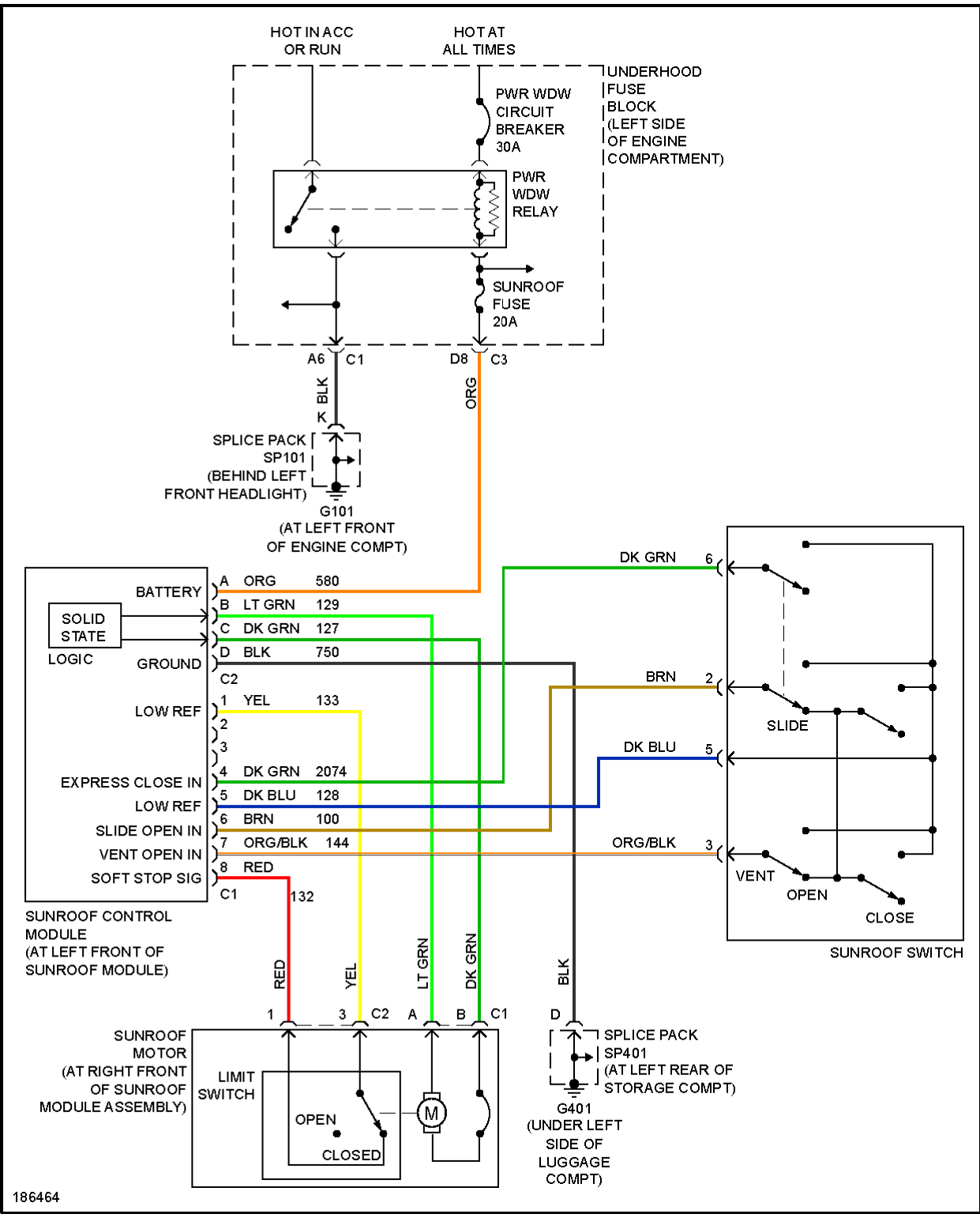


Fig. 55: Power Top/Sunroof Circuit

POWER WINDOWS

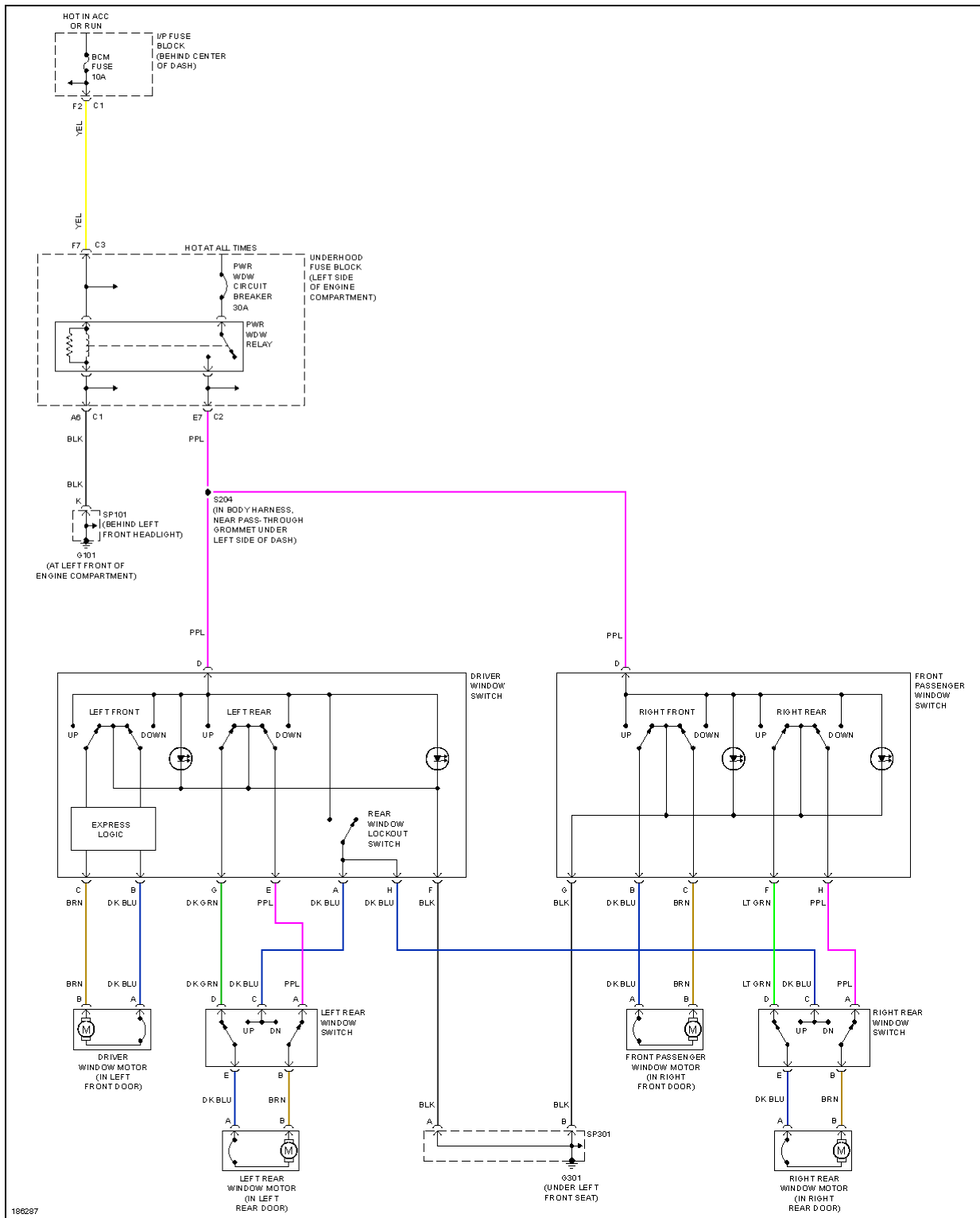


Fig. 56: Power Windows Circuit

RADIO

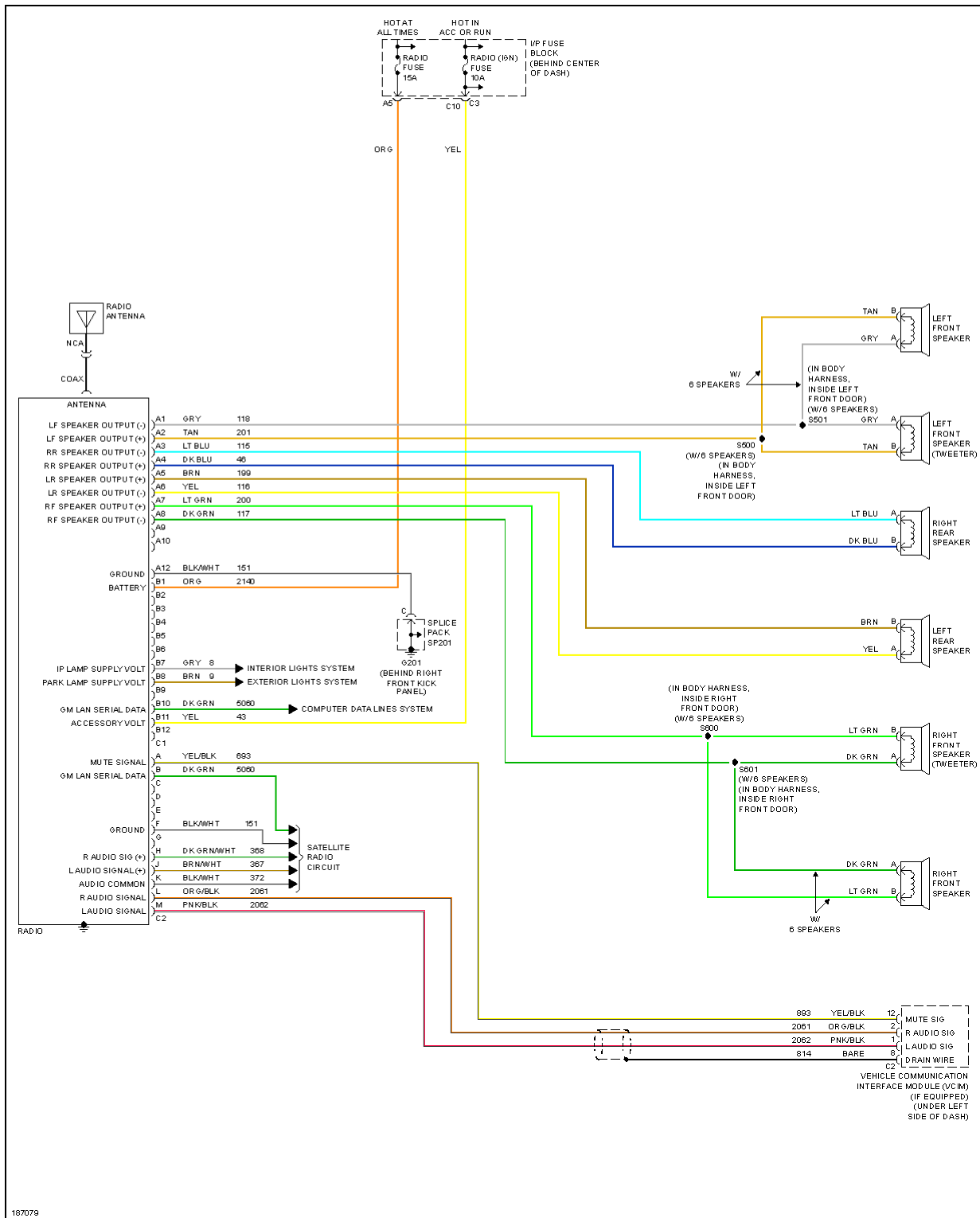


Fig. 57: Base Radio Circuit

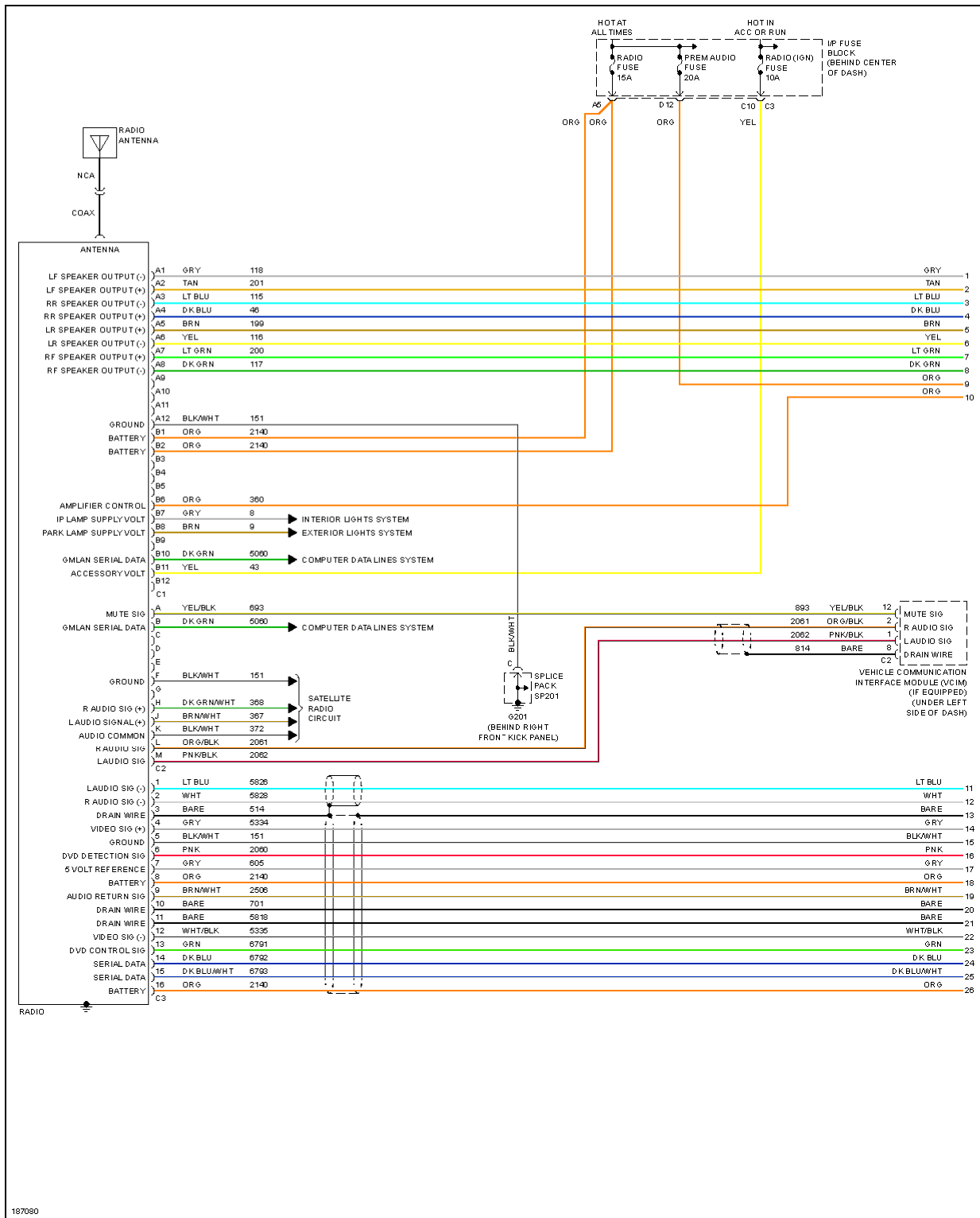


Fig. 58: Premium Sound Radio Circuit (1 of 2)

Fig. 59: Premium Sound Radio Circuit (2 of 2)

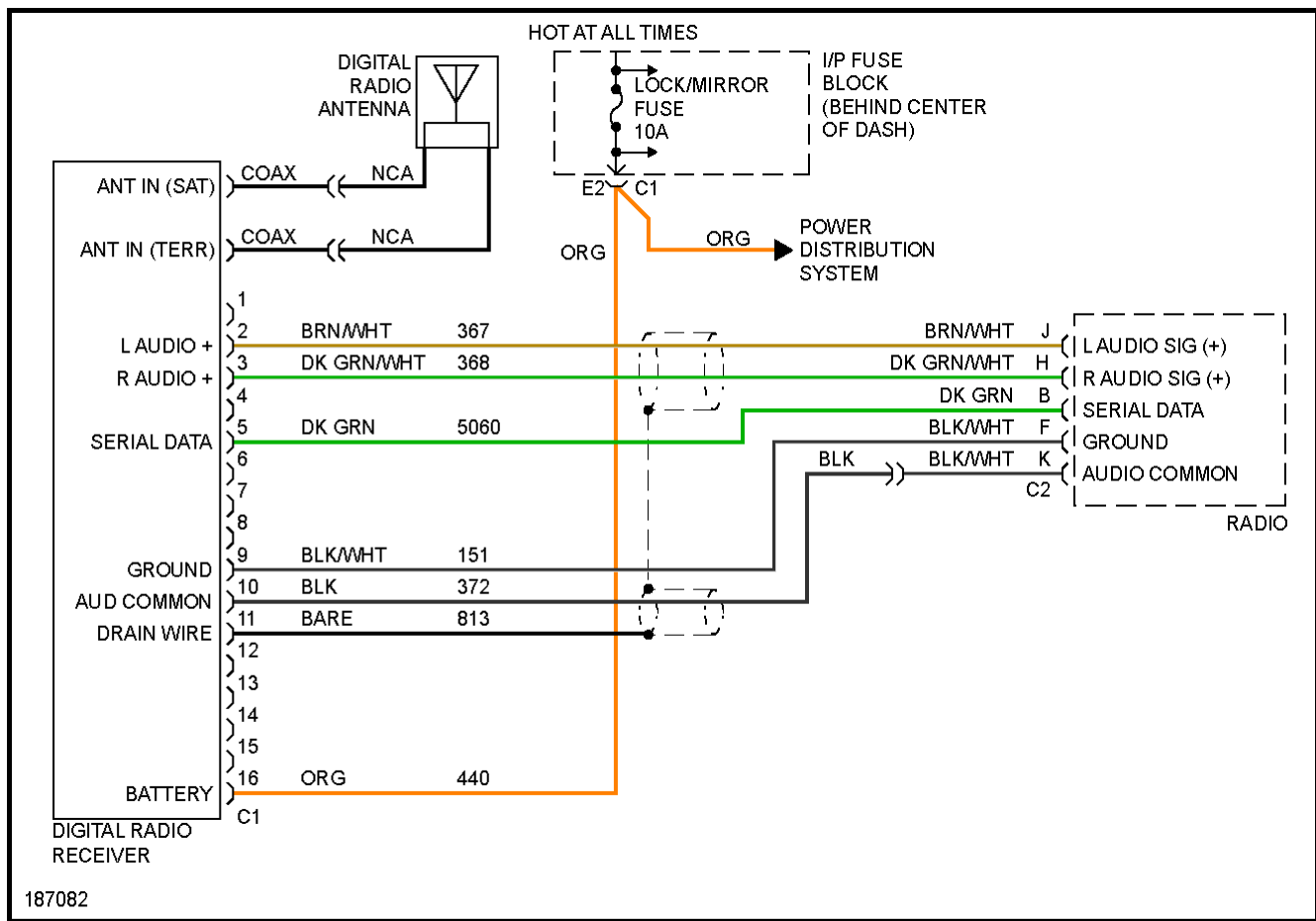


Fig. 60: Satellite Radio Circuit

SHIFT INTERLOCK

2.2L VIN D

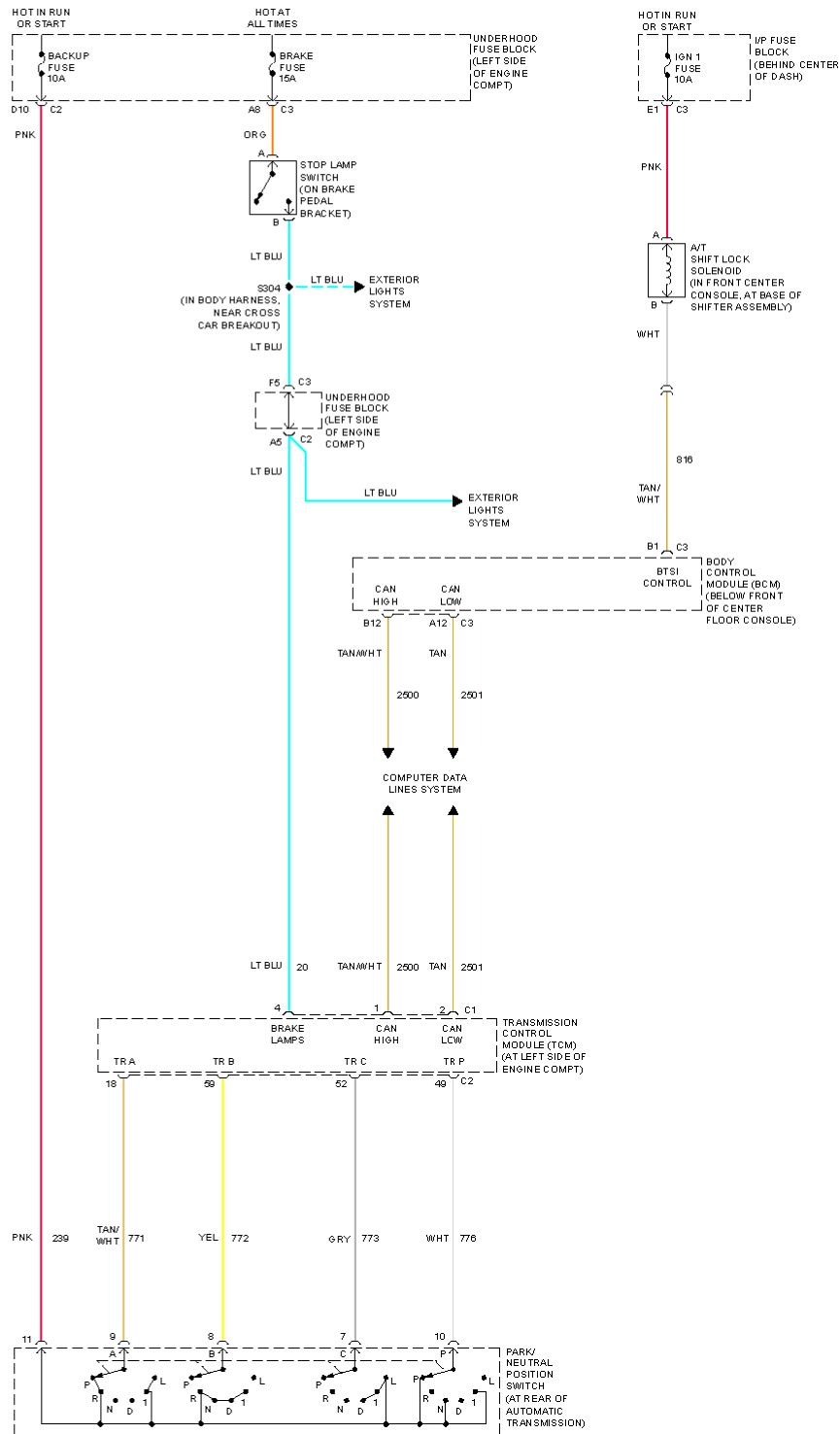


Fig. 61: 2.2L VIN D, Shift Interlock Circuit

3.5L VIN 4

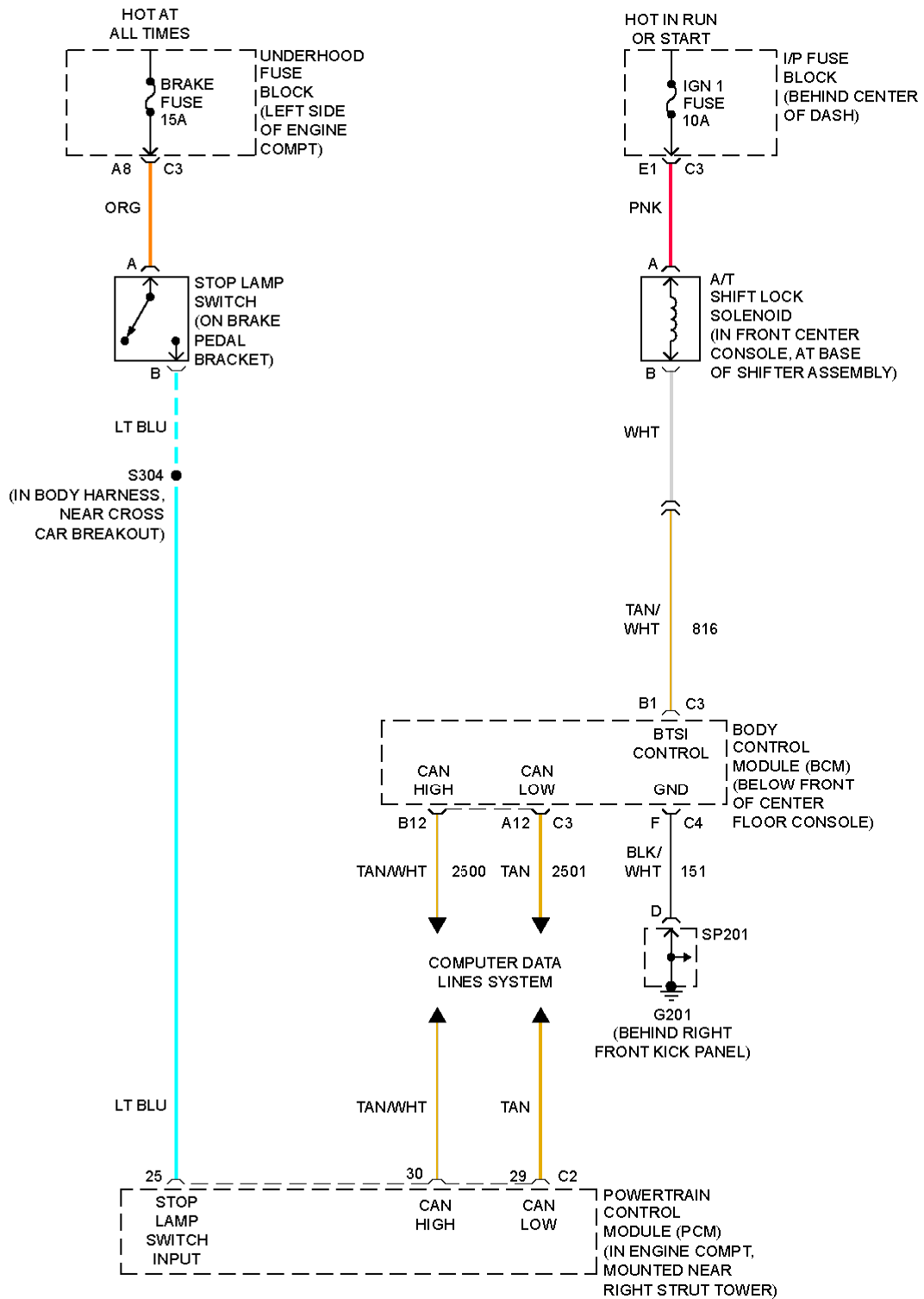


Fig. 62: 3.5L VIN 4, Shift Interlock Circuit

STARTING/CHARGING

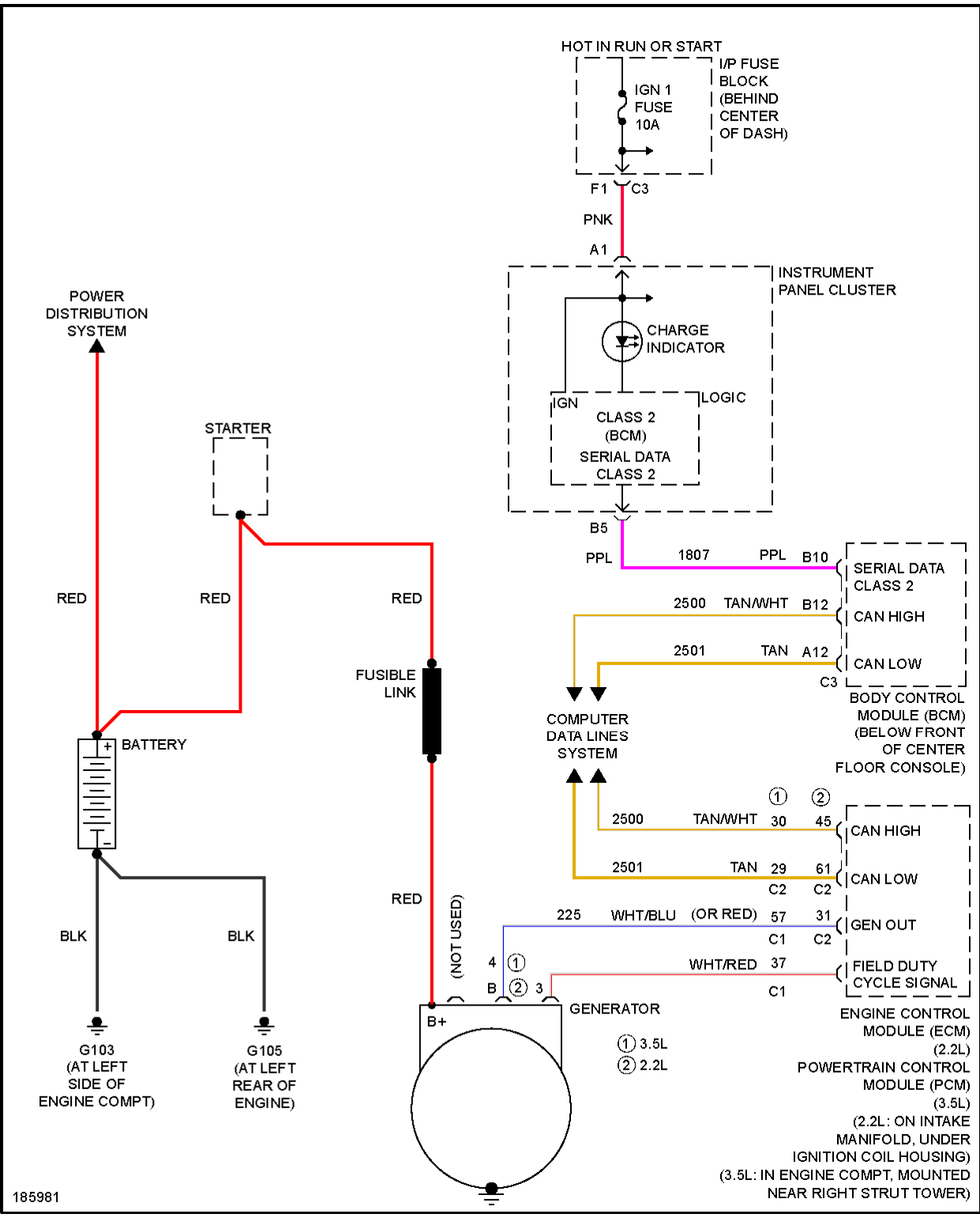


Fig. 63: Charging Circuit

2.2L VIN D

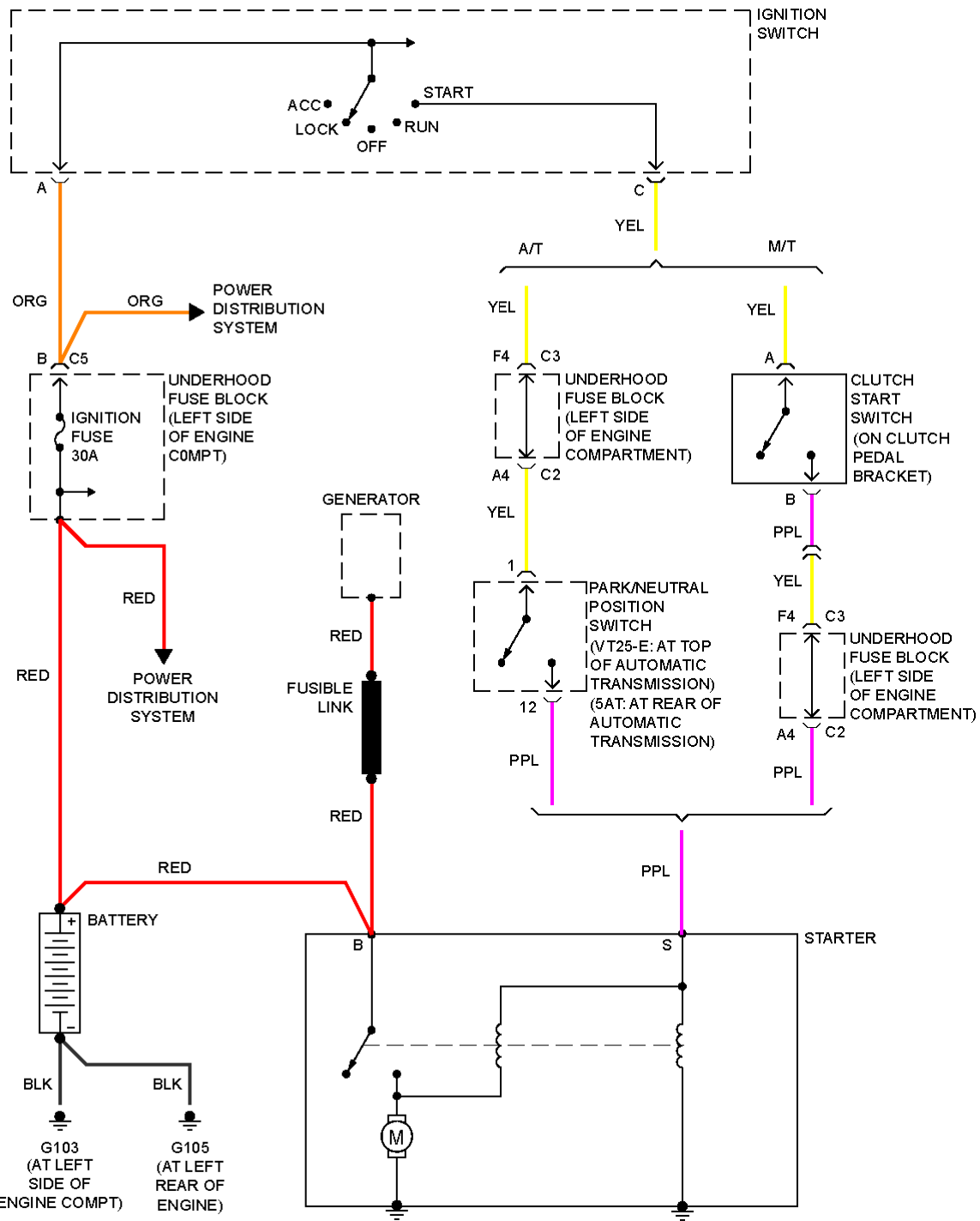


Fig. 64: 2.2L VIN D, Starting Circuit

3.5L VIN 4

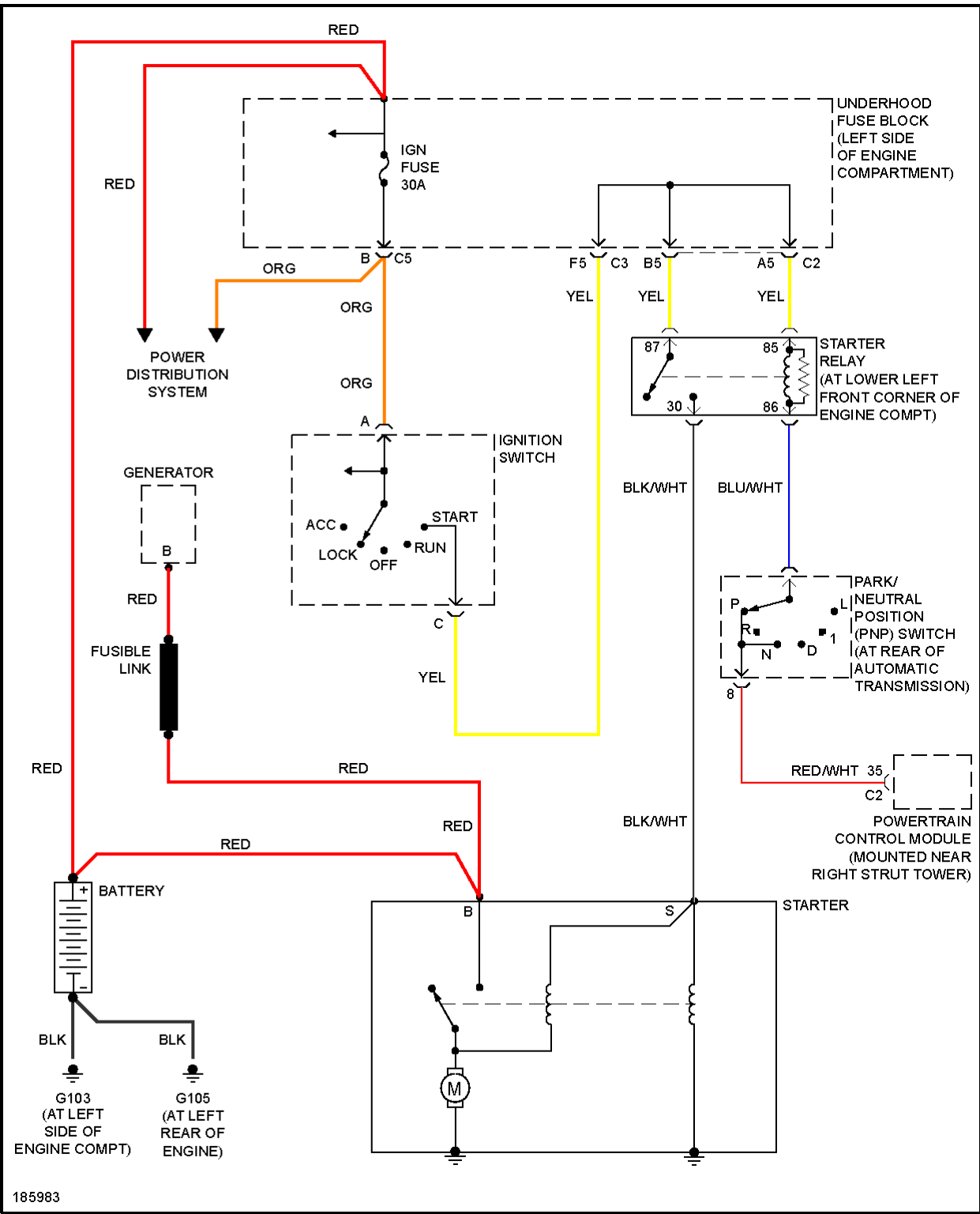


Fig. 65: 3.5L VIN 4, Starting Circuit

SUPPLEMENTAL RESTRAINTS

Fig. 66: Supplemental Restraints Circuit

TRANSMISSION

2.2L VIN D

Fig. 67: 2.2L VIN D, A/T Circuit

2.2L VIN F

Fig. 68: 2.2L VIN F, A/T Circuit

3.5L VIN 4

Fig. 69: 3.5L VIN 4, A/T Circuit (1 of 2)

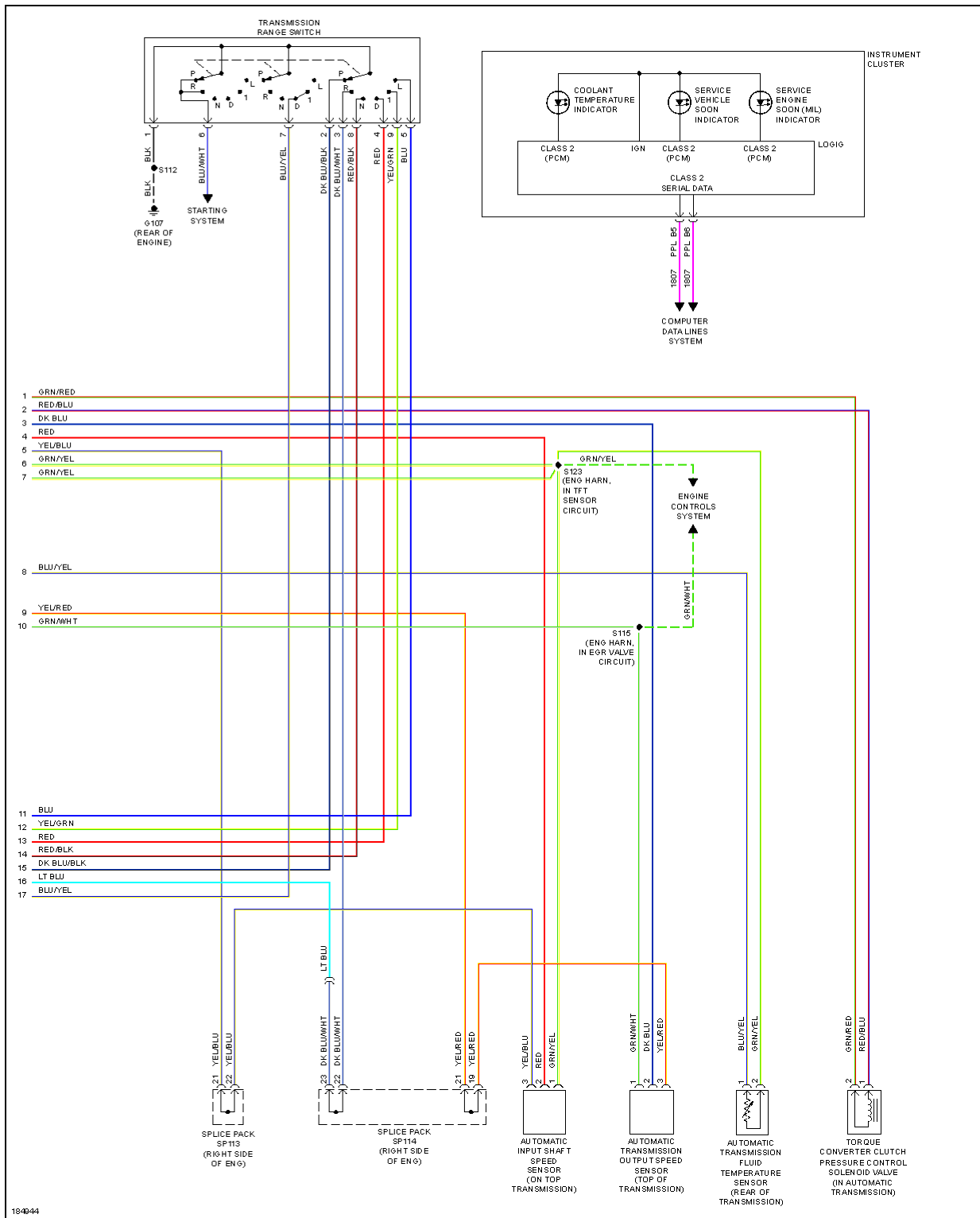


Fig. 70: 3.5L VIN 4, A/T Circuit (2 of 2)

WARNING SYSTEMS

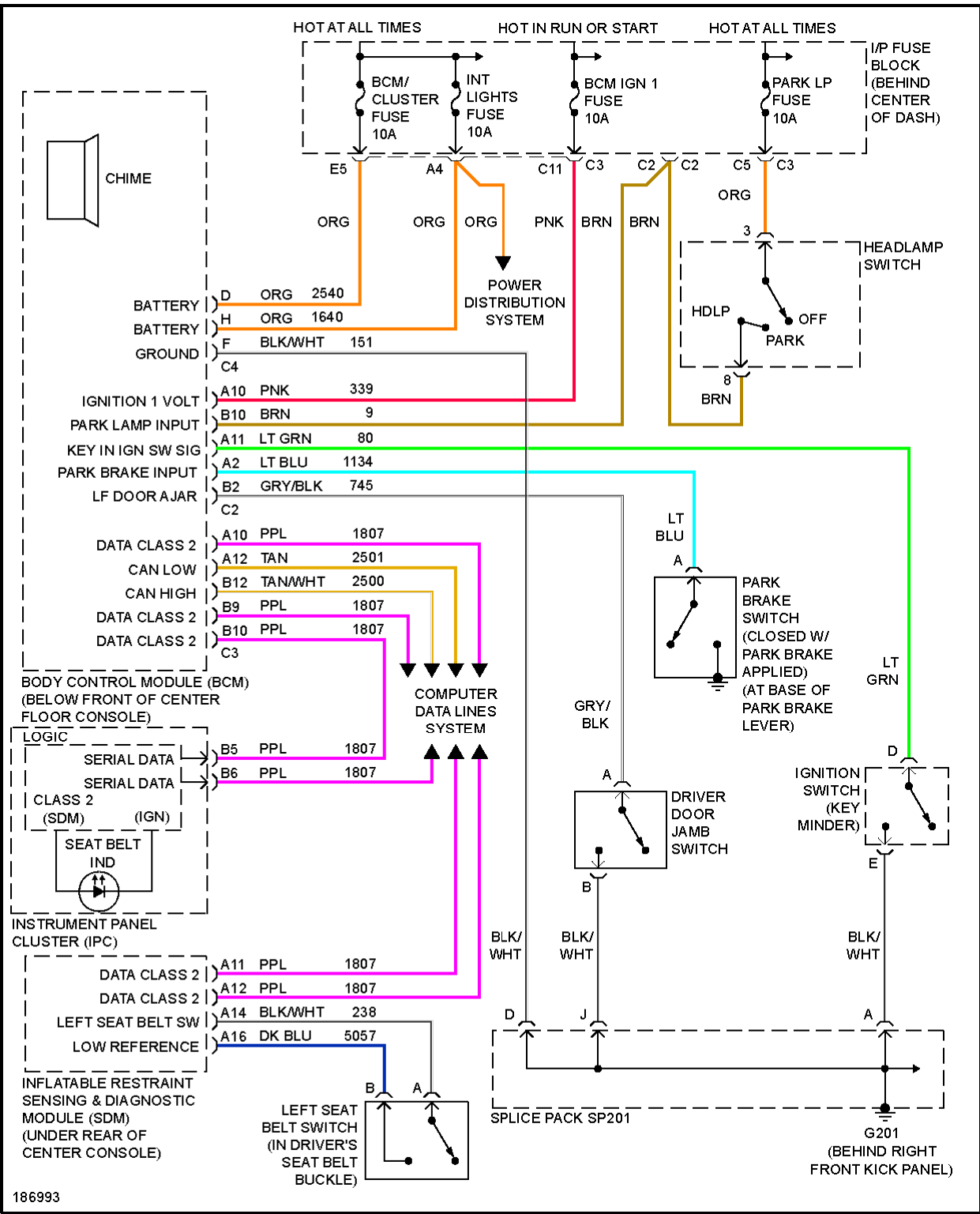


Fig. 71: Warning Systems Circuit

WIPER/WASHER

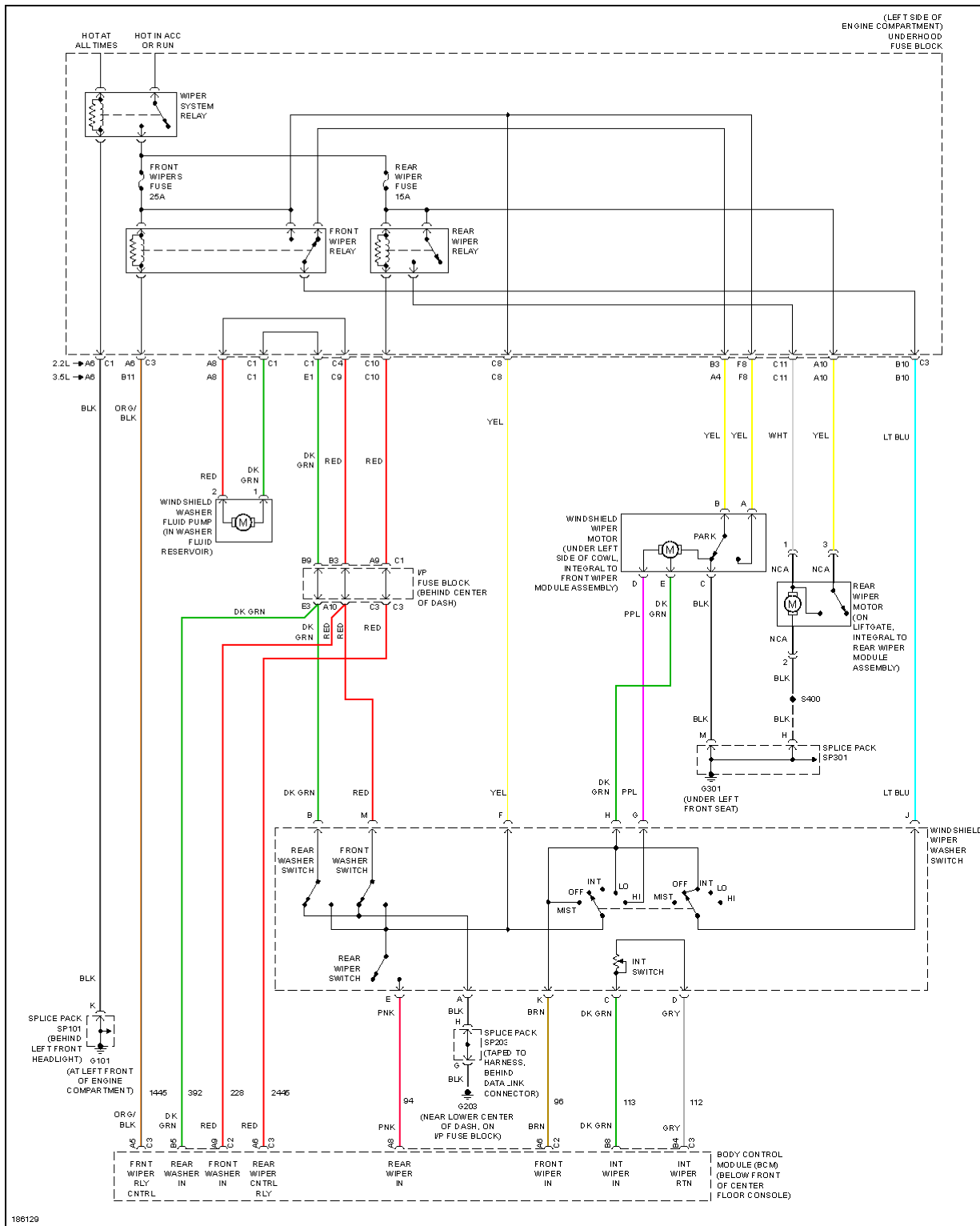


Fig. 72: Wiper/Washer Circuit