

2014 ELECTRICAL

Wiring Systems and Power Management - Repair Instructions - Corvette

REPAIR INSTRUCTIONS

GMLAN AND MEDIA ORIENTED SYSTEMS TRANSPORT (MOST) WIRING REPAIRS

Special Tools

- **EL-38125-10** Splice Sleeve Crimping Tool
- DuraSeal splice sleeves
- A wire stripping tool

For equivalent regional tools, refer to **Special Tools** .

The DuraSeal splice sleeves have the following 2 critical features:

- A special heat shrink sleeve environmentally seals the splice. The heat shrink sleeve contains a sealing adhesive inside.
- A cross hatched (knurled) core crimp provides necessary contact integrity for the sensitive, low energy circuits.

The GM Local Area Network (GMLAN) System requires special wiring repair procedures due to the sensitive nature of the circuitry. Follow the specific procedures and instructions when working on GMLAN connectors and terminals.

GMLAN Repairs

NOTE: When making a repair to any GMLAN network, the original wire length after the repair must be the same length as before the repair. If the network is a twisted pair, the twist must be maintained after the repair is completed.

GMLAN has 2 types of networks, low speed and high speed. Low speed GMLAN has a single wire and works at slow speeds. High speed GMLAN has 2 wires in a twisted pair and works at higher speeds. For more information on GMLAN, refer to **Data Link Communications Description and Operation** .

GMLAN Connector Terminal Repair

NOTE: A terminated lead can be used to replace damaged connector terminals for both high speed and low speed GMLAN systems. When making a connector terminal repair on a GMLAN high speed system with twisted pair wires, do not untwist the wires more than necessary to make the repair.

repair procedure in order to repair the terminal. Refer to **Connector Repairs** for the appropriate connector repair procedure.

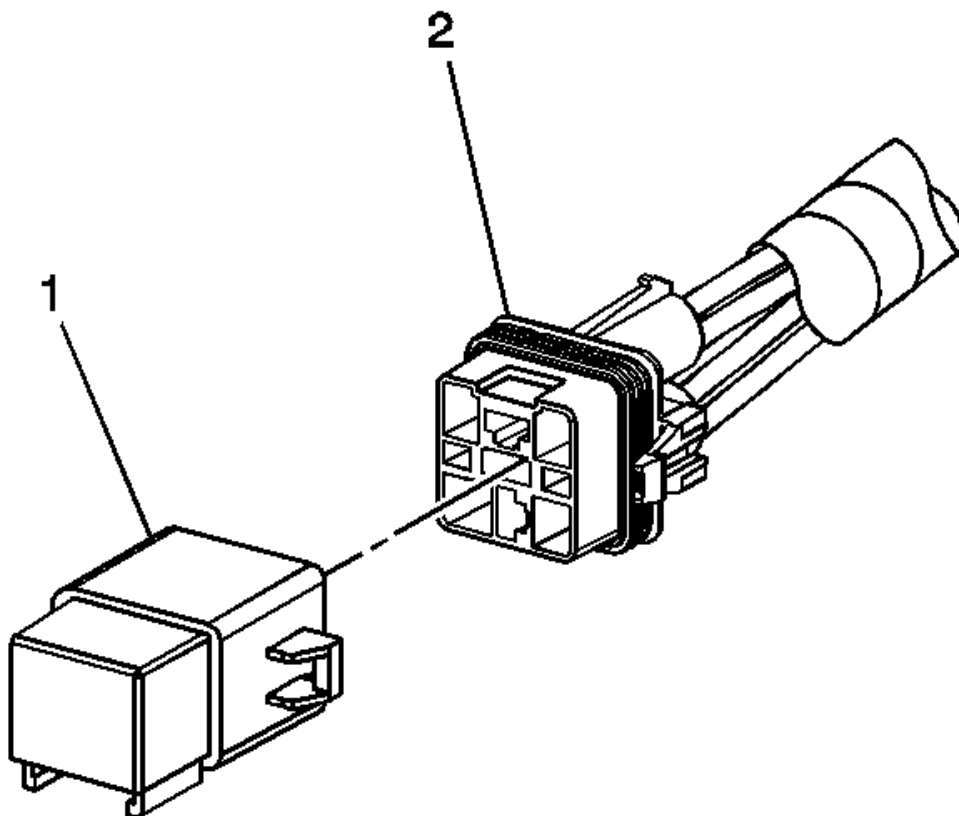
GMLAN Wire Repair

NOTE: Refer to **Wiring Repairs** in the service information connector end views or the vehicle schematics in order to determine the correct wire size for the circuit you are repairing. You must obtain this information in order to ensure circuit integrity.

If any wire except the pigtail is damaged, repair the wire by splicing in a new section of wire of the same gauge size (0.5 mm², 0.8 mm², 1.0 mm² etc.). Use the DuraSeal splice sleeves and **EL-38125-10** tool. For wiring repair, refer to **Splicing Copper Wire Using Splice Sleeves**.

RELAY REPLACEMENT (ATTACHED TO WIRE HARNESS)

Removal Procedure



Courtesy of GENERAL MOTORS COMPANY

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.

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

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

Installation Procedure

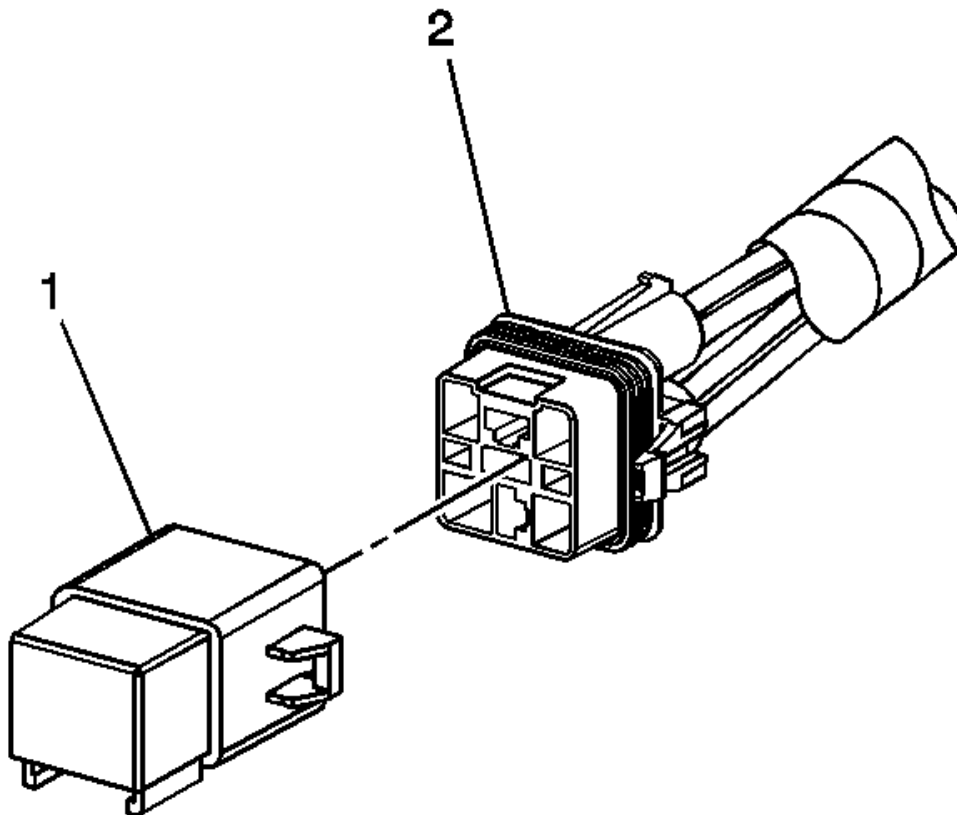


Fig. 2: Identifying Relay & Wire Harness Connector
Courtesy of GENERAL MOTORS COMPANY

1. Connect the relay (1) to the wire harness connector (2).

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

RELAY REPLACEMENT (WITHIN AN ELECTRICAL CENTER)

Special Tools

EL-43244 Relay Puller Pliers

Removal Procedure

1. Remove the electrical center cover.

NOTE:

- **Always note the orientation of the relay.**
- **If equipped with a notch style relay; observe the location of the notch on the old relay to verify the new relay is installed with the notch in the same location.**
- **Ensure that the electrical center is secure, as not to put added stress on the wires or terminals.**

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

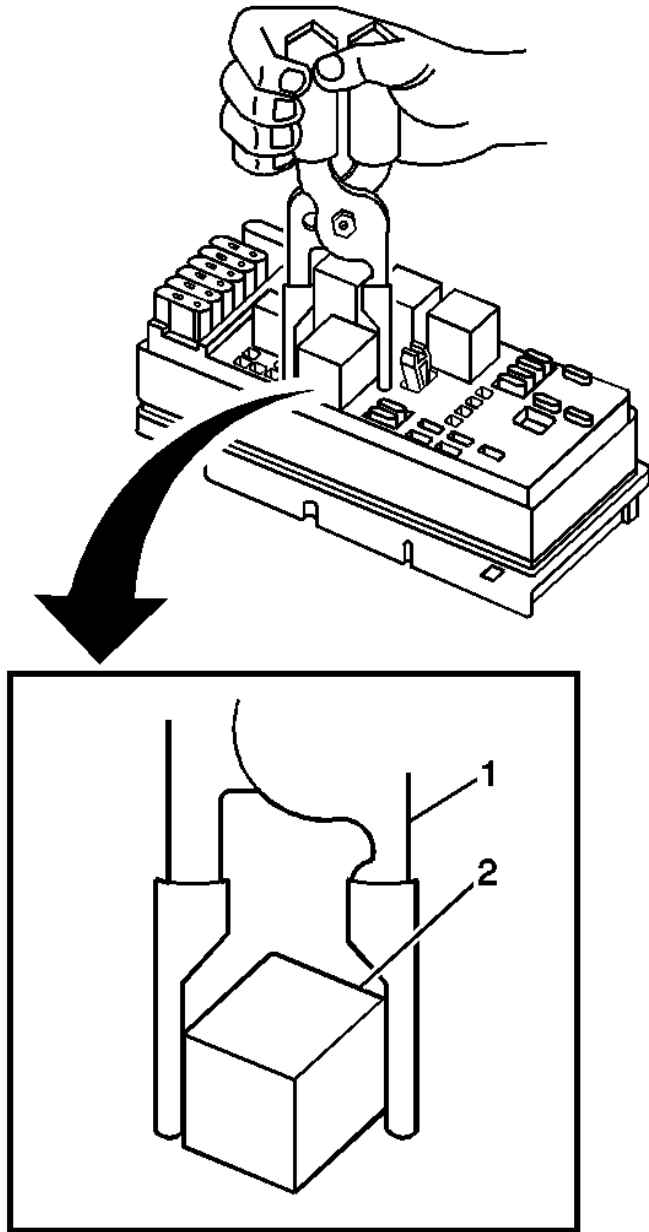


Fig. 3: Removing/Installing Relay
Courtesy of GENERAL MOTORS COMPANY

3. Using the EL-43244 (1) position the tool on opposing corners of the relay (2).

CAUTION: Use EL-43244 to pull the relay straight out from the electrical center terminals. The use of pliers or a flat bladed tool could damage the electrical center.

4. Remove the relay (2) from the electrical center.

Installation Procedure

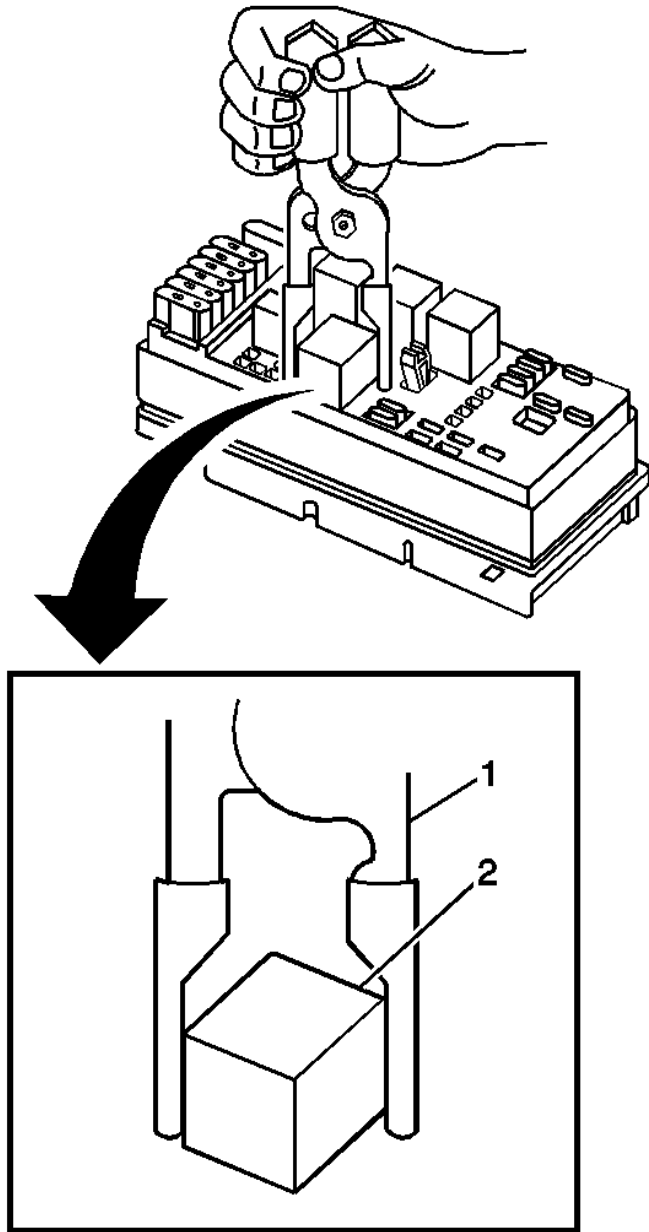


Fig. 4: Removing/Installing Relay
Courtesy of GENERAL MOTORS COMPANY

1. Install the relay (2) in the same position as removed.

2. Install the electrical center cover.

FRONT COMPARTMENT FUSE BLOCK REPLACEMENT

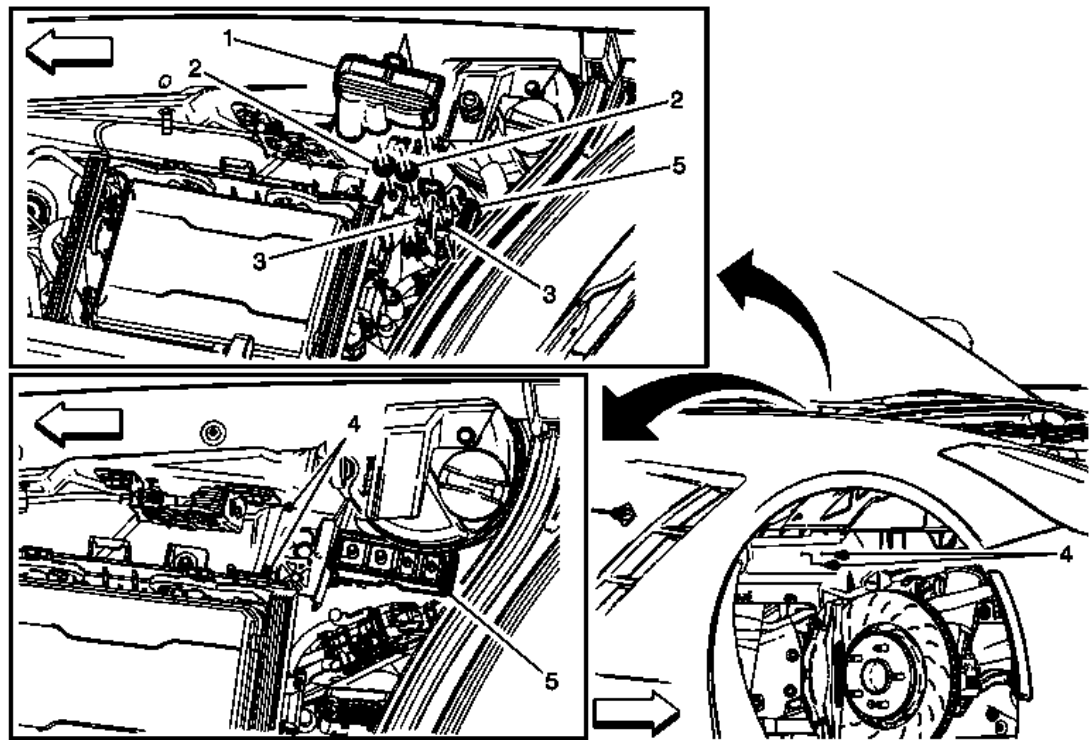


Fig. 5: Front Compartment Fuse Block
 Courtesy of GENERAL MOTORS COMPANY

Front Compartment Fuse Block Replacement

Callout	Component Name
Preliminary Procedures	
1. Disconnect the battery negative cable. Refer to Battery Negative Cable Replacement . 2. Remove the right hand front wheelhouse liner. Refer to Front Wheelhouse Liner Replacement	
1	Front Compartment Fuse Block Cover Procedure Carefully release the retainer tab.
2	Starter and Generator Cable Nut (Qty 2) CAUTION: Refer to Fastener Caution .

	Reposition the starter and generator cables. Tighten 22 (16 lb ft)
3	Forward Lamp Harness Terminal Nut (Qty: 2) Procedure Reposition the forward lamp harness. Tighten 4.7 (42 lb in)
4	Front Compartment Fuse Block Bolt (Qty 2) Tighten 2.5 (22 lb in) NOTE: Access the bolts through the wheel opening.
5	Front Compartment Fuse Block

UNDERHOOD ELECTRICAL CENTER OR JUNCTION BLOCK REPLACEMENT

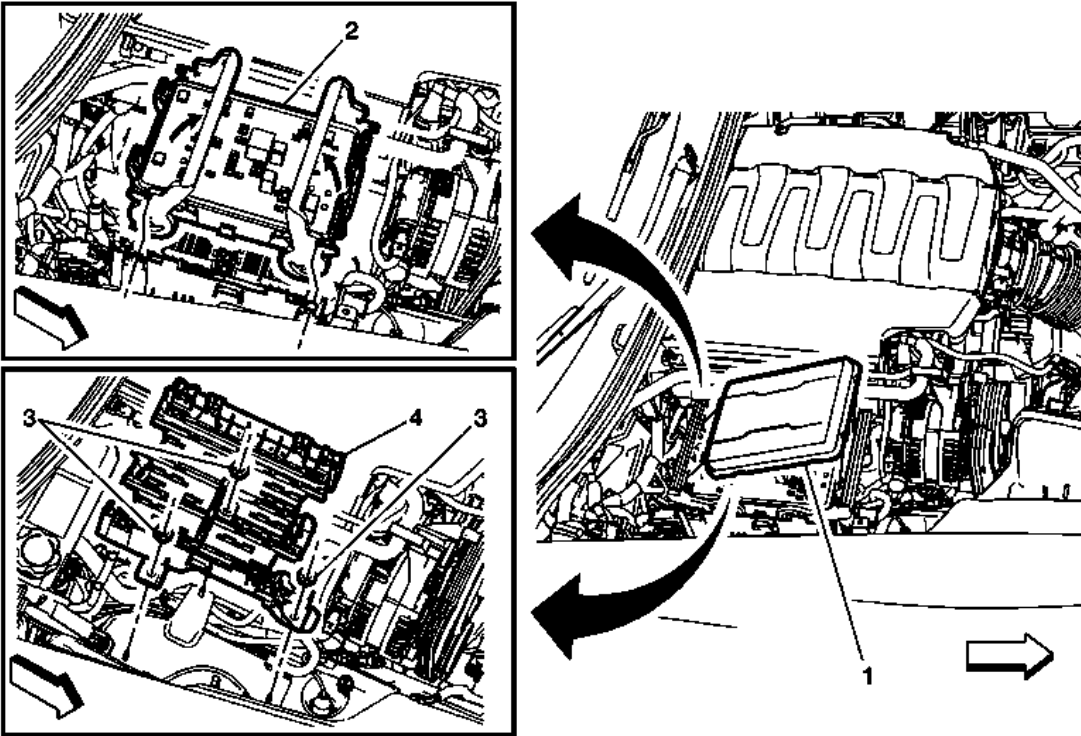


Fig. 6: Underhood Electrical Center or Junction Block
Courtesy of GENERAL MOTORS COMPANY

Underhood Electrical Center or Junction Block Replacement

Callout	Component Name

Disconnect the battery. Refer to **Battery Negative Cable Disconnection and Connection** .

1	Underhood Electrical Center/Junction Block Cover Procedure Release the front two retainers and slide the underhood electrical center/junction block cover forward to release the two rear tabs.
2	Underhood Electrical Center/Junction Block Procedure 1. Reposition the positive battery cable at the rear of the underhood electrical center/junction block. 2. Release the 4 retainer tabs using a suitable hook-like tool to release the locking levers to allow the locking levers to be rotated to the full up position. 3. Remove the underhood electrical center/junction block by lifting on the locking levers, then with a slight shacking motion on the locking levers remove the underhood electrical center/junction block from the underhood electrical center/junction block bracket. 4. Reposition the wiring harness connectors by releasing the snap retainers from the underhood electrical center/junction block bracket.
3	Underhood Electrical Center/Junction Block Bracket Nut (Qty 3) CAUTION: Refer to <u>Fastener Caution</u> . Tighten 6 (53 lb in)
4	Underhood Electrical Center/Junction Block Bracket

BODY WIRING HARNESS JUNCTION BLOCK REPLACEMENT

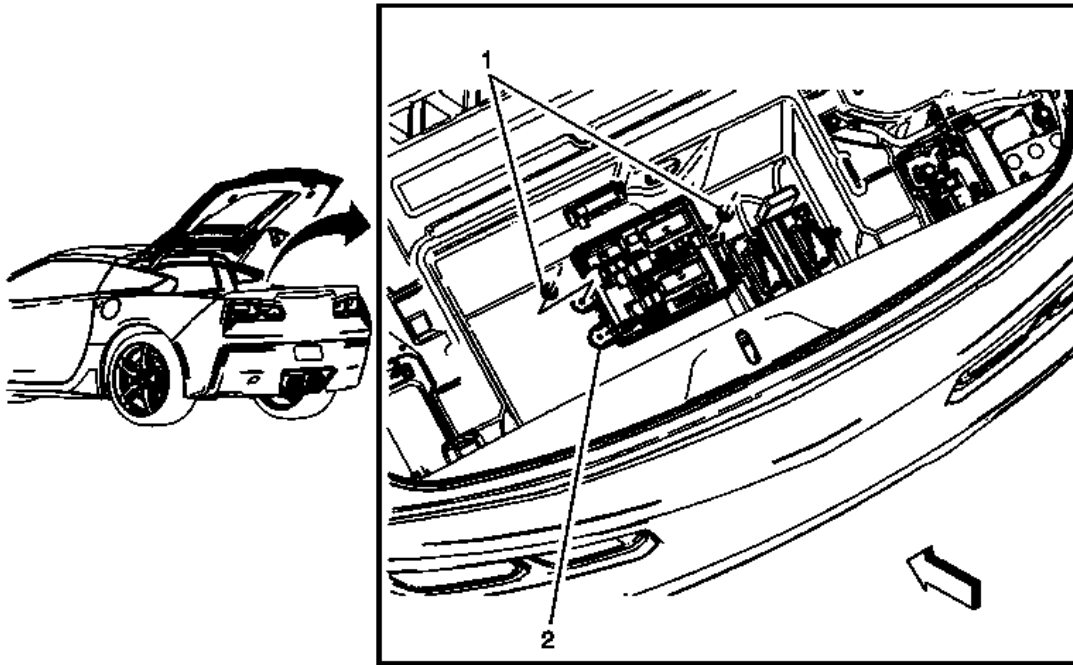


Fig. 7: Body Wiring Harness Junction Block
Courtesy of GENERAL MOTORS COMPANY

Body Wiring Harness Junction Block Replacement

Callout	Component Name
Preliminary Procedures 1. Disconnect the battery. Refer to <u>Battery Negative Cable Disconnection and Connection</u> . 2. Remove the rear compartment floor trim panel. Refer to. <u>Rear Compartment Floor Panel Trim Replacement (North America)</u> , <u>Rear Compartment Floor Panel Trim Replacement (Export - CU9, CV5, CZ3, C4E)</u>	
1	Body Wiring Harness Junction Block Nut (Qty: 2) CAUTION: Refer to <u>Fastener Caution</u> . Tighten 6 (53 lb in)
2	Body Wiring Harness Junction Block Procedure Disconnect the electrical connections.

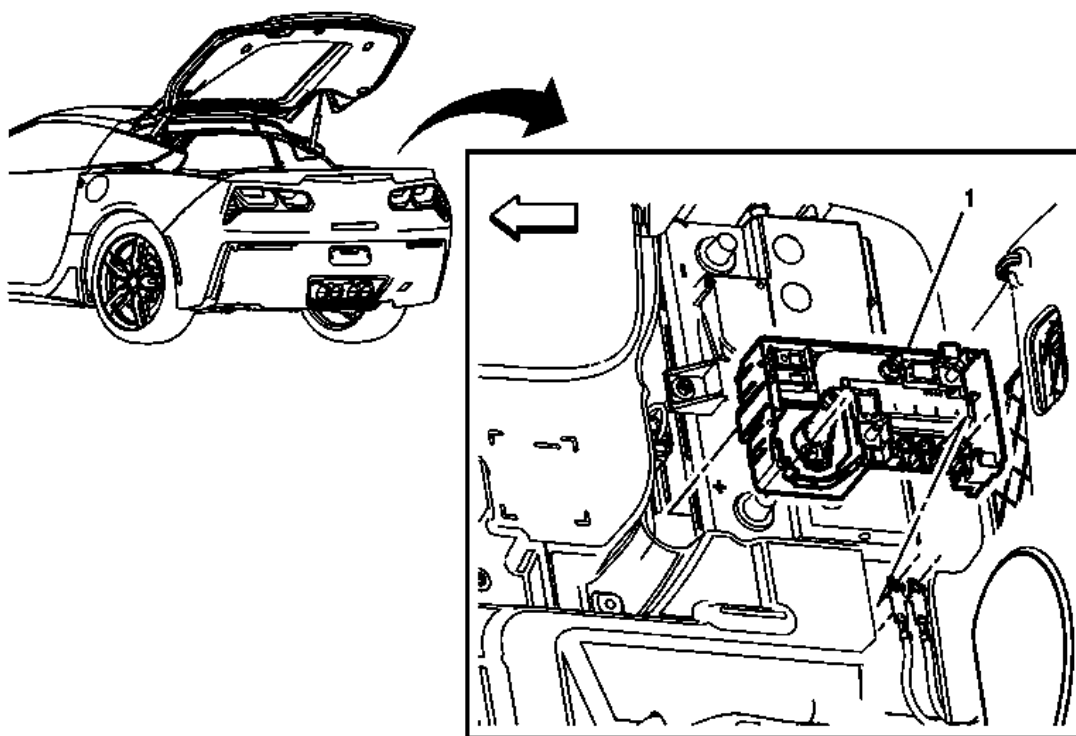


Fig. 8: Rear Body Fuse Block
Courtesy of GENERAL MOTORS COMPANY

Rear Body Fuse Block Replacement

Callout	Component Name
Preliminary Procedures	
1. Disconnect the battery negative cable. Refer to <u>Battery Negative Cable Replacement</u> . 2. Disconnect the battery positive cable. Refer to <u>Battery Positive Cable Replacement (LT1)</u> 3. Remove the rear compartment floor panel trim. Refer to <u>Rear Compartment Floor Panel Trim Replacement (North America)</u> , <u>Rear Compartment Floor Panel Trim Replacement (Export - CU9, CV5, CZ3, C4E)</u> 4. Reposition the rear floor panel carpet support.	
1	Rear Body Fuse Block Procedure 1. Loosen the positive battery post terminal. 2. Reposition the fuse block terminal wires. 3. Release the tab retainers on the front and rear of the rear body fuse block and remove.

IGNITION AND START SWITCH REPLACEMENT

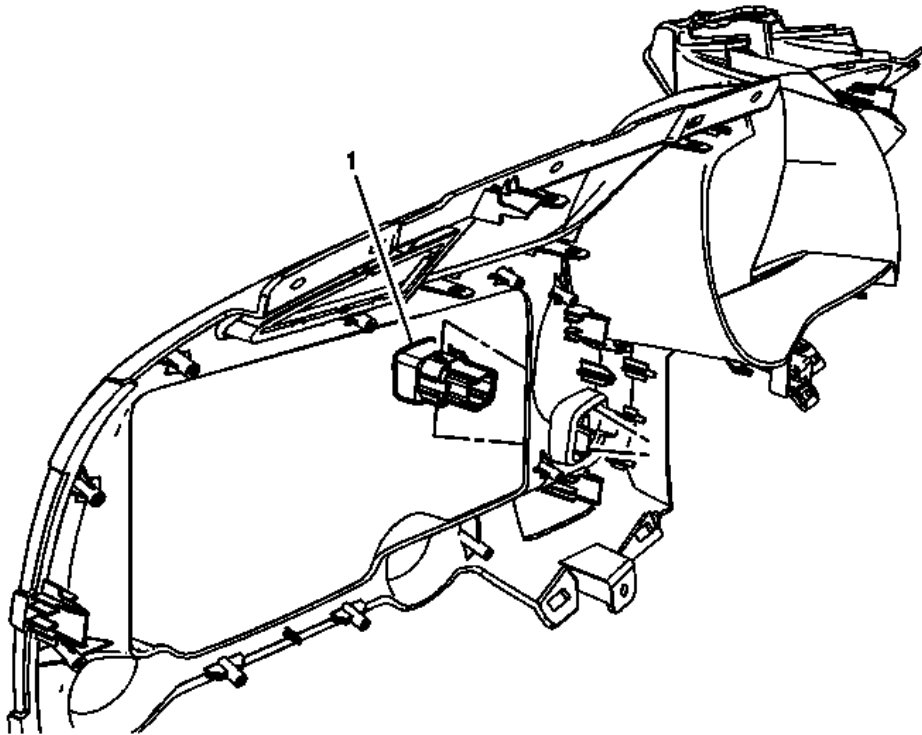


Fig. 9: Ignition and Start Switch
 Courtesy of GENERAL MOTORS COMPANY

Ignition and Start Switch Replacement

Callout	Component Name
Preliminary Procedure Remove the instrument panel carrier reinforcement. Refer to <u>Instrument Panel Carrier Reinforcement Replacement</u> .	
1	Ignition and Start Switch Procedure 1. Disconnect electrical connection. 2. Depress tabs on switch and remove from the panel.