SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Front Floor Console Armrest Bolt	2.5 N.m	22 lb in
Front Floor Console Compartment Nut	4.7 N.m	42 lb in
Front Floor Console Nut	9 N.m	80 lb in
Front Floor Console Retainer Bolt	9 N.m	80 lb in
Front Floor Console Trim Plate Bolt	2.5 N.m	22 lb in
Instrument Panel Bolt	22 N.m	16 lb ft
Instrument Panel Assist Handle Bolt	1.9 N.m	17 lb in
Instrument Panel Carrier Reinforcement Bolt	2.5 N.m	22 lb in
Instrument Panel Center Support Bracket Bolt	9 N.m	80 lb in
Instrument Panel Compartment Bolt	2.5 N.m	22 lb in
Instrument Panel Compartment Bracket Bolt	2.5 N.m	22 lb in
Instrument Panel Compartment Door Latch Actuator Bolt	2.5 N.m	22 lb in
Instrument Panel Compartment Reinforcement Bolt	2.5 N.m	22 lb in
Instrument Panel Driver Knee Bolster Deflector Bracket Bolt	2.5 N.m	22 lb in
Instrument Panel Knee Bolster Bolt	2.5 N.m	22 lb in
Instrument Panel Lower Bracket Bolt	9 N.m	80 lb in
Instrument Panel Lower Trim Panel Bolt	2.5 N.m	22 lb in
Instrument Panel Molding Bolt	2.5 N.m	22 lb in
Instrument Panel Retainer Bolt	6 N.m	53 lb in
Instrument Panel Side Trim Panel Bolt	2.5 N.m	22 lb in
Instrument Panel Steering Column Lower Trim Cover Bolt	2.5 N.m	22 lb in
Instrument Panel Tie Bar Brace Bolt	9 N.m	80 lb in
Instrument Panel Tie Bar Bolt	9 N.m	80 lb in
Instrument Panel Trim Pad Bolt	2.5 N.m	22 lb in
Instrument Panel Trim Plate Bolt	2.5 N.m	22 lb in
Power Brake Booster Nut	23 N.m	17 lb ft
Steering Column Bracket Bolt	9 N.m	80 lb in

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DIAGNOSTIC INFORMATION AND PROCEDURES

DIAGNOSTIC CODE INDEX

DIAGNOSTIC CODE INDEX

DTC	Description
DTC B324D	DTC B324D Instrument Panel Compartment Door Latch Actuator Circuit

DTC B324D: INSTRUMENT PANEL COMPARTMENT DOOR LATCH ACTUATOR

Diagnostic Instructions

- Perform the **Diagnostic System Check - Vehicle** prior to using this diagnostic procedure.
- Review **Strategy Based Diagnosis** for an overview of the diagnostic approach.
- **Diagnostic Procedure Instructions** provides an overview of each diagnostic category.

DTC Descriptors

DTC B324D

Instrument Panel Compartment Door Latch Actuator Circuit

For symptom byte information refer to: **Symptom Byte List** .

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
BCM B+	B324D 01, B324D 04	B324D 01, B324D 04	-	-
Instrument Panel Compartment Door Unlatch Actuator Relay Control	B324D 02	B324D 04	B324D 01	-
Underhood Fuse Block Ground	-	B324D 04	-	-

Circuit/System Description

The body control module supplies a 12V reference voltage to the instrument panel multifunction switch through the release switch signal circuit. When the instrument panel multifunction switch is pressed, the release switch signal circuit is grounded through the instrument panel multifunction switch ground circuit and the reference voltage is pulled low within the body control module. In response, the body control module applies battery positive voltage to the instrument panel compartment door unlatch actuator relay control circuit, which energizes the coil side of the relay. The

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battery positive voltage through the relay and the instrument panel compartment door latch control circuit activating the latch releasing the instrument panel compartment door.

Conditions for Running the DTC

When the relay is being actively commanded by the body control module

Conditions for Setting the DTC

B324D 01 and B324D 04

A loss of B+ voltage to the body control module.

B324D 01

The body control module detects short to battery in the instrument panel compartment door unlatch actuator relay control circuit.

B324D 02

The body control module detects short to ground in the instrument panel compartment door unlatch actuator relay control circuit.

B324D 04

The body control module detects an open/high resistance in the instrument panel compartment door unlatch actuator relay control circuit.

Action Taken When the DTC Sets

B324D 01 and B324D 04

The instrument panel multifunction switch 2 will be inoperative

B324D 01

The instrument panel compartment door will not latch.

B324D 02 or B324D 04

The body control module will command the relay, but the relay will not energize and the instrument panel compartment door unlatch actuator will not activate

Conditions for Clearing the DTC

- The DTC will be current for as long as the fault is present.
- When the fault is no longer present, the DTC will be a history DTC.

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- A history DTC will clear after 50 ignition cycles.

Reference Information

Schematic Reference

- **Release Systems Schematics**
- **Door Lock/Indicator Schematics**

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Instrument Panel Compartment Description and Operation

Electrical Information Reference

- **Circuit Testing**
- **Connector Repairs**
- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator activates when pressing the appropriate switch on the S48D Multifunction Switch 2 - Instrument Panel.
    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator does not activate**

      Refer to Circuit/System Testing.

    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator activates**
3. All OK.

Circuit/System Testing

1. Ignition OFF, disconnect the X2 harness connector at the K9 Body Control Module, ignition ON.
2. Verify a test lamp illuminates between the B+ circuit terminal 3 and ground.

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1. Ignition OFF.
2. Test for less than 2 ohms in the ignition circuit end to end.
    - If 2 ohms or greater, repair the open/high resistance in the circuit.
    - If less than 2 ohms, verify the fuse is not open and there is voltage at the fuse.
    - **If the test lamp does not illuminate and the circuit fuse is open**
3. Ignition OFF.
4. Test for infinite resistance between the ignition circuit and ground.
    - If less than infinite resistance, repair the short to ground on the circuit.
    - If infinite resistance, replace the K9 Body Control Module.

- **If the test lamp illuminates**

3. Ignition OFF and all vehicle systems OFF, disconnect the X1 harness connector at the X50A Fuse Block-Underhood. It may take up to 2 minutes for all vehicle systems to power down.
4. Test for less than 10 ohms between the ground circuit terminal 27 and ground.

- **If 10 ohms or greater**

1. Ignition OFF.
2. Test for less than 2 ohms in the ground circuit end to end.
    - If 2 ohms or greater, repair the open/high resistance in the circuit.
    - If less than 2 ohms, repair the open/high resistance in the ground connection.

- **If less than 10 ohms**

5. Ignition OFF, connect the X1 harness connector at the X50A Fuse Block-Underhood. Disconnect the X4 harness connector at the K9 Body Control Module, ignition ON.
6. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator is not activated.

- **If the M91 Instrument Panel Compartment Door Unlatch Actuator is activated**

1. Ignition OFF, disconnect the X1 harness connector at the X50A Fuse Block-Underhood.
2. Test for less than 1 V between the K9 Body Control Module control circuit terminal 8 X4 and ground.
    - If 1 V or greater, repair the short to voltage on the circuit.
    - If less than 1 V, replace the X50A Fuse Block-Underhood.

- **If the M91 Instrument Panel Compartment Door Unlatch Actuator is not activated**

7. Connect a 3A fused jumper wire between the control circuit terminal 8 and B+.
8. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator activates.

- **If the M91 Instrument Panel Compartment Door Unlatch Actuator does not activate**

1. Ignition OFF, remove the jumper wire, disconnect the X1 harness connector at the X50A Fuse Block-Underhood, ignition ON.
2. Test for infinite resistance between the K9 Body Control Module control circuit terminal 8 X4 and ground.
    - If less than Infinite resistance, repair the short to ground on the circuit.
    - If infinite resistance

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3. Test for less than 2 ohms in the control circuit end to end.
    - If 2 ohms or greater, repair the open/high resistance in the circuit.
    - If less than 2 ohms, replace the X50A Fuse Block-Underhood.
  - **If the M91 Instrument Panel Compartment Door Unlatch Actuator activates**
9. Replace the K9 Body Control Module.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Front Compartment Fuse Block Replacement**
- **Control Module References** for body control module replacement, programming and setup

SYMPTOMS-INSTRUMENT PANEL AND CONSOLE TRIM

NOTE: The following steps must be completed before using the symptom tables.

1. Perform the **Diagnostic System Check - Vehicle** before using the Symptom Tables in order to verify that all of the following are true:
    - There are no DTCs set.
    - The control modules can communicate via the serial data link.
2. Review the system operation in order to familiarize yourself with the system functions. Refer to **Instrument Panel Compartment Description and Operation**.

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the system. Refer to **Checking Aftermarket Accessories** .
- Inspect the easily accessible or visible system components for obvious damage or conditions which could cause the symptom.

Intermittent

Faulty electrical connections or wiring may be the cause of intermittent conditions. Refer to **Testing for Intermittent Conditions and Poor Connections** .

Symptom List

Refer to the symptom diagnostic procedure below in order to diagnose the symptom:

Instrument Panel Compartment Door Latch Release Malfunction

INSTRUMENT PANEL COMPARTMENT DOOR LATCH RELEASE MALFUNCTION

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- Perform the **Diagnostic System Check - Vehicle** prior to using this diagnostic procedure.
- Review **Strategy Based Diagnosis** for an overview of the diagnostic approach.
- **Diagnostic Procedure Instructions** provides an overview of each diagnostic category.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
BCM B+	B324D 01, B324D 04	B324D 01, B324D 04	-	-
Instrument Panel Compartment Door Unlatch Actuator Relay Control	B324D 02	B324D 04	B324D 01	-
Underhood Fuse Block Ground	-	B324D 04	-	-
Instrument Panel Compartment Door Unlatch Actuator Control	1	1	1	-
Instrument Panel Compartment Door Unlatch Actuator Ground	-	1	-	-
Glove Box Door Release Signal	2	2	2	-
Instrument Panel Compartment Door Unlatch Switch Ground	-	2	-	-
1. Instrument Panel Compartment Door Unlatch Actuator Inoperative 2. Instrument Panel Compartment Release Switch Inoperative				

Circuit/System Description

The body control module supplies a 12V reference voltage to the instrument panel compartment door unlatch switch through the release switch signal circuit. When the instrument panel compartment door unlatch switch is pressed, the release switch signal circuit is grounded through the instrument panel compartment door unlatch switch ground circuit and the reference voltage is pulled low within the body control module. In response, the body control module applies battery positive voltage to the instrument panel compartment door unlatch actuator relay control circuit, which energizes the coil side of the relay. The switch side of the instrument panel compartment door unlatch actuator relay then closes, supplying battery positive voltage through the relay and the instrument panel compartment door latch control circuit activating the latch releasing the instrument panel compartment door.

Reference Information

Schematic Reference

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- **Release Systems Schematics**
- **Door Lock/Indicator Schematics**

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Instrument Panel Compartment Description and Operation

Electrical Information Reference

- **Circuit Testing**
- **Connector Repairs**
- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify the scan tool Interior Glove Box Unlatch Switch parameter changes from Inactive to Active to Inactive when pressing the S137 Instrument Panel Compartment Door Unlatch Switch.
    - **If the parameter does not change**

      Refer to Circuit/System Testing - Instrument Panel Compartment Door Release Switch Inoperative.

    - **If the parameter changes**
3. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator activates when pressing the S137 Instrument Panel Compartment Door Unlatch Switch.
    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator does not activate**

      Refer to Circuit/System Testing - Instrument Panel Compartment Door Latch Inoperative.

    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator activates**
4. All OK.

Circuit/System Testing

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1. Ignition OFF, disconnect the X2 harness connector at the K9 Body Control Module, ignition ON.
2. Verify a test lamp illuminates between the B+ circuit terminal 3 and ground.
    - **If the test lamp does not illuminate and the circuit fuse is good**
    1. Ignition OFF.
    2. Test for less than 2 ohms in the ignition circuit end to end.
        - If 2 ohms or greater, repair the open/high resistance in the circuit.
        - If less than 2 ohms, verify the fuse is not open and there is voltage at the fuse.
        - **If the test lamp does not illuminate and the circuit fuse is open**
    3. Ignition OFF.
    4. Test for infinite resistance between the ignition circuit and ground.
        - If less than infinite resistance, repair the short to ground on the circuit.
        - If infinite resistance, replace the K9 Body Control Module
    - **If the test lamp illuminates**
3. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S137 Instrument Panel Compartment Door Unlatch Switch. It may take up to 2 minutes for all vehicle systems to power down.
4. Test for less than 10 ohms between the ground circuit terminal 2 and ground.
    - **If 10 ohms or greater**
    1. Ignition OFF.
    2. Test for less than 2 ohms in the ground circuit end to end.
        - If 2 ohms or greater, repair the open/high resistance in the circuit.
        - If less than 2 ohms, repair the open/high resistance in the ground connection.
    - **If less than 10 ohms**
5. Ignition ON.
6. Test for greater than 10 V between the signal circuit terminal 1 and ground.
    - **If 10 V or less**
    1. Ignition OFF, disconnect the X2 harness connector at the K9 Body Control Module.
    2. Test for infinite resistance between the signal circuit and ground.
        - If less than infinite resistance, repair the short to ground on the circuit.
        - If infinite resistance
    3. Test for less than 2 ohms in the signal circuit end to end.
        - If 2 ohms or greater, repair the open/high resistance in the circuit.
        - If less than 2 ohms, replace the K9 Body Control Module.
    - **If greater than 10 V**
7. Test or replace the S137 Instrument Panel Compartment Door Unlatch Switch.

Instrument Panel Compartment Door Latch Inoperative

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Instrument Panel Compartment Door Unlatch Actuator. It may take up to 2 minutes for all vehicle systems to power down.

2. Test for less than 10 ohms between the ground circuit terminal 2 and ground.
    - **If 10 ohms or greater**
    1. Ignition OFF.
    2. Test for less than 2 ohms in the ground circuit end to end.
        - If 2 ohms or greater, repair the open/high resistance in the circuit.
        - If less than 2 ohms, repair the open/high resistance in the ground connection.
    - **If less than 10 ohms**
3. Connect a test lamp between the control circuit terminal 1 and ground, ignition ON.
4. Verify the test lamp does not turn ON and OFF when pressing the appropriate switch on the S137 Instrument Panel Compartment Door Unlatch Switch.
    - **If the test lamp turns ON and OFF**

      Test or replace the M91 Instrument Panel Compartment Door Unlatch Actuator.

    - **If the test lamp does not turn ON and OFF**
5. Ignition OFF, connect the harness connector at the M91 Instrument Panel Compartment Door Unlatch Actuator. Disconnect the X1 harness connector at the X50A Fuse Block-Underhood, ignition ON.
6. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator is not activated.
    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator is activated**
    1. Ignition OFF, disconnect the harness connector at the M91 Instrument Panel Compartment Door Unlatch Actuator, ignition ON.
    2. Test for less than 1 V between the control circuit terminal 1 and ground.
        - If 1 V or greater, repair the short to voltage on the circuit.
        - If less than 1 V, test or replace the M91 Instrument Panel Compartment Door Unlatch Actuator.
    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator is not activated**
7. Connect a 10 A fused jumper wire between the control circuit terminal G2 and B+.
8. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator activates.
    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator does not activate**
    1. Ignition OFF, remove the jumper wire, disconnect the harness connector at the M91 Instrument Panel Compartment Door Unlatch Actuator, ignition ON.
    2. Test for infinite resistance between the control circuit and ground.
        - If less than Infinite resistance, repair the short to ground on the circuit.
        - If infinite resistance
    3. Test for less than 2 ohms in the control circuit end to end.
        - If 2 ohms or greater, repair the open/high resistance in the circuit.
        - If less than 2 ohms, test or replace the M91 Instrument Panel Compartment Door

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Unlatch Actuator.

- **If the M91 Instrument Panel Compartment Door Unlatch Actuator activates**

9. Ignition OFF and all vehicle systems OFF. It may take up to 2 minutes for all vehicle systems to power down.
10. Test for less than 10 ohms between the ground circuit terminal 27 and ground.
    - **If 10 ohms or greater**
    1. Ignition OFF.
    2. Test for less than 2 ohms in the ground circuit end to end.
        - If 2 ohms or greater, repair the open/high resistance in the circuit.
        - If less than 2 ohms, repair the open/high resistance in the ground connection.
    - **If less than 10 ohms**
11. Ignition OFF, connect the X1 harness connector at the X50A Fuse Block-Underhood. Disconnect the X4 harness connector at the K9 Body Control Module, ignition ON.
12. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator is not activated.
    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator is activated**
    1. Ignition OFF, disconnect the X1 harness connector at the X50A Fuse Block-Underhood.
    2. Test for less than 1 V between the K9 Body Control Module control circuit terminal 8 X4 and ground.
        - If 1 V or greater, repair the short to voltage on the circuit.
        - If less than 1 V, replace the X50A Fuse Block-Underhood.
    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator is not activated**
13. Connect a 3A fused jumper wire between the control circuit terminal 8 and B+.
14. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator activates.
    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator does not activate**
    1. Ignition OFF, remove the jumper wire, disconnect the X1 harness connector at the X50A Fuse Block-Underhood, ignition ON.
    2. Test for infinite resistance between the K9 Body Control Module control circuit terminal 8 X4 and ground.
        - If less than Infinite resistance, repair the short to ground on the circuit.
        - If infinite resistance
    3. Test for less than 2 ohms in the control circuit end to end.
        - If 2 ohms or greater, repair the open/high resistance in the circuit.
        - If less than 2 ohms, replace the X50A Fuse Block-Underhood.
    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator activates**
15. Replace the K9 Body Control Module.

Component Testing

Instrument Panel Compartment Door Release Switch

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1. Ignition OFF, disconnect the harness connector at the S137 Instrument Panel Compartment Door Unlatch Switch.
2. Test for infinite resistance between the signal terminal 1 and the ground terminal 2 with the switch in the open position.
    - **If less than infinite resistance**

      Replace the S137 Instrument Panel Compartment Door Unlatch Switch.

    - **If infinite resistance**
3. Test for less than 3 ohms between the signal terminal 1 and the ground terminal 2 with the switch in the closed position.
    - **If 3 ohms or greater**

      Replace the S137 Instrument Panel Compartment Door Unlatch Switch.

    - **If less than 3 ohms**
4. All OK.

Instrument Panel Compartment Door Release Actuator

1. Ignition OFF, disconnect the harness connector at the M91 Instrument Panel Compartment Door Unlatch Actuator.
2. Install a 10 A fused jumper wire between the control terminal 1 and 12 V. Install a jumper wire between the ground terminal 2 and ground.
3. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator activates.
    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator does not activate.**

      Replace the M91 Instrument Panel Compartment Door Unlatch Actuator.

    - **If the M91 Instrument Panel Compartment Door Unlatch Actuator does activate.**
4. All OK.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- **Front Compartment Fuse Block Replacement**
- **Instrument Panel Compartment Door Latch Actuator Replacement**
- **Instrument Panel Compartment Door Release Switch Replacement**
- **Control Module References** for body control module replacement, programming and setup

REPAIR INSTRUCTIONS

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POWER

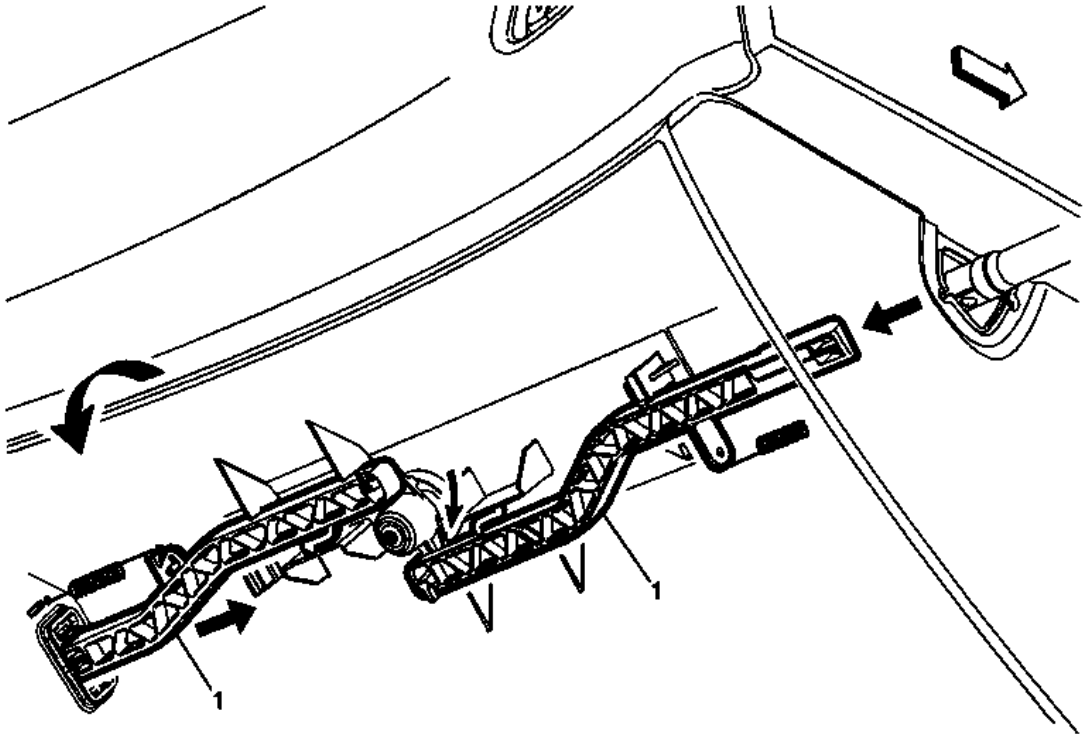

Fig. 1: Instrument Panel Compartment Door Without Electrical Power
Courtesy of GENERAL MOTORS COMPANY

Opening the Instrument Panel Compartment Door without Electrical Power

Callout	Component Name
Preliminary Procedure Remove the instrument panel outer trim cover. Refer to **Instrument Panel Outer Trim Cover Replacement**.	
1	Instrument Panel Compartment Door Latch **NOTE:** **It is important that the tool used is blunt, such as a 1/4 inch drive socket extension or eraser end of a pencil. Sharper tools, such as a screwdriver, may damage the latch mechanism.** **Procedure** In the event that either the actuator or the door release switch should become inoperative, the compartment door can be opened by inserting a small, blunt ended tool into the access hole to manually release the latch and open the door.

INSTRUMENT PANEL INSULATOR PANEL REPLACEMENT - RIGHT SIDE

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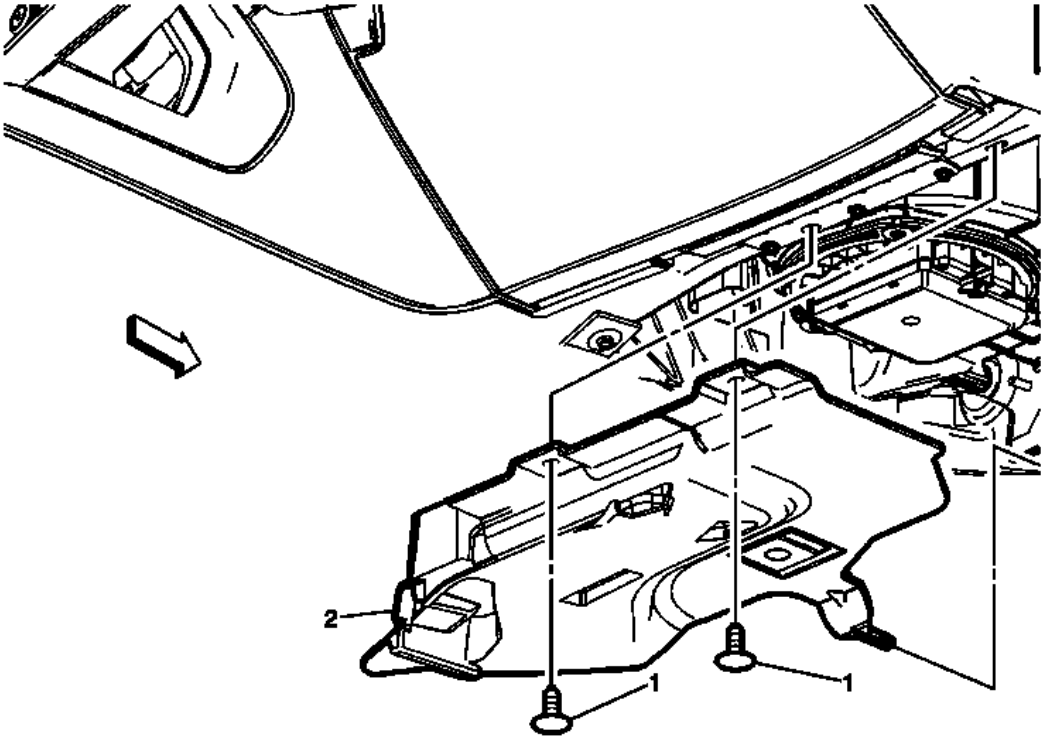

Fig. 2: Instrument Panel Insulator Panel - Right Side
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Insulator Panel Replacement - Right Side

Callout	Component Name
1	Instrument Panel Insulator Clip (Qty: 2)
2	Instrument Panel Insulator Panel - Right Side

INSTRUMENT PANEL INSULATOR PANEL REPLACEMENT - LEFT SIDE

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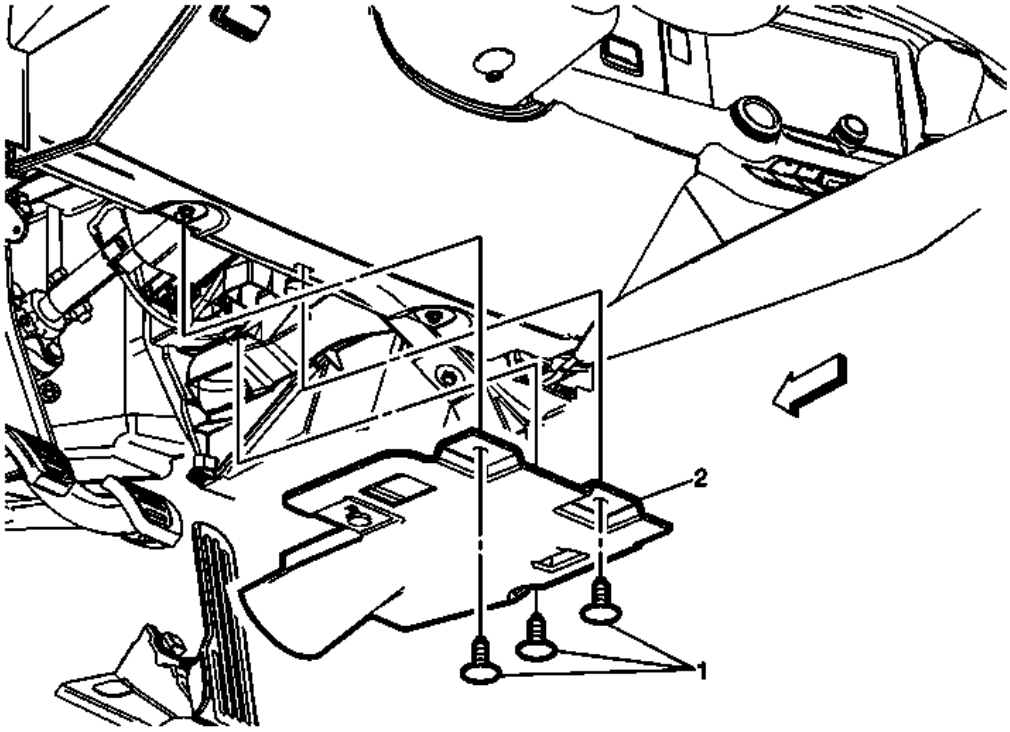

Fig. 3: Instrument Panel Insulator Panel - Left Side
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Insulator Panel Replacement - Left Side

Callout	Component Name
1	Instrument Panel Insulator Clip (Qty: 3)
2	Instrument Panel Insulator Panel - Left Side

INSTRUMENT PANEL ACCESSORY SWITCH TRIM PANEL REPLACEMENT

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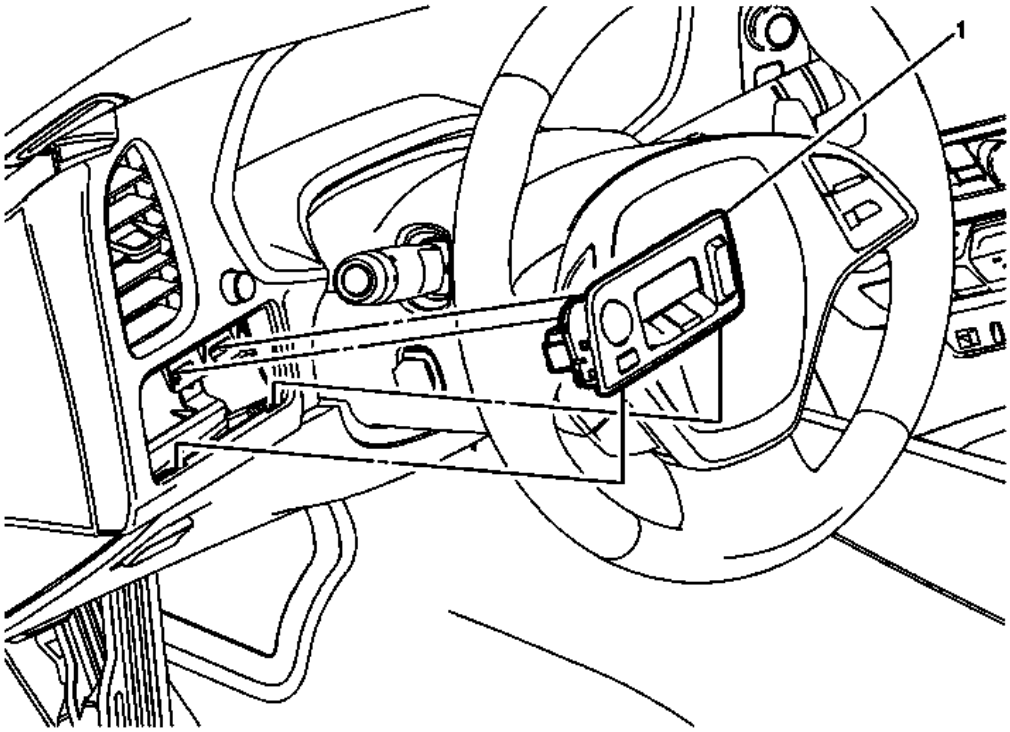

Fig. 4: Instrument Panel Accessory Switch Trim Panel
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Accessory Switch Trim Panel Replacement

Callout	Component Name
1	Instrument Panel Accessory Switch Trim Panel **Procedures** 1. Use a flat bladed plastic trim tool in order to release the retainers securing the trim panel to the instrument panel assembly. 2. Disconnect all electrical connectors. 3. Transfer components as necessary.

INSTRUMENT PANEL ACCESSORY BRACKET REPLACEMENT

Removal Procedure

1. Remove the driver information display. Refer to **Driver Information Display Replacement** .

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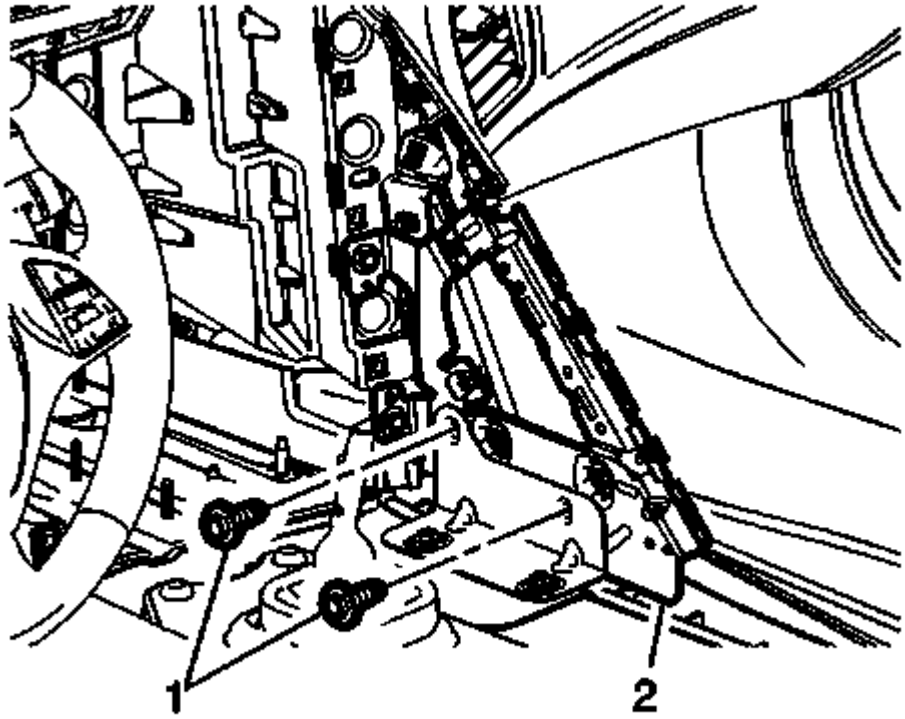

Fig. 5: Instrument Panel Accessory Bracket And Fasteners
Courtesy of GENERAL MOTORS COMPANY

2. Remove the fasteners (1) securing the instrument panel accessory bracket (2) to the instrument panel lower bracket.

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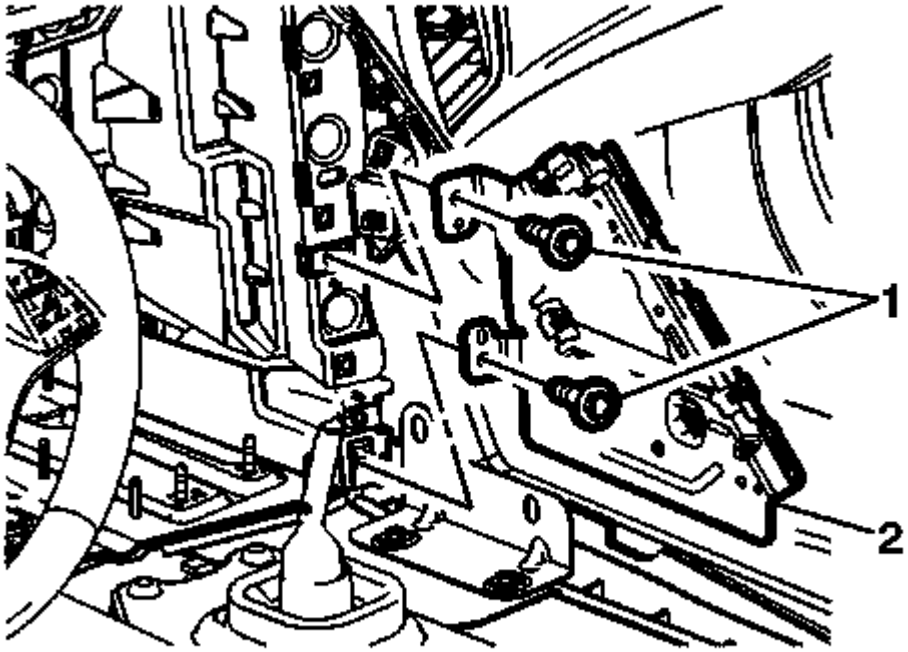

Fig. 6: Instrument Panel Accessory Bracket And Fasteners
Courtesy of GENERAL MOTORS COMPANY

3. Remove the fasteners (1) securing the instrument panel accessory bracket (2) to the instrument panel assembly.

Installation Procedure

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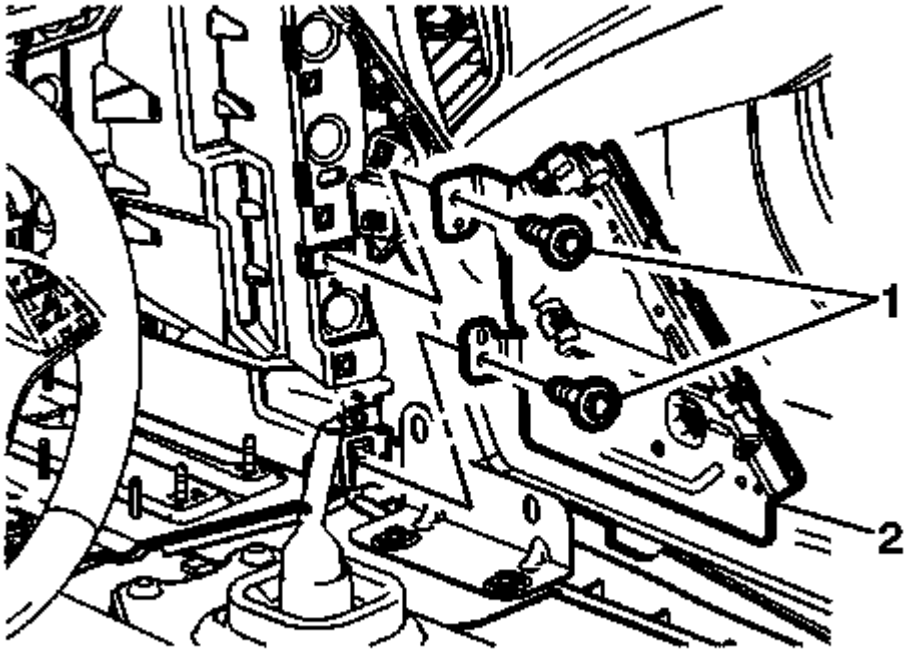

Fig. 7: Instrument Panel Accessory Bracket And Fasteners
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to Fastener Caution .

1. Install the fasteners (1) securing the instrument panel accessory bracket (2) to the instrument panel assembly and tighten to 6 (53 lb in).

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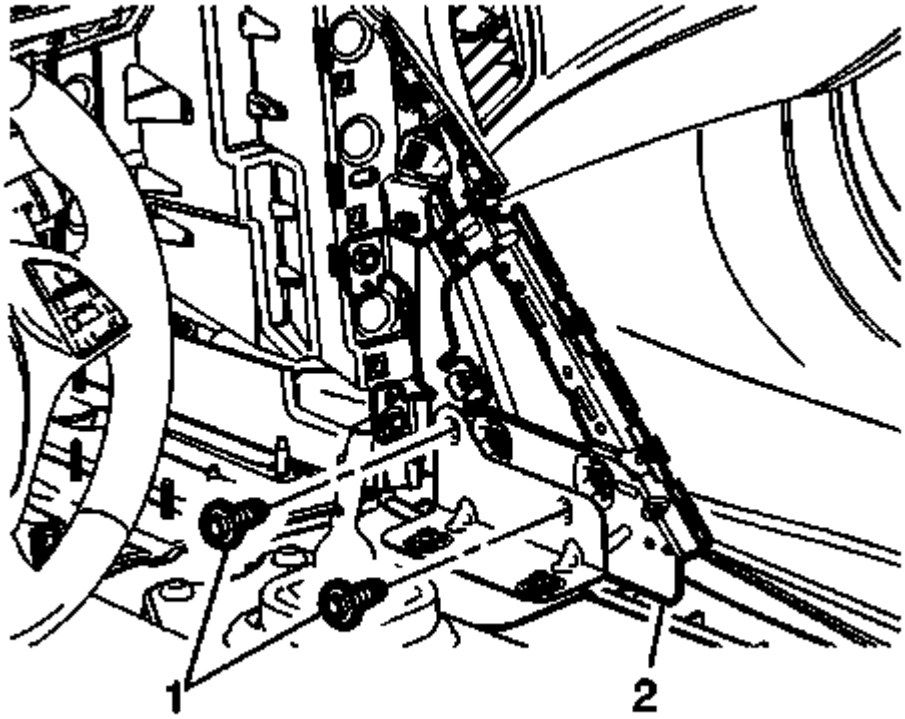

Fig. 8: Instrument Panel Accessory Bracket And Fasteners
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to Fastener Caution .

2. Install the fasteners (1) securing the instrument panel accessory bracket (2) to the instrument panel lower bracket and tighten to 9 (80 lb in).
3. Install the driver information display. Refer to **Driver Information Display Replacement** .

INSTRUMENT PANEL DRIVER KNEE BOLSTER DEFLECTOR BRACKET REPLACEMENT

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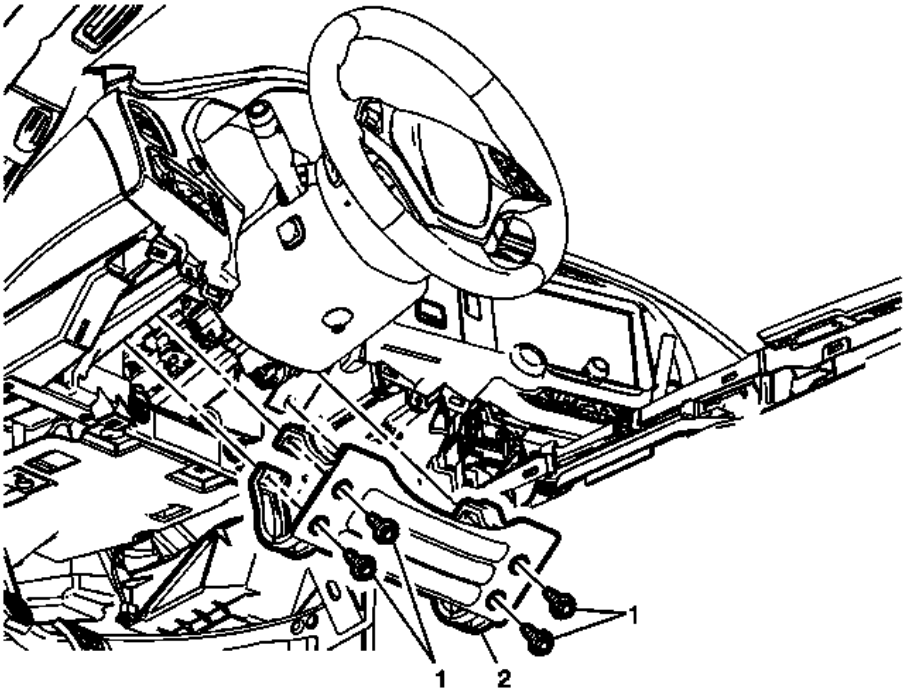

Fig. 9: Instrument Panel Driver Knee Bolster Deflector Bracket
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Driver Knee Bolster Deflector Bracket Replacement

Callout	Component Name
Preliminary Procedure Remove the instrument panel knee bolster. Refer to **Instrument Panel Knee Bolster Replacement**.	
1	Instrument Panel Driver Knee Bolster Deflector Bracket Bolt (Qty: 4) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
2	Instrument Panel Driver Knee Bolster Deflector Bracket

INSTRUMENT PANEL KNEE BOLSTER REPLACEMENT

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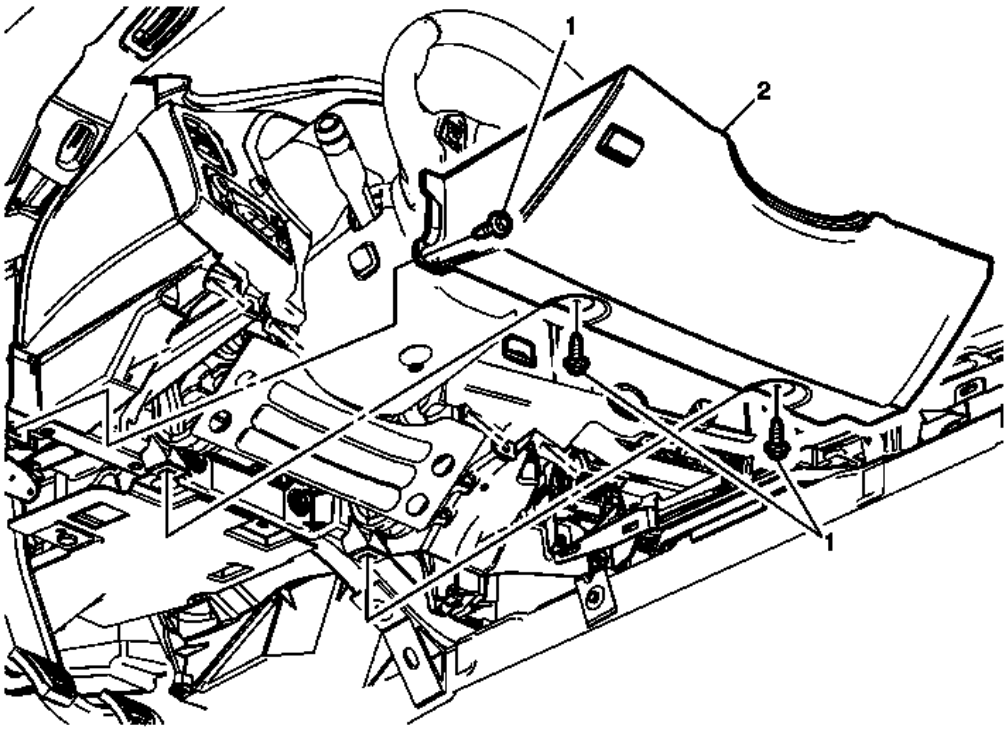

Fig. 10: Instrument Panel Knee Bolster
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Knee Bolster Replacement

Callout	Component Name
Preliminary Procedure 1. Remove the left front floor console trim plate. Refer to **Front Floor Console Trim Plate Replacement (Manual)**, **Front Floor Console Trim Plate Replacement (Automatic)** 2. Remove the left front side door sill garnish molding. Refer to **Front Side Door Sill Garnish Molding Replacement** .	
1	Instrument Panel Knee Bolster Bolt (Qty: 3) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
2	Instrument Panel Knee Bolster **Procedures** 1. Grasp the lower edge of the knee bolster and pull outward disengaging the

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	2. Disconnect the electrical connector.

INSTRUMENT PANEL PASSENGER KNEE BOLSTER REINFORCEMENT REPLACEMENT

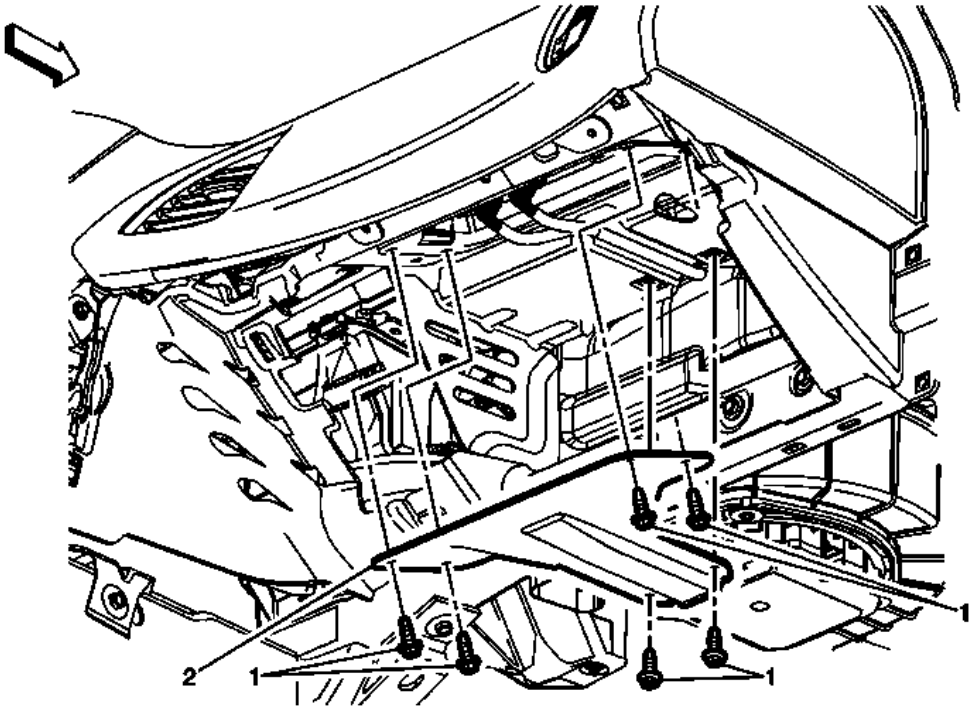

Fig. 11: Instrument Panel Passenger Knee Bolster Reinforcement
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Passenger Knee Bolster Reinforcement Replacement

Callout	Component Name
Preliminary Procedure Remove the instrument panel compartment. Refer to **Instrument Panel Compartment Replacement**.	
1	Instrument Panel Compartment Reinforcement Bolt (Qty: 6) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
2	Instrument Panel Passenger Knee Bolster Reinforcement

INSTRUMENT PANEL TRIM PLATE REPLACEMENT

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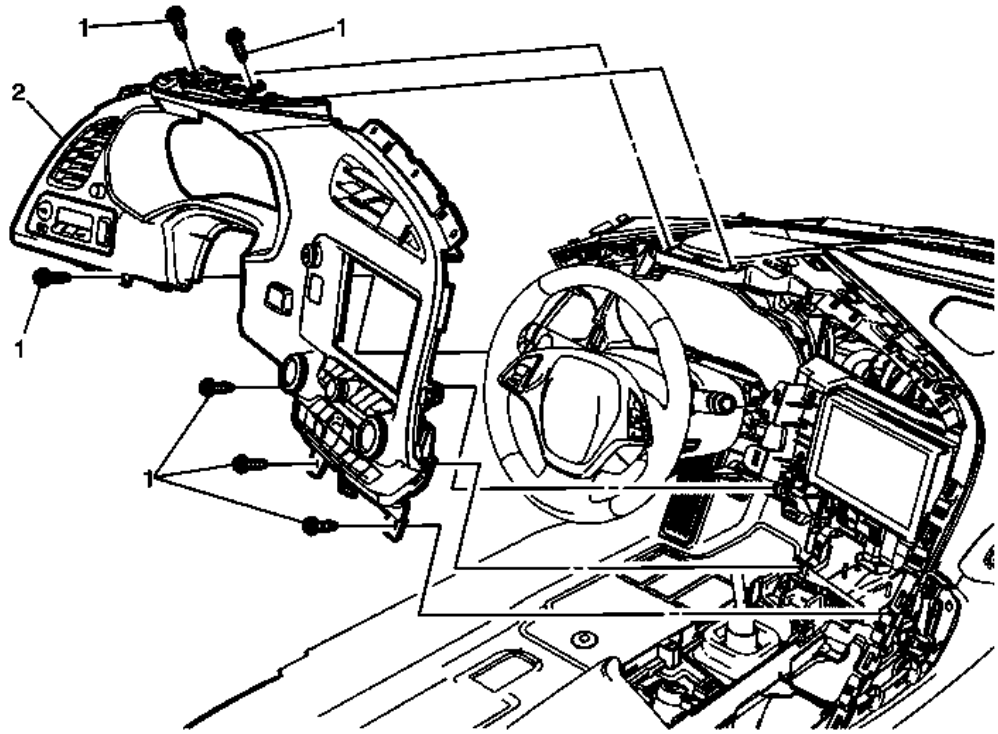

Fig. 12: Instrument Panel Trim Plate
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Trim Plate Replacement

Callout	Component Name
Preliminary Procedures 1. Remove the instrument panel molding. Refer to **Instrument Panel Molding Replacement**. 2. Remove the instrument panel knee bolster. Refer to **Instrument Panel Knee Bolster Replacement**.	
1	Instrument Panel Trim Plate Bolt (Qty: 6) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
2	Instrument Panel Trim Plate **Procedures** 1. Gentle pull back to release the retainer securing the trim plate to the

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	2. Disconnect all electrical connectors. 3. Transfer components as necessary.

INSTRUMENT PANEL SIDE TRIM PANEL REPLACEMENT

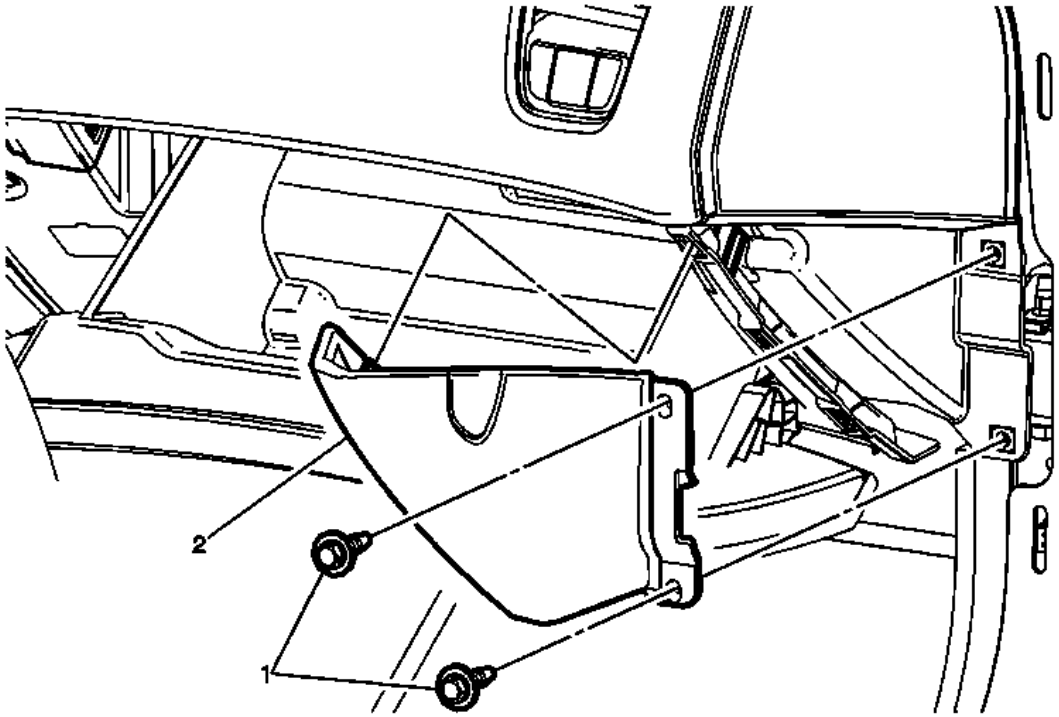

Fig. 13: Instrument Panel Side Trim Panel
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Side Trim Panel Replacement

Callout	Component Name
Preliminary Procedure Remove the right body hinge pillar garnish molding. Refer to **Body Hinge Pillar Garnish Molding Replacement** .	
1	Instrument Panel Side Trim Panel Bolt (Qty: 2) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
	Instrument Panel Side Trim Panel

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2	1. Open the instrument panel compartment to access the retainer for the side trim panel. 2. Use a flat bladed plastic trim tool in order to release the retainers securing the trim panel to the instrument panel compartment.

INSTRUMENT PANEL CENTER UPPER MOLDING REPLACEMENT

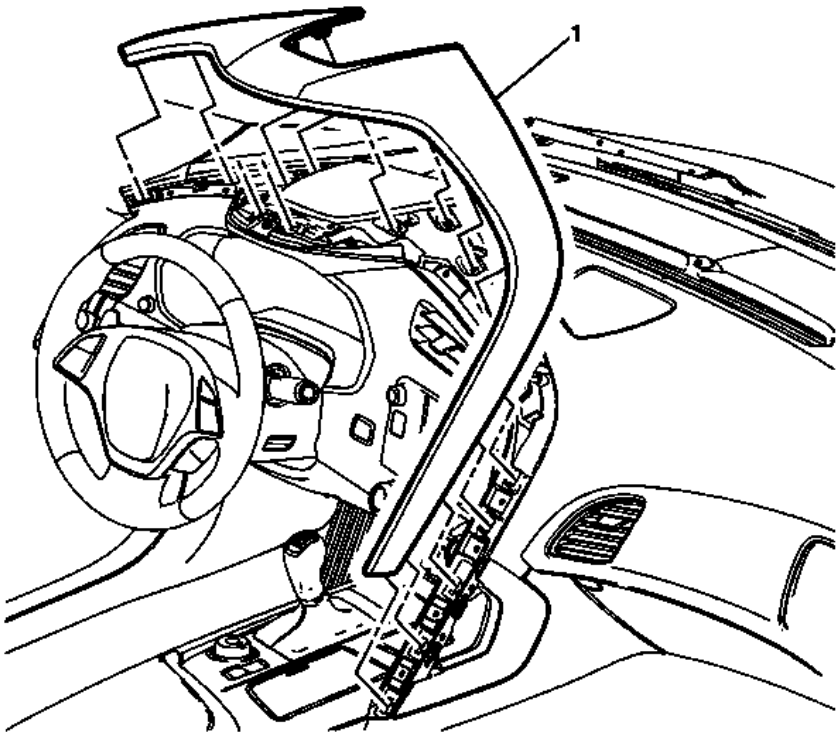

Fig. 14: Instrument Panel Center Upper Molding
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Center Upper Molding Replacement

Callout	Component Name
Preliminary Procedure Remove the instrument panel assist handle. Refer to **Instrument Panel Assist Handle Replacement**.	
1	Instrument Panel Center Upper Molding **Procedure** Use a flat bladed plastic trim tool in order to release the retainers securing the center upper molding to the instrument panel assembly.

INSTRUMENT PANEL UPPER TRIM PANEL COVER REPLACEMENT

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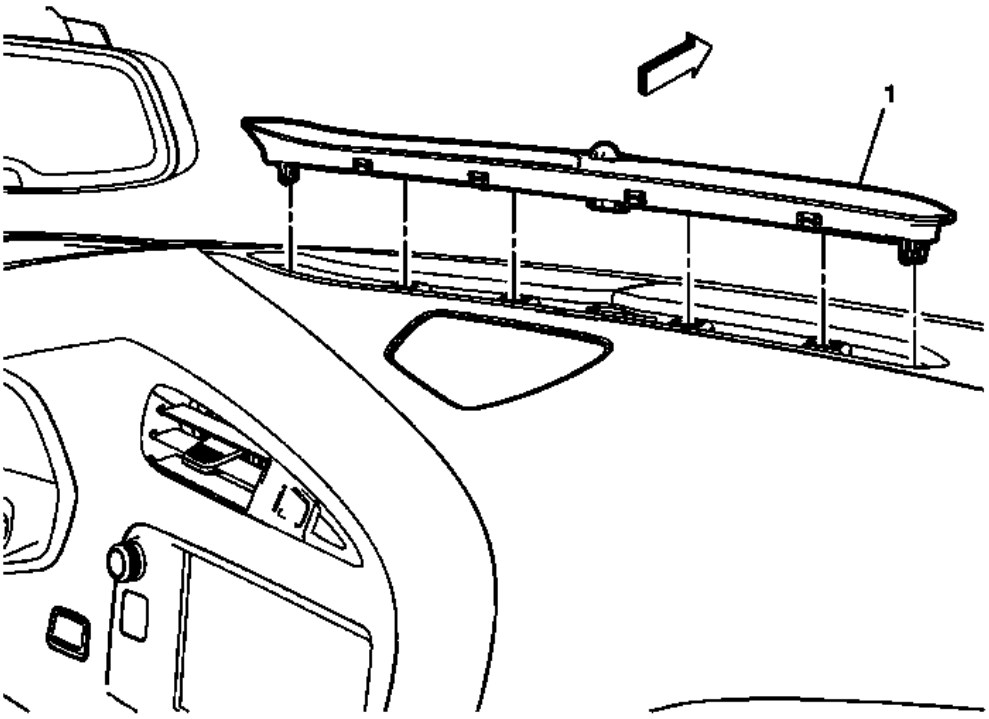

Fig. 15: Instrument Panel Upper Trim Panel Cover
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Upper Trim Panel Cover Replacement

Callout	Component Name
1	Instrument Panel Upper Trim Panel Cover **Procedures** 1. Use a flat bladed plastic trim tool in order to release the retainers securing the cover to the instrument panel assembly. 2. Disconnect the electrical connector. 3. Transfer components as necessary.

INSTRUMENT PANEL TRIM PAD RADIO CENTER SPEAKER OPENING COVER REPLACEMENT

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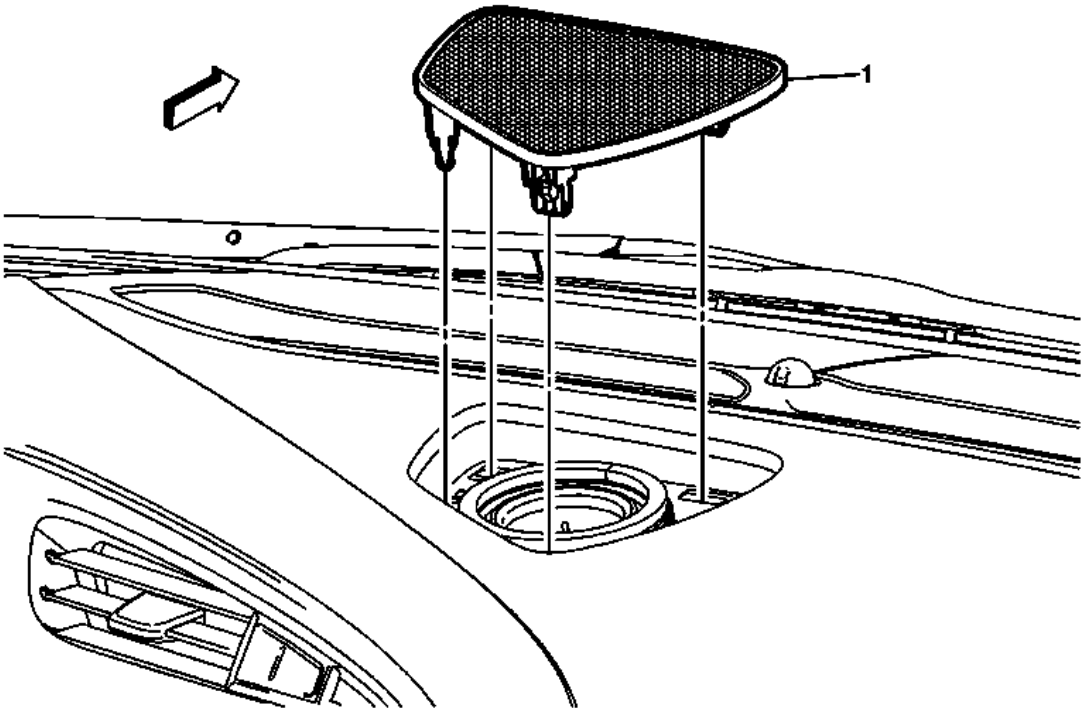

Fig. 16: Instrument Panel Trim Pad Radio Center Speaker Opening Cover
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Trim Pad Radio Center Speaker Opening Cover Replacement

Callout	Component Name
1	Instrument Panel Trim Pad Radio Center Speaker Opening Cover **Procedure** Use a flat bladed plastic trim tool in order to release the retainers securing the cover to the instrument panel assembly.

INSTRUMENT PANEL OUTER TRIM COVER REPLACEMENT

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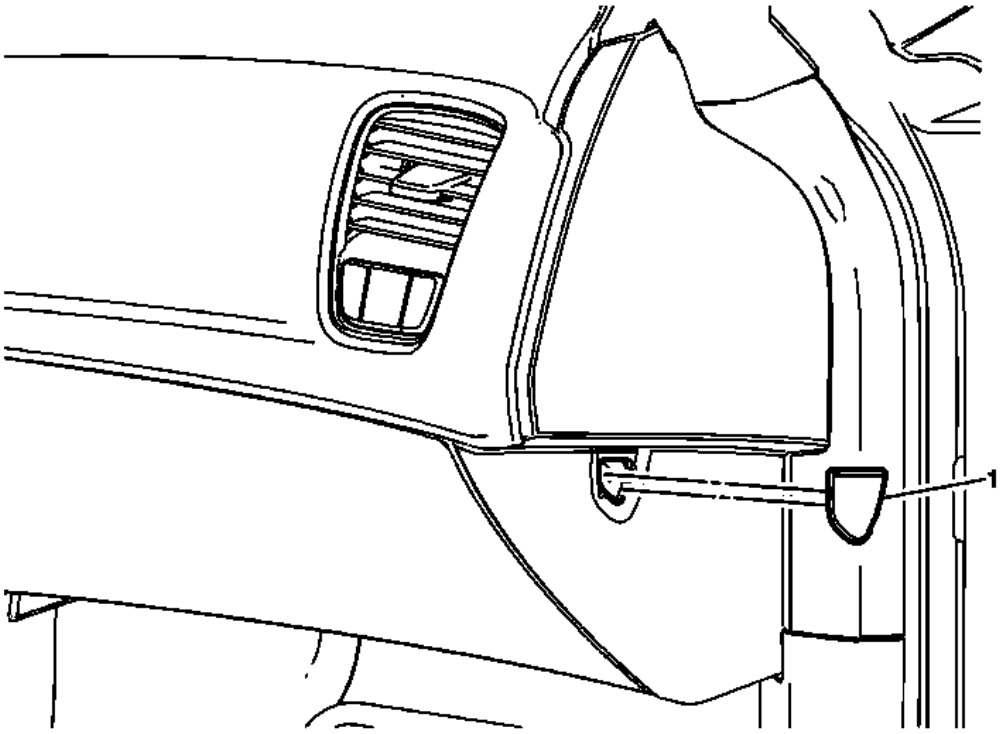

Fig. 17: Instrument Panel Outer Trim Cover
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Outer Trim Cover Replacement

Callout	Component Name
1	Instrument Panel Outer Trim Cover **Procedure** Use a flat bladed plastic trim tool in order to release the retainers securing the trim cover to the instrument panel assembly.

INSTRUMENT PANEL LOWER TRIM PANEL REPLACEMENT

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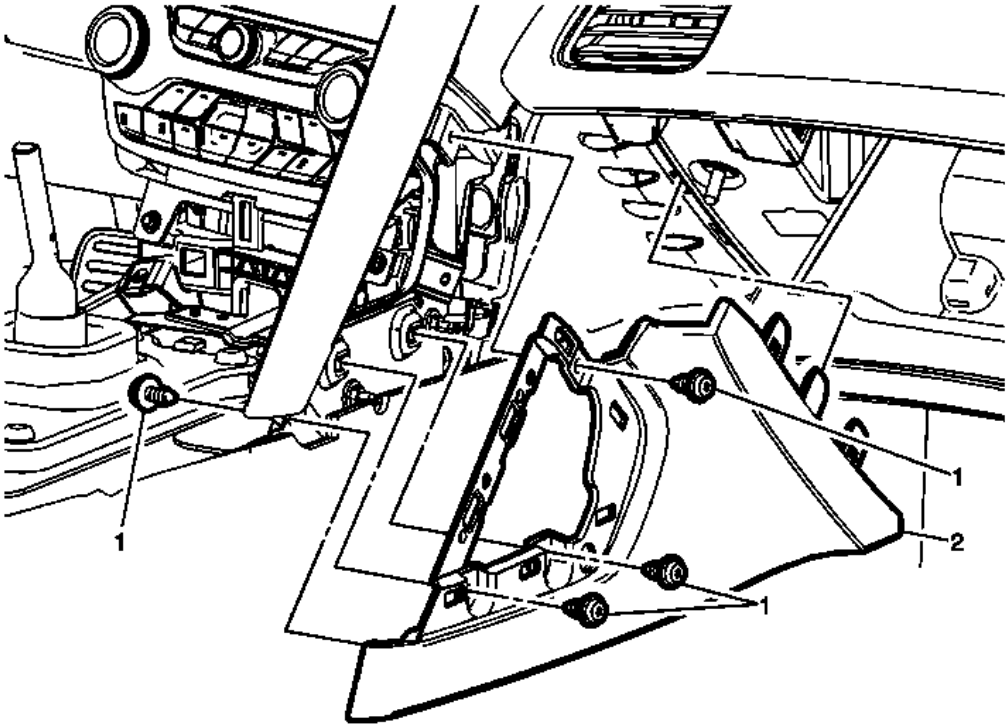

Fig. 18: Instrument Panel Lower Trim Panel
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Lower Trim Panel Replacement

Callout	Component Name
Preliminary Procedures 1. Remove the instrument panel lower center trim panel. Refer to **Instrument Panel Lower Center Trim Panel Replacement**. 2. Remove the front floor lower console. Refer to **Front Floor Lower Console Replacement**.	
1	Instrument Panel Lower Trim Panel Bolt (Qty: 4) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
2	Instrument Panel Lower Trim Panel **Procedure** Use a flat bladed plastic trim tool in order to release the tabs securing the trim panel to the instrument panel compartment assembly.

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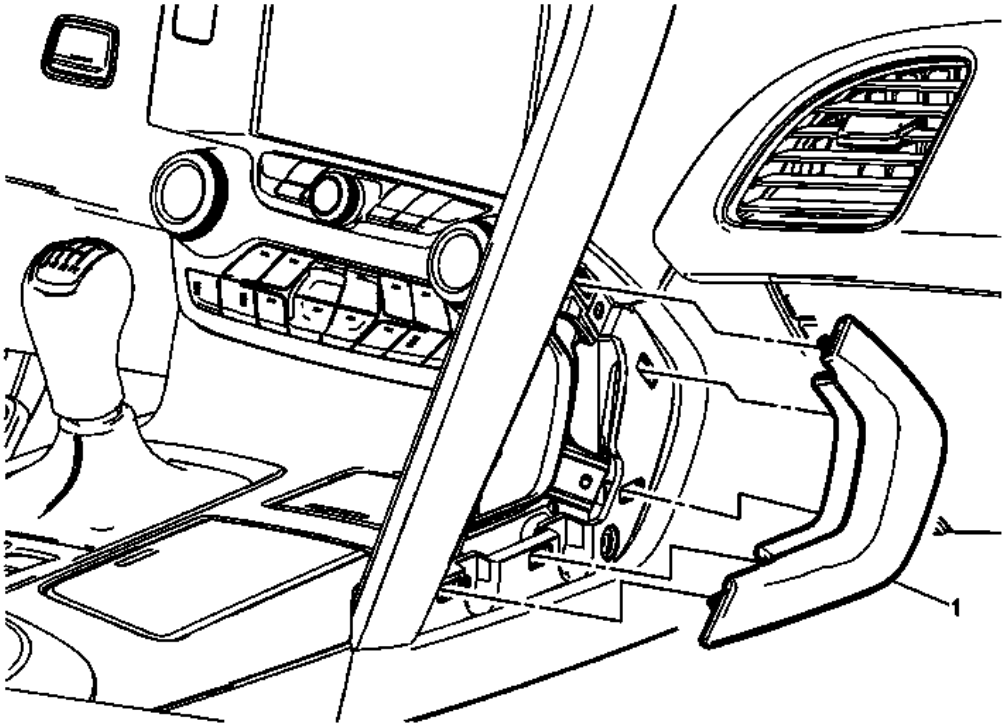

Fig. 19: Instrument Panel Lower Center Trim Panel
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Lower Center Trim Panel Replacement

Callout	Component Name
Preliminary Procedure Remove the right instrument panel assist handle. Refer to **Instrument Panel Assist Handle Replacement**.	
1	Instrument Panel Lower Center Trim Panel **Procedure** Use a flat bladed plastic trim tool in order to release the retainers securing the trim panel to the instrument panel assembly.

INSTRUMENT PANEL COMPARTMENT REPLACEMENT

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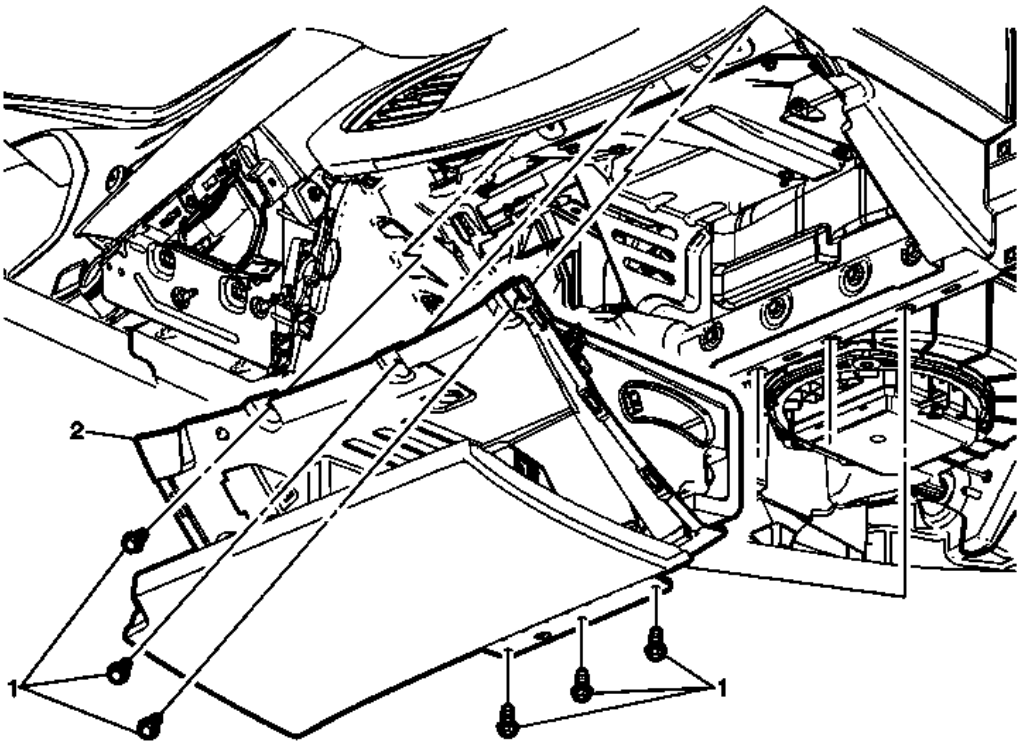

Fig. 20: Instrument Panel Compartment
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Compartment Replacement

Callout	Component Name
Preliminary Procedure 1. Remove the right insulator panel. Refer to **Instrument Panel Insulator Panel Replacement - Right Side** 2. Remove the side trim panel. Refer to **Instrument Panel Side Trim Panel Replacement**. 3. Remove the lower trim panel. Refer to **Instrument Panel Lower Trim Panel Replacement**. 4. In the event that the door is inoperable, manually release the latch. Refer to **Opening the Instrument Panel Compartment Door without Electrical Power**.	
1	Instrument Panel Compartment Bolt (Qty: 6) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
2	Instrument Panel Compartment

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	Grasp the lower edge of the compartment and pull outward disengaging the retainers securing the panel to the instrument panel assembly.

INSTRUMENT PANEL COMPARTMENT DOOR LATCH ACTUATOR REPLACEMENT

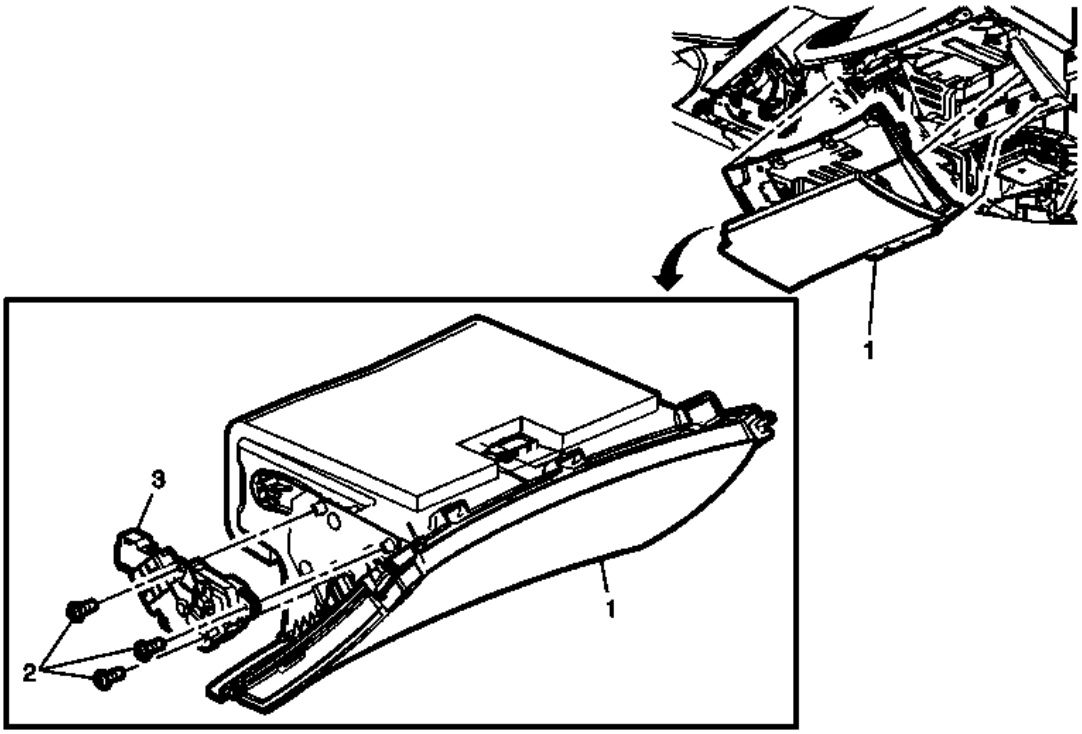

Fig. 21: Instrument Panel Compartment Door Latch Actuator
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Compartment Door Latch Actuator Replacement

Callout	Component Name
1	Instrument Panel Compartment Door Refer to **Instrument Panel Compartment Replacement**.
2	Instrument Panel Compartment Door Latch Actuator Bolt (Qty: 3) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
3	Instrument Panel Compartment Door Latch Actuator

INSTRUMENT PANEL COMPARTMENT DOOR LOCK BEZEL REPLACEMENT

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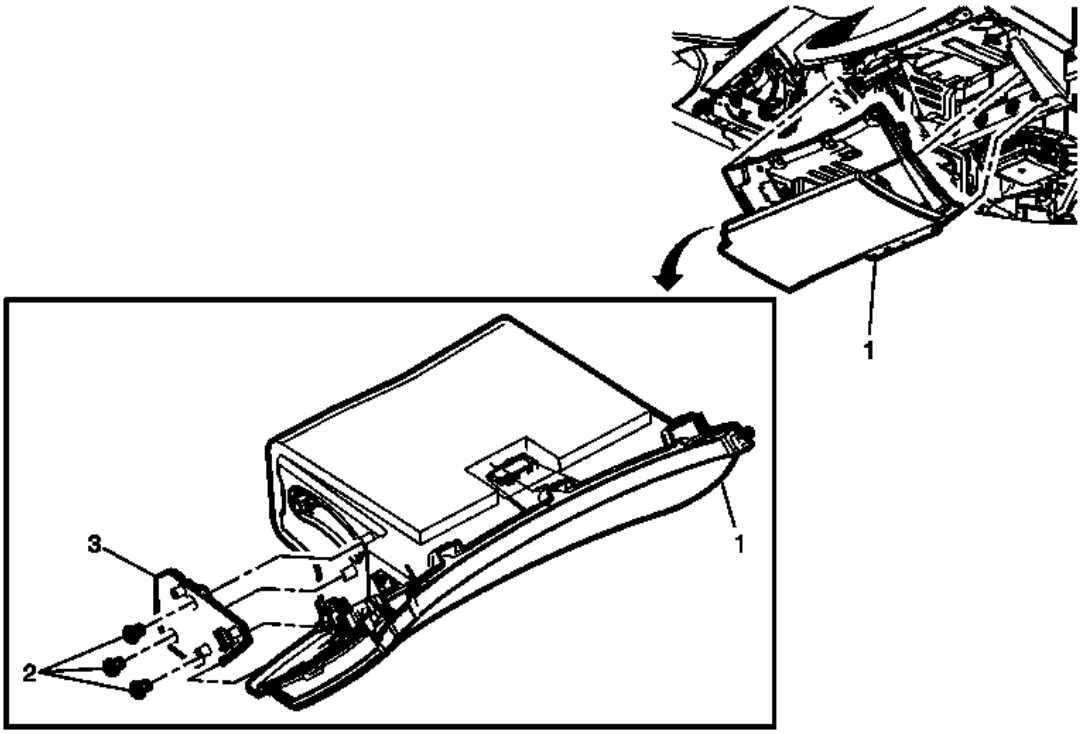

Fig. 22: Instrument Panel Compartment Door Lock Bezel
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Compartment Door Lock Bezel Replacement

Callout	Component Name
1	Instrument Panel Compartment Door Latch Actuator Refer to **Instrument Panel Compartment Door Latch Actuator Replacement**.
2	Instrument Panel Compartment Bracket Bolt (Qty: 3) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
3	Instrument Panel Compartment Door Lock Bezel

INSTRUMENT PANEL ASSIST HANDLE REPLACEMENT

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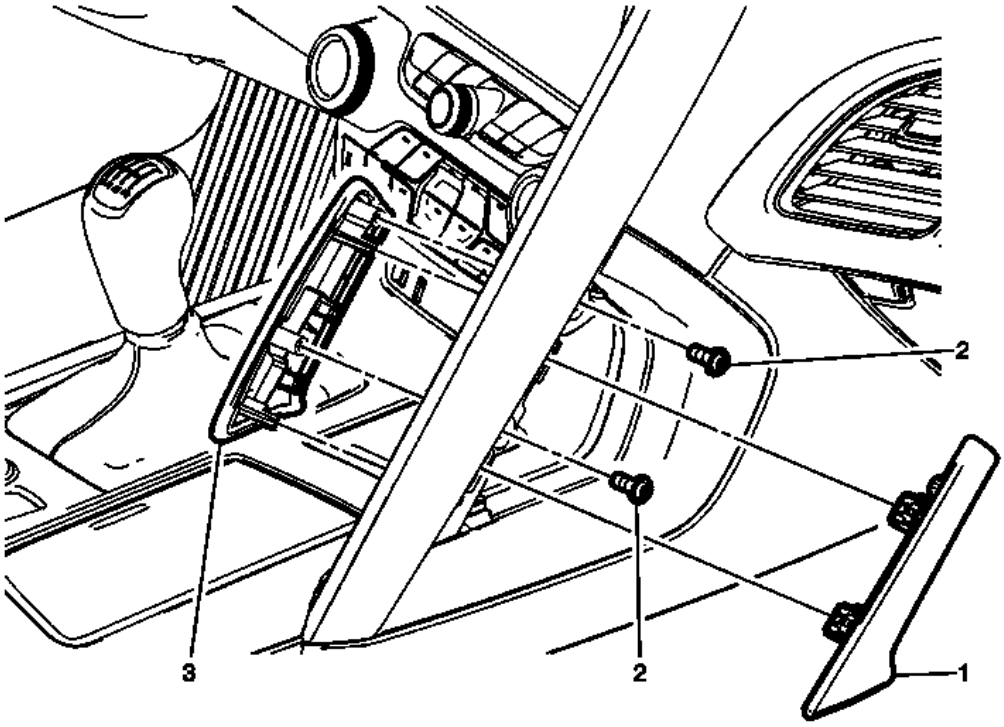

Fig. 23: Instrument Panel Assist Handle
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Assist Handle Replacement

Callout	Component Name
1	Instrument Panel Assist Handle - Right **Procedure** Use a flat bladed plastic trim tool in order to release the retainers securing the handle to the instrument panel assembly.
2	Instrument Panel Assist Handle Bolt (Qty: 2) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 1.9 (17 lb in)
3	Instrument Panel Assist Handle - Left

INSTRUMENT PANEL MOLDING REPLACEMENT

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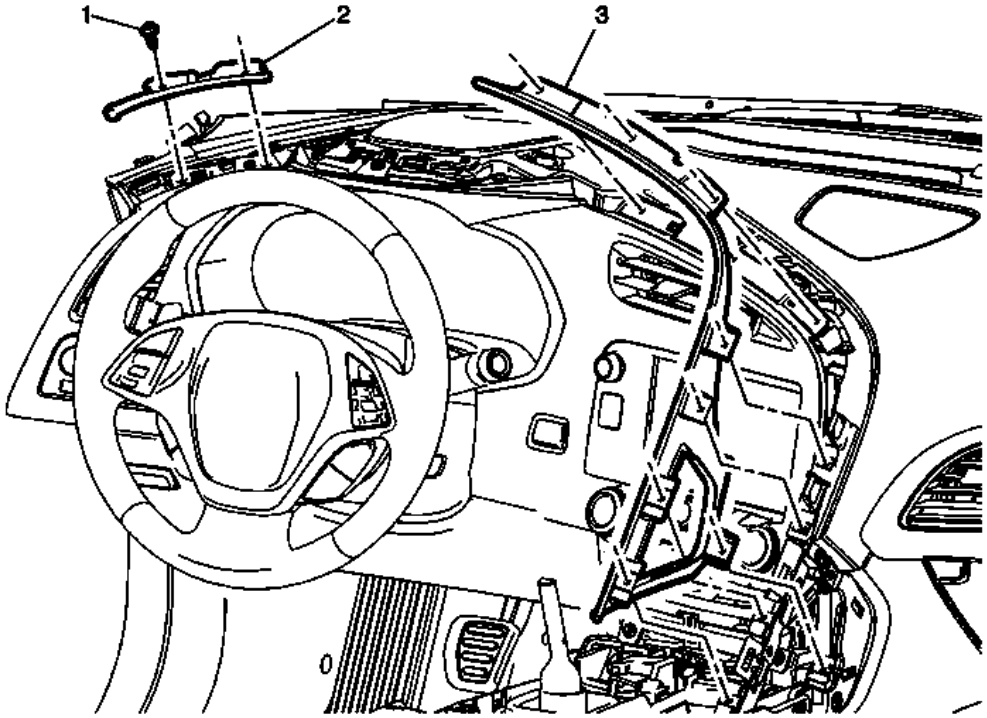

Fig. 24: Instrument Panel Molding
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Molding Replacement

Callout	Component Name
Preliminary Procedure 1. Remove the instrument panel center upper molding. Refer to **Instrument Panel Center Upper Molding Replacement**. 2. Remove the instrument panel lower center trim panel. Refer to **Instrument Panel Lower Center Trim Panel Replacement**. 3. Remove the front floor console trim plate. Refer to **Front Floor Console Trim Plate Replacement (Manual)**, **Front Floor Console Trim Plate Replacement (Automatic)**.	
1	Instrument Panel Molding Bolt (Qty: 10) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
2	Instrument Panel Molding - Left
3	Instrument Panel Molding - Right

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INSTRUMENT PANEL TRIM PAD REPLACEMENT

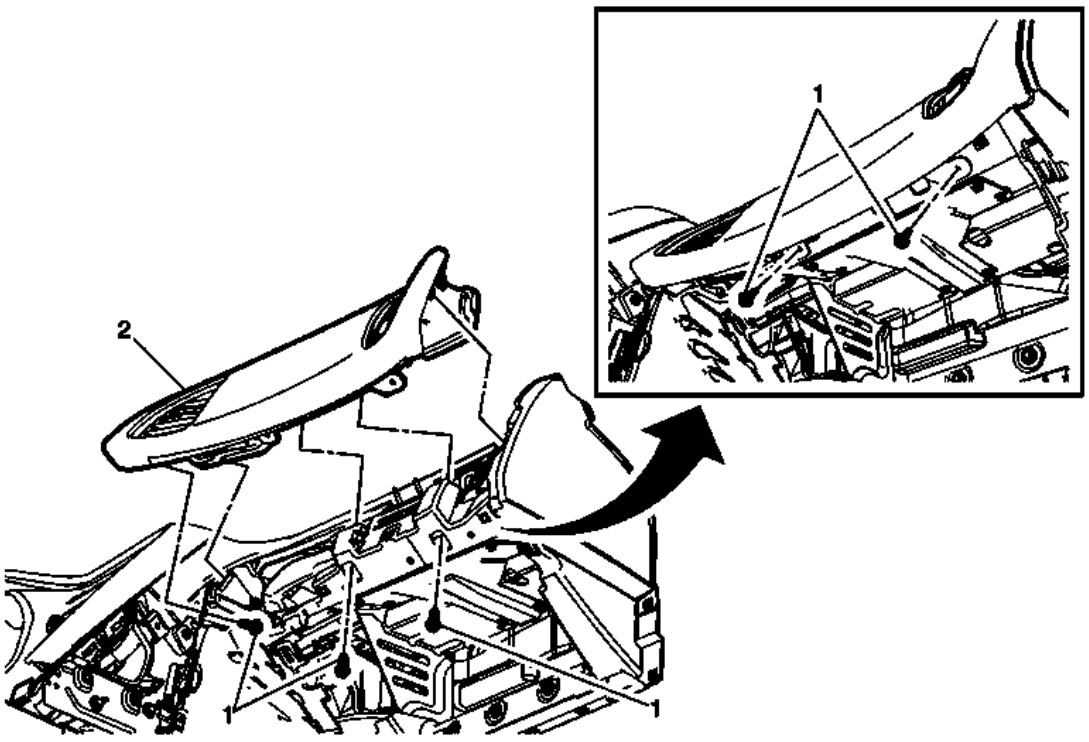

Fig. 25: Instrument Panel Trim Pad
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Trim Pad Replacement

Callout	Component Name
Preliminary Procedure Remove the instrument panel compartment. Refer to **Instrument Panel Compartment Replacement**.	
1	Instrument Panel Trim Pad Bolt (Qty: 5) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
2	Instrument Panel Trim Pad **Procedure** Grasp the lower edge of the trim pad and pull outward disengaging the retainers securing the pad to the instrument panel assembly.

INSTRUMENT PANEL TRIM PAD RADIO SPEAKER OPENING COVER REPLACEMENT - LEFT SIDE

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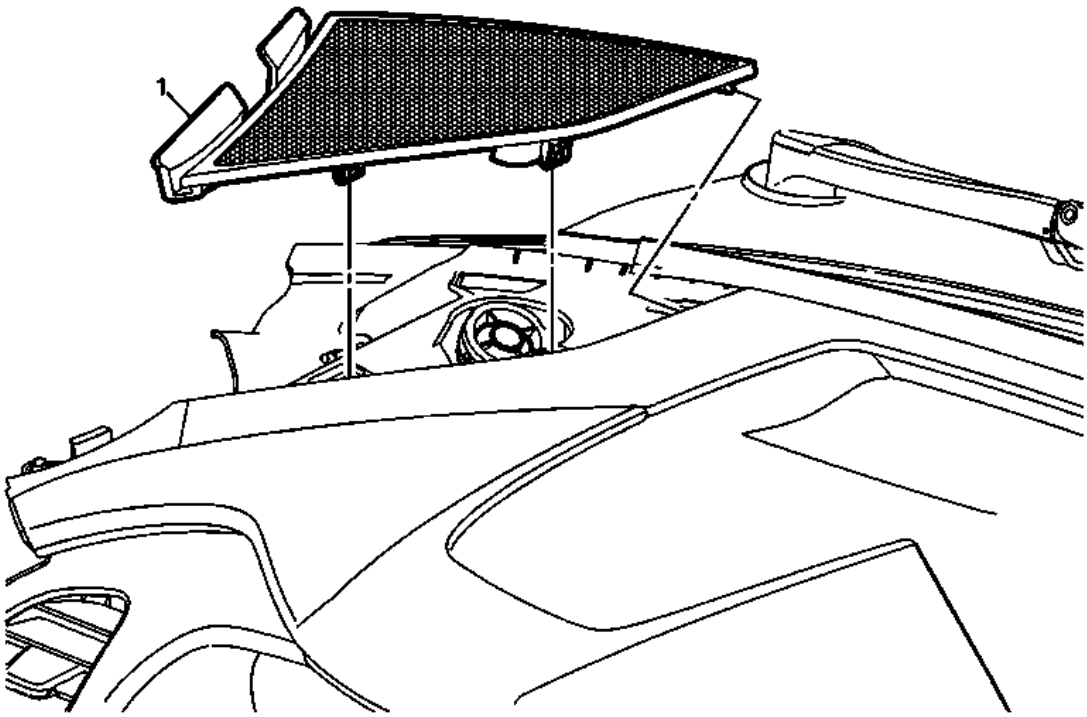

Fig. 26: Instrument Panel Trim Pad Radio Speaker Opening Cover - Left Side
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Trim Pad Radio Speaker Opening Cover Replacement - Left Side

Callout	Component Name
Preliminary Procedure Remove the left windshield garnish molding. Refer to **Windshield Garnish Molding Replacement** .	
1	Instrument Panel Trim Pad Radio Speaker Opening Cover - Left **Procedure** Use a flat bladed plastic trim tool in order to release the retainers securing the cover to the instrument panel compartment.

INSTRUMENT PANEL TRIM PAD RADIO SPEAKER OPENING COVER REPLACEMENT - RIGHT SIDE

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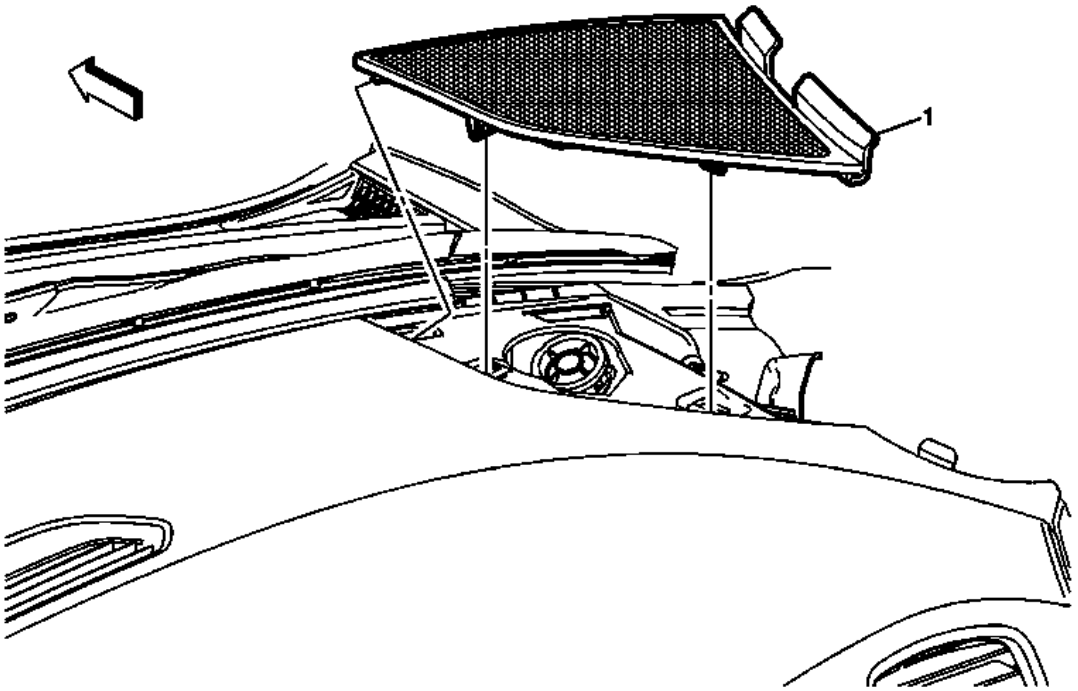

Fig. 27: Instrument Panel Trim Pad Radio Speaker Opening Cover - Right Side
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Trim Pad Radio Speaker Opening Cover Replacement - Right Side

Callout	Component Name
Preliminary Procedure Remove the right windshield garnish molding. Refer to **Windshield Garnish Molding Replacement** .	
1	Instrument Panel Trim Pad Radio Speaker Opening Cover - right **Procedure** Use a flat bladed plastic trim tool in order to release the retainers securing the cover to the instrument panel compartment.

STEERING COLUMN BRACKET REPLACEMENT

Removal Procedure

1. Disable the SIR system. Refer to **SIR Disabling and Enabling** .
2. Disconnect the negative battery cable. Refer to **Battery Negative Cable Disconnection and Connection** .
3. Remove the instrument panel (I/P) assembly. Refer to **Instrument Panel Assembly Replacement**.
4. Remove the left side window defogger outlet duct. Refer to **Side Window Defogger Outlet Duct Replacement - Left Side** .

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5. Remove the brake pedal assembly. Refer to **Brake Pedal Assembly Replacement** .
6. If equipped with a clutch pedal, release the clutch master cylinder from the dash panel. Refer to **Clutch Master Cylinder Replacement** .

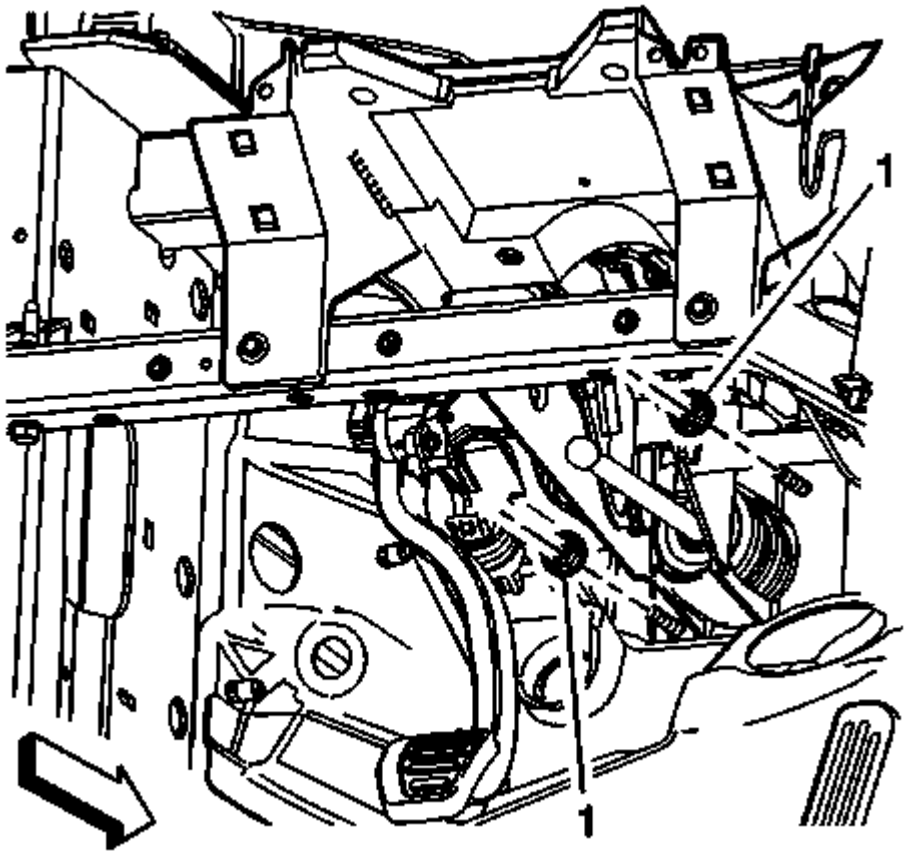

Fig. 28: Power Brake Booster Nut
Courtesy of GENERAL MOTORS COMPANY

7. Remove the power brake booster nut (1).

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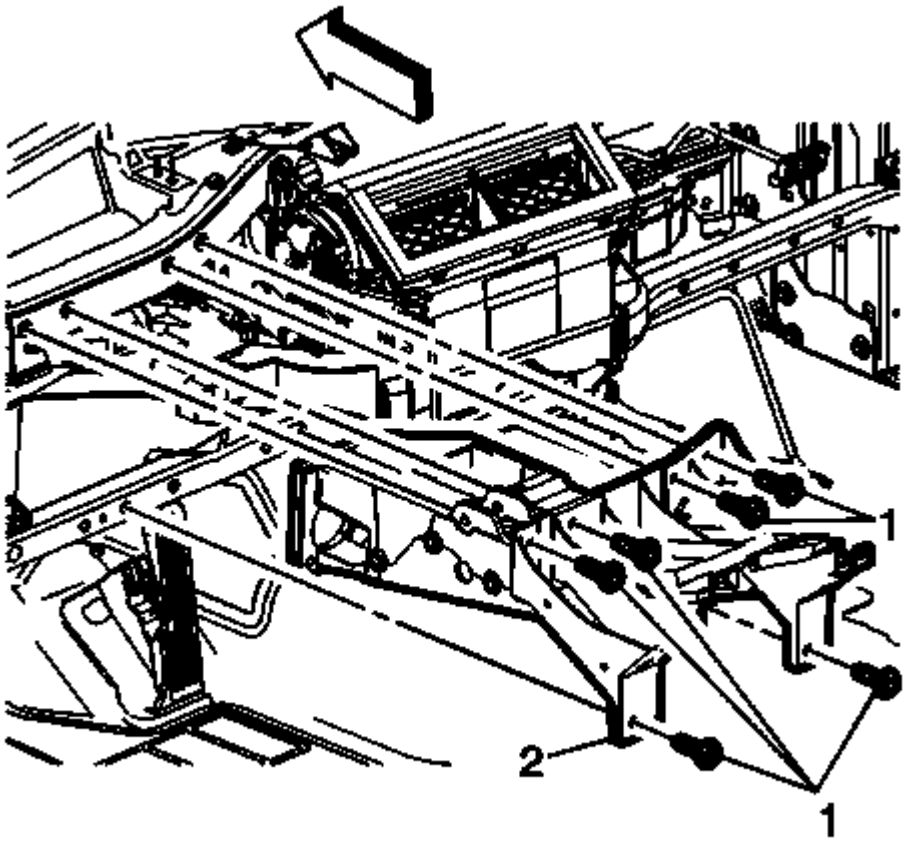

Fig. 29: Steering Column Bracket
Courtesy of GENERAL MOTORS COMPANY

NOTE: The following step ensures proper trim fit during installation.

8. Mark the location of the steering column bracket.
9. Remove the steering column bracket bolt (1) which secure the steering column bracket to the upper and lower I/P tie bar.
10. Remove the steering column bracket (2).
11. Remove the clutch pedal assembly, if equipped. Refer to **Clutch Pedal Replacement** .

Installation Procedure

1. Install the clutch pedal assembly, if equipped. Refer to **Clutch Pedal Replacement** .

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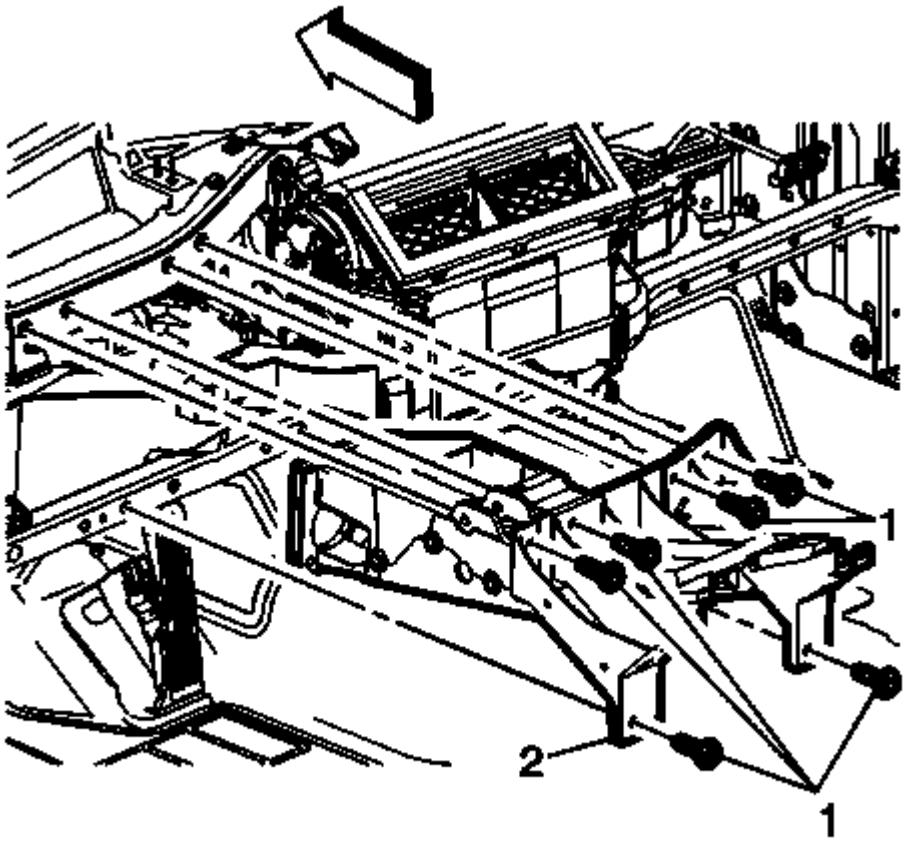

Fig. 30: Steering Column Bracket
Courtesy of GENERAL MOTORS COMPANY

2. Install the steering column bracket (2) into position as marked prior to removal.
3. Install the steering column bracket bolt (1) which secure the steering column bracket (2) to the upper I/P tie bar. Do NOT tighten the bolts.

CAUTION: Refer to Fastener Caution .

4. Install the steering column bracket bolt (1) which secure the steering column bracket (2) to the lower I/P tie bar.

Tighten

Tighten both upper and lower bracket bolts to 9 (80 lb in).

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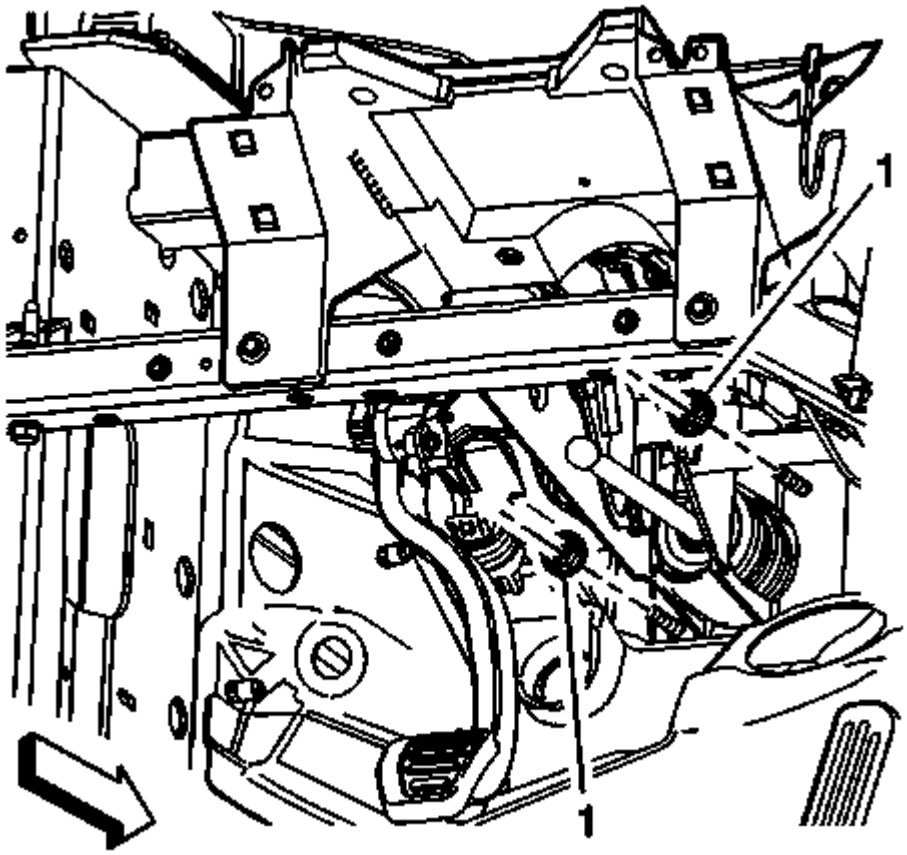

Fig. 31: Power Brake Booster Nut
Courtesy of GENERAL MOTORS COMPANY

5. Install the power brake booster nut (1).

   Tighten

   Tighten the nuts to 23 (17 lb ft)

6. If equipped with a clutch pedal, install the clutch master cylinder to the dash panel. Refer to **Clutch Master Cylinder Replacement** .
7. Install the brake pedal assembly. Refer to **Brake Pedal Assembly Replacement** .
8. Install the left side window defogger outlet duct. Refer to **Side Window Defogger Outlet Duct Replacement - Left Side** .
9. Install the I/P assembly. Refer to **Instrument Panel Assembly Replacement**.
10. Connect the negative battery cable. Refer to **Battery Negative Cable Disconnection and Connection** .
11. Enable the SIR system. Refer to **SIR Disabling and Enabling** .

INSTRUMENT PANEL ASSEMBLY REPLACEMENT

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Removal Procedure

1. Disable the SIR system. Refer to **SIR Disabling and Enabling** .

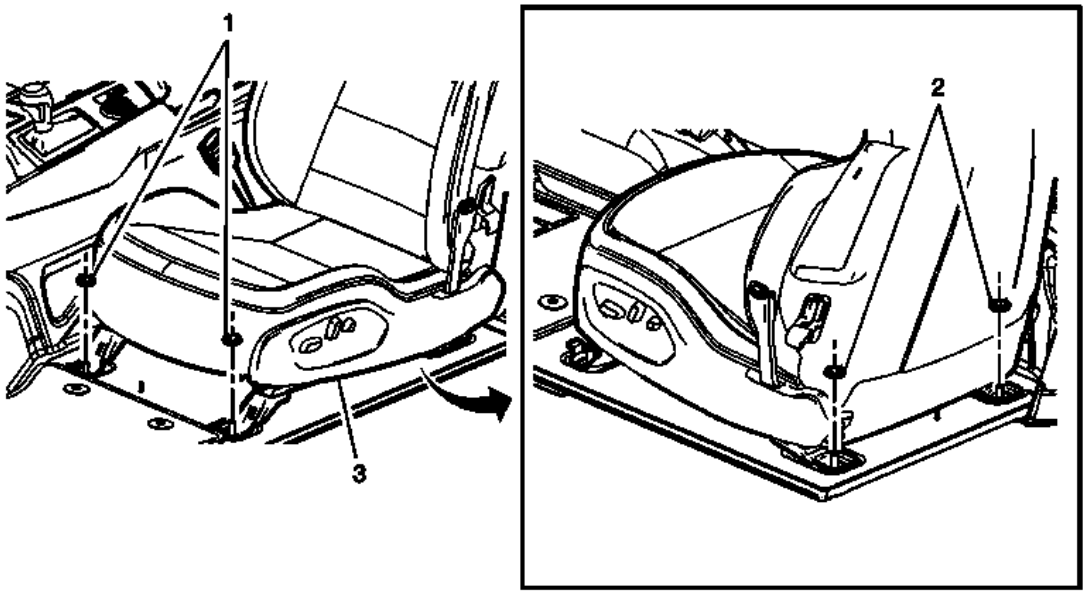

Fig. 32: Driver And Passenger Seat
Courtesy of GENERAL MOTORS COMPANY

2. Remove the driver and passenger seat (3). Refer to **Driver or Passenger Seat Removal and Installation** .

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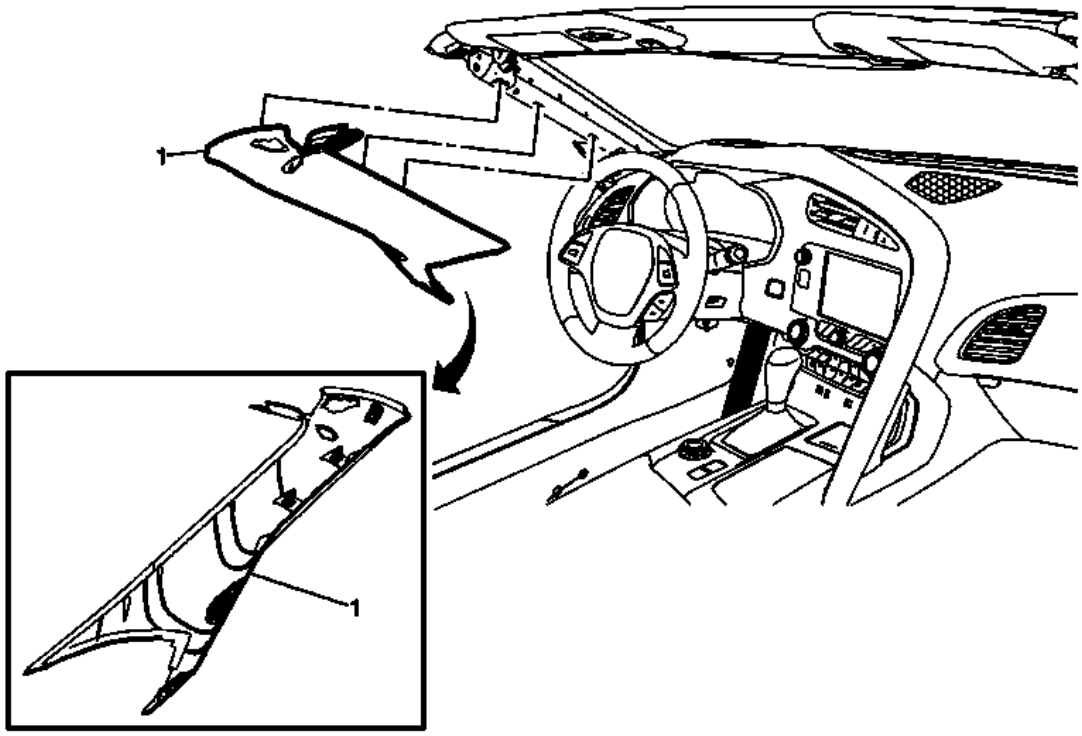

Fig. 33: Windshield Garnish Molding
Courtesy of GENERAL MOTORS COMPANY

3. Remove the windshield garnish molding (1). Refer to **Windshield Garnish Molding Replacement** .

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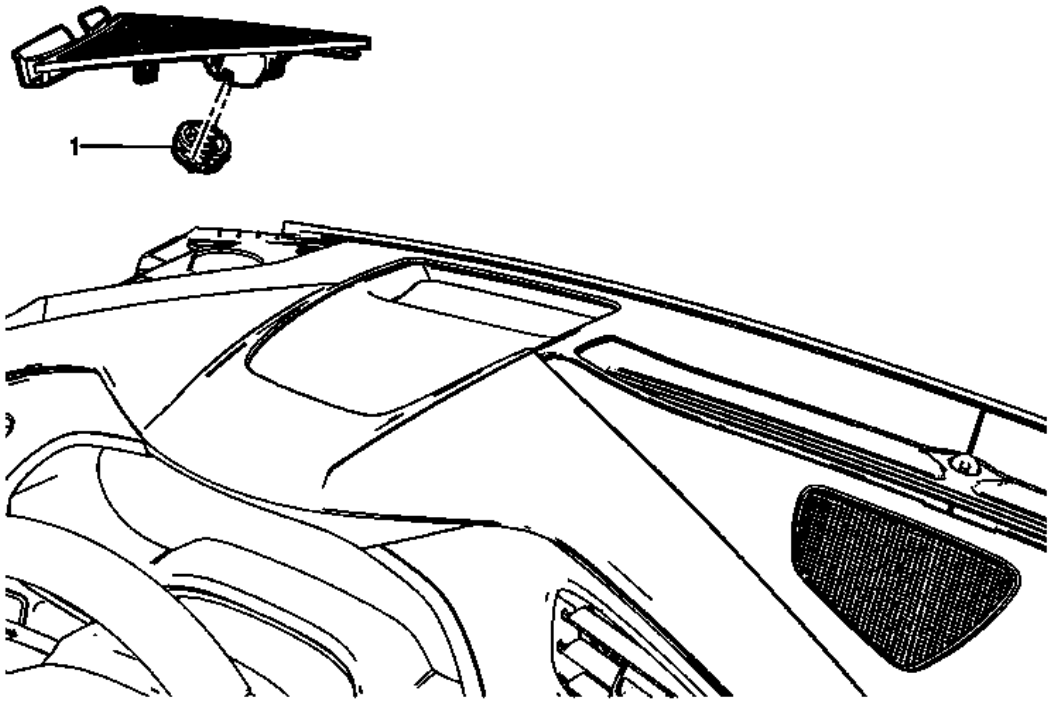

Fig. 34: Left Radio Front Speaker
Courtesy of GENERAL MOTORS COMPANY

4. Remove the left radio front speaker (1). Refer to **Radio Front Speaker Replacement (Left Side)** , **Radio Front Speaker Replacement (Right Side)** .

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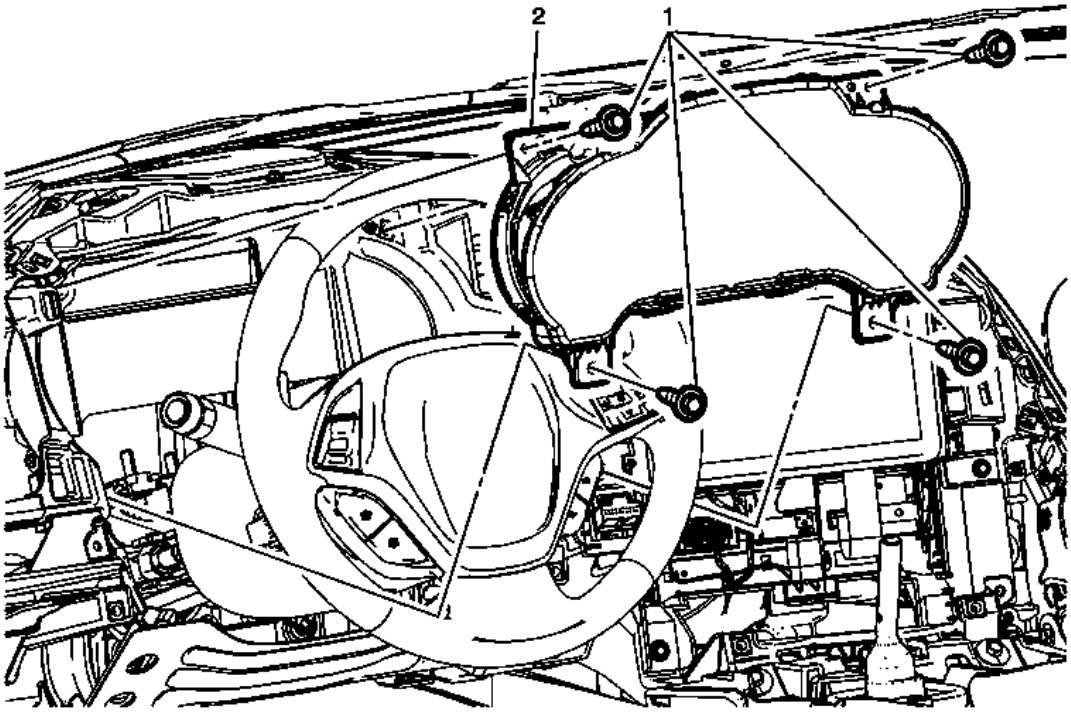

Fig. 35: Instrument Cluster
Courtesy of GENERAL MOTORS COMPANY

5. Remove the instrument cluster (2). Refer to **Instrument Cluster Replacement** .

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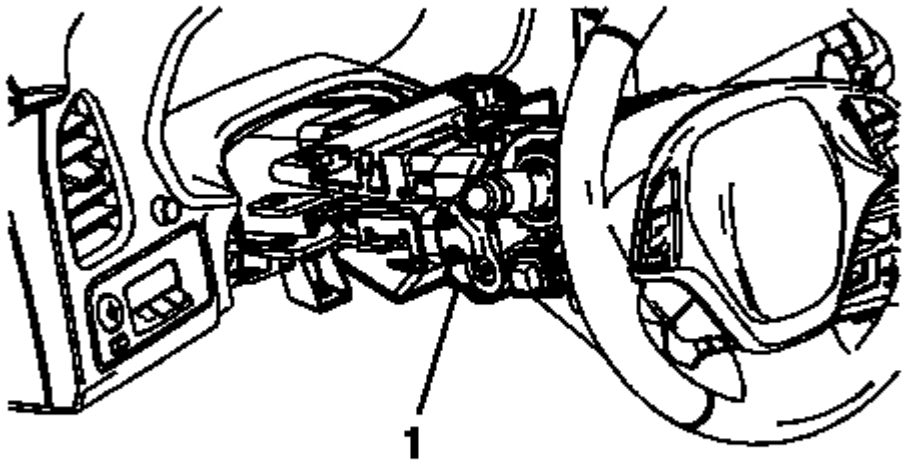

Fig. 36: Steering Column
Courtesy of GENERAL MOTORS COMPANY

6. Remove the steering column (1). Refer to **Steering Column Replacement (Without Electronic Steering Column Lock)** , **Steering Column Replacement (With Electronic Steering Column Lock)** .

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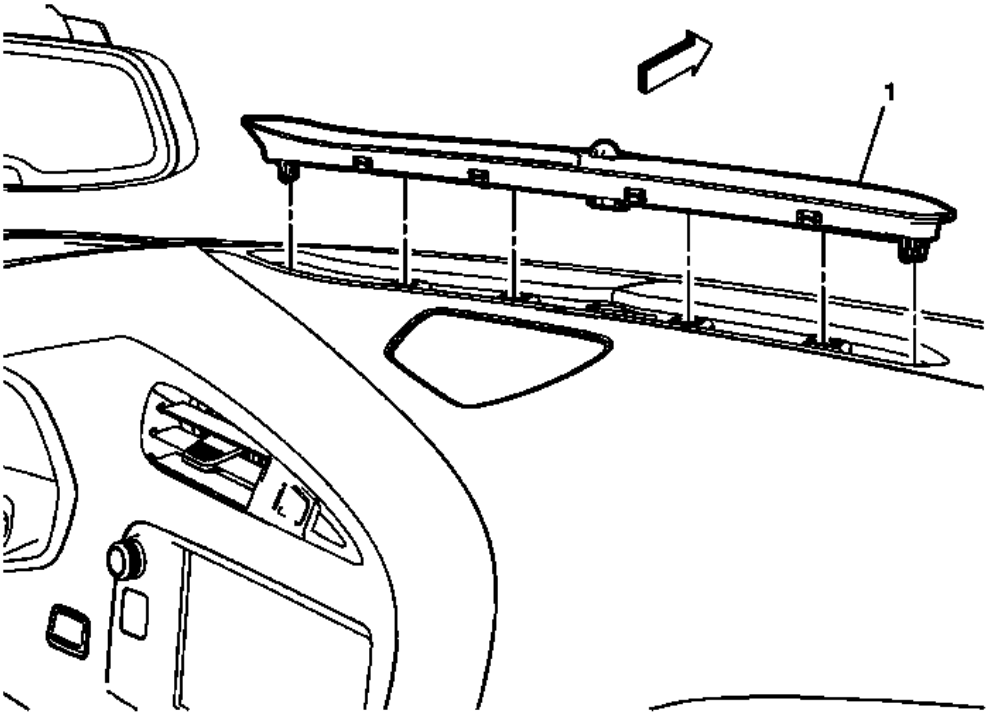

Fig. 37: Instrument Panel Upper Trim Panel Cover
Courtesy of GENERAL MOTORS COMPANY

7. Remove the instrument panel upper trim panel cover (1). Refer to **Instrument Panel Upper Trim Panel Cover Replacement**.

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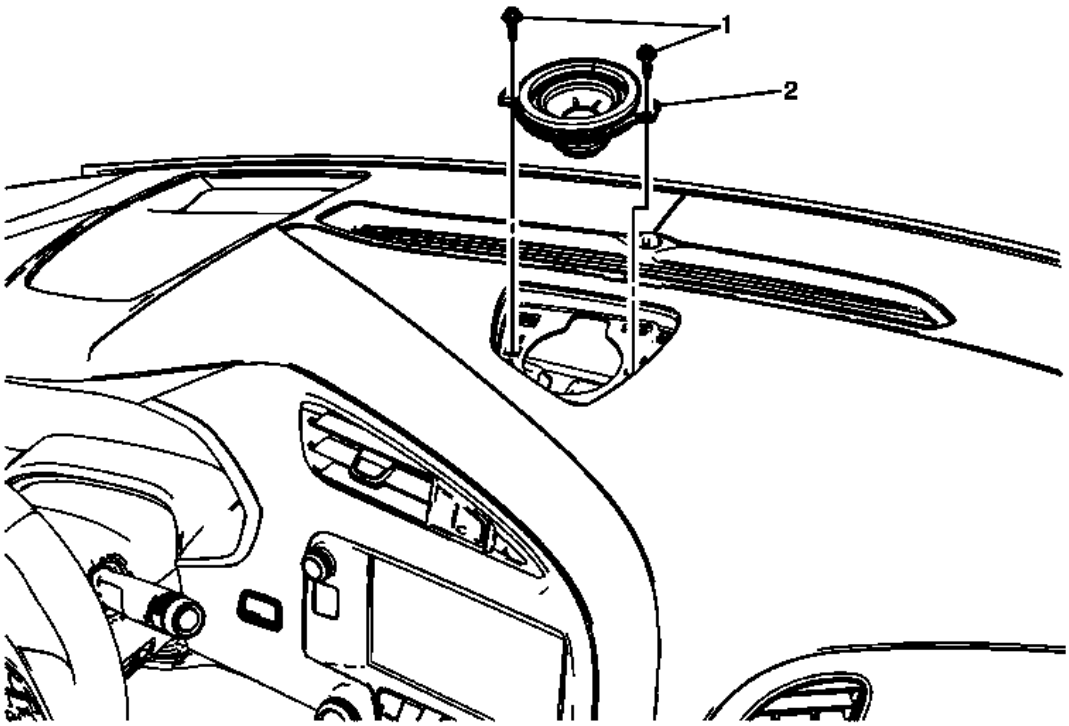

Fig. 38: Radio Front Center Speaker
Courtesy of GENERAL MOTORS COMPANY

8. Remove the radio front center speaker (2). Refer to **Radio Front Center Speaker Replacement** .

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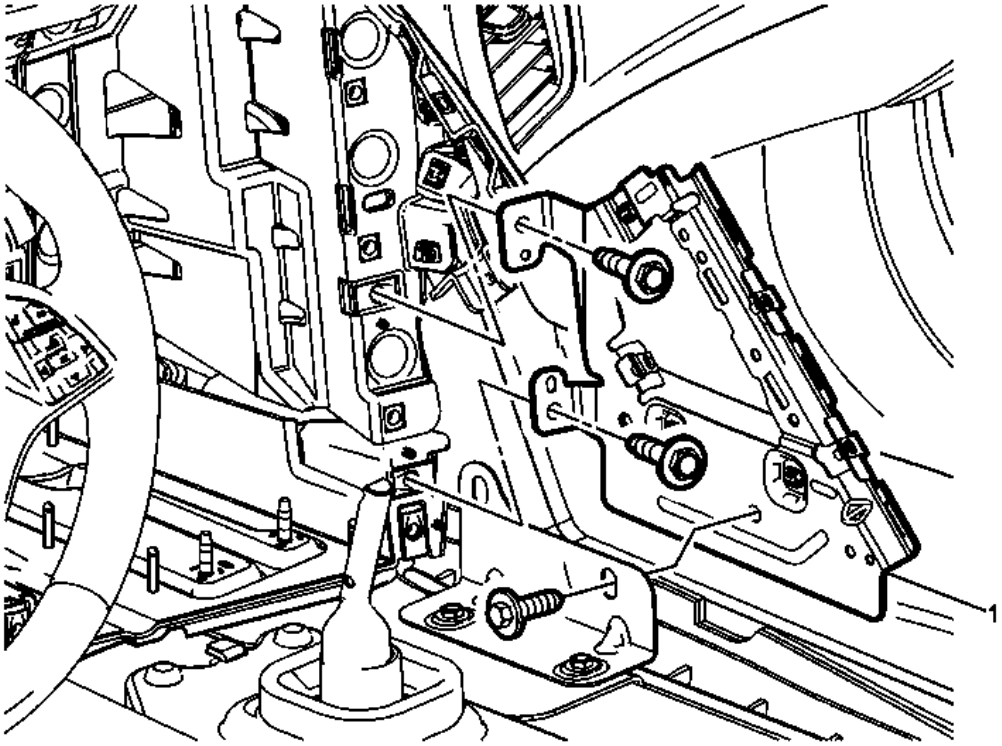

Fig. 39: Instrument Panel Accessory Bracket
Courtesy of GENERAL MOTORS COMPANY

9. Remove the instrument panel accessory bracket (1). Refer to **Instrument Panel Accessory Bracket Replacement**.

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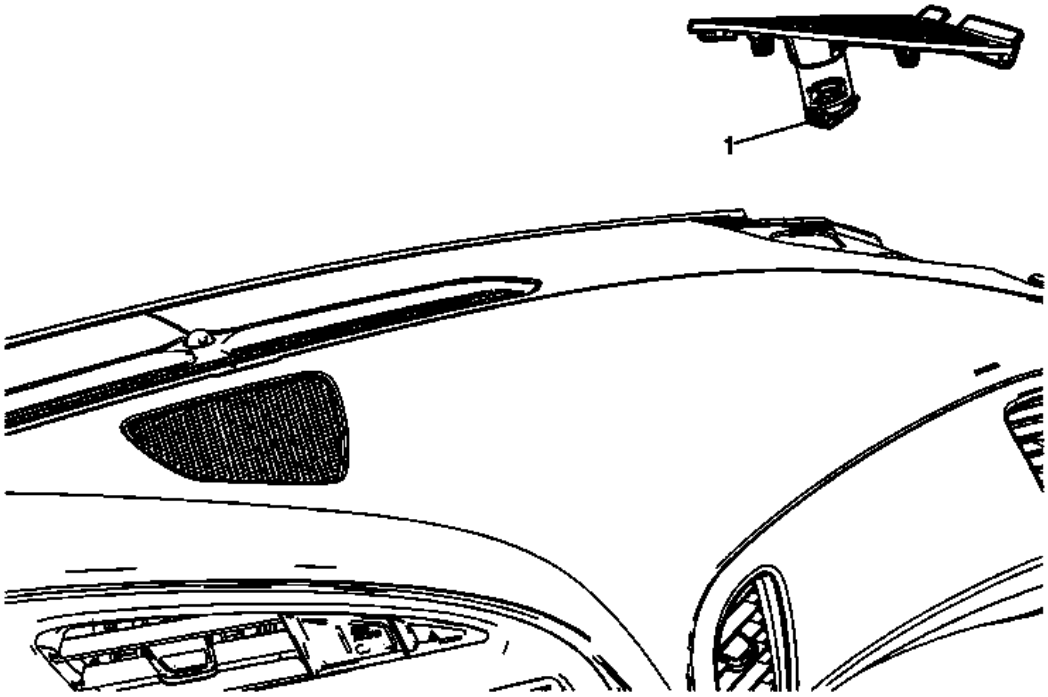

Fig. 40: Right Radio Front Speaker
Courtesy of GENERAL MOTORS COMPANY

10. Remove the right radio front speaker (1). Refer to **Radio Front Speaker Replacement (Left Side)** , **Radio Front Speaker Replacement (Right Side)** .

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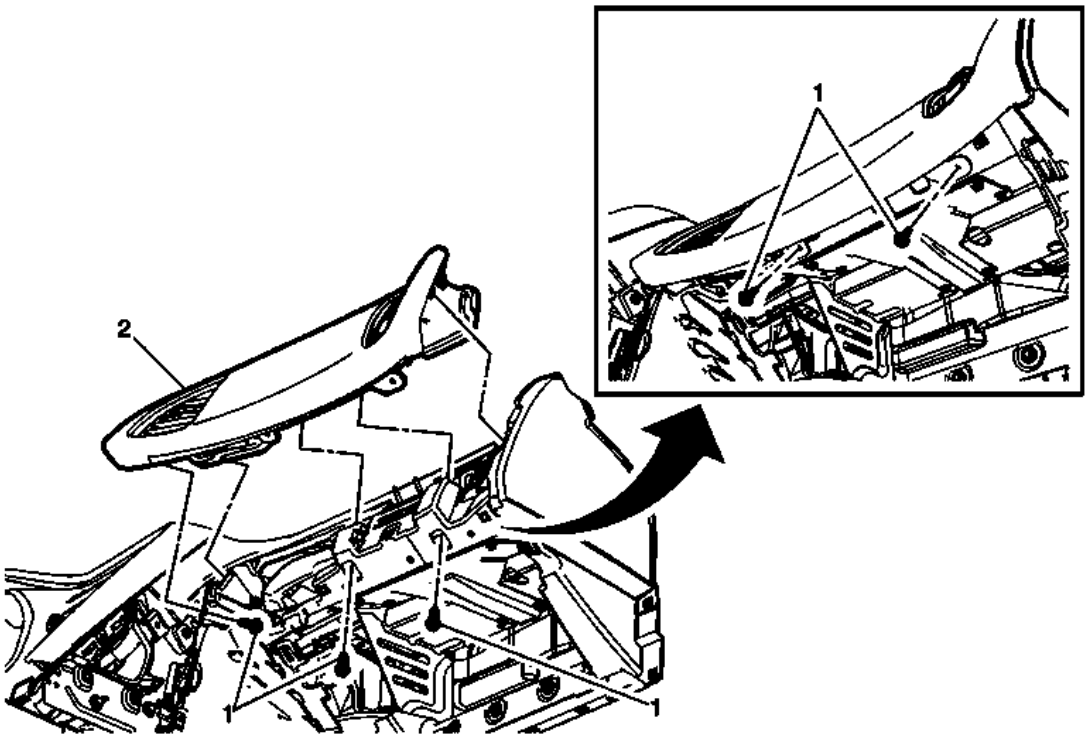

Fig. 41: Instrument Panel Trim Pad
Courtesy of GENERAL MOTORS COMPANY

11. Remove the instrument panel trim pad (2). Refer to **Instrument Panel Trim Pad Replacement**.

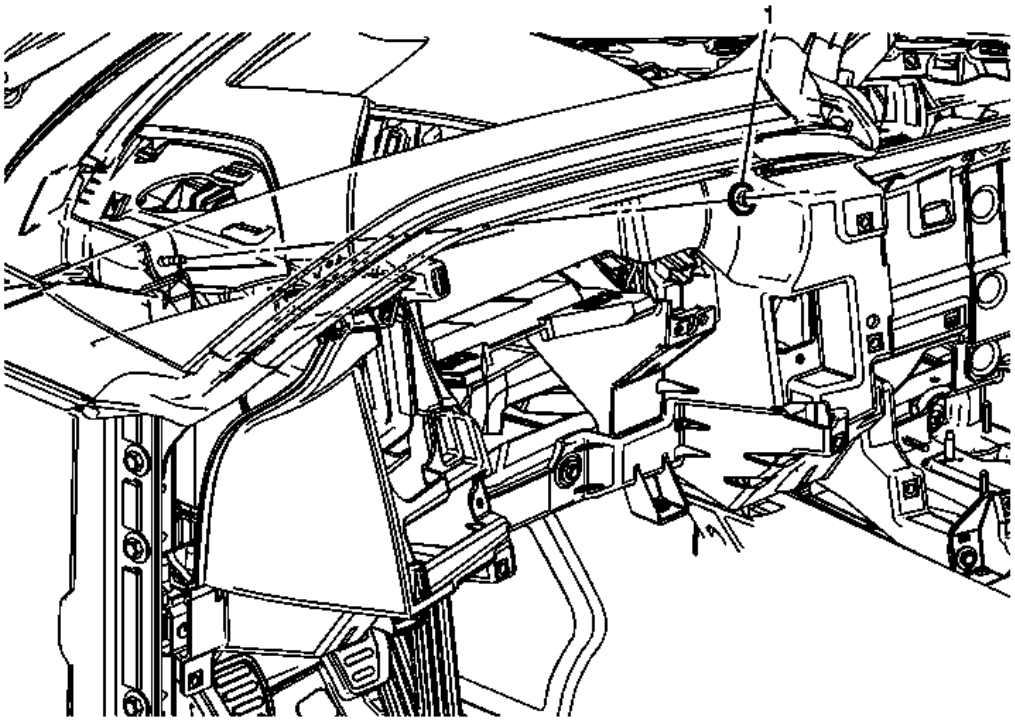

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Fig. 42: Instrument Panel Retainer Nut
Courtesy of GENERAL MOTORS COMPANY

12. Remove the instrument panel retainer nut (1).

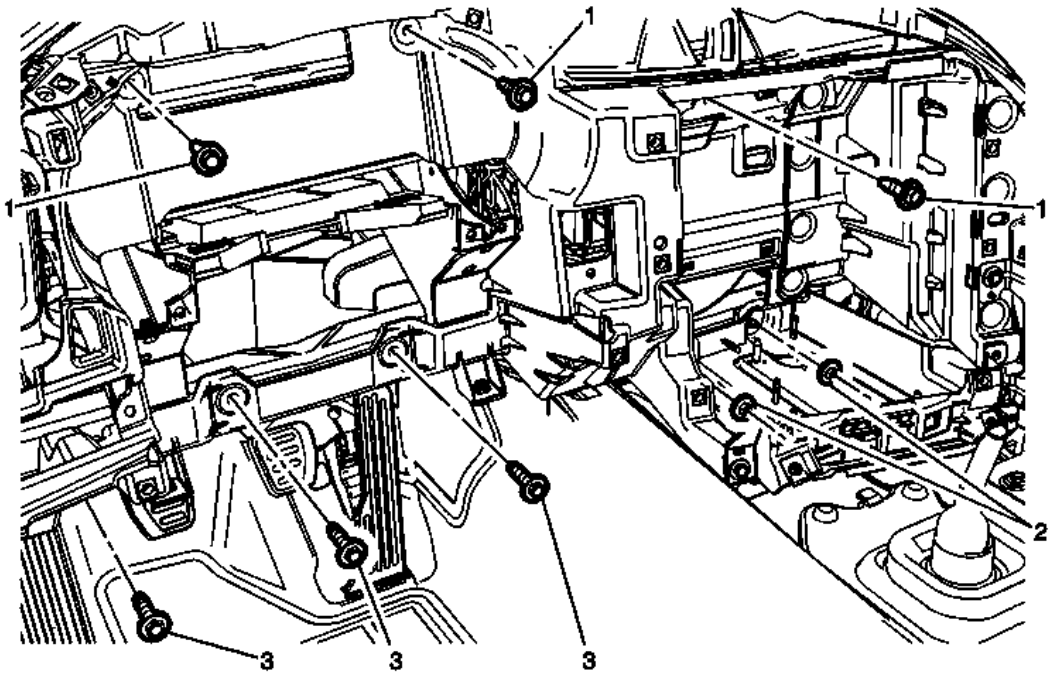

Fig. 43: Instrument Panel Retainer Nut And Bolt
Courtesy of GENERAL MOTORS COMPANY

13. Remove the instrument panel retainer bolt (1).
14. Remove the instrument panel retainer nut (2) and the instrument panel retainer bolt (3).

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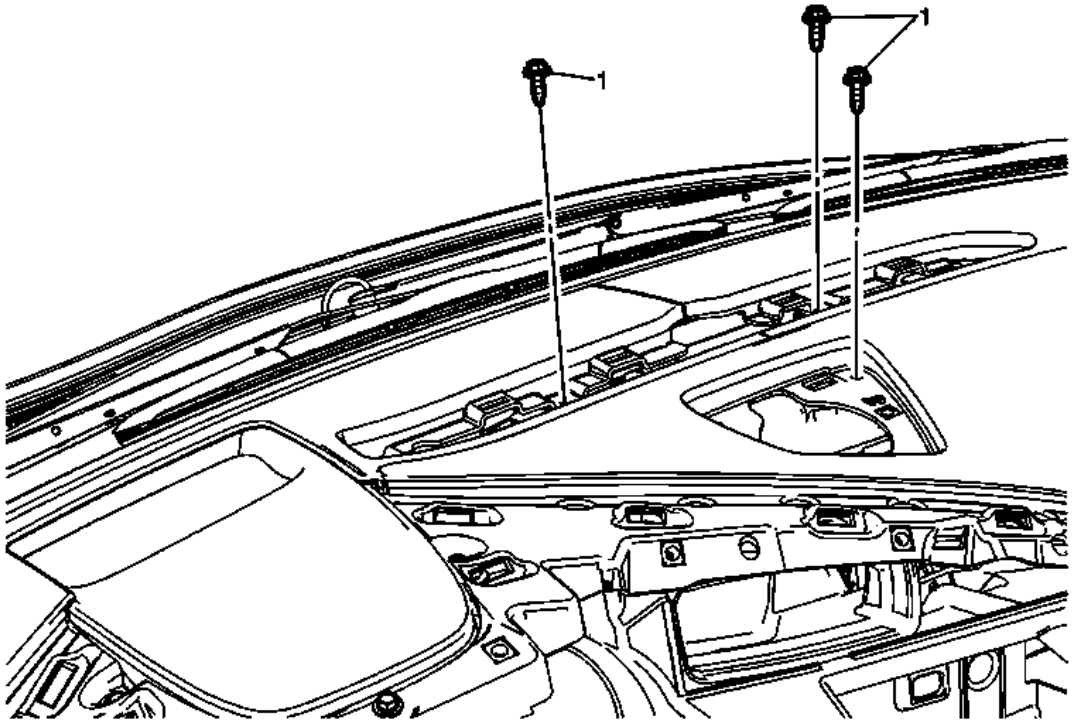

Fig. 44: Instrument Panel Retainer Bolt
Courtesy of GENERAL MOTORS COMPANY

15. Remove the instrument panel retainer bolt (1).

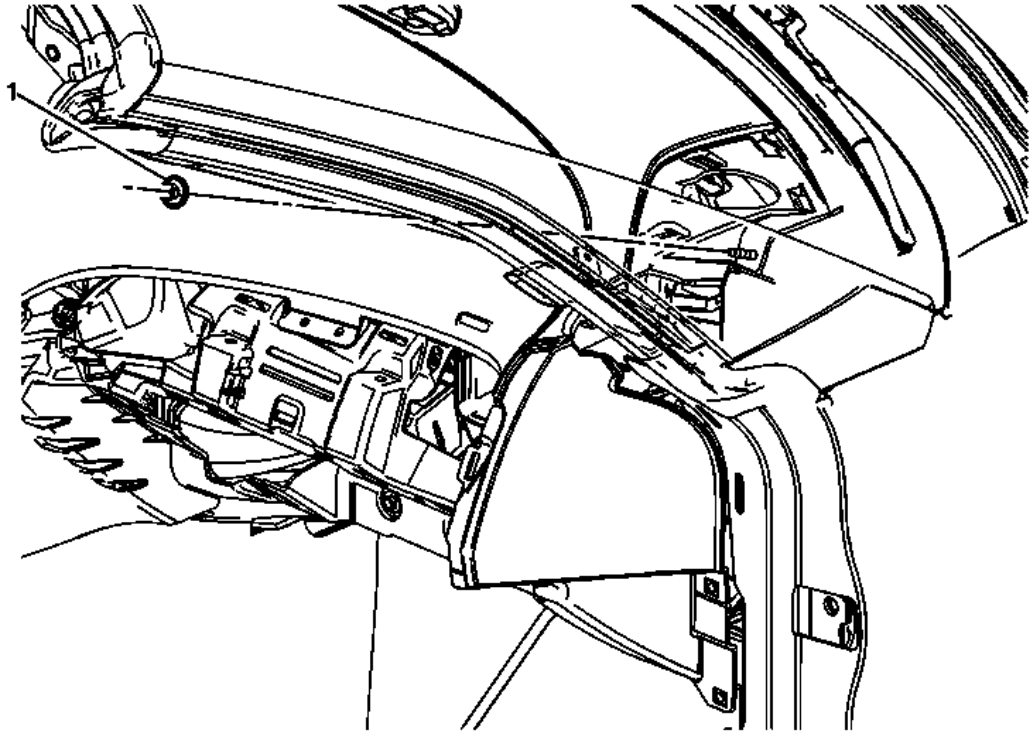

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Fig. 45: Instrument Panel Retainer Nut
Courtesy of GENERAL MOTORS COMPANY

16. Remove the instrument panel retainer nut (1).

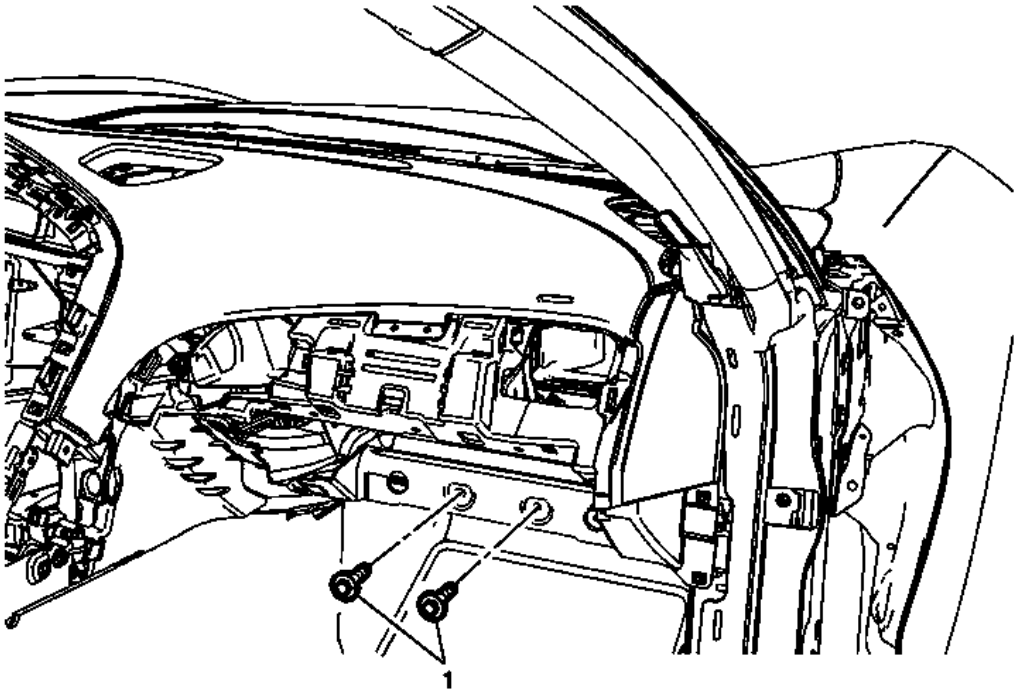

Fig. 46: Instrument Panel Trim Pad Bolt
Courtesy of GENERAL MOTORS COMPANY

17. Remove the instrument panel trim pad bolt (1).

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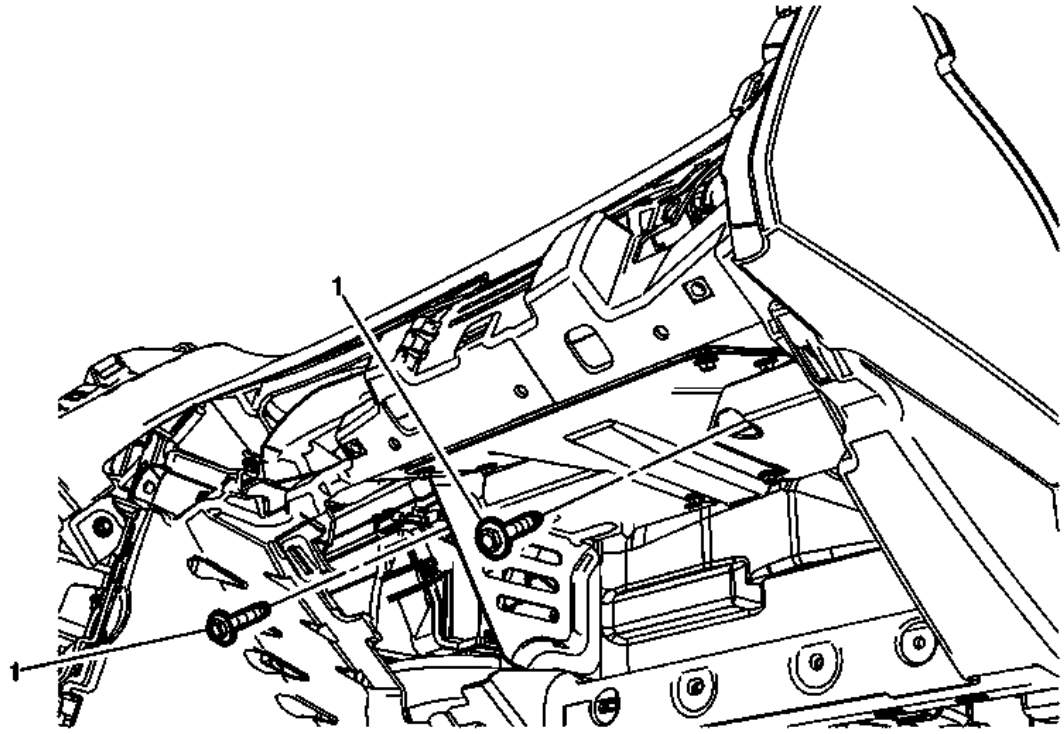

Fig. 47: Instrument Panel Inflatable Restraint Module Bolt
Courtesy of GENERAL MOTORS COMPANY

18. Remove the instrument panel inflatable restraint module bolt (1).

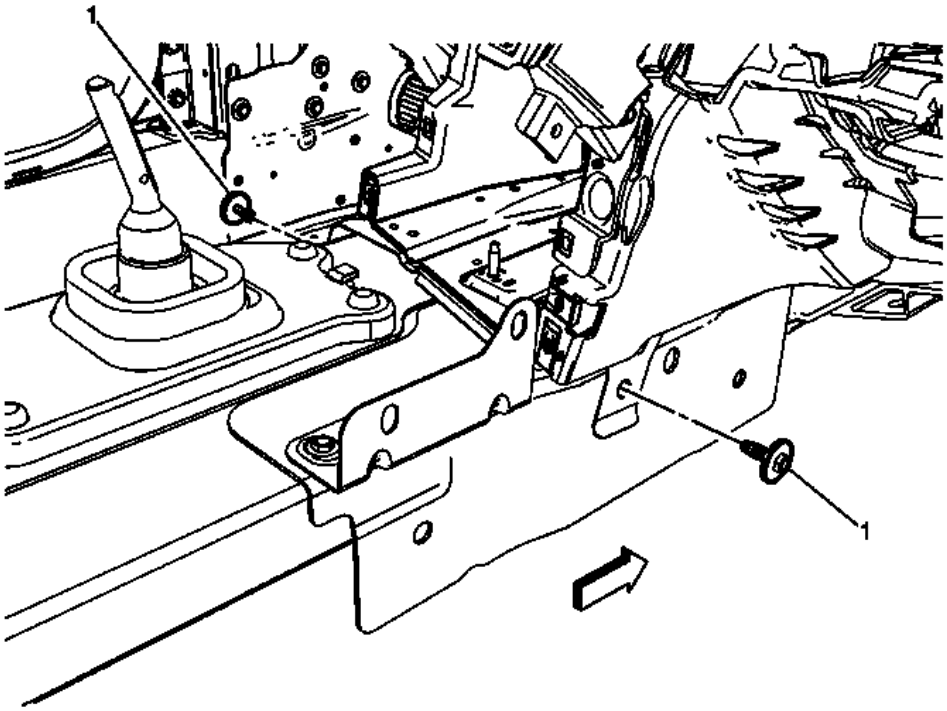

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Fig. 48: Instrument Panel Center Support Bracket Bolt
Courtesy of GENERAL MOTORS COMPANY

19. Remove the instrument panel center support bracket bolt (1).
20. Note location and routing of the instrument panel wiring harness prior to removal of the instrument panel assembly to ensure proper reinstallation.
21. Disconnect the wiring harness from the instrument panel assembly.

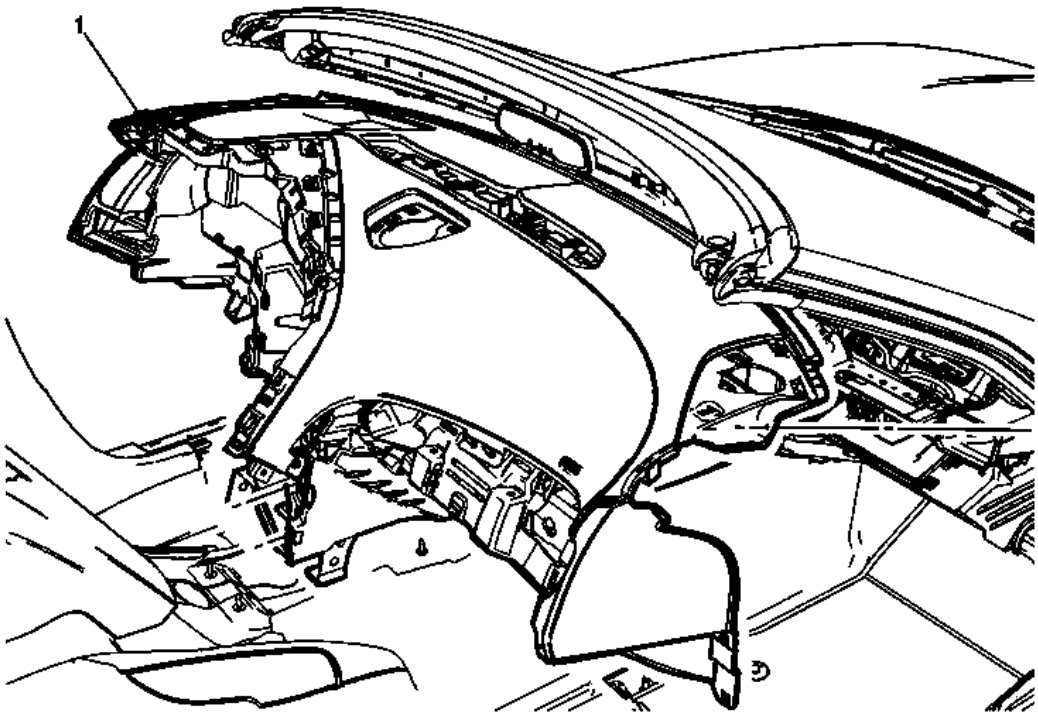

Fig. 49: Instrument Panel Assembly
Courtesy of GENERAL MOTORS COMPANY

22. When removing the instrument panel assembly (1) apply tape to the edges of instrument panel to prevent marring.
23. With the aid of an assistant, remove the instrument panel assembly (1) from the vehicle.
24. When replacing the instrument panel assembly (1), transfer all necessary components.

Installation Procedure

1. When replacing the instrument panel assembly apply tape to the edges of the new panel.

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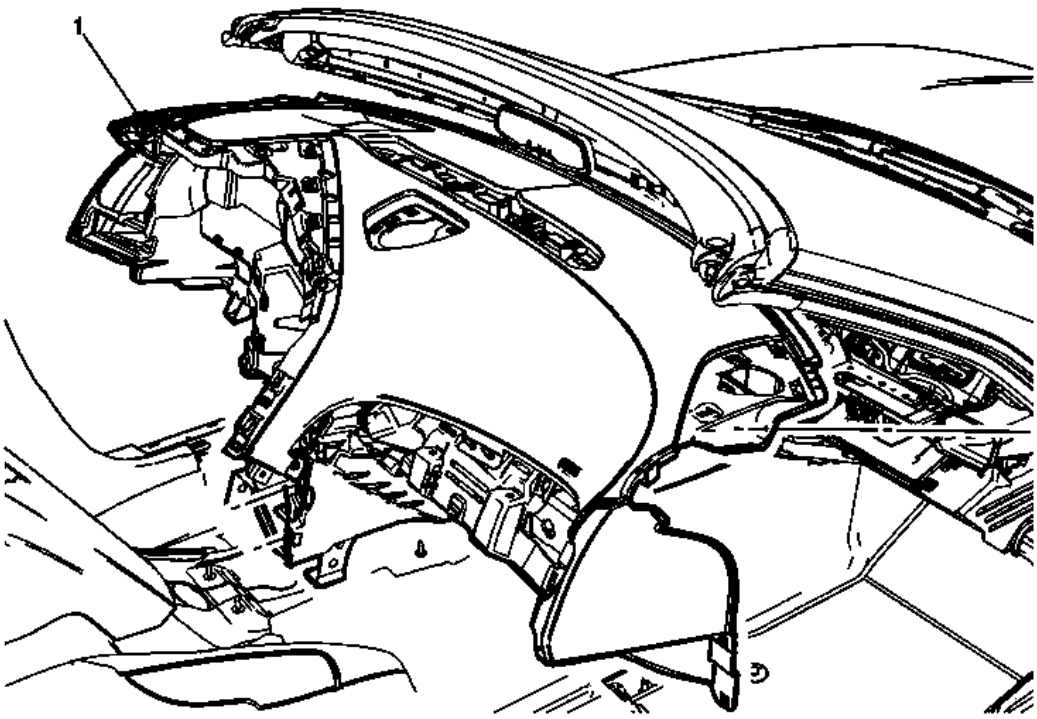

Fig. 50: Instrument Panel Assembly
Courtesy of GENERAL MOTORS COMPANY

2. With the aid of an assistant, position the instrument panel assembly (1) into the vehicle.
3. Reposition the instrument panel wiring harness into vehicle position as was noted in the removal process and connect the fasteners securing the instrument panel wiring harness to the instrument panel assembly.

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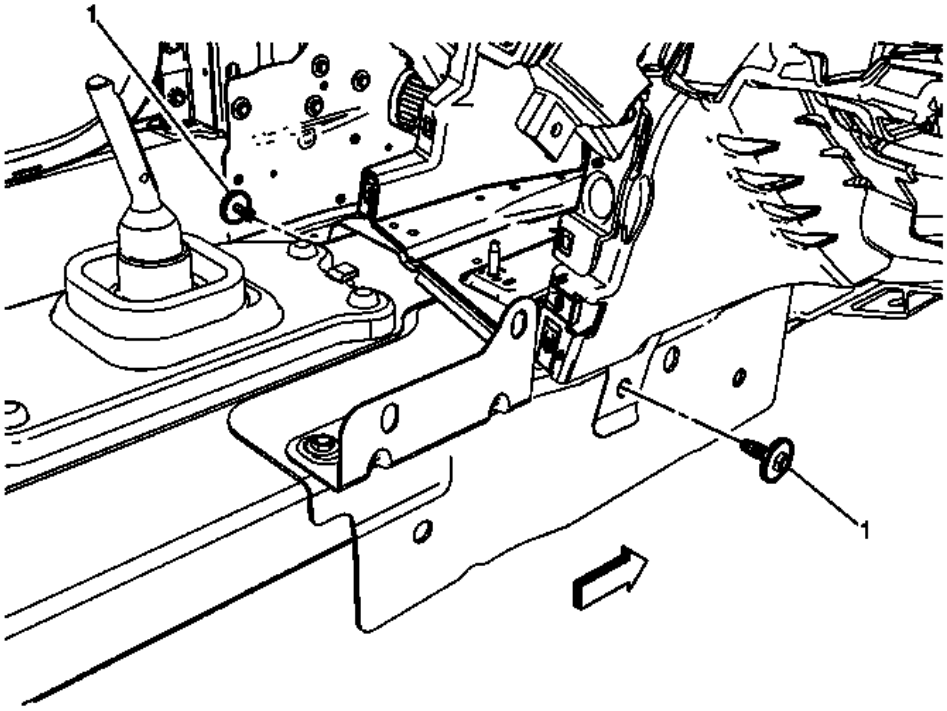

Fig. 51: Instrument Panel Center Support Bracket Bolt
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to Fastener Caution .

4. Install the instrument panel center support bracket bolt (1) and tighten to 9 (80 lb in).

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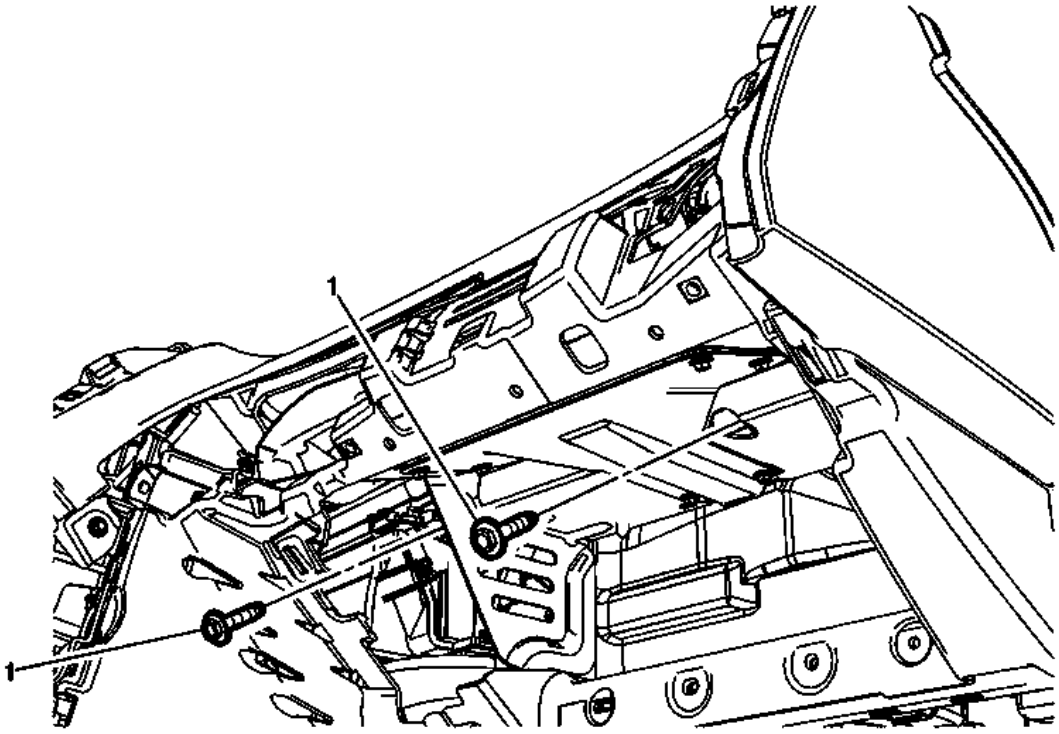

Fig. 52: Instrument Panel Inflatable Restraint Module Bolt
Courtesy of GENERAL MOTORS COMPANY

5. Install the instrument panel inflatable restraint module bolt (1) and tighten to 9 (80 lb in).

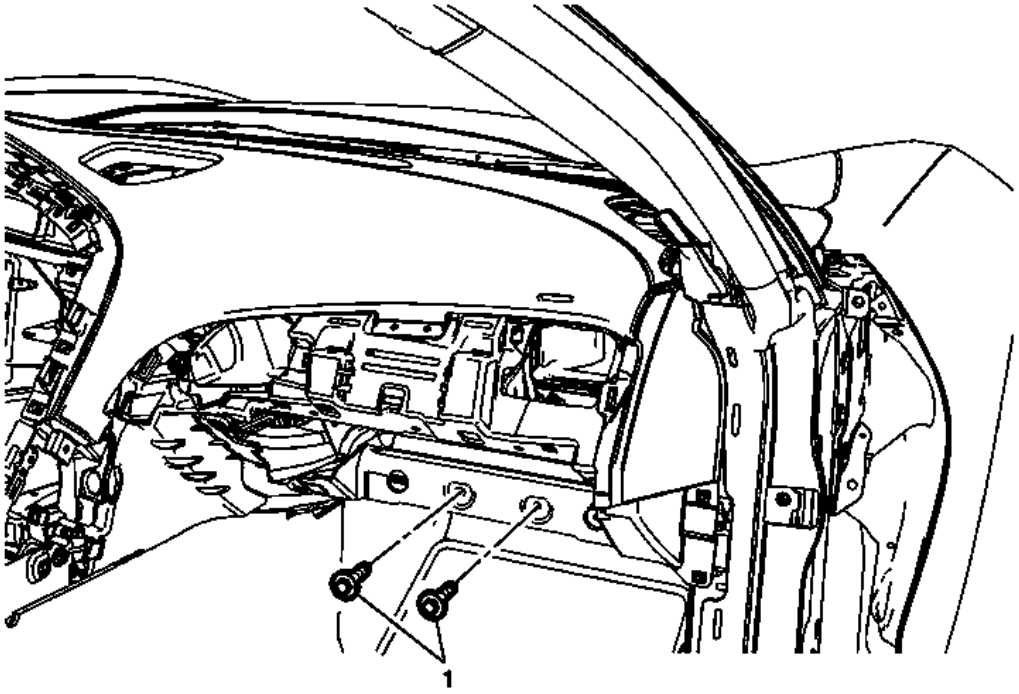

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Fig. 53: Instrument Panel Trim Pad Bolt
Courtesy of GENERAL MOTORS COMPANY

6. Install the instrument panel trim pad bolt (1) and tighten to 6 (53 lb in).

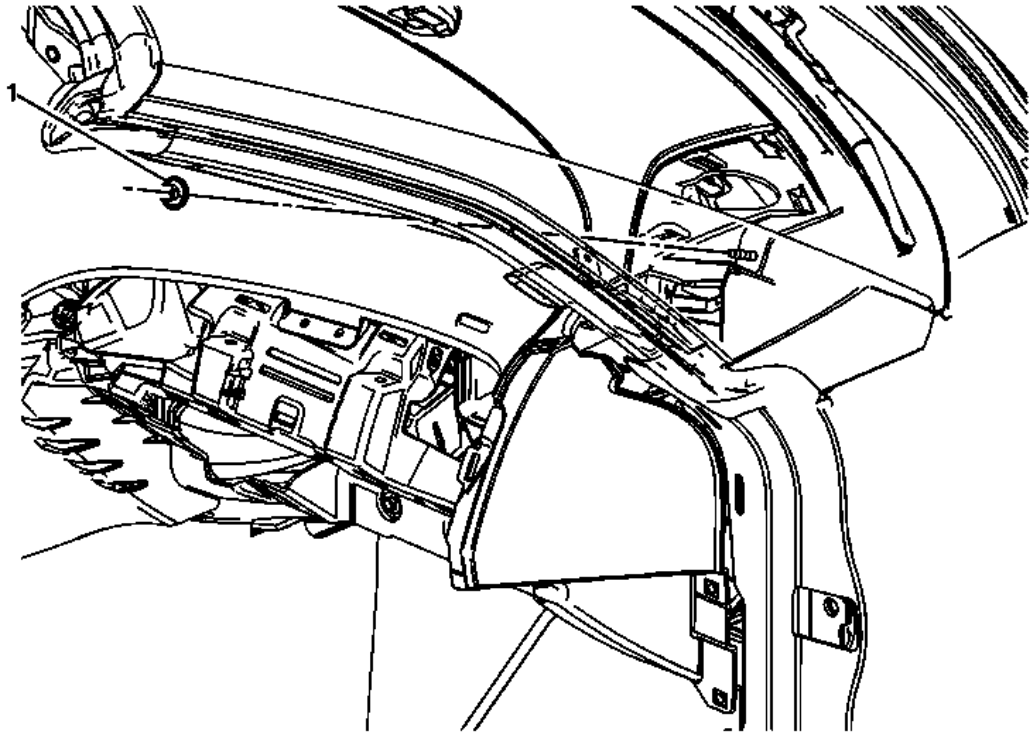

Fig. 54: Instrument Panel Retainer Nut
Courtesy of GENERAL MOTORS COMPANY

7. Install the instrument panel retainer nut (1) and tighten to 6 (53 lb in).

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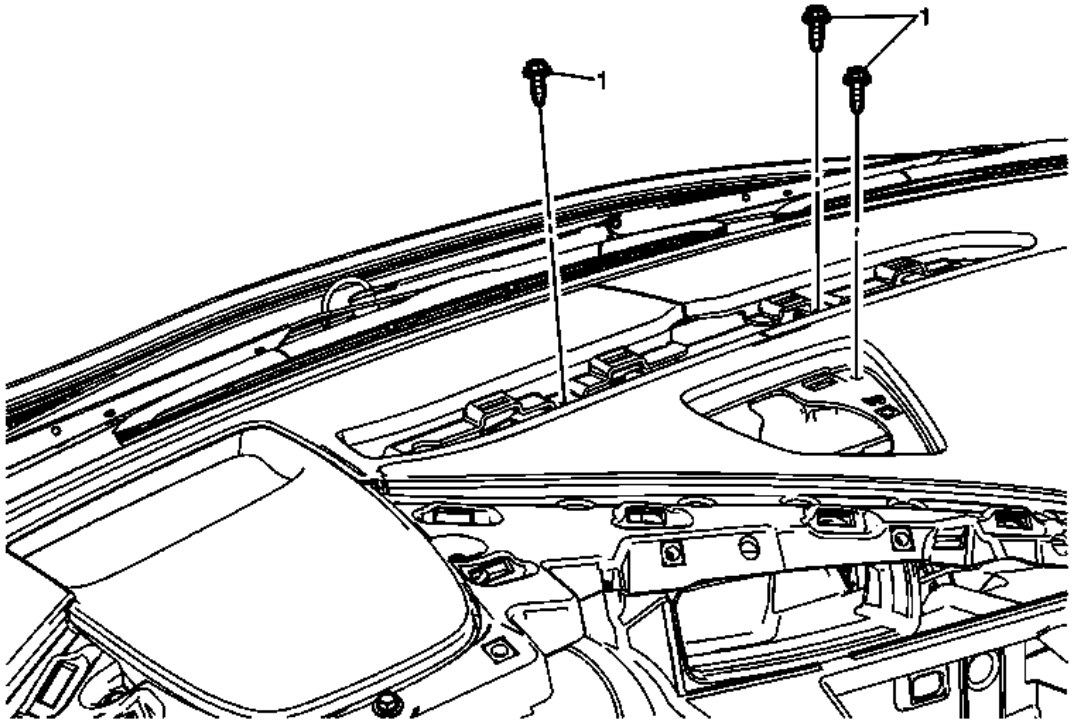

Fig. 55: Instrument Panel Retainer Bolt
Courtesy of GENERAL MOTORS COMPANY

8. Install the instrument panel retainer bolt (1) and tighten to 2.5 (22 lb in).

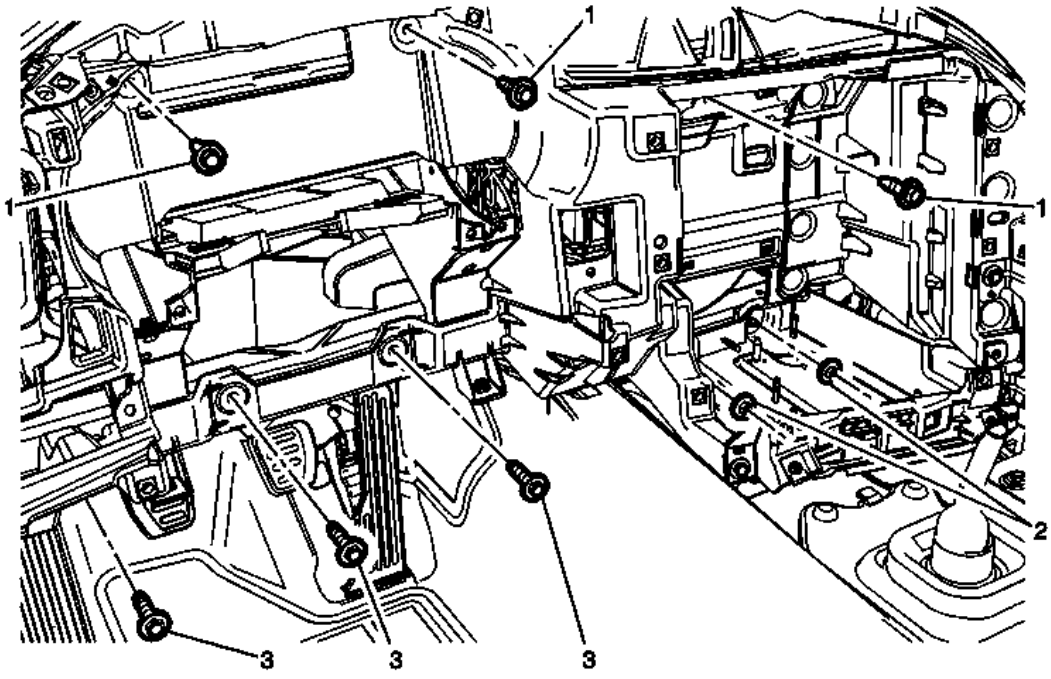

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Fig. 56: Instrument Panel Retainer Nut And Bolt
Courtesy of GENERAL MOTORS COMPANY

9. Install the instrument panel retainer bolt (1) and tighten to 2.5 (22 lb in).
10. Install the instrument panel retainer nut (2) and the instrument panel retainer bolt (3) and tighten to 6 (53 lb in).

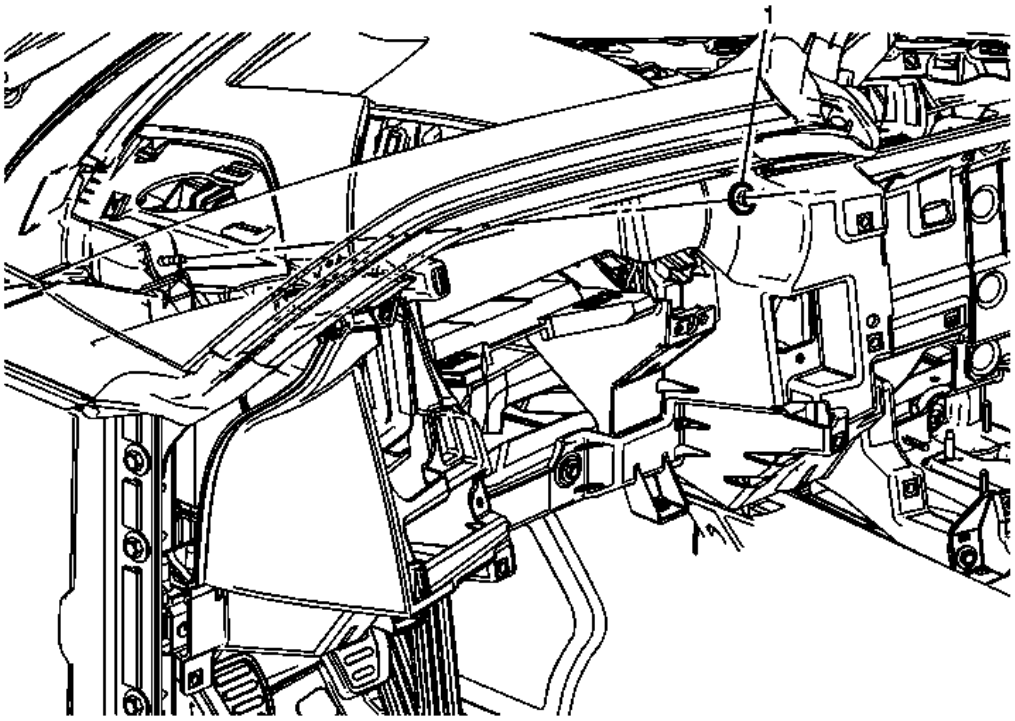

Fig. 57: Instrument Panel Retainer Nut
Courtesy of GENERAL MOTORS COMPANY

11. Install the instrument panel retainer nut (1) and tighten to 6 (53 lb in).

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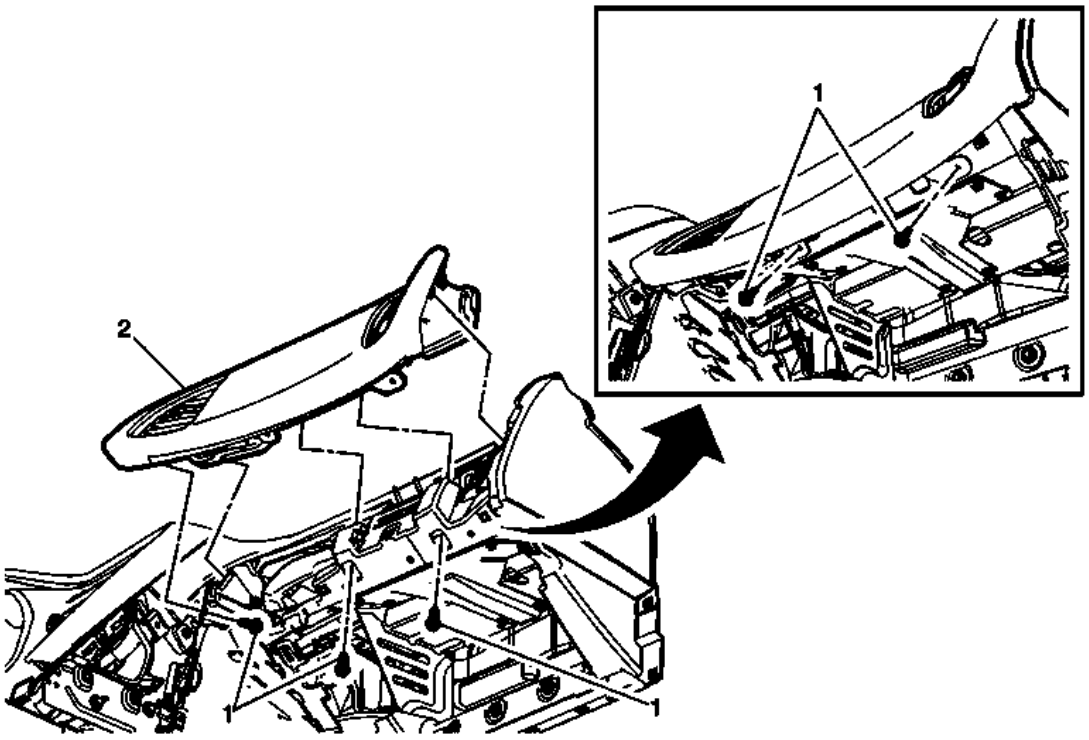

Fig. 58: Instrument Panel Trim Pad
Courtesy of GENERAL MOTORS COMPANY

12. Install the instrument panel trim pad (2). Refer to **Instrument Panel Trim Pad Replacement**.

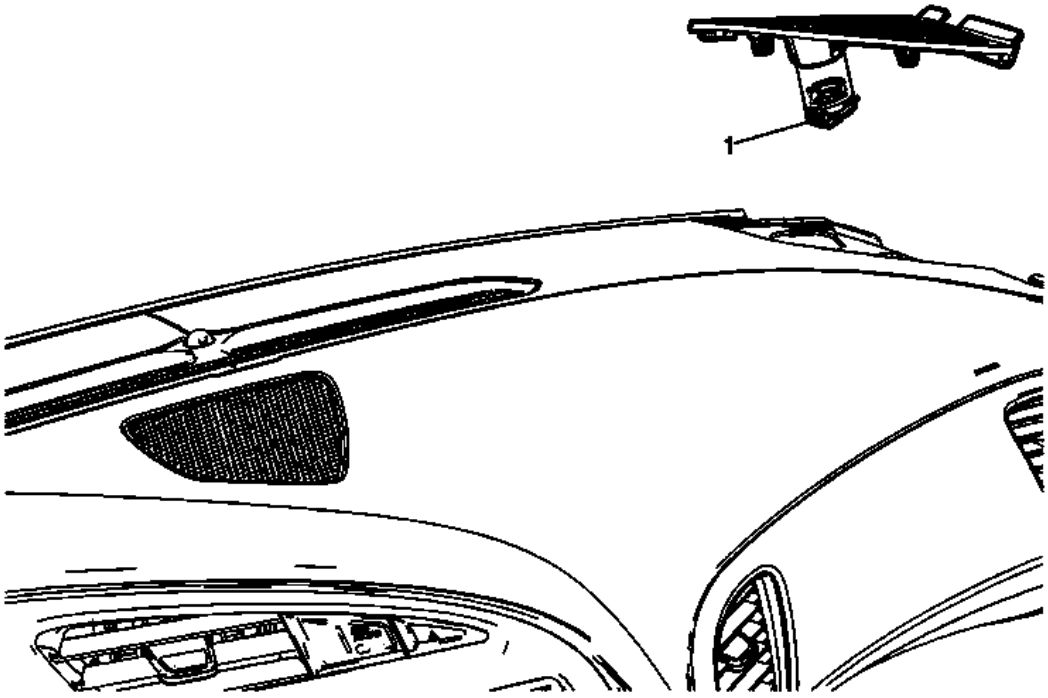

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Fig. 59: Right Radio Front Speaker
Courtesy of GENERAL MOTORS COMPANY

13. Install the right radio front speaker (1). Refer to **Radio Front Speaker Replacement (Left Side)** , **Radio Front Speaker Replacement (Right Side)** .

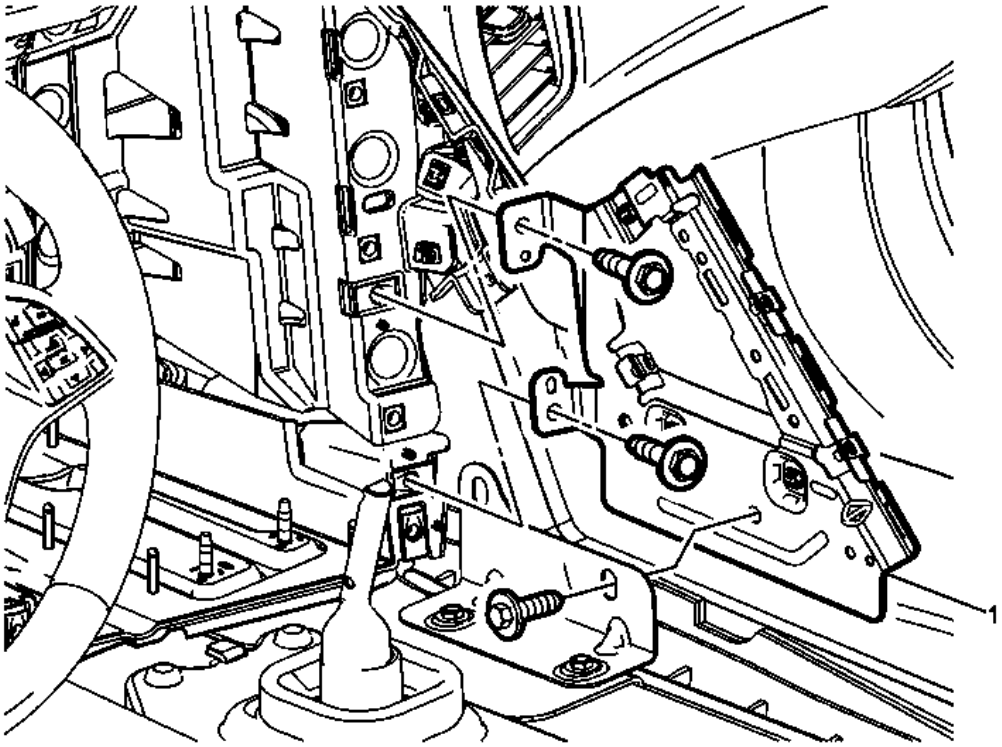

Fig. 60: Instrument Panel Accessory Bracket
Courtesy of GENERAL MOTORS COMPANY

14. Install the instrument panel accessory bracket (1). Refer to **Instrument Panel Accessory Bracket Replacement**.

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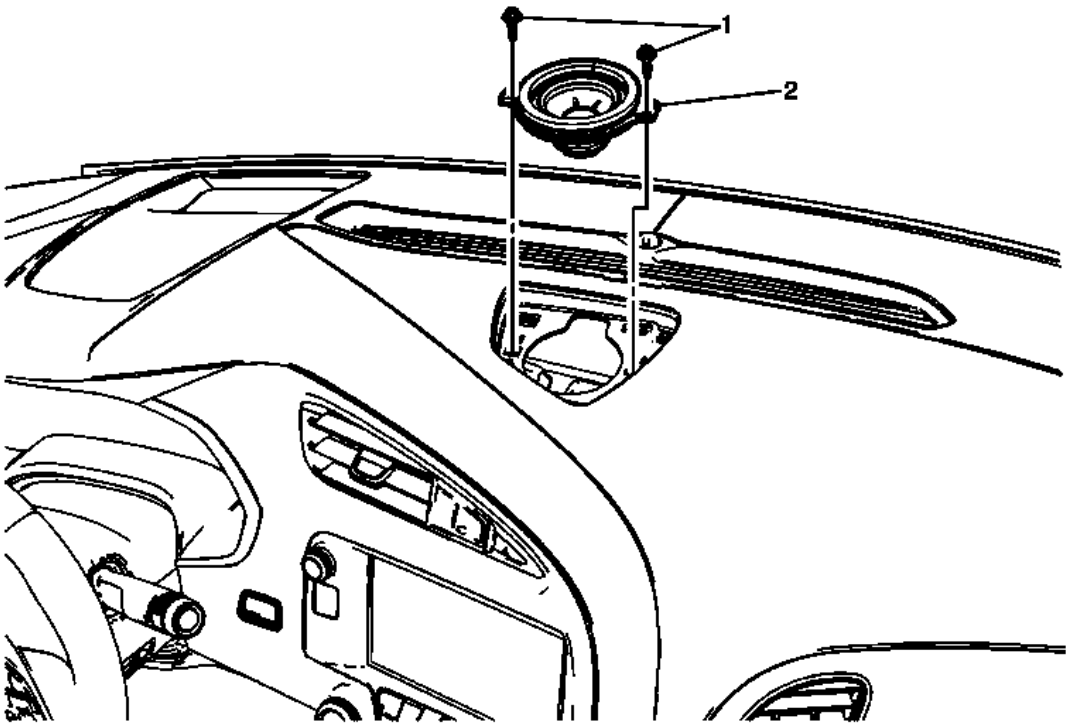

Fig. 61: Radio Front Center Speaker
Courtesy of GENERAL MOTORS COMPANY

15. Install the radio front center speaker (2). Refer to **Radio Front Center Speaker Replacement** .

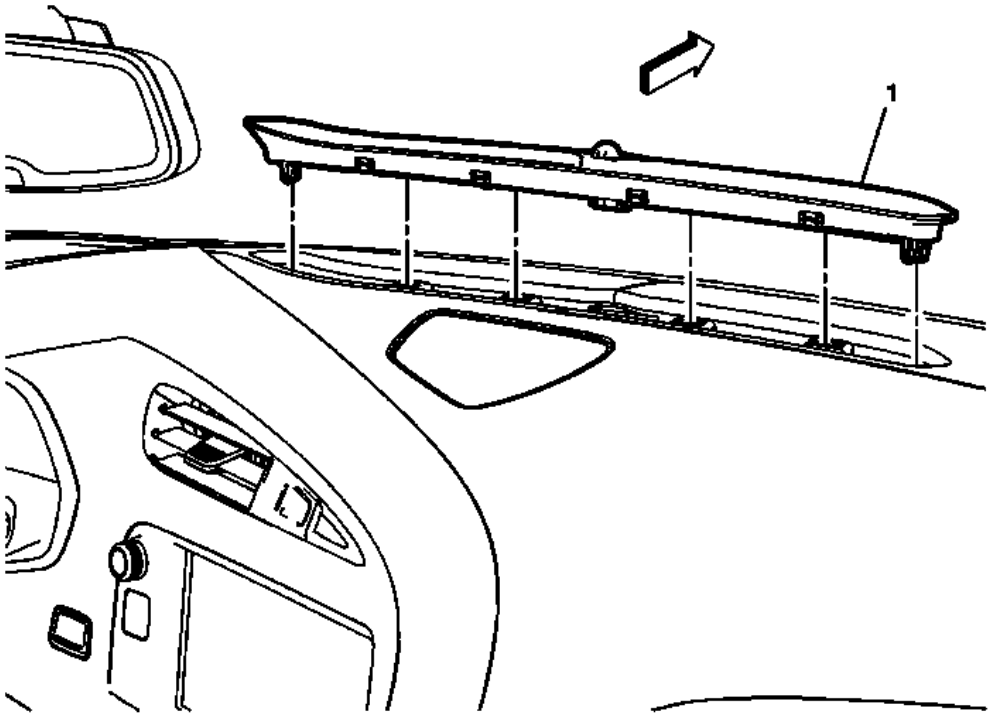

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Fig. 62: Instrument Panel Upper Trim Panel Cover
Courtesy of GENERAL MOTORS COMPANY

16. Install the instrument panel upper trim panel cover (1). Refer to **Instrument Panel Upper Trim Panel Cover Replacement**.

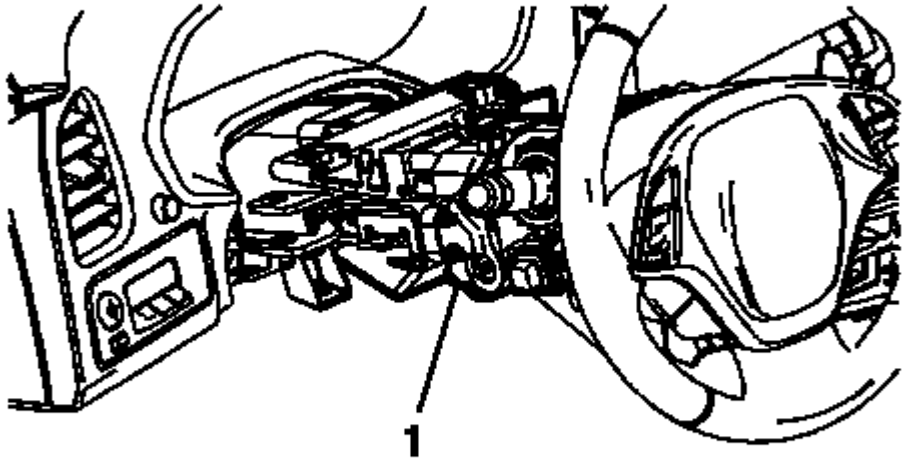

Fig. 63: Steering Column
Courtesy of GENERAL MOTORS COMPANY

17. Install the steering column (1). Refer to **Steering Column Replacement (Without Electronic Steering Column Lock)** , **Steering Column Replacement (With Electronic Steering Column Lock)** .

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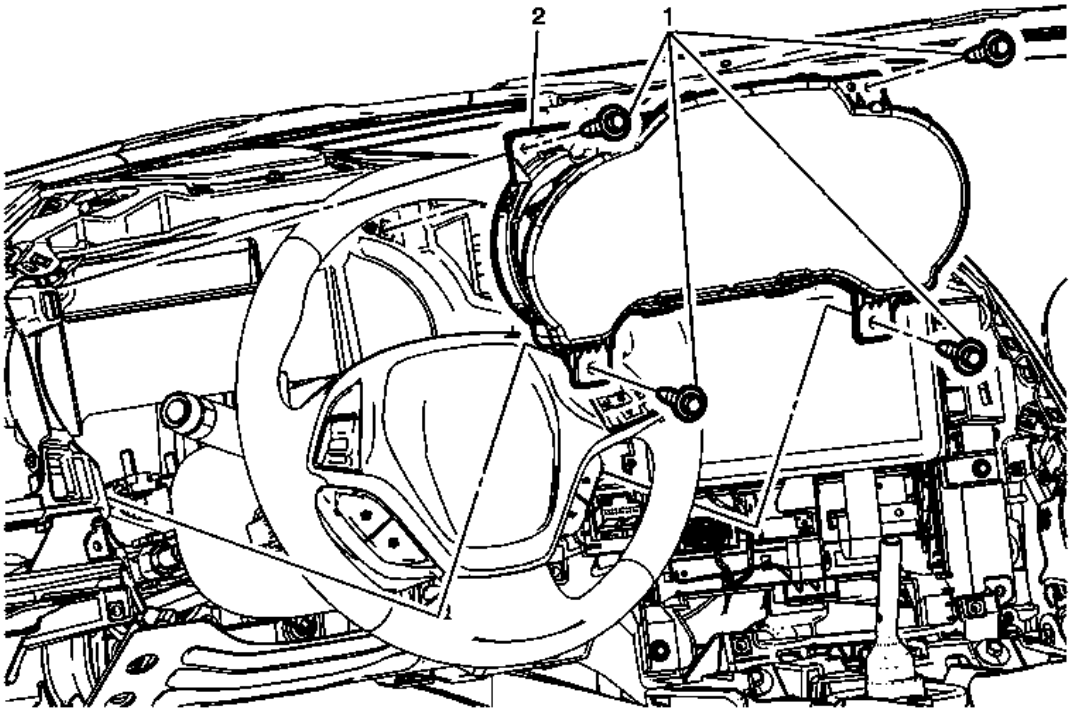

Fig. 64: Instrument Cluster
Courtesy of GENERAL MOTORS COMPANY

18. Install the instrument cluster (2). Refer to **Instrument Cluster Replacement** .

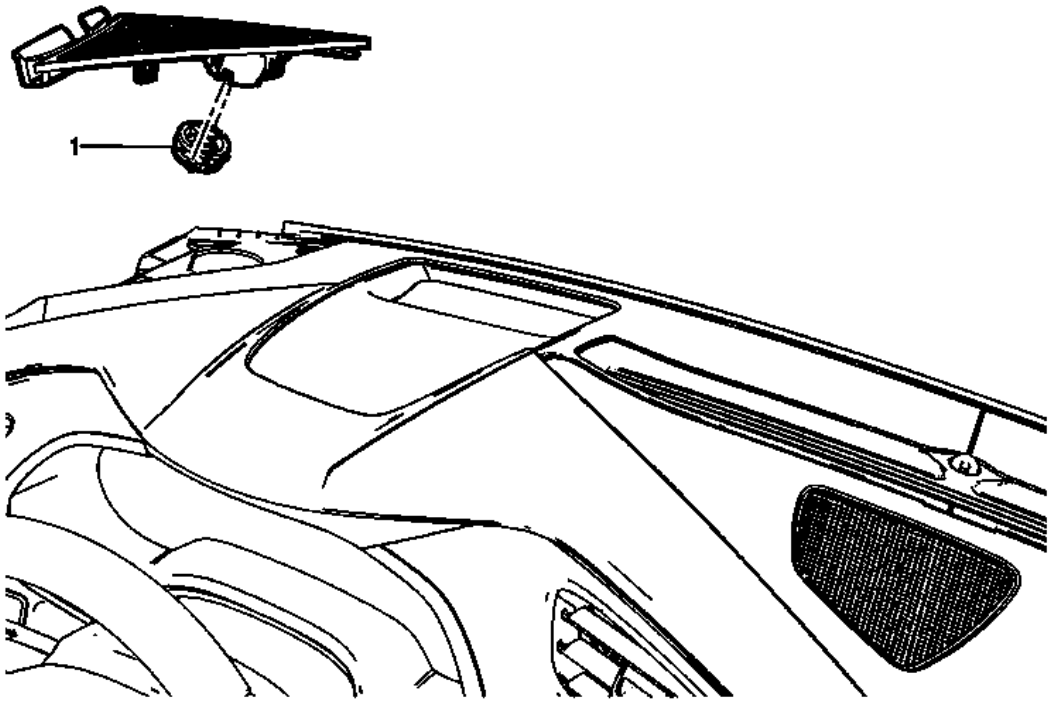

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Fig. 65: Left Radio Front Speaker
Courtesy of GENERAL MOTORS COMPANY

19. Install the left radio front speaker (1). Refer to **Radio Front Speaker Replacement (Left Side)** , **Radio Front Speaker Replacement (Right Side)** .

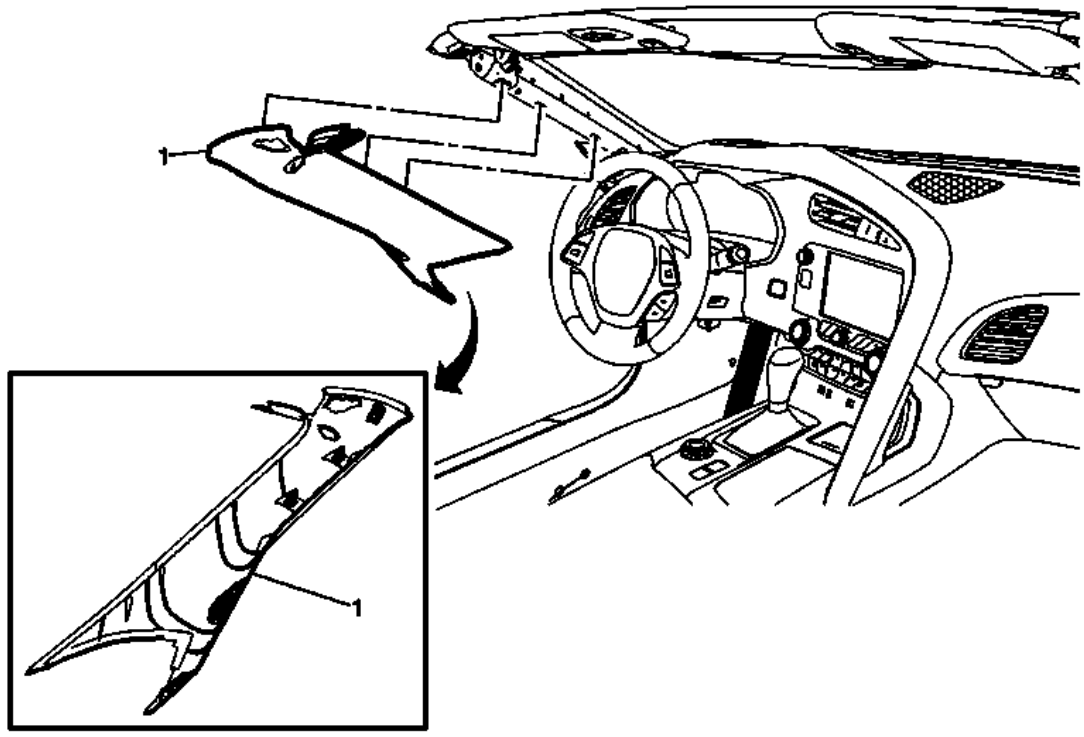

Fig. 66: Windshield Garnish Molding
Courtesy of GENERAL MOTORS COMPANY

20. Install the windshield garnish molding (1). Refer to **Windshield Garnish Molding Replacement** .

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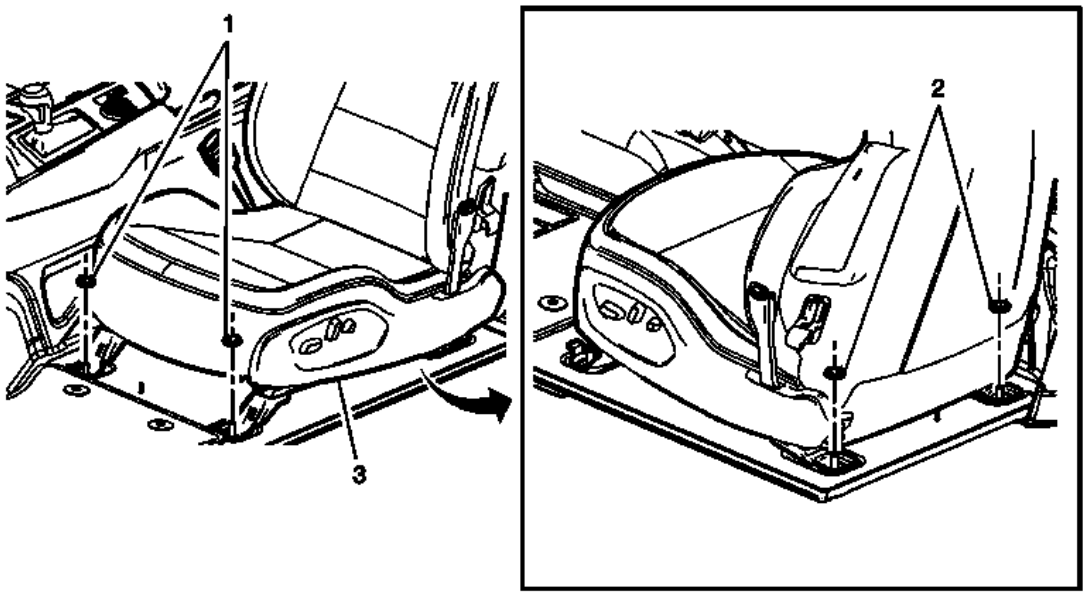

Fig. 67: Driver And Passenger Seat
Courtesy of GENERAL MOTORS COMPANY

21. Install the driver and passenger seat (3). Refer to **Driver or Passenger Seat Removal and Installation** .
22. Enable the SIR system. Refer to **SIR Disabling and Enabling** .

INSTRUMENT PANEL CARRIER REINFORCEMENT REPLACEMENT

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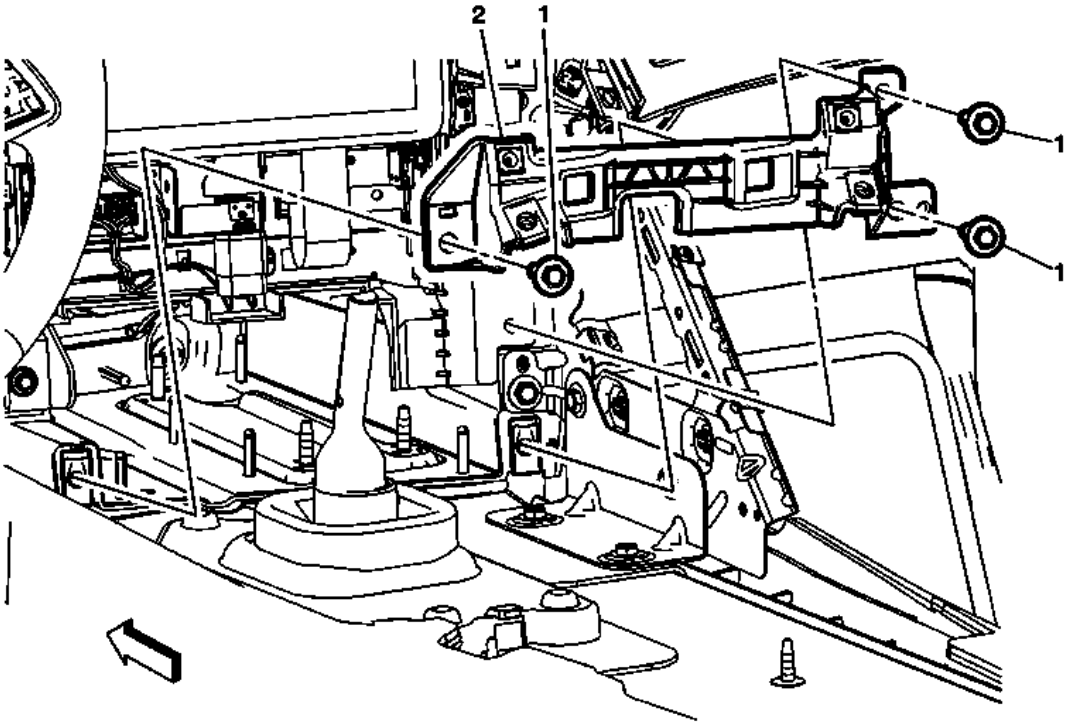

Fig. 68: Instrument Panel Carrier Reinforcement
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Carrier Reinforcement Replacement

Callout	Component Name
Preliminary Procedure 1. Remove the instrument panel trim plate. Refer to **Instrument Panel Trim Plate Replacement**. 2. Remove the front floor lower console. Refer to **Front Floor Lower Console Replacement**.	
1	Instrument Panel Carrier Reinforcement Bolt (Qty: 3) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
2	Instrument Panel Carrier Reinforcement

INSTRUMENT PANEL TIE BAR REPLACEMENT

Removal Procedure

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1. Remove the left front floor air outlet duct. Refer to **Floor Front Air Outlet Duct Replacement - Left Side** .
2. Remove the instrument panel lower airbag bracket. Refer to **Instrument Panel Lower Airbag Bracket Replacement** .

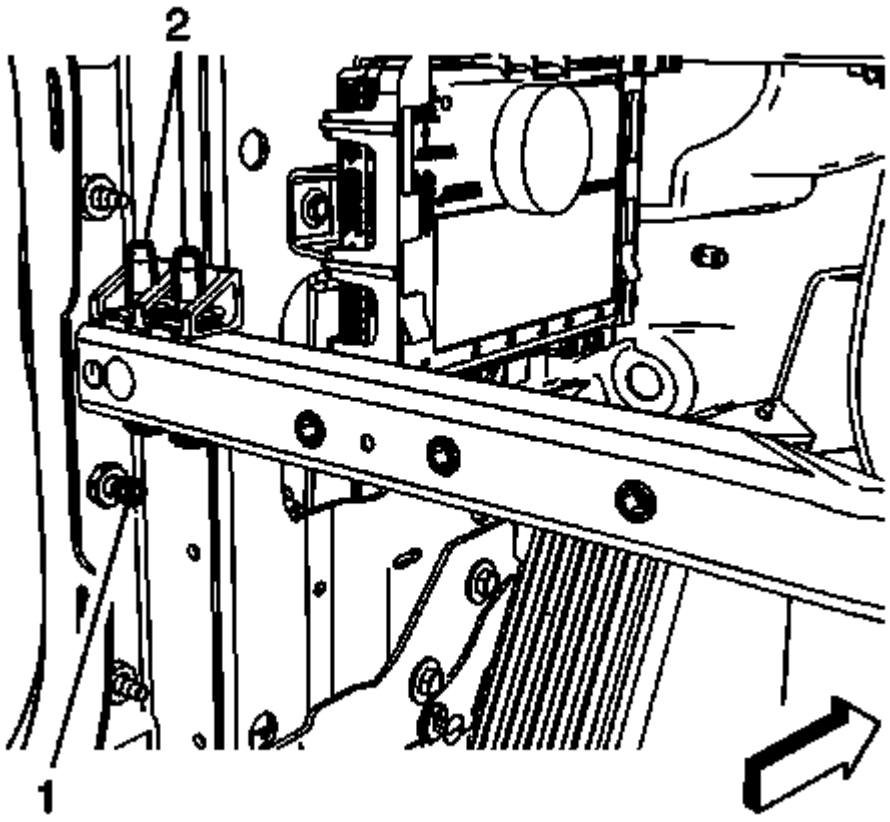

Fig. 69: Instrument Panel Tie Bar Bolts
Courtesy of GENERAL MOTORS COMPANY

3. The outer two bolts (2) on the tie bar cannot be removed because the end of a lock pillar bolt (1) extends inboard and blocks the tie bar bolts (2) from being removed. Use a mini air saw to cut the end off the bolt (1) on the left and right side of the tie bar.

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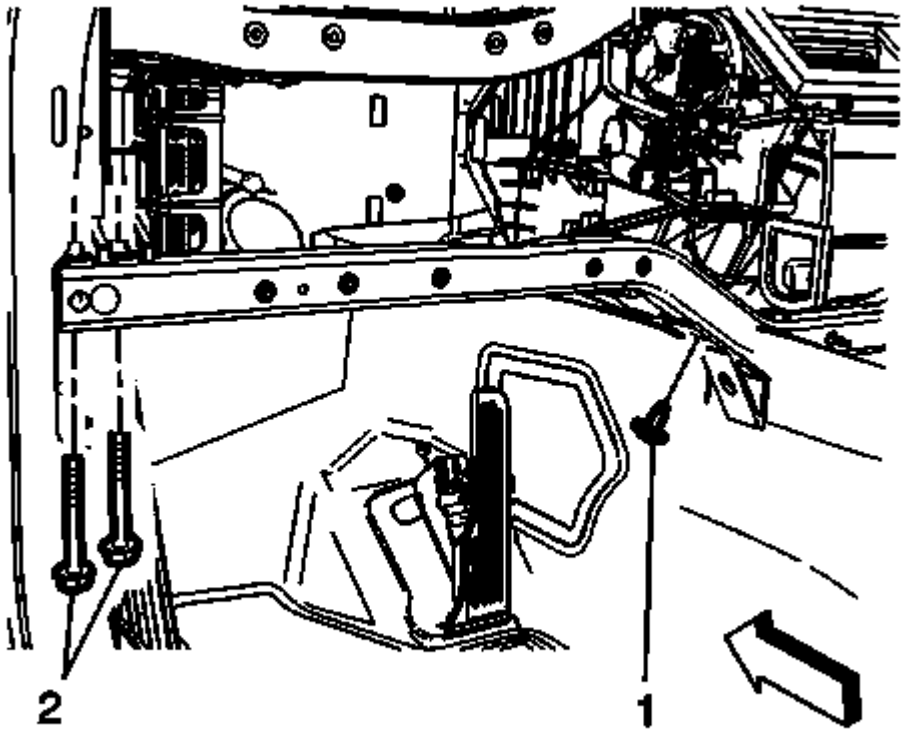

Fig. 70: Instrument Panel Tie Bar Bolt And Instrument Panel Bolts
Courtesy of GENERAL MOTORS COMPANY

4. Remove the instrument panel tie bar bolt (1) and instrument panel bolts (2).

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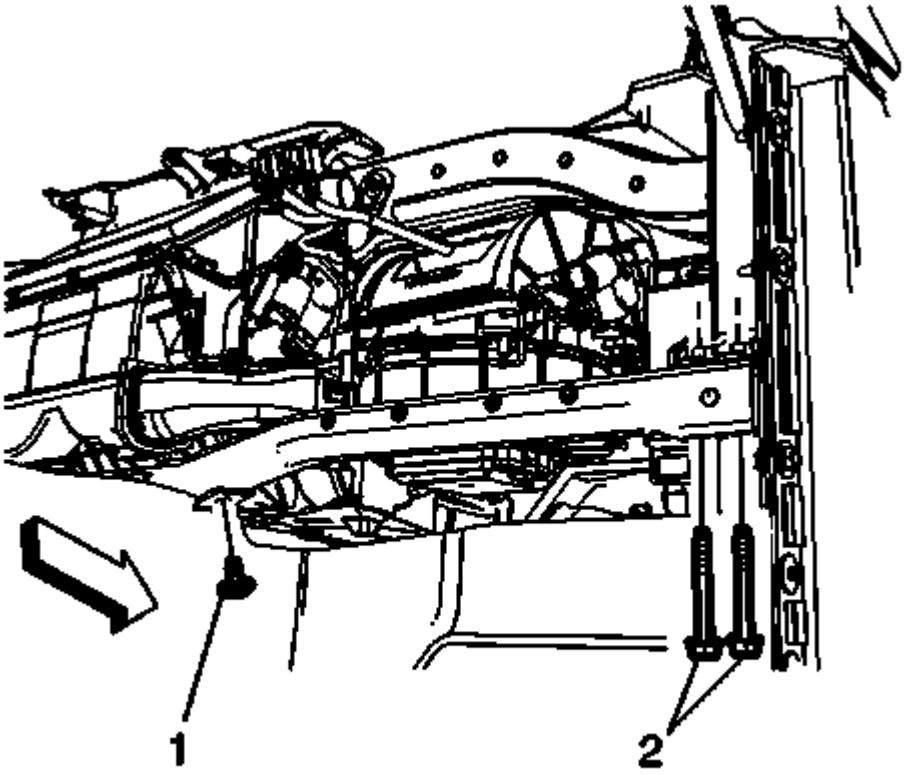

Fig. 71: Instrument Panel Tie Bar Bolt And Instrument Panel Bolts
Courtesy of GENERAL MOTORS COMPANY

5. Remove the instrument panel tie bar bolt (1) and instrument panel bolts (2).

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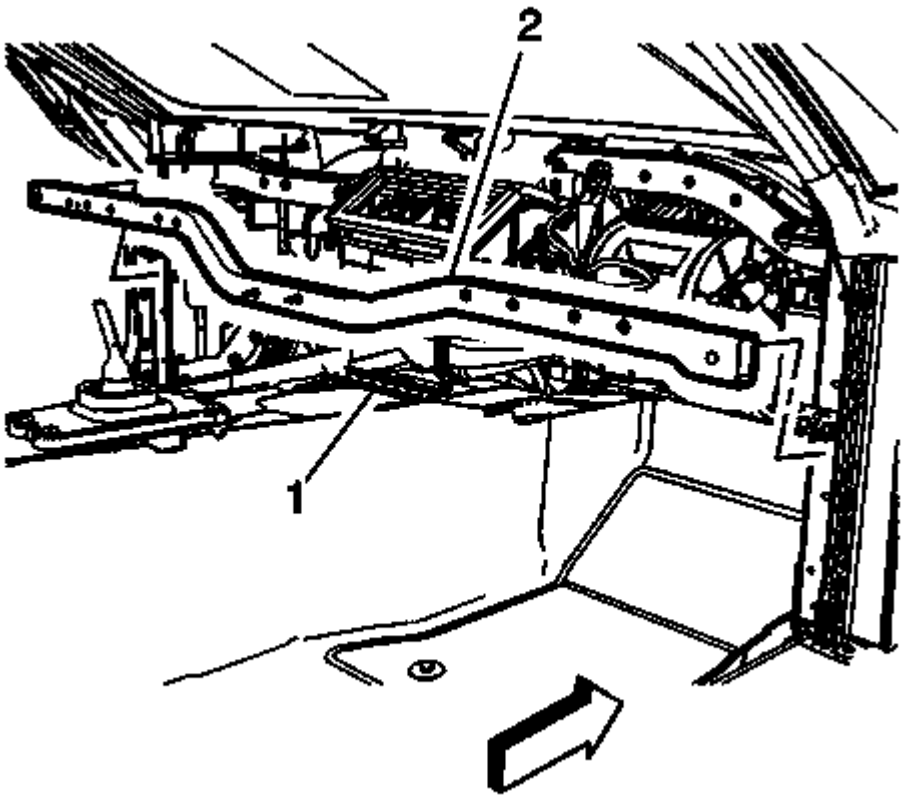

Fig. 72: Instrument Panel Tie Bar
Courtesy of GENERAL MOTORS COMPANY

6. Mark the location of the instrument panel tie bar (1) to ensure proper fit during installation.
7. Use a heat gun to de-bond the adhesive from the tunnel.
8. Remove the tie bar (2).
9. Remove all remaining loose adhesive.

Installation Procedure

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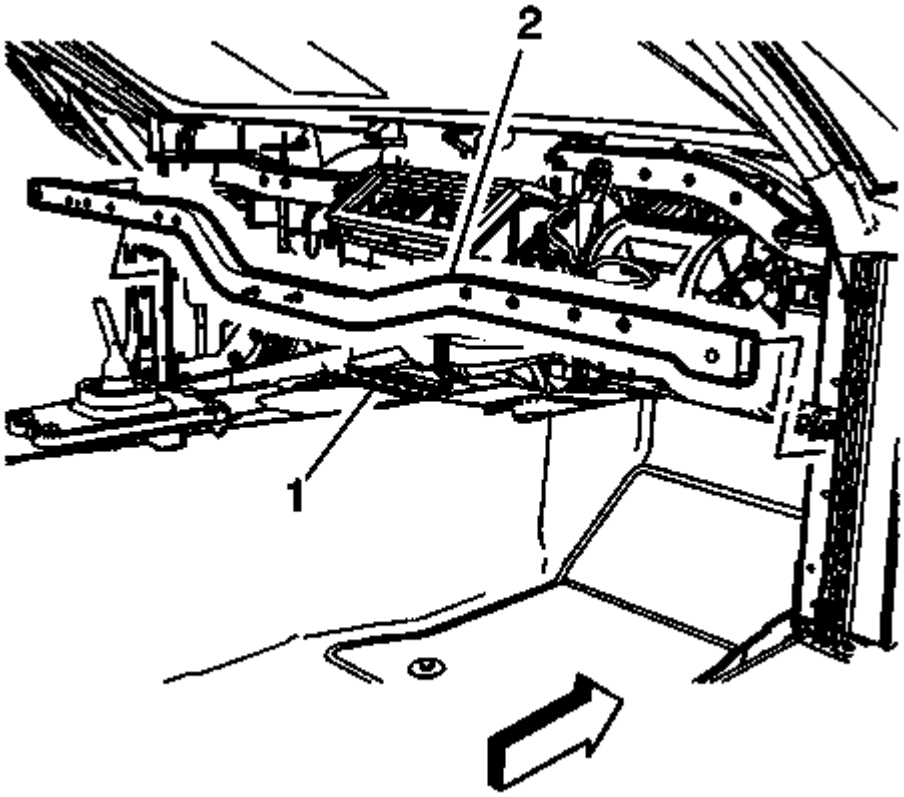

Fig. 73: Instrument Panel Tie Bar
Courtesy of GENERAL MOTORS COMPANY

1. Apply adhesive (1) to the tunnel using **Aluminum Panel Bonding (Non-Structural)** , **Aluminum Panel Bonding (Structural)** .
2. Install the tie bar (2).

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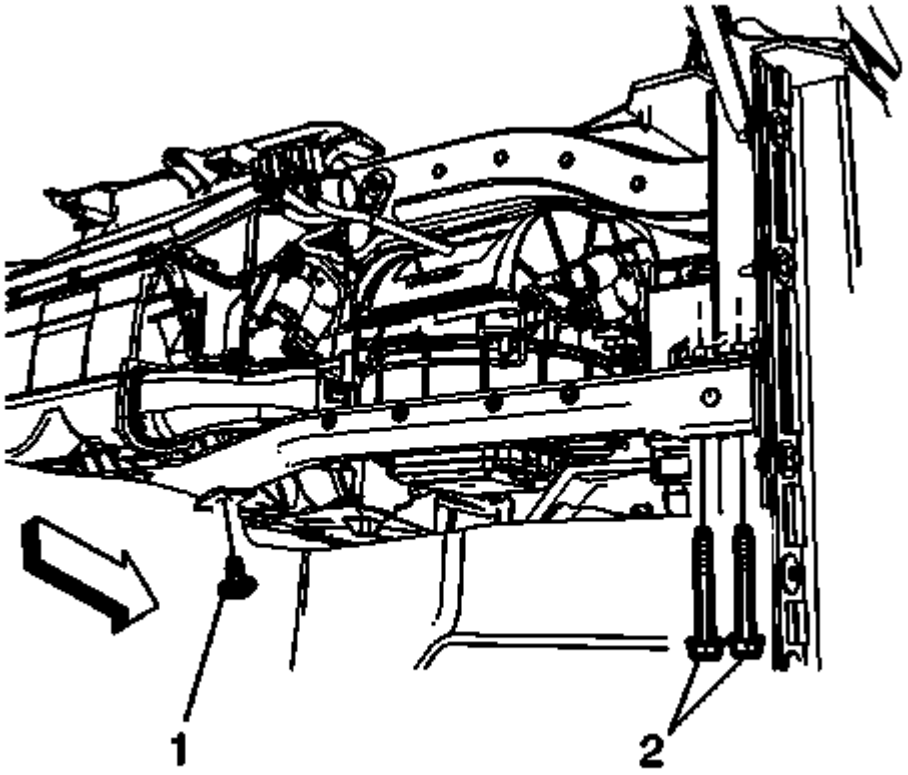

Fig. 74: Instrument Panel Tie Bar Bolt And Instrument Panel Bolts
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to Fastener Caution .

3. Install the instrument panel tie bar bolt (1).

   Tighten

   9 (80 lb in)

4. Install the instrument panel bolts (2).

   Tighten

   22 (16 lb ft)

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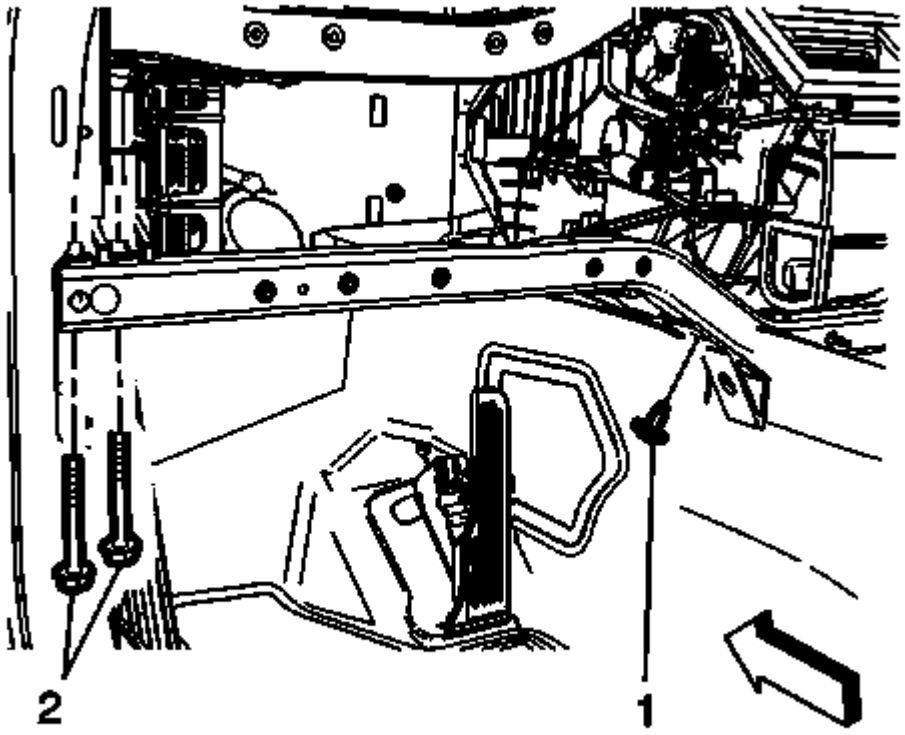

Fig. 75: Instrument Panel Tie Bar Bolt And Instrument Panel Bolts
Courtesy of GENERAL MOTORS COMPANY

5. Install the instrument panel tie bar bolt (1).

   Tighten

   9 (80 lb in)

6. Install the instrument panel bolts (2).

   Tighten

   22 (16 lb ft)

7. Install the instrument panel lower airbag bracket. Refer to **Instrument Panel Lower Airbag Bracket Replacement** .
8. Install the left front floor air outlet duct. Refer to **Floor Front Air Outlet Duct Replacement - Left Side** .

INSTRUMENT PANEL TIE BAR BRACE REPLACEMENT

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Removal Procedure

1. Pull the carpet back from under the instrument panel as needed. Refer to **Front Floor Panel Carpet Replacement - Left Side** and **Front Floor Panel Carpet Replacement - Right Side** .

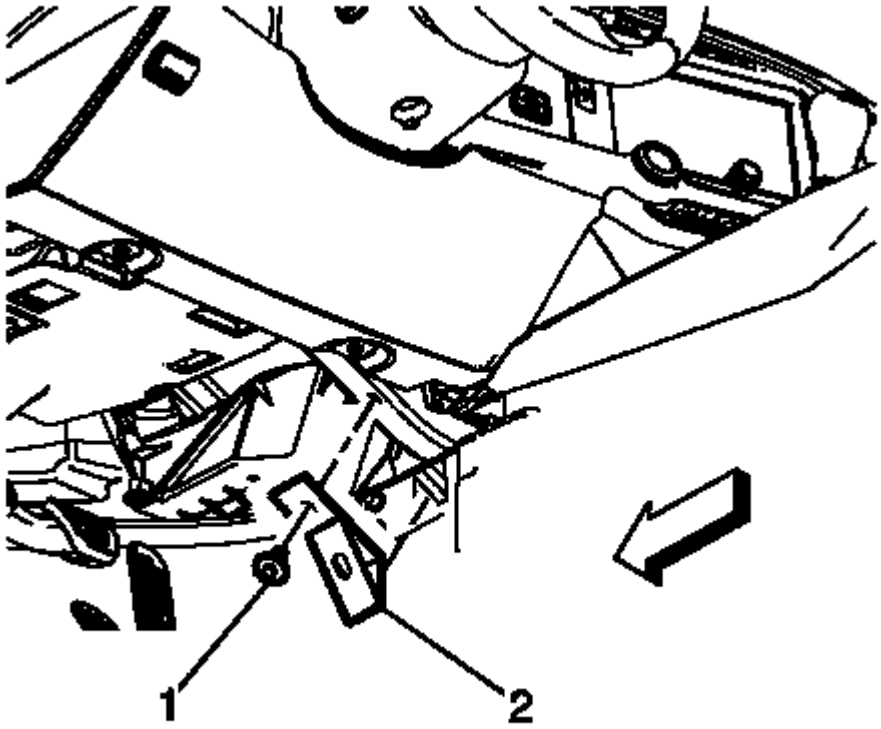

Fig. 76: Instrument Panel Tie Bar Brace Bolt And Left Instrument Panel Tie Bar Brace
Courtesy of GENERAL MOTORS COMPANY

NOTE: The following step ensures proper trim fit during installation.

2. Mark the location of the instrument panel tie bar brace.
3. Remove the instrument panel tie bar brace bolt (1) which secure the brace to the lower instrument panel tie bar.
4. Remove the left instrument panel tie bar brace (2) by applying heat and pry to detach the adhesive along the floor panel tunnel panel.

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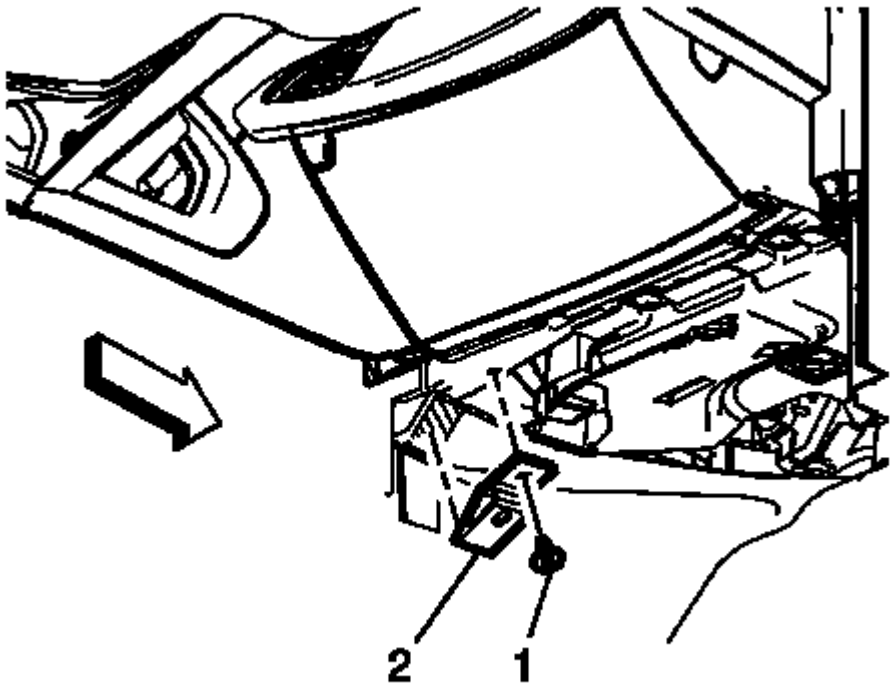

Fig. 77: Instrument Panel Tie Bar Brace Bolt And Left Instrument Panel Tie Bar Brace
Courtesy of GENERAL MOTORS COMPANY

NOTE: The following step ensures proper trim fit during installation.

5. Mark the location of the instrument panel tie bar brace.
6. Remove the instrument panel tie bar brace bolt (1) which secure the brace to the lower instrument panel tie bar.
7. Remove the right instrument panel tie bar brace (2) by applying heat and pry to detach the adhesive along the floor panel tunnel panel.
8. Remove all remaining loose adhesive.

Installation Procedure

1. Clean and prepare all bonding mating surfaces according to adhesive manufacturer's recommendations.

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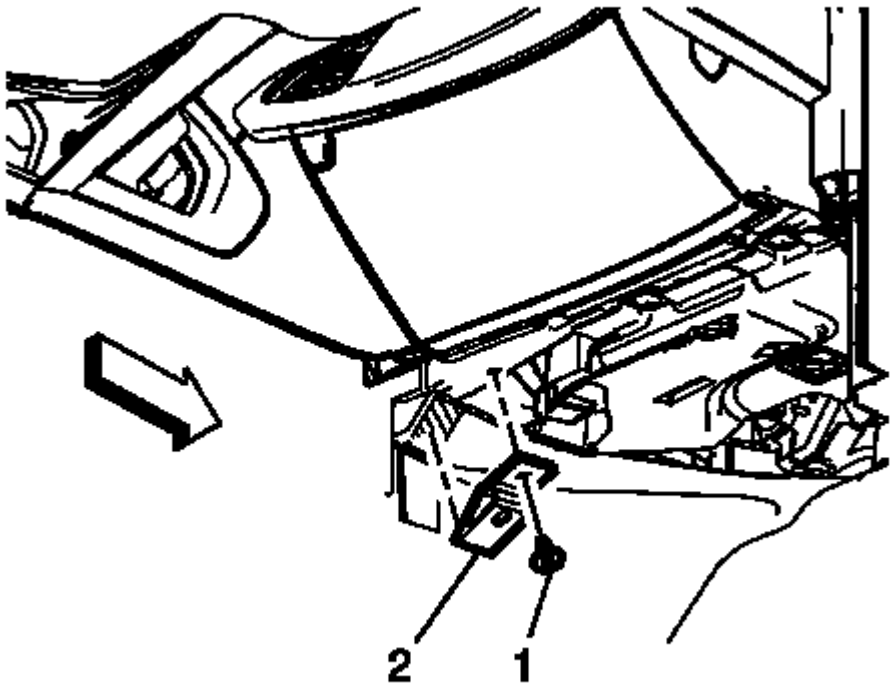

Fig. 78: Instrument Panel Tie Bar Brace Bolt And Left Instrument Panel Tie Bar Brace
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to Fastener Caution .

2. Apply adhesive to the right instrument panel tie bar brace (2) and tape the brace in place as necessary.
3. Install the instrument panel tie bar brace bolt (1).

Tighten

9 (80 lb in).

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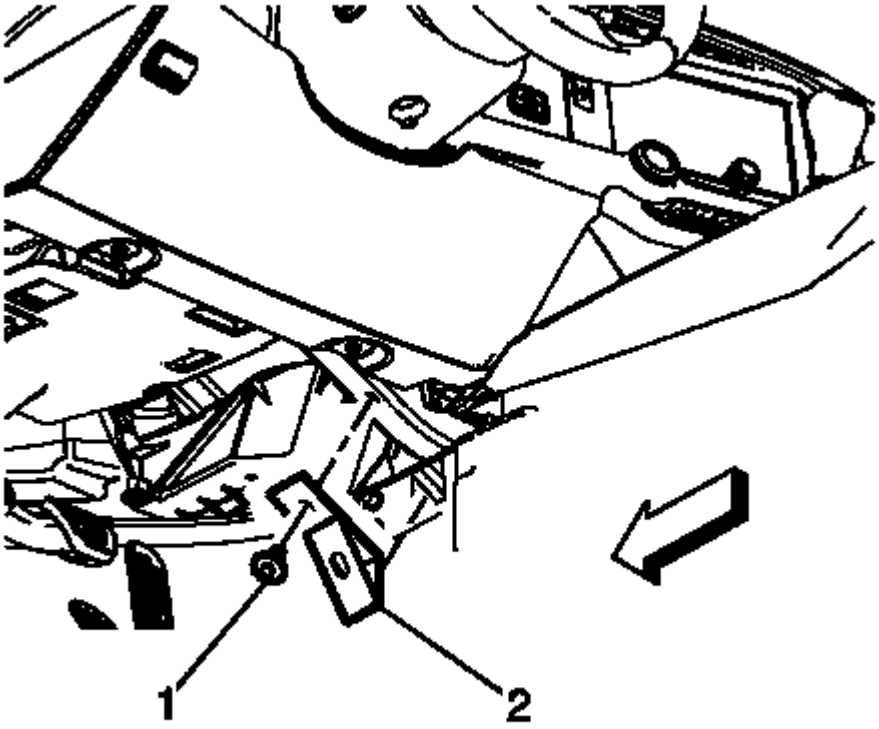

Fig. 79: Instrument Panel Tie Bar Brace Bolt And Left Instrument Panel Tie Bar Brace
Courtesy of GENERAL MOTORS COMPANY

4. Apply adhesive to the left instrument panel tie bar brace (2) and tape the brace in place as necessary.
5. Install the instrument panel tie bar brace bolt (1).

   Tighten

   9 (80 lb in).

6. Replace the carpet back under the instrument panel as needed. Refer to **Front Floor Panel Carpet Replacement - Left Side** and **Front Floor Panel Carpet Replacement - Right Side** .

FRONT FLOOR CONSOLE BOLT ACCESS HOLE COVER REPLACEMENT

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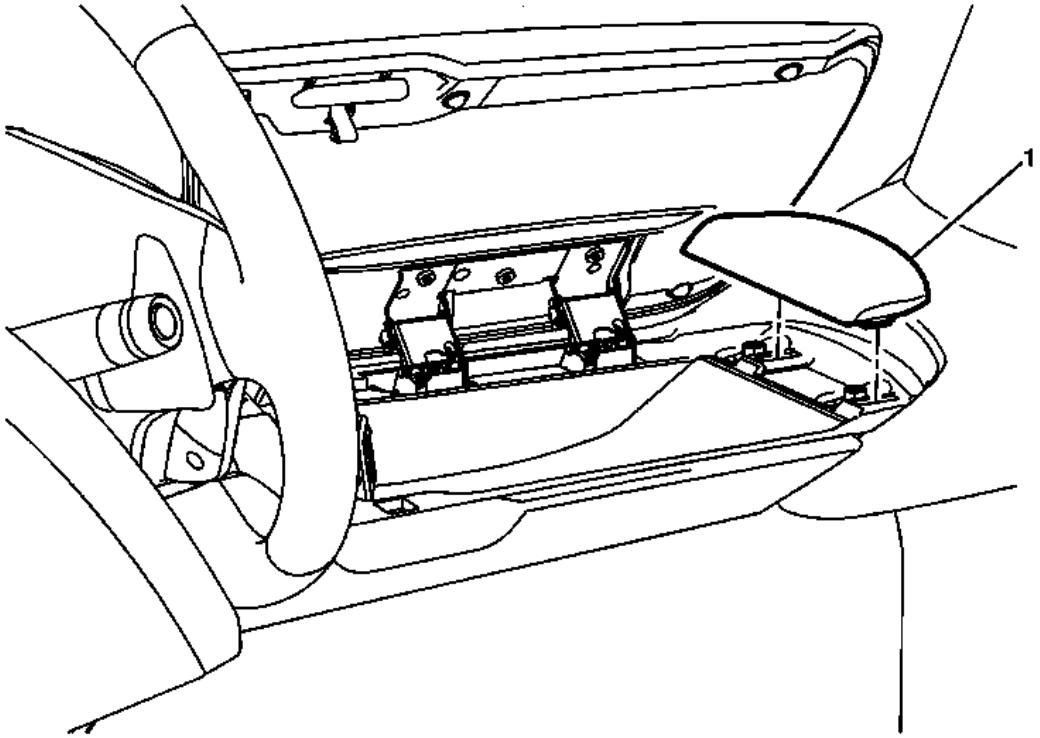

Fig. 80: Front Floor Console Bolt Access Hole Cover
Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Bolt Access Hole Cover Replacement

Callout	Component Name
1	Front Floor Console Bolt Access Hole Cover **Procedure** Use a flat bladed plastic trim tool in order to release the retainers securing the access hole cover to the front floor console assembly.

FRONT FLOOR CONSOLE FRONT COMPARTMENT REPLACEMENT

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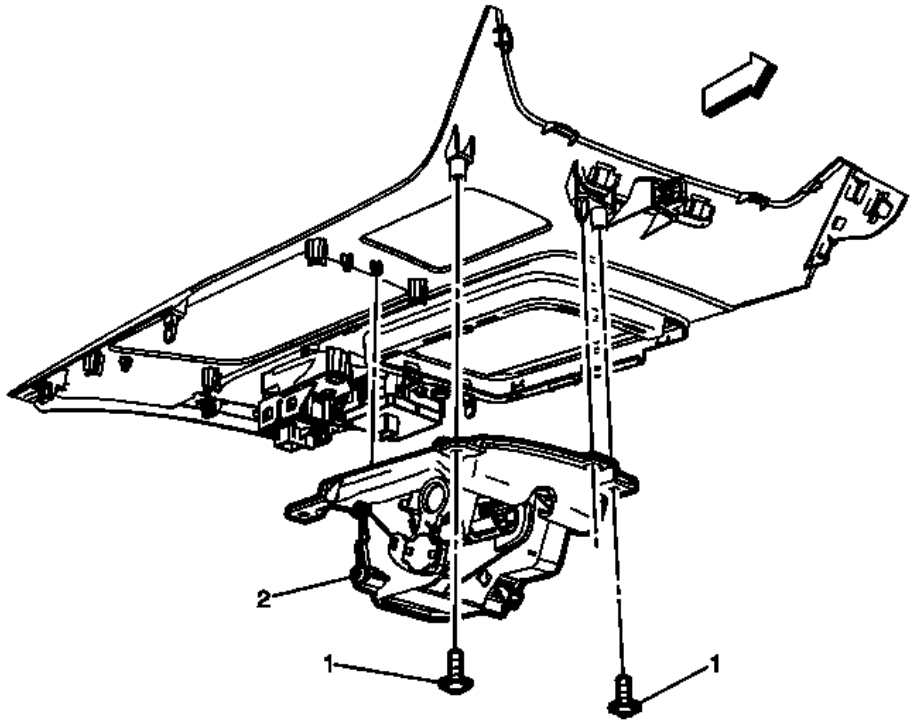

Fig. 81: Front Floor Console Front Compartment
Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Front Compartment Replacement

Callout	Component Name
Preliminary Procedure Remove the front floor console cup holder. Refer to **Front Floor Console Cup Holder Replacement**.	
1	Front Floor Console Trim Plate Bolt (Qty: 2) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
2	Front Floor Console Front Compartment

FRONT FLOOR CONSOLE CUP HOLDER REPLACEMENT

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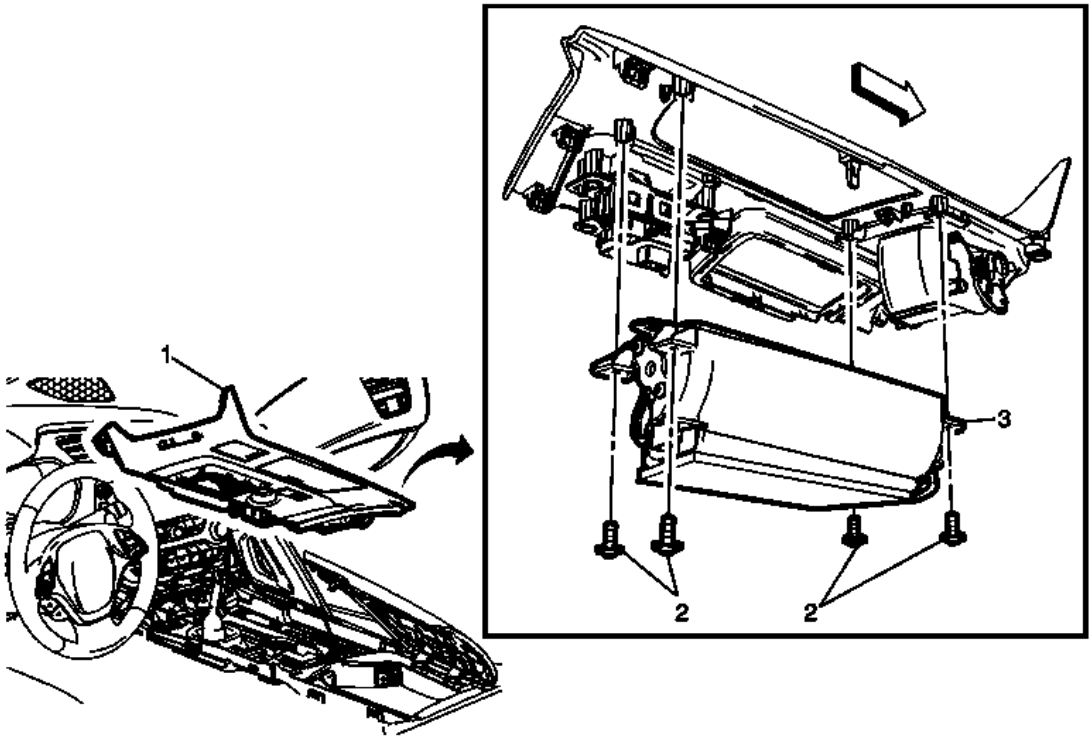

Fig. 82: Front Floor Console Cup Holder
Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Cup Holder Replacement

Callout	Component Name
1	Front Floor Console Trim Plate Refer to **Front Floor Console Trim Plate Replacement (Manual)**, **Front Floor Console Trim Plate Replacement (Automatic)**.
2	Front Floor Console Trim Plate Bolt (Qty: 4) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
3	Front Floor Console Cup Holder

FRONT FLOOR PANEL FILLER PANEL REPLACEMENT

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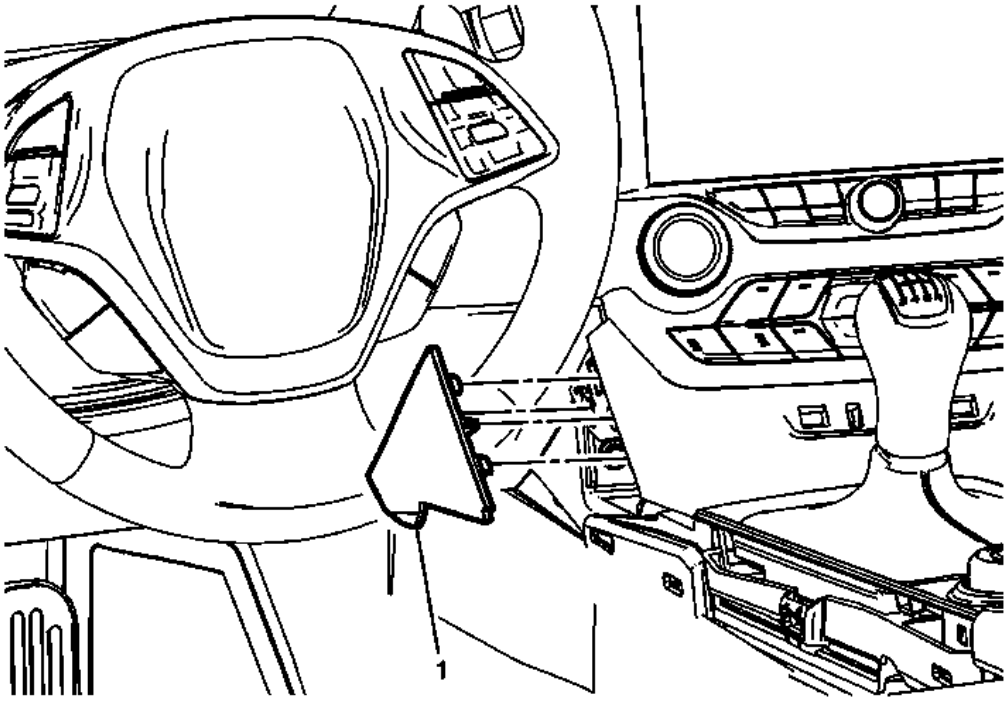

Fig. 83: Front Floor Panel Filler Panel
Courtesy of GENERAL MOTORS COMPANY

Front Floor Panel Filler Panel Replacement

Callout	Component Name
Preliminary Procedure Remove the front floor console extension panel. Refer to **Front Floor Console Extension Panel Replacement**.	
1	Front Floor Panel Filler Panel **Procedure** Use a flat bladed plastic trim tool in order to release the tabs securing the panel to the front floor console assembly.

FRONT FLOOR CONSOLE TRANSMISSION SHIFT OPENING BEZEL REPLACEMENT

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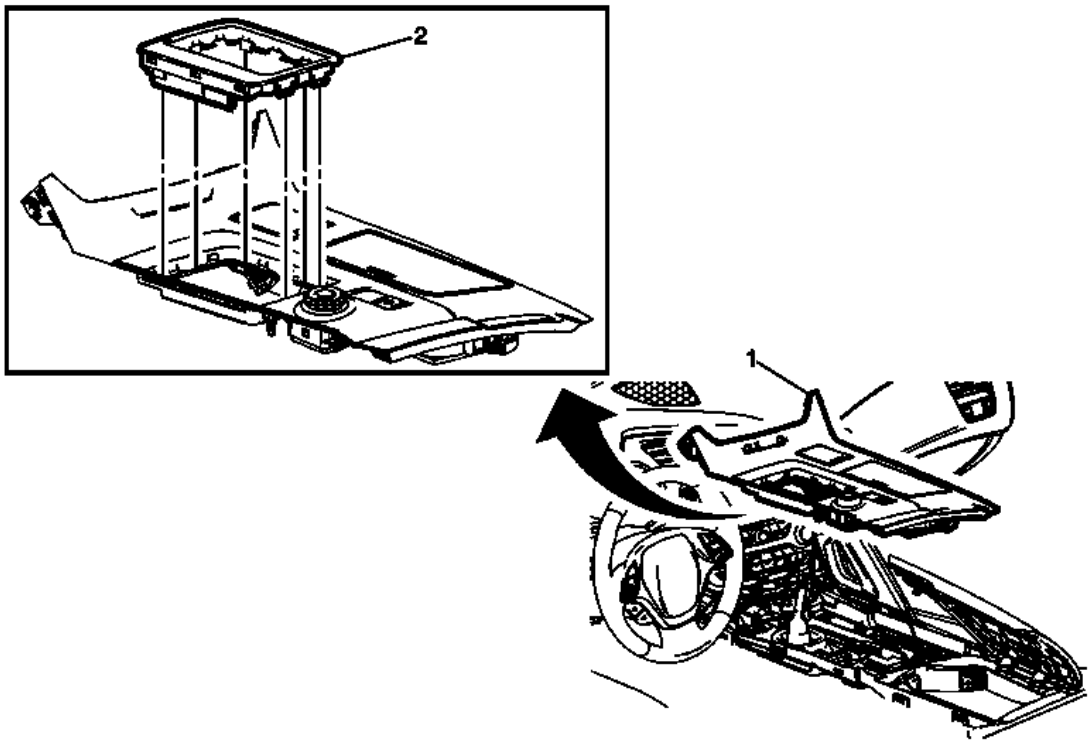

Fig. 84: Front Floor Console Transmission Shift Opening Bezel
Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Transmission Shift Opening Bezel Replacement

Callout	Component Name
1	Front Floor Console Trim Plate Refer to **Front Floor Console Trim Plate Replacement (Manual)**, **Front Floor Console Trim Plate Replacement (Automatic)**.
2	Front Floor Console Transmission Shift Opening Bezel **Procedure** Use a suitable tool to release the tabs securing the bezel to the front floor console trim plate.

FRONT FLOOR CONSOLE EXTENSION PANEL REPLACEMENT

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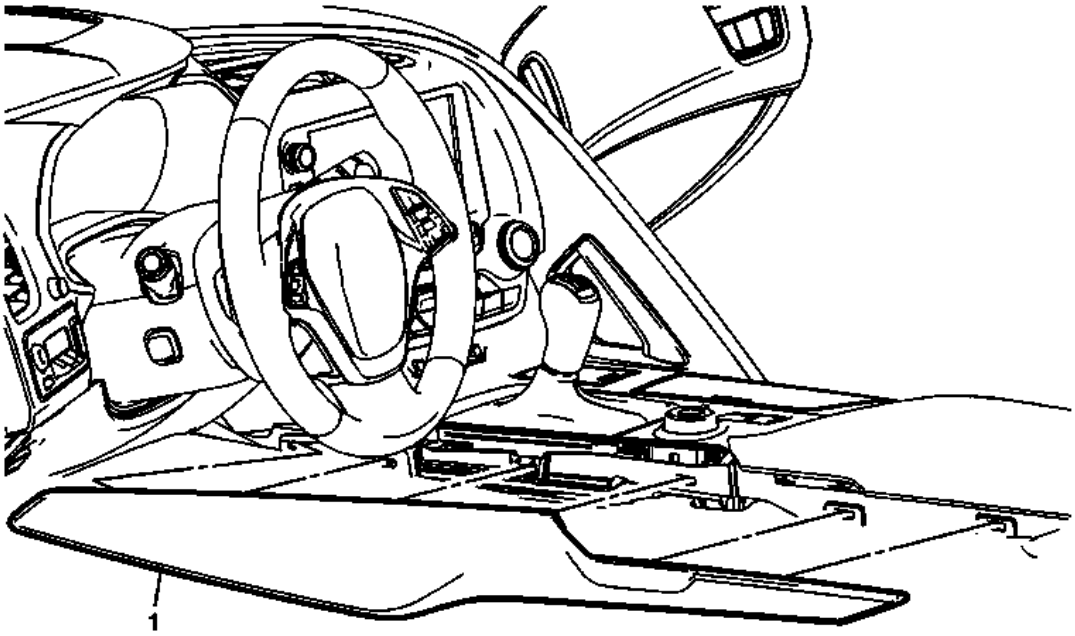

Fig. 85: Front Floor Console Extension Panel
Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Extension Panel Replacement

Callout	Component Name
1	Front Floor Console Extension Panel **Procedure** Use a flat bladed plastic trim tool in order to release the retainers securing the extension panel to the front floor console assembly.

FRONT FLOOR LOWER CONSOLE REPLACEMENT

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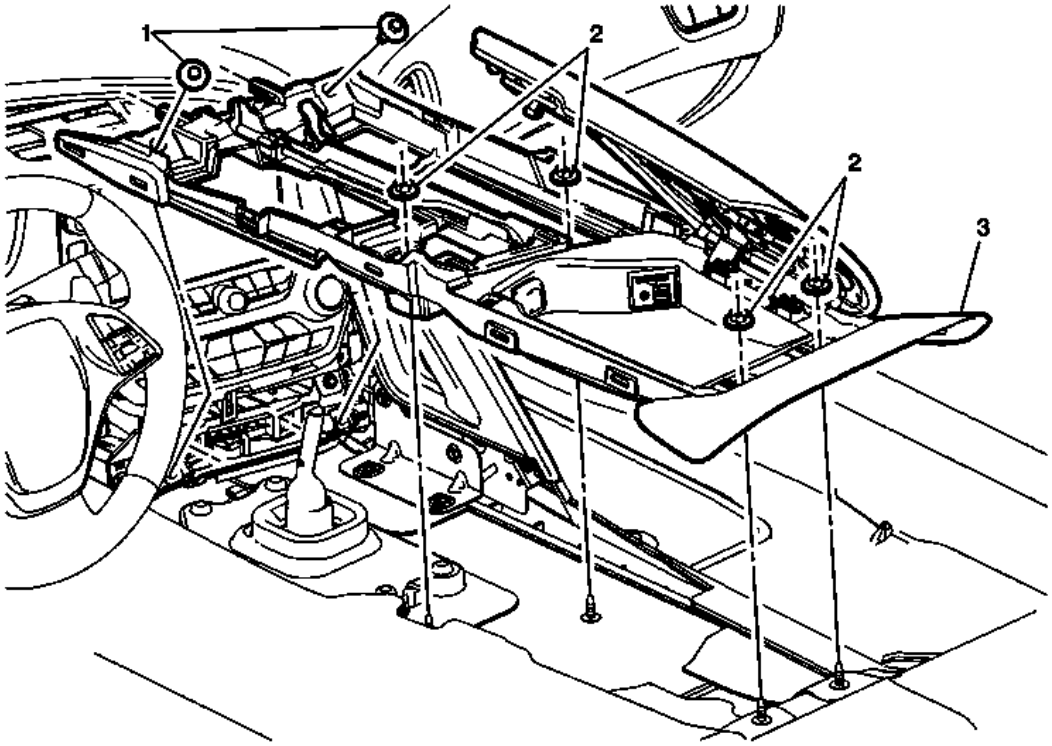

Fig. 86: Front Floor Lower Console
Courtesy of GENERAL MOTORS COMPANY

Front Floor Lower Console Replacement

Callout	Component Name
Preliminary Procedures 1. Remove the front floor console trim plate. Refer to **Front Floor Console Trim Plate Replacement (Manual)**, **Front Floor Console Trim Plate Replacement (Automatic)**. 2. Remove the folding top stowage compartment extension outer panel, if equipped. Refer to **Folding Top Stowage Compartment Extension Outer Panel Replacement** .	
1	Front Floor Console Retainer Bolt (Qty: 2) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 9 (80 lb in)
2	Front Floor Console Nut (Qty: 4) **Tighten** 9 (80 lb in)
3	Front Floor Lower Console

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FRONT FLOOR CONSOLE BRACKET REPLACEMENT

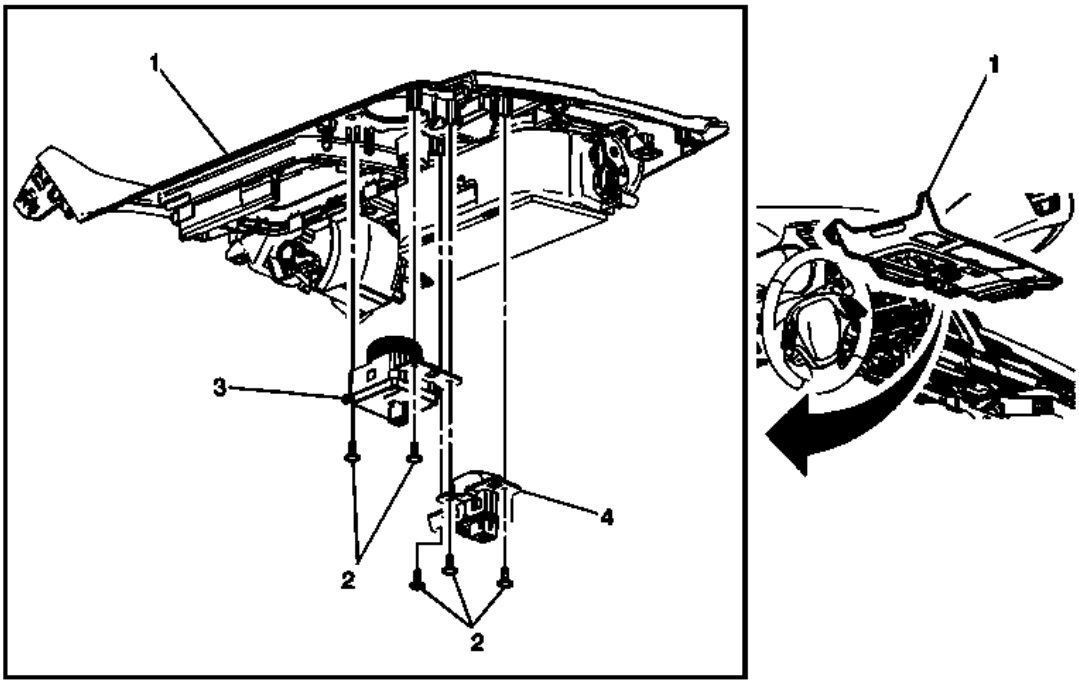

Fig. 87: Front Floor Console Bracket
Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Bracket Replacement

Callout	Component Name
1	Front Floor Console Trim Plate Refer to **Front Floor Console Trim Plate Replacement (Manual)**, **Front Floor Console Trim Plate Replacement (Automatic)**.
2	Front Floor Console Trim Plate Bolt (Qty: 5) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
3	Front Floor Console Bracket - Ride Control Switch **Procedure** Transfer components as necessary.
4	Front Floor Console Bracket - Parking Brake Control Switch **Procedure** Transfer components as necessary.

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FRONT FLOOR CONSOLE ARMREST LATCH REPLACEMENT

Removal Procedure

NOTE: Lay the armrest on a soft, clean surface to avoid damaging the leather.

1. Remove the front floor console armrest. Refer to **Front Floor Console Armrest Replacement**.

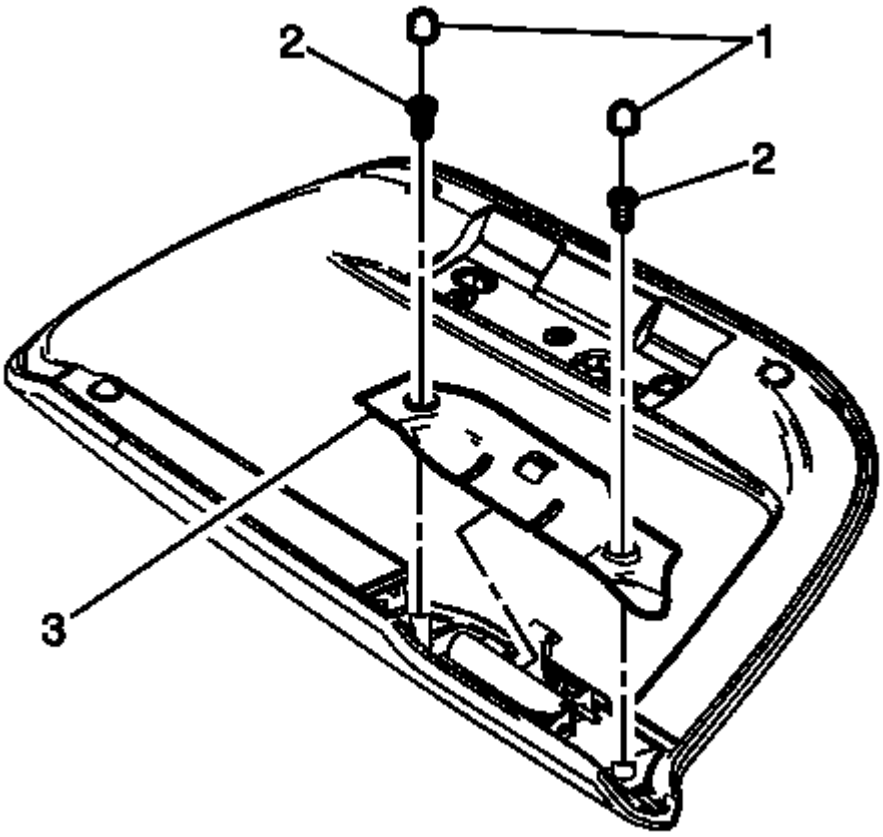

Fig. 88: Front Floor Console Armrest Bumper
Courtesy of GENERAL MOTORS COMPANY

2. Use a suitable tool to remove the front floor console armrest bumper (1).
3. Remove the front floor console armrest bolt (2) that secure the latch cover (3) to the armrest assembly.

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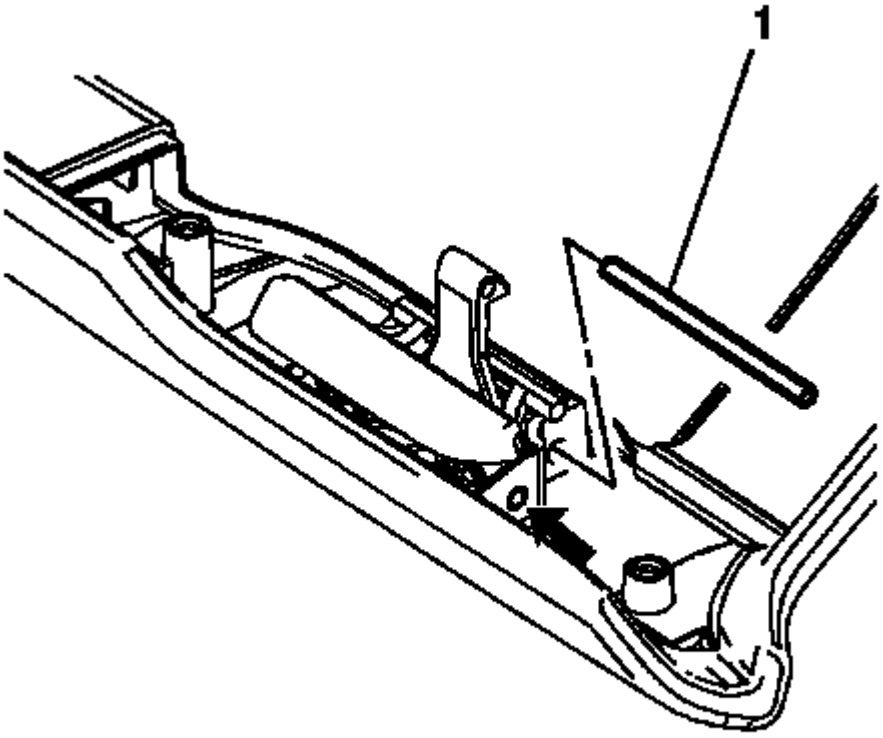

Fig. 89: Latch Pivot Pin
Courtesy of GENERAL MOTORS COMPANY

4. Remove the latch pivot pin (1).
5. Use a suitable tool to release the pins on the latch paddle.

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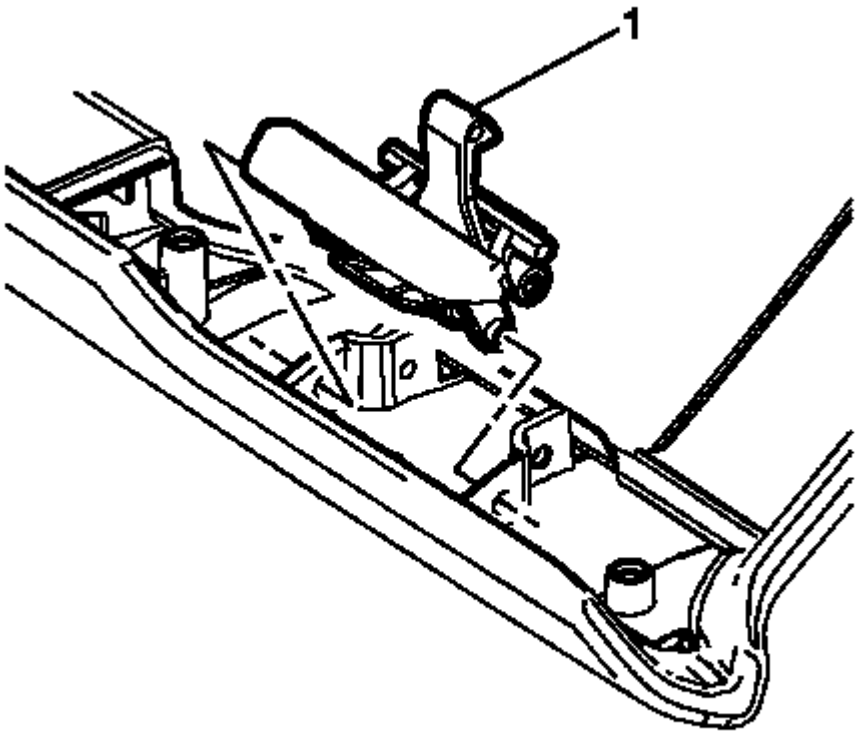

Fig. 90: Front Floor Console Armrest Latch
Courtesy of GENERAL MOTORS COMPANY

6. Remove the front floor console armrest latch (1).

Installation Procedure

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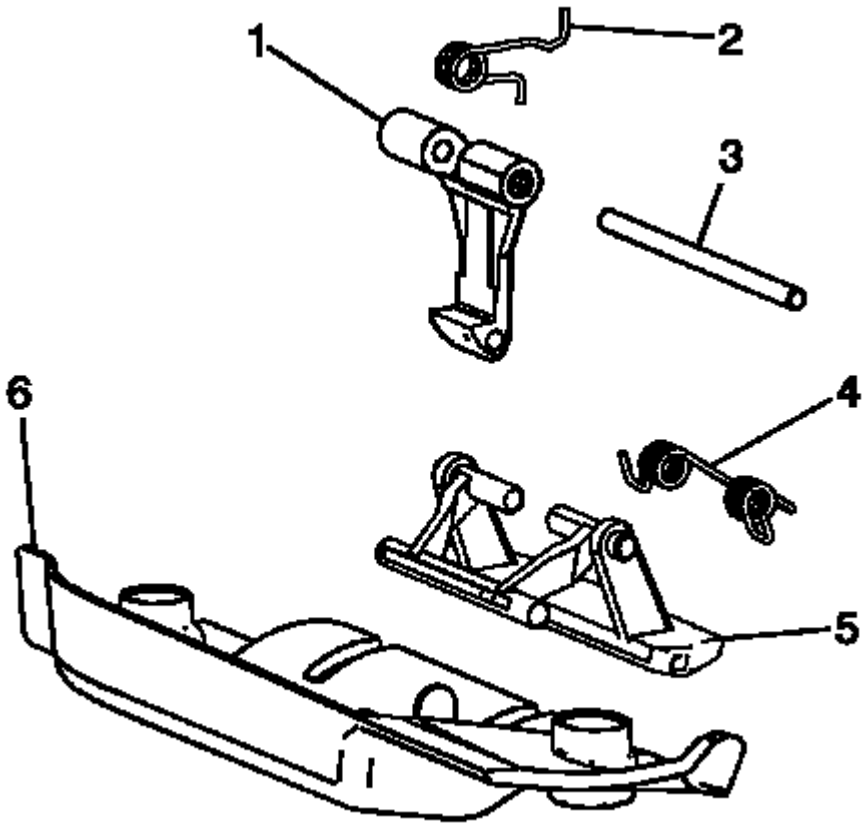

Fig. 91: Latch Striker And Latch Striker Spring
Courtesy of GENERAL MOTORS COMPANY

NOTE: Assemble the latch to the front floor console armrest on a work table. Not in the vehicle.

1. The replacement latch package includes: Latch striker (1), latch striker spring (2), latch pivot pin (3), latch paddle spring (4), latch paddle (5) and latch cover (6).

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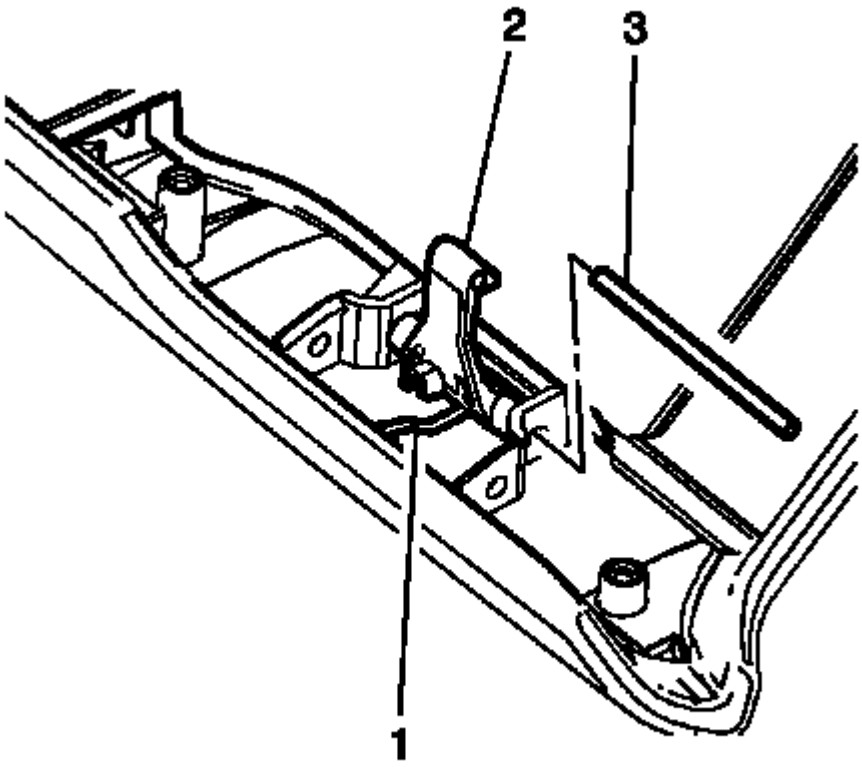

Fig. 92: Latch Striker And Latch Striker Spring
Courtesy of GENERAL MOTORS COMPANY

2. Install the latch striker spring (1) and the latch striker (2) on top of the spring and insert the latch pivot pin (3.)

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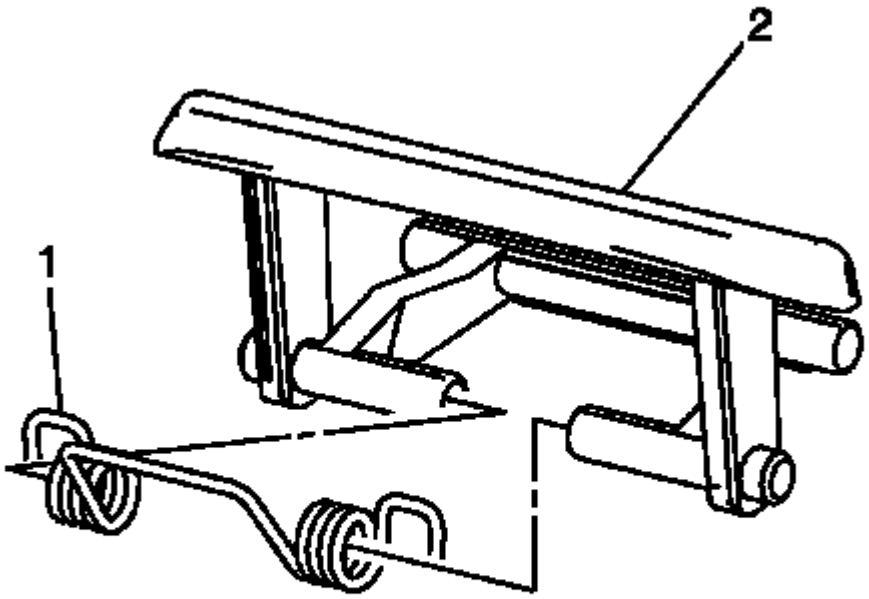

Fig. 93: Latch Paddle Spring And Latch Paddle
Courtesy of GENERAL MOTORS COMPANY

3. Attach the latch paddle spring (1) to the latch paddle (2).

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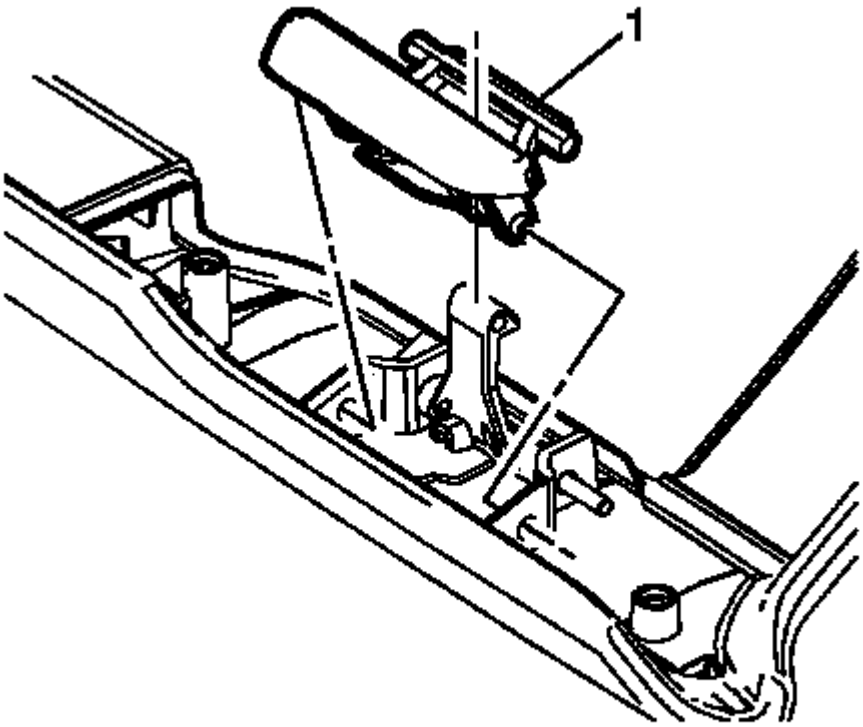

Fig. 94: Latch Paddle Assembly
Courtesy of GENERAL MOTORS COMPANY

4. Install the latch paddle assembly (1) into the front floor console armrest.

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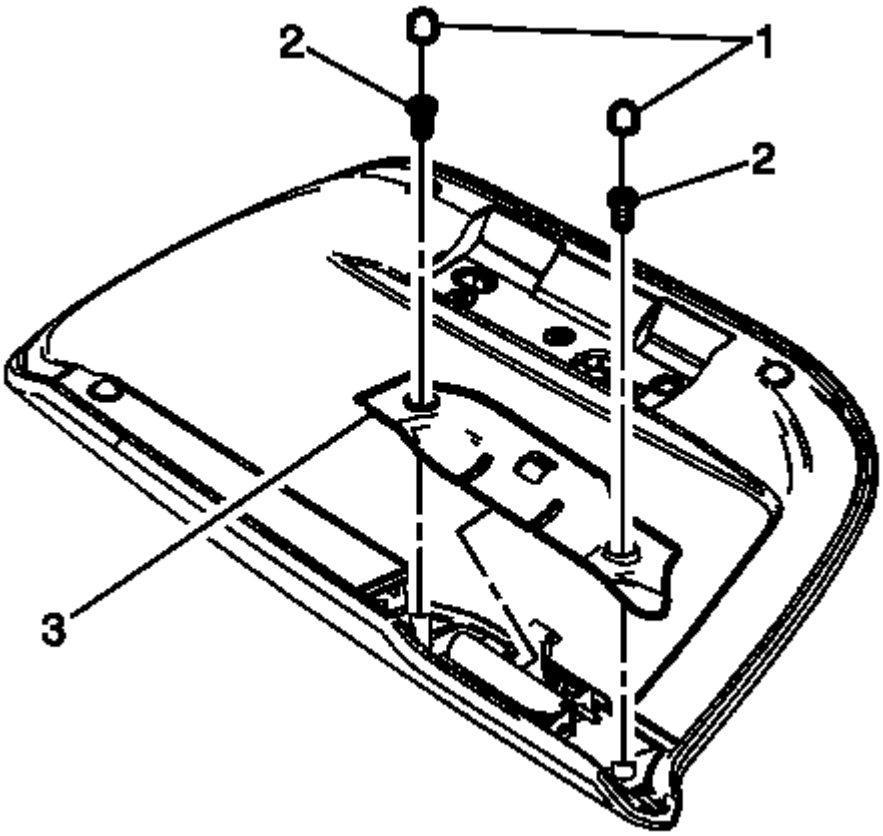

Fig. 95: Front Floor Console Armrest Bumper
Courtesy of GENERAL MOTORS COMPANY

5. Tighten the screw (2) that retains the latch cover (3) to the front floor console armrest.

   Tighten

   Tighten the screw to 1.5 (13 lb in).

6. Insert the front floor console armrest bumper (1).
7. Install the front floor console armrest. Refer to **Front Floor Console Armrest Replacement**.

FRONT FLOOR CONSOLE ARMREST REPLACEMENT

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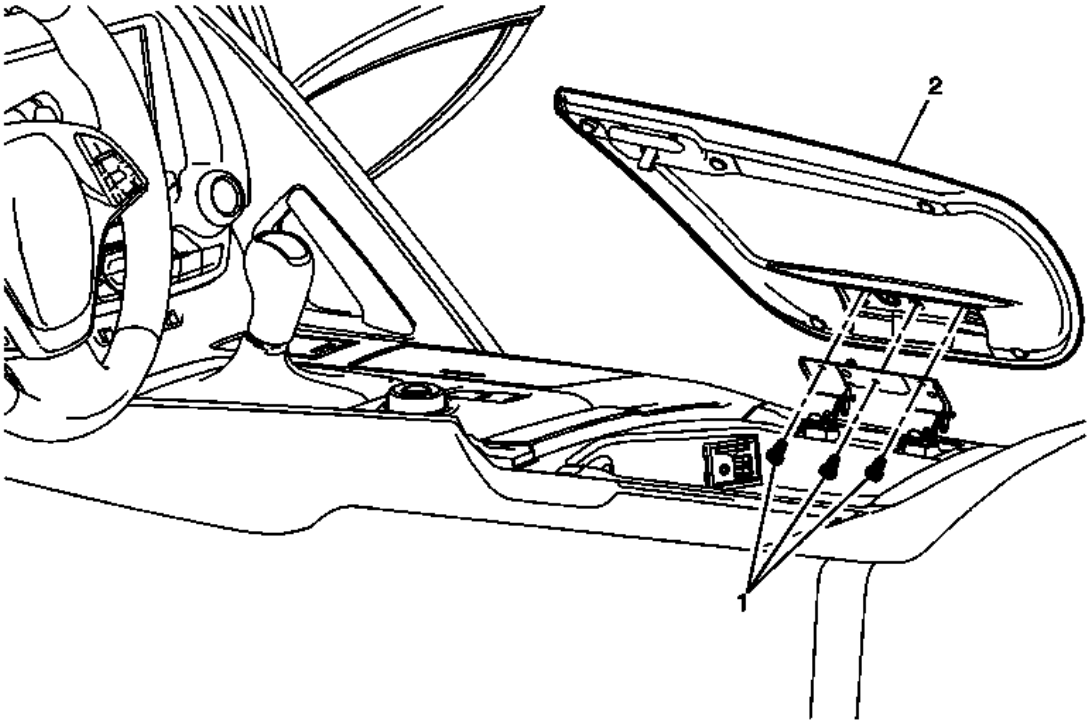

Fig. 96: Front Floor Console Armrest
Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Armrest Replacement

Callout	Component Name
1	Front Floor Console Armrest Bolt (Qty: 3) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 2.5 (22 lb in)
2	Front Floor Console Armrest

FRONT FLOOR CONSOLE ARMREST HINGE REPLACEMENT

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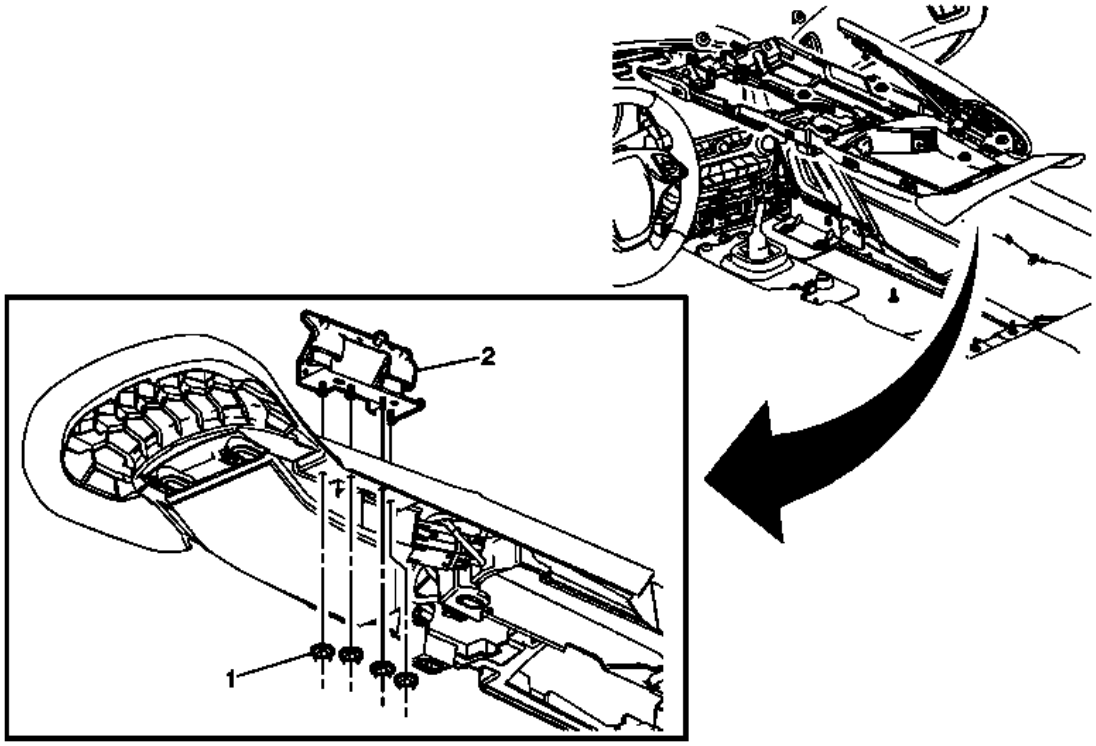

Fig. 97: Front Floor Console Armrest Hinge
Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Armrest Hinge Replacement

Callout	Component Name
Preliminary Procedures 1. Remove the front floor lower console. Refer to **Front Floor Lower Console Replacement**. 2. Remove the front floor console armrest. Refer to **Front Floor Console Armrest Replacement**.	
1	Front Floor Console Compartment Nut (Qty: 4) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 4.7 (42 lb in)
2	Front Floor Console Armrest Hinge

FRONT FLOOR CONSOLE TRIM PLATE REPLACEMENT (MANUAL)

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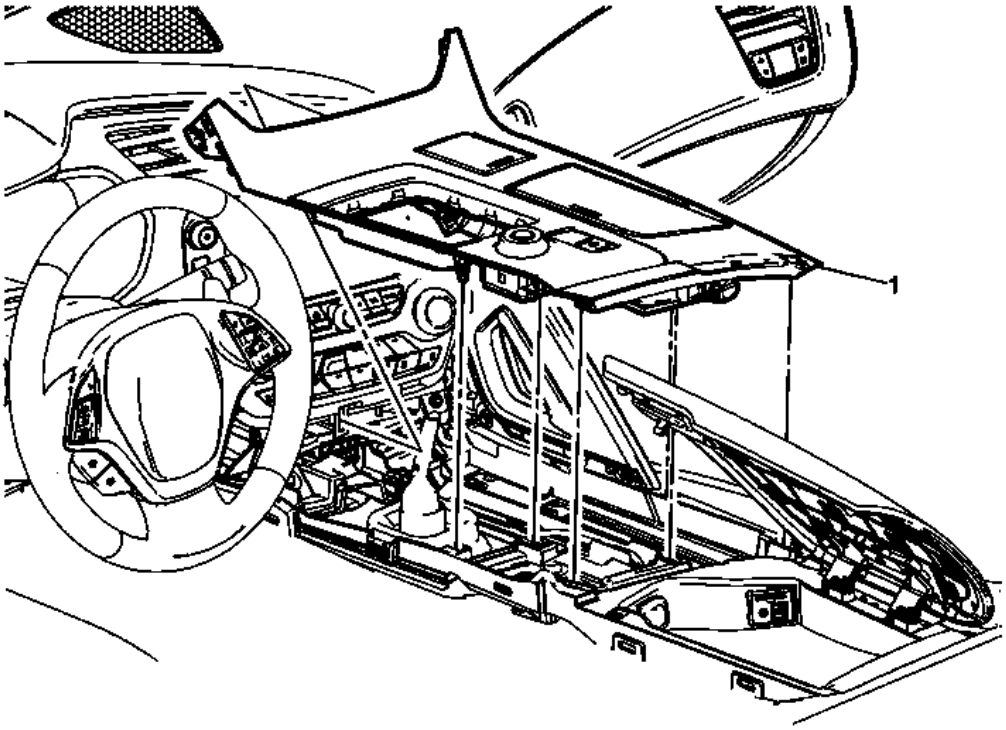

Fig. 98: Front Floor Console Trim Plate (Manual)
Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Trim Plate Replacement (Manual)

Callout	Component Name
Preliminary Procedures 1. Remove the front floor panel filler panel. Refer to **Front Floor Panel Filler Panel Replacement**. 2. Remove the transmission control lever boot. Refer to **Transmission Control Lever Boot Replacement** .	
1	Front Floor Console Trim Plate **Procedure** 1. Use a flat bladed plastic trim tool in order to release the retainers securing the trim plate to the front floor console assembly. 2. Disconnect all electrical connectors.

FRONT FLOOR CONSOLE TRIM PLATE REPLACEMENT (AUTOMATIC)

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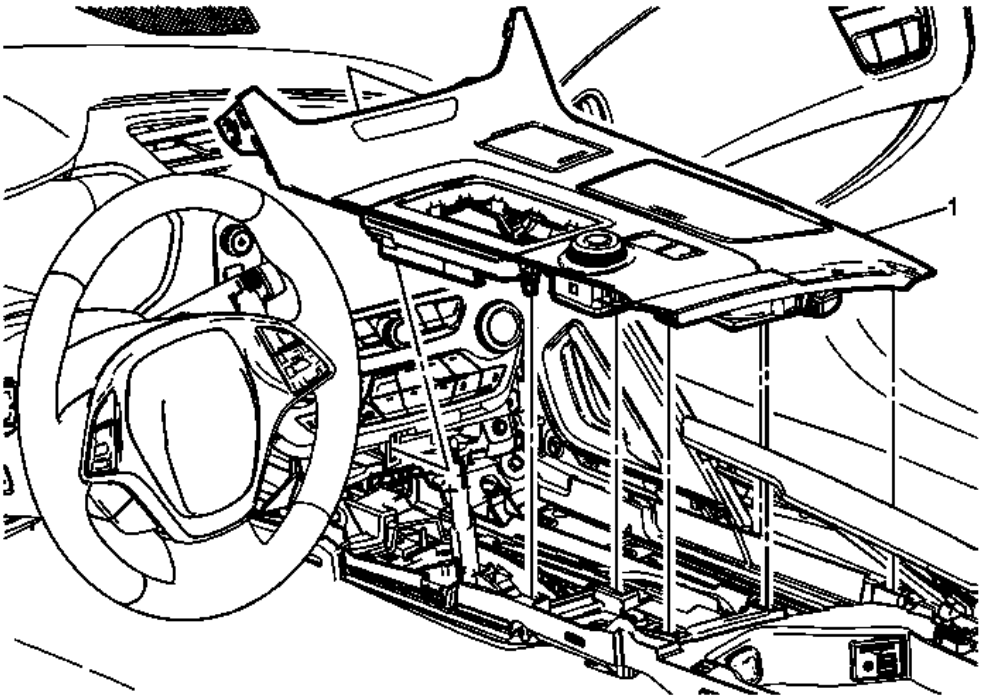

Fig. 99: Front Floor Console Trim Plate (Automatic)
Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Trim Plate Replacement (Automatic)

Callout	Component Name
Preliminary Procedures 1. Remove the front floor panel filler panel. Refer to **Front Floor Panel Filler Panel Replacement**. 2. Remove the transmission control lever knob. Refer to **Transmission Control Lever Knob Replacement** .	
1	Front Floor Console Trim Plate **Procedure** 1. Use a flat bladed plastic trim tool in order to release the retainers securing the trim plate to the front floor console assembly. 2. Disconnect all electrical connectors.

DESCRIPTION AND OPERATION

INSTRUMENT PANEL COMPARTMENT DESCRIPTION AND OPERATION

Instrument Panel Compartment Door Release System Components

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- Body control module (BCM)
- Glove compartment release switch
- Instrument panel compartment door unlatch actuator
- Instrument panel compartment door unlatch actuator relay

Instrument Panel Compartment Door Release Operation

When the glove compartment release switch is pressed, the instrument panel compartment release switch signal circuit is switched to ground. The BCM responds by applying battery voltage to the relay control circuit which energizes the relay. The relay is supplied with battery voltage at all times from a 10A fuse. With the relay coil energized, the relay switch contacts close allowing battery voltage to be supplied to the instrument panel compartment door unlatch actuator causing the actuator to release. The glove compartment release switch ground is part of instrument panel multifunction switch 2.

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