

ACCESSORIES & EQUIPMENT

Lighting - Repair Instructions - CTS Sedan

REPAIR INSTRUCTIONS

BRAKE PEDAL POSITION SENSOR CALIBRATION

NOTE: Brake system does not use a brake switch, stoplight switch or brakelight switch. System uses a Brake Pedal Position Sensor to control these functions.

Calibration Criteria

NOTE: Do not apply the brake pedal during the brake pedal position sensor calibration procedure. Any movement of the brake pedal during this procedure will cause the calibration procedure to fail. If this occurs, the brake pedal position sensor calibration must be repeated.

Brake pedal position sensor calibration must be performed after the brake pedal position sensor, body control module (BCM), or engine control module (ECM) have been serviced. The calibration procedure will set the brake pedal position sensor home value. This value is used by the BCM and ECM to determine the action of the driver applying the brake system and to provide this information to the vehicle subsystems via serial data.

Calibration Procedure

1. Apply the parking brake.
2. Ignition ON, engine OFF, place the transmission in the PARK position for automatic transmission or NEUTRAL position for manual transmission.
3. Install a scan tool.
4. Clear all DTCs before proceeding.
5. Navigate to the Configuration/Reset Functions menu of the BCM.
6. Select the Brake Pedal Position Sensor Learn procedure and follow the directions displayed on the screen.
7. Navigate to the Configuration/Reset Functions menu of the ECM.
8. Select the Learn Functions menu.
9. Select the Brake Pedal Position Sensor Learn procedure and follow the directions displayed on the screen.

BRAKE PEDAL POSITION SENSOR REPLACEMENT

NOTE: Brake system does not use a brake switch, stoplight switch or brakelight switch. System uses a Brake Pedal Position Sensor to control these functions.

Removal Procedure

1. Remove the left side instrument panel lower trim panel insulator. Refer to [Instrument Panel Lower](#)

Trim Panel Insulator Replacement - Left Side .

2. Disconnect the brake pedal position sensor electrical connector.

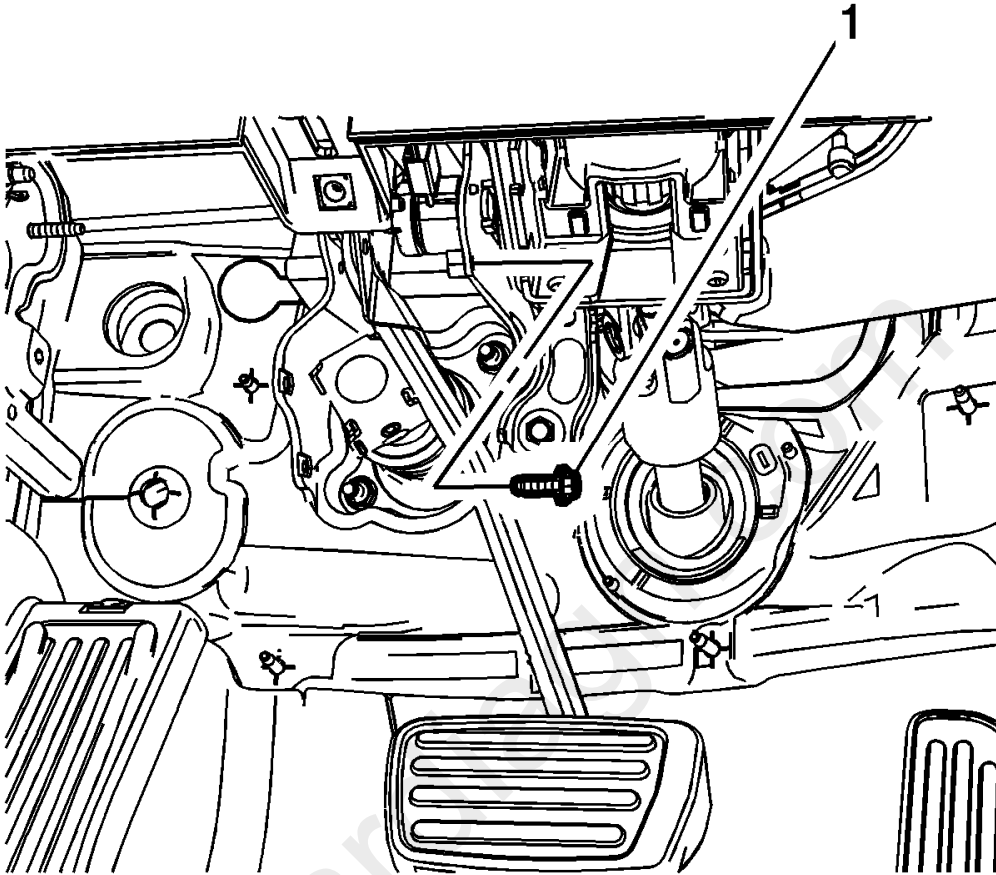


Fig. 1: Brake Pedal Position Sensor Bolt
Courtesy of GENERAL MOTORS COMPANY

3. Remove the brake pedal position sensor bolt (1).

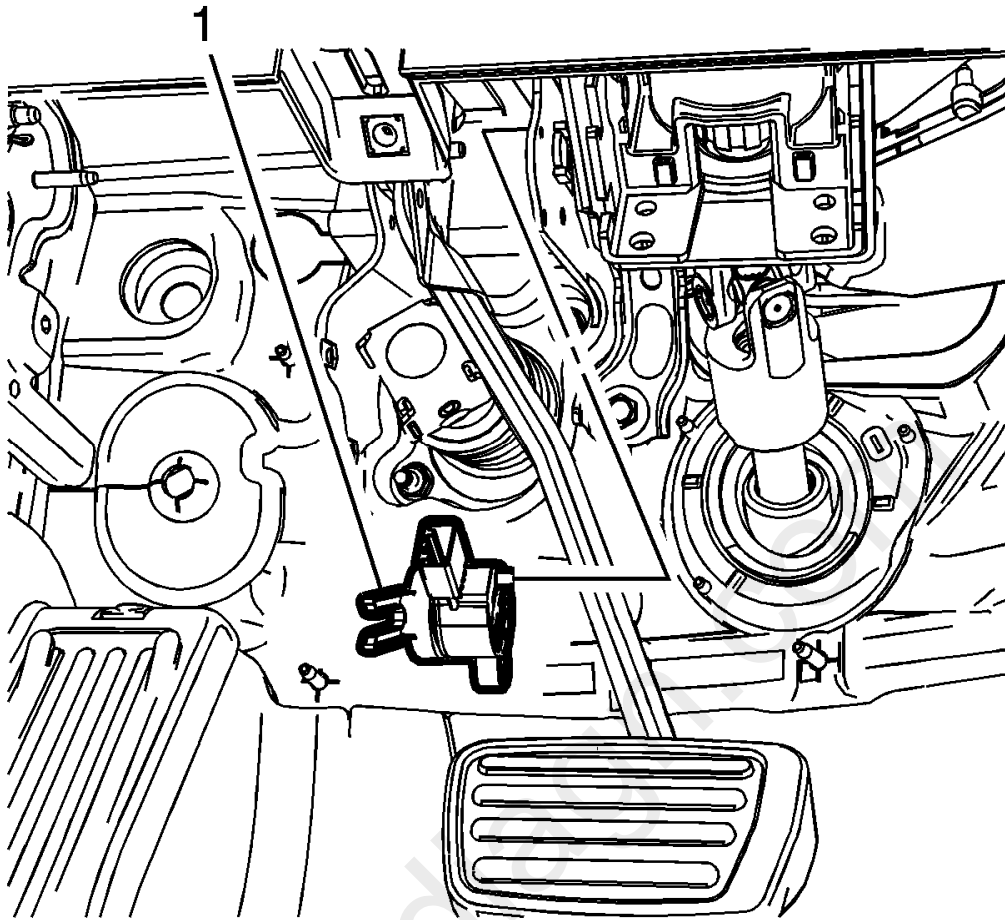


Fig. 2: Brake Pedal Position Sensor
Courtesy of GENERAL MOTORS COMPANY

4. Remove the brake pedal position sensor (1).

Installation Procedure

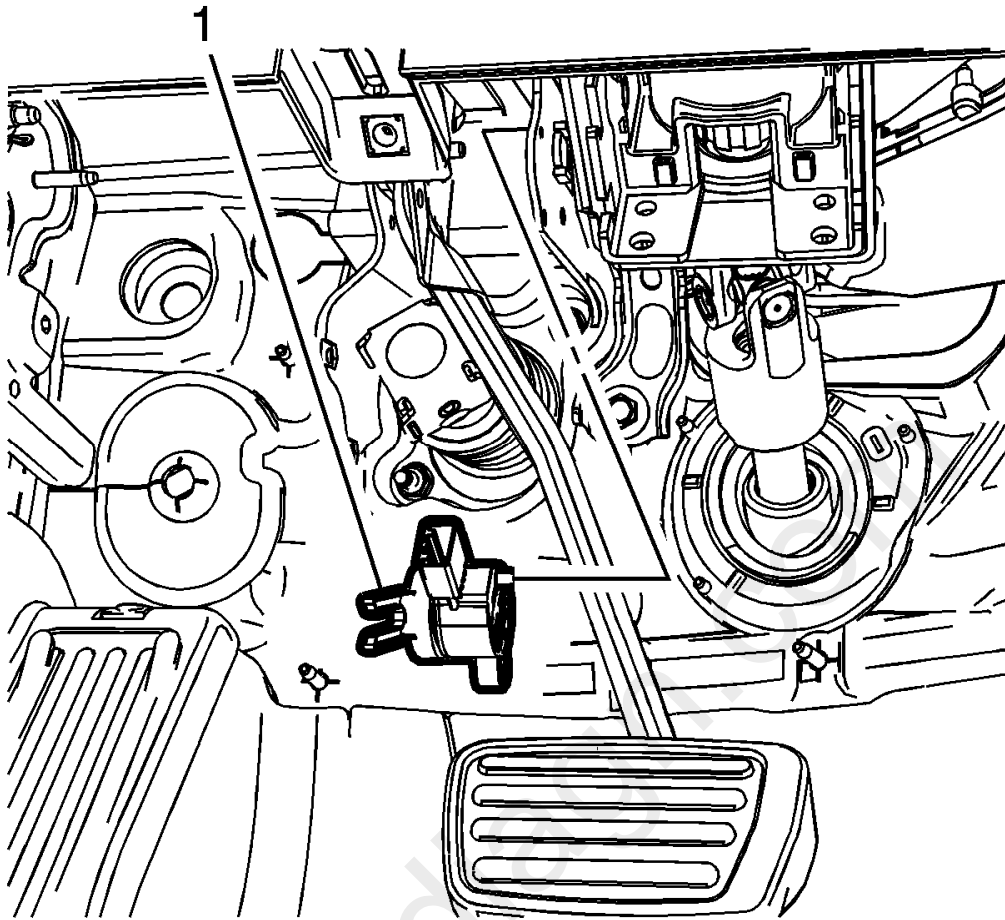


Fig. 3: Brake Pedal Position Sensor
Courtesy of GENERAL MOTORS COMPANY

NOTE: **Align the locating pin on the brake pedal position sensor to the hole on the brake pedal assembly bracket.**

1. Position the fork of the brake pedal position sensor (1) over the brake pedal pin and install the brake pedal position sensor.

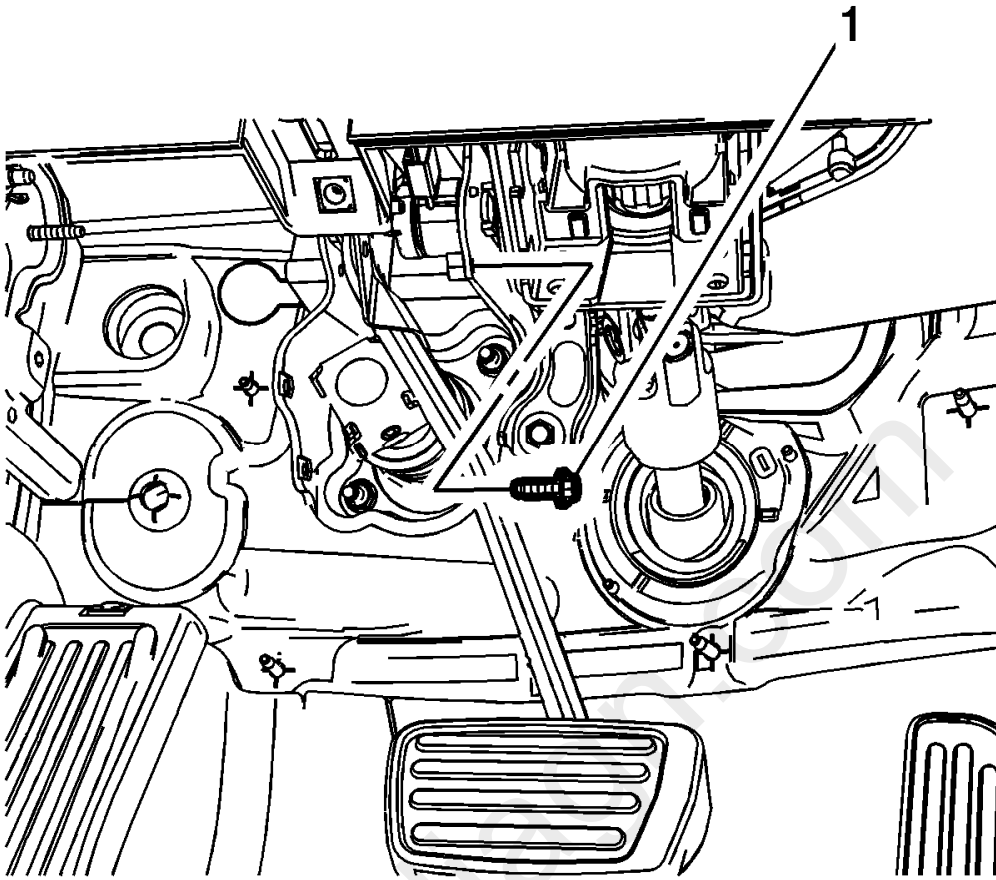


Fig. 4: Brake Pedal Position Sensor Bolt
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to Fastener Caution .

2. Install the brake pedal position sensor bolt (1).
3. Connect the brake pedal position sensor electrical connector.
4. Calibrate the brake pedal position sensor. Refer to **Brake Pedal Position Sensor Calibration**.
5. Install the left side instrument panel lower trim panel insulator. Refer to **Instrument Panel Lower Trim Panel Insulator Replacement - Left Side** .

INTERIOR LAMP SWITCH REPLACEMENT

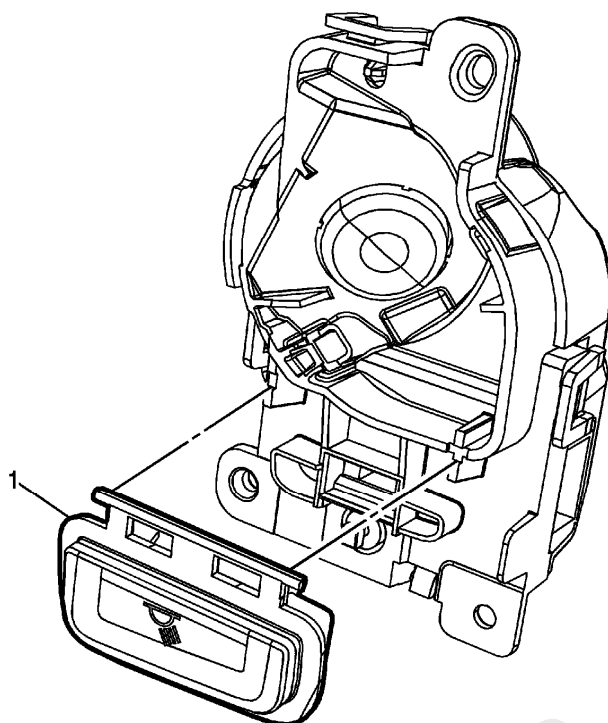


Fig. 5: Interior Lamp Switch
 Courtesy of GENERAL MOTORS COMPANY

Interior Lamp Switch Replacement

Callout	Component Name
Preliminary Procedure Remove the center reading and courtesy lamp. Refer to <u>Center Reading and Courtesy Lamp Replacement.</u>	
1	Interior Lamp Switch Procedure Release the tabs and remove the switch.

HAZARD WARNING SWITCH REPLACEMENT

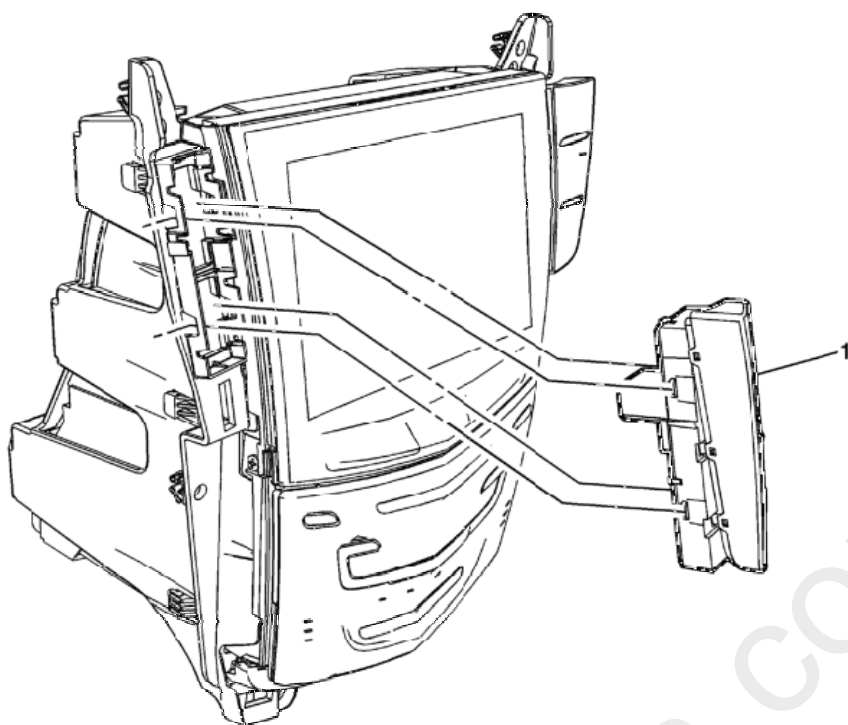


Fig. 6: Hazard Warning Switch
 Courtesy of GENERAL MOTORS COMPANY

Hazard Warning Switch Replacement

Callout	Component Name
Preliminary Procedure Remove the instrument panel accessory bracket. Refer to <u>Instrument Panel Accessory Bracket Replacement</u> .	
1	Hazard Warning Switch Procedure Using the appropriate tool, depress the tabs on switch to remove from the bracket.

DIMMER SWITCH REPLACEMENT

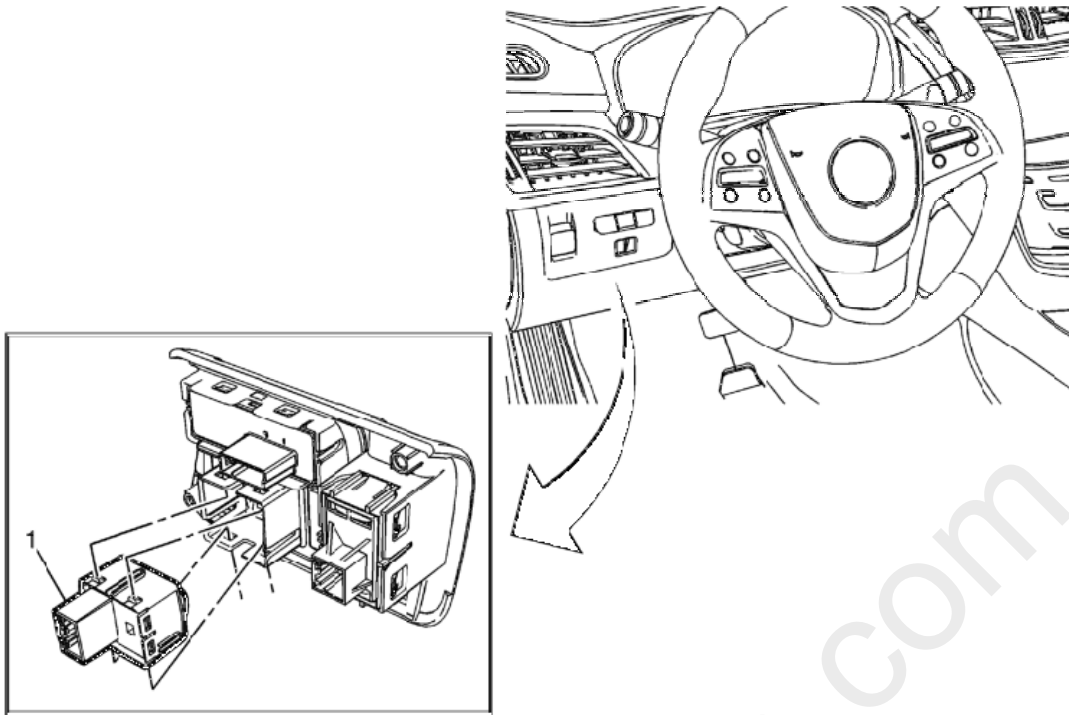


Fig. 7: Dimmer Switch
 Courtesy of GENERAL MOTORS COMPANY

Dimmer Switch Replacement

Callout	Component Name
Preliminary Procedure Remove the instrument panel knee bolster. Refer to <u>Instrument Panel Knee Bolster Replacement</u> .	
1	Dimmer Switch Procedure Release tabs on switch to remove from the bezel.

DOME AND READING LAMP SWITCH REPLACEMENT

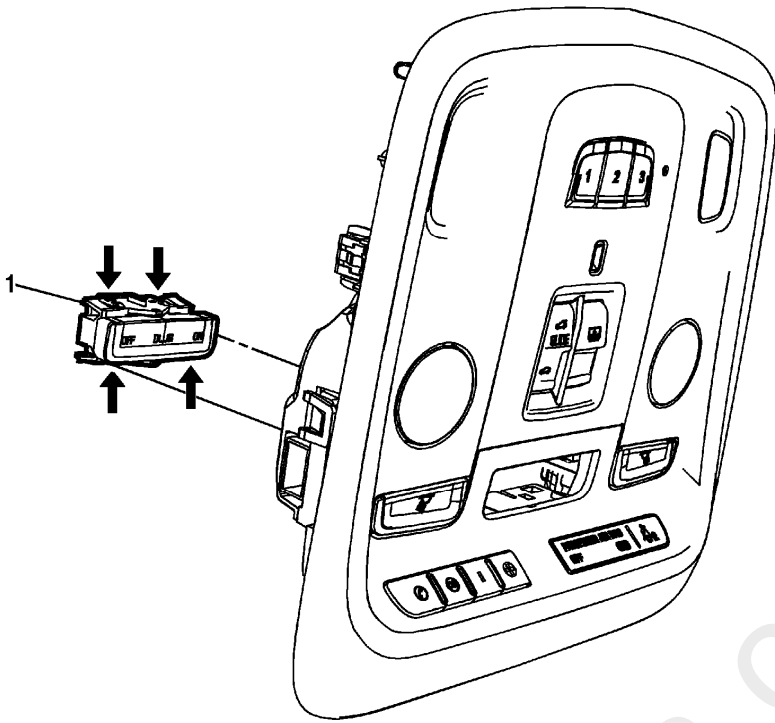


Fig. 8: Dome and Reading Lamp Switch
 Courtesy of GENERAL MOTORS COMPANY

Dome and Reading Lamp Switch Replacement

Callout	Component Name
Preliminary Procedure Remove the roof console. Refer to Roof Console Replacement .	
1	Dome and Reading Lamp Switch Procedure Release the tabs and remove the switch.

CENTER COURTESY LAMP REPLACEMENT

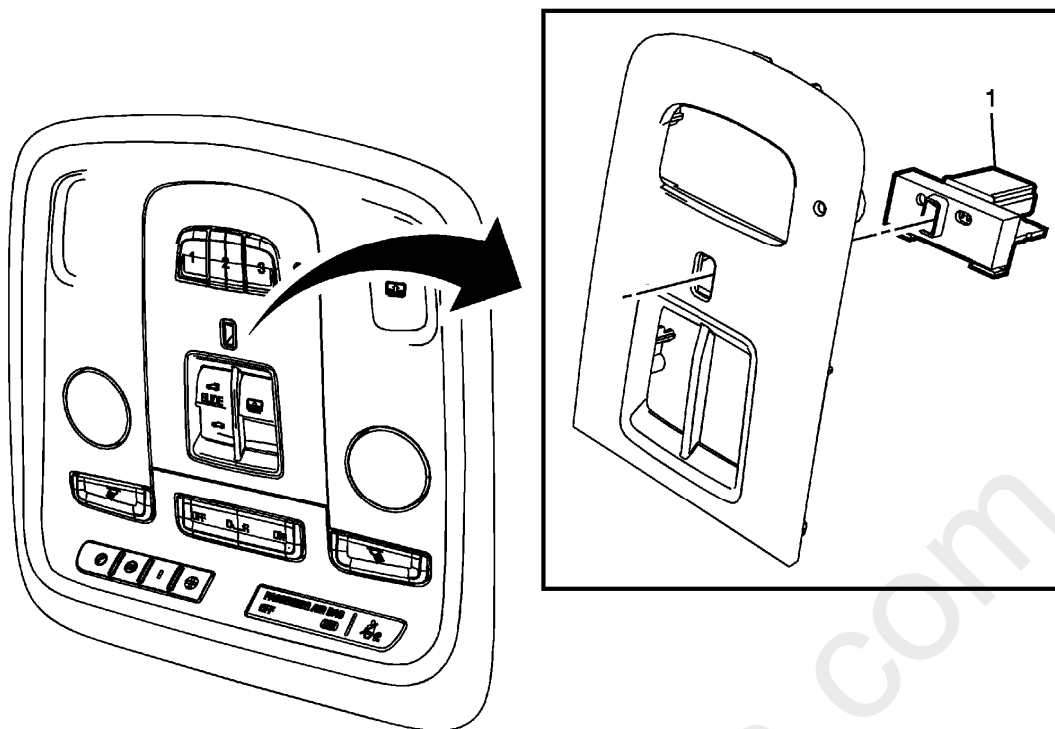


Fig. 9: Center Courtesy Lamp
 Courtesy of GENERAL MOTORS COMPANY

Center Courtesy Lamp Replacement

Callout	Component Name
Preliminary Procedure Remove the roof console accessory switch trim plate. Refer to <u>Roof Console Accessory Switch Trim Plate Replacement</u> .	
1	Center Courtesy Lamp Procedure Release the tabs and remove the lamp.

CENTER READING AND COURTESY LAMP REPLACEMENT

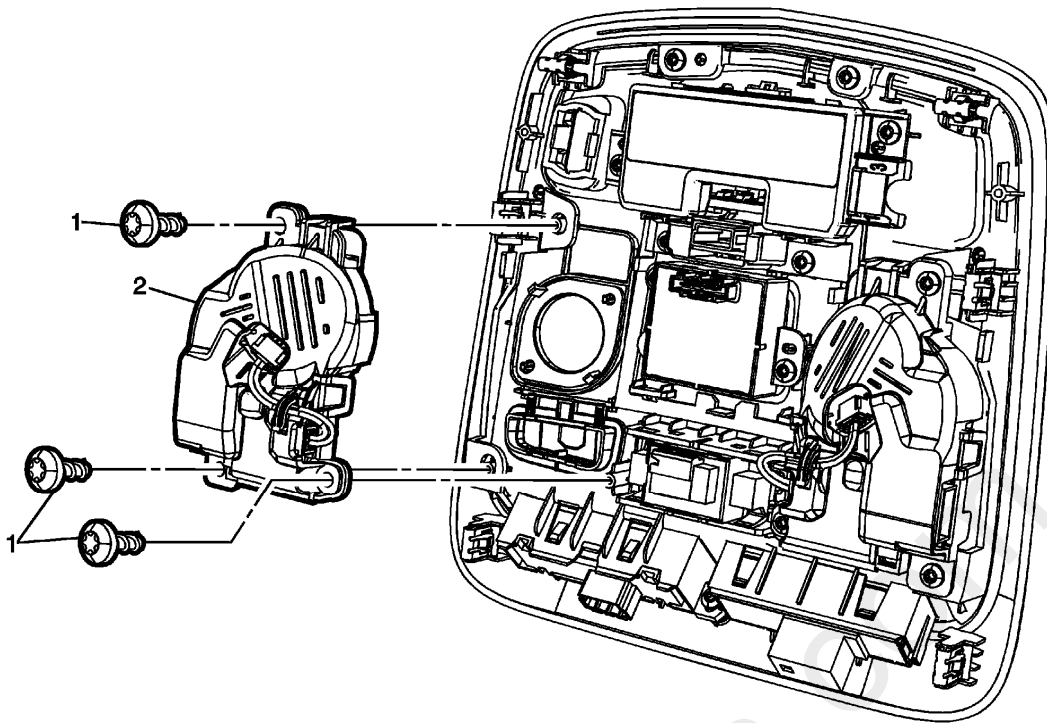


Fig. 10: Center Reading and Courtesy Lamp
 Courtesy of GENERAL MOTORS COMPANY

Center Reading and Courtesy Lamp Replacement

Callout	Component Name
Preliminary Procedure Remove the roof console. Refer to <u>Roof Console Replacement</u> .	
1	Center Reading and Courtesy Lamp Fasteners (Qty: 3) CAUTION: Refer to <u>Fastener Caution</u> .
2	Center Reading and Courtesy Lamp

FRONT FLOOR COURTESY LAMP REPLACEMENT

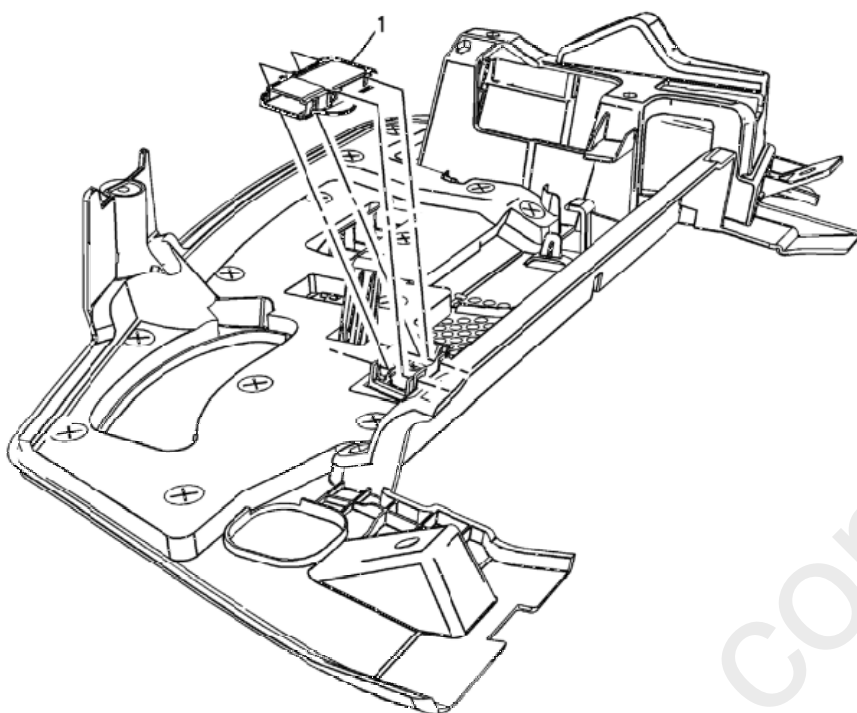


Fig. 11: Front Floor Courtesy Lamp
 Courtesy of GENERAL MOTORS COMPANY

Front Floor Courtesy Lamp Replacement

Callout	Component Name
Preliminary Procedure Remove the instrument panel lower trim panel insulator - right side. Refer to <u>Instrument Panel Lower Trim Panel Insulator Replacement - Right Side</u> , or the instrument panel lower trim panel insulator - left side. Refer to <u>Instrument Panel Lower Trim Panel Insulator Replacement - Left Side</u> .	
1	Front Floor Courtesy Lamp Procedure 1. If replacing the right side lamp, use the appropriate tool to release the tabs on lamp and remove from insulator panel. 2. If replacing the left side lamp, use the appropriate tool to release the tabs on lamp and remove from the instrument panel knee bolster. 3. Disconnect the electrical connection.

FRONT FLOOR CONSOLE CUP HOLDER ILLUMINATION LAMP REPLACEMENT

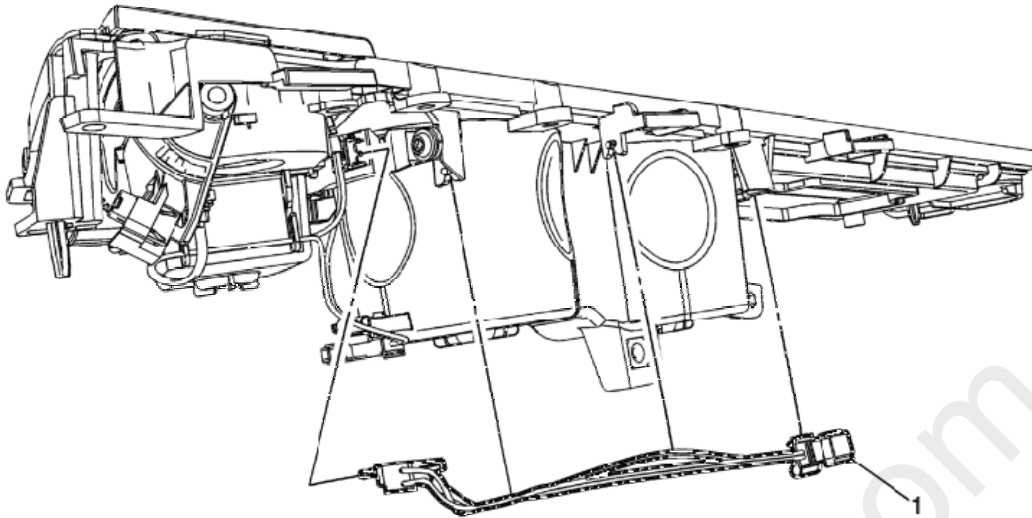


Fig. 12: Front Floor Console Cup Holder Illumination Lamp
 Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Cup Holder Illumination Lamp Replacement

Callout	Component Name
Preliminary Procedure Remove the front floor console cup holder plate. Refer to <u>Front Floor Console Cup Holder Plate Replacement</u> .	
1	Front Floor Console Cup Holder Illumination Lamp Procedure 1. Disconnect the lamp from the cup holder plate. 2. Release the wire from several tabs to remove.

FRONT FLOOR CONSOLE COMPARTMENT LAMP REPLACEMENT (REAR)

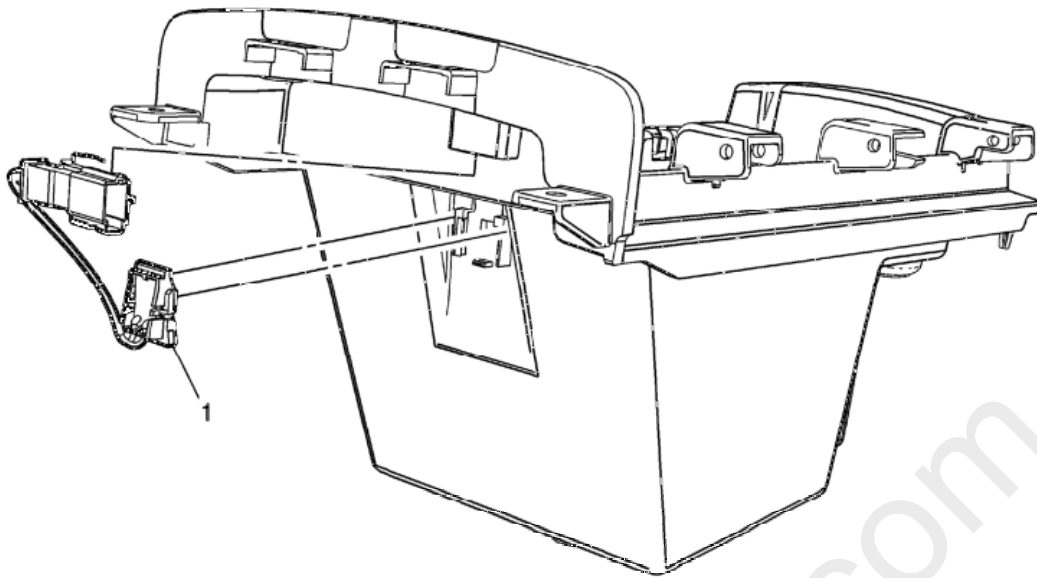


Fig. 13: Front Floor Console Compartment Lamp (Rear)
 Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Compartment Lamp Replacement (Rear)

Callout	Component Name
Preliminary Procedure Remove the front floor console compartment. Refer to <u>Front Floor Console Compartment Replacement</u> .	
1	Front Floor Console Compartment Lamp Procedure 1. Use a plastic flat bladed trim tool in order to release the lamp assembly from the compartment. 2. Disconnect the electrical connection.

FRONT FLOOR CONSOLE COMPARTMENT LAMP REPLACEMENT (FRONT)

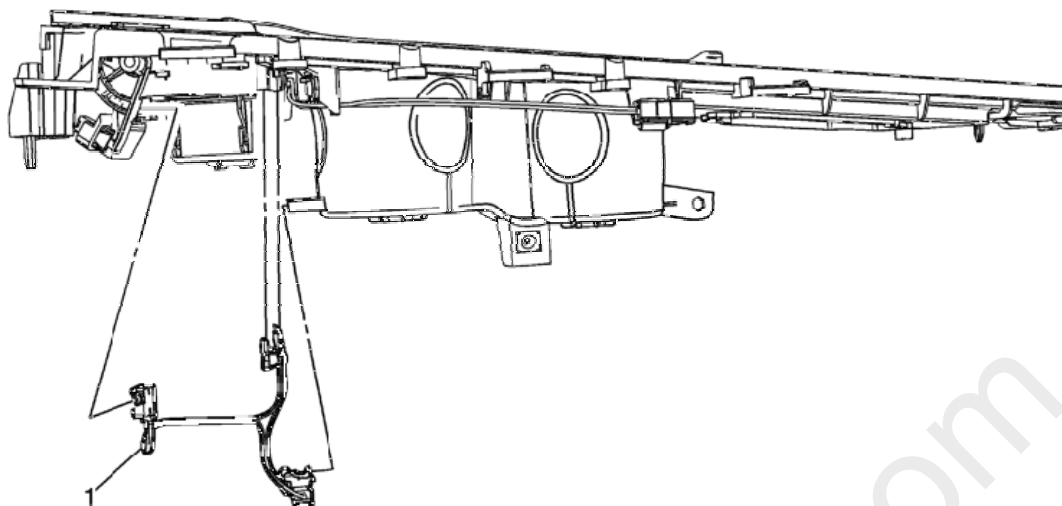


Fig. 14: Front Floor Console Compartment Lamp (Front)
 Courtesy of GENERAL MOTORS COMPANY

Front Floor Console Compartment Lamp Replacement (Front)

Callout	Component Name
Preliminary Procedure Remove the front floor console cup holder plate. Refer to <u>Front Floor Console Cup Holder Plate Replacement</u> .	
1	Front Floor Console Compartment Lamp Procedure 1. Use a plastic flat bladed trim tool in order to release the lamp assembly from the compartment in two places. 2. Unclip the lamp assembly from the cup holder.

FRONT SIDE DOOR INSIDE HANDLE ILLUMINATION LAMP REPLACEMENT

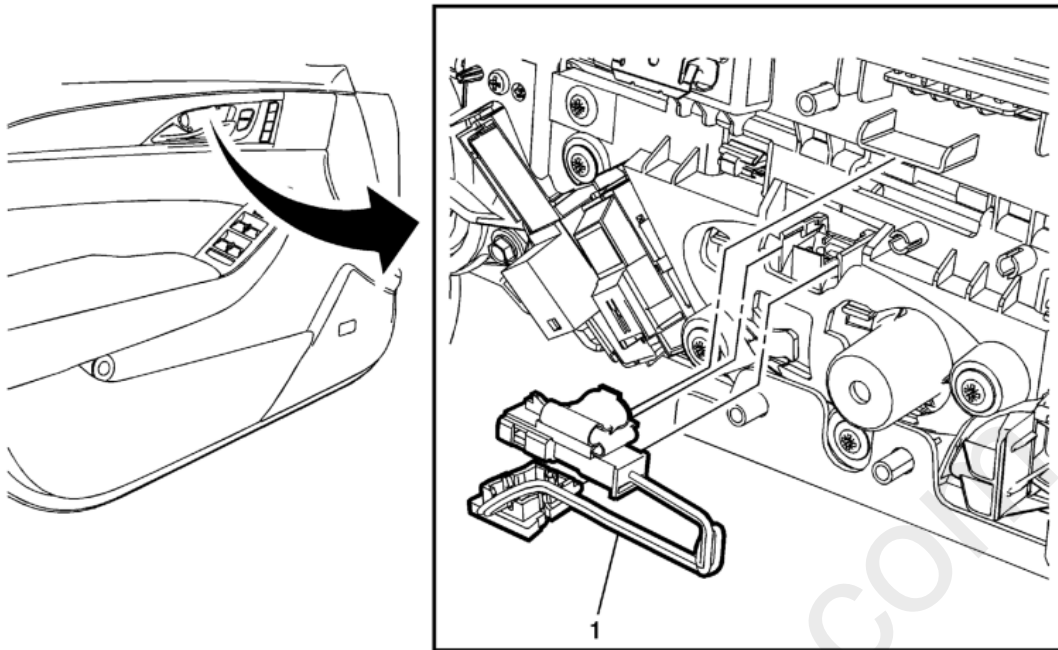


Fig. 15: Front Side Door Inside Handle Illumination Lamp
 Courtesy of GENERAL MOTORS COMPANY

Front Side Door Inside Handle Illumination Lamp Replacement

Callout	Component Name
Preliminary Procedure	
Remove the front side door trim. Refer to Front Side Door Trim Replacement .	
1	Front Side Door Inside Handle Illumination Lamp Procedure 1. Reposition the front side door trim insulator panel. 2. Disconnect the electrical connectors. 3. Unsnap lamp assembly from trim panel tabs.

REAR SIDE DOOR INSIDE HANDLE ILLUMINATION LAMP REPLACEMENT

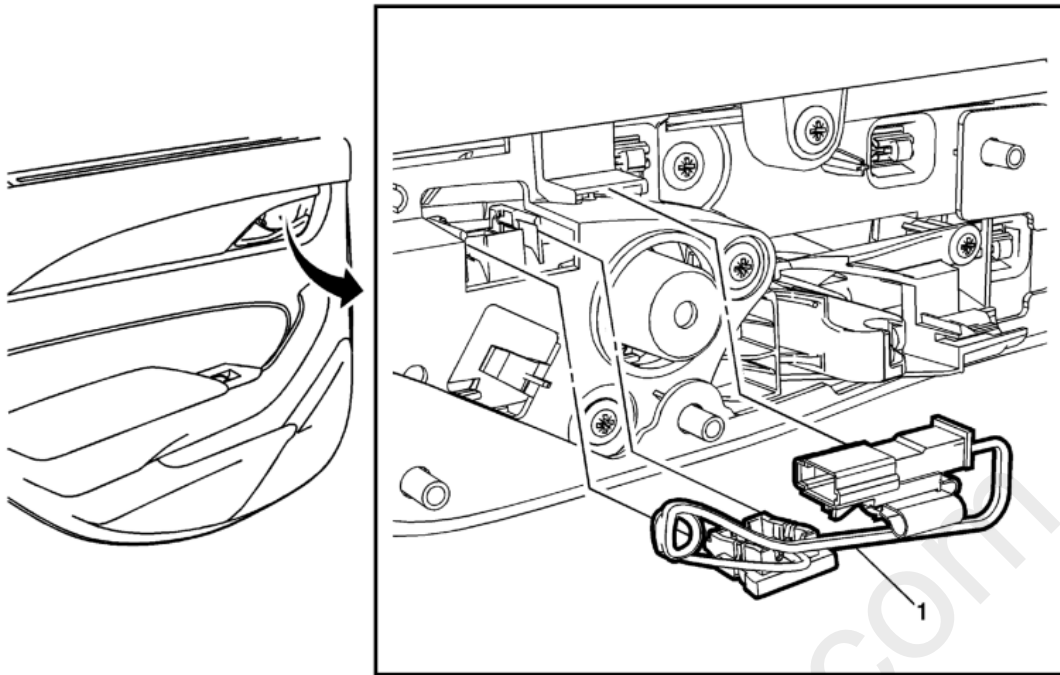


Fig. 16: Rear Side Door Inside Handle Illumination Lamp
 Courtesy of GENERAL MOTORS COMPANY

Rear Side Door Inside Handle Illumination Lamp Replacement

Callout	Component Name
Preliminary Procedure	
Remove the rear side door trim. Refer to <u>Rear Side Door Trim Replacement</u> .	
1	Rear Side Door Inside Handle Illumination Lamp Procedure 1. Disconnect the electrical connectors. 2. Unsnap lamp assembly from the rear side door inside handle.

REAR SIDE DOOR COURTESY LAMP REPLACEMENT

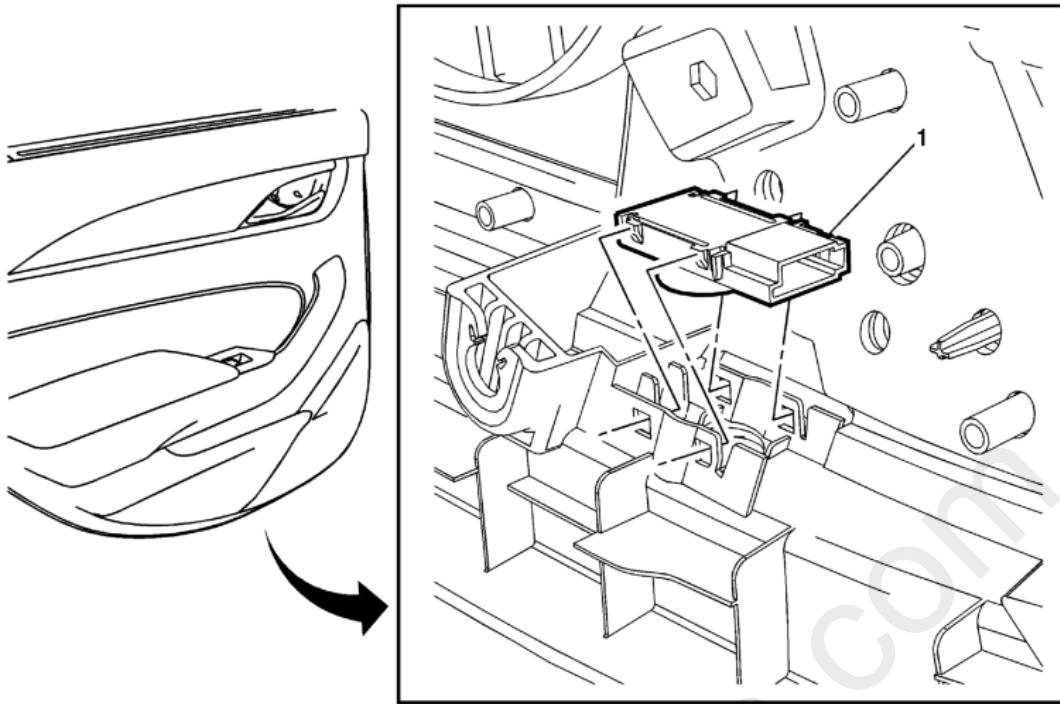


Fig. 17: Rear Side Door Courtesy Lamp
 Courtesy of GENERAL MOTORS COMPANY

Rear Side Door Courtesy Lamp Replacement

Callout	Component Name
Preliminary Procedure	
Remove the rear side door trim. Refer to <u>Rear Side Door Trim Replacement</u> .	
1	Rear Side Door Courtesy Lamp Procedure 1. Disconnect the electrical connectors. 2. Unsnap lamp assembly tabs from the bracket.

FRONT SIDE DOOR COURTESY LAMP REPLACEMENT

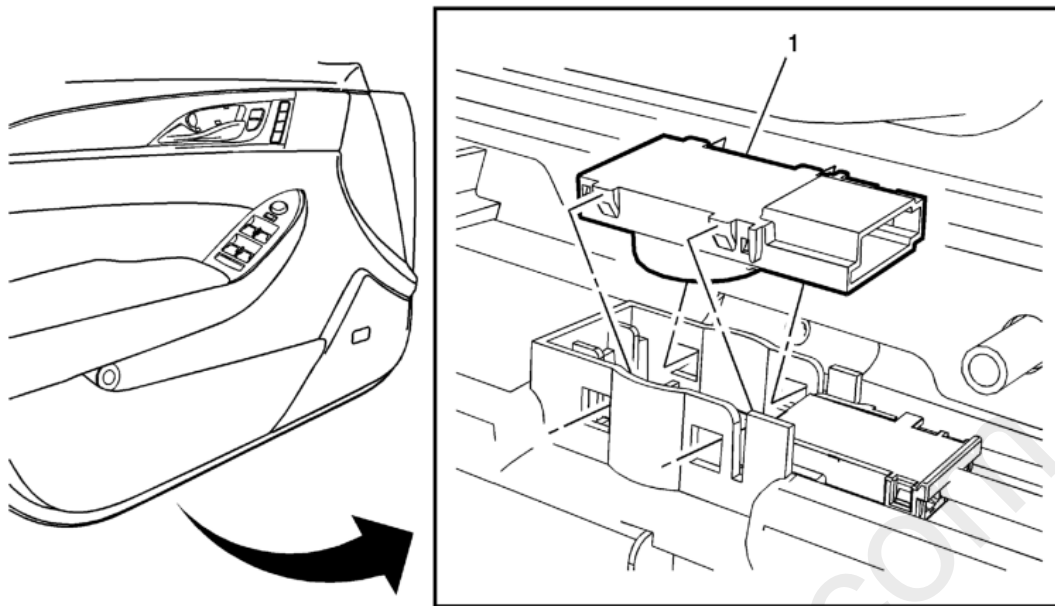


Fig. 18: Front Side Door Courtesy Lamp
 Courtesy of GENERAL MOTORS COMPANY

Front Side Door Courtesy Lamp Replacement

Callout	Component Name
Preliminary Procedure	
Remove the front side door trim. Refer to Front Side Door Trim Replacement .	
1	Front Side Door Courtesy Lamp Procedure 1. Disconnect the electrical connector. 2. Unsnap lamp assembly from bracket tabs.

FRONT FLOOR FLOOD LAMP REPLACEMENT (LEFT SIDE)

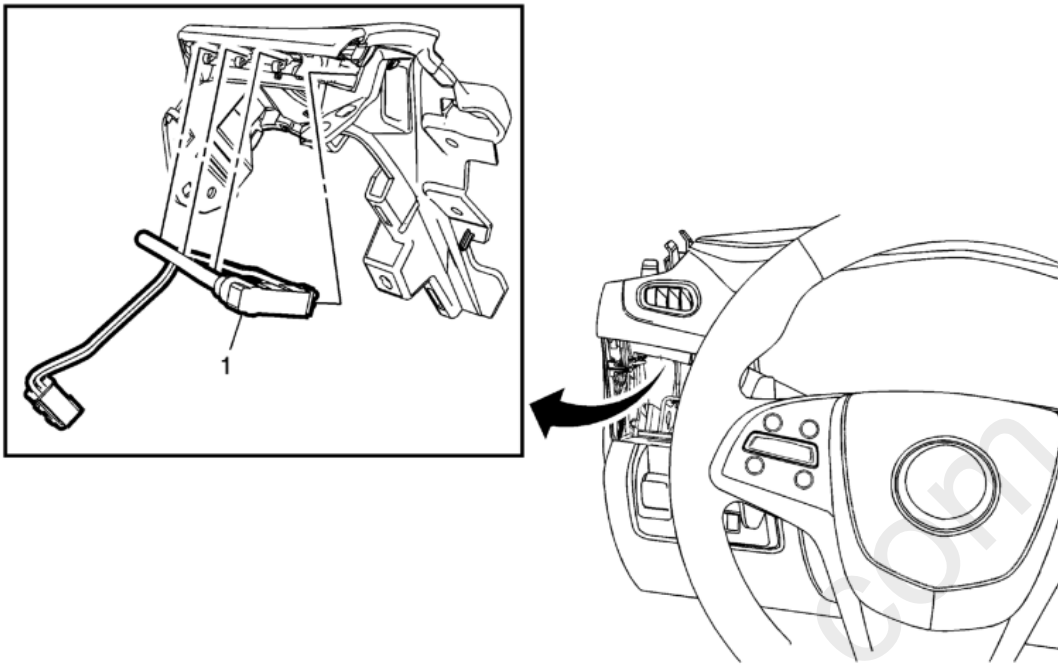


Fig. 19: Front Floor Flood Lamp (Left Side)
Courtesy of GENERAL MOTORS COMPANY

Front Floor Flood Lamp Replacement (Left Side)

Callout	Component Name
Preliminary Procedure Remove the instrument panel trim pad - drivers side. Refer to <u>Instrument Panel Trim Pad Replacement (Passenger Side)</u> , <u>Instrument Panel Trim Pad Replacement (Driver Side)</u> .	
1	Front Floor Flood Lamp Procedure 1. Disconnect the electrical connector. 2. Unsnap lamp assembly from the retainer.

FRONT FLOOR FLOOD LAMP REPLACEMENT (CENTER)

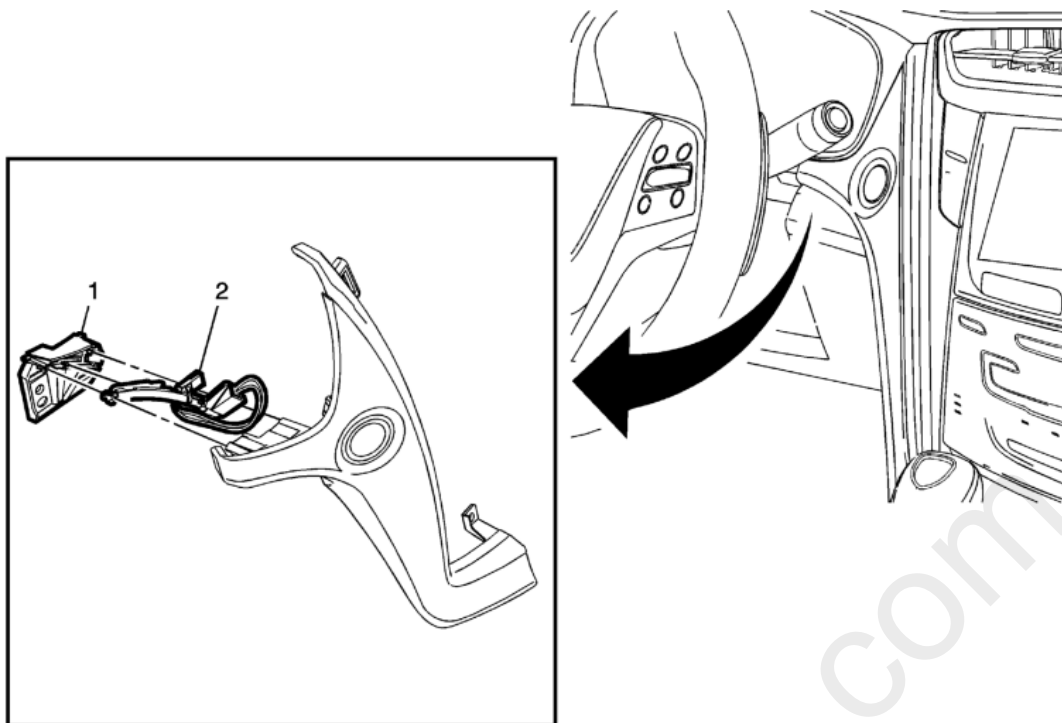


Fig. 20: Front Floor Flood Lamp (Center)
 Courtesy of GENERAL MOTORS COMPANY

Front Floor Flood Lamp Replacement (Center)

Callout	Component Name
Preliminary Procedure Remove the instrument panel lower center trim - left side. Refer to <u>Instrument Panel Lower Center Trim Panel Replacement (Right Side)</u> , <u>Instrument Panel Lower Center Trim Panel Replacement (Left Side)</u> .	
1	Instrument Panel Lamp Bracket
2	Front Floor Flood Lamp
	Procedure Disconnect the lamp from the bracket assembly.

FRONT FLOOR FLOOD LAMP REPLACEMENT (RIGHT SIDE)

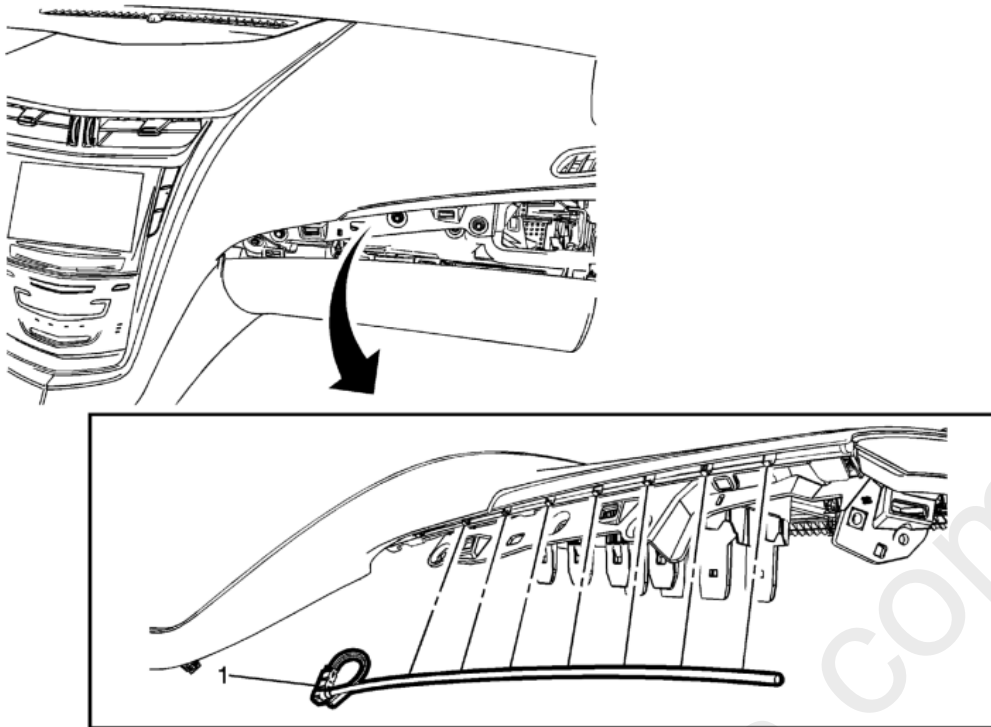


Fig. 21: Front Floor Flood Lamp (Right Side)
 Courtesy of GENERAL MOTORS COMPANY

Front Floor Flood Lamp Replacement (Right Side)

Callout	Component Name
Preliminary Procedure Remove the instrument panel trim pad - passenger side. Refer to <u>Instrument Panel Trim Pad Replacement (Passenger Side)</u> , <u>Instrument Panel Trim Pad Replacement (Driver Side)</u> .	
1	Front Floor Flood Lamp Procedure 1. Disconnect the electrical connector. 2. Unsnap the flood lamp assembly from the instrument panel trim.

INSTRUMENT PANEL COMPARTMENT LAMP REPLACEMENT

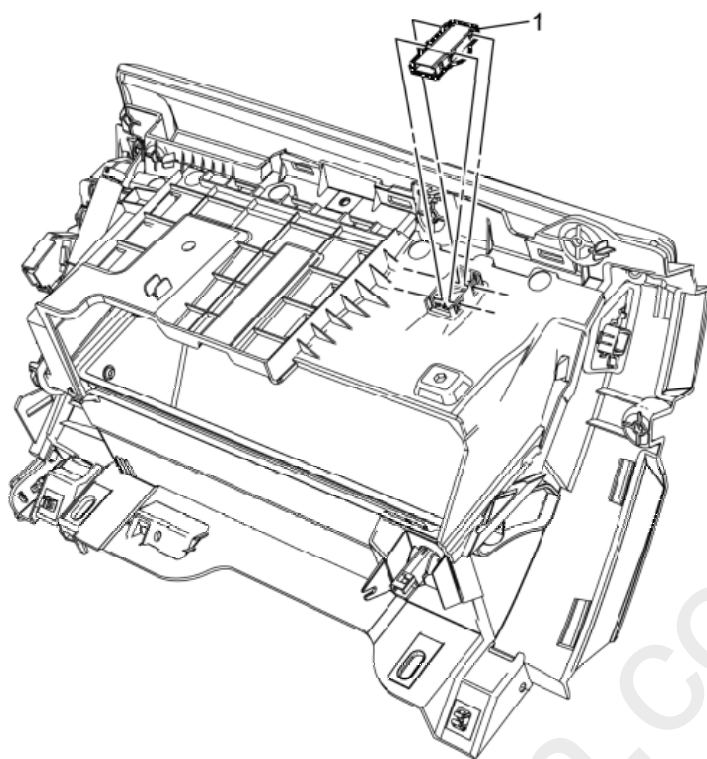


Fig. 22: Instrument Panel Compartment Lamp
 Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Compartment Lamp Replacement

Callout	Component Name
Preliminary Procedure Remove the instrument panel compartment. Refer to Instrument Panel Compartment Replacement .	
1	Instrument Panel Compartment Lamp Procedure 1. Disconnect the electrical connector. 2. Using the appropriate tool depress tabs to release.

INSTRUMENT PANEL COMPARTMENT LAMP SWITCH REPLACEMENT

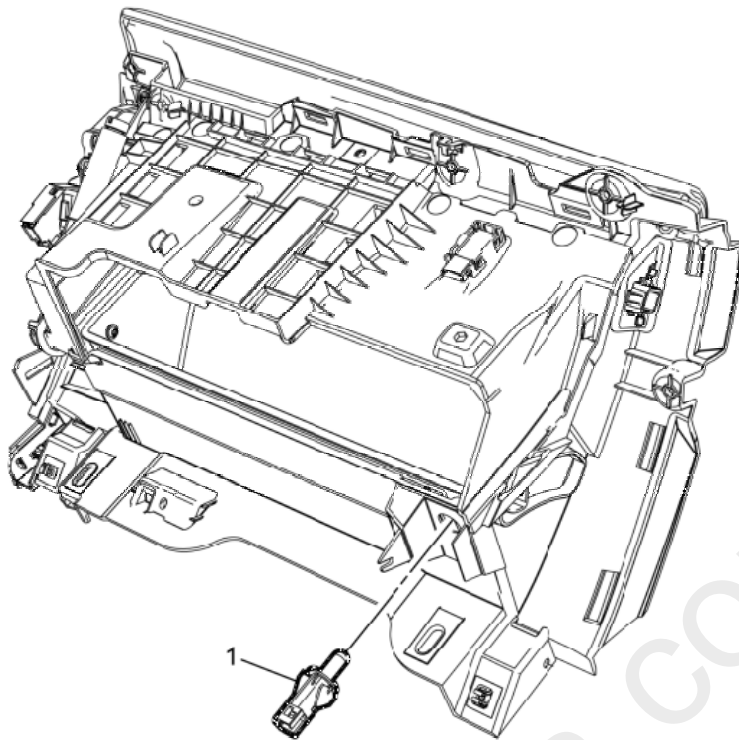


Fig. 23: Instrument Panel Compartment Lamp Switch
 Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Compartment Lamp Switch Replacement

Callout	Component Name
Preliminary Procedure	
Remove the instrument panel compartment. Refer to Instrument Panel Compartment Replacement .	
1	Instrument Panel Compartment Lamp Switch Procedure Depress the tabs on the lamp switch to remove.

ROOF RAIL REAR SEAT POSITION READING AND COURTESY LAMP REPLACEMENT

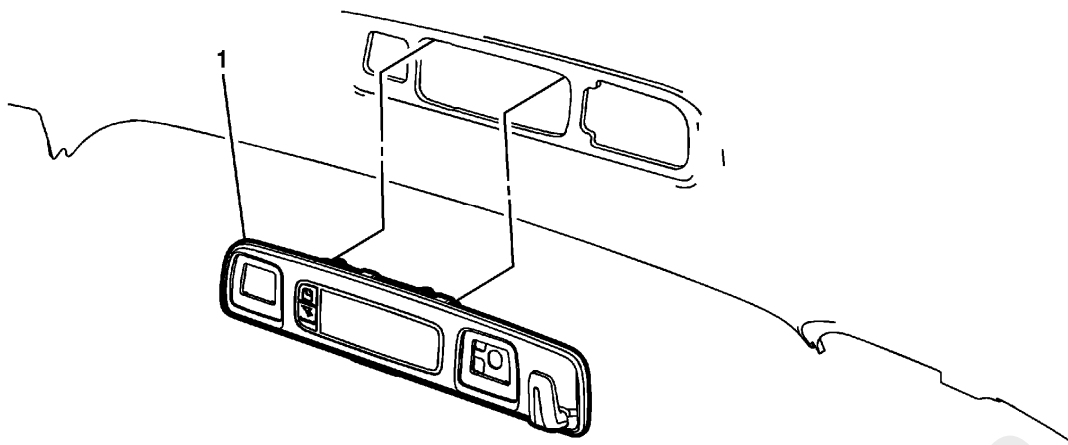


Fig. 24: Roof Rail Rear Seat Position Reading & Courtesy Lamp
Courtesy of GENERAL MOTORS COMPANY

Roof Rail Rear Seat Position Reading and Courtesy Lamp Replacement

Callout	Component Name
Preliminary Procedure	
Remove the roof rail rear assist handle. Refer to <u>Roof Rail Rear Assist Handle Replacement</u> .	
1	Roof Rail Rear Seat Position Reading and Courtesy Lamp Assembly
	Procedure
	1. Release the top portion of the lamp from the headliner.
	2. Disconnect the electrical connector.
	3. Remove the lamp from the headliner.

SUNSHADE ILLUMINATED MIRROR LAMP LENS REPLACEMENT

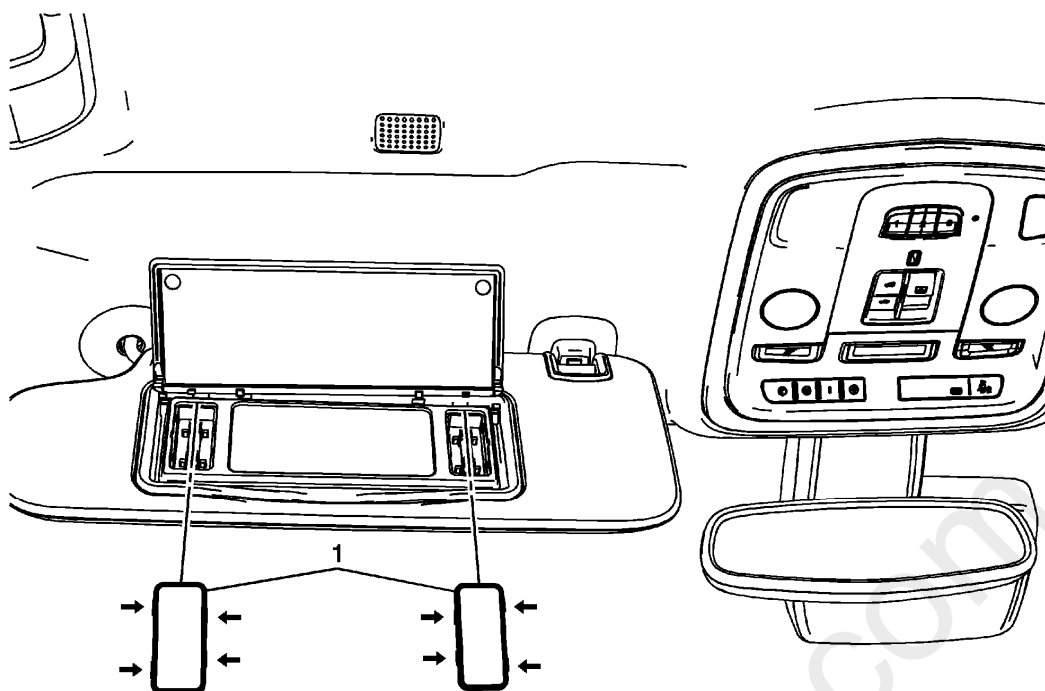


Fig. 25: Sunshade Illuminated Mirror Lamp Lens
 Courtesy of GENERAL MOTORS COMPANY

Sunshade Illuminated Mirror Lamp Lens Replacement

Callout	Component Name
1	Sunshade Illuminated Mirror Lamp Lens Procedure Carefully use a flat bladed tool, and release the tabs retaining the lamp lens to the sunshade assembly.

OUTSIDE REARVIEW MIRROR TURN SIGNAL LAMP REPLACEMENT

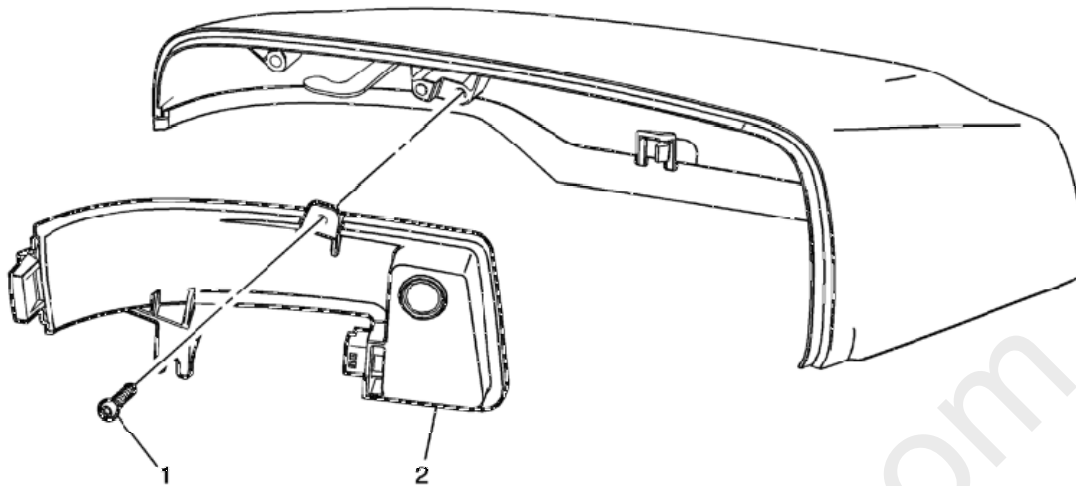


Fig. 26: Outside Rearview Mirror Turn Signal Lamp
 Courtesy of GENERAL MOTORS COMPANY

Outside Rearview Mirror Turn Signal Lamp Replacement

Callout	Component Name
Preliminary Procedure Remove the outside rearview mirror housing upper cover. Refer to <u>Outside Rearview Mirror Housing Upper Cover Replacement (North America)</u> , <u>Outside Rearview Mirror Housing Upper Cover Replacement (Except North America)</u> .	
1	Outside Rearview Mirror Turn Signal Lamp Screw. CAUTION: Refer to <u>Fastener Caution</u> .
2	Outside Rearview Mirror Turn Signal Lamp Procedure Pull outside rearview mirror turn signal lamp out of outside rearview mirror housing upper cover.

HEADLAMP REPLACEMENT

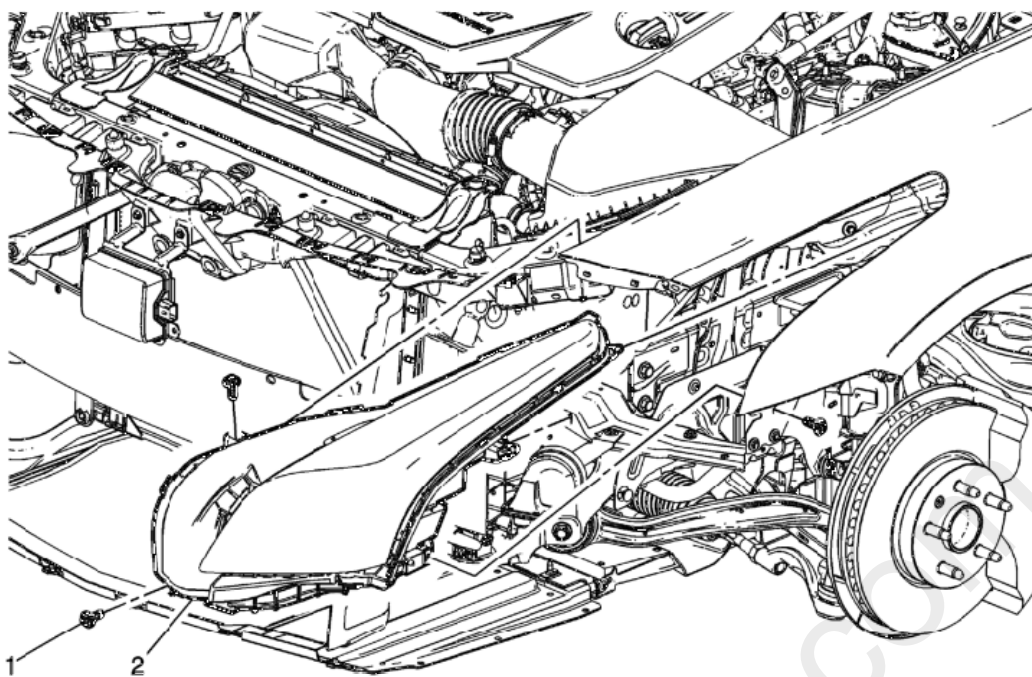


Fig. 27: Headlamp

Courtesy of GENERAL MOTORS COMPANY

Headlamp Replacement

Callout	Component Name
Preliminary Procedure Remove the front bumper fascia. Refer to Front Bumper Fascia Replacement .	
1	Headlamp Bolt (Qty: 3) CAUTION: Refer to Fastener Caution . Tighten 2.5 N.m(22 lb in)
2	Headlamp Procedure 1. Grasp the headlamp and firmly pull straight back to release the top rearward retainer. 2. Disconnect the electrical connector. 3. Aim the headlamp after replacement. Refer to Headlamp Aiming.

HEADLAMP BALLAST REPLACEMENT

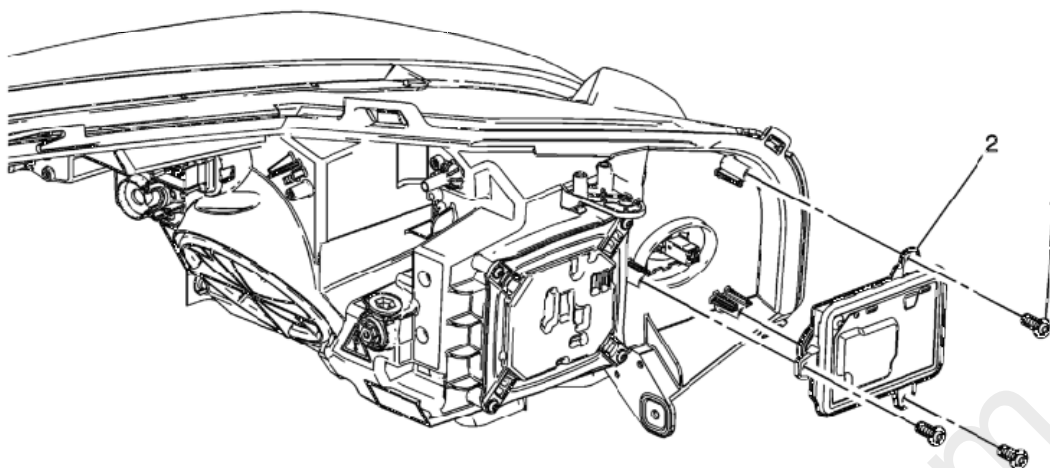


Fig. 28: Headlamp Ballast
 Courtesy of GENERAL MOTORS COMPANY

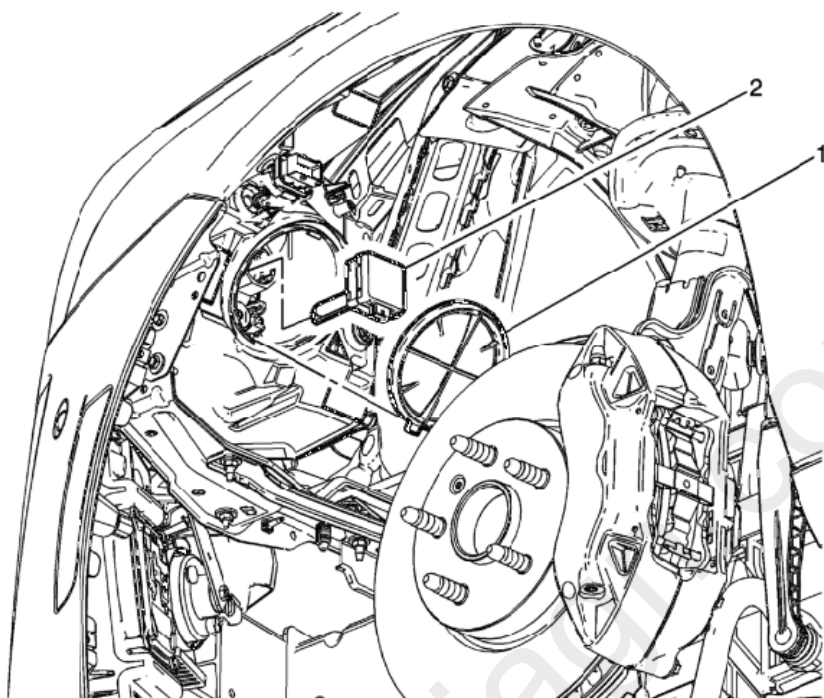
Headlamp Ballast Replacement

Callout	Component Name
WARNING: The high intensity discharge system produces high voltage and current. In order to reduce the risk of severe shocks and burns, the battery negative cable must be disconnected any time service work is being performed on or around the high intensity discharge system.	
WARNING: The high intensity discharge system produces high voltage and current. To reduce the risk of severe shocks and burns: • Never open the high intensity discharge system ballast or the arc tube assembly starter. • Never probe between the high intensity discharge system ballast output connector and the arc tube assembly.	
Preliminary Procedure Remove the front bumper fascia. Refer to <u>Front Bumper Fascia Replacement</u> .	
1	Headlamp Ballast Bolts (Qty: 3) CAUTION: Refer to <u>Fastener Caution</u> .
	Headlamp Ballast

2

Procedure

Disconnect the electrical connector.

HEADLAMP BULB REPLACEMENT**Fig. 29: Headlamp Bulb**

Courtesy of GENERAL MOTORS COMPANY

Headlamp Bulb Replacement

Callout	Component Name
Preliminary Procedure Remove the front wheelhouse liner. Refer to Front Wheelhouse Liner Replacement .	
1	Headlamp Opening Cover Procedure Turn counterclockwise and pull from the headlamp.
2	Headlamp Bulb WARNING: Refer to <u>Halogen Bulb Warning</u> . Procedure 1. Disconnect the electrical connector. 2. Pull the headlamp bulb straight out from the headlamp.

HEADLAMP BRACKET REPLACEMENT

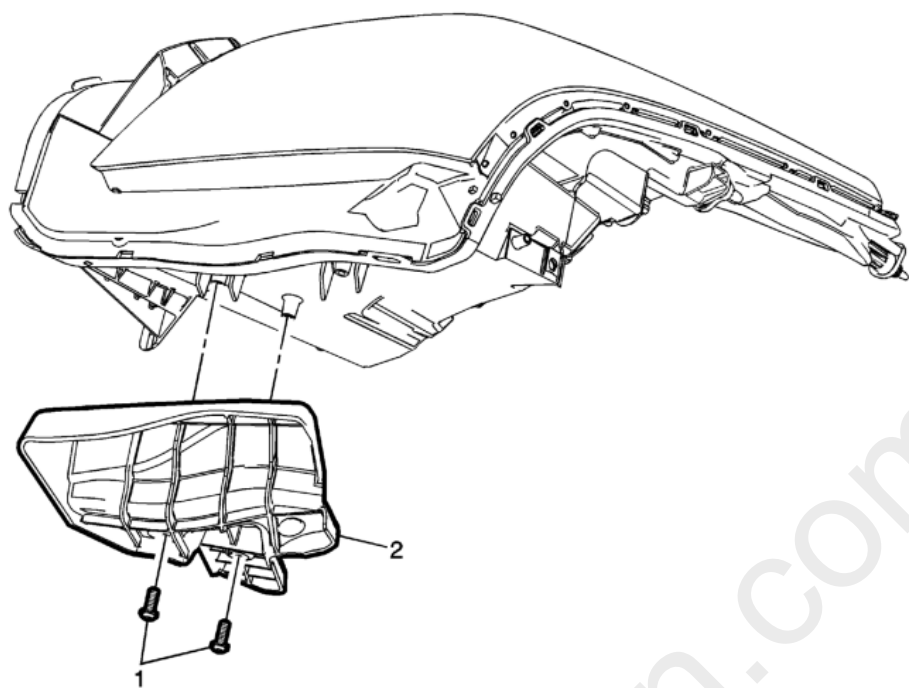


Fig. 30: Headlamp Bracket
Courtesy of GENERAL MOTORS COMPANY

Headlamp Bracket Replacement

Callout	Component Name
Preliminary Procedure Remove the headlamp. Refer to Headlamp Replacement .	
1	Headlamp Screw (Qty: 2) CAUTION: Refer to Fastener Caution .
2	Headlamp Bracket

HEADLAMP AIMING

Aiming Headlamps (Visual Aim)

IMPORTANT: Some state and local laws specify requirements for headlamp aim. All of these laws must be complied with when performing any headlamp aiming operations.

Headlamp aim should be checked:

- When a new headlamp capsule is installed.

- If service or repairs to the front end area have (or may have) disturbed the headlamps or their mounting.
- Suspension components have been replaced or repaired.
- The area will consist of a level surface large enough to allow for a vehicle and an additional 7.62 m (25 ft) measured from face of lamps to the front of the aiming screen.
- The screen will be 1.52 m (5 ft) high x 3.66 m (12 ft) wide with a matte white surface well shaded from extraneous light, and properly adjusted to the floor on which the vehicle stands. Provisions may be made for moving the screen so it can be aligned parallel with the vehicle.
- The screen shall be provided with a fixed vertical centerline, 2 laterally adjustable vertical tapes, and 1 vertically adjustable horizontal tape.
- If a regular commercial aiming screen is not available, the screen may consist of a vertical wall having a clear uninterrupted area approximately 1.83 m (6 ft) high and 3.66 m (12 ft) wide. The surface should be finished with a washable non-gloss white paint.

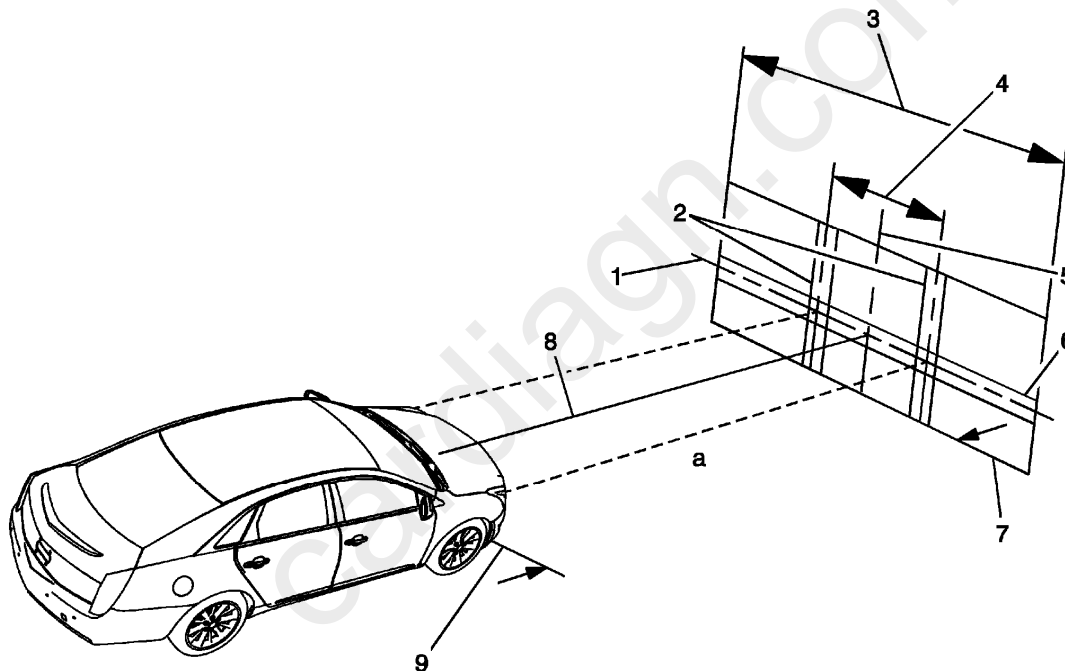


Fig. 31: Headlamp Aiming Procedure
Courtesy of GENERAL MOTORS COMPANY

- After the aiming screen has been set up in its permanent location, it is necessary to paint a reference line on the floor (9) directly under the lens of the lamps to indicate the proper location of the headlamps when they are being aimed:
 - Distance between headlamps (1)
 - Center line of screen (2)
 - Adjustable vertical pointer (3)
 - Adjustable horizontal tape (4)

- Diagram of light screen (5)
- Vertical center line ahead of right headlamp pointer position (6)
- 7.62 m (25 ft) (7)
- Car centerline axis (8)

Prior to aiming the headlamps, the following steps must be taken:

1. Remove any snow, ice or mud from the vehicle.
2. The vehicle must have a full tank of gas.
3. Stop all other work on the vehicle.
4. If any service has been performed on the vehicle, make sure that all of the components are back in their original place.
5. The vehicle must be on a level surface.

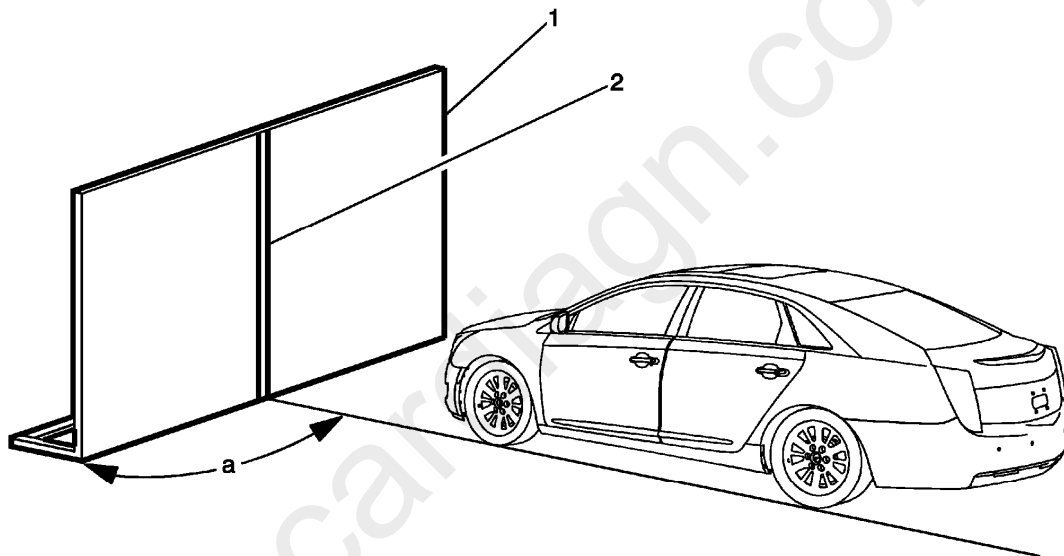


Fig. 32: Headlamp Aiming Reference Lines
Courtesy of GENERAL MOTORS COMPANY

6. The vehicle left tires must be aligned with the reference line extending from the screen with the headlamps aligned with the vertical reference line (2).
7. Do not load any cargo in the vehicle.
8. The vehicle must contain 1 person or 72.56 kg (160 lb) on the driver's seat.
9. Inflate the tires to the proper pressure.
10. Simulate the vehicle loads if the intended use of the vehicle is for hauling heavy loads or towing a trailer.

11. Rock the vehicle in order to stabilize the suspension.
12. Turn ON the headlamps to low beam and observe the left and the top edges of the high intensity zone on the screen. The edges of the high intensity zone should fall within the specifications.

Headlamp Aiming Procedure

1. Open the hood.

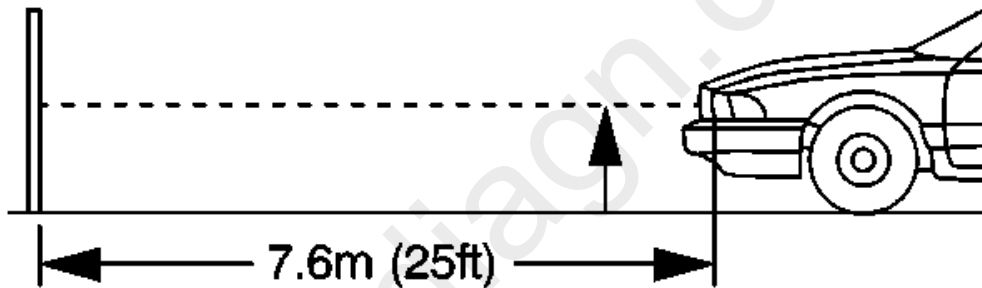


Fig. 33: Measuring Distance Between Headlamps Face & Aiming Screen
Courtesy of GENERAL MOTORS COMPANY

2. Measure from the floor to the center of the headlamp bulb, some headlamps have an aim dot marked on the headlamp lens.
3. At the screen, measure from the floor and place the horizontal tape at the measured distance.
4. Measure from the reference line on the floor to the left headlamp bulb centerline.
5. At the screen, measure from the reference line and place the vertical tape at the measured distance.

6. Measure from the reference line on the floor to the right headlamp bulb centerline.
7. At the screen, measure from the reference line and place the vertical tape at the measured distance.

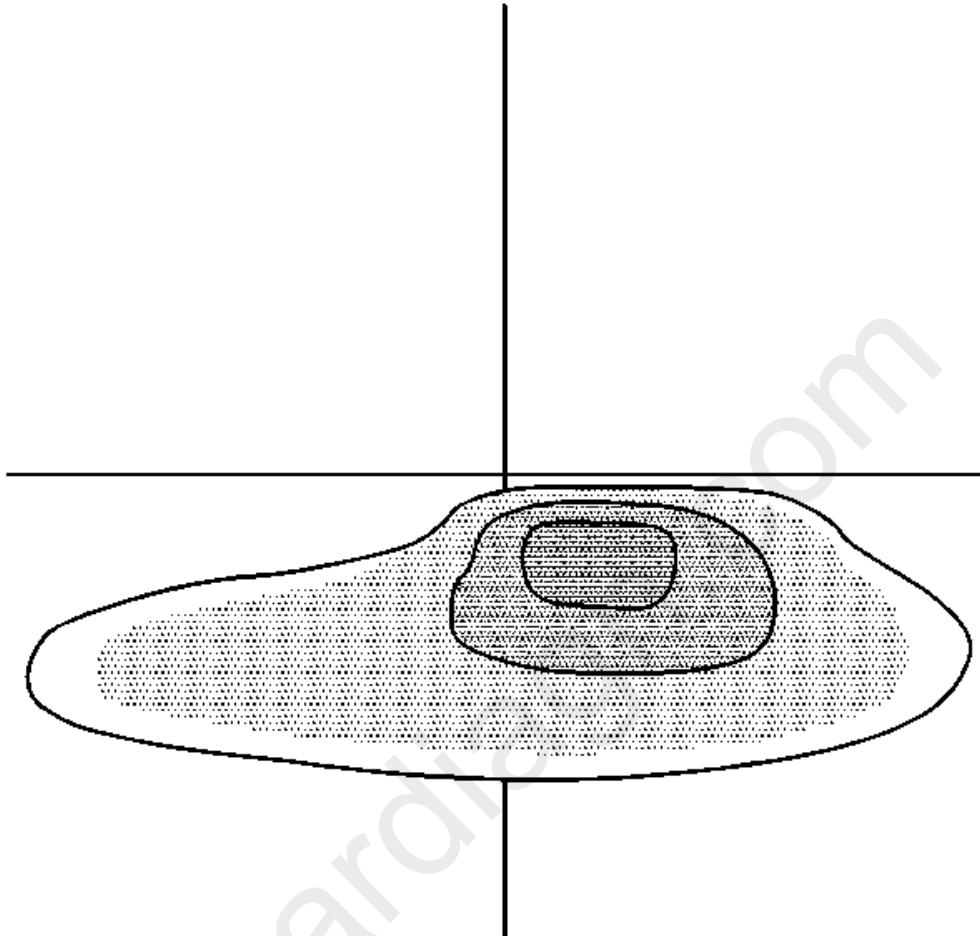


Fig. 34: Identifying Right Side Low Beam Proper Screen Positioning
Courtesy of GENERAL MOTORS COMPANY

IMPORTANT: Do not cover the headlamp, this may cause excessive heat build up.

8. Turn on the low beam headlamps and block the light from projecting onto the screen from the passenger side headlamp.

IMPORTANT: Horizontal headlamp adjustment does not exist.

9. Adjust the vertical aim of the headlamps to the specifications required by the state and the local authorities, or as shown in step number 8.
10. Rotate the headlamp adjuster to change the vertical aim of the headlamp.

11. Repeat the aiming procedure for the passenger side headlamp while blocking the light from projecting onto the screen from the driver side headlamp.
12. Close the hood.

FRONT SUSPENSION AUTOMATIC FORWARD LIGHTING POSITION SENSOR REPLACEMENT

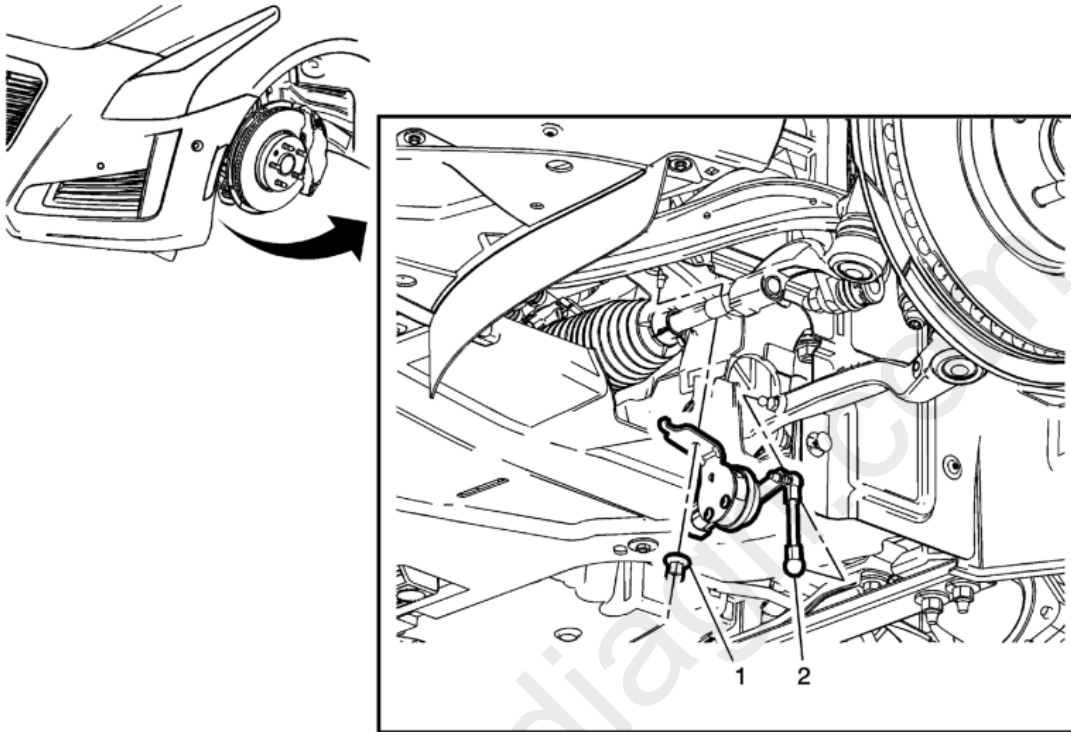


Fig. 35: Front Suspension Automatic Forward Lighting Position Sensor
 Courtesy of GENERAL MOTORS COMPANY

Front Suspension Automatic Forward Lighting Position Sensor Replacement

Callout	Component Name
Preliminary Procedure Remove the front tire and wheel. Refer to <u>Tire and Wheel Removal and Installation</u> .	
1	Front Suspension Automatic Forward Lighting Position Sensor Nut CAUTION: Refer to <u>Fastener Caution</u> . Tighten 9 N.m(80 lb in)
2	Front Suspension Automatic Forward Lighting Position Sensor Procedure

1. Disconnect the electrical connector.
2. With a suitable tool separate the ball and socket.

REAR SUSPENSION AUTOMATIC FORWARD LIGHTING LEVELING POSITION SENSOR REPLACEMENT

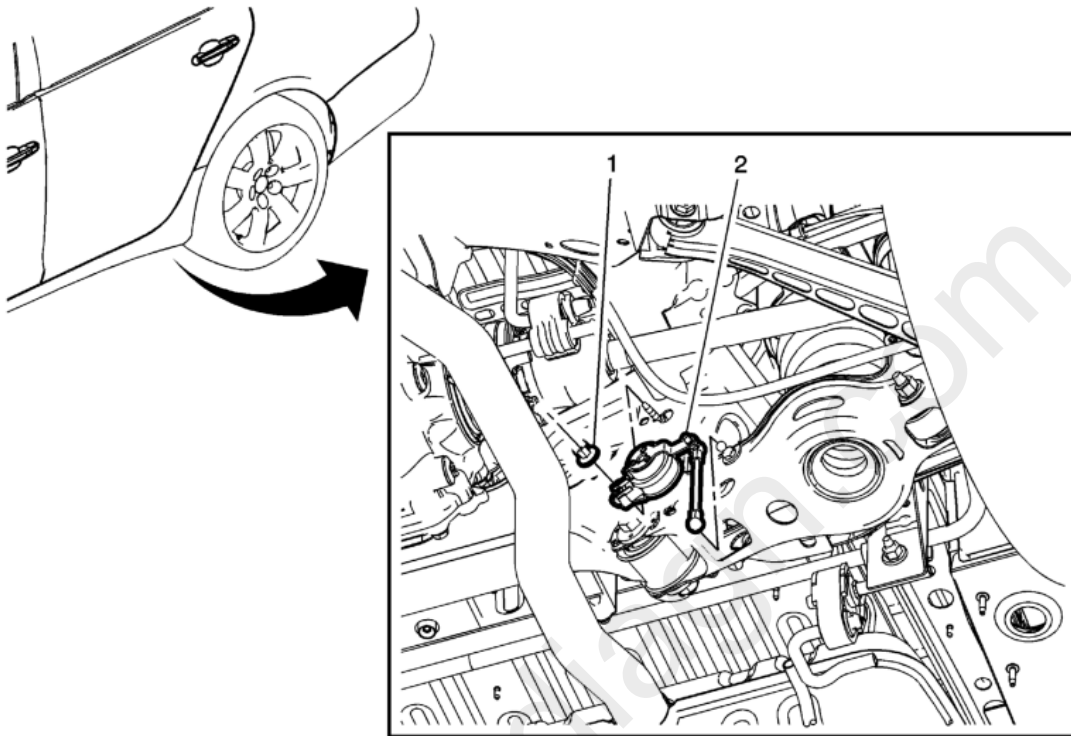


Fig. 36: Rear Suspension Automatic Forward Lighting Leveling Position Sensor
 Courtesy of GENERAL MOTORS COMPANY

Rear Suspension Automatic Forward Lighting Leveling Position Sensor Replacement

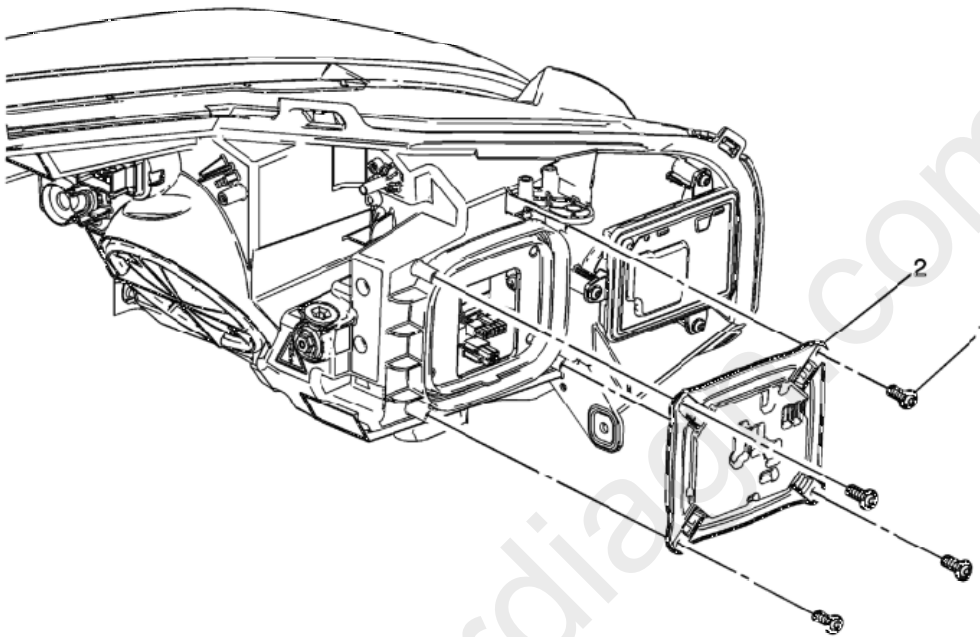
Callout	Component Name
Preliminary Procedures	
1. Lift the vehicle. Refer to <u>Lifting and Jacking the Vehicle</u> . 2. Remove the rear suspension lower control arm cover. Refer to <u>Rear Suspension Lower Control Arm Cover Replacement</u> .	
1	Rear Suspension Automatic Forward Lighting Leveling Position Sensor Nut CAUTION: Refer to <u>Fastener Caution</u> . Tighten 9 N.m(80 lb in)

2

Rear Suspension Automatic Forward Lighting Leveling Position Sensor

Procedure

1. Disconnect the electrical connector.
2. With a suitable tool separate the ball and socket.

HEADLAMP AUTOMATIC CONTROL MODULE REPLACEMENT (HEADLAMP)**Fig. 37: Headlamp Automatic Control Module (Headlamp)**

Courtesy of GENERAL MOTORS COMPANY

Headlamp Automatic Control Module Replacement (Headlamp)

Callout	Component Name
WARNING: The high intensity discharge system produces high voltage and current. In order to reduce the risk of severe shocks and burns, the battery negative cable must be disconnected any time service work is being performed on or around the high intensity discharge system.	
WARNING: The high intensity discharge system produces high voltage and current. To reduce the risk of severe shocks and burns:	
• Never open the high intensity discharge system ballast or the arc tube assembly starter. • Never probe between the high intensity discharge system ballast output connector and the arc	

tube assembly.

Preliminary Procedure Remove the headlamp. Refer to Headlamp Replacement.

1	Headlamp Automatic Control Module Bolt (Qty: 4) CAUTION: Refer to <u>Fastener Caution</u> .
2	Headlamp Automatic Control Module Procedure Disconnect the electrical connectors.

HEADLAMP AUTOMATIC CONTROL MODULE REPLACEMENT (DAYTIME RUNNING LAMP)

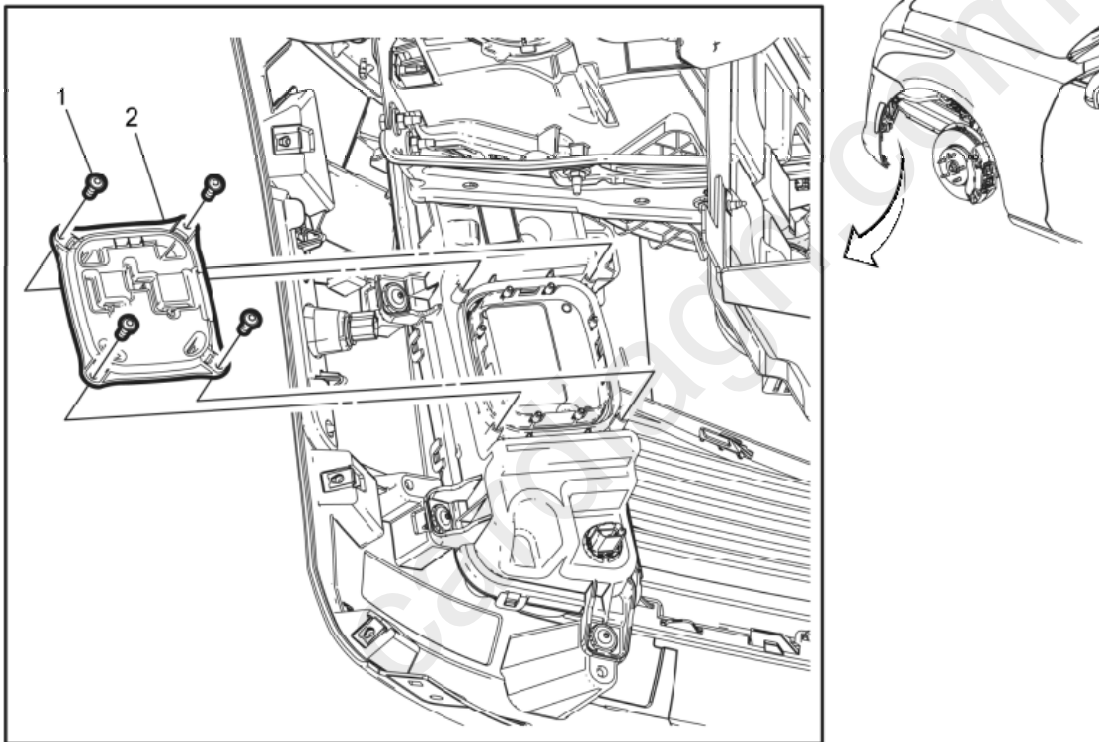


Fig. 38: Headlamp Automatic Control Module (Daytime Running Lamp)
Courtesy of GENERAL MOTORS COMPANY

Headlamp Automatic Control Module Replacement (Daytime Running Lamp)

Callout	Component Name
Preliminary Procedure Remove the front wheelhouse liner. Refer to <u>Front Wheelhouse Liner Replacement</u> .	
1	Headlamp Automatic Control Module Bolt (Qty: 4) CAUTION: Refer to <u>Fastener Caution</u> .

2

Headlamp Automatic Control Module

Procedure

Pull the headlamp automatic control module straight out and disconnect the electrical connectors.

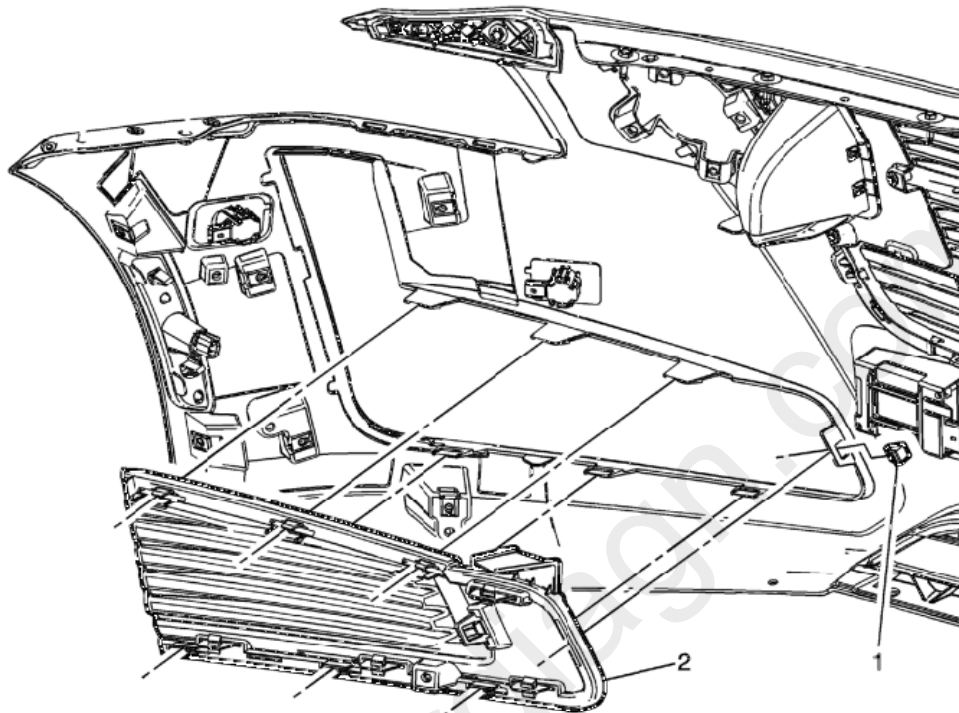
FRONT FOG LAMP OPENING COVER REPLACEMENT

Fig. 39: Front Fog Lamp Opening Cover

Courtesy of GENERAL MOTORS COMPANY

Front Fog Lamp Opening Cover Replacement

Callout	Component Name
Preliminary Procedure	
Remove the daytime running, parking, and turn signal lamp. Refer to <u>Daytime Running, Parking, and Turn Signal Lamp Replacement</u> .	
1	Front Fog Lamp Opening Cover Retainer Procedure Compress and pull front fog lamp opening cover retainer from locking tab.
2	Front Fog Lamp Bezel Procedure Release the 6 locking tabs from the front fog lamp opening cover and pull from the front bumper fascia.

DAYTIME RUNNING, PARKING, AND TURN SIGNAL LAMP REPLACEMENT

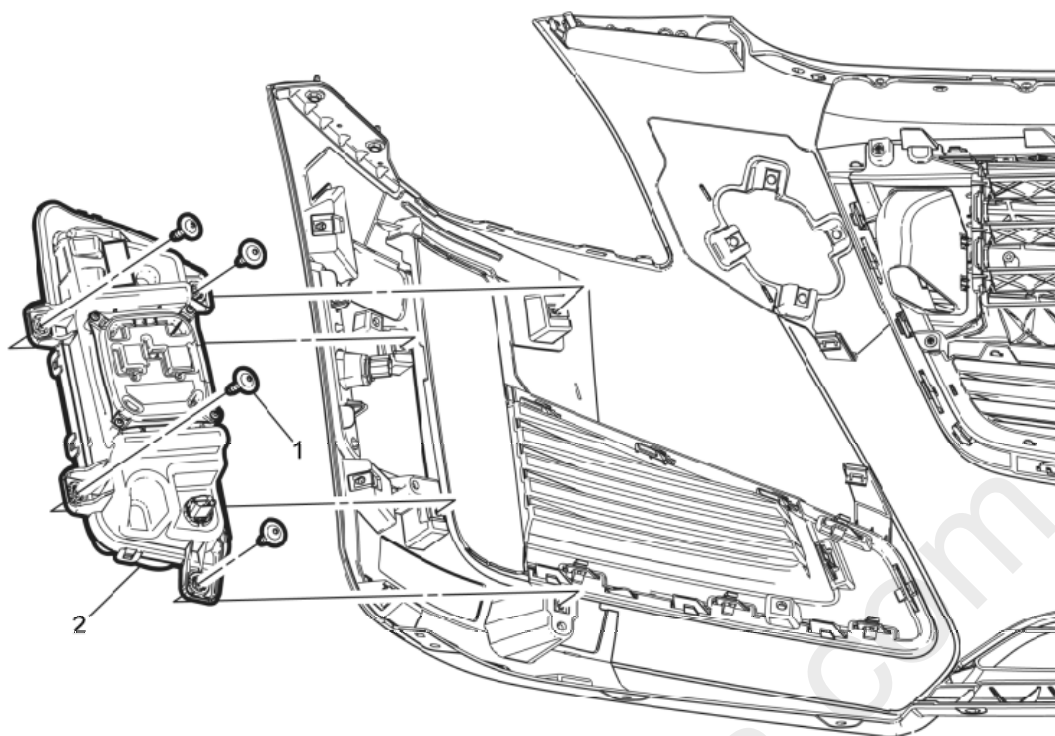


Fig. 40: Daytime Running, Parking, and Turn Signal Lamp
 Courtesy of GENERAL MOTORS COMPANY

Daytime Running, Parking, and Turn Signal Lamp Replacement

Callout	Component Name
Preliminary Procedure Remove the front bumper fascia. Refer to Front Bumper Fascia Replacement .	
1	Daytime Running Lamp Screw (Qty: 4) CAUTION: Refer to Fastener Caution . Tighten 2.5 N.m (22 lb in)
2	Daytime Running Lamp Procedure Disconnect the electrical connector.

FRONT SIDE MARKER LAMP REPLACEMENT

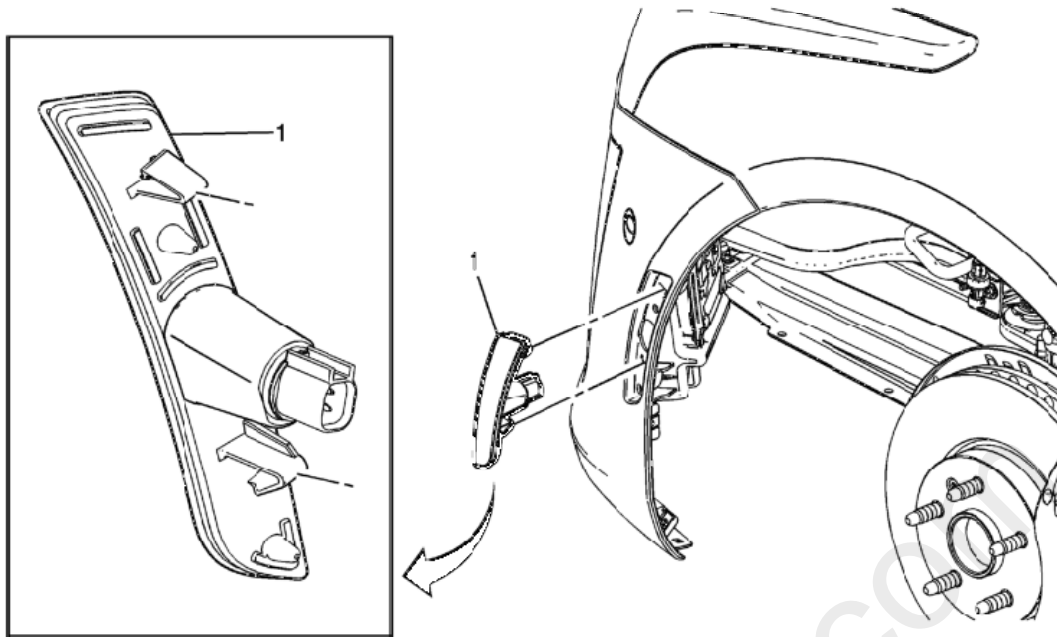


Fig. 41: Front Side Marker Lamp
 Courtesy of GENERAL MOTORS COMPANY

Front Side Marker Lamp Replacement

Callout	Component Name
Preliminary Procedure	
Remove the front wheelhouse liner. Refer to Front Wheelhouse Liner Replacement .	
1	Front Side Marker Lamp Procedure 1. Disconnect the electrical connector. 2. Compress the upper and lower clips and pull from the front bumper fascia.

FRONT SIDE MARKER LAMP BULB REPLACEMENT

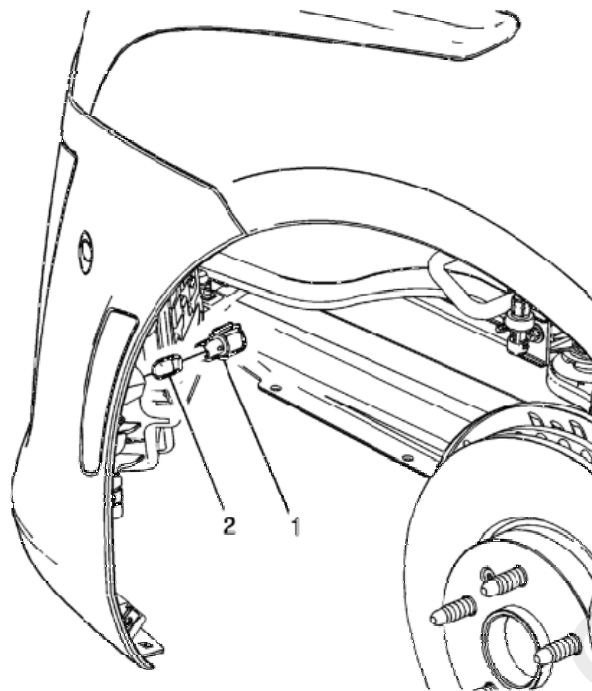


Fig. 42: Front Side Marker Lamp Bulb
 Courtesy of GENERAL MOTORS COMPANY

Front Side Marker Lamp Bulb Replacement

Callout	Component Name
Preliminary Procedure Remove the front wheelhouse liner. Refer to Front Wheelhouse Liner Replacement .	
1	Front Side Marker Lamp Bulb Socket Procedure Turn front side marker lamp bulb socket counterclockwise and pull straight out.
2	Front Side Marker Lamp Bulb Procedure Pull front side marker lamp bulb straight out of the front side marker lamp bulb socket.

HIGH MOUNT STOP LAMP REPLACEMENT

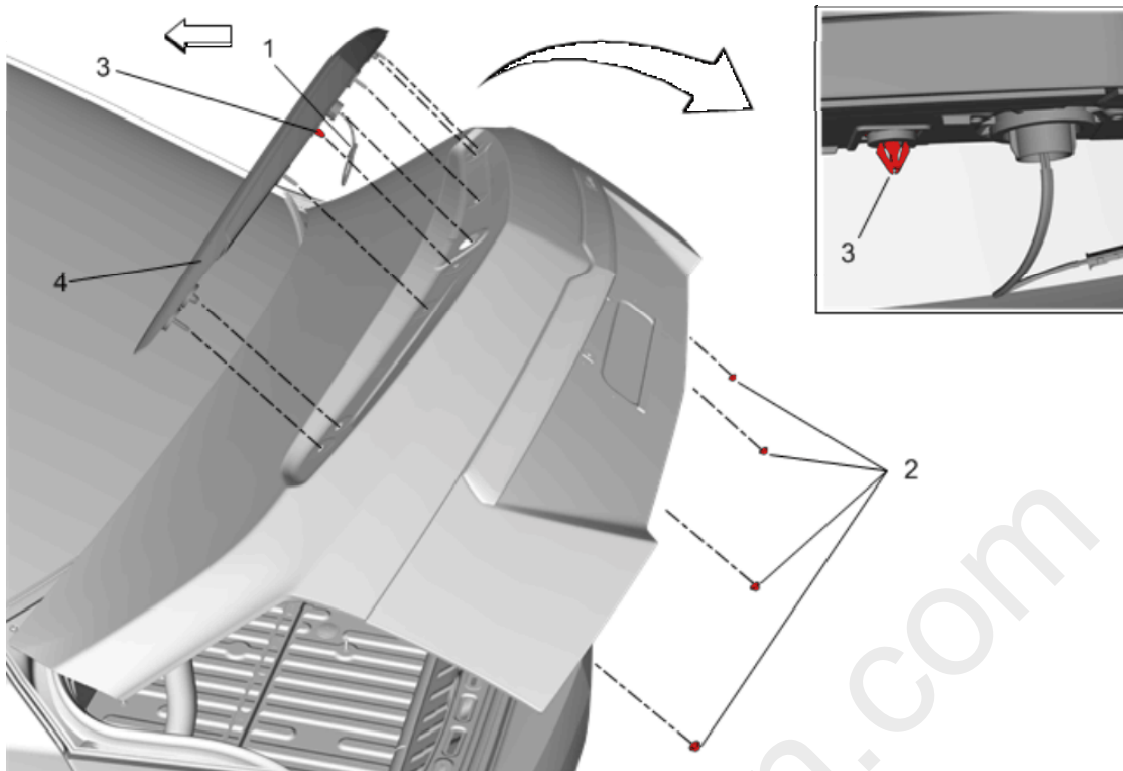


Fig. 43: High Mount Stop Lamp
Courtesy of GENERAL MOTORS COMPANY

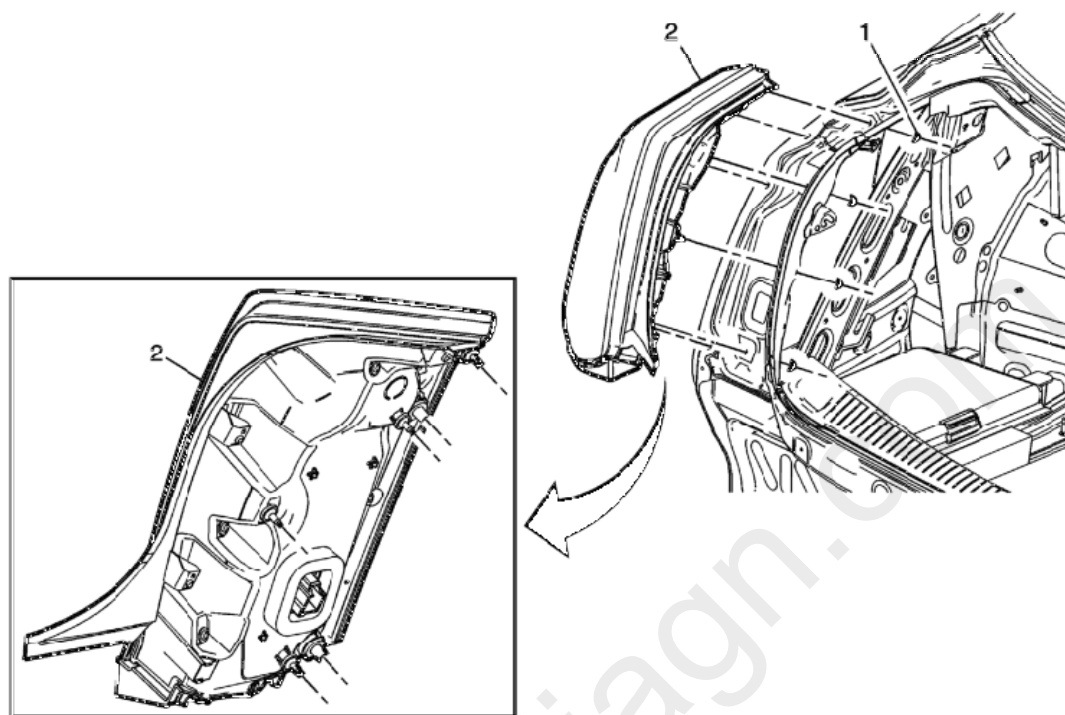
High Mount Stop Lamp Replacement

Callout	Component Name
Preliminary Procedure Remove the rear compartment lid inner panel trim. Refer to <u>Rear Compartment Lid Inner Panel Trim Replacement</u> .	
1	High Mount Stop Lamp Connector Procedure Disconnect the high mount stop lamp electrical connector.
2	High Mount Stop Lamp Nut (Qty: 4) CAUTION: Refer to <u>Fastener Caution</u> . Tighten 4.7 (42 lb in)
3	High Mount Stop Lamp Retainer Procedure Release the locating tab retainer before attempting to remove the high mount lamp, and when installing the lamp, ensure the retainer tab is firmly secured into the rear compartment lid.
	High Mount Stop Lamp

4

Procedure

Pull straight up and release grommet from rear compartment lid.

REAR BODY STRUCTURE STOP LAMP REPLACEMENT**Fig. 44: Rear Body Structure Stop Lamp**

Courtesy of GENERAL MOTORS COMPANY

Rear Body Structure Stop Lamp Replacement

Callout	Component Name
Preliminary Procedures	
1. Remove the rear bumper fascia. Refer to <u>Rear Bumper Fascia Replacement</u> . 2. Reposition the rear compartment side trim. Left hand side, refer to <u>Rear Compartment Side Trim Replacement - Left Side</u> , . Right hand side, refer to <u>Rear Compartment Side Trim Replacement - Right Side</u> .	
1	Tail Lamp Nut (Qty: 4) CAUTION: Refer to <u>Fastener Caution</u> . Tighten 4.7 N.m(42 lb in)

2	Tail Lamp Procedure 1. Disconnect the electrical connector. 2. Pull straight back from body side outer frame.
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BACKUP LAMP REPLACEMENT

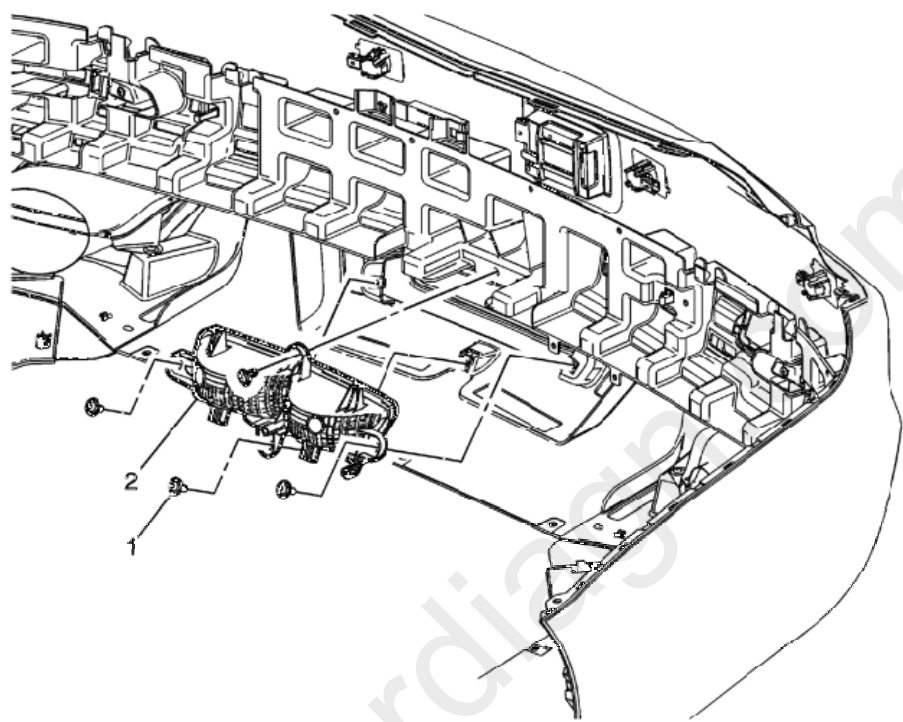


Fig. 45: Backup Lamp
 Courtesy of GENERAL MOTORS COMPANY

Backup Lamp Replacement

Callout	Component Name
Preliminary Procedure Remove the rear bumper fascia. Refer to <u>Rear Bumper Fascia Replacement</u> .	
1	Backup Lamp Screw (Qty: 4) CAUTION: Refer to <u>Fastener Caution</u> .
2	Backup Lamp Procedure 1. Disconnect the electrical connector.

2. Remove backup lamp from rear bumper fascia.

BACKUP LAMP BULB REPLACEMENT

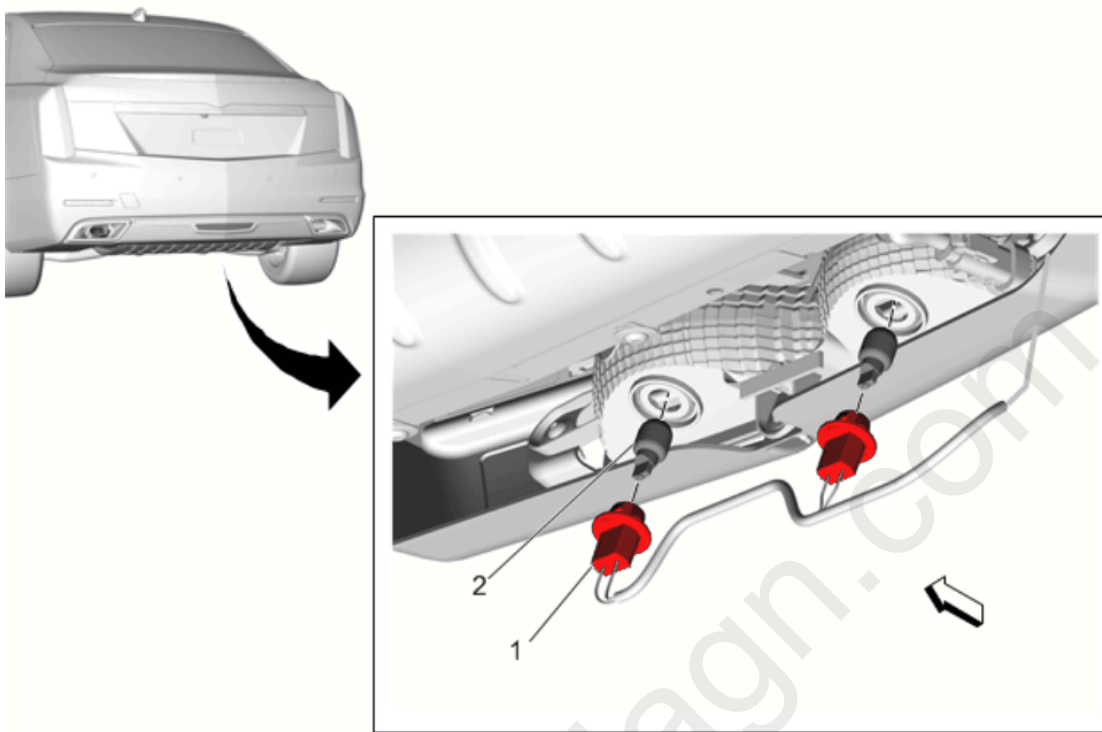


Fig. 46: Backup Lamp Bulb
Courtesy of GENERAL MOTORS COMPANY

Backup Lamp Bulb Replacement

Callout	Component Name
Preliminary Procedure Remove the rear bumper fascia. Refer to, <u>Rear Bumper Fascia Replacement</u> .	
1	Backup Lamp Bulb Socket (Qty:2) Procedure Rotate the backup lamp bulb socket counterclockwise and remove from the backup lamp.
2	Backup Lamp Bulb (Qty:2) Procedure Pull the backup lamp blub straight out from the backup lamp socket.

BACKUP LAMP BULB REPLACEMENT (EXPORT ONLY)

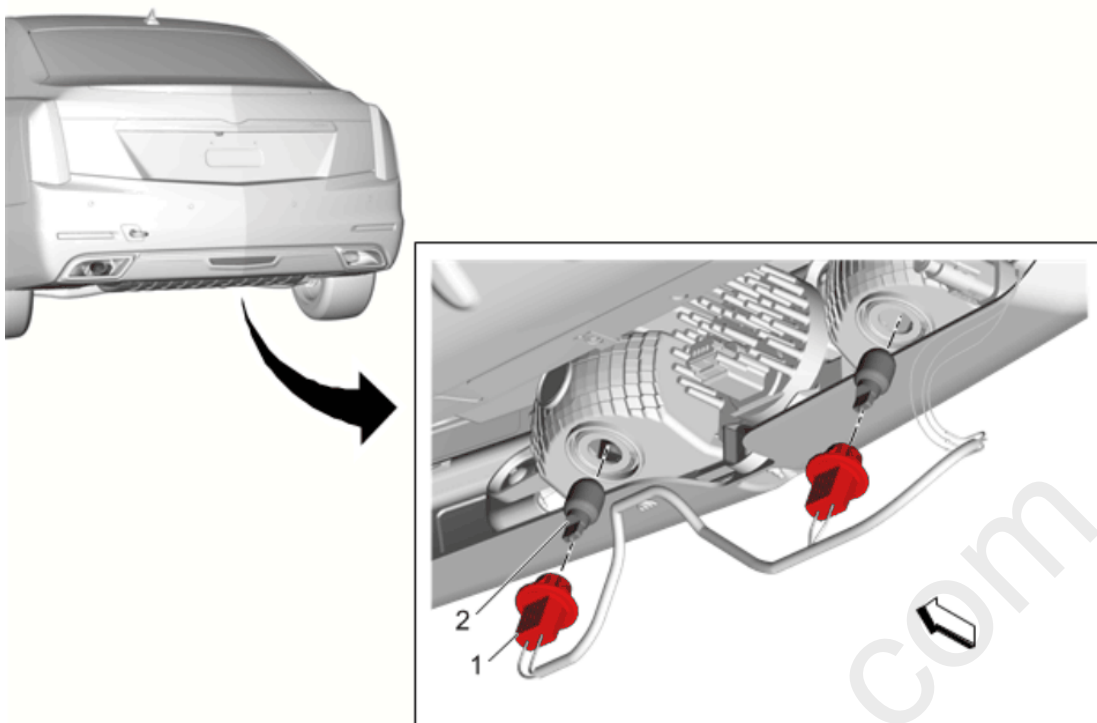


Fig. 47: Backup Lamp Bulb (Export only)
 Courtesy of GENERAL MOTORS COMPANY

Backup Lamp Bulb Replacement (Export only)

Callout	Component Name
Preliminary Procedure Remove the rear bumper fascia. Refer to, <u>Rear Bumper Fascia Replacement</u> .	
1	Backup Lamp Bulb Socket (Qty:2) Procedure Rotate the backup lamp bulb socket counterclockwise and remove from the backup lamp.
2	Backup Lamp Bulb (Qty:2) Procedure Pull the backup lamp blub straight out from backup lamp socket.

BACKUP AND REAR FOG LAMP REPLACEMENT (EXPORT ONLY)

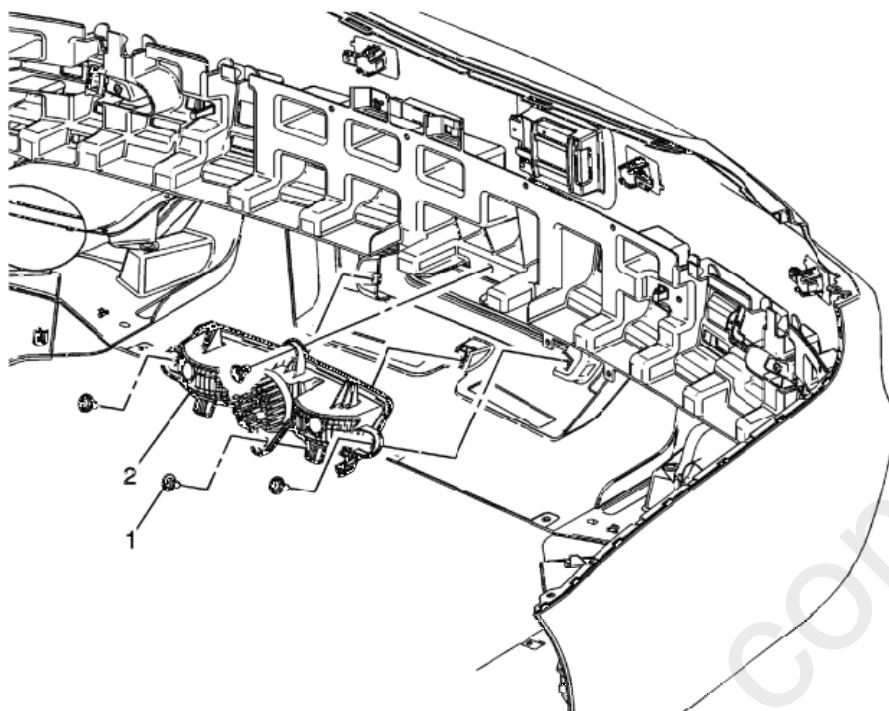


Fig. 48: Backup and Rear Fog Lamp (Export Only)

Courtesy of GENERAL MOTORS COMPANY

Backup and Rear Fog Lamp Replacement (Export Only)

Callout	Component Name
Preliminary Procedure Remove the rear bumper fascia. Refer to <u>Rear Bumper Fascia Replacement</u> .	
1	Backup and Rear Fog Lamp Screw (Qty: 4) CAUTION: Refer to <u>Fastener Caution</u> .
2	Backup and Rear Fog Lamp Procedure 1. Disconnect the electrical connector. 2. Remove backup and rear fog lamp from rear bumper fascia.

REAR LICENSE PLATE LAMP REPLACEMENT

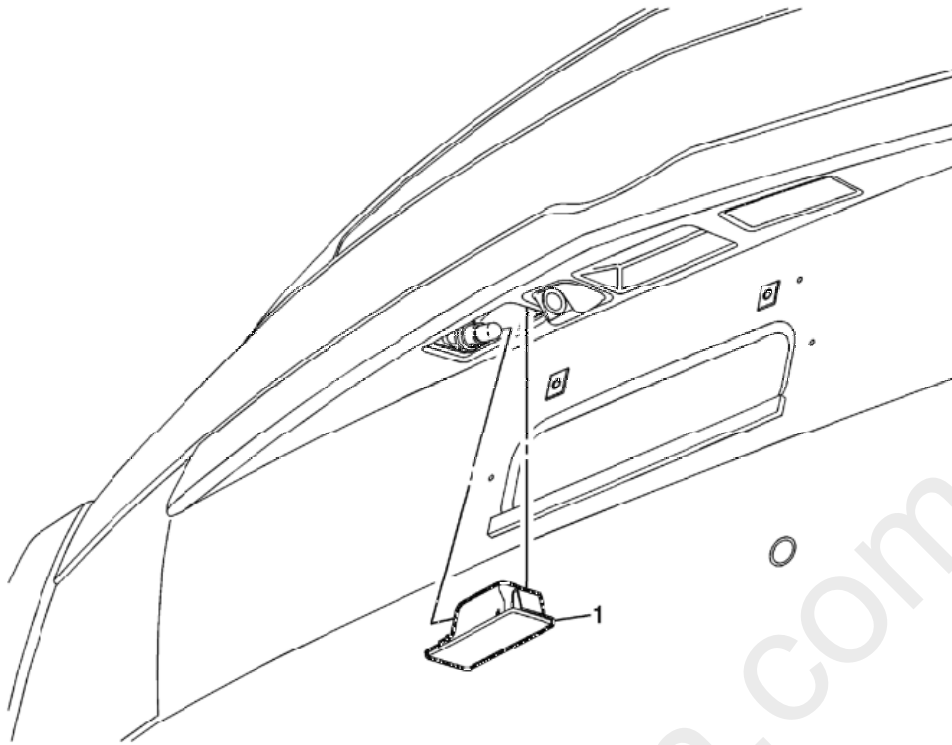


Fig. 49: Rear License Plate Lamp
 Courtesy of GENERAL MOTORS COMPANY

Rear License Plate Lamp Replacement

Callout	Component Name
1	Rear License Plate Lamp Procedure 1. Use a flat bladed tool to compress the locking tab on the passenger side of the rear license plate lamp and release from the rear closure center applique. 2. Turn the rear license plate lamp bulb socket pull from the rear license plate lamp.

REAR LICENSE PLATE LAMP BULB REPLACEMENT

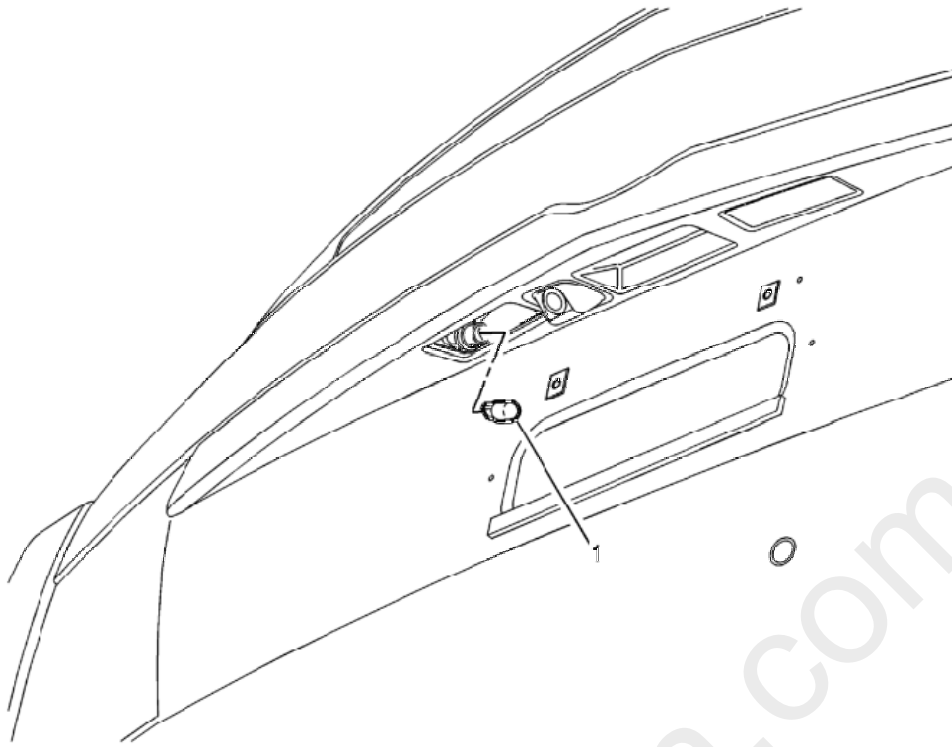


Fig. 50: Rear License Plate Lamp Bulb
 Courtesy of GENERAL MOTORS COMPANY

Rear License Plate Lamp Bulb Replacement

Callout	Component Name
Preliminary Procedure	
Remove the rear license plate lamp. Refer to <u>Rear License Plate Lamp Replacement</u> .	
1	Rear License Plate Lamp Bulb Procedure Pull the rear license plate lamp bulb straight out of the rear license plate lamp bulb socket.

EXTERIOR FLOOD LAMP REPLACEMENT

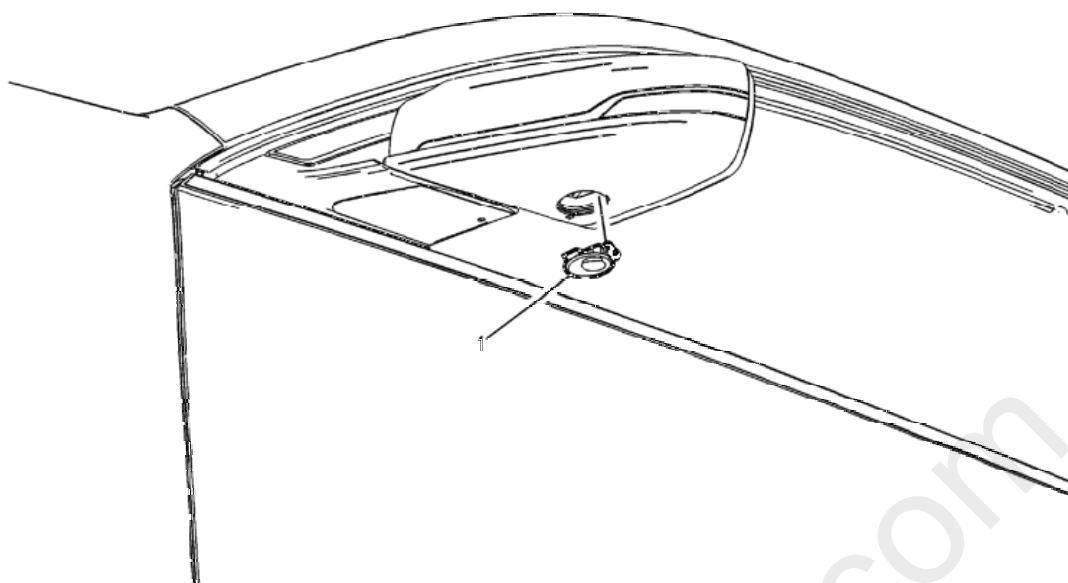


Fig. 51: Exterior Flood Lamp
 Courtesy of GENERAL MOTORS COMPANY

Exterior Flood Lamp Replacement

Callout	Component Name
1	Exterior Flood Lamp Procedure 1. Use a flat bladed tool to compress the retainer on the outboard side of the outside review mirror courtesy lamp and release from the outside rearview mirror. 2. Disconnect electrical connector.