

2007 Cadillac Escalade

2007 ACCESSORIES & EQUIPMENT Sunroof - Avalanche, Escalade, Suburban, Tahoe & Yukon

2007 ACCESSORIES & EQUIPMENT

Sunroof - Avalanche, Escalade, Suburban, Tahoe & Yukon

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Sunroof Air Deflector	3 N.m	27 lb in
Sunroof Module Bracket Screw	2 N.m	18 lb in
Sunroof Module Retaining Bolts	9 N.m	80 lb in
Sunroof Module Retaining Nuts	9 N.m	80 lb in
Sunroof Motor Bolts	6 N.m	53 lb in
Sunroof Switch Screw	2 N.m	18 lb in
Sunroof Window	4 N.m	35 lb in

SCHEMATIC AND ROUTING DIAGRAMS

SUNROOF SCHEMATICS

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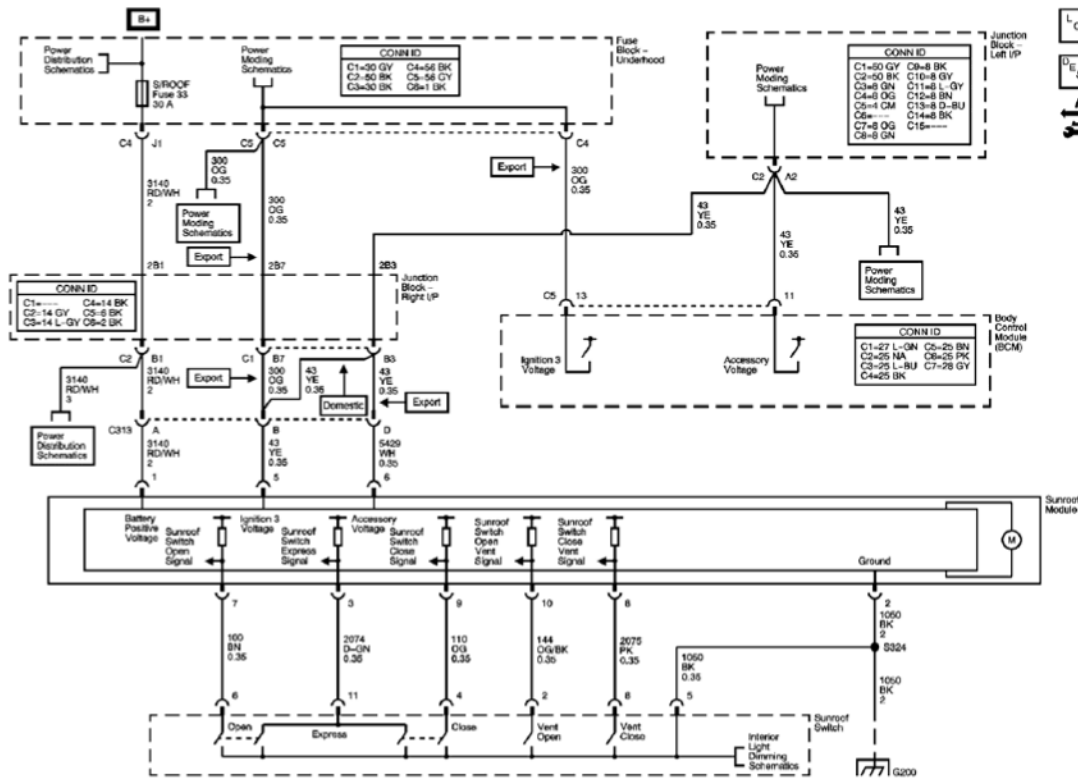


Fig. 1: Sunroof Schematic

Courtesy of GENERAL MOTORS CORP.

COMPONENT LOCATOR

SUNROOF COMPONENT VIEWS

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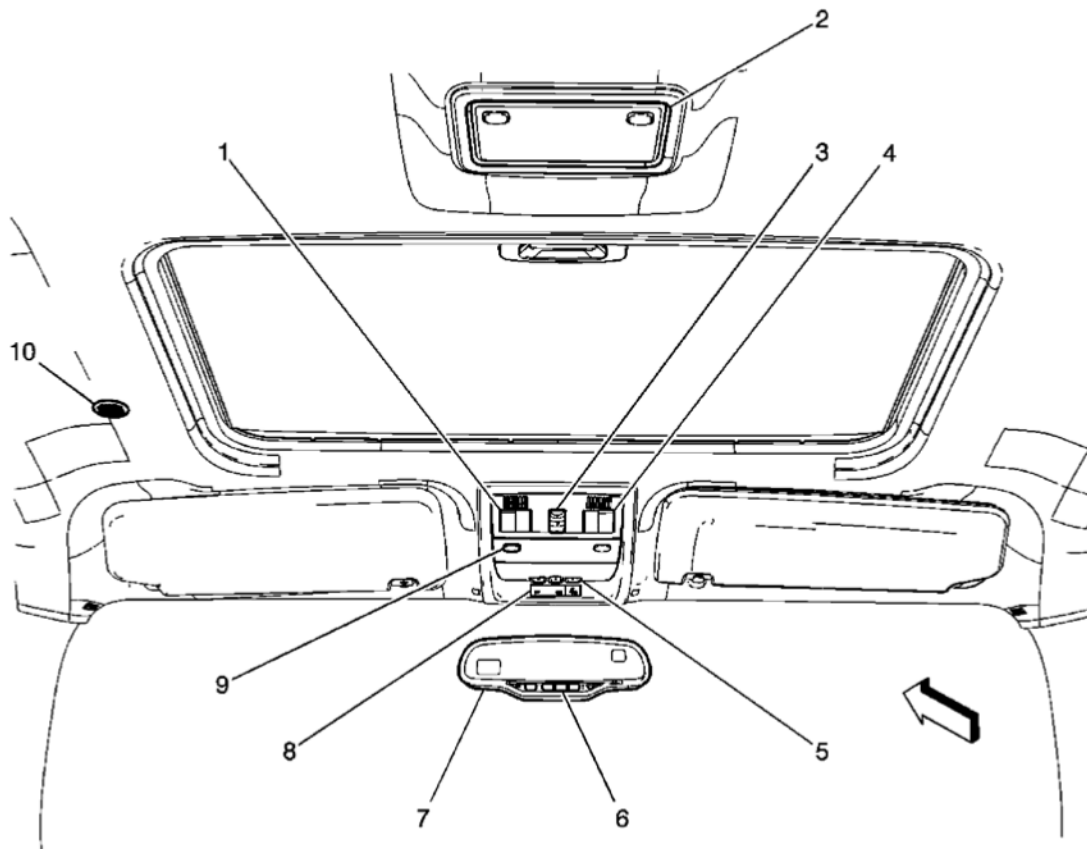


Fig. 2: Top Front Of The Passenger Compartment
Courtesy of GENERAL MOTORS CORP.

Callouts For Fig. 2

Callout	Component Name
1	Sunroof Switch (CF5)
2	Courtesy/Reading Lamps - Second Row
3	Power Liftgate Switch (E61)
4	Folding Seat Switch - Front (ARS)
5	Garage Door Opener (UG1)
6	Onstar Button Assembly (UE1)
7	Inside Rearview Mirror (ISRVM)
8	Inflatable Restraint Passenger Air Bag ON/OFF Indicator
9	Courtesy/Reading Lamp - Front
10	Inside Air Temperature Sensor - Front (CJ2)

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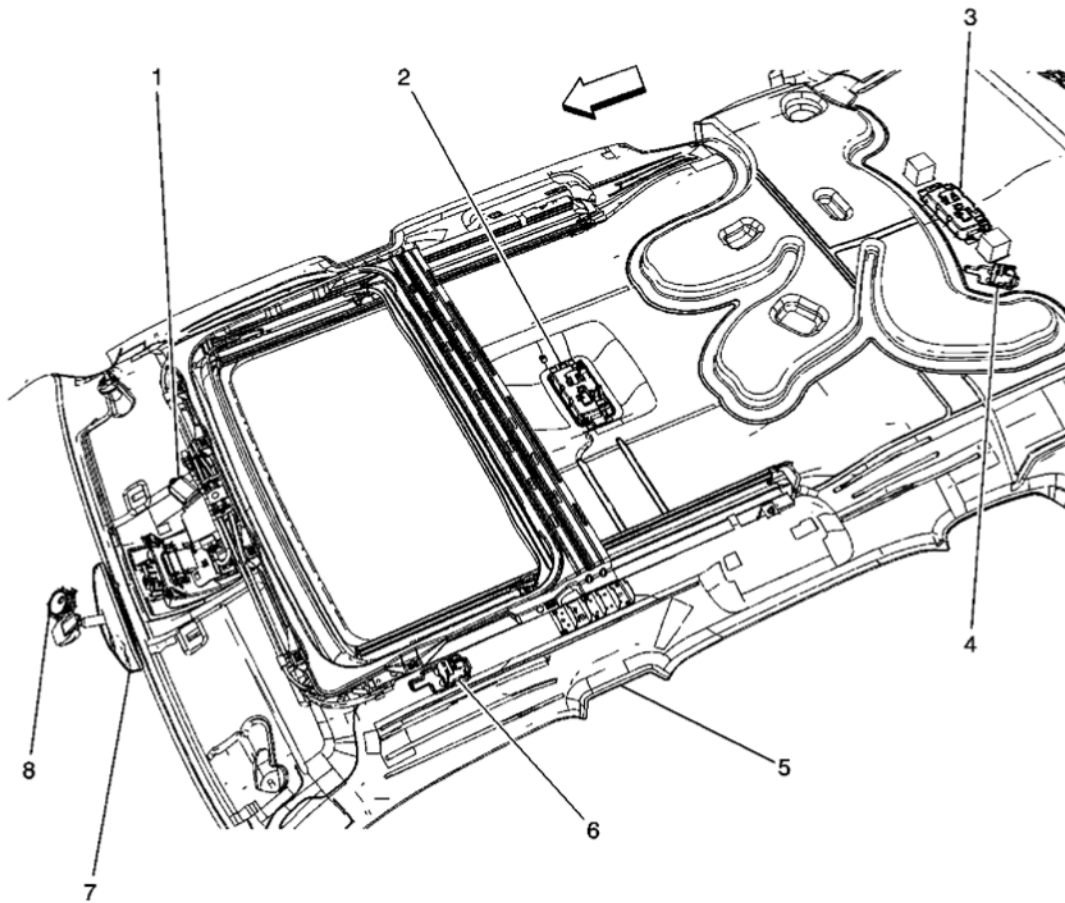


Fig. 3: Above The Headliner

Courtesy of GENERAL MOTORS CORP.

Callouts For Fig. 3

Callout	Component Name
1	Sunroof Module (CF5)
2	Courtesy/Reading Lamps - 2nd Row
3	Courtesy/Reading Lamps - 3rd Row
4	Inside Air Temperature Sensor - Rear (CJ2)
5	Headliner
6	Inside Air Temperature Sensor - Front (CJ2)
7	Inside Rearview Mirror (ISRV)
8	Outside Moisture Sensor (CE1)

VISUAL IDENTIFICATION

SUNROOF CONNECTOR END VIEWS

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Sunroof Switch

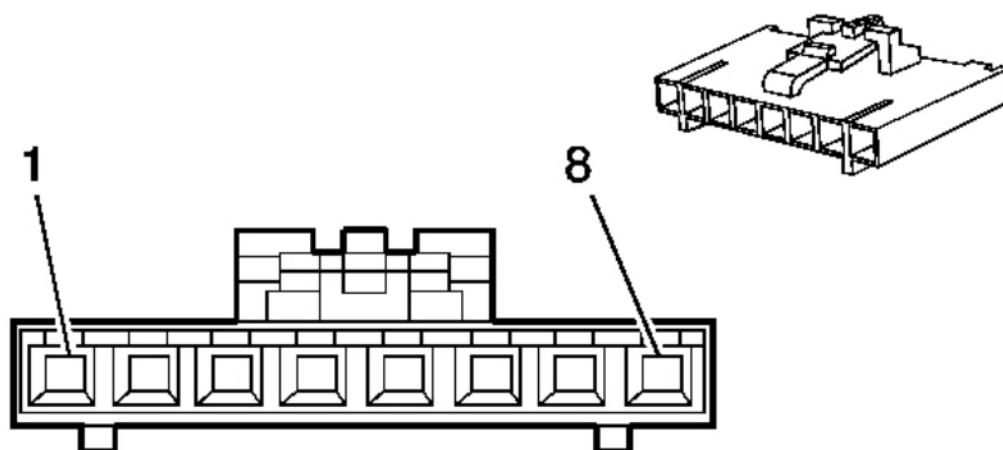


Fig. 4: Sunroof Switch Connector End View
Courtesy of GENERAL MOTORS CORP.

Sunroof Switch Connector Parts Information

Connector Part Information

- OEM: 12103492
- Service: 89046705
- Description: 8-Way F Receptacle 0.64 Series (BK)

Terminal Part Information

- Terminal/Tray: 16-02-1110/20
- Core/Insulation Crimp: H/H
- Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Sunroof Switch Connector Terminal Identification

Pin	Wire Color	Circuit No.	Function
1	D-GN	2074	Sunroof Switch Express Signal
2	OG/BK	144	Sunroof Switch Open Vent Signal
3	BN/WH	230	Instrument Panel Lamp Dimming Control
4	OG	110	Sunroof Switch Close Signal
5	BK	1050	Ground
6	BN	100	Sunroof Switch Open Signal

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7	-	-	Not Used
8	PK	2075	Sunroof Switch Close Vent Signal

DIAGNOSTIC INFORMATION AND PROCEDURES

SYMPTOMS - ROOF

IMPORTANT: Review the system description in order to familiarize yourself with the system functions. Refer to Sunroof Description and Operation.

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the Sunroof System. Refer to Checking Aftermarket Accessories in Wiring Systems.
- 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 in Wiring Systems.

Symptom List

Refer to Power Sunroof Inoperative in order to diagnose the symptom.

POWER SUNROOF INOPERATIVE

Power Sunroof Inoperative

Step	Action	Yes	No
Schematic Reference: <u>Sunroof Schematics</u>			
Connector End View Reference: <u>Sunroof Connector End Views</u>			
1	Did you perform the Diagnostic System Check - Vehicle?	Go to Step 2	Go to <u>Diagnostic System Check - Vehicle</u>
2	Perform the sunroof re-initialization. Refer to <u>Sunroof Motor/Actuator Initialization/Teach Process</u> . Does the system operate normally?	Go to <u>Testing for Intermittent Conditions and Poor Connections</u>	Go to Step 3
3	1. Disconnect the sunroof switch harness connector. 2. Connect a test lamp from battery voltage to the ground circuit terminal in the switch harness connector.		

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	Does the test lamp illuminate?	Go to Step 4	Go to Step 11
4	1. Turn the ignition ON. 2. Using a DMM test for battery voltage on all of the switch signal circuits in the switch harness connector. Is battery voltage present on all of the switch signal circuits?	Go to Step 9	Go to Step 5
5	Is battery voltage present on any of the switch signal circuits?	Go to Step 10	Go to Step 6
6	1. Disconnect the sunroof motor/actuator connector. 2. Connect a test lamp from the battery supply circuit terminal in the harness connector to a good ground. Does the test lamp illuminate?	Go to Step 7	Go to Step 12
7	1. Connect a test lamp from the ignition signal circuit terminal in the sunroof motor/actuator harness connector to a good ground. 2. Turn the ignition ON. Does the test lamp illuminate?	Go to Step 8	Go to Step 13
8	Connect a test lamp from battery voltage to the ground circuit terminal in the sunroof motor/actuator harness connector. Does the test lamp illuminate?	Go to Step 16	Go to Step 14
9	Connect a fused jumper wire from each of the switch signal circuits in the switch harness connector to ground. Does the sunroof operate using a fused jumper wire in place of the switch?	Go to Step 15	Go to Step 16
10	Test the faulted switch signal circuit for an open or short to ground. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u>. Did you find and correct the condition?	Go to Step 20	Go to Step 16
11	Repair the sunroof switch ground circuit for an open or high resistance. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u>. Is the repair complete?	Go to Step 20	-
12	Repair the sunroof motor/actuator battery supply circuit for an open or short to ground. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u>. Is the repair complete?	Go to Step 20	-

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13	Repair the sunroof motor/actuator ignition signal circuit for an open or short to ground. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> . Is the repair complete?	Go to Step 20	-
14	Repair the sunroof motor/actuator ground circuit for an open or high resistance. Refer to <u>Circuit Testing</u> and <u>Wiring Repairs</u> . Is the repair complete?	Go to Step 20	-
15	Inspect for a poor connections at the sunroof switch harness connector. Refer to <u>Testing for Intermittent Conditions and Poor Connections</u> and <u>Connector Repairs</u> . Did you find and correct the condition?	Go to Step 20	Go to Step 17
16	Inspect for a poor connection at the sunroof motor/actuator harness connector. Refer to <u>Testing for Intermittent Conditions and Poor Connections</u> and <u>Connector Repairs</u> . Did you find and correct the condition?	Go to Step 20	Go to Step 18
17	Replace the sunroof switch. Refer to <u>Sunroof Switch Replacement</u> . Did you complete the replacement?	Go to Step 20	-
18	Replace the sunroof motor. Refer to <u>Control Module References</u> for replacement, setup, and programming. Did you complete the replacement?	Go to Step 20	-
20	Operate the system in order to verify the repair. Did you correct the condition?	System OK	Go to Step 2

REPAIR INSTRUCTIONS

SUNROOF PANEL SIDE OPENING COVER REPLACEMENT

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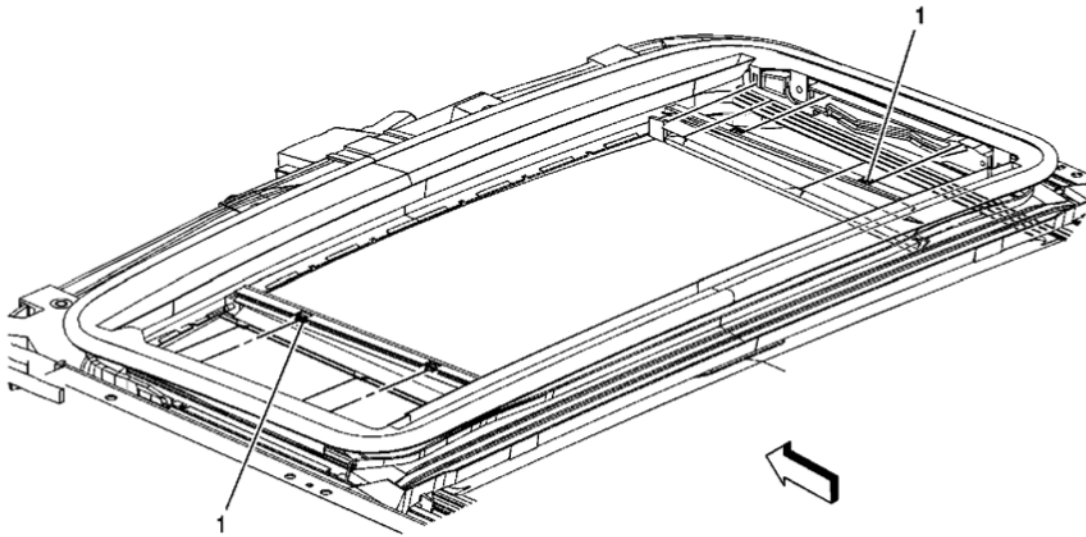


Fig. 5: View Of Sunroof Side Opening Covers
Courtesy of GENERAL MOTORS CORP.

Sunroof Panel Side Opening Cover Replacement

Callout	Component Name
1	Sunroof Side Opening Covers (Qty:2) Tip: Pull inboard on the lower edge of the cover to release it from the top of the track, then pull inboard on the top edge to release from the window reinforcement.

SUNROOF AIR DEFLECTOR REPLACEMENT

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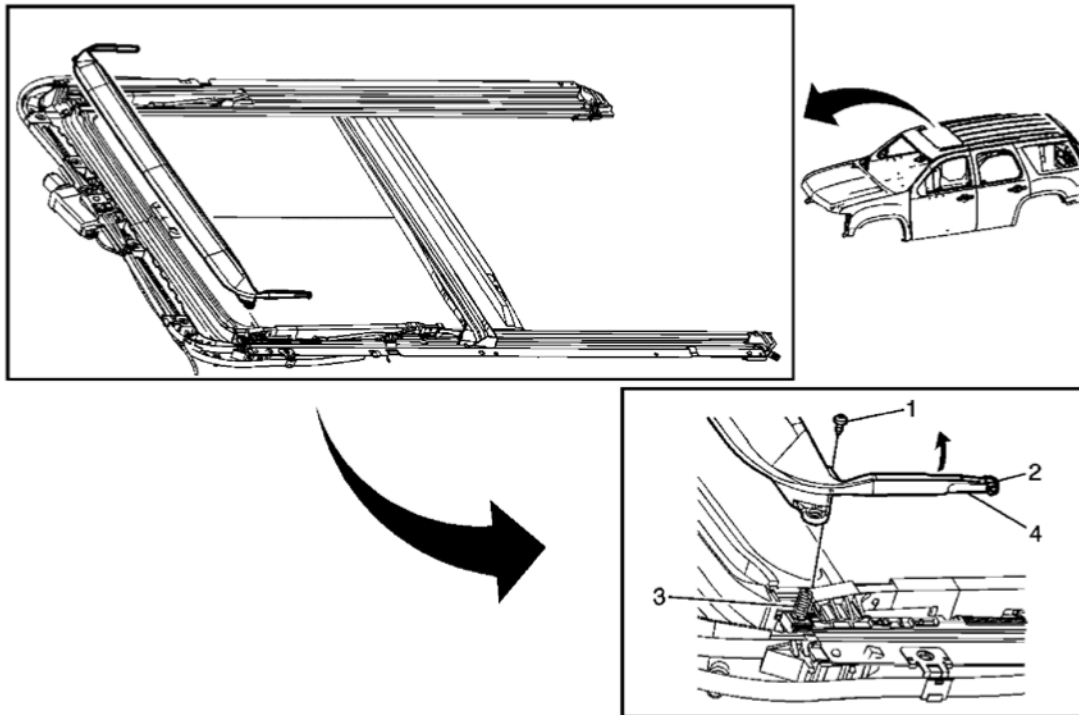


Fig. 6: View Of Sunroof Air Deflector & Components
Courtesy of GENERAL MOTORS CORP.

Sunroof Air Deflector Replacement

Callout	Component Name
Preliminary Procedure: Open the sunshade and sunroof to the fully opened position.	
1	Sunroof Air Deflector Screws (Qty: 2) NOTE: Refer to <u>Fastener Notice</u> . Tighten: 3 N.m (27 lb in) Tip: - When removing the screws from the corners use care not to let the springs jump loose from the module corners. - One screw is located on the inside of each corner, remove the air deflector guide block.
2	Sunroof Air Deflector Retainer
3	Sunroof Air Deflector Spring

SUNROOF DRAIN INSPECTION AND CLEANING

Drain Hose Routing

A drain trough encircles the sunroof window panel and water is drained off by the drain hoses located at each corner of the housing. A drain channel spans across the sunroof module at the rear of the window panel and directs water into the trough.

1. Check to ensure the front drain hoses are routed down the windshield pillars and out the center of the pillar between the door hinges. Make sure the hoses are not kinked.
2. Check to ensure the rear drain hoses are routed through the rear pillars and out of the rocker panel. Make sure the rear hoses are properly routed in the metal roof slot and taped in place.

Plugged Drain Hose

If a waterleak has occurred check for a plugged drain hose at each corner of drainage system.

1. Open the sunroof window.
2. To test for blockage, pour a small container of water into the module housing drain trough. Check each corner to confirm the drain hose is draining water.

CAUTION: Wear safety glasses in order to avoid eye damage.

3. Use compressed air, 241 kPa (35 psi) or less to blow out any drain hose that is plugged.
4. Test the system again.
5. If the hose remains plugged, check to see it is properly routed and does not have a kink. Refer to **Drain Hose Routing**.
6. Remove the blockage using the following steps.
 1. Push mechanics wire through the hose to remove the obstruction.
 2. Use compressed air in order to blow out any remaining material.

Disconnected Drain Hose

Inspect the drainage system for disconnected drain hoses. Complete the following steps in order to obtain partial access to drain hoses and check for a disconnected hose.

1. Open the sunroof window panel.
2. Lower the headliner as needed. Refer to **Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CF5 and U42)** or **Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CF5 w/o U42)** or **Headlining Trim Panel Replacement (Avalanche w/CJ2 w/o CF5 and U42)** or **Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CJ3)** or **Headlining Trim Panel**

Replacement (Avalanche/Escalade EXT w/U42 w/o CF5) or Headlining Trim Panel Replacement (LWB w/CF5 and U42) or Headlining Trim Panel Replacement (LWB w/CF5 w/o U42) or Headlining Trim Panel Replacement (LWB w/CJ2) or Headlining Trim Panel Replacement (LWB w/CJ3) or Headlining Trim Panel Replacement (LWB w/U42 w/o CF5) or Headlining Trim Panel Replacement (SWB w/CF5 and U42) or Headlining Trim Panel Replacement (SWB w/CF5 w/o U42) or Headlining Trim Panel Replacement (SWB w/CJ3) or Headlining Trim Panel Replacement (SWB w/o CF5 and U42) or Headlining Trim Panel Replacement (SWB w/U42 w/o CF5) .

3. Connect any disconnected hoses.
4. Ensure that the rear drain hoses are properly routed in the metal roof slot and taped in place.

SUNROOF MODULE BRACKET REPLACEMENT

Removal Procedure

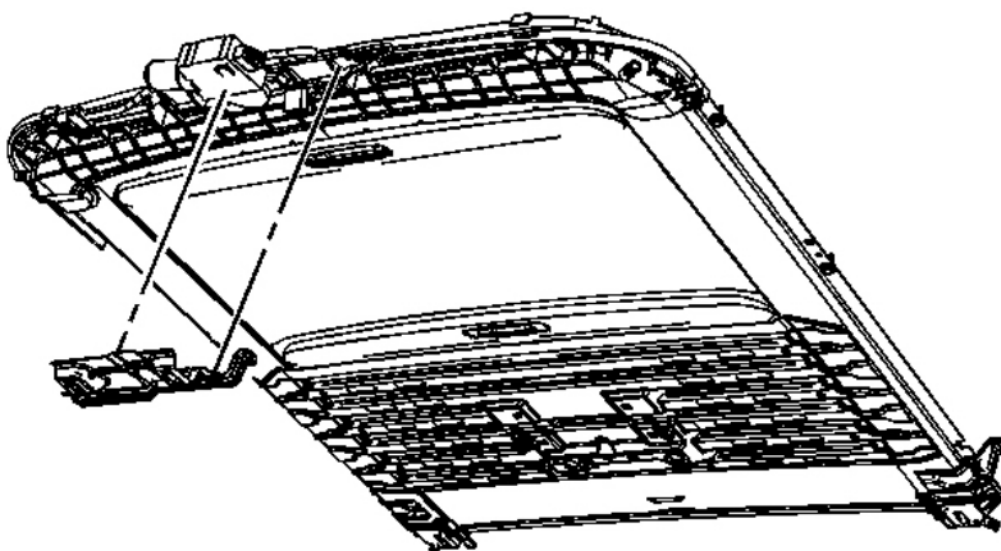


Fig. 7: View Of Sunroof Module Bracket
Courtesy of GENERAL MOTORS CORP.

1. Remove the overhead console. Refer to Roof Console Replacement .
2. Remove one left side screw from the bracket.
3. Carefully pulling down on the front edge of the headliner, swing the bracket downward to release the right side from the module.

Installation Procedure

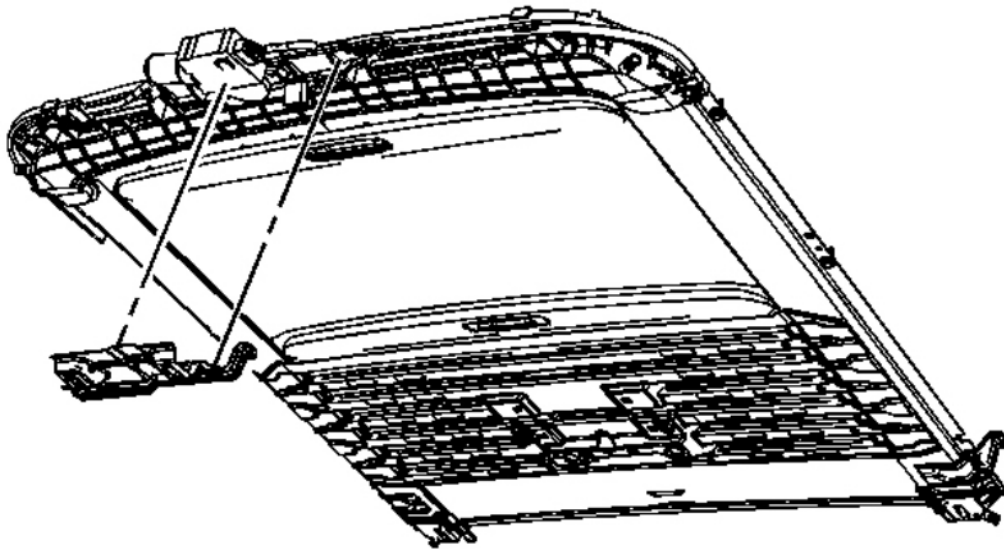


Fig. 8: View Of Sunroof Module Bracket
Courtesy of GENERAL MOTORS CORP.

NOTE: Refer to Fastener Notice .

1. Install the screw to the bracket.

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

2. Install the overhead console. Refer to Roof Console Replacement .

SUNROOF HOUSING FRONT DRAIN HOSE REPLACEMENT

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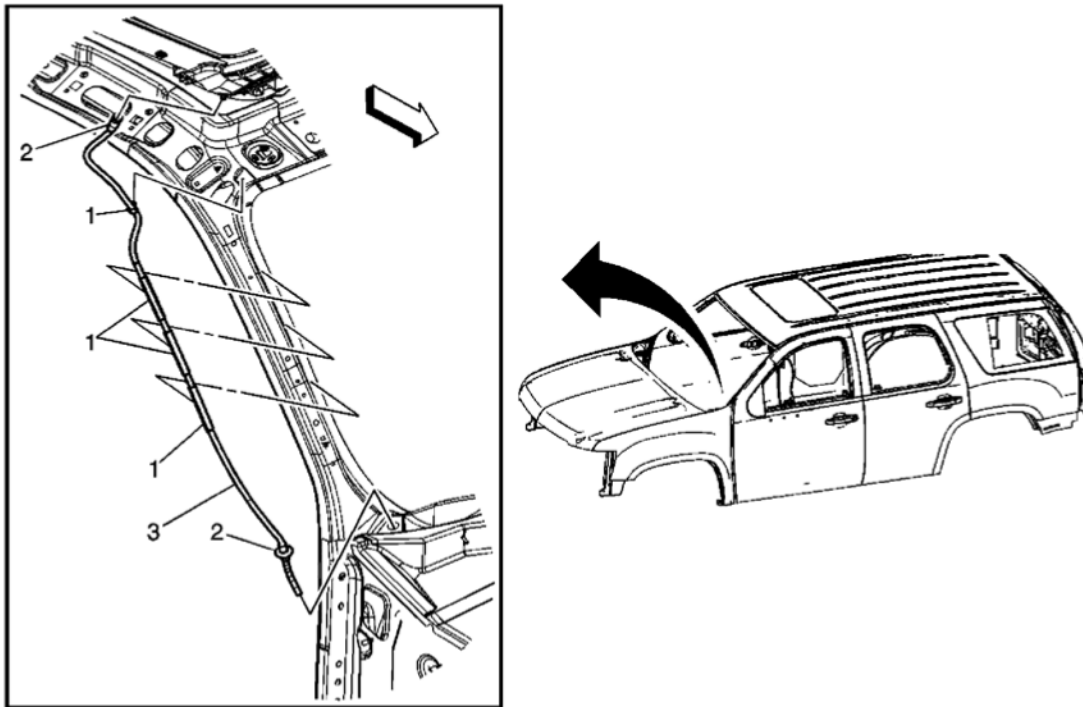


Fig. 9: View Of Sunroof Front Drain Hose, Grommet & Retainers
Courtesy of GENERAL MOTORS CORP.

Sunroof Housing Front Drain Hose Replacement

Callout	Component Name
Preliminary Procedures	
1. Remove the front garnish moldings. Refer to <u>Garnish Molding Replacement - Windshield Pillar</u> . 2. Lower the front section of the headliner, as needed. Refer to <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CF5 w/o U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche w/CJ2 w/o CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CJ3)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/U42 w/o CF5)</u> or <u>Headlining Trim Panel Replacement (LWB w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (LWB w/CF5 w/o U42)</u> or <u>Headlining Trim Panel Replacement (LWB w/CJ2)</u> or <u>Headlining Trim Panel Replacement (LWB w/CJ3)</u> or <u>Headlining Trim Panel Replacement (LWB w/U42 w/o CF5)</u> or <u>Headlining Trim Panel Replacement (SWB w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (SWB w/CF5 w/oU42)</u> or <u>Headlining Trim Panel Replacement (SWB w/CJ3)</u> or <u>Headlining Trim Panel Replacement (SWB w/o CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (SWB w/U42 w/o CF5)</u> .	
1	Sunroof Clip Front Retainers (Qty: 3) Tip: Remove the retainer clips from the side of the A pillar.

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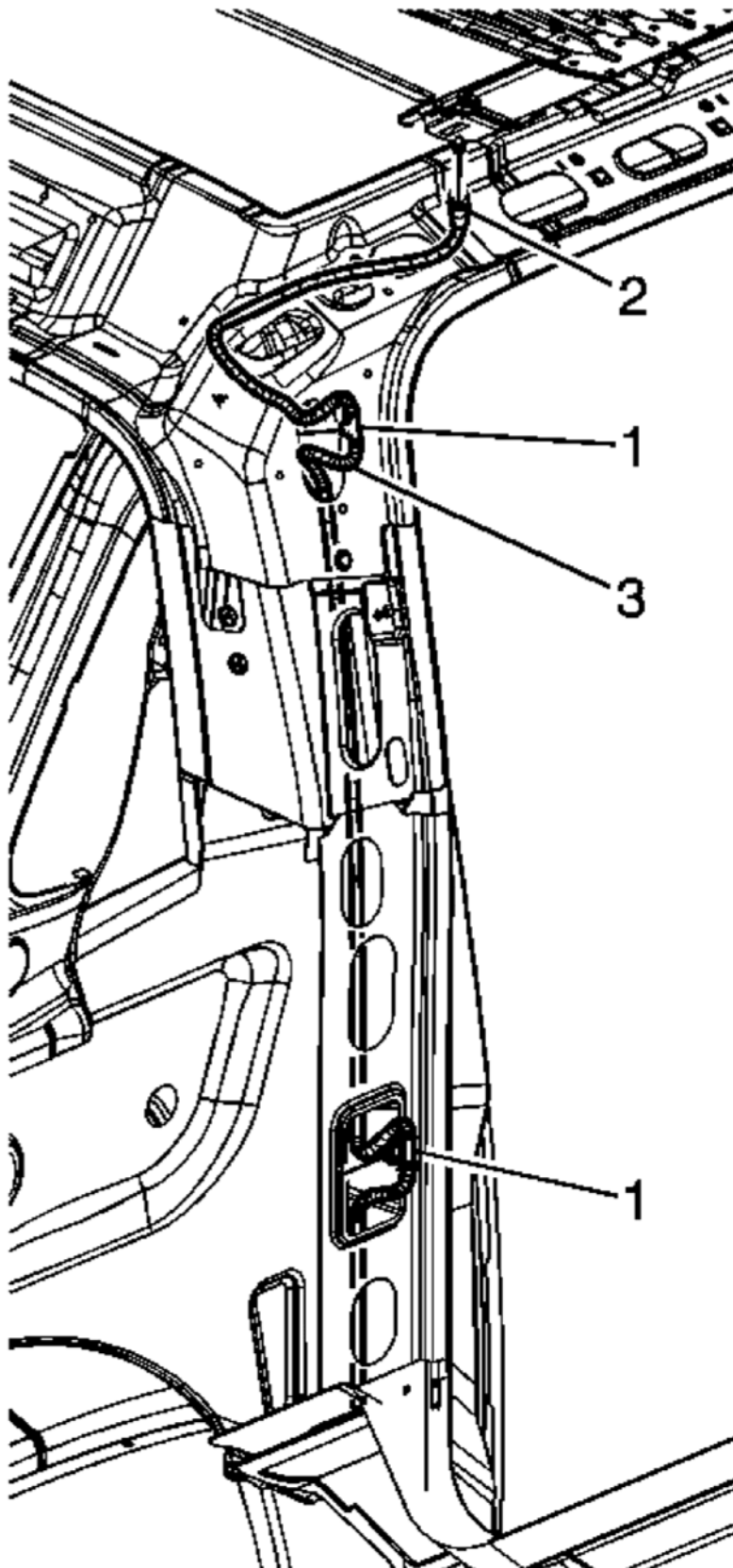
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2	Sunroof Hose Drain Front Grommet Tip: Use care when remove the drain hose grommet end from the cowl panel. The grommet presses in and pulls out of the cowl panel.
3	Sunroof Drain Front Hose Tip: Disconnect the drain hose from the module by pulling rearward.

SUNROOF HOUSING REAR DRAIN HOSE REPLACEMENT (AVALANCHE)

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Fig. 10: View Of Sunroof Hose, Grommet & Retainers

Courtesy of GENERAL MOTORS CORP.

Sunroof Housing Rear Drain Hose Replacement (Avalanche)

Callout	Component Name
Preliminary Procedure: Lower the rear section of the headliner, as needed. Refer to <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CF5 w/o U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche w/CJ2 w/o CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CJ3)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/U42 w/o CF5)</u> or <u>Headlining Trim Panel Replacement (LWB w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (LWB w/CF5 w/o U42)</u> or <u>Headlining Trim Panel Replacement (LWB w/CJ2)</u> or <u>Headlining Trim Panel Replacement (LWB w/CJ3)</u> or <u>Headlining Trim Panel Replacement (LWB w/U42 w/o CF5)</u> or <u>Headlining Trim Panel Replacement (SWB w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (SWB w/CF5 w/oU42)</u> or <u>Headlining Trim Panel Replacement (SWB w/CJ3)</u> or <u>Headlining Trim Panel Replacement (SWB w/o CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (SWB w/U42 w/o CF5)</u> .	
1	Sunroof Drain Hose Retainer (Qty: 2) Tip: Unplug the drain hoses from the left and right side of the drain weeper valve and the tape strip.
2	Sunroof Drain Hose Grommet
3	Sunroof Hose

SUNROOF HOUSING REAR DRAIN HOSE REPLACEMENT (ESCALADE)

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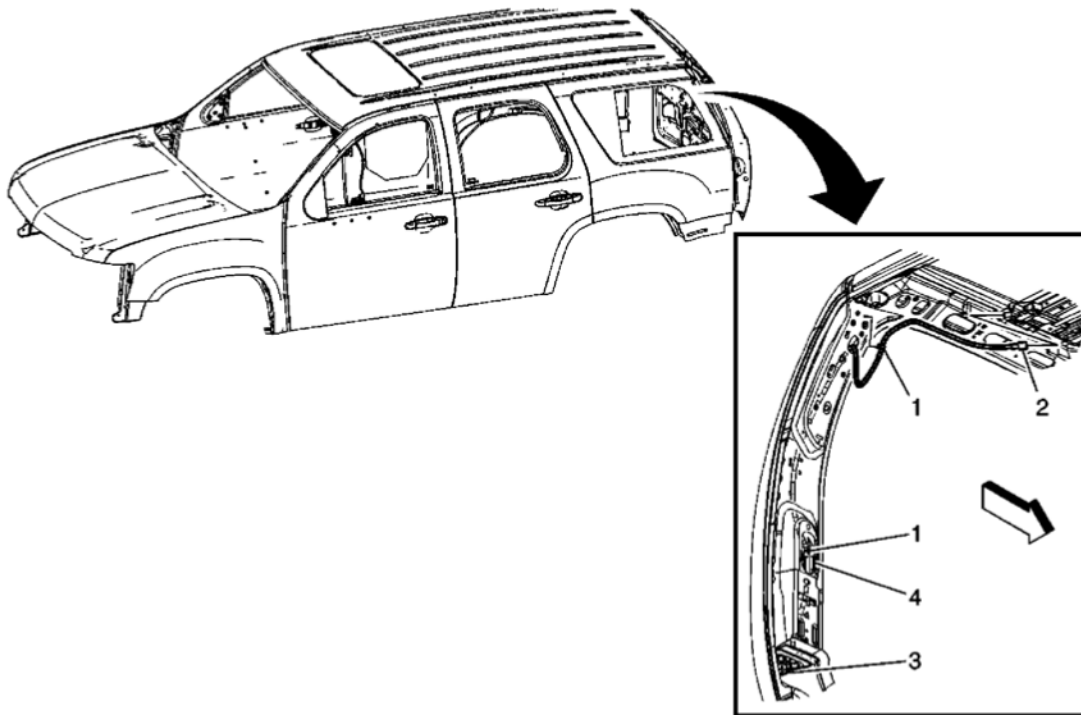


Fig. 11: View Of Sunroof Hose, Grommet & Retainers
Courtesy of GENERAL MOTORS CORP.

Sunroof Housing Rear Drain Hose Replacement (Escalade)

Callout	Component Name
Preliminary Procedure: Lower the rear section of the headliner, as needed. Refer to <u>Headlining Rear Trim Panel Replacement (Extended Wheelbase)</u> .	
1	Sunroof Drain Hose Grommet (Qty: 2)
2	Sunroof Drain Hose Clips Tip: Unplug the drain hoses from the left and right side of the drain weeper valve and the tape strip.
3	Sunroof Hose Tip: Remove the vehicle spare tire to access rubber grommet.

SUNROOF HOUSING REAR DRAIN HOSE REPLACEMENT (YUKON XL/DENALI/SUBURBAN)

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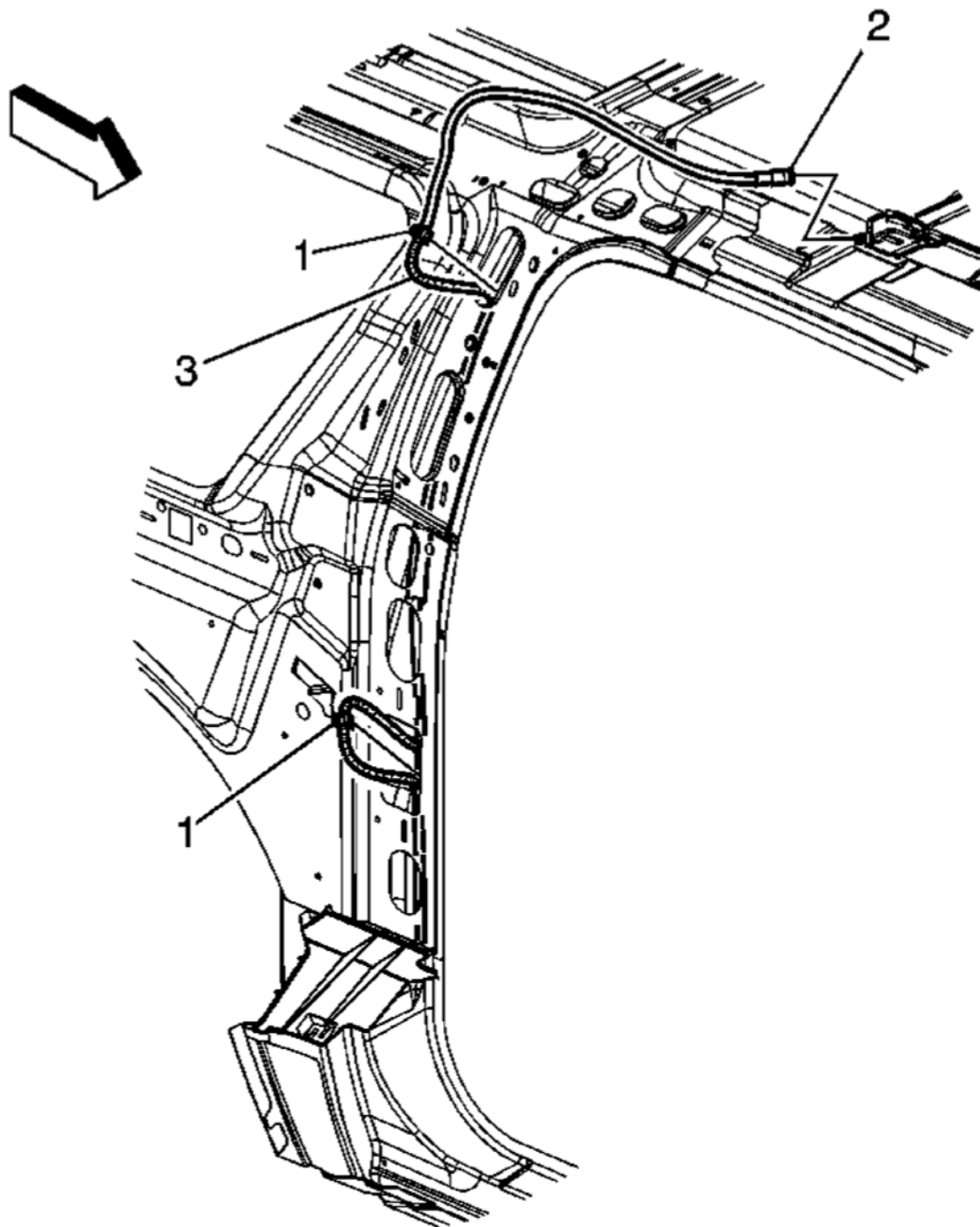


Fig. 12: View Of Sunroof Hose, Grommet & Retainers
Courtesy of GENERAL MOTORS CORP.

Sunroof Housing Rear Drain Hose Replacement (Yukon XL/Denali/Suburban)

Callout	Component Name
Preliminary Procedure:	

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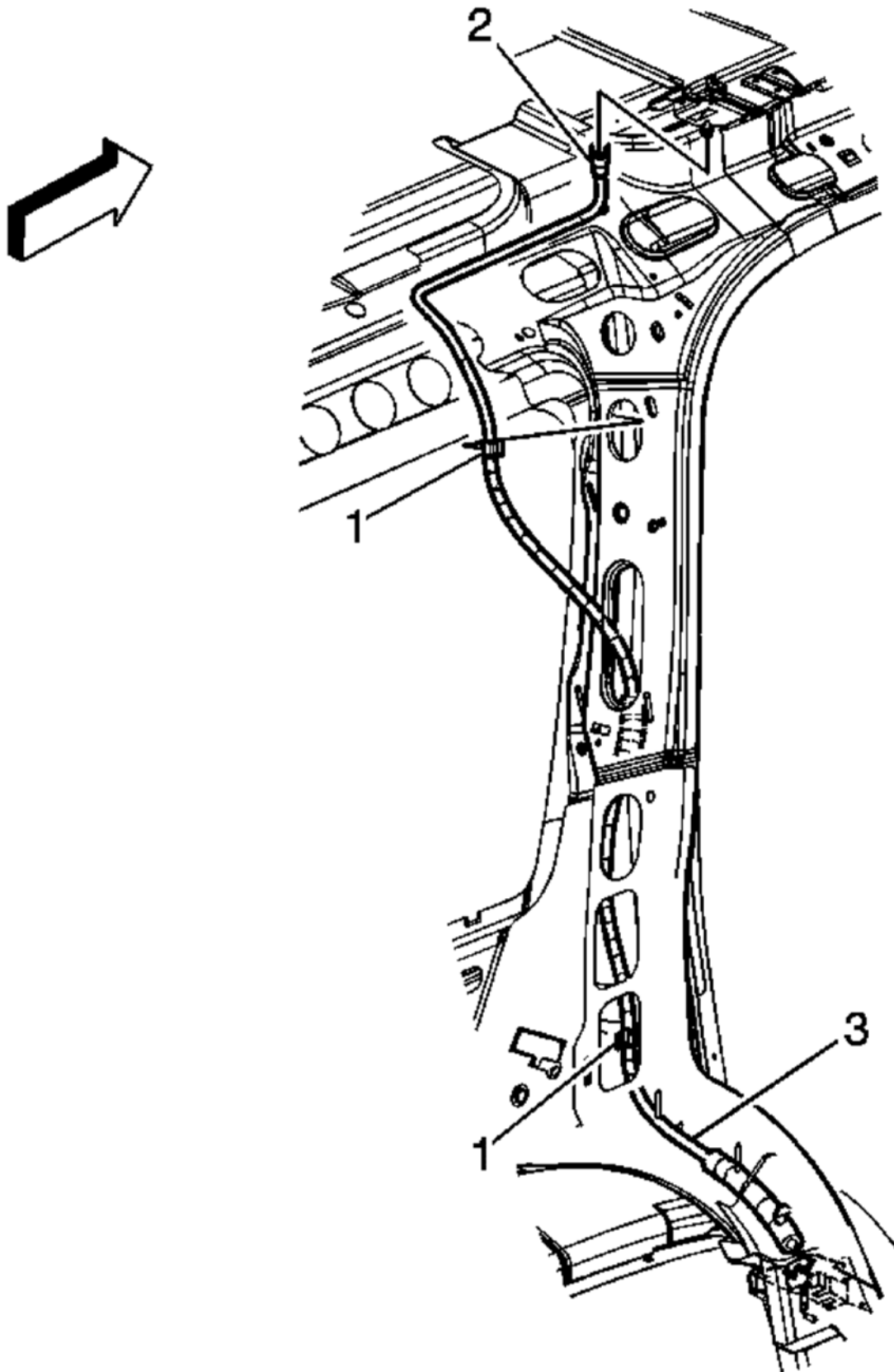
Lower the rear section of the headliner, as needed. Refer to [Headlining Trim Panel Replacement \(Avalanche/Escalade EXT w/CF5 and U42\)](#) or [Headlining Trim Panel Replacement \(Avalanche/Escalade EXT w/CF5 w/o U42\)](#) or [Headlining Trim Panel Replacement \(Avalanche w/CJ2 w/o CF5 and U42\)](#) or [Headlining Trim Panel Replacement \(Avalanche/Escalade EXT w/CJ3\)](#) or [Headlining Trim Panel Replacement \(Avalanche/Escalade EXT w/U42 w/o CF5\)](#) or [Headlining Trim Panel Replacement \(LWB w/CF5 and U42\)](#) or [Headlining Trim Panel Replacement \(LWB w/CF5 w/o U42\)](#) or [Headlining Trim Panel Replacement \(LWB w/CJ2\)](#) or [Headlining Trim Panel Replacement \(LWB w/CJ3\)](#) or [Headlining Trim Panel Replacement \(LWB w/U42 w/o CF5\)](#) or [Headlining Trim Panel Replacement \(SWB w/CF5 and U42\)](#) or [Headlining Trim Panel Replacement \(SWB w/CF5 w/o U42\)](#) or [Headlining Trim Panel Replacement \(SWB w/CJ3\)](#) or [Headlining Trim Panel Replacement \(SWB w/o CF5 and U42\)](#) or [Headlining Trim Panel Replacement \(SWB w/U42 w/o CF5\)](#) .

1	Sunroof Drain Hose Retainer (Qty: 2) Tip: Unplug the drain hoses from the left and right side of the drain weeper valve and the tape strip.
2	Sunroof Drain Hose Grommet
3	Sunroof Hose

SUNROOF HOUSING REAR DRAIN HOSE REPLACEMENT (YUKON/TAHOE SHORT UTILITY)

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Fig. 13: View Of Sunroof Hose, Grommet & Retainers

Courtesy of GENERAL MOTORS CORP.

Sunroof Housing Rear Drain Hose Replacement (Yukon/Tahoe Short Utility)

Callout	Component Name
Preliminary Procedure: Lower the rear section of the headliner, as needed. Refer to <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CF5 w/o U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche w/CJ2 w/o CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CJ3)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/U42 w/o CF5)</u> or <u>Headlining Trim Panel Replacement (LWB w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (LWB w/CF5 w/o U42)</u> or <u>Headlining Trim Panel Replacement (LWB w/CJ2)</u> or <u>Headlining Trim Panel Replacement (LWB w/CJ3)</u> or <u>Headlining Trim Panel Replacement (LWB w/U42 w/o CF5)</u> or <u>Headlining Trim Panel Replacement (SWB w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (SWB w/CF5 w/oU42)</u> or <u>Headlining Trim Panel Replacement (SWB w/CJ3)</u> or <u>Headlining Trim Panel Replacement (SWB w/o CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (SWB w/U42 w/o CF5)</u> .	
1	Sunroof Drain Hose Grommet (Qty: 2)
2	Sunroof Drain Hose Clips Tip: Unplug the drain hoses from the left and right side of the drain weeper valve and the tape strip.
3	Sunroof Hose

SUNROOF MODULE ASSEMBLY REPLACEMENT

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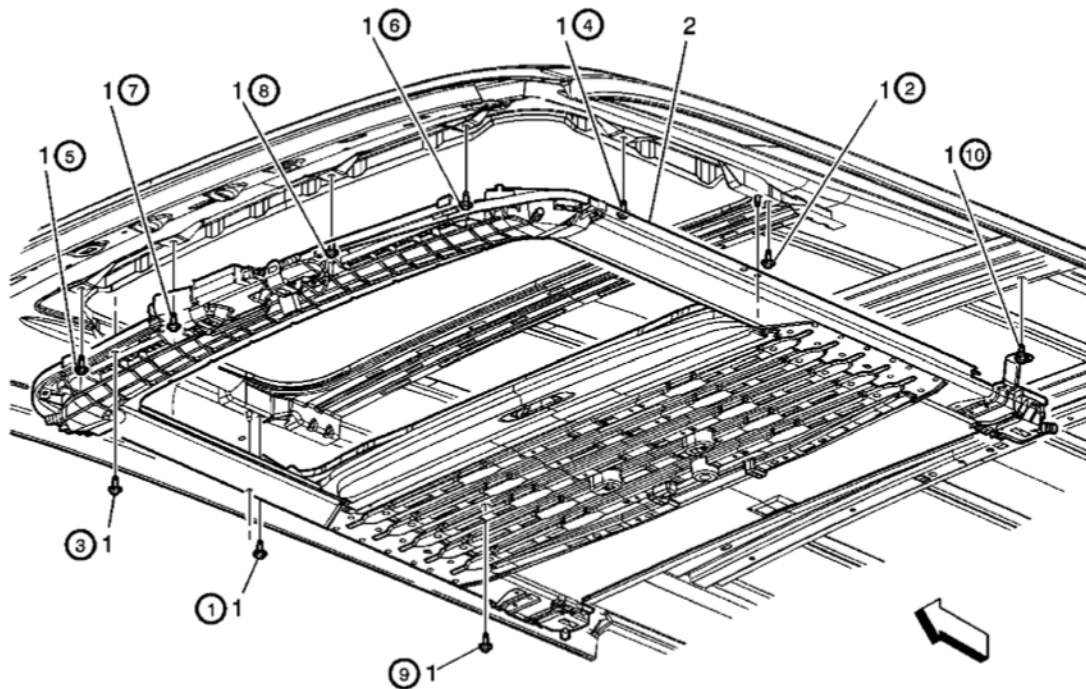


Fig. 14: View Of Sunroof Module & Bolts
Courtesy of GENERAL MOTORS CORP.

Sunroof Module Assembly Replacement

Callout	Component Name
Preliminary Procedures	
1.	Remove the sunroof window. Refer to <u>Sunroof Window Replacement</u> .
2.	Remove the air deflector. Refer to <u>Sunroof Air Deflector Replacement</u> .
3.	Lower the headliner as needed. Refer to <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CF5 w/o U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche w/CJ2 w/o CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CJ3)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/U42 w/o CF5)</u> or <u>Headlining Trim Panel Replacement (LWB w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (LWB w/CF5 w/o U42)</u> or <u>Headlining Trim Panel Replacement (LWB w/CJ2)</u> or <u>Headlining Trim Panel Replacement (LWB w/CJ3)</u> or <u>Headlining Trim Panel Replacement (LWB w/U42 w/o CF5)</u> or <u>Headlining Trim Panel Replacement (SWB w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (SWB w/CF5 w/oU42)</u> or <u>Headlining Trim Panel Replacement (SWB w/CJ3)</u> or <u>Headlining Trim Panel Replacement (SWB w/o CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (SWB w/U42 w/o CF5)</u> .
4.	Remove the front sunroof module bracket. Refer to <u>Sunroof Module Bracket Replacement</u> .
5.	Remove the sunroof motor/actuator. Refer to <u>Sunroof Motor/Actuator Replacement</u> .

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6. Remove the sunroof wiring harness.
7. Remove the sunshade. Refer to **Sunroof Sunshade Assembly Replacement**.

1	Sunroof Module Bolts (Qty: 10) NOTE: Refer to <u>Fastener Notice</u> . Tip: 1. Remove the drain hoses from each side of the drain weeper valve. 2. With the aid of assistant, remove the module from the vehicle. Tighten: 9 N.m (80 lb in)
2	Sunroof Module Tip: When tightening the bolts, follow the mandatory sequence.

GARNISH MOLDING REPLACEMENT - SUNROOF PANEL WINDOW (EXTENDED)

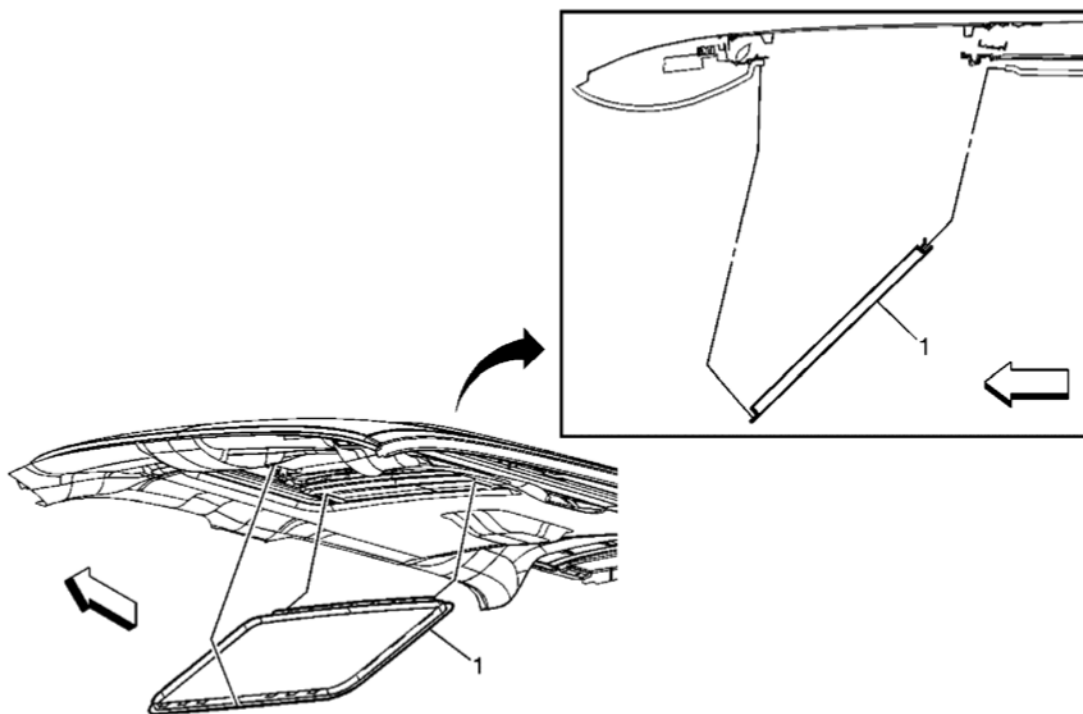


Fig. 15: Locating Garnish Molding
Courtesy of GENERAL MOTORS CORP.

Garnish Molding Replacement - Sunroof Panel Window (Extended)

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Callout	Component Name
1	Sunroof Panel/Window Garnish Molding Assembly Tip: 1. Tilt molding approximately 45 degrees with rear end up. 2. Push molding rearward to sandwich headliner and sunroof tub between molding flange and tabs. 3. Grab front of molding at centerline and pull rearward approximately 1 inch. 4. Push front edge up, locking front tabs in place. 5. Push up on outboard edges of molding to secure. 6. After molding is secured, slide the molding forward until it stops.

SUNROOF MOTOR/ACTUATOR INITIALIZATION/TEACH PROCESS

Perform the initialization/teach procedure any time:

- A new sunroof motor/actuator has been installed.
- The existing sunroof motor/actuator has been removed and reinstalled.
- The sunroof system has suffered 3 interruptions for emergency events, i.e. anti-pinch, debris in tracks etc., and normal operation is canceled.

By performing the initialization/teach procedure, the sunroof motor/actuator records the open vent stop position. The motor/actuator will then understand the other positions, closed and full open soft stop, and allow express and obstacle detection functions.

1. Ensure that all electrical harness connectors are connected.
2. Turn the ignition to ON.
3. Completely close the sunroof window with the manual close switch.
4. Press the sunroof vent switch to the vent open position until the sunroof window stops, and continue holding the switch for at least 10 seconds.

IMPORTANT: The initialization/teach procedure is not complete if the battery and/or ignition power has been interrupted during the process.
The Initialization/Teach Process must be restarted if the procedure is not carried out completely.

5. Verify the operation of the sunroof in all positions.

SUNROOF MOTOR/ACTUATOR REPLACEMENT

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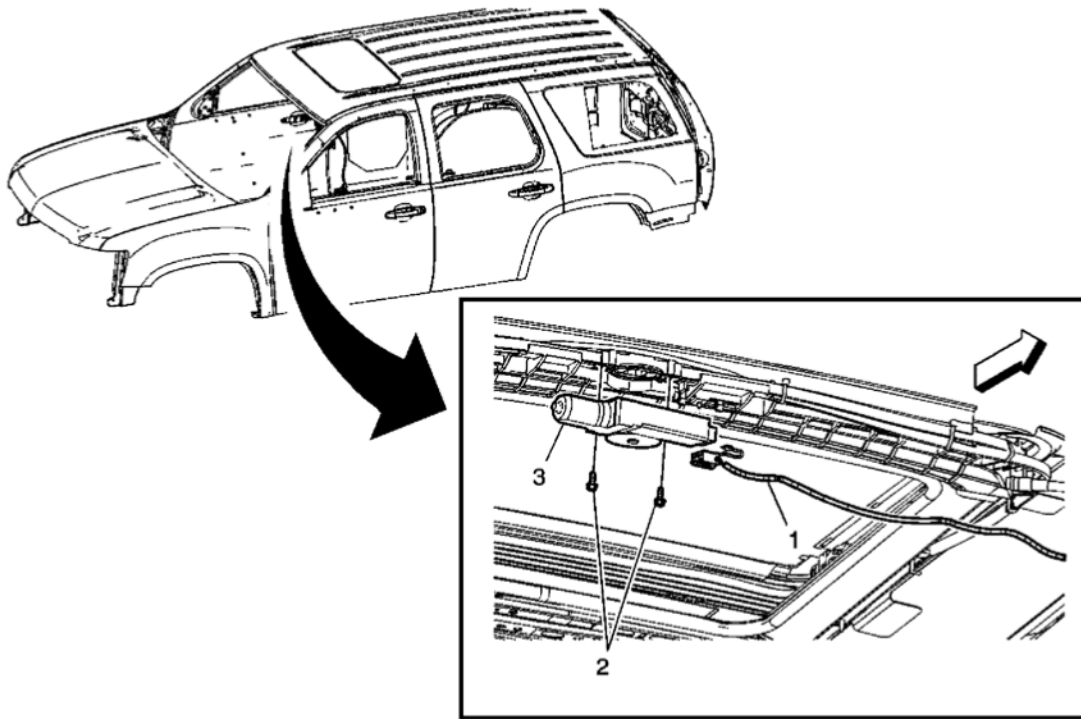


Fig. 16: View Of Sunroof Motor/Actuator & Components

Courtesy of GENERAL MOTORS CORP.

Sunroof Motor/Actuator Replacement

Callout	Component Name
Preliminary Procedures	
1. Remove the overhead console. Refer to <u>Roof Console Replacement</u> .	
2. Remove the sunroof module bracket. Refer to <u>Sunroof Module Bracket Replacement</u> .	
1	Sunroof Motor/Actuator Plug
2	Sunroof Motor/Actuator Screws (Qty: 2) NOTE: Refer to <u>Fastener Notice</u> . Tighten: 6 N.m (53 lb in)
3	Sunroof Motor/Actuator Tip: 1. Pull downward to disengage the motor/actuator from the sunroof module. 2. It will be necessary to reattach the motor. <u>Sunroof Motor/Actuator Initialization/Teach Process</u> .

SUNROOF SUNSHADE ASSEMBLY REPLACEMENT

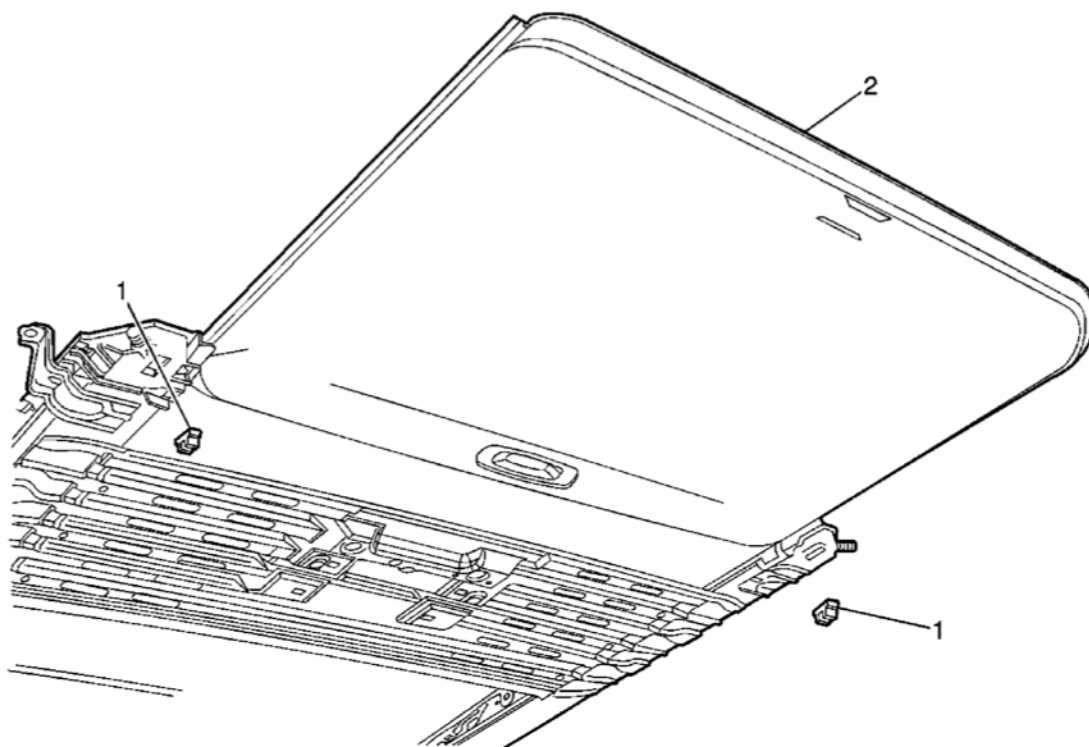


Fig. 17: View Of Sunroof Sunshade & Stopper
 Courtesy of GENERAL MOTORS CORP.

Sunroof Sunshade Assembly Replacement

Callout	Component Name
Preliminary Procedures: Lower the headliner. Refer to <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CF5 w/o U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche w/CJ2 w/o CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/CJ3)</u> or <u>Headlining Trim Panel Replacement (Avalanche/Escalade EXT w/U42 w/o CF5)</u> or <u>Headlining Trim Panel Replacement (LWB w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (LWB w/CF5 w/o U42)</u> or <u>Headlining Trim Panel Replacement (LWB w/CJ2)</u> or <u>Headlining Trim Panel Replacement (LWB w/CJ3)</u> or <u>Headlining Trim Panel Replacement (LWB w/U42 w/o CF5)</u> or <u>Headlining Trim Panel Replacement (SWB w/CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (SWB w/CF5 w/oU42)</u> or <u>Headlining Trim Panel Replacement (SWB w/CJ3)</u> or <u>Headlining Trim Panel Replacement (SWB w/o CF5 and U42)</u> or <u>Headlining Trim Panel Replacement (SWB w/U42 w/o CF5)</u> .	
1	Sunshade Stopper (Qty: 2)
2	Sunshade
Tip: Pull rearward to remove the sunshade from the module.	

SUNROOF SWITCH REPLACEMENT

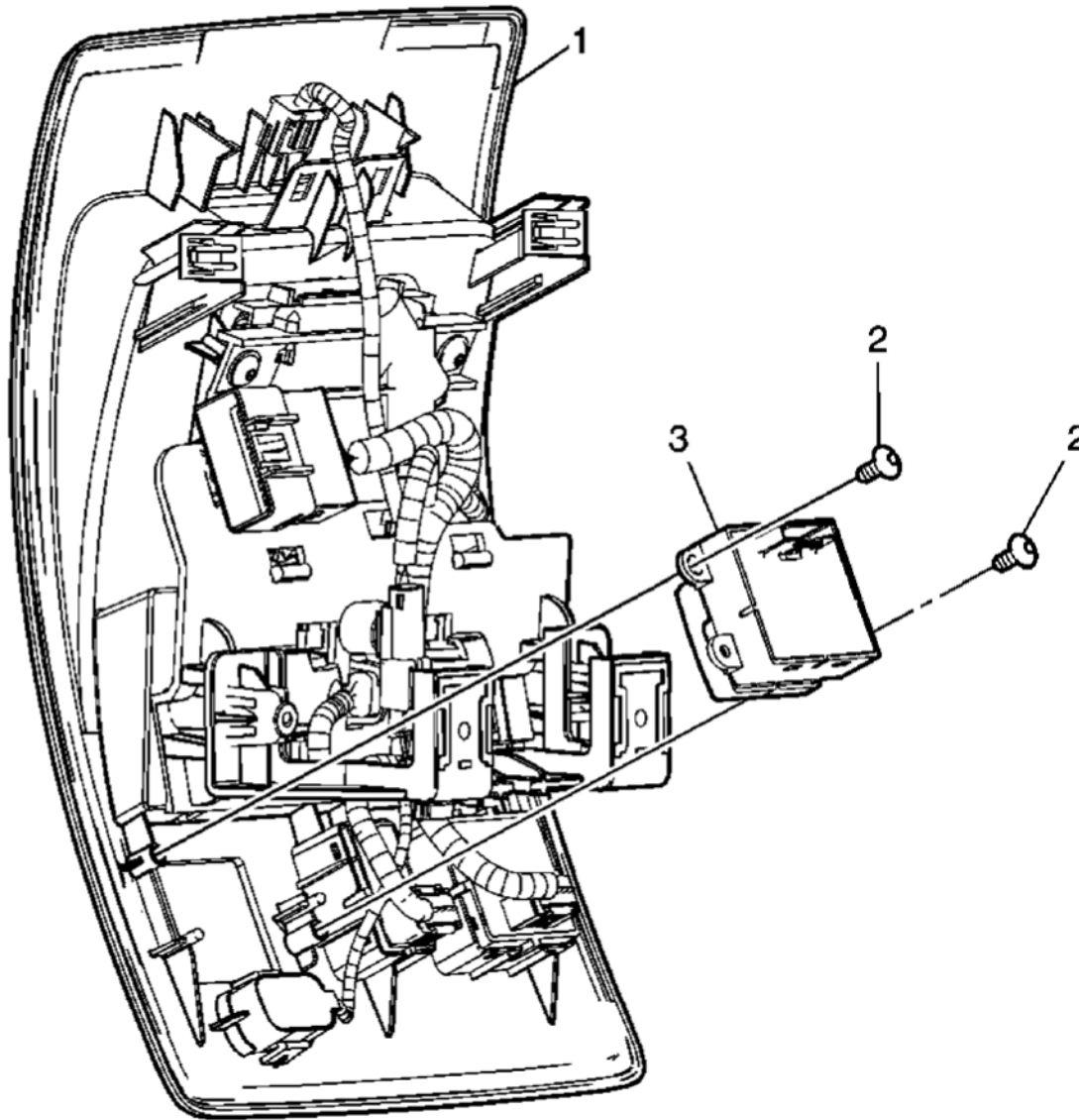


Fig. 18: View Of Overhead Console Assembly, Sunroof Switch Assembly & Screws
Courtesy of GENERAL MOTORS CORP.

Sunroof Switch Replacement

Callout	Component Name
1	Overhead Console Assembly Refer to <u>Roof Console Replacement</u> .
2	Sunroof Switch Screw (Qty: 2) NOTE:

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	Refer to <u>Fastener Notice</u> .
	Tighten: 2 N.m (18 lb in)
3	Sunroof Switch Assembly Tip: Disconnect electrical connector.

SUNROOF WINDOW WEATHERSTRIP REPLACEMENT

Removal Procedure

1. Remove the sunroof window. Refer to **Sunroof Window Replacement**.

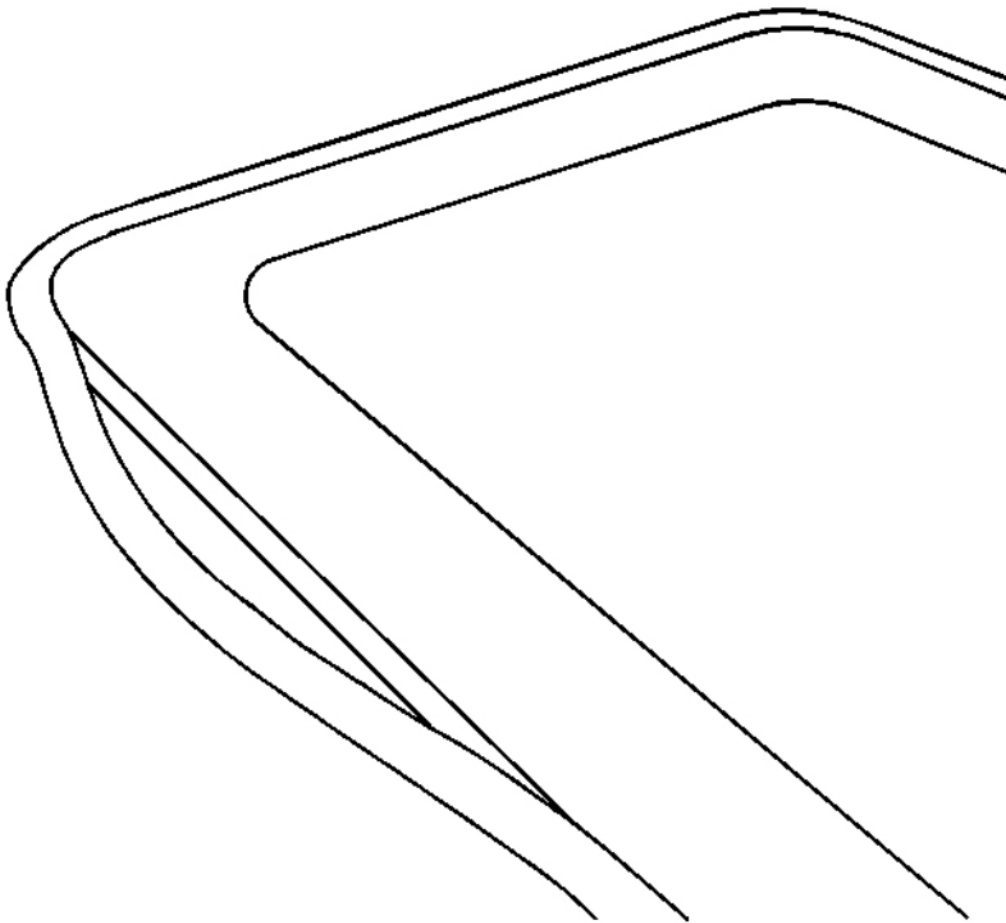


Fig. 19: Sunroof Window Weatherstrip
Courtesy of GENERAL MOTORS CORP.

2. Carefully remove the sunroof window weatherstrip from the perimeter of the sunroof window.

Installation Procedure

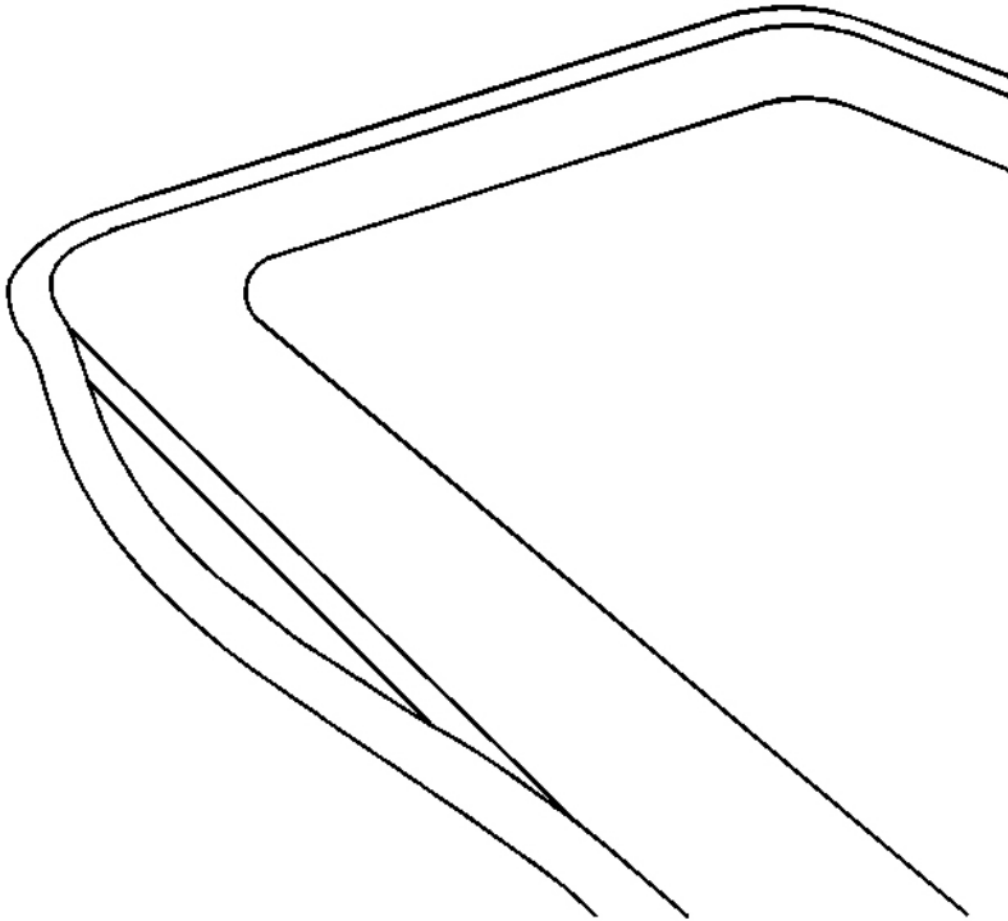


Fig. 20: Sunroof Window Weatherstrip
Courtesy of GENERAL MOTORS CORP.

1. Carefully install the sunroof window weatherstrip to the perimeter of the sunroof window, ensuring that the weatherstrip is fully seated.
2. Install the sunroof window to the sunroof module assembly. Refer to **Sunroof Window Replacement**.
3. Ensure that the sunroof does not have any air or waterleaks.

SUNROOF WINDOW HEIGHT AND OPENING FIT ADJUSTMENT

Window Height Set

1. Slide the sunroof sunshade to the open position.
2. Remove the sunroof panel side covers. Refer to Sunroof Panel Side Opening Cover Replacement.
3. Cycle the sunroof to the fully closed position.
4. Loosen the sunroof window panel screws.

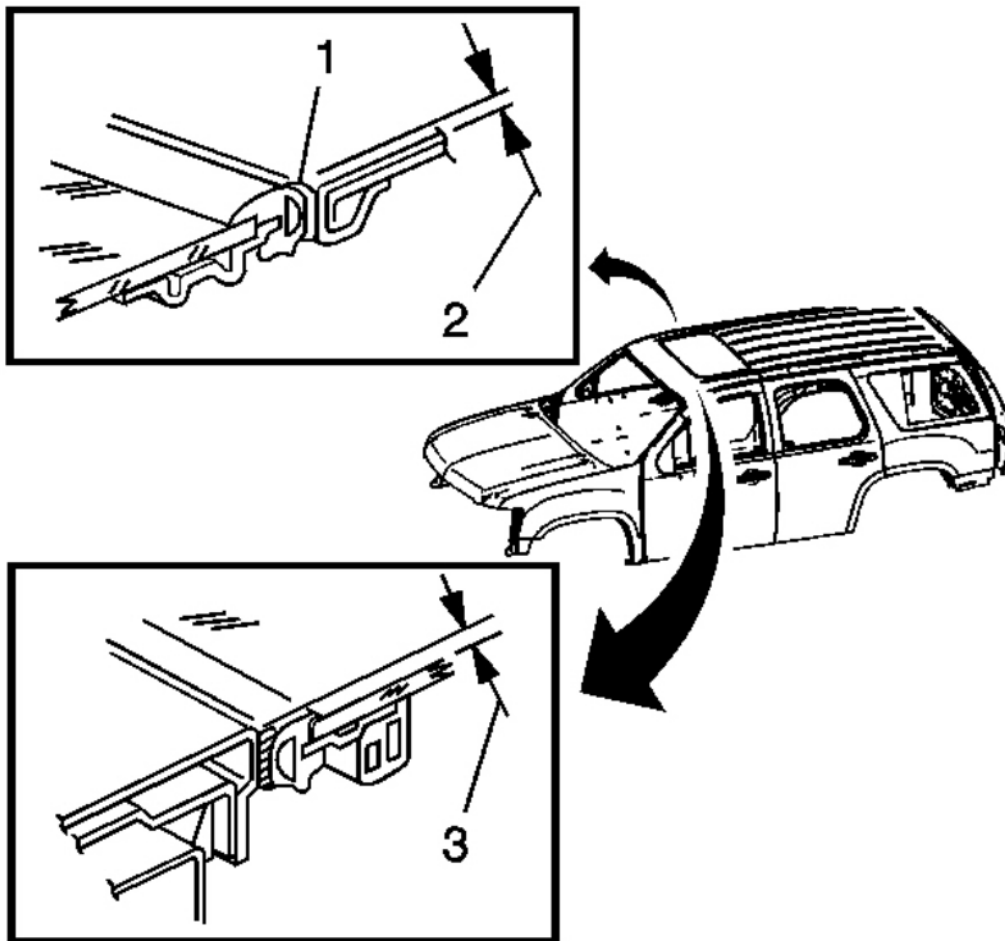


Fig. 21: Checking Corners Of Sunroof Window Panel
Courtesy of GENERAL MOTORS CORP.

5. Individually adjust the 4 corners of the sunroof window panel.
6. Adjust the front of the sunroof window panel to 0.0 - 1.0 mm (0.040 in) below the top surface (3) of the roof panel.

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- Adjust the rear of the sunroof window panel to 1.0+0.0 mm (0.040 in) above the top surface (2) of the roof panel.

NOTE: Refer to Fastener Notice .

- Tighten the sunroof window panel screws.

Tighten: Tighten the sunroof window panel screws to 4 N.m (35 lb in).

- Install the sunroof panel side covers. Refer to Sunroof Panel Side Opening Cover Replacement.
- Close the sunshade.

SUNROOF WINDOW REPLACEMENT

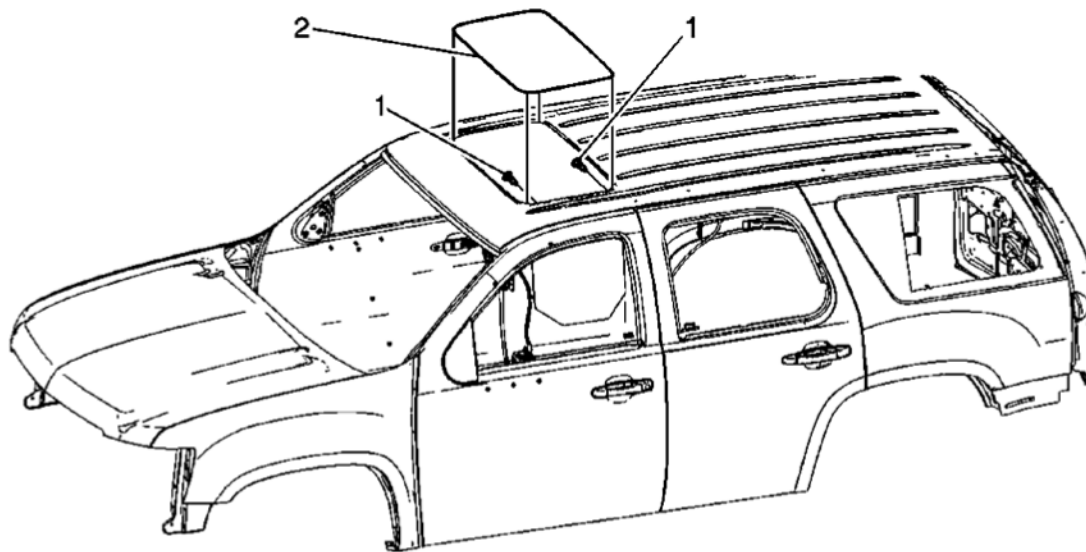


Fig. 22: View Of Sunroof Window & Screws
Courtesy of GENERAL MOTORS CORP.

Sunroof Window Replacement

Callout	Component Name
1	Sunroof Window Screws (Qty: 4) NOTE: Refer to <u>Fastener Notice</u> . Tip: 1. Open the sunshade.

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	2. Remove the sunroof panel side covers. Refer to <u>Sunroof Panel Side Opening Cover Replacement</u>. 3. Ensure that the sunroof window is in the fully closed position. 4. The Screws are located on the inside edge of each corner of the window. Tighten: 4 N.m (35 lb in)
2	Sunroof Window Tip: Remove the window from the outside of the vehicle.

DESCRIPTION AND OPERATION

SUNROOF DESCRIPTION AND OPERATION

The power sunroof is operated by the sunroof motor/actuator which consists of the motor and electronic control unit as a complete assembly. The system is powered by a battery supply circuit and ignition and retained accessory power signal circuits determine when the may be operated. The switch signal circuits are supplied battery voltage through a resistor and monitored within the ECU. When a sunroof switch is pressed the switch signal circuit is closed to ground and most of the voltage supplied to the signal circuit will be dropped across the resistor within the ECU indicating the switch is active.