

# Moon Roof Stuck/Improper Operation

**Service Category** Vehicle Exterior

**Section** Sliding Roof/Convertible

**Market** USA

Toyota Supports  
 ASE Certification 

## Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2003 – 2008	4Runner	

### TSB SUPERSESSION NOTICE

The information contained in this TSB supersedes TSB No. BO016–06.

- Applicability has been updated to include 2008 model year 4Runner vehicles.

TSB No. BO016–06 is Obsolete and any printed versions should be discarded. Be sure to review the entire content of this service bulletin before proceeding.

## Introduction

Some customers may experience a moon roof that exhibits improper operation, such as:

- The moon roof does not close from its fully open position (an improper jam protection operation occurs).
- The moon roof is stuck due to a difference of alignment between the right and left parts of the moon roof.
- Sliding parts are stuck due to hardened grease.

Perform the following repair procedure to correct these conditions.

## Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
BD5037	Clean/Lubricate Wind Deflector Links & Align Moon Roof Cable	0.9	63203–35040	9A	83
			63203–35041		
			63203–35050		
			63203–35060		

## Moon Roof Stuck/Improper Operation

### Warranty Information (Continued)

**APPLICABLE WARRANTY**

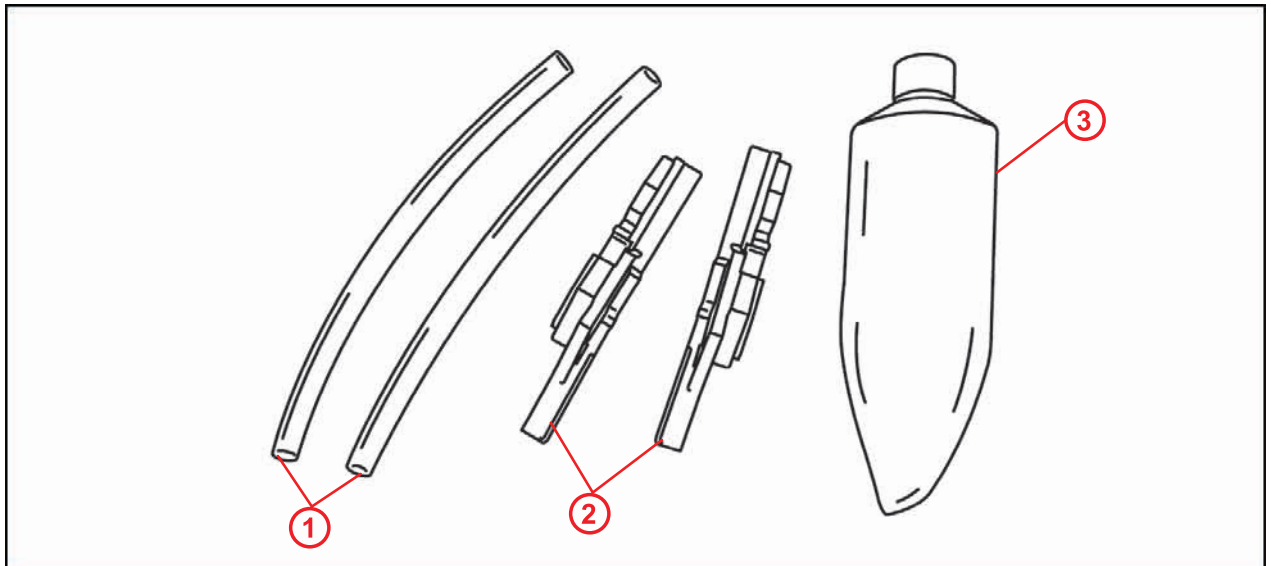
- This repair is covered under the Toyota Comprehensive Warranty. This warranty is in effect for 36 months or 36,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to correction of a problem based upon a customer's specific complaint.

### Parts Information

PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	QTY
63207-35040	Same	Base Sub-assembly, Roof Window Balancer (Repair Kit)	1

### Kit Contents

Figure 1.



1	Tubes
2	Wind Deflector Guide Rail Holders
3	Grease

**NOTE**

The plastic tubes are NOT required for this TSB.

# Moon Roof Stuck/Improper Operation

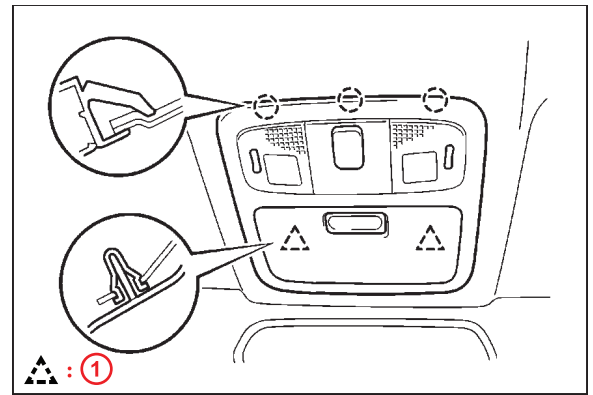
## Repair Procedure

**NOTE**

Perform the same procedure for both the RH and LH sides.

1. Remove the gear assembly.
  - A. Open the moon roof approximately 75% and then remove the ignition key.
  - B. Release the two (2) metal clips (behind the sunglass holder) by gently pulling down the front of the map light assembly.

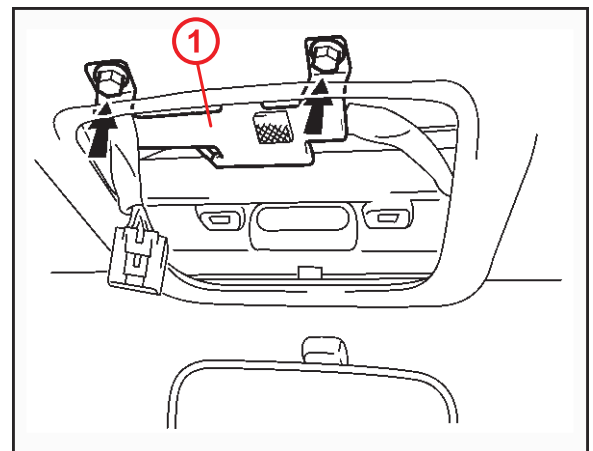
Figure 2.



1	Clip
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- C. Disconnect the connector and remove the map light assembly.
- D. Remove the two (2) bolts, disconnect the motor connector, and then remove the gear assembly.

Figure 3.



1	Gear Assembly
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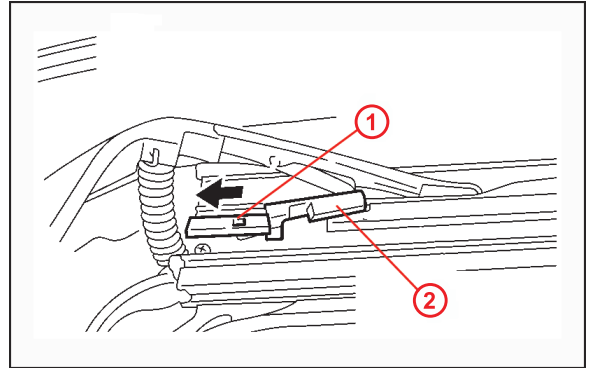
2. Remove the roof wind deflector.

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### Repair Procedure (Continued)

- A. Using a flathead screwdriver, hold down the guide block release lever and push the plastic clip forward.

Figure 4.



2	Plastic Clip
3	Guide Block

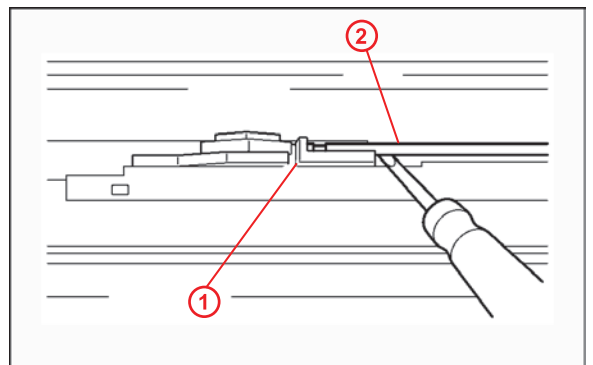
- B. Slide the guide block backwards and out. Repeat for the other side and remove the wind deflector.

**NOTE**

To prevent breakage of the guide block release lever when the outside temperature is below 40° F (4° C), use a heat gun to raise the temperature of the guide block and surrounding aluminum housing to at least 65° F (18° C). Be careful NOT to damage components or paint with the heat gun.

- 3. Disconnect the wind deflector rod.
  - A. Place a screwdriver against the rail, in the notch area shown in the illustration, and pry the rod to disconnect.

Figure 5.



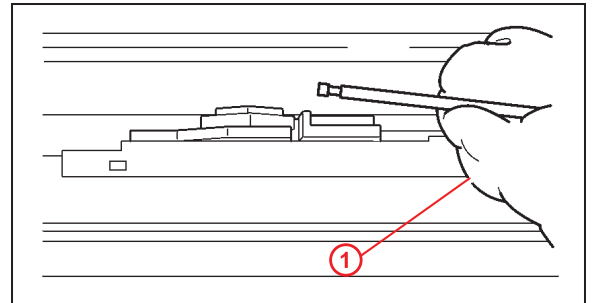
1	Holder
2	Rod

## Moon Roof Stuck/Improper Operation

### Repair Procedure (Continued)

- B. Secure the rod with a piece of cloth. Place the cloth between the rod and track to keep it out of the way.

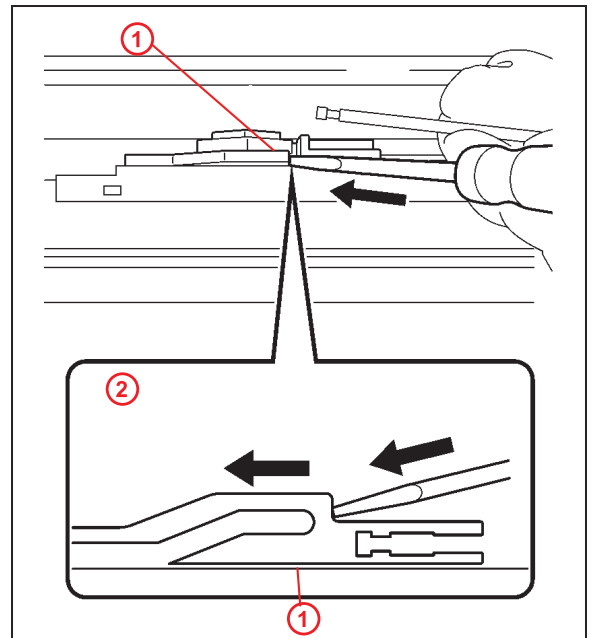
**Figure 6.**



<b>1</b>	<b>Cloth</b>
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- 4. Remove the moon roof wind deflector guide rail holder.
  - A. Place a flathead screwdriver against the stepped portion of the holder and lightly tap the screwdriver, using a hammer, to release the holder.
  - B. Move the holder toward the front of the vehicle by pushing it with the screwdriver and remove it from the rail.

**Figure 7.**



<b>1</b>	<b>Holder</b>
<b>2</b>	<b>Cross Section of Holder</b>

## Moon Roof Stuck/Improper Operation

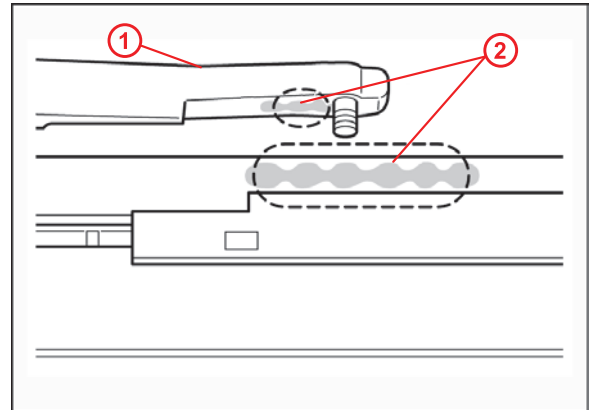
### Repair Procedure (Continued)

5. Replace the grease.

A. Using a piece of cloth or scraper, remove the old grease from the holder-sliding surface on the rail and the deflector arm.

**NOTE**  
Remove the grease on both the RH and LH sides.

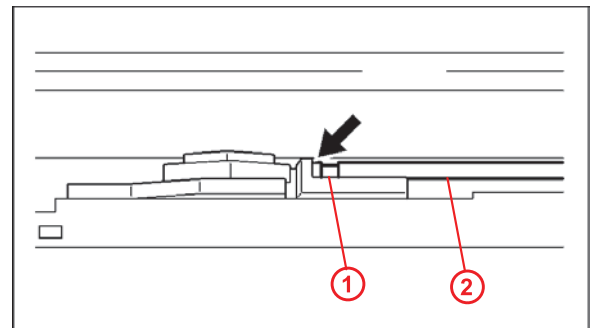
**Figure 8.**



<b>1</b>	<b>Deflector Arm</b>
<b>2</b>	<b>Old Grease</b>

B. Install the NEW holder (P/N 63257–35040/50, included in repair kit P/N 63207–35040) to the rail by performing the removal procedure in reverse order.

**Figure 9.**

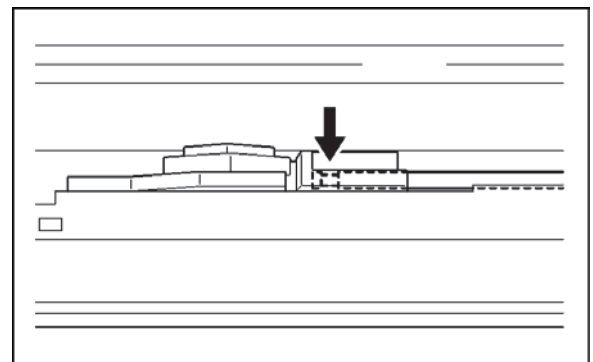


<b>1</b>	<b>Holder</b>
<b>2</b>	<b>Rod</b>

C. Push the rod into the holder.

**NOTE**  
Make sure the wind deflector rod is installed in the guide block's towards the most forward position.

**Figure 10.**

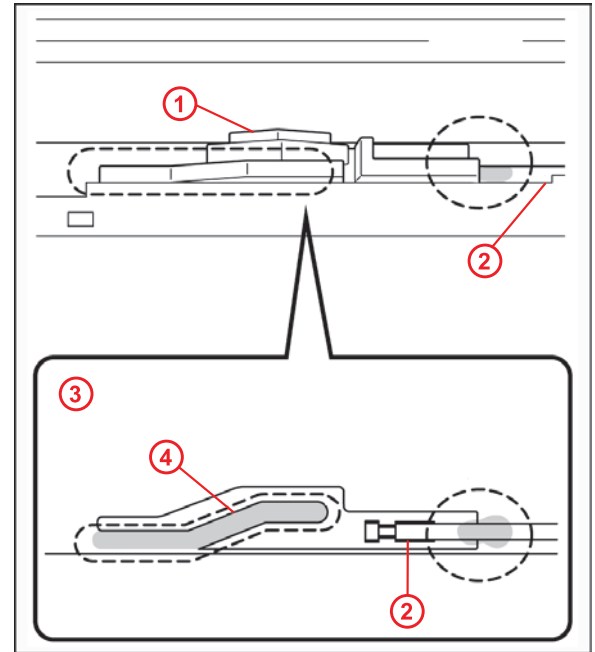


## Moon Roof Stuck/Improper Operation

### Repair Procedure (Continued)

- D. Apply grease (P/N 09170-35010, included in the repair kit) to the contact surface between the holder and the rail and the groove (deflector arm installation portion).

**Figure 11.**



1	Holder
2	Rod
3	Cross Section of Holder
4	Groove

- 6. Install the roof wind deflector by performing the removal procedure in the reverse order.

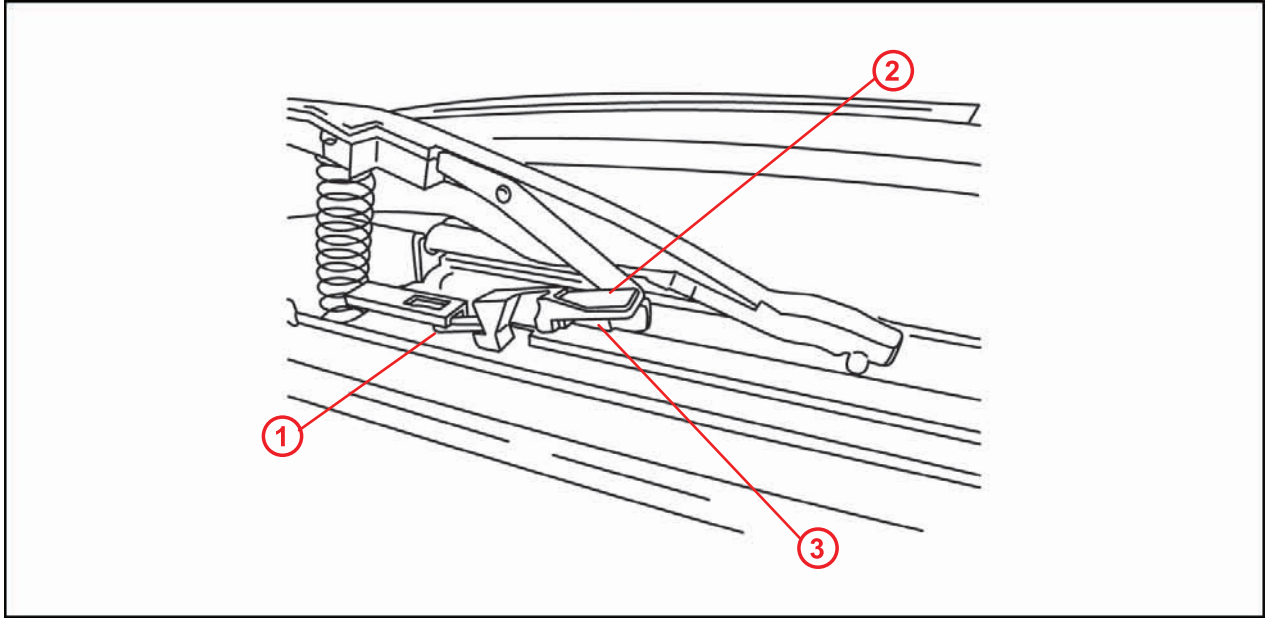
**NOTE**  
**Install the front tab first, then slide back, and snap into position.**

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### Repair Procedure (Continued)

Figure 12.



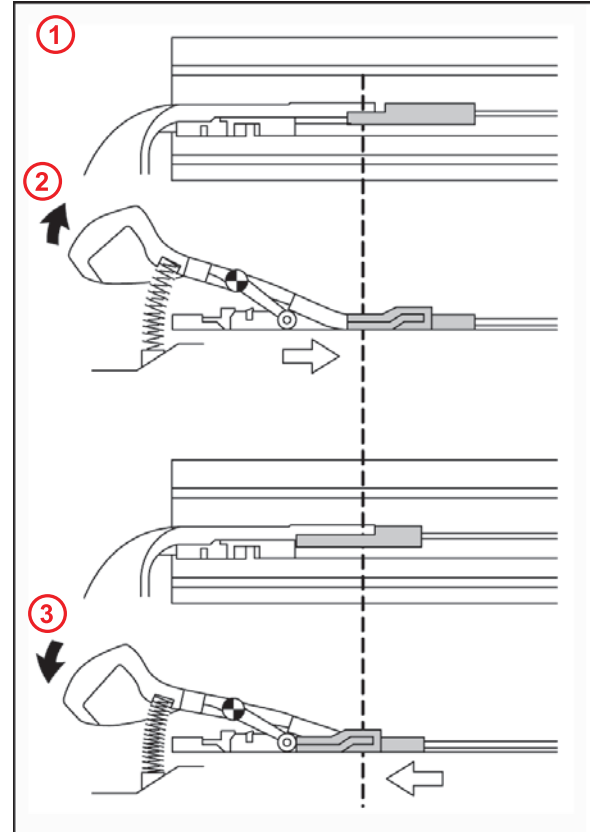
1	Slide Forward
2	Push Down
3	Slide Back to Lock



## Moon Roof Stuck/Improper Operation

7. Align the drive cable holders.

**Figure 13.**

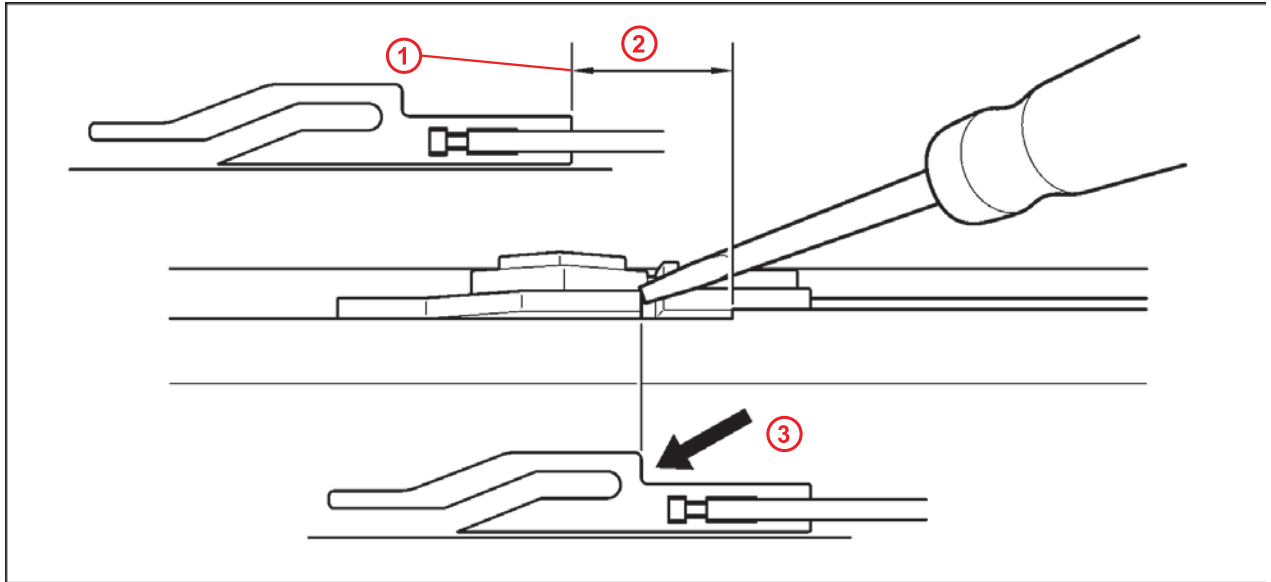


<b>1</b>	<b>Deflector Operation</b>
<b>2</b>	<b>Full-up Position</b>
<b>3</b>	<b>Half-up Position</b>

- A. Place a flathead screwdriver against the stepped portion of the holder and push the holder toward the front of the vehicle to move the deflector to the half-up position. Align the RH and LH holder positions.

**Moon Roof Stuck/Improper Operation**

**Figure 14.**

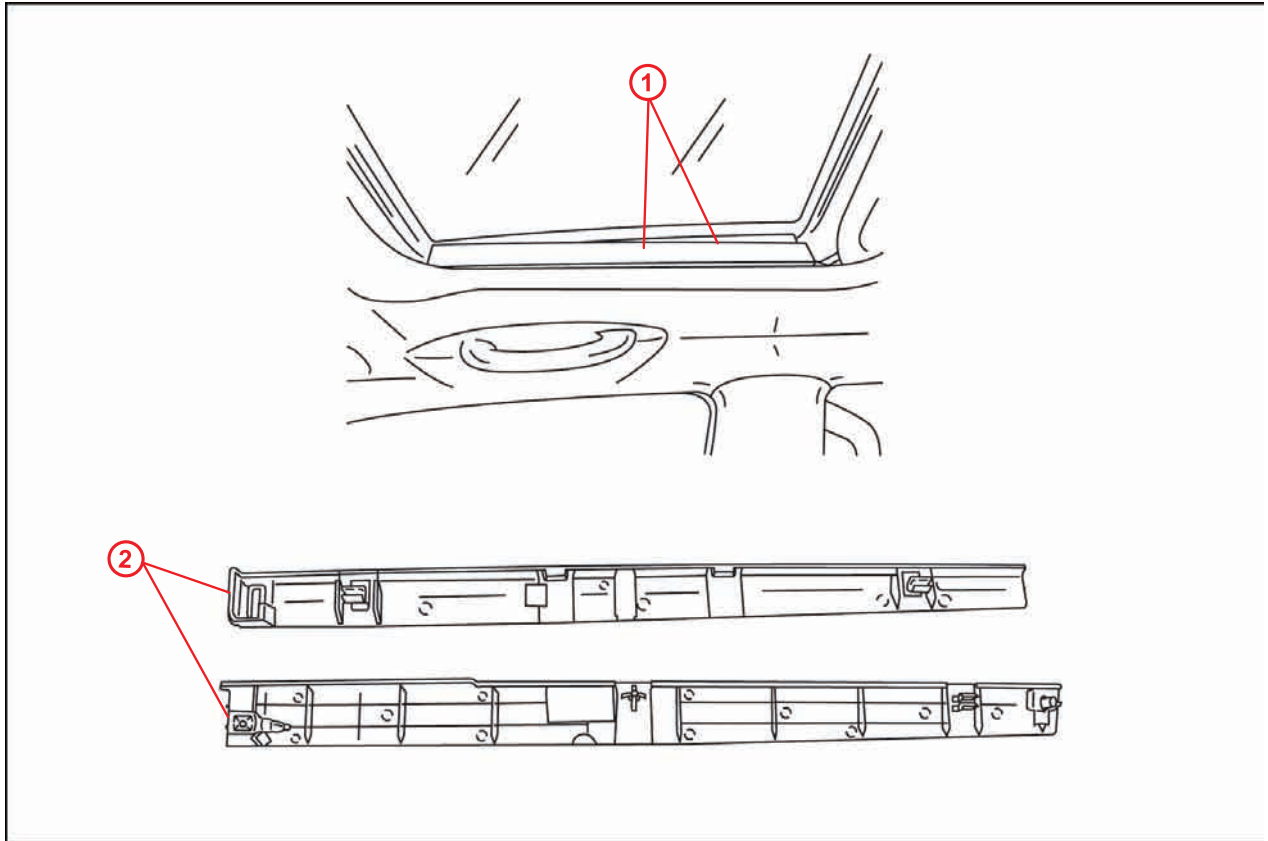


<b>1</b>	<b>Half-up Position</b>
<b>2</b>	<b>Distance Between End of Holder &amp; Cutout of Rail: Approximately 17 mm (0.67 in.)</b>
<b>3</b>	<b>Push Stepped Portion of Holder Toward Front Side &amp; Move Deflector to Half-up Position</b>

- B. Install the gear assembly and connect the map light assembly. Operate the moon roof switch to move the slide panel to its fully closed position.
- C. Remove the two (2) moon roof side garnish pieces by releasing the locking clips (pull gently).

# Moon Roof Stuck/Improper Operation

Figure 15.



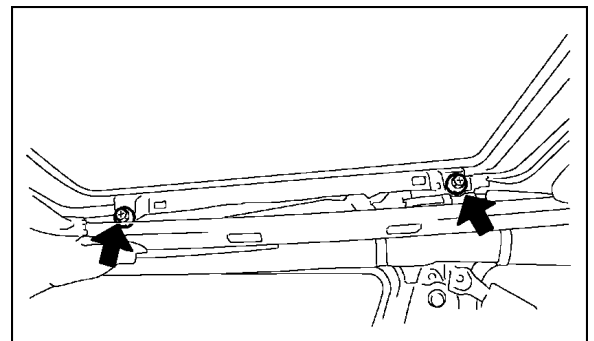
1	Two (2) Side Garnish Pieces
2	Backside of Moon Roof Garnish

- D. Remove the moon roof panel and gear assembly. Set the moon roof system to the fully closed position.

**NOTE**

Be careful when removing the Torx screws for the moon roof panel to prevent damage to the screws.

Figure 16.

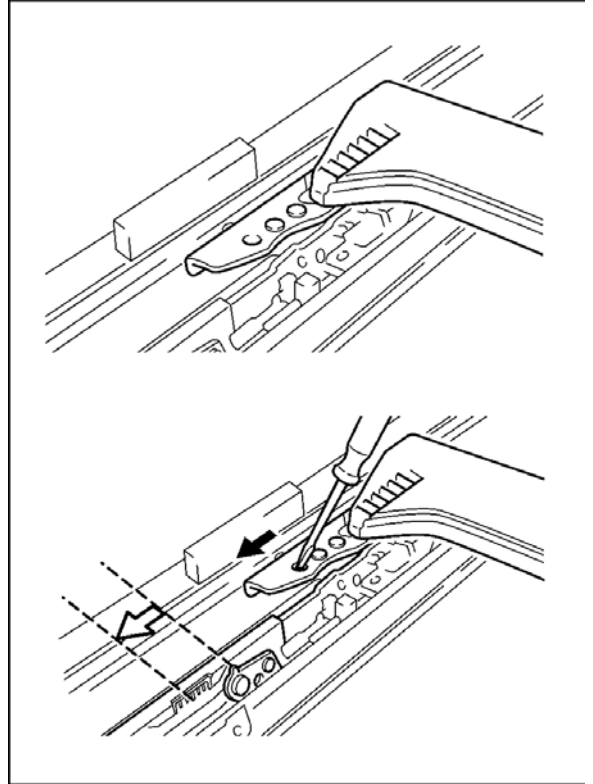


## Moon Roof Stuck/Improper Operation

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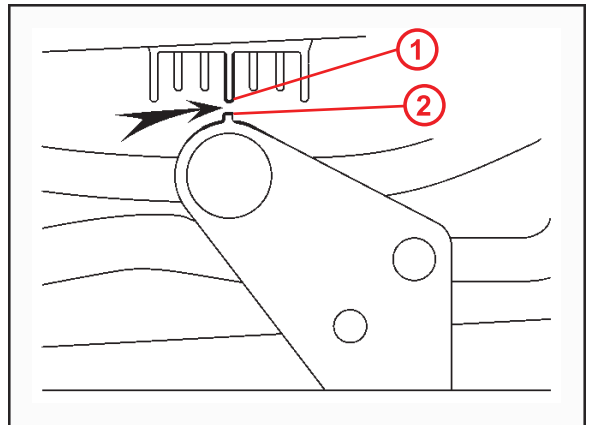
- (1) Using a flathead screwdriver, push the bracket of the cable assembly forward.

**Figure 17.**



- (2) Align the protrusion of the link to the center marking of the bracket.

**Figure 18.**



<b>1</b>	<b>Center Marking</b>
<b>2</b>	<b>Protrusion</b>

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8. Install the moon roof drive gear assembly, the moon roof panel, and the side garnish.

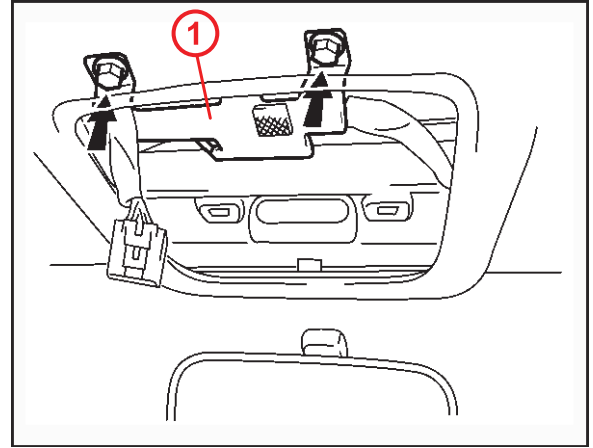
Moon Roof Glass Assembly Mounting Screw.

**Torque: 4.0 N\*m (41 kgf\*cm, 35 in\*lbf)**

Moon Roof Drive Gear Assembly Mounting Bolt.

**Torque: 5.4 N\*m (55 kgf\*cm, 48 in\*lbf)**

Figure 19.



1 Gear Assembly

9. Initialize the moon roof.
- A. Press the moon roof switch on the "TILT-UP" side and hold the button (the button may have to be held for up to 10 seconds).
    - The moon roof will lock in the fully tilted up position.
    - Then, the moon roof will move down a few millimeters.
  - B. Release the switch — initialization is complete.
  - C. Cycle the moon roof through all the operating modes (including auto-open and auto-close modes) to make sure the moon roof functions properly.
10. Install the connected map lamp assembly.