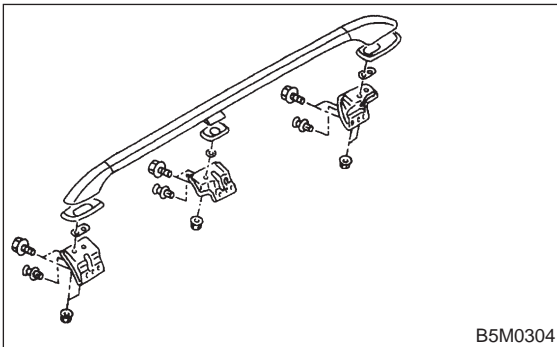


15. Roof Rail

A: REMOVAL AND INSTALLATION

- 1) Remove roof trim, rear quarter trim, pillar trim, etc. <Ref. to 5-3 [W5A0].>
- 2) Remove flange bolts.
- 3) Remove flange nuts.
- 4) Remove roof rail.



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- 5) Installation is in the reverse order of removal.

CAUTION:

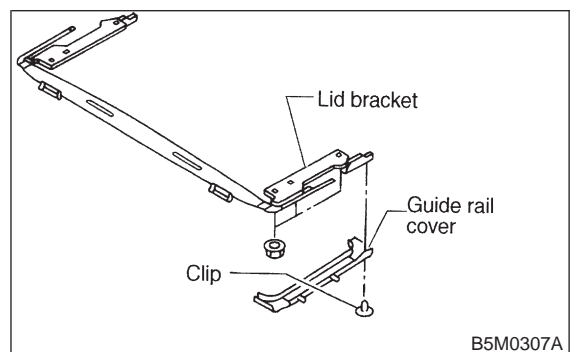
To prevent deformation, be sure to install roof rail in steps 4), 3), 2) and 1), in that order.

16. Sunroof

A: REMOVAL AND INSTALLATION

1. SEDAN AND WAGON REAR (EXCEPT OUTBACK)

- 1) Glass lid assembly:
 - (1) Completely open sun shade. (Push it back far.)
 - (2) Remove a clip and detach guide rail cover.
 - (3) Remove six nuts from the left and right lid bracket.
 - (4) Working inside, slightly raise glass lid assembly until it is disengaged from lid bracket.

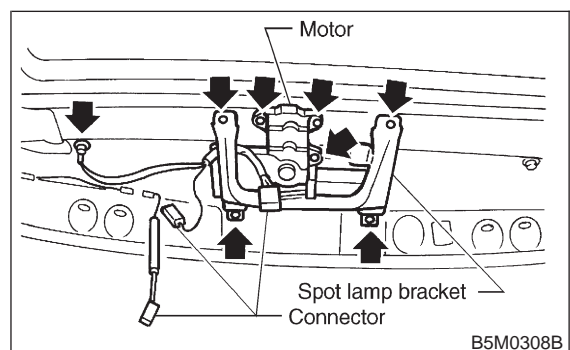


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- (5) Hold both ends of glass lid assembly and remove it at an angle.
- (6) Installation is in the reverse order of removal.

2) Sunroof motor and relay:

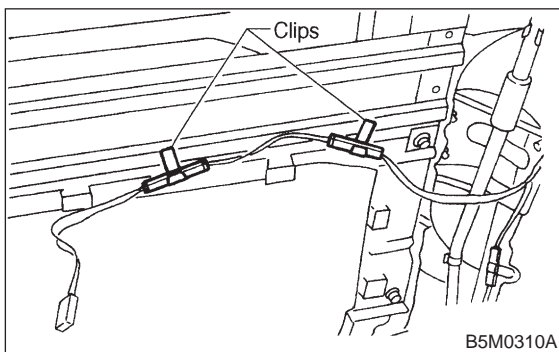
- (1) Remove center pillar trim upper. <Ref. to 5-3 [W5A3].>
- (2) Remove front pillar trim upper. <Ref. to 5-3 [W5A4].>
- (3) Remove assist grip on left side.
- (4) Remove sunvisor with hook.
- (5) Remove sunroof switch.
- (6) Remove rearview mirror.
- (7) While rolling up roof trim, disconnect harness clips and connector.
- (8) While rolling up roof trim, remove spot lamp bracket and sunroof motor.
- (9) Installation is in the reverse order of removal.



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3) Sunroof frame:

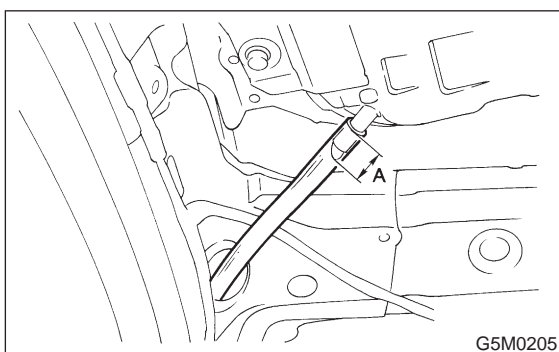
- (1) Remove sunroof switch, center and rear room lamps.
- (2) Remove roof trim, rear quarter trim, pillar trim, etc. <Ref. to 5-3 [W5A0].>
- (3) Remove glass lid assembly.
- (4) Remove two harness support clips.



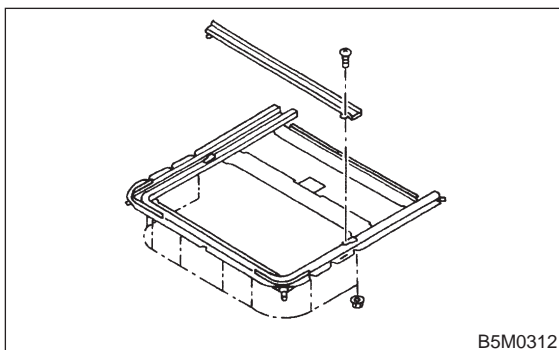
- (5) Disconnect harness clips and connector of sunroof motor.
- (6) Disconnect front and rear drain tubes.

CAUTION:
When installing drain tube, insert it securely into drain pipe.

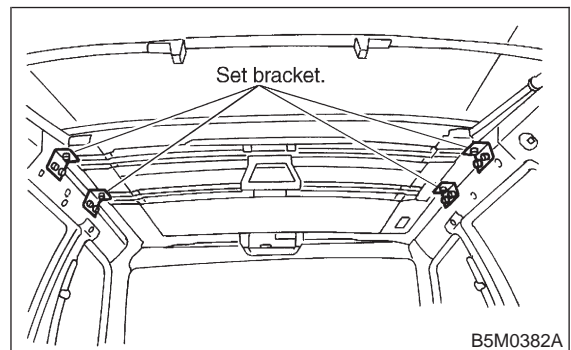
Length A:
15 mm (0.59 in) or more



- (7) Remove eight nuts.



- (8) Remove set bracket mounting bolts.
- (9) Remove sunroof frame.

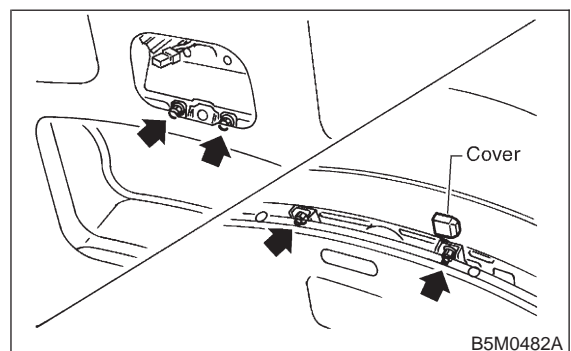


- (10) Installation is in the reverse order of removal.

2. WAGON FRONT (OUTBACK)

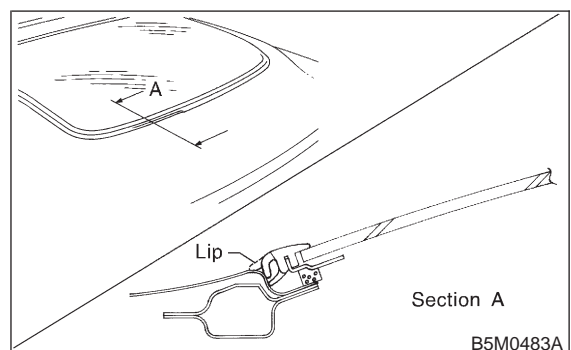
1) Sunroof panel:

- (1) Tilt up the front sunroof (Most upper position).
- (2) Disconnect ground cable from battery.
- (3) Remove sunroof switch then remove two bolts.
- (4) Remove cover then remove two nuts from tilt up assembly.
- (5) Take off the sunroof panel from body.

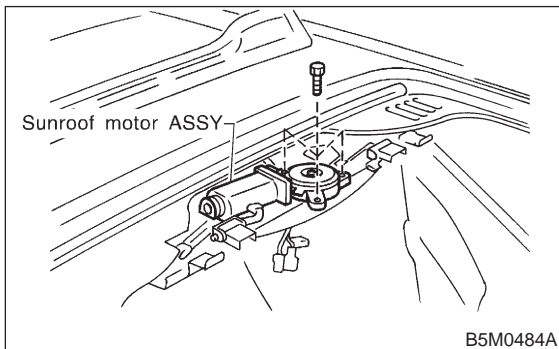


- (6) Installation is in the reverse order of removal.

CAUTION:
When installing sunroof panel, ensure not to pinch its panel end lip.



- 2) Sunroof motor assembly:
 (1) Remove sunroof panel. <Ref. to 5-1 [W16A2].>
 (2) Remove motor cover.
 (3) Disconnect connector then remove sunroof motor assembly.

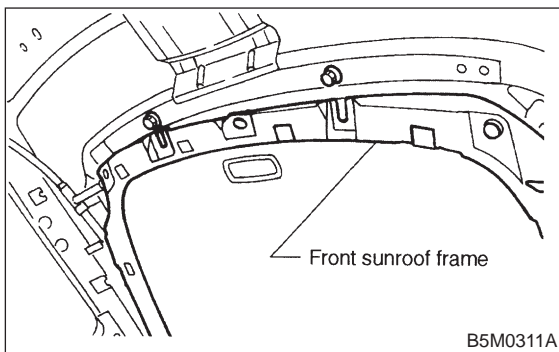


(4) Installation is in the reverse order of removal.

- 3) Sunroof flame:
 (1) Remove sunroof panel. <Ref. to 5-1 [W16A2].>
 (2) Remove roof trim panel. <Ref. to 5-3 [W5A9].>
 (3) Remove sunroof flame.

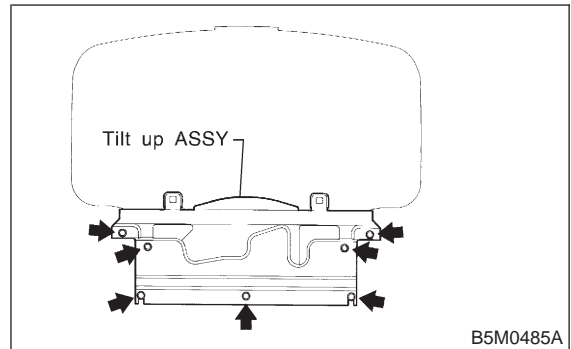
NOTE:

To facilitate installation, leave the two front mounting bolts on the body.



(4) Installation is in the reverse order of removal.

- 4) Tilt up assembly:
 (1) Remove sunroof flame. <Ref. to 5-1 [W16A2].>
 (2) Remove tilt up assembly.



(3) Installation is in the reverse order of removal.

B: ADJUSTMENT

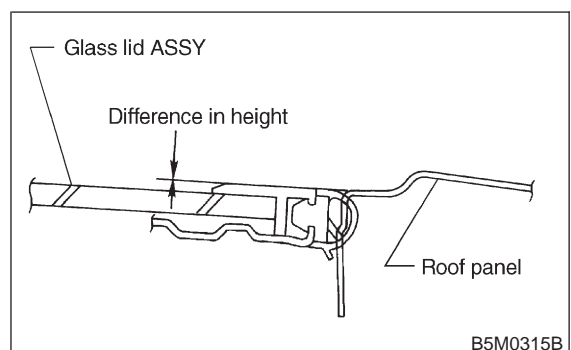
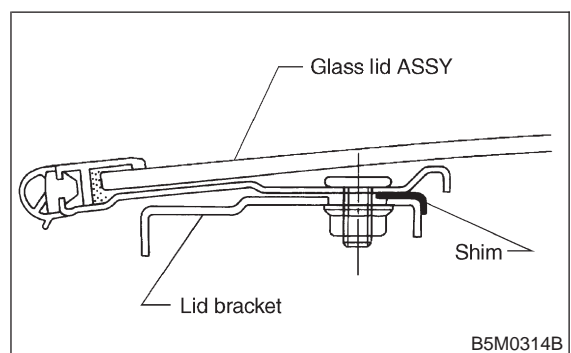
1. SEDAN AND WAGON REAR (EXCEPT OUTBACK)

- 1) Alignment of height between glass lid assembly and roof panel:

- (1) Remove guide rail cover.
 (2) Loosen nuts and adjust height by adding (Max: two pieces) and extracting (Max: one piece) shim(s) (Standard: one piece) between glass lid assembly and lid bracket.

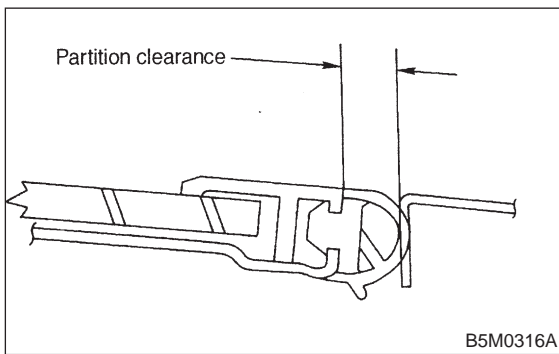
Difference in height between glass lid assembly and roof panel:

0±0.5 mm (0±0.020 in)



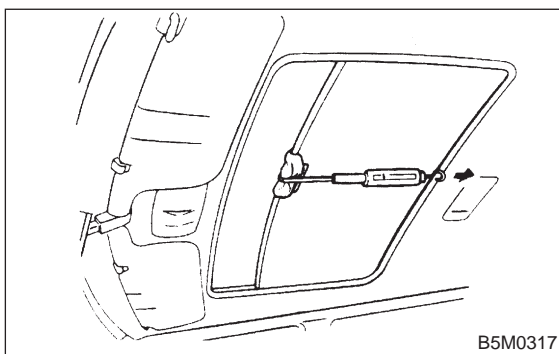
- 2) Alignment of glass lid assembly with roof panel:
 (1) Remove guide rail cover.
 (2) Loosen nuts and move glass lid assembly to either side to adjust front, rear, right, and left side partitions.

Partition clearance:
 $7.0 \pm 0.5 \text{ mm } (0.276 \pm 0.020 \text{ in})$



- 3) Checking for movement of glass lid assembly itself:

- (1) Before installing sunroof motor, check glass lid assembly for movement.
 (2) Place a cloth on glass lid assembly and sun shade, and attach a spring scale to glass lid assembly edge using the cloth.



- (3) Pull spring scale to measure force required to move glass lid assembly.

Force required to move glass lid assembly and sun shade trim:

Less than 196 N (20 kg, 44 lb)

Considerable effort is required to start glass lid assembly moving, so take scale reading while glass lid assembly is moving smoothly.

- (4) If force required exceeds specifications, check the following points:

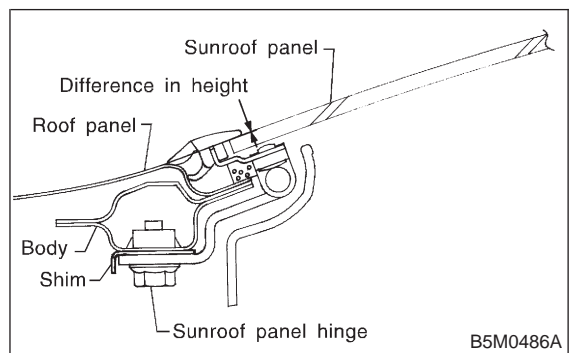
- Glass lid assembly, sun shade and deflector and guide rail assembly for improper installation
- Cable for seizure

2. WAGON FRONT (OUTBACK)

- 1) Alignment of height between sunroof panel and roof panel

Loosen sunroof panel installation bolts and nuts then adjust height by adding (Max: two pieces) and extracting (Max: one piece) shim(s) (Standard: one piece) between sunroof panel hinge and body.

Difference in height between sunroof panel and roof panel:
 $0 \pm 1.0 \text{ mm } (0 \pm 0.039 \text{ in})$



- 2) Alignment of partition clearance
 Loosen sunroof panel installation bolts and nuts then move glass to either side to adjust front, rear, right, and left side partitions.

Partition clearance:
 $1 \pm 1.0 \text{ mm } (0.04 \pm 0.039 \text{ in})$

