

2005 ACCESSORIES & EQUIPMENT

Sliding Roof - RAV4

ON-VEHICLE INSPECTION

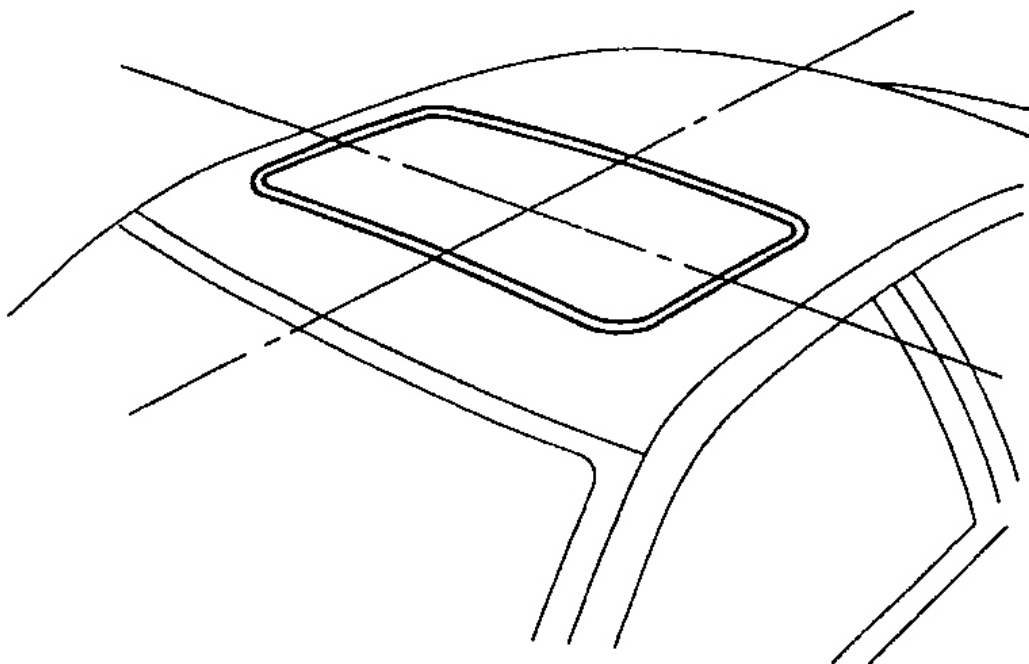
INSPECT SLIDING ROOF GLASS ALIGNMENT

- a. Start the engine and check the operation time of the sliding roof.

Operation time: Approx. 6 seconds

- b. Check for abnormal noise or binding during operation.
- c. With the sliding roof fully closed, check for water leakage.
- d. Check for a difference in level between the sliding roof weatherstrip and roof panel.

Front end and rear end: 0 +/- 1.5 mm (0 +/- 0.059 in.)



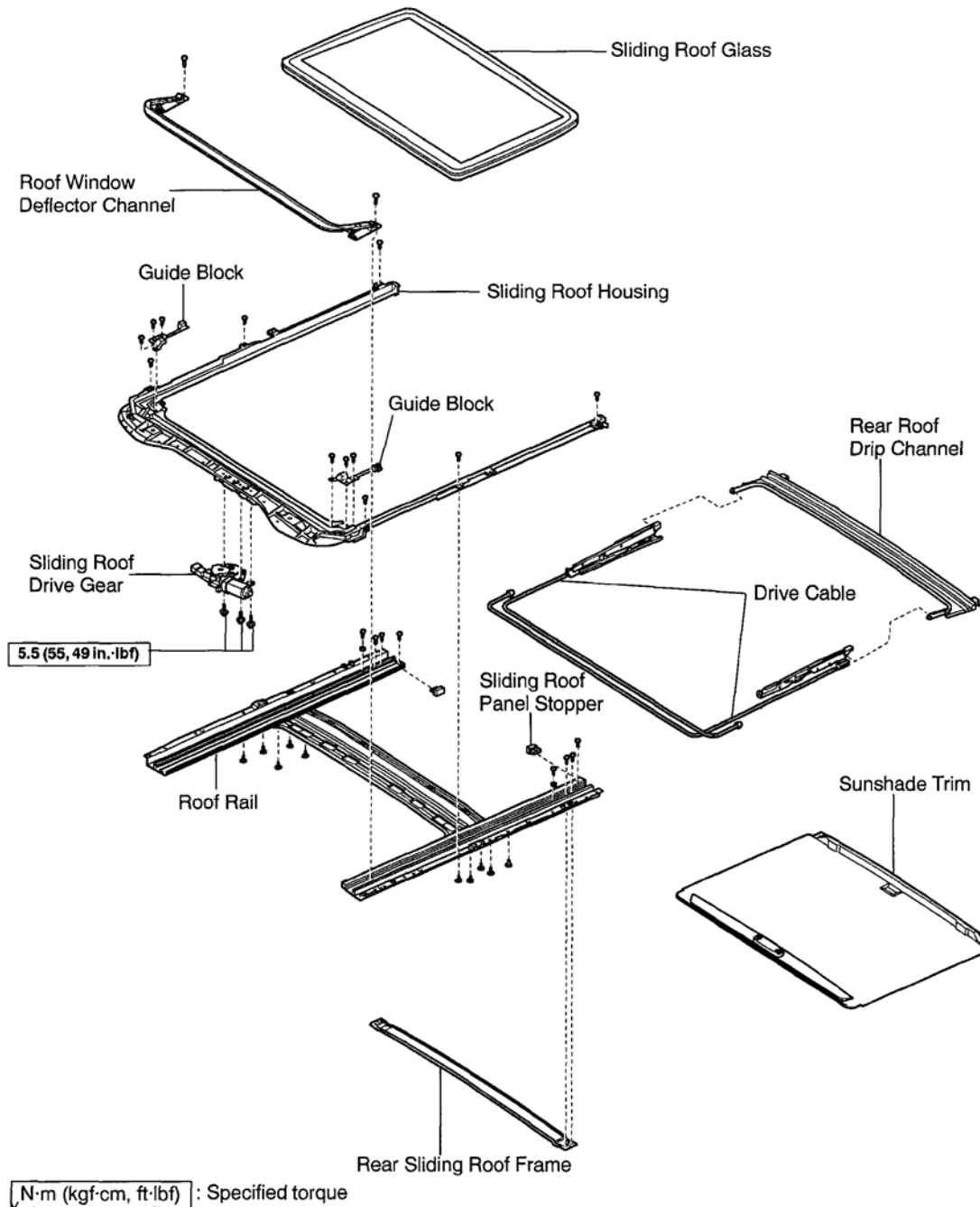
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Fig. 1: Inspecting Sliding Roof Glass Alignment
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2005 Toyota RAV4

2005 ACCESSORIES & EQUIPMENT Sliding Roof - RAV4

COMPONENTS



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Fig. 2: Identifying Sliding Roof Components & Torque Specifications
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

HINT:

A bolt without a torque specification is shown in the standard bolt chart (see **SPECIFIED TORQUE FOR STANDARD BOLTS**).

1. **REMOVE REAR SEATS**
2. **REMOVE REAR FLOOR FINISH PLATE**
3. **REMOVE REAR DOOR SCUFF PLATES**
4. **REMOVE ROOM LIGHT AND COVER**
 - a. Using a screwdriver, remove the cover.

HINT:

Tape the screwdriver tip before use.

- b. Remove the screw and room light, then disconnect the connector.
5. **REMOVE ASSIST GRIPS AND COVERS**
6. **REMOVE FRONT DOOR SCUFF PLATES**
7. **REMOVE SUN VISORS**

Remove the 4 screws and 2 sun visors.

8. **REMOVE INNER REAR VIEW MIRROR**
9. **REMOVE ROOF CONSOLE BOX**

- a. Using a screwdriver, remove the roof console box cover.

HINT:

Tape the screwdriver tip before use.

- b. Remove the 3 screws and roof console box, then disconnect the connector.
10. **REMOVE DECK SIDE TRIMS**
 - a. Remove the bolt and rear seat outer belt floor anchor.

Torque: 43 N.m (440 kgf.cm, 32 ft.lbf)

- b. Remove the 5 screws.
 - c. Using a screwdriver, remove the deck side trim.

HINT:

Tape the screwdriver tip before use.

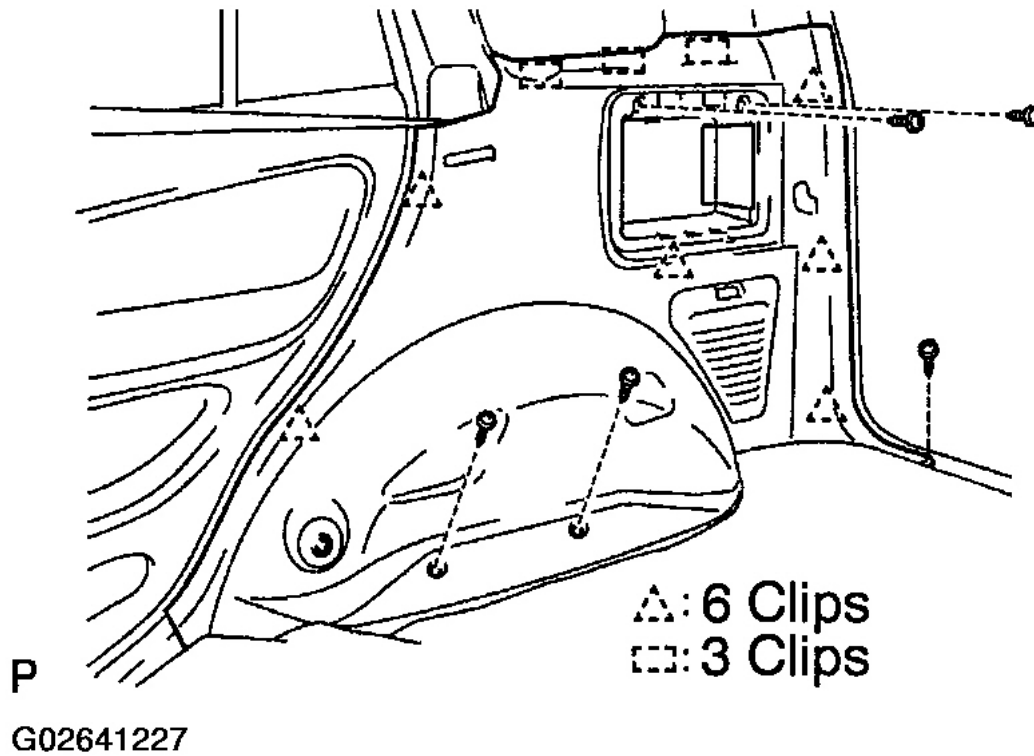


Fig. 3: Removing Deck Side Trim

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- d. Employ the same manner described above to the other side.
- e. LH side:

Disconnect the connector.

11. REMOVE ROOF SIDE INNER GARNISHES

- a. Remove the bolt and rear seat outer belt shoulder anchor.

Torque: 43 N.m (440 kgf.cm, 32 ft.lbf)

- b. Remove the 3 clips.
- c. Using a screwdriver, remove the roof side inner garnish.

HINT:

Tape the screwdriver tip before use.

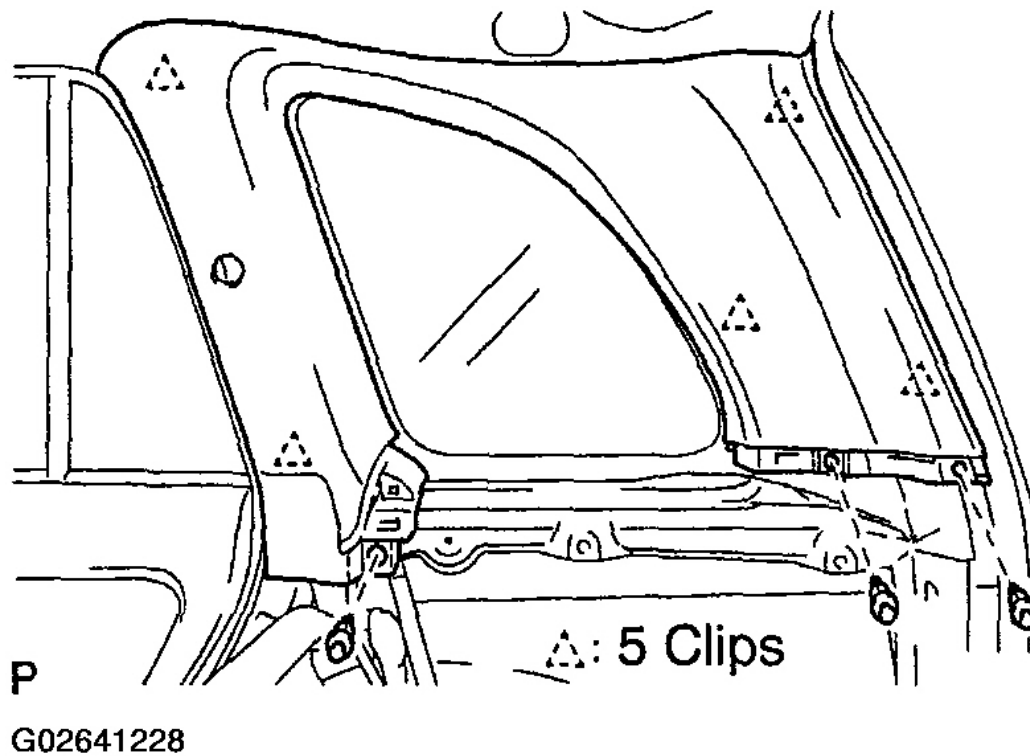


Fig. 4: Removing Roof Side Inner Garnish

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

12. REMOVE CENTER PILLAR LOWER GARNISHES

- a. Remove the bolt and front seat outer belt floor anchor.

Torque: 43 N.m (440 kgf.cm, 32 ft.lbf)

- b. Pull the center pillar lower garnish upward to remove it.

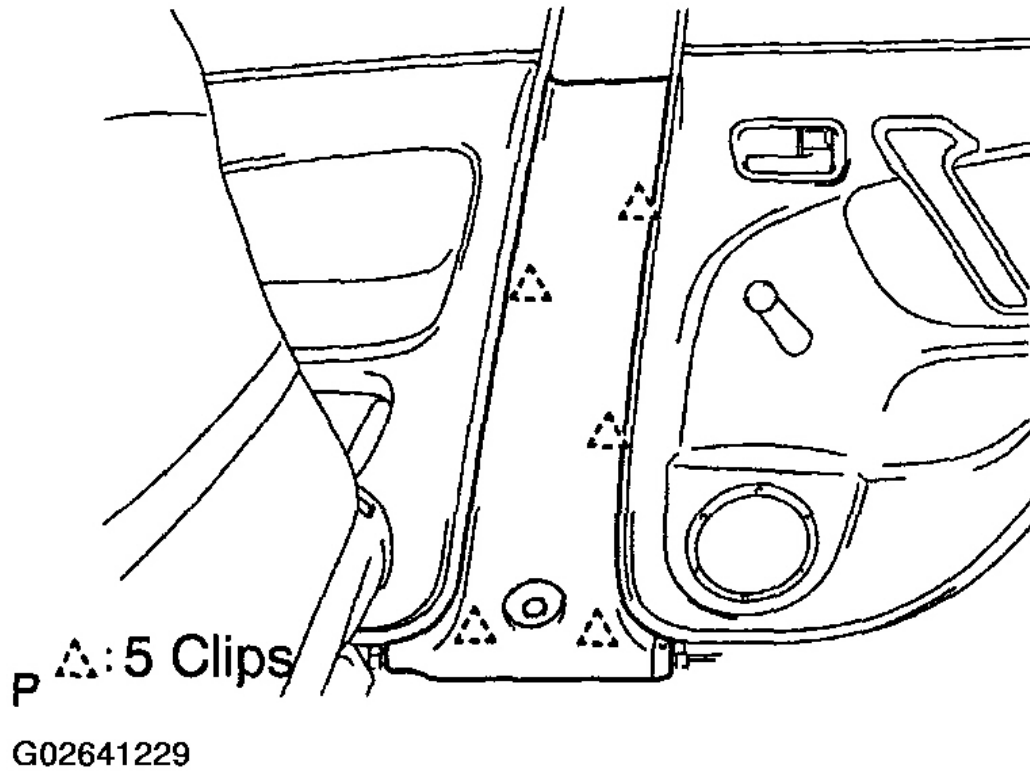


Fig. 5: Removing Center Pillar Lower Garnish

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Employ the same manner described above to the other side.
- 13. **REMOVE CENTER PILLAR UPPER GARNISHES**
 - a. Remove the bolt and front seat outer belt shoulder anchor.

Torque: 43 N.m (440 kgf.cm, 32 ft.lbf)

- b. Using a screwdriver, remove the center pillar upper garnish.

HINT:

Tape the screwdriver tip before use.

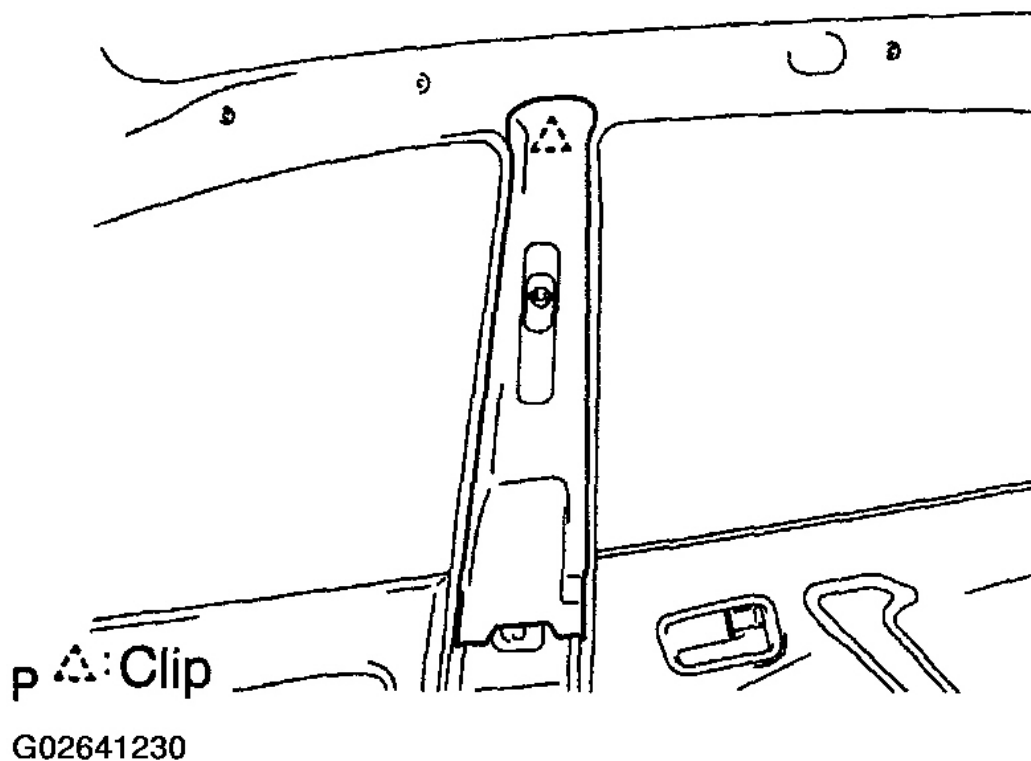


Fig. 6: Removing Center Pillar Upper Garnish

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Employ the same manner described above to the other side.

14. REMOVE FRONT PILLAR GARNISHES

15. REMOVE ROOF HEADLINING

- a. Using a screwdriver, remove the roof headlining trim garnish.

HINT:

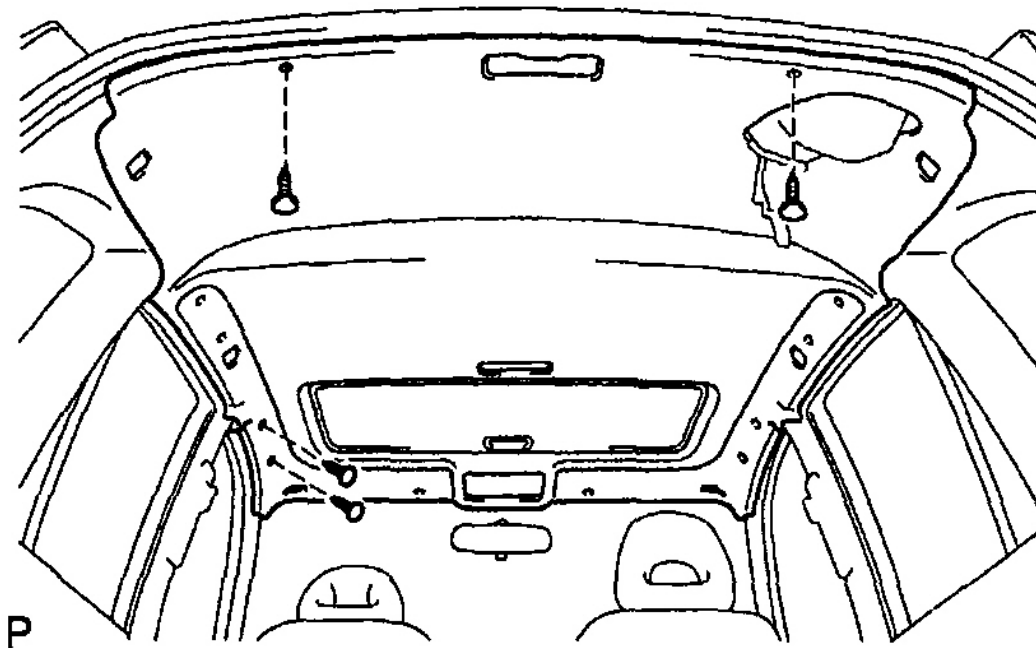
Tape the screwdriver tip before use.

- b. Remove the 2 sun visor holders.
- c. Remove the 4 room partition net hooks.
- d. Remove the 4 clips and roof headlining.

HINT:

At the time of installation, please refer to the following item. When installing the roof headlining,

put the fastener tapes.



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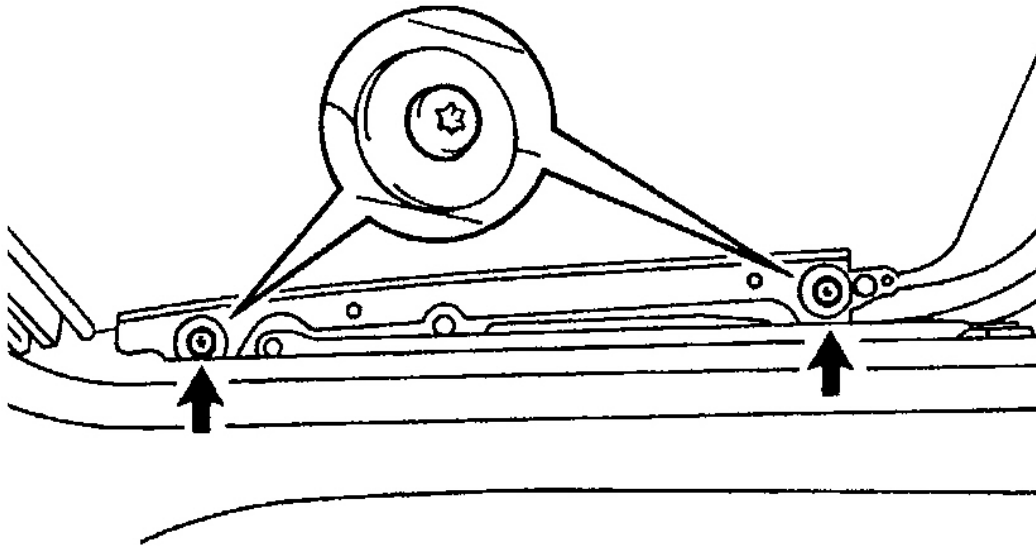
Fig. 7: Removing Roof Headlining

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

16. REMOVE SLIDING ROOF GLASS

- a. Using a Torx(R) wrench, remove the Torx(R) screws.

Torque: 4.0 N.m (40 kgf.cm, 36 in.lbf)



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Fig. 8: Removing Sliding Roof Glass Torx(R) Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Pull the glass upward to remove it.
- 17. **REMOVE SLIDING ROOF DRIVE GEAR**
 - a. Disconnect the 2 connectors.
 - b. Remove the 3 bolts and drive gear.

Torque: 5.5 N.m (55 kgf.cm, 49 in.lbf)

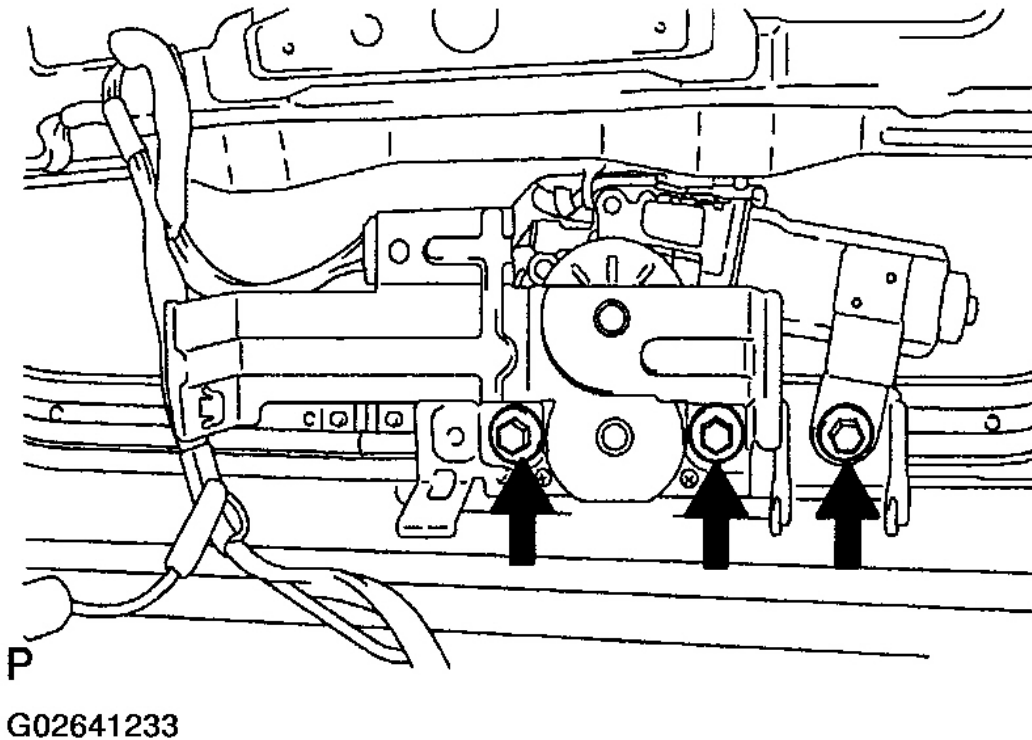


Fig. 9: Removing Sliding Roof Drive Gear
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

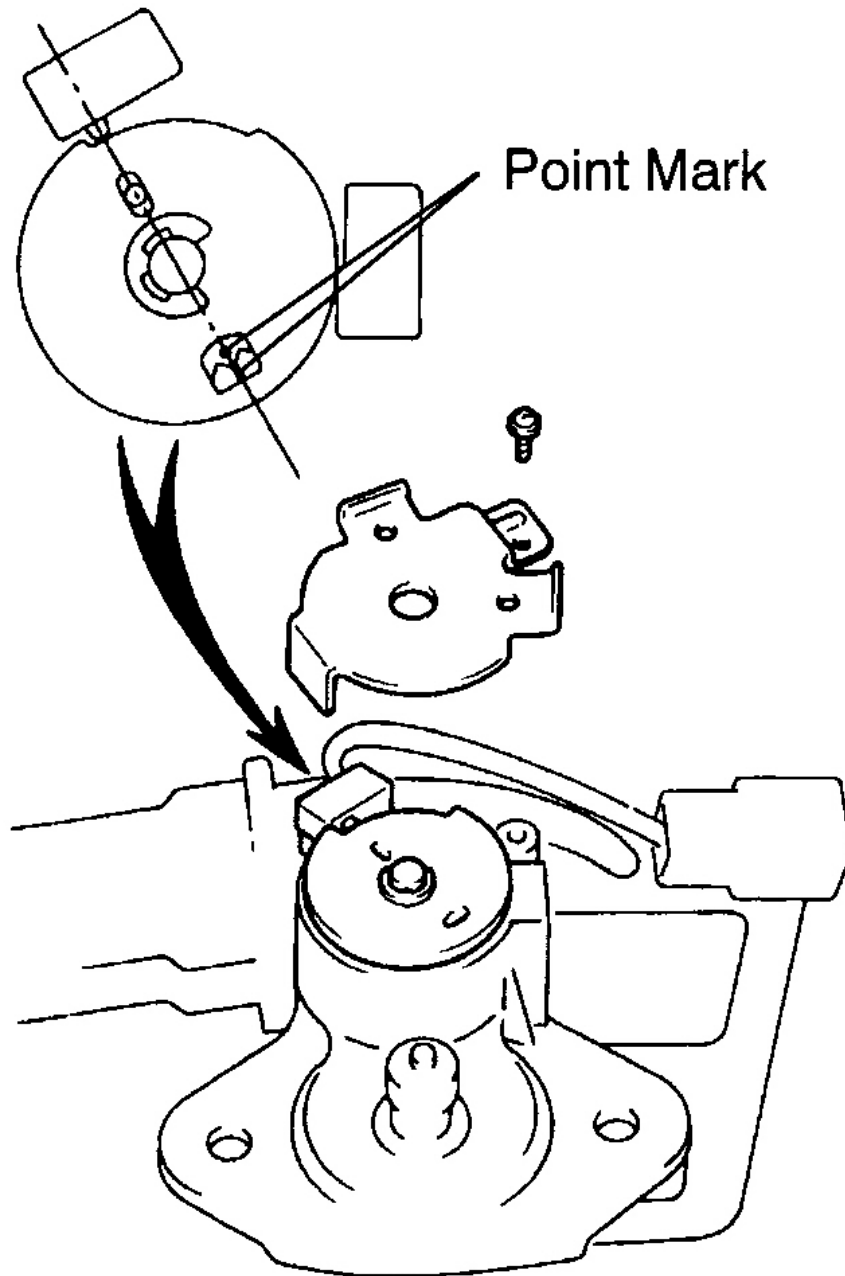
HINT:

At the time of installation, please refer to the following item.

Apply adhesive to 2 gear side bolts.

Part No. 08833-00070, THREE BOND 1324 or equivalent

- c. Remove the screw and cam plate cover.
- d. Remove the large screw, washers and shims.
- e. Turn the drive shaft with a screwdriver to align the housing and gear point mark as shown.
- f. Install the cam plate cover with the screw.



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Fig. 10: Removing Cam Plate Cover

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- a. Disconnect the 4 drain hoses from the housing.
- b. Remove the 6 nuts and 4 bolts, then remove the housing, as shown.

Torque: 5.5 N.m (55 kgf.cm, 49 in.lbf)

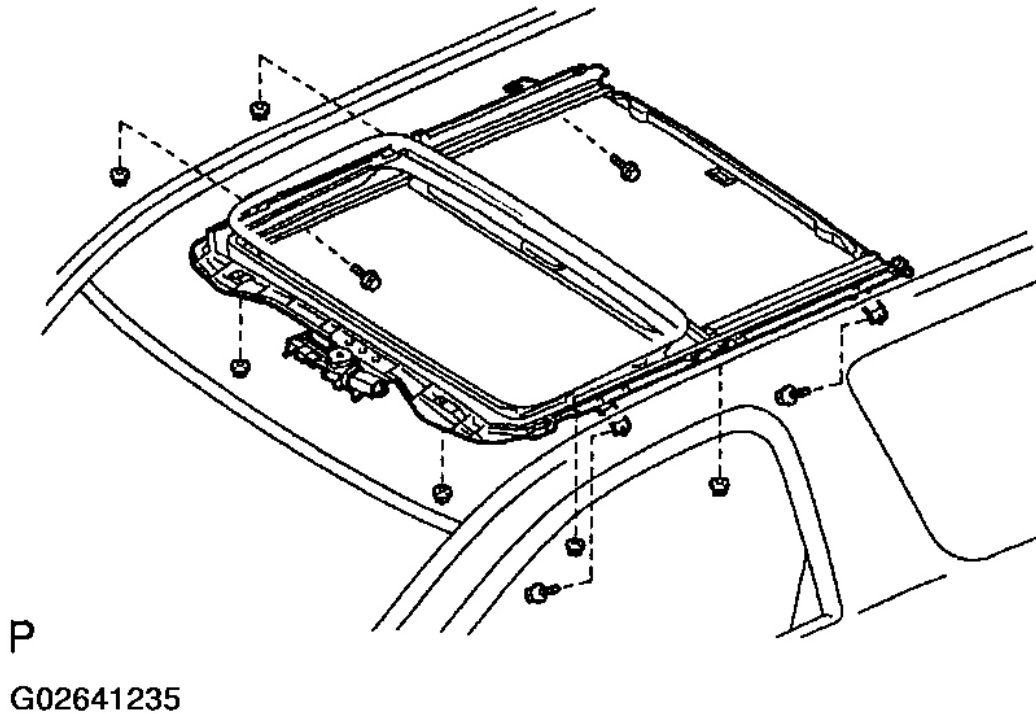
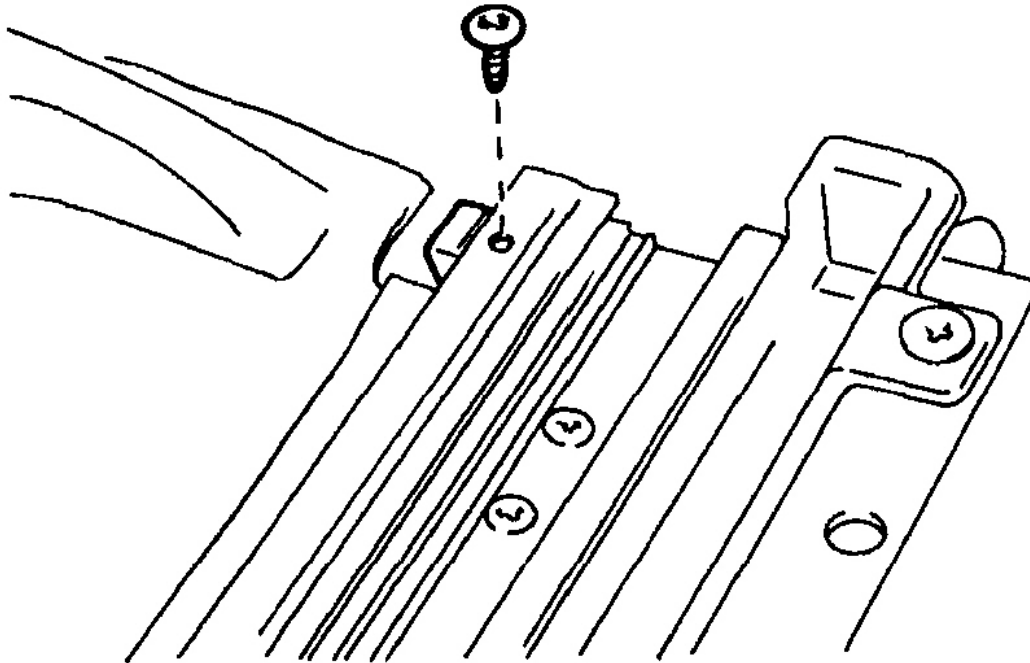


Fig. 11: Removing Sliding Roof Housing
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

DISASSEMBLY

1. REMOVE SLIDING ROOF PANEL STOPPERS
 - a. Remove the screw and stopper.

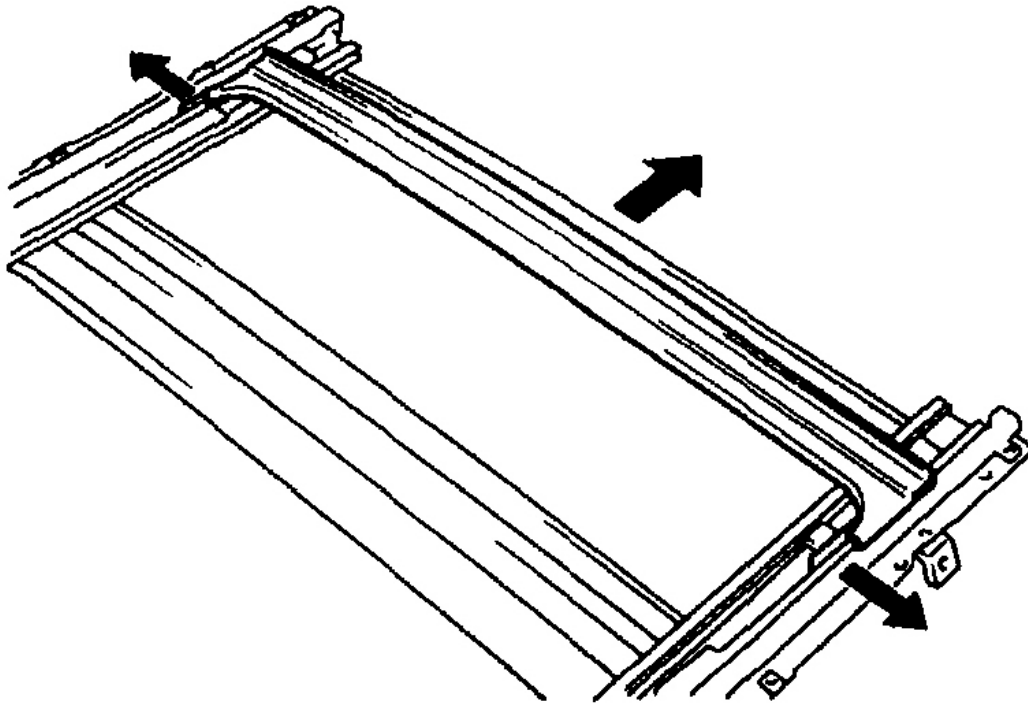


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Fig. 12: Removing Sliding Roof Panel Stoppers
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Employ the same manner described above to the other side.
2. **REMOVE SUNSHADE TRIM**
3. **REMOVE REAR ROOF DRIP CHANNEL**

Remove the rear roof drip channel as shown.

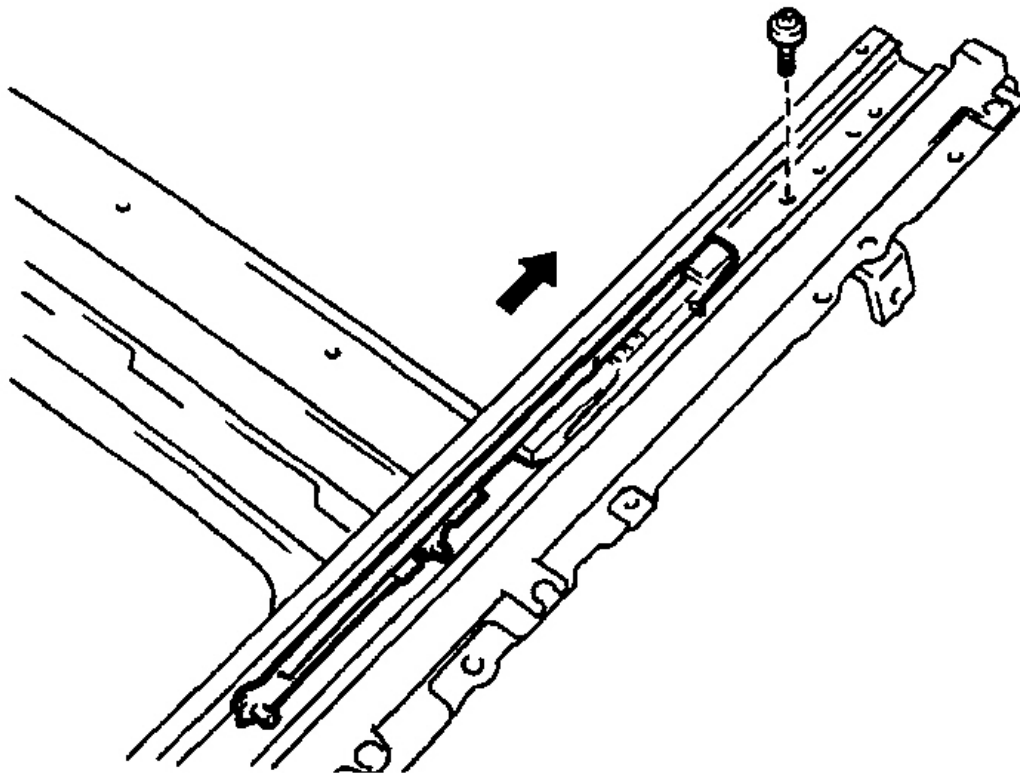


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Fig. 13: Removing Rear Roof Drip Channel
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. REMOVE DRIVE CABLE

- a. Remove the screw and guide rail stopper.
- b. Slide the drive cable rearward, then remove it.



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Fig. 14: Removing Drive Cable

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

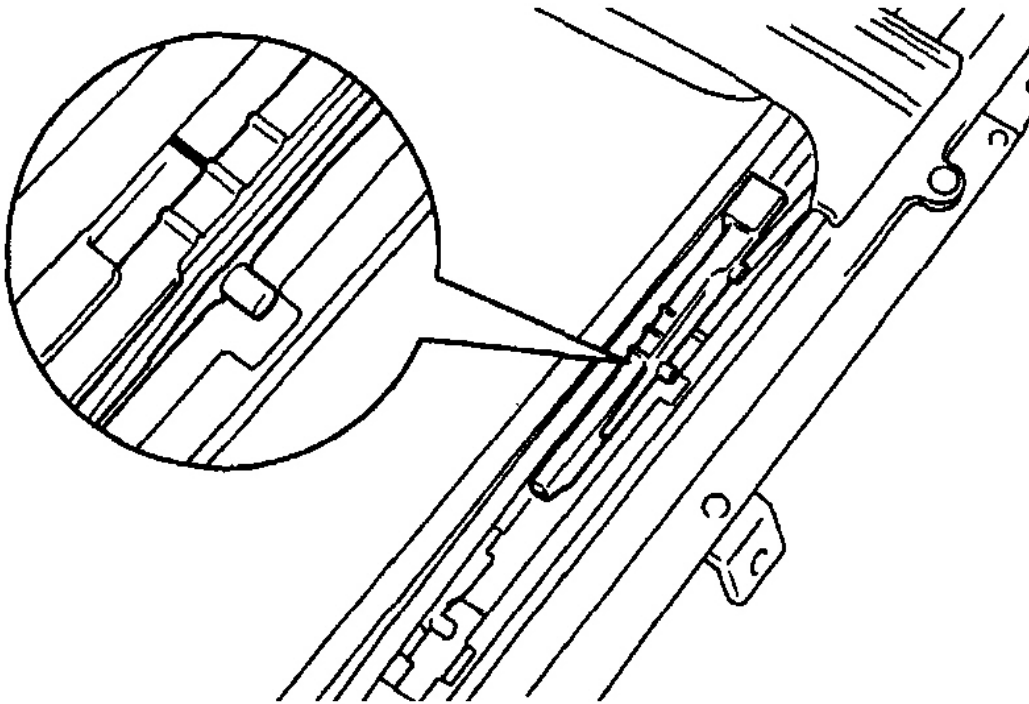
5. REMOVE REAR SLIDING ROOF FRAME

- a. Remove the 4 screws and rear sliding roof frame.

HINT:

At the time of reassembly, please refer to the following items.

- Adjust the drive cable to a closed and tilted down position.
- Slide the cable forward or backward to align the 2 marks as shown.
- Slide the cable to the forefront with your hand.

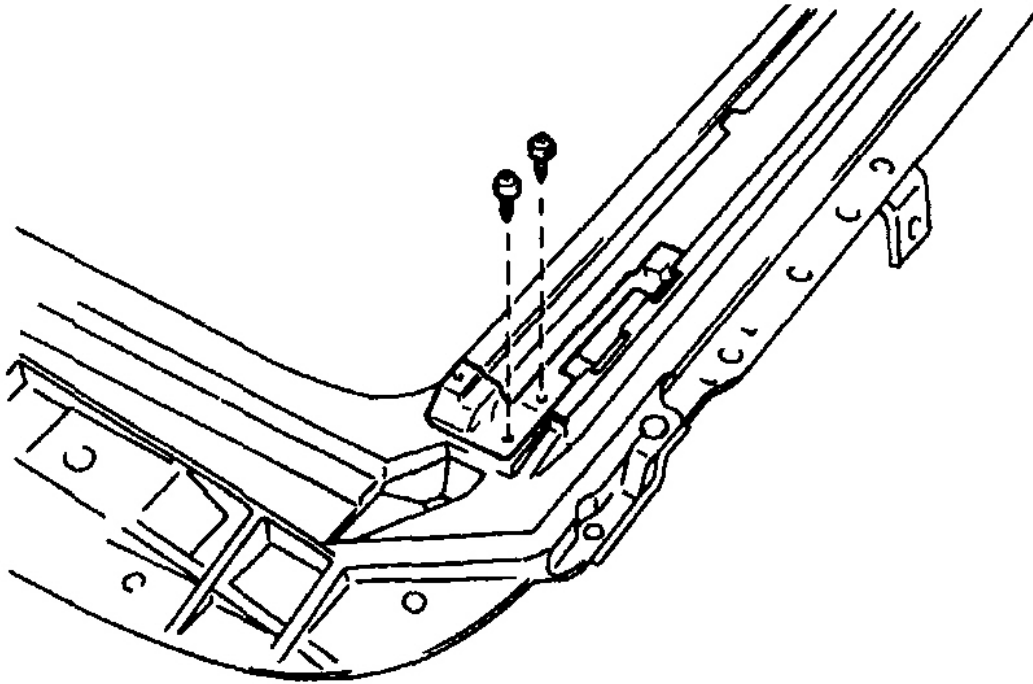


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Fig. 15: Removing Rear Sliding Roof Frame

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Employ the same manner described above to the other side.
- 6. **REMOVE ROOF WINDOW DEFLECTOR PANEL**
- 7. **REMOVE GUIDE BLOCKS**
 - a. Remove the 2 screws and guide block.
 - b. Employ the same manner described above to the other side.



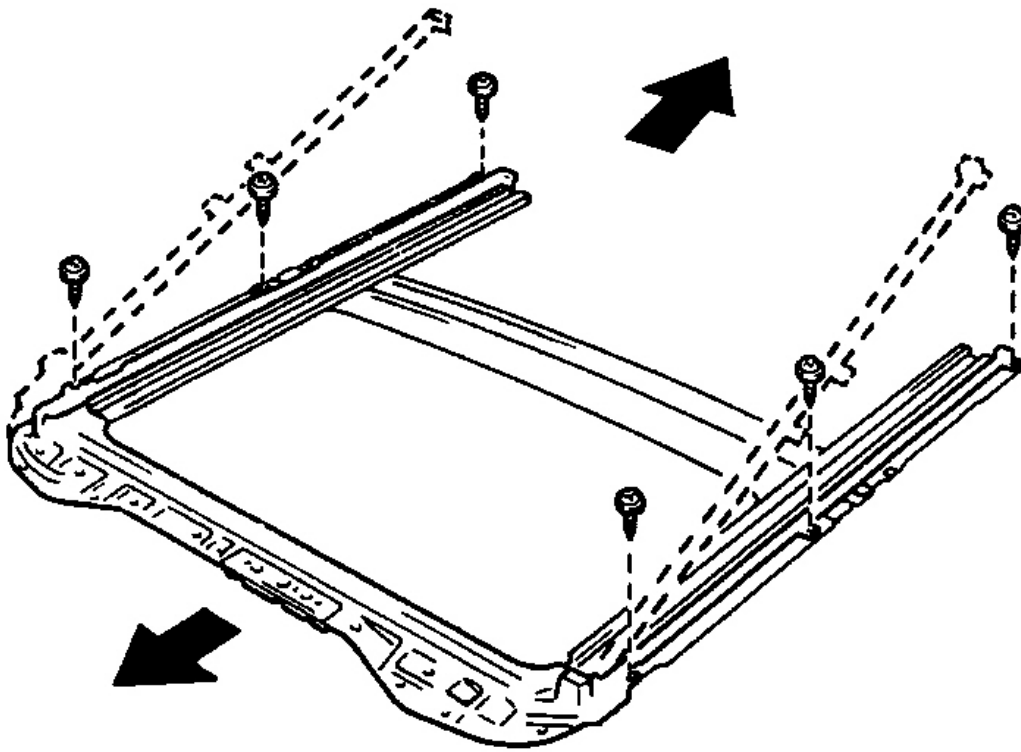
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Fig. 16: Removing Guide Blocks

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

8. REMOVE SLIDING ROOF HOUSING

Remove the 6 screws and sliding roof housing.



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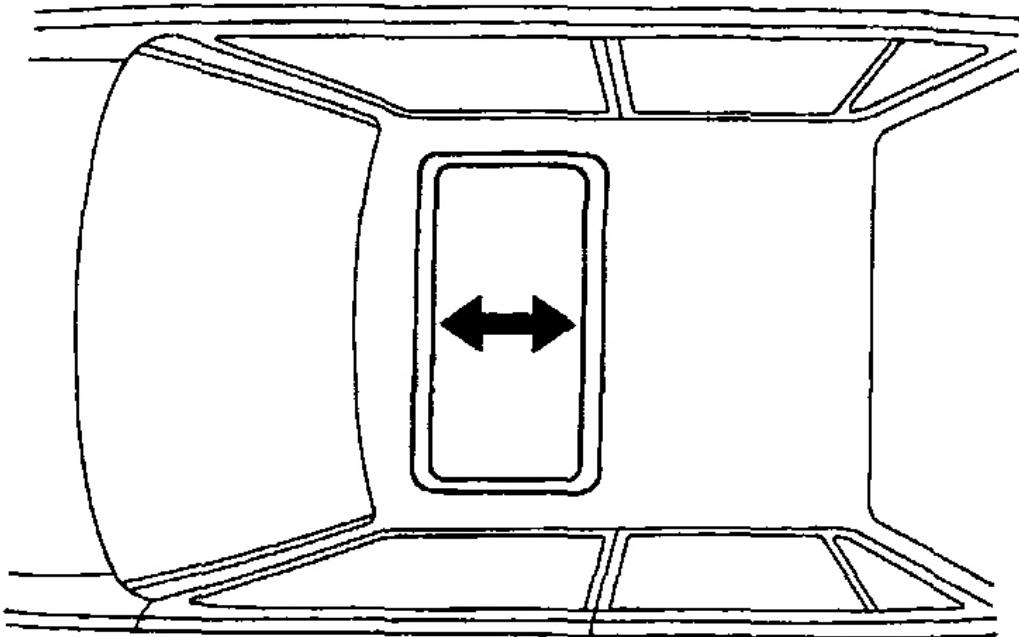
Fig. 17: Removing Sliding Roof Housing

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ADJUSTMENT

1. ADJUST FORWARD OR REARWARD

- a. Using a Torx(R) wrench, loosen the sliding roof glass installation screws.
- b. Adjust the sliding roof glass forward and rearward.



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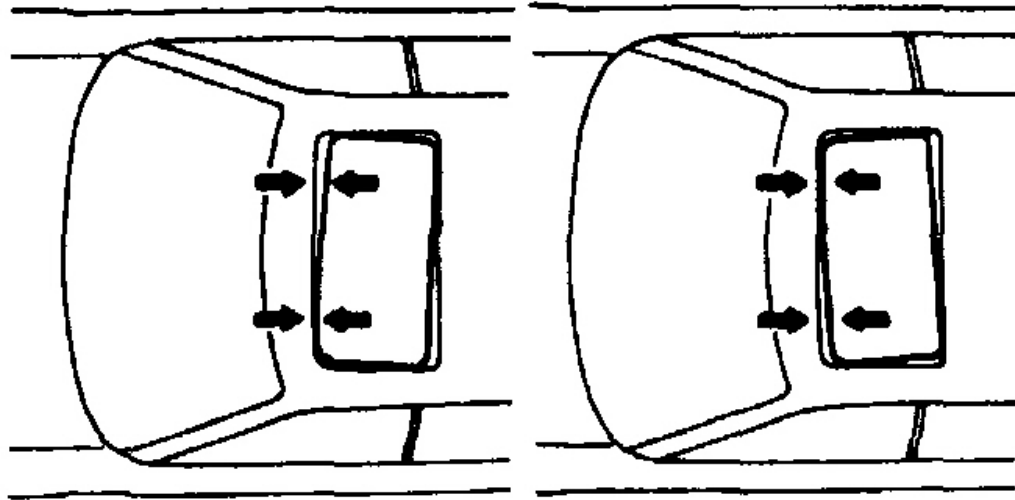
Fig. 18: Adjusting Sliding Roof Glass Forward Or Rearward
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. ADJUST CLEARANCE

(Difference in left and right clearance)

- a. When the front or rear alignment is not correct, remove the drive gear and sliding roof glass, then adjust the drive rail.

NOTE: **Remove the drive gear with sliding roof fully closed.**

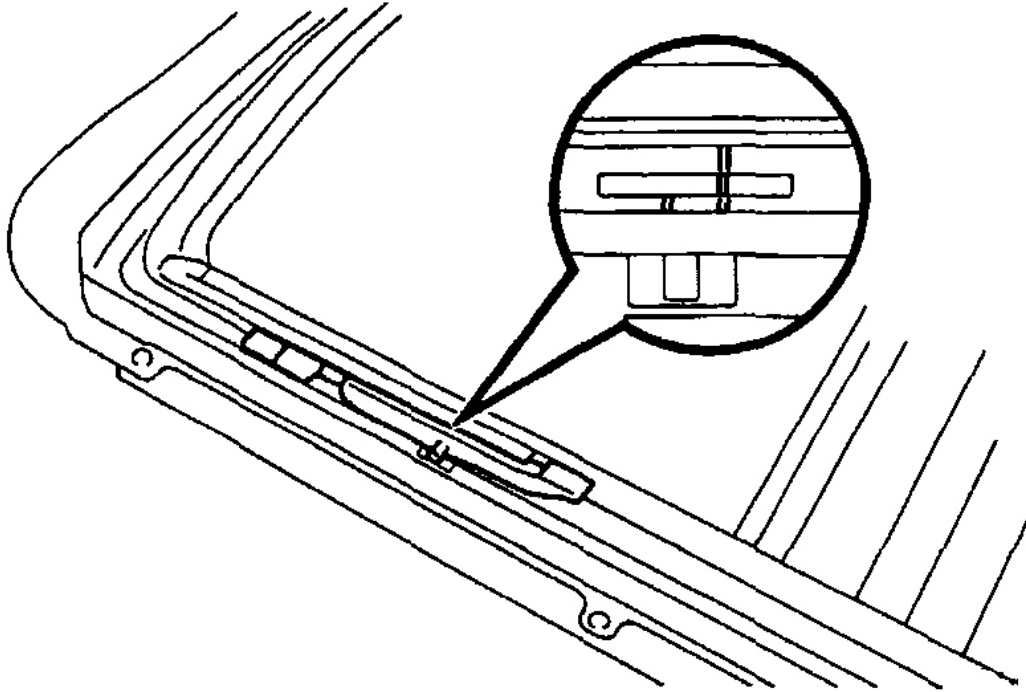


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Fig. 19: Adjusting Sliding Roof Glass Clearance

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Adjust by sliding the cable forward or rearward to align the 2 marks as shown.
- c. Install the drive gear and sliding roof glass.



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Fig. 20: Adjusting Sliding Cable Forward Or Rearward To Align Marks
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REASSEMBLY

The reassembly procedures are the disassembly procedures in reverse order (see DISASSEMBLY).

INSTALLATION

The installation procedures are the removal procedures in reverse order (see REMOVAL).