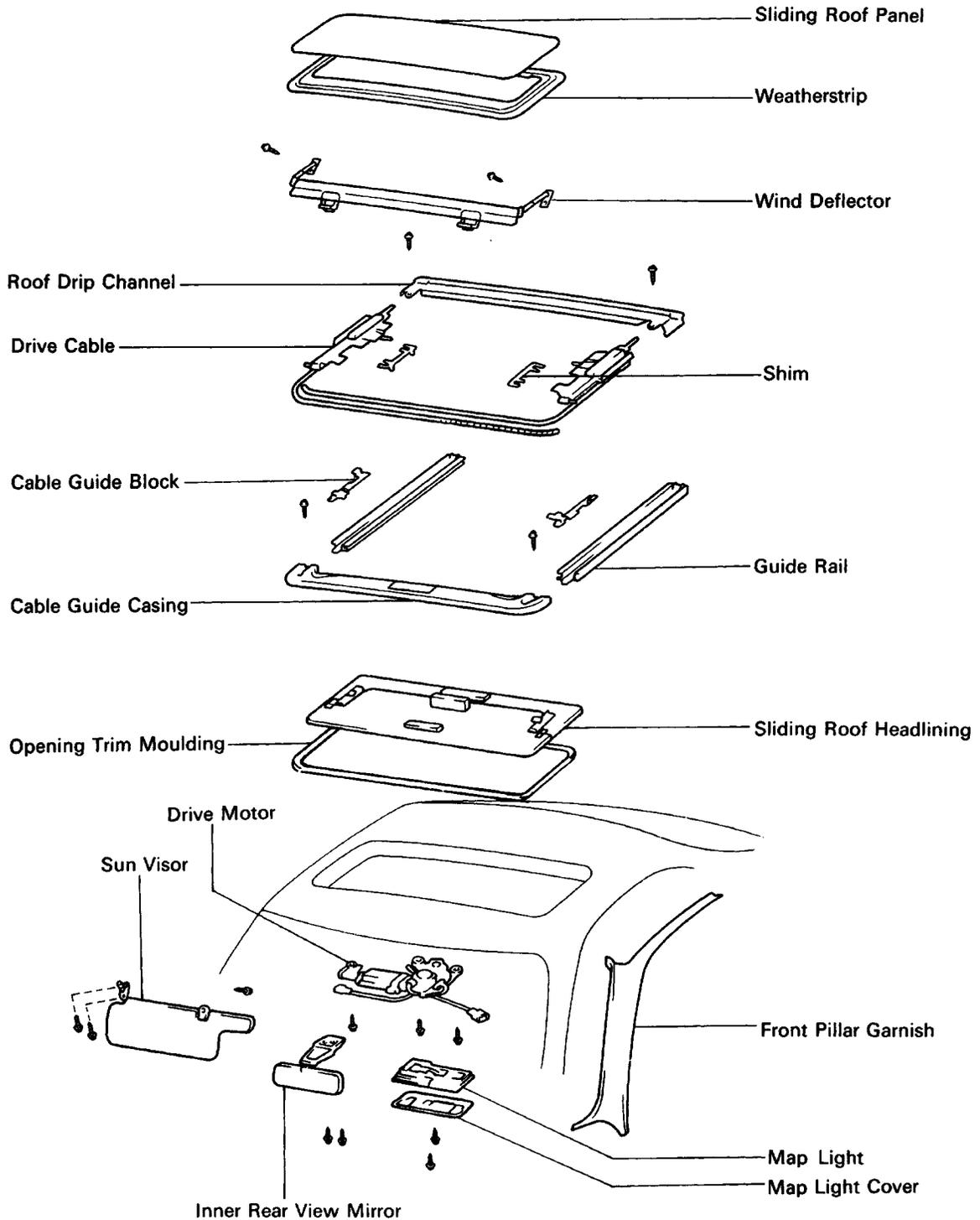
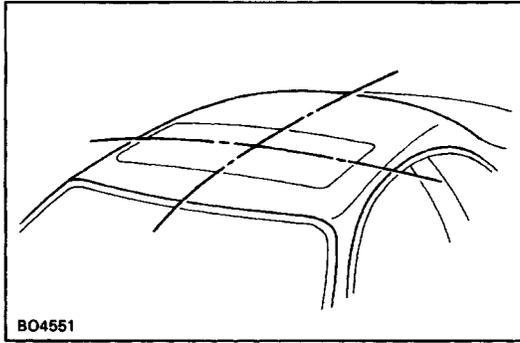
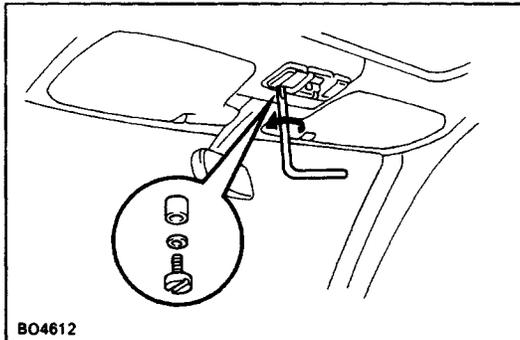


# SUN ROOF COMPONENTS

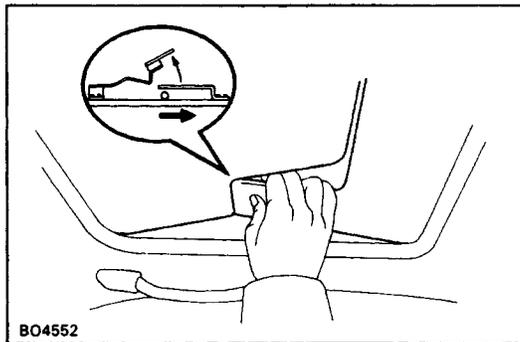




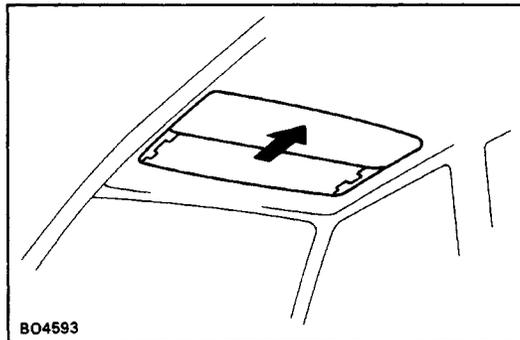
BO4551



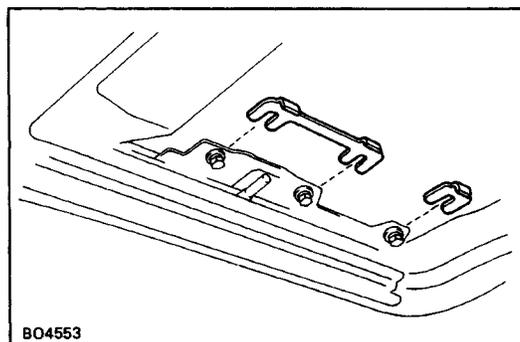
BO4612



BO4552



BO4593



BO4553

## ON-VEHICLE INSPECTION

### INSPECT SLIDING ROOF PANEL ALIGNMENT

- (a) Start the engine and check the operation time of the moon roof.  
Operation time: Approx 5 secs.
- (b) Check for abnormal noise or binding during operation.
- (c) With the sun roof fully closed, check for water leakage.
- (d) Check for a difference in level between the sliding panel and roof panel.  
Front side:  $-0.9 \pm 1$  mm ( $-0.035 \pm 0.039$  in.)  
Rear side:  $0.1 \pm 1$  mm ( $0.004 \pm 0.039$  in.)

If the sliding roof does not operate:

- (a) Remove the control switch cover.
- (b) Remove the motor screw inside.

**CAUTION: Be careful not to lose the shims.**

- (c) Manually operate the sun roof by inserting a special crank-shaped screwdriver into the hole and turning the drive shaft.

## ADJUSTMENT OF SLIDING ROOF

### 1. SLIDE SLIDING ROOF HEADLINING BACKWARD

- (a) Tilt up the panel 10 – 20 mm (0.39 – 0.79 in.).
- (b) Push up the left and right levers above the headlining.

- (c) Slide the headlining backward.

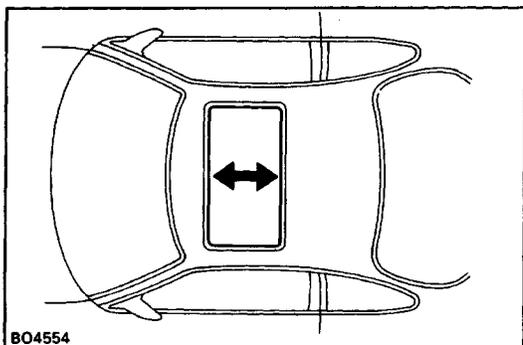
### 2. TO ADJUST LEVEL DIFFERENCE

- (a) Tilt down the panel.
- (b) Adjust by increasing or decreasing the number of shims.

HINT: If the front of the sliding roof is high, even without a shoe shim, it will not close completely.

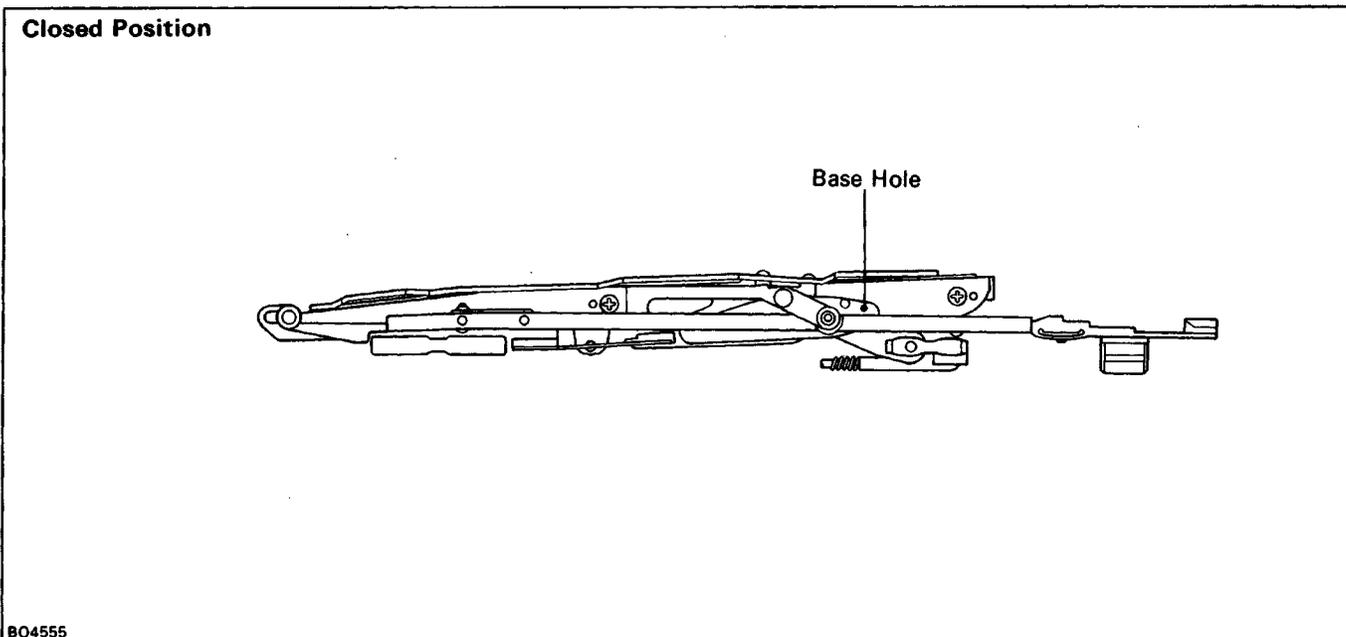
**3. TO ADJUST FORWARD OR REARWARD**

Adjust by loosening the sliding roof installation bolts, and move the sliding roof panel forward and rearward.

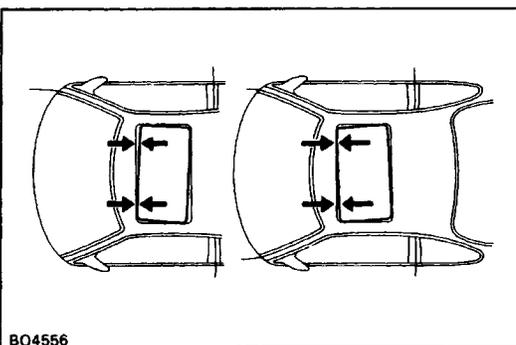


BO4554

HINT: With the sliding roof closed, insert a pin or like object into the base hole to insure alignment of the holes.



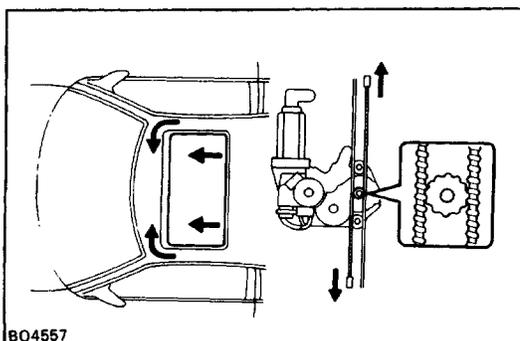
BO4555

**4. TO ADJUST CLEARANCE  
(Difference in left and right clearance)**

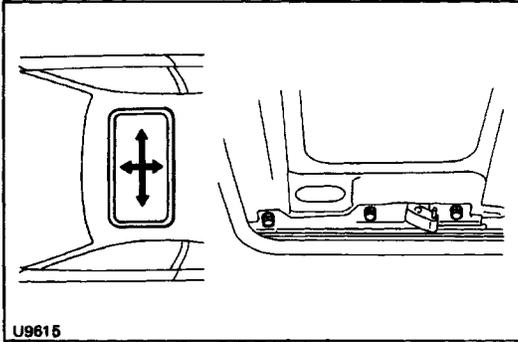
BO4556

**If the difference is about 2 mm (0.08 in.):**

- (a) Remove the drive motor and shift the cable one notch.
- (b) Reinstall the motor.



BO4557



If the difference is about 1 mm (0.04 in.): Loosen the sliding roof rear shoe installation nuts and readjust the sliding roof to the proper position

## REMOVAL OF SLIDING ROOF

(See page [BO-49](#))

1. TILT UP SLIDING ROOF PANEL
2. SLIDE SLIDING ROOF HEADLINING  
(See step 1 on page [BO-52](#))
3. DISCONNECT BATTERY CABLE FROM NEGATIVE

USA:

**CAUTION:** Work must be started after approx. 20 seconds or longer from the time the ignition switch is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from

4. REMOVE MAP LIGHT

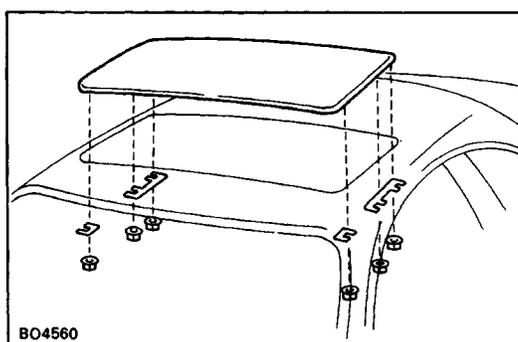
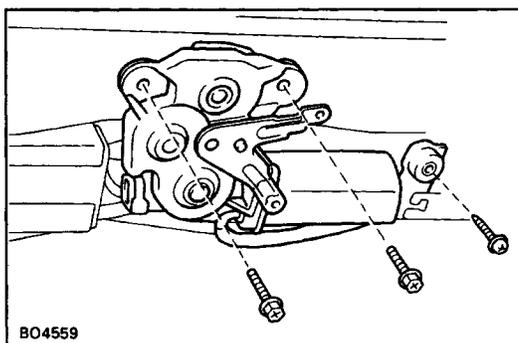
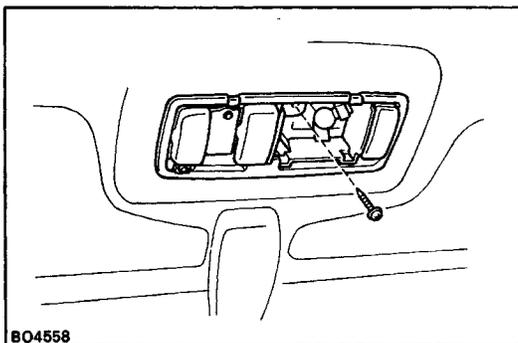
- (a) Remove a screw and the map
- (b) Remove a screw and the map
- (c) Disconnect the connector.

5. REMOVE FOLLOWING PARTS:

- (a) Assist grip
- (b) Front pillar garnish (See step 3 on page [BO-33](#))
- (c) Sun visor and holder
- (d) Inner rear view mirror
- (e) Opening trim moulding

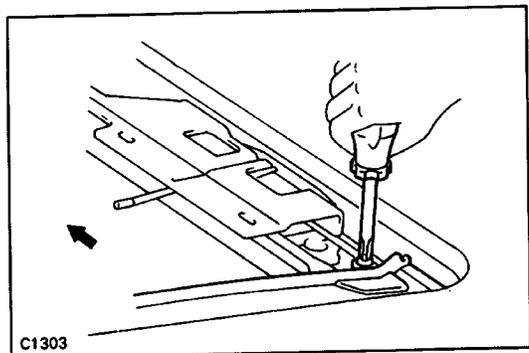
6. REMOVE DRIVE MOTOR

- (a) Push down the front side of roof headlining
- (b) Disconnect the drive motor connectors
- (c) Remove three bolts and drive motor

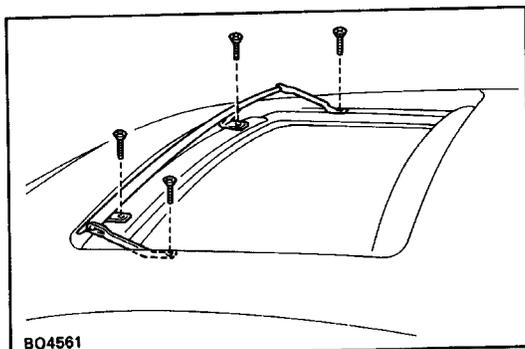


7. REMOVE SLIDING ROOF PANEL

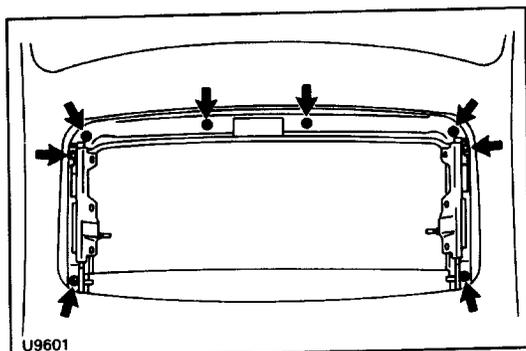
- (a) Remove the six sliding roof installation nuts and shims.  
HINT: Be sure the number of shims.
- (b) Pull the panel upward to remove it.

**8. REMOVE ROOF DRIP CHANNEL**

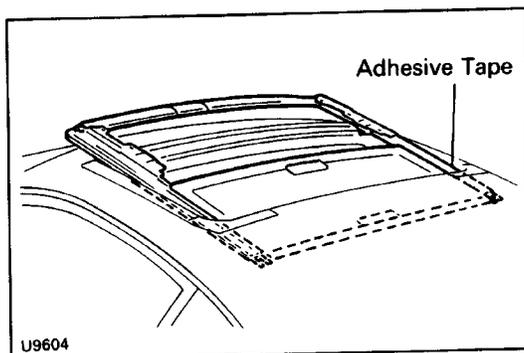
- (a) Remove two screws.
- (b) Pull the channel forward to remove it.

**9. REMOVE WIND DEFLECTOR**

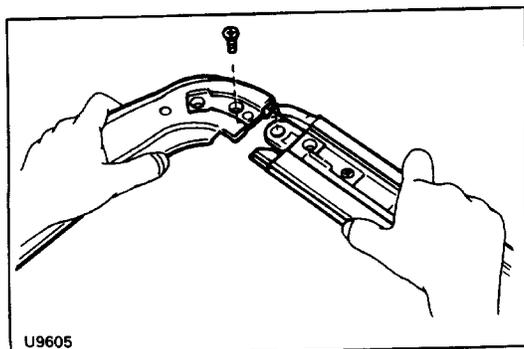
- (a) Slide the drive cable rearward.
- (b) Remove four screws and the deflector.

**10. REMOVE CABLE GUIDE CASING ASSEMBLY**

- (a) Slide the drive cable forward and remove the eight set screws.



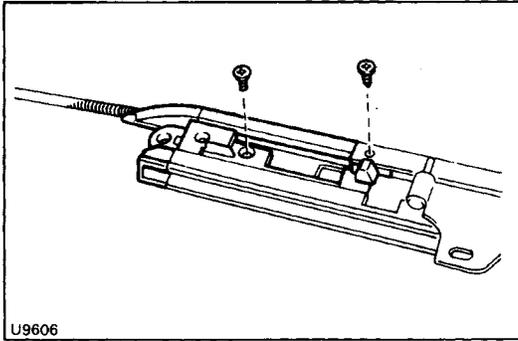
- (b) Apply adhesive tape to protect the body.
- (c) Pull the cable guide casing assembly off in forward direction.

**DISASSEMBLY OF SLIDING ROOF**

(See page [BO-51](#))

- 1. REMOVE SLIDING ROOF HEADLINING**
- 2. REMOVE CABLE GUIDE CASING FROM CASING ASSEMBLY**

- (a) Remove two set screws.
- (b) Pull the cable guide casing forward to remove.



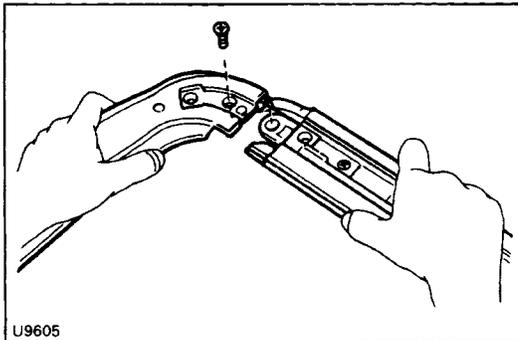
### 3. REMOVE CABLE FROM GUIDE RAIL

- (a) Remove two screws and the cable guide block from the guide rail.
- (b) Pull the drive cable from the guide rail.

## ASSEMBLY OF SLIDING ROOF

(See page [BO-51](#))

1. APPLY IMP GREASE TO DRIVE CABLE
2. PLACE DRIVE CABLES INTO GUIDE RAIL
3. INSTALL CABLE GUIDE BLOCK TO GUIDE RAIL

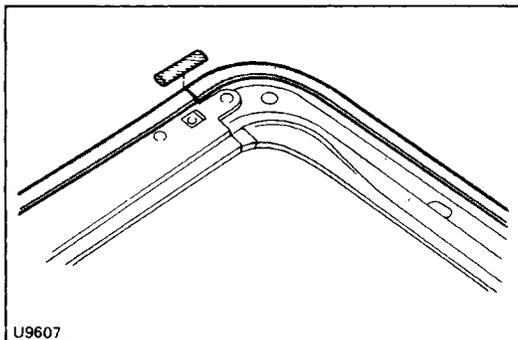


### 4. INSTALL CABLE GUIDE CASING AND GUIDE RAIL

- (a) Insert the drive cable into the casing, and align it with the guide rail.
- (b) Install the guide rail and guide casing with the screws.

- (c) Use butyl tape to cover the cut portion of the weatherstrip at the connection between the guide casing and guide rail.

### 5. INSTALL SLIDING ROOF HEADLINING

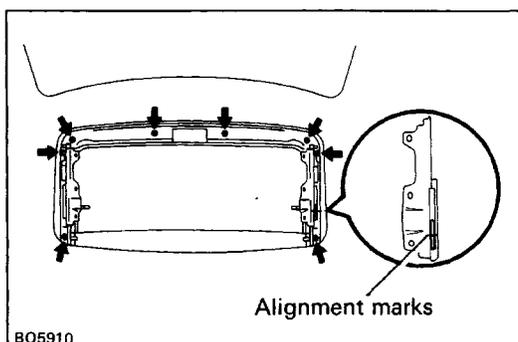


## INSTALLATION OF SLIDING ROOF

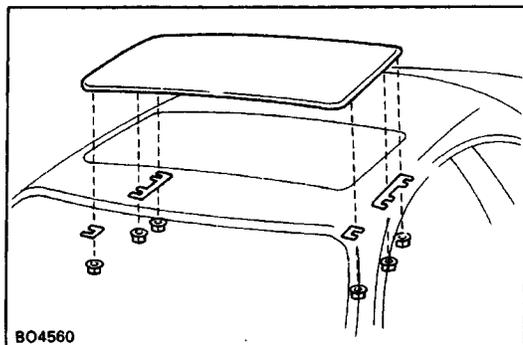
(See page [BO-51](#))

### 1. INSTALL CABLE GUIDE CASING ASSEMBLY ONTO ROOF

- (a) While pushing down on the center of the casing insert the cable guide casing assembly from the front of the roof.
- (b) Install eight set screws.
- (c) Align the alignment marks.



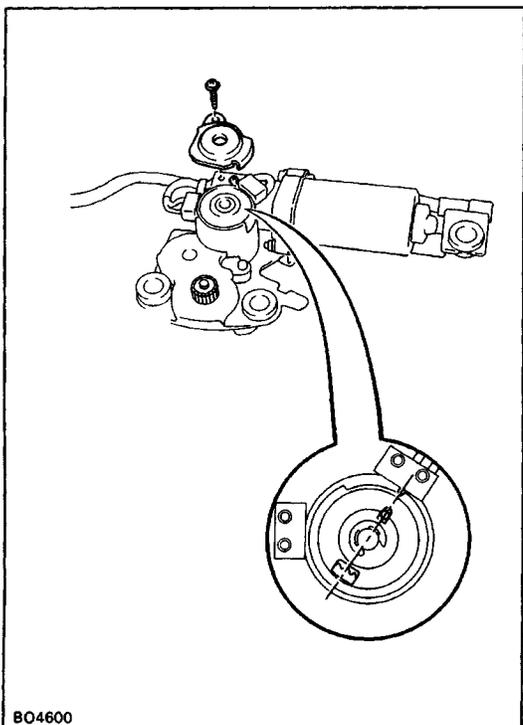
Alignment marks



**2. INSTALL ROOF DRIP CHANNEL**

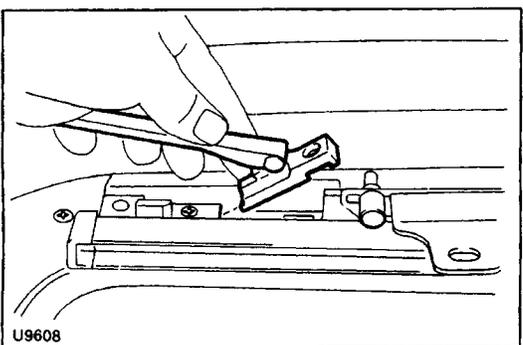
**3. INSTALL SLIDING ROOF PANEL**

HINT: Install the same number of shims that were disassembled.



**4. INSTALL DRIVE MOTOR**

- (a) Remove the screw and cam plate cover.
- (b) Loosen the large screw at the back side of drive shaft, then turn the drive shaft by hand to align the housing and gear point mark as shown in the illustration.
- (c) Install the screw and cam plate cover.
- (d) Install the drive motor to the roof.
- (e) Connect the drive motor connectors.
- (f) Install the front side of the roof headlining.



**5. INSTALL WIND DEFLECTOR**

Install the wind deflector with set screws.

**6. SLIDE SLIDING ROOF HEADLINING FORWARD**

- (a) Open the headlining.
- (b) Slide the sliding roof panel backward to install the headlining to the panel.

**7. INSTALL FOLLOWING PARTS:**

- Assist grip
- Front pillar garnish
- Sun visor and holder
- Inner rear view mirror
- Opening trim moulding

**8. INSTALL MAP LIGHT**

- (a) Connect the connector.
- (b) Install the screw and the map light.
- (c) Install the screw and the map light cover.

**9. CONNECT BATTERY CABLE TO NEGATIVE TERMINAL**