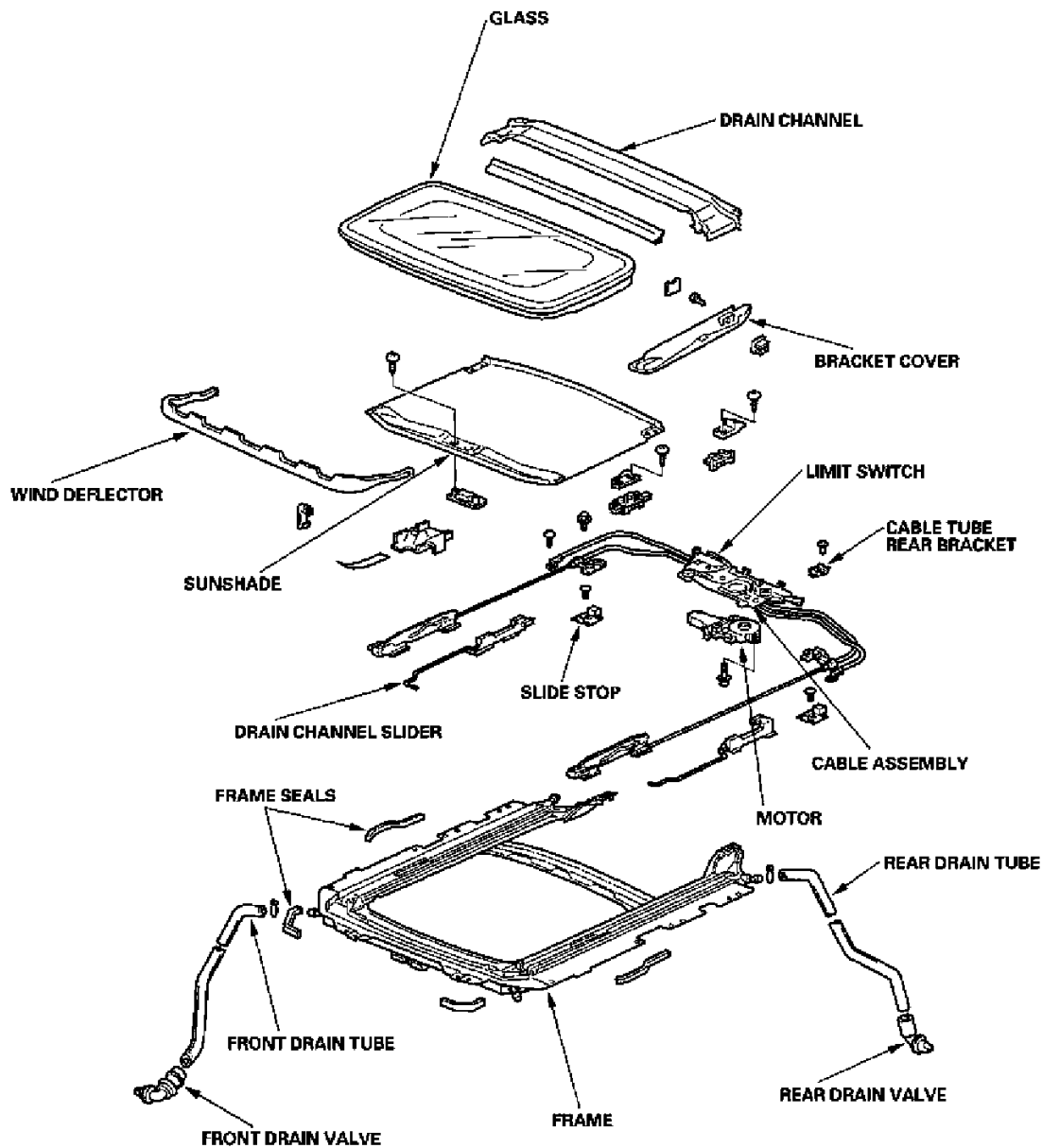


2004 ACCESSORIES & EQUIPMENT

Moonroof - TSX

COMPONENT LOCATION INDEX



G01818841

Fig. 1: Locating Moonroof Components

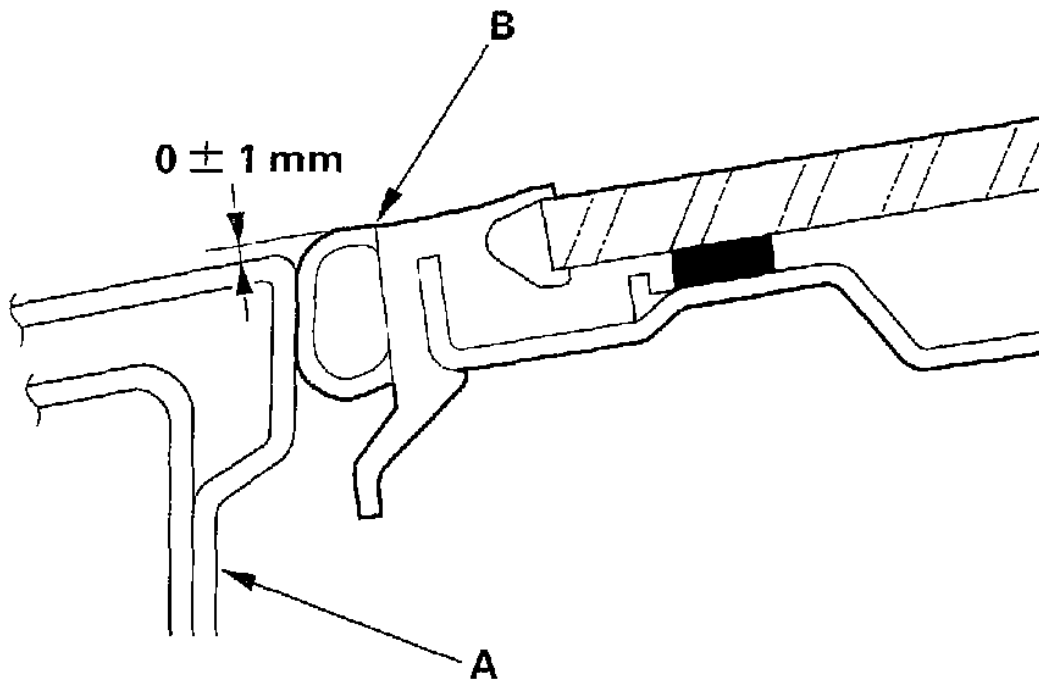
SYMPTOM TROUBLESHOOTING INDEX

Symptom	Diagnostic procedure	Also check for
Water leaks from moonroof	1. Check for a clogged drain tube. 2. Check for a gap between the glass weatherstrip and the roof panel. 3. Check for a defective or an improperly installed glass weatherstrip or drain channel. 4. Check for a gap between the drain seal and the roof panel.	
Wind noise from moonroof	1. Check for excessive clearance between the glass weatherstrip and the roof panel.	
Motor noise from moonroof	1. Check for a loose motor. 2. Check for a worn gear or bearing. 3. Check for a deformed cable assembly.	
Moonroof glass does not move, but motor turns	1. Check for a defective gear or inner cable. 2. Check for foreign matter stuck between the guide rail and the slider. 3. Check for a loose inner cable. 4. Make sure the cable assembly is attached properly.	
Moonroof glass does not move and motor does not turn (glass can be moved with moonroof wrench)	1. Check for a blown fuse. 2. Check for a faulty moonroof switch. 3. Check the limit switch. 4. Check for a run down battery. 5. Check for a defective motor. 6. Check for a faulty relay.	

G01518842

Fig. 2: Symptom Troubleshooting Index**GLASS HEIGHT ADJUSTMENT**

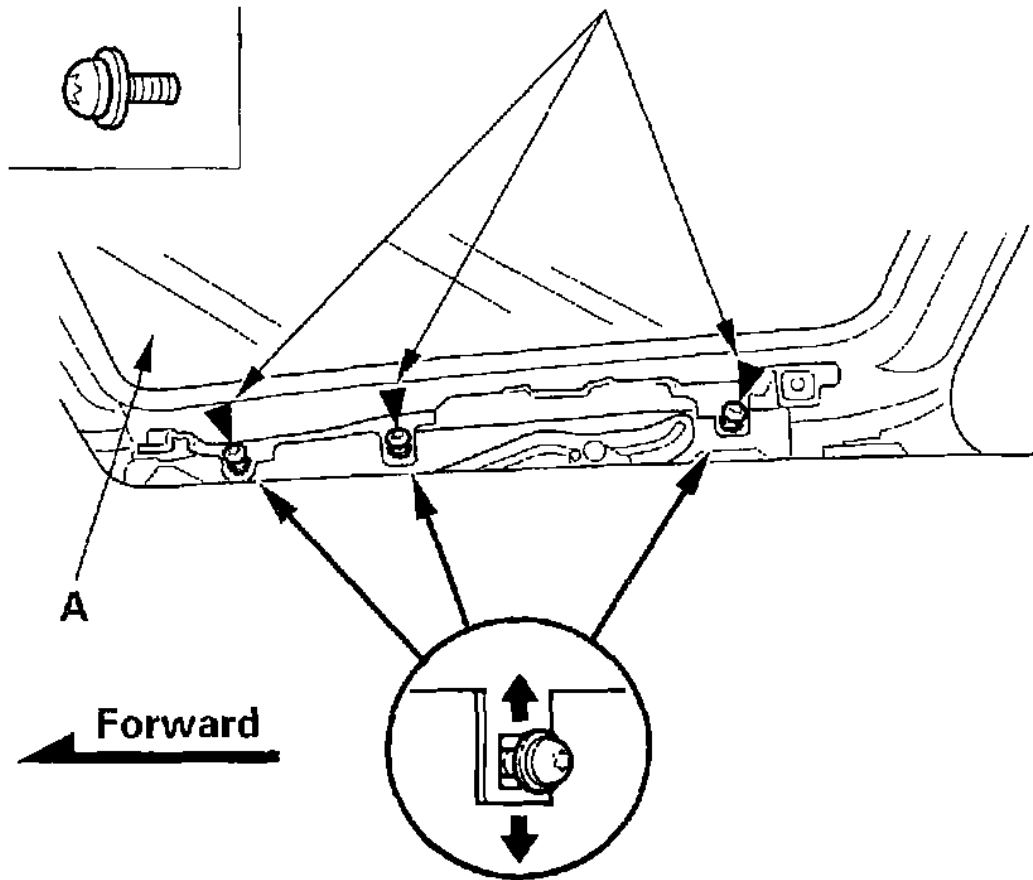
The roof panel (A) should be even with the glass weatherstrip (B), to within 0 +1/-1 mm (0 +0.04/-0.04 in.) all the way around. If not, make the following adjustment:



G01818943

Fig. 3: Checking Glass Height

1. Remove the bracket cover.
2. Loosen the bolts on each side, and adjust the glass (A).

Fastener Locations**▶ : Bolt, 6****5 x 0.8 mm****3.9 N·m (0.4 kgf·m, 3 lbf·ft)**

G01818944

Fig. 4: Adjusting The Glass

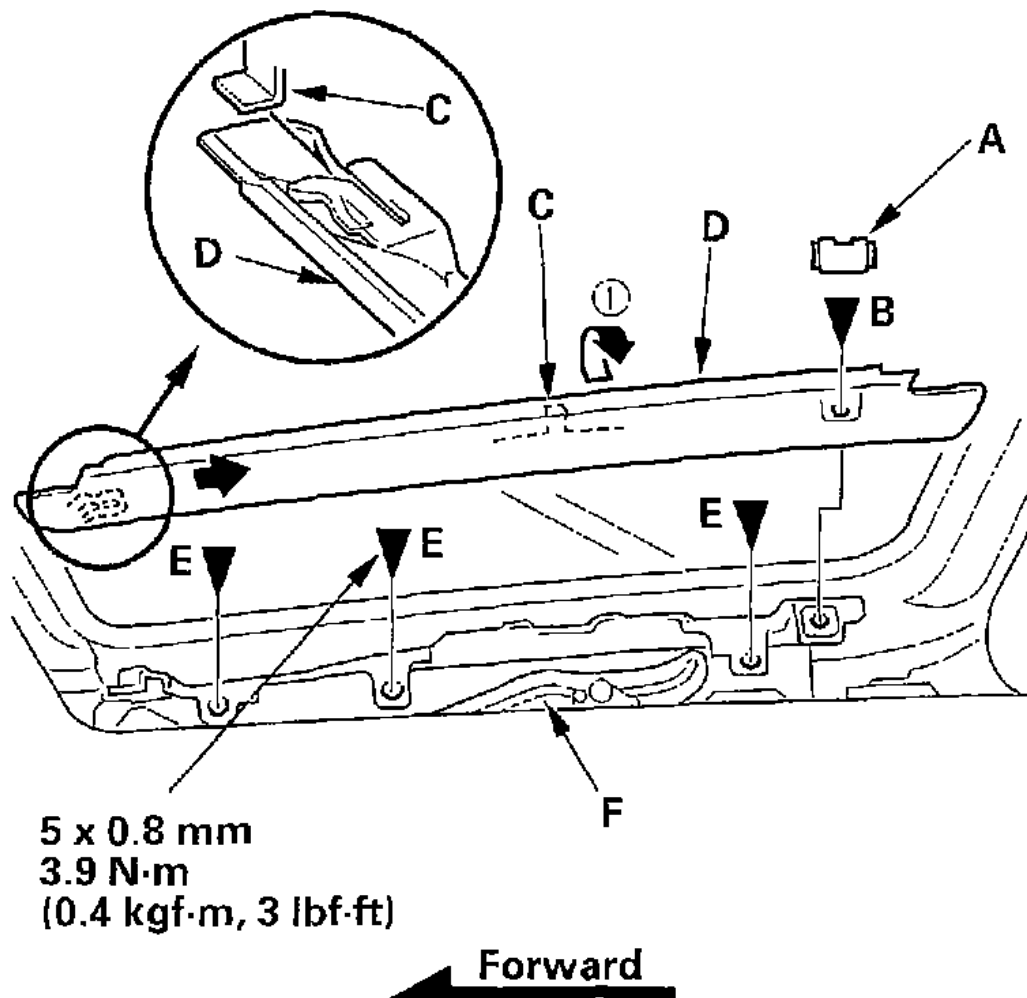
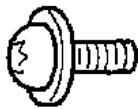
3. If necessary, repeat on the opposite side.

GLASS REPLACEMENT

1. Close the glass fully.
2. Slide the sunshade all the way back.
3. Pry out the lid (A), remove the screws (B), and release the hooks (C), then remove both bracket covers (D). With a Torx T25 bit, remove the bolts (E) from both glass brackets (F).

Fastener Locations

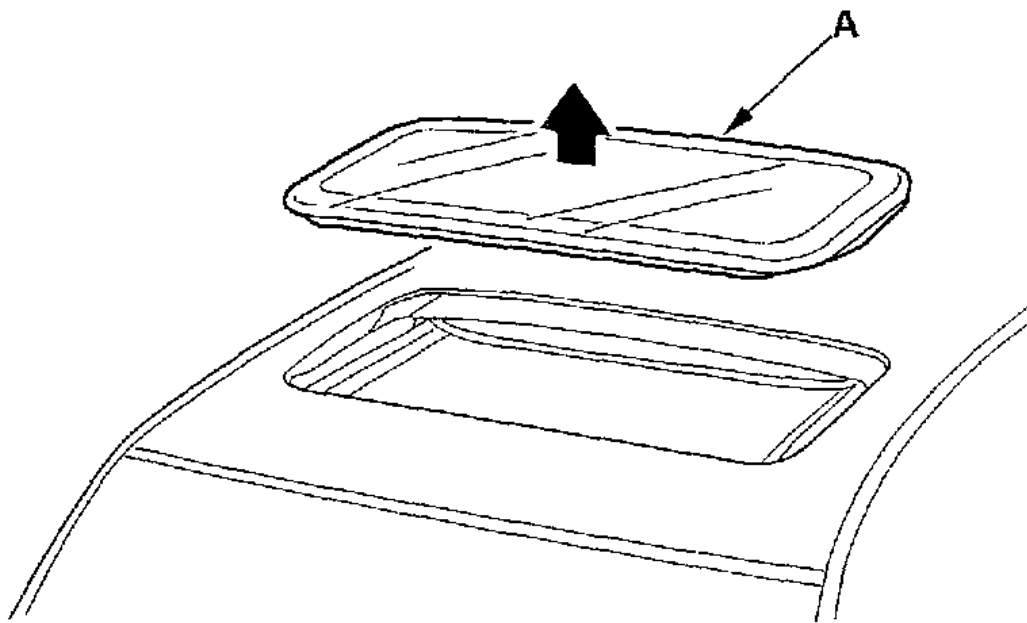
B ▶ : Screw, 2 E ▶ : Bolt, 6



G01818945

Fig. 5: Removing Both Bracket Covers

4. Remove the glass (A) by lifting it up. Do not damage the roof panel.



G01818946

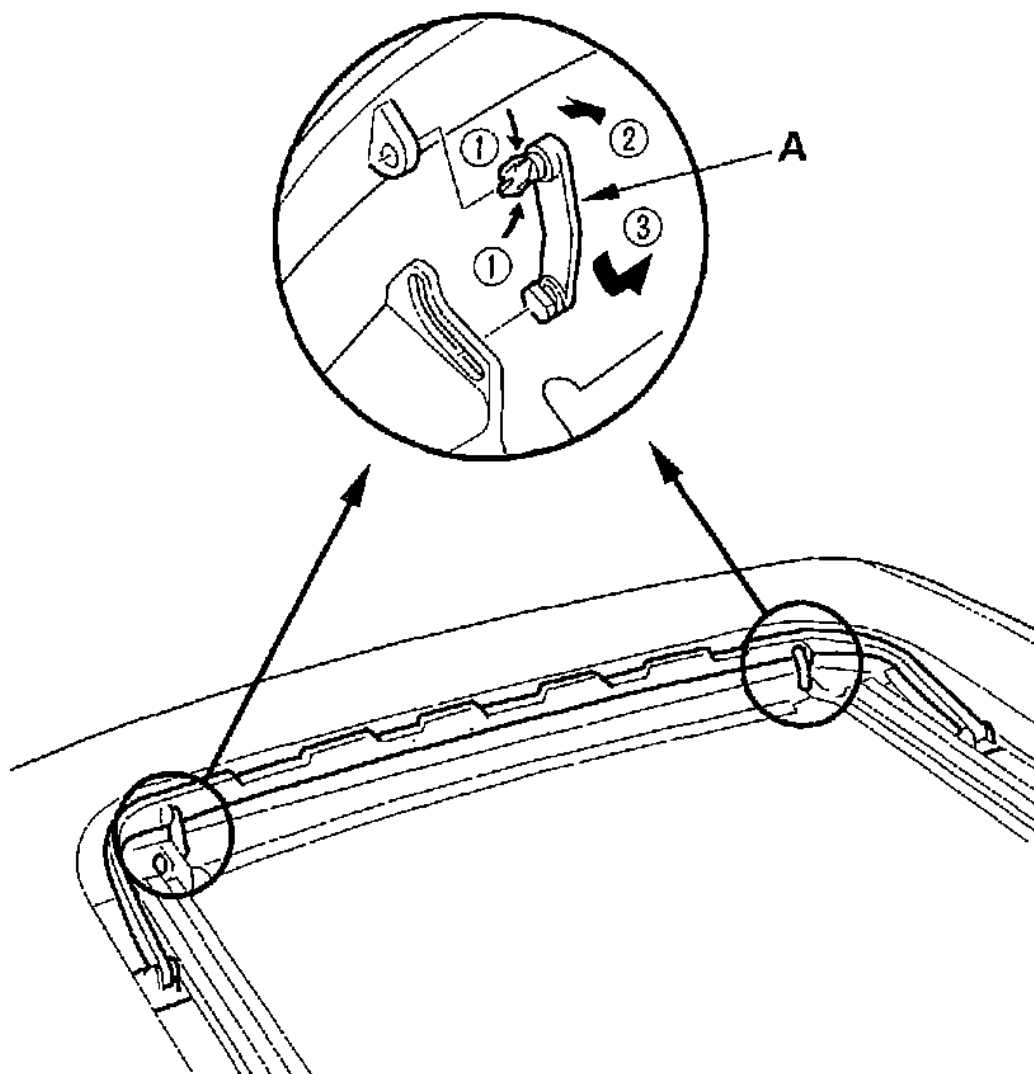
Fig. 6: Removing The Glass

5. Install the glass in the reverse order of the removal, and adjust the glass height alignment.
6. Check for water leaks. Use free-flowing water from a hose without a nozzle. Do not use high-pressure water.

NOTE: It is normal for some water to seep past the moonroof into the moonroof frame, and exit through the drains.

WIND DEFLECTOR REPLACEMENT

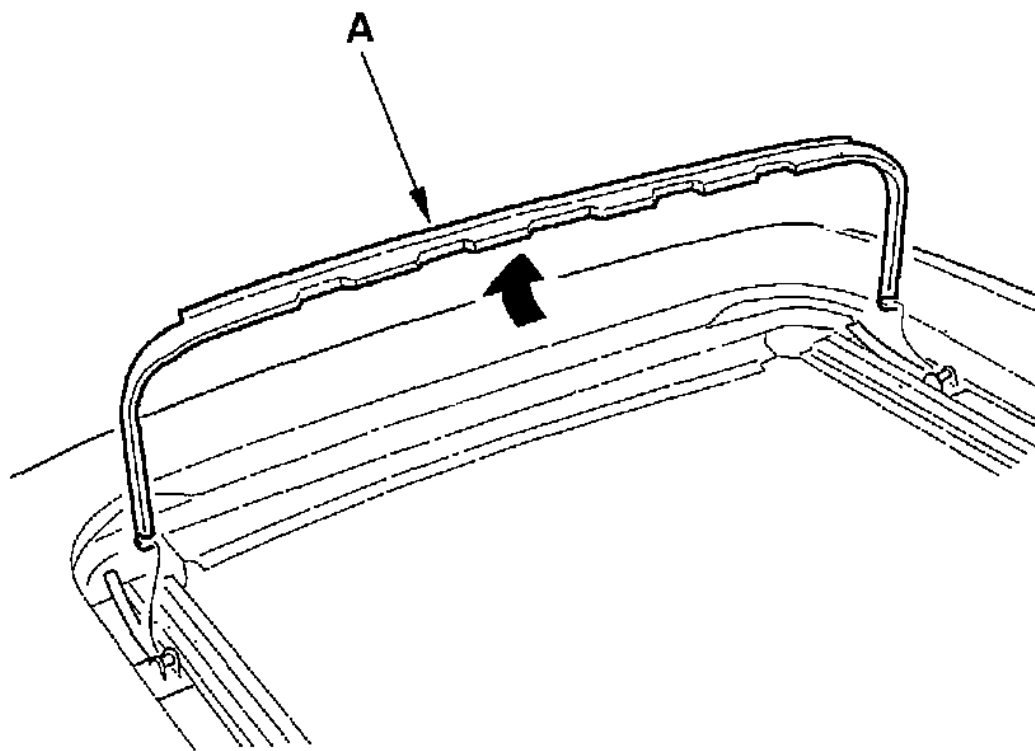
1. Open the glass fully.
2. Remove the links (A) from both sides.



G01818947

Fig. 7: Removing The Links From Both Sides

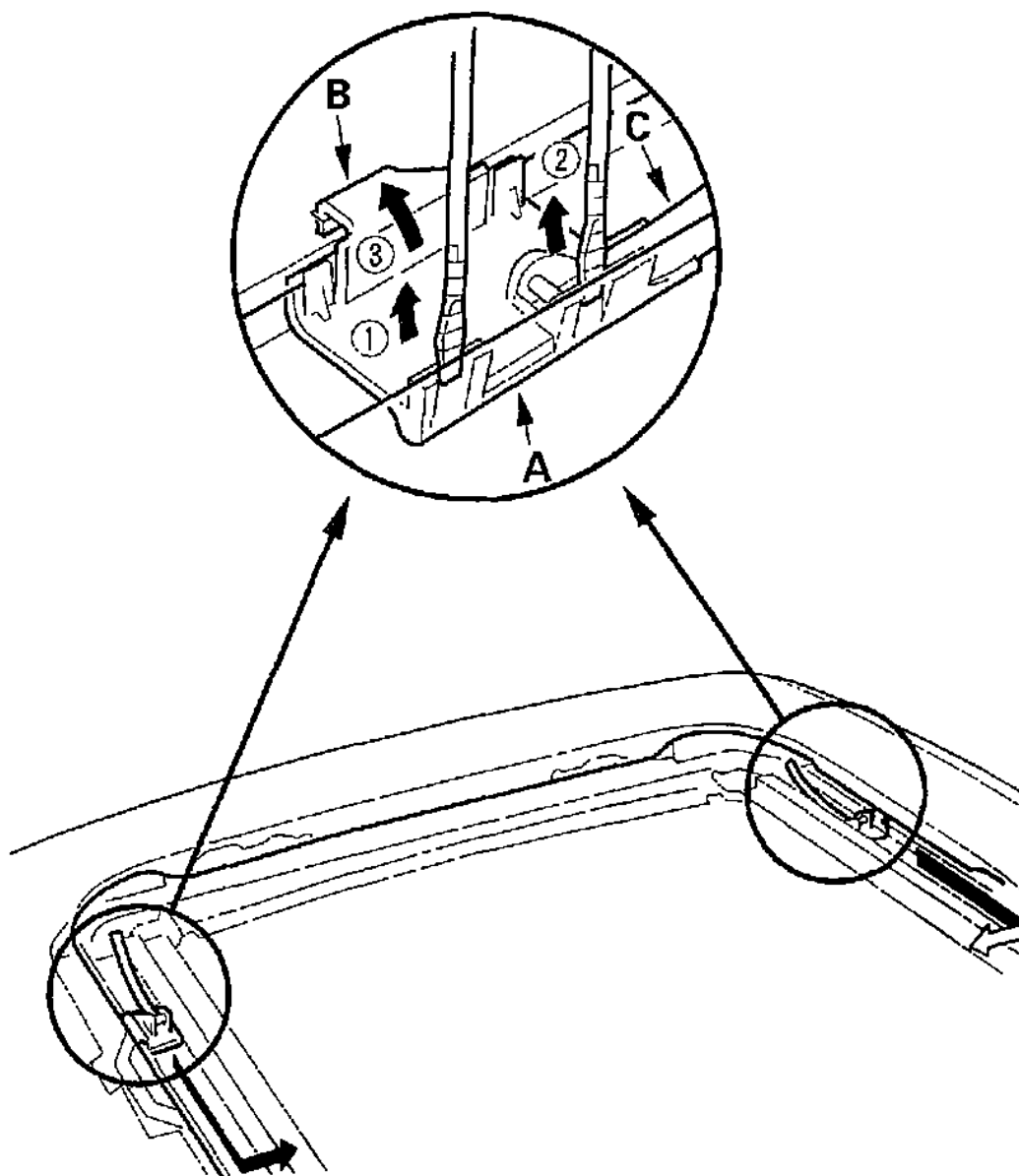
3. Remove the wind deflector (A).



G01818948

Fig. 8: Removing The Wind Deflector

4. Pry up on the deflector bases (A) and release the hooks (B), then remove the bases with springs (C) from both sides.



G01818949

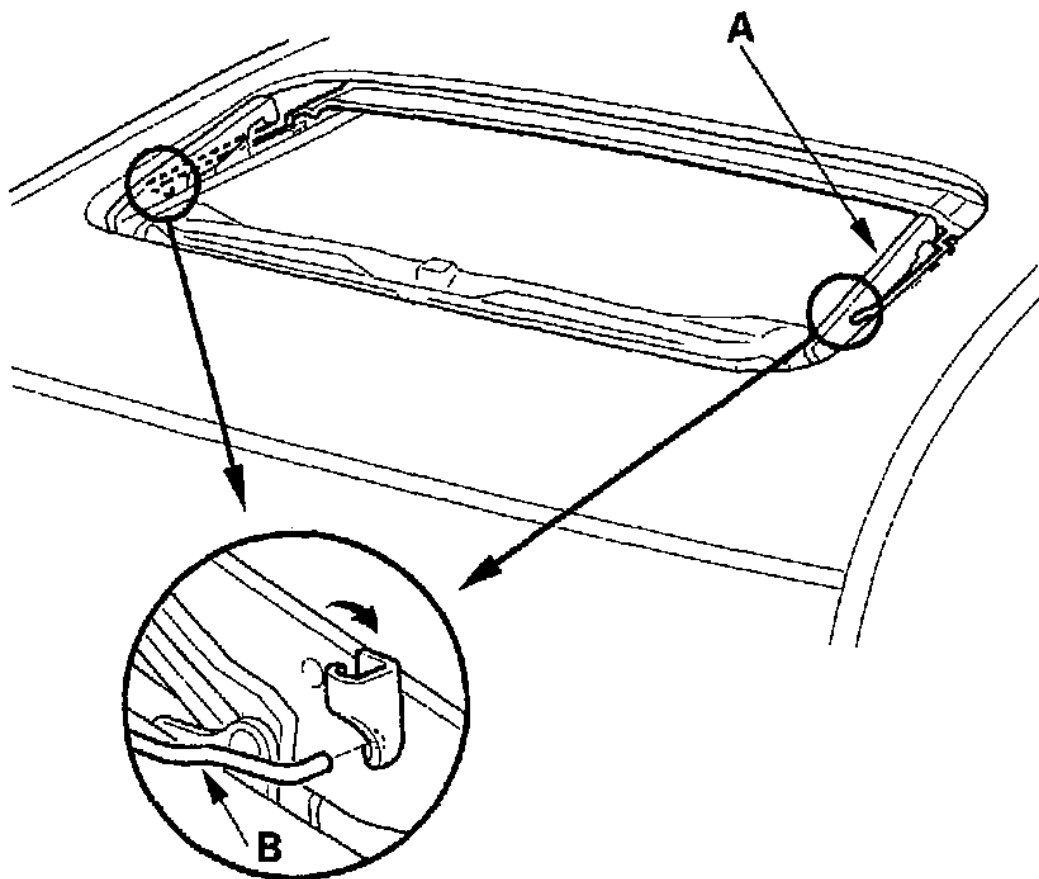
Fig. 9: Removing The Bases With Springs

5. Install the deflector in the reverse order of removal.

DRAIN CHANNEL REPLACEMENT

1. Remove the glass (see **GLASS REPLACEMENT**).

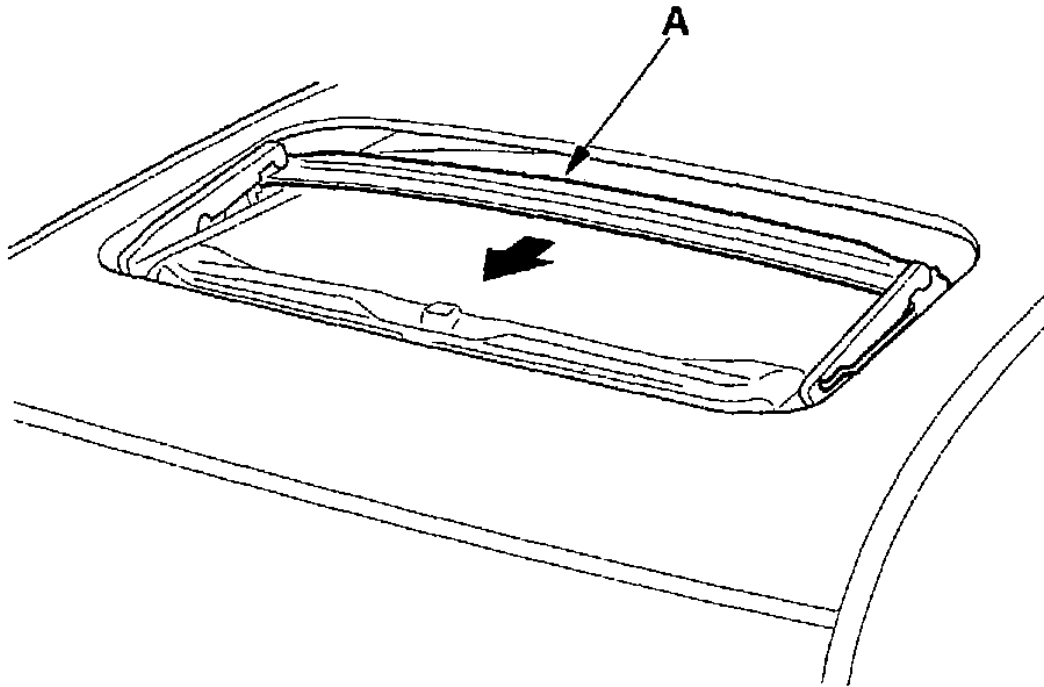
2. With the moonroof wrench, move both glass brackets (A) to the position where the moonroof normally tilts up and disconnect the drain channel rod (B) on both sides.



G01818950

Fig. 10: Disconnecting The Drain Channel Rod

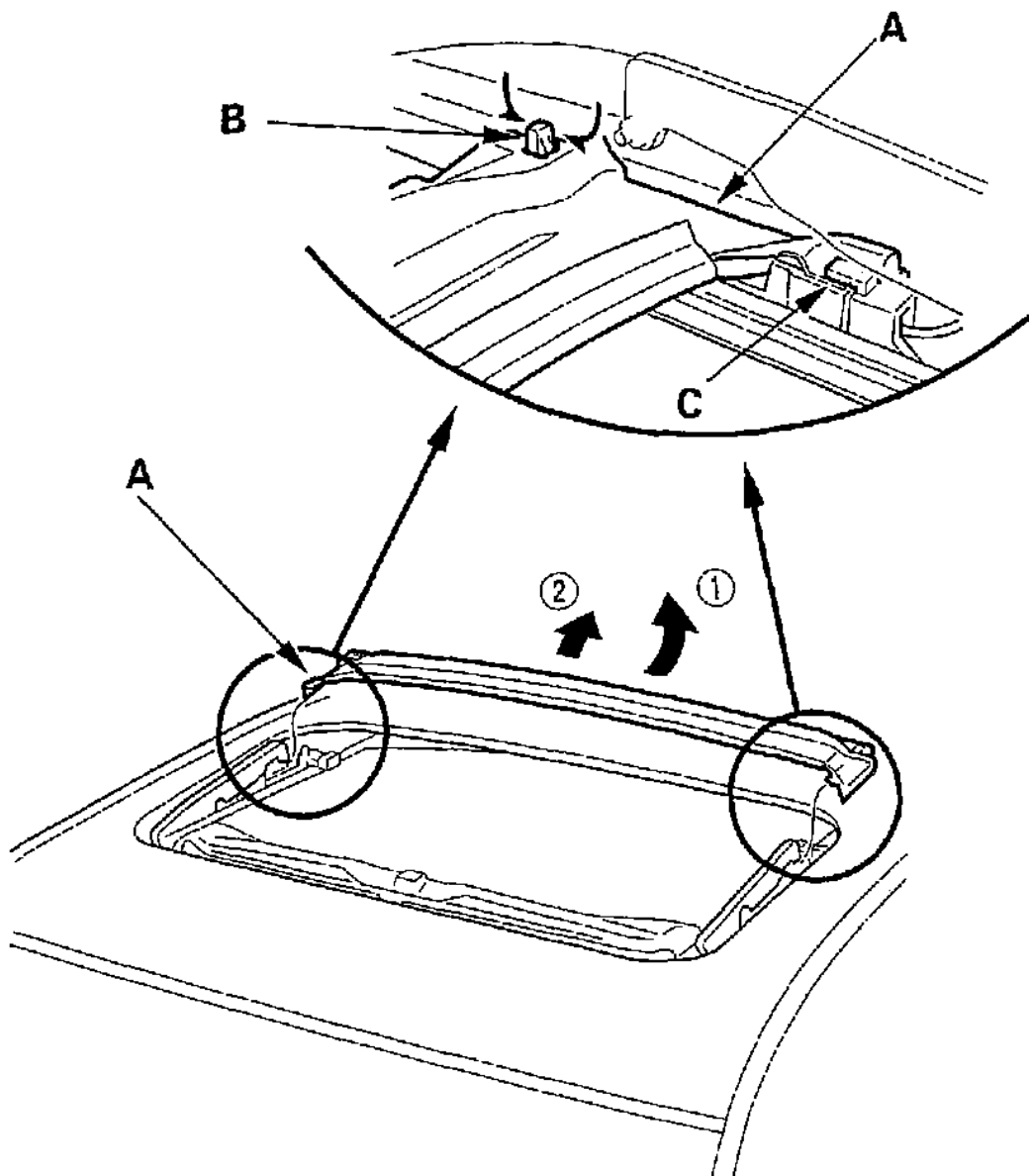
3. Slide the drain channel (A) forward.



G01818951

Fig. 11: Sliding The Drain Channel Forward

4. Pull the rear edge of the drain channel (A) up while pushing both clips (B), and release the channel from both hooks (C) of the drain channel slider by pulling it rearward



G01818952

Fig. 12: Releasing The Channel From Both Hooks Of The Drain Channel Slider

5. Remove the drain channel.
6. Install the channel in the reverse order of removal, and note these items:
 - Push the clip portions into place securely.
 - Check the glass height adjustment (see **GLASS REPLACEMENT**).
7. Check for water leaks. Let the water run freely from a hose without a nozzle. Do not use a high-pressure

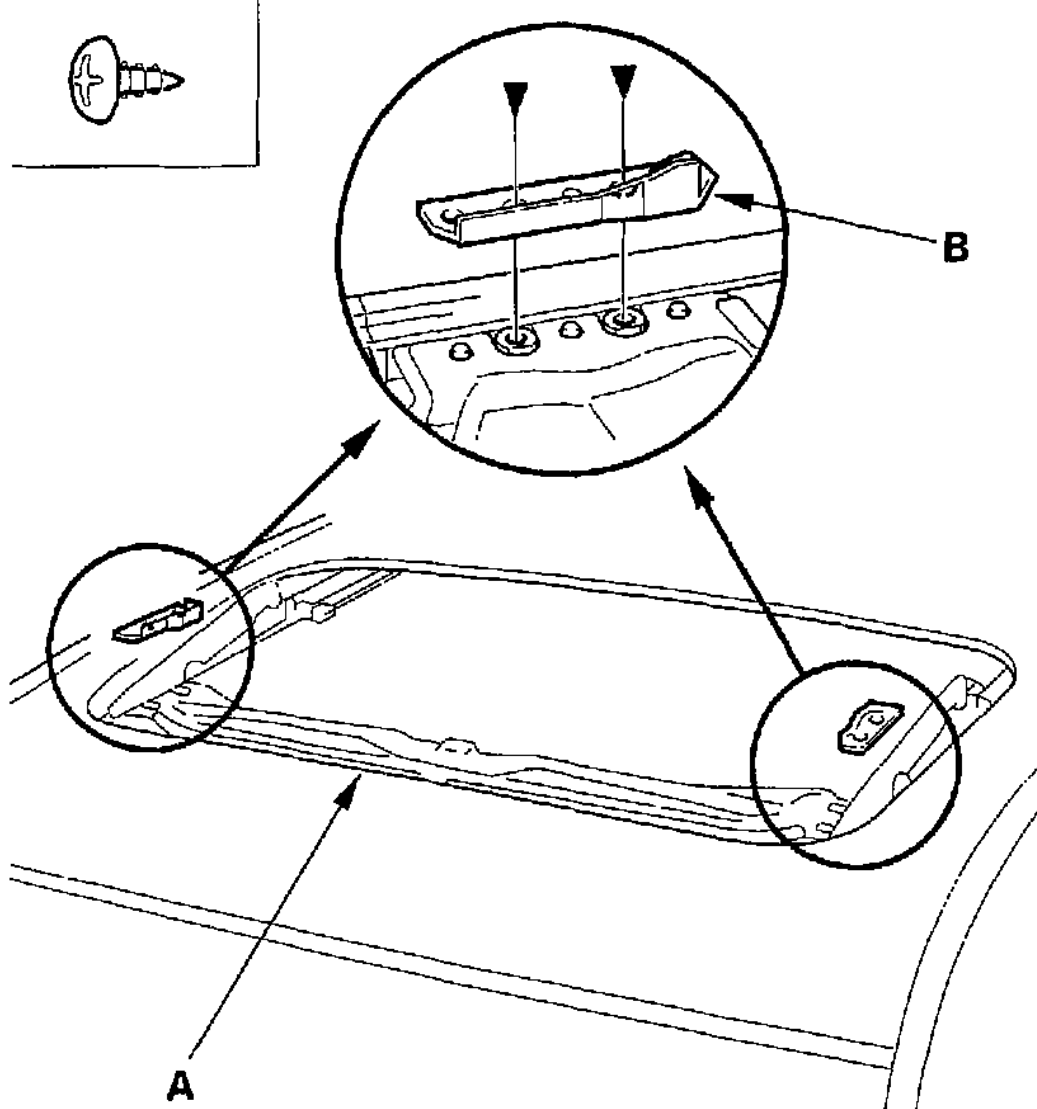
spray.

SUNSHADE REPLACEMENT

1. Remove the drain channel (see **DRAIN CHANNEL REPLACEMENT**).
2. Slide the sunshade (A) until you can see both sunshade slider spacers (B).

Fastener Locations

► : Screw, 4



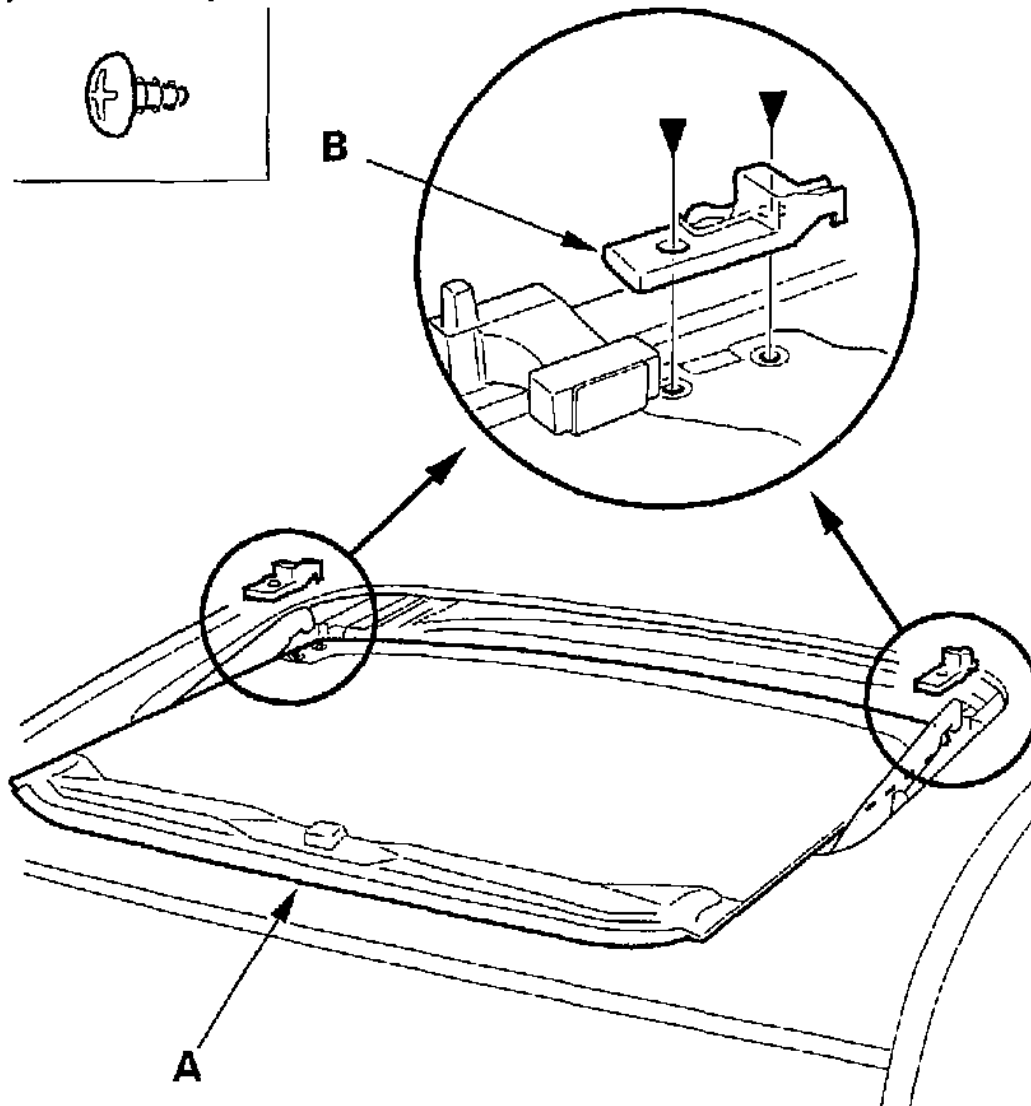
G01818953

Fig. 13: Sliding The Sunshade

3. Remove the screws, then remove both spacers.
4. While lifting the front portion of the sunshade (A), move the sunshade forward until you can see both sunshade rear hooks (B). Do not damage the sunshade and hooks.

Fastener Locations

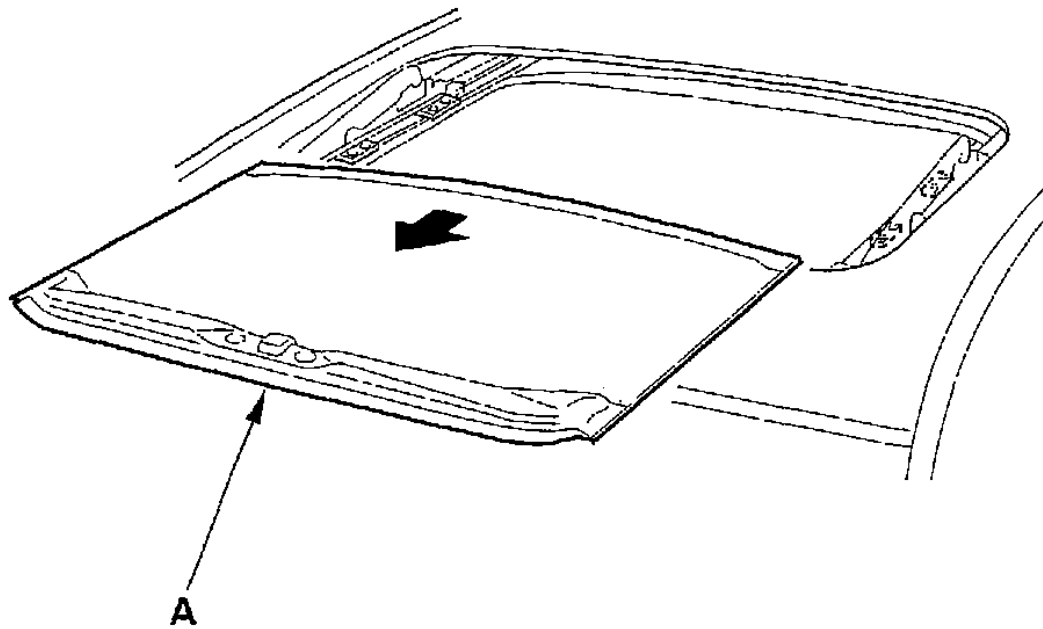
► : Screw, 4



G01818954

Fig. 14: Moving The Sunshade Forward Until You Can See Both Sunshade Rear Hooks

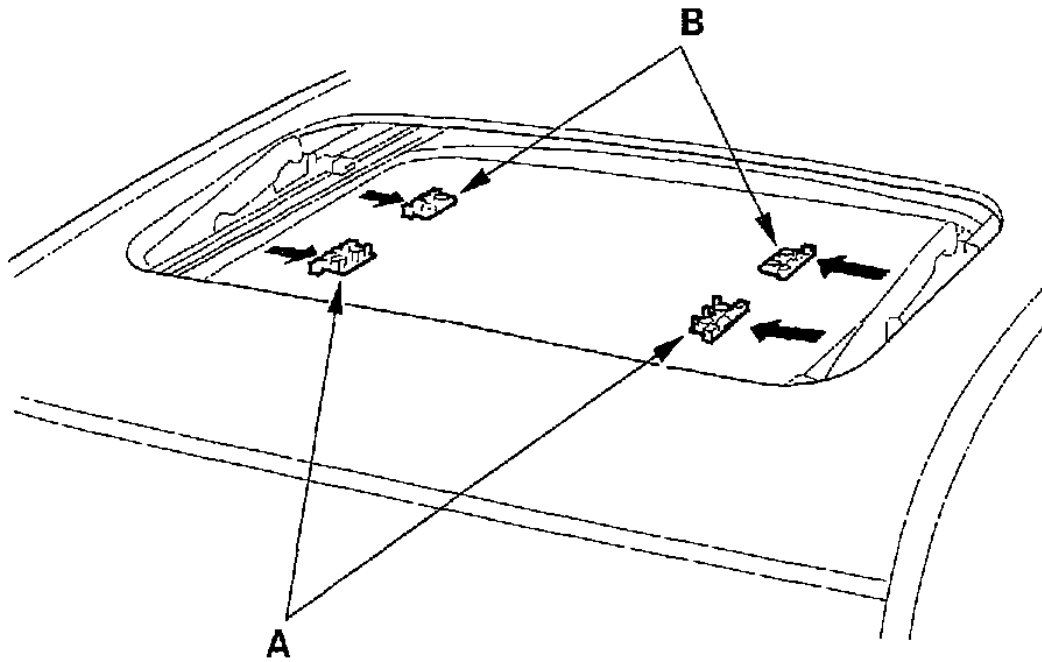
5. Remove the screws, then remove both hooks.
6. Remove the sunshade (A).



G01818955

Fig. 15: Removing The Sunshade

7. Remove both front sunshade base sliders (A) and both rear sunshade base sliders (B).



G01818956

Fig. 16: Removing Front & Rear Sunshade Base Sliders

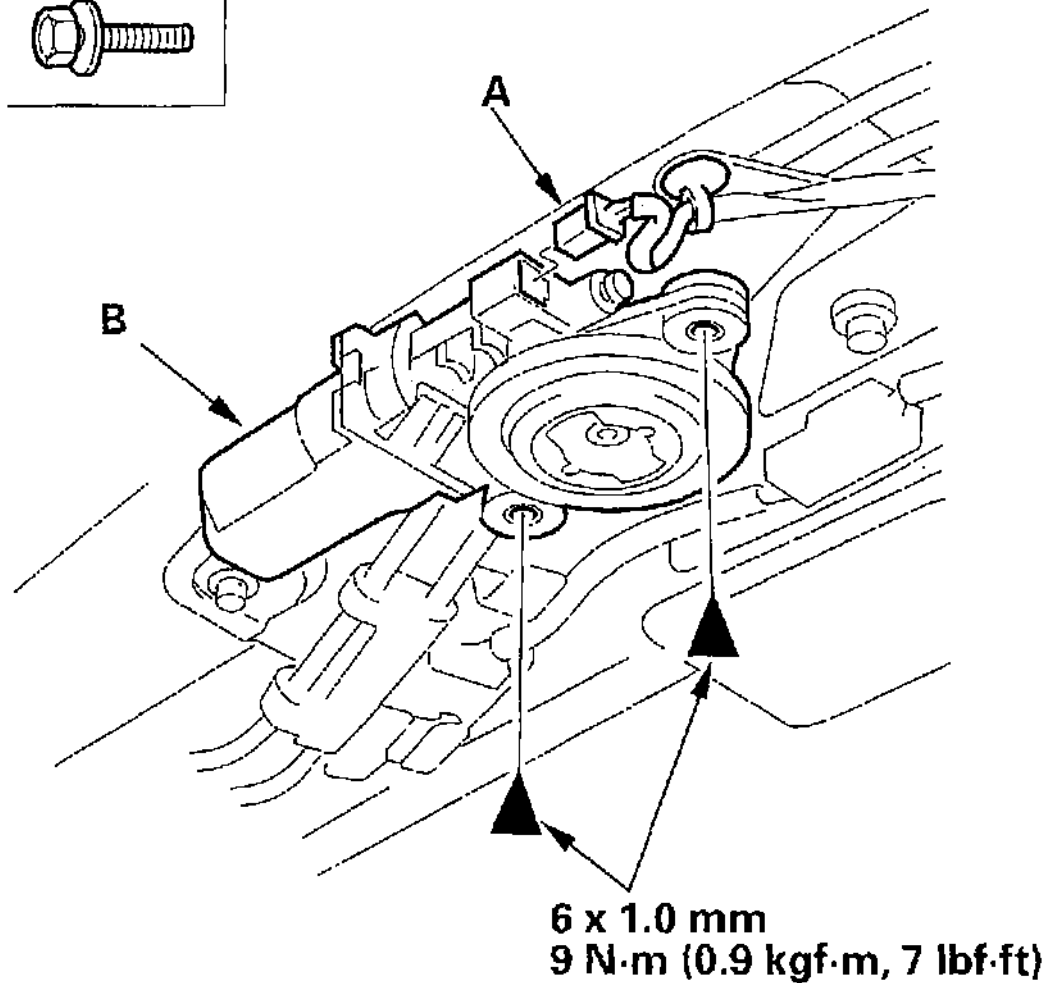
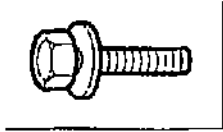
8. Install the sunshade in the reverse order of removal, and check the glass height adjustment (see **GLASS REPLACEMENT**).
9. Check for water leaks. Let the water run freely from a hose without a nozzle. Do not use a high-pressure spray.

MOTOR REPLACEMENT

1. Remove the headliner (see **HEADLINER REMOVAL/INSTALLATION**).
2. Put on gloves to protect your hands. Disconnect the connector (A), and remove the bolts, then remove the motor (B).

Fastener Locations

► : Bolt, 2



G01818957

Fig. 17: Removing The Motor

3. Install the motor in the reverse order of removal, and note these items:
 - Make sure the connector is plugged in properly.
 - Check the motor operation.

FRAME & DRAIN TUBE REPLACEMENT

SRS components are located in this area. Review the SRS component locations, and the precautions and procedures in the SRS section before performing repairs or service. See **AIR BAG RESTRAINT SYSTEMS** .

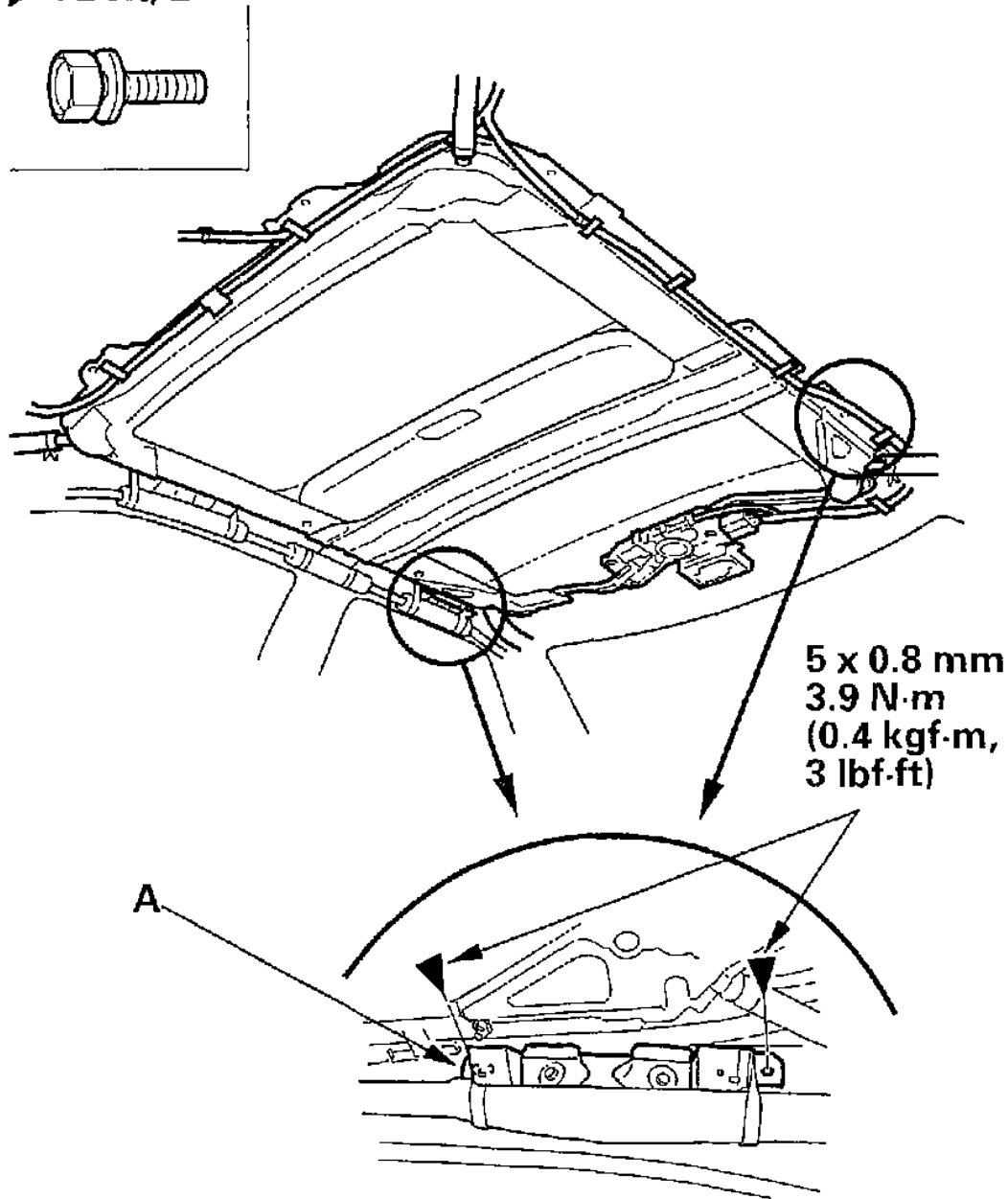
1. Remove these items:

- Headliner (see **HEADLINER REMOVAL/INSTALLATION**)
- Moonroof glass (see **GLASS REPLACEMENT**)
- Without side curtain airbag: Rear grab handle bracket, both sides (see step 7 of **HEADLINER REMOVAL/INSTALLATION**)
- Without side curtain airbag: Roof side pad, front and rear both sides (see step 8 of **HEADLINER REMOVAL/INSTALLATION**)

2. With side curtain airbag: Remove the bolts securing both rear grab handle brackets (A), then release them from the body. Do not pull the bracket with the airbag excessively. Take care not to damage the airbag.

Fastener Locations

► : Bolt, 2

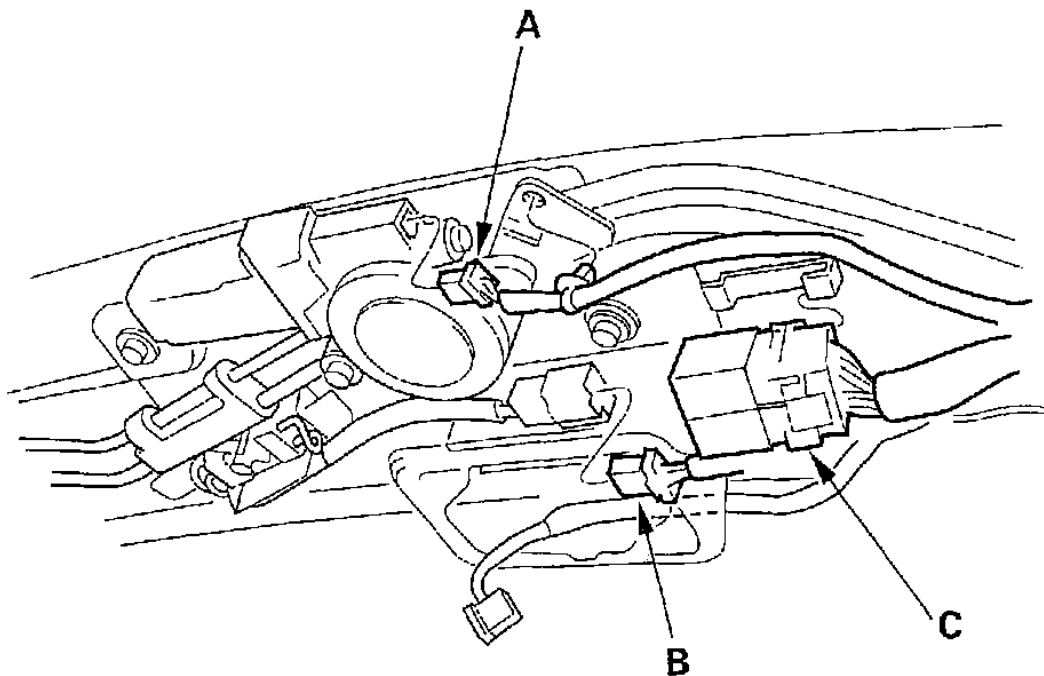


G01818958

Fig. 18: Removing The Bolts Securing Both Rear Grab Handle Brackets

- Put on gloves to protect your hands. Disconnect the motor connector (A), open/close-tilt/close switch

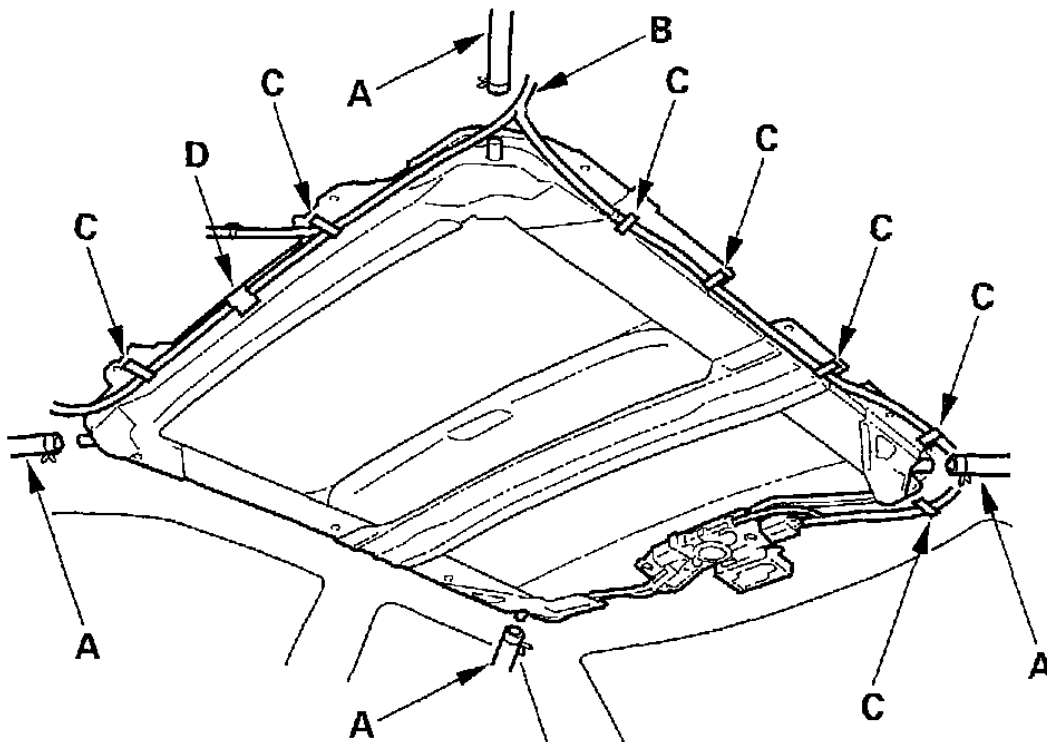
connector (B), and remove the moonroof relays (C).



G01818959

Fig. 19: Removing The Moonroof Relays

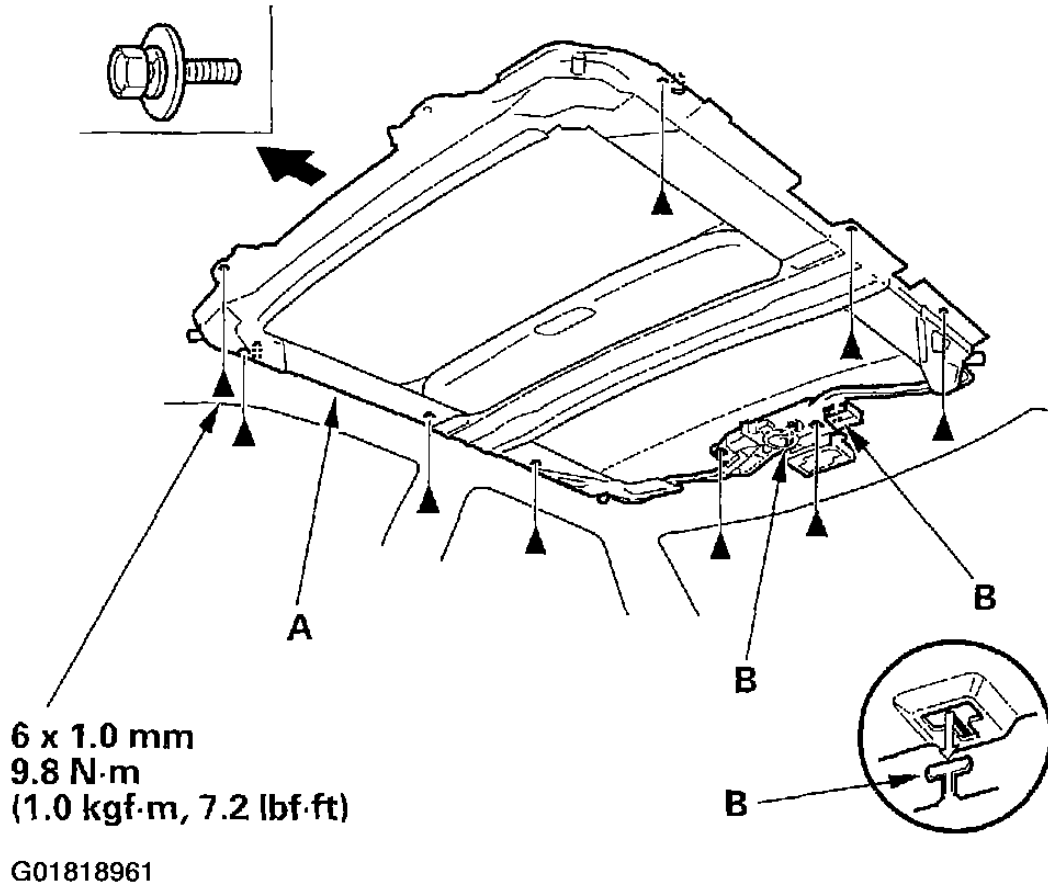
4. Disconnect the drain tubes (A).



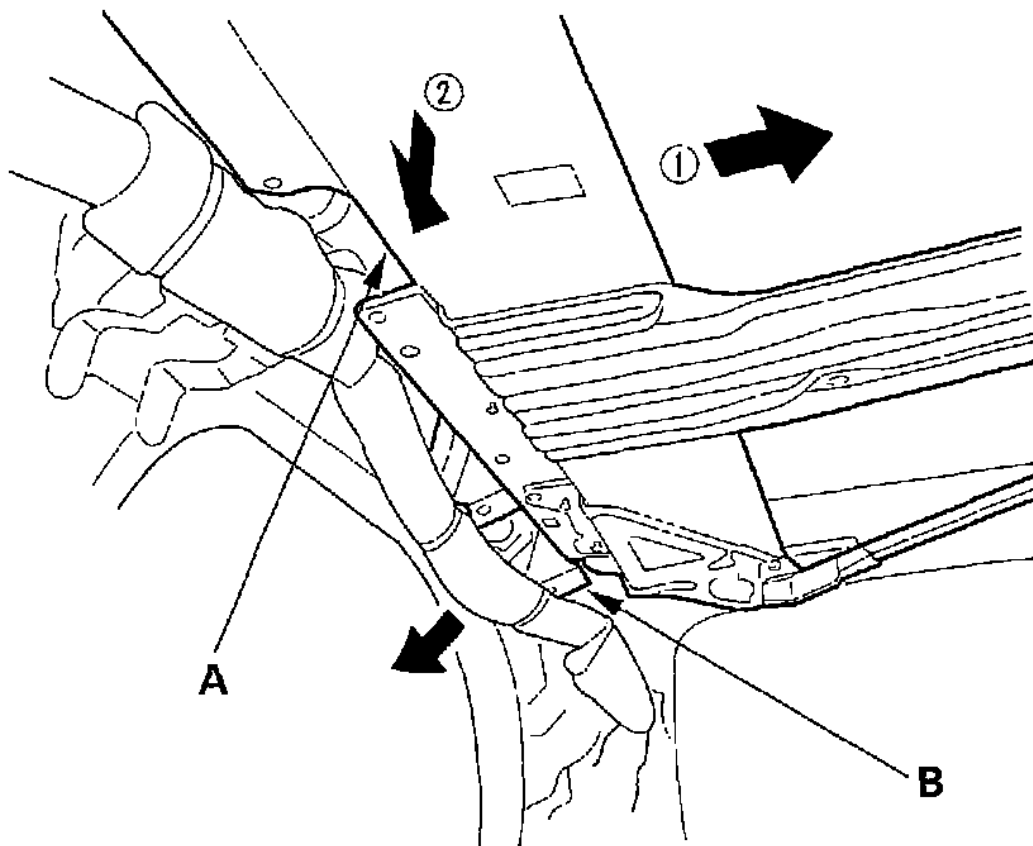
G01818960

Fig. 20: Disconnecting The Drain Tubes

5. Remove the interior harness (B) by detaching the harness clips (C) and removing the tape (D).
6. With an assistant holding the frame (A), remove the bolts, starting at the rear, and release the rear hooks (B) by moving the frame forward.

Fastener Locations**► : Bolt, 9****Fig. 21: Removing The Bolts & Releasing The Rear Hooks**

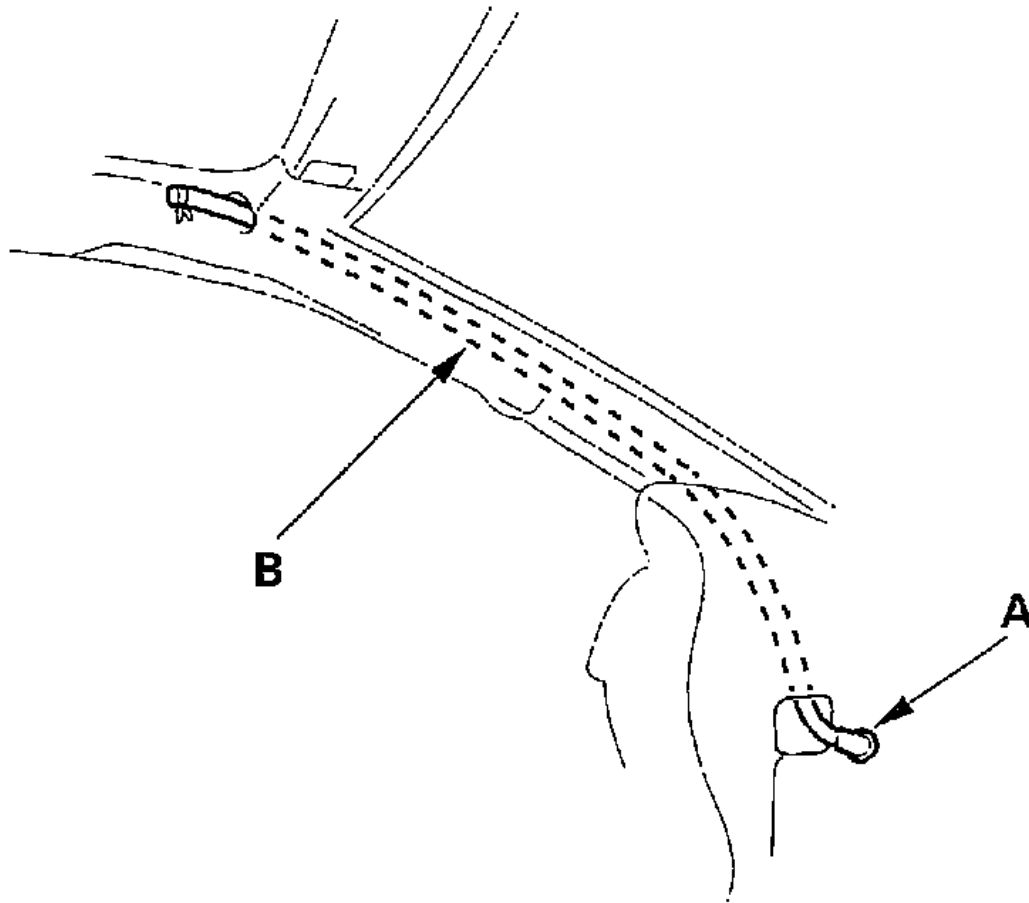
7. With the help of an assistant, move the frame (A) to the left or right, then lower the opposite side of rear grab handle down. If equipped, keep the rear grab handle bracket (B) away from the frame while lowering the frame. Take care not to hang the frame on the bracket.



G01818962

Fig. 22: Moving The Frame, Then Lowering The Opposite Side Of Rear Grab Handle Down

8. With the help of an assistant, carefully remove the frame through the front door opening. Take care not to scratch the interior trim and body, or tear the seat covers.
9. To remove a front drain valve (A) from the body, remove the kick panel, left or right (see **TRIM REMOVAL/INSTALLATION - DOOR AREA**). Tie a string to the top end of the drain tube, then pull the front drain tube (B) down out of the A-pillar.

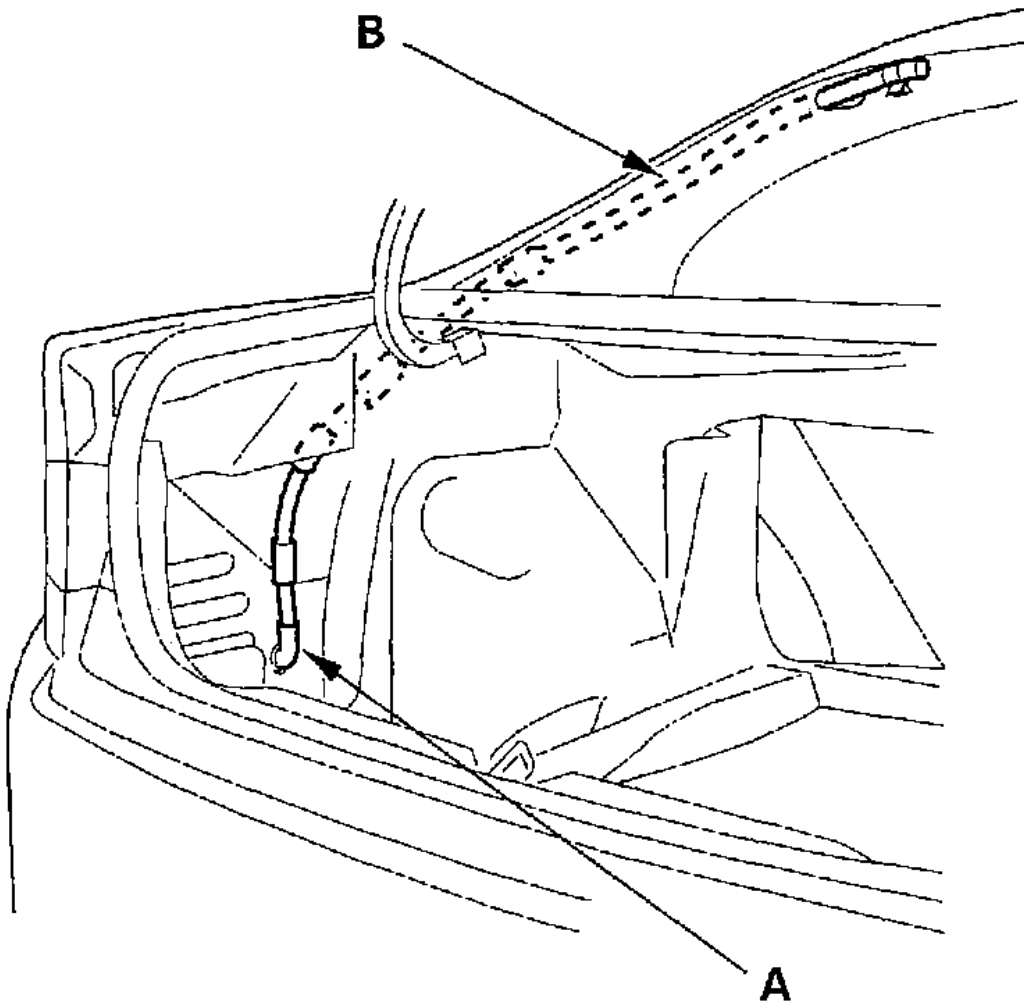


G01818963

Fig. 23: Removing The Front Drain Valve

10. To remove a rear drain valve (A) from the body, remove these parts (see **TRIM REMOVAL/INSTALLATION - TRUNK AREA**):
- Spare tire lid
 - Trunk rear trim panel

Tie a string to the top end of the rear drain tube (B), then pull back the trunk side trim panel and pull the drain tube down out of the pillar.

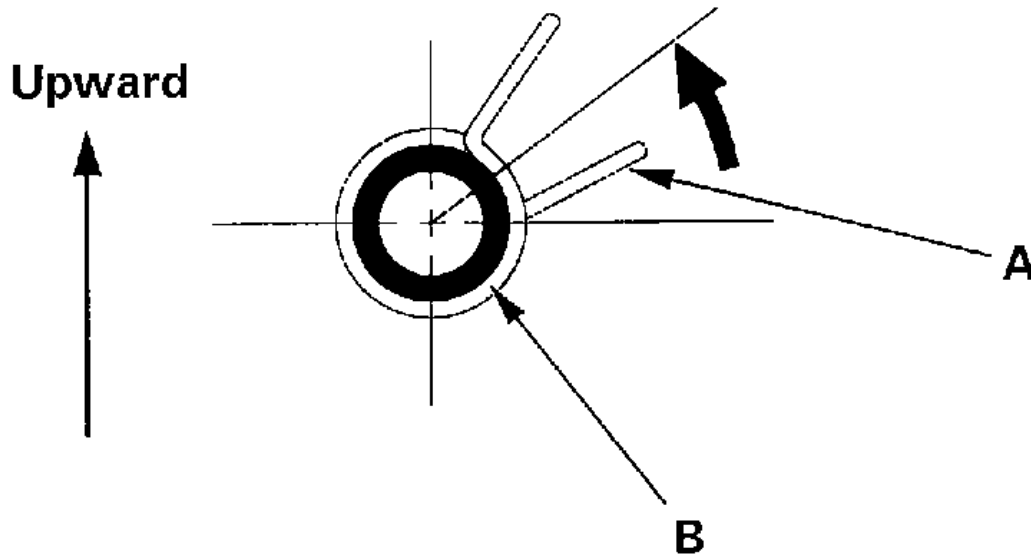


G01818964

Fig. 24: Removing The Rear Drain Tube

11. Install the frame and drain tube in the reverse order of removal, and note these items:
 - Before installing the frame, clear the drain tubes and drain valves using compressed air.
 - When installing, tie a string to the top end of the new drain tube and pull it up into the roof.
 - Check the frame seal.
 - Clean the surface of the frame.
 - When installing the frame, first attach the rear hooks into the body holes.
 - Make sure the connectors are plugged in properly.
 - When connecting the drain tube, slide it over the frame nozzle at least 10 mm (0.39 in.).

- Install the tube clip (A) on the drain tube (B) as shown.



G01818965

Fig. 25: Identifying Proper Orientation Of Tube Clip On The Drain Tube

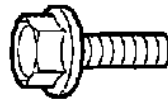
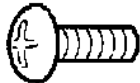
12. Check for water leaks. Let the water run freely from a hose without a nozzle. Do not use a high-pressure spray.

DRAIN CHANNEL SLIDER & CABLE ASSEMBLY REPLACEMENT

1. Remove the frame (see **FRAME & DRAIN TUBE REPLACEMENT**).
2. Remove these parts from the frame:
 - Sunshade (see **SUNSHADE REPLACEMENT**)
 - Moonroof motor (see **MOTOR REPLACEMENT**)
3. Put on gloves to protect your hands. Remove the screws (A, B) securing the slide stops (C), and cable tube rear brackets (D), cable tube side bracket mounting bolts (E) and the cable tube mounting screws (F) from both sides of the frame (G).

Fastener Locations

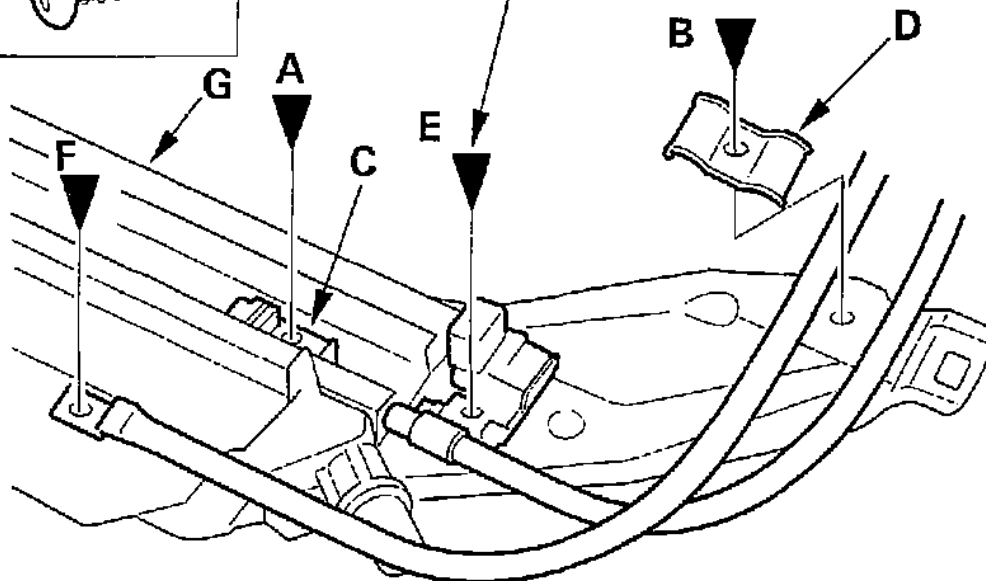
A ▶ : Screw, 2 B ▶ : Screw, 2 E ▶ : Bolt, 2



F ▶ : Screw, 2



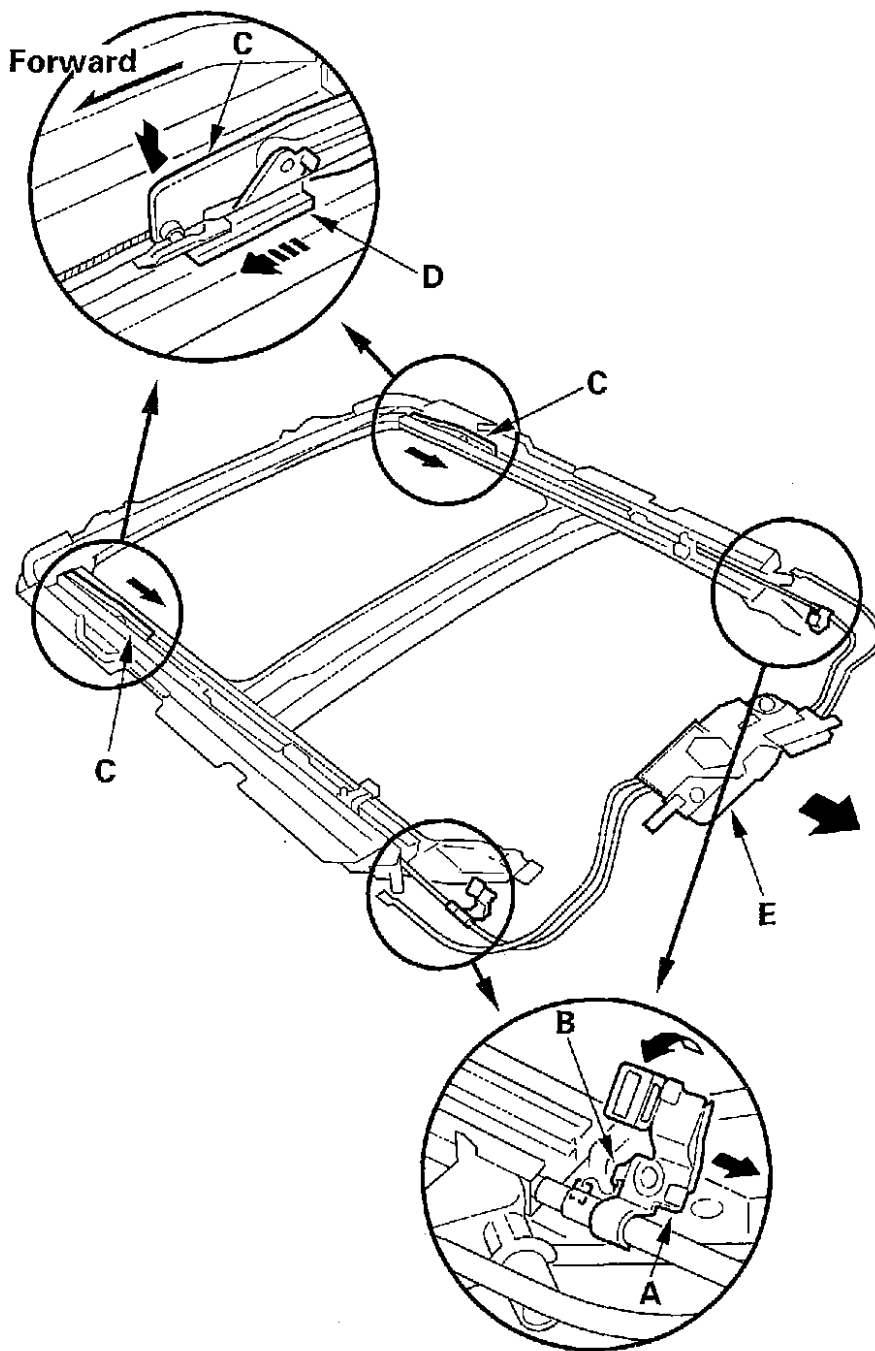
6 x 1.0 mm
9.8 N·m
(1.0 kgf·m, 7.2 lbf·ft)



G01818966

Fig. 26: Removing The Screws

4. Turn both cable tube side brackets (A) up to release the hooks (B) from the holes in both sides of the frame.

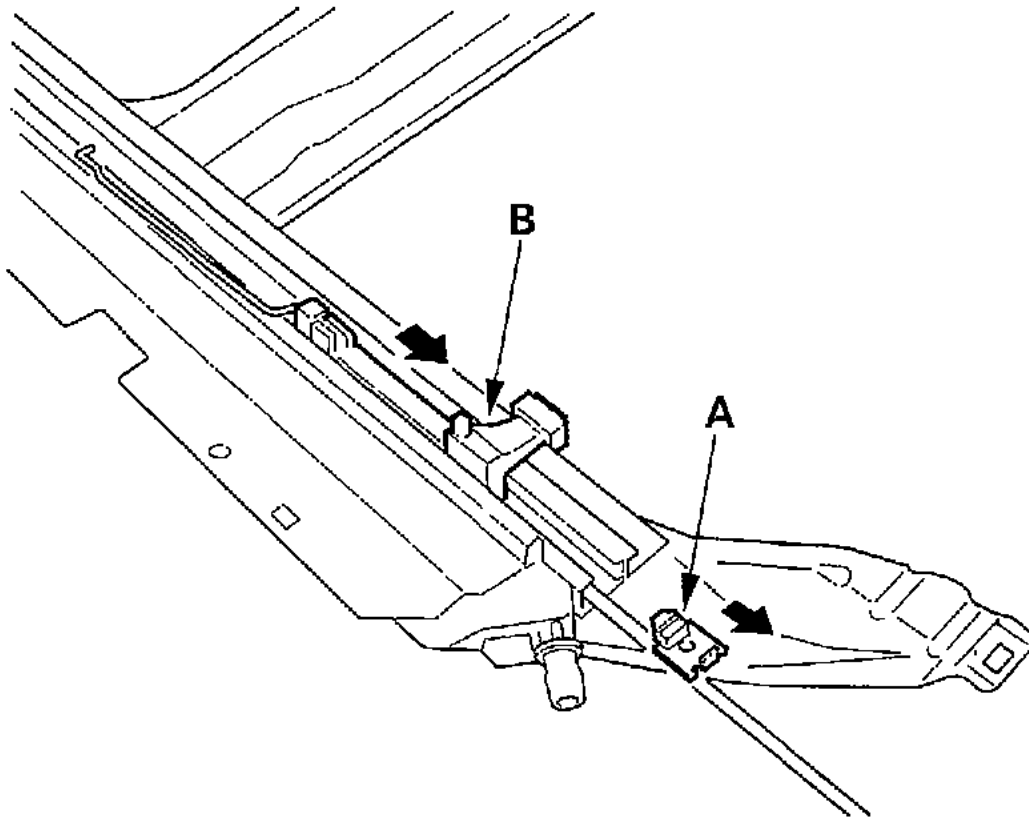


G01818967

Fig. 27: Releasing The Hooks

5. Pivot the glass bracket (C) down by sliding the link lifter (D) back, then slide both glass brackets back with the link lifters.
6. Slide the cable assembly (E) half-way.

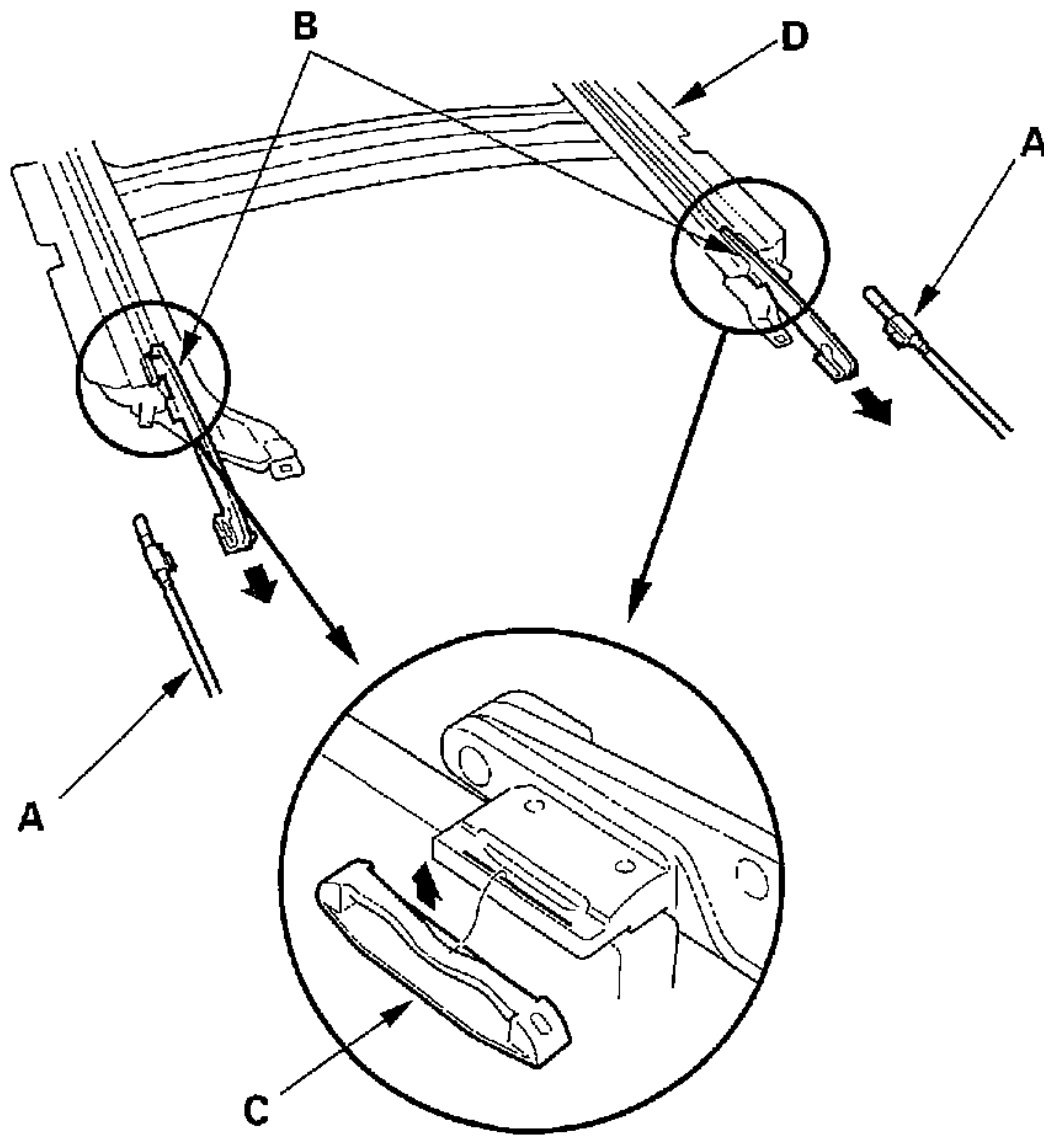
7. Remove the slide stops (A) and the drain channel sliders (B) from both sides.



G01818968

Fig. 28: Removing The Slide Stops & The Drain Channel Sliders

8. Slide the cable assembly (A) and both glass brackets (B) back, remove the deflector sliders (C) from both glass brackets, then remove them from the frame (D).

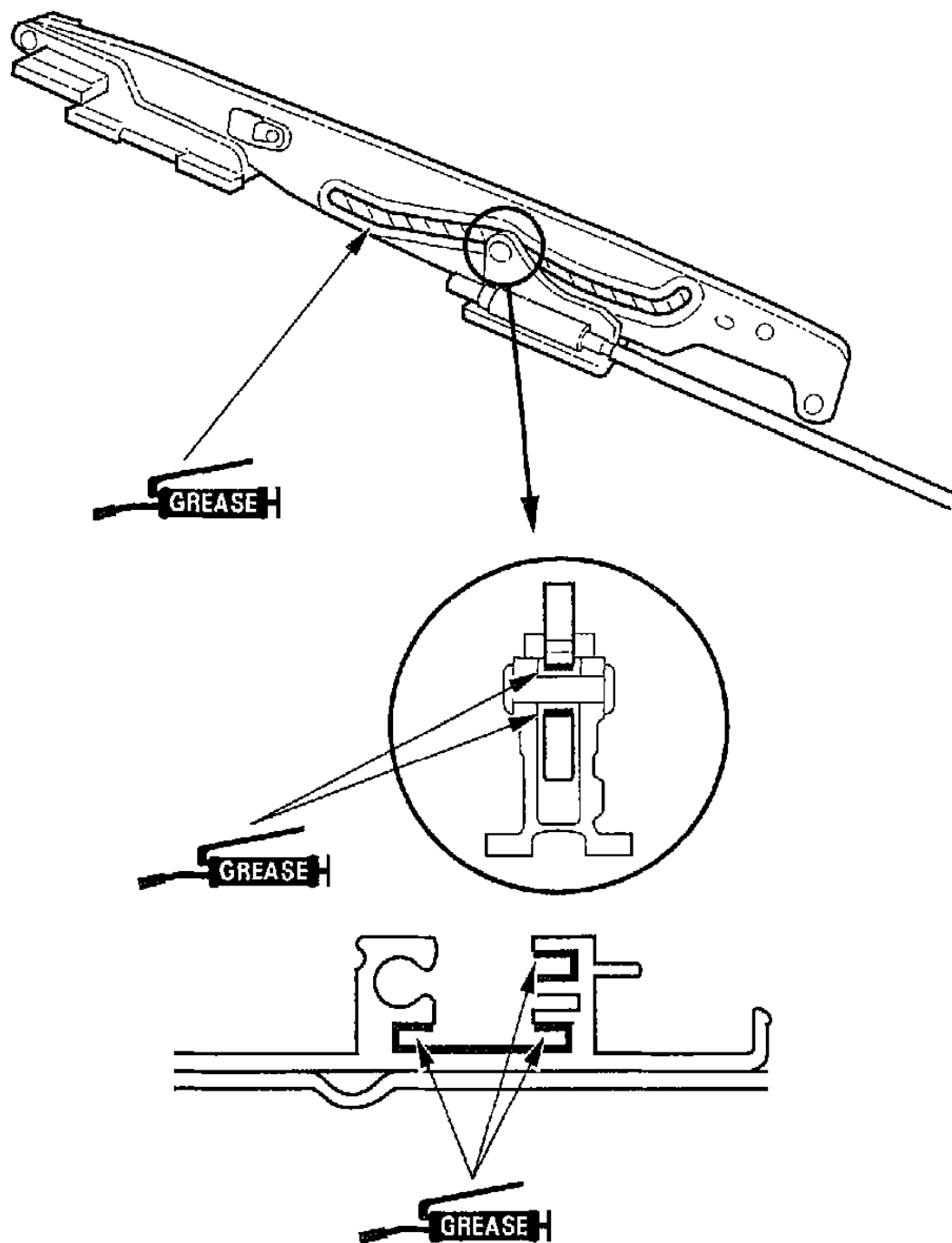


G01818969

Fig. 29: Removing The Deflector Sliders

9. Install the slider and cable assembly in the reverse order of removal, and note these items:
- Damaged parts should be replaced.
 - Apply multipurpose grease to the glass bracket (A) and guide rail portion of the frame (B) indicated by the arrows.
 - Before reinstalling the motor, make sure both link lifters are parallel, and in the fully closed position.

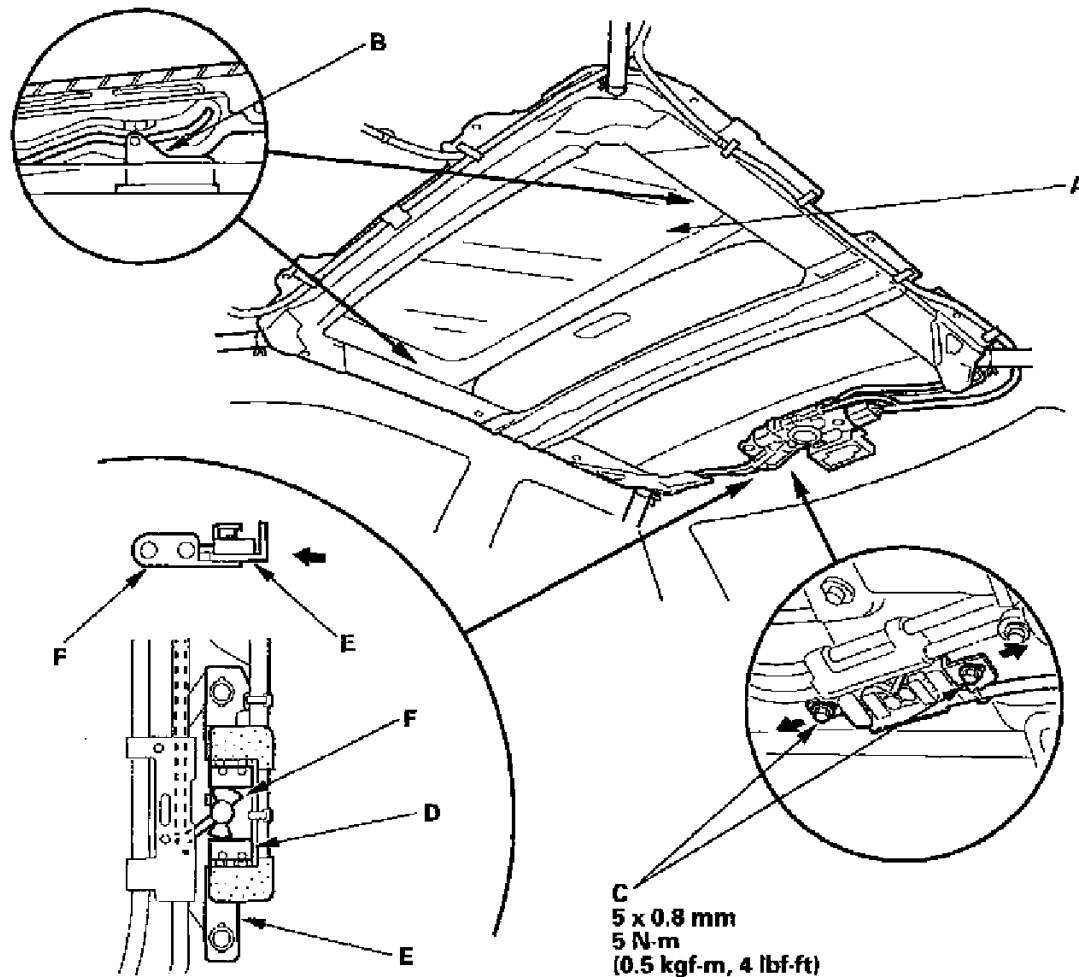
- Before reinstalling the motor, install the frame and glass, then check the opening drag (see **CLOSING FORCE & OPENING DRAG CHECK**).



G01818970

Fig. 30: Applying Multipurpose Grease**LIMIT SWITCH ADJUSTMENT**

1. Remove the headliner (see **HEADLINER REMOVAL/INSTALLATION**).
2. With the moonroof wrench, close the glass (A) fully:
 - Make sure both link lifters (B) are parallel, and in the position shown.
 - Check the glass fit to the roof panel and the glass height (see **GLASS REPLACEMENT**).



G01818971

Fig. 31: Adjusting Limit Switch

3. With an open-end wrench, loosen the limit switch mounting bolts (C).
4. Adjust the limit switch (D):
 - Move the switch plate (E) a little at a time, then secure it at the position where you hear a faint click when the switch cam (F) pushes the limit switch (open/close).

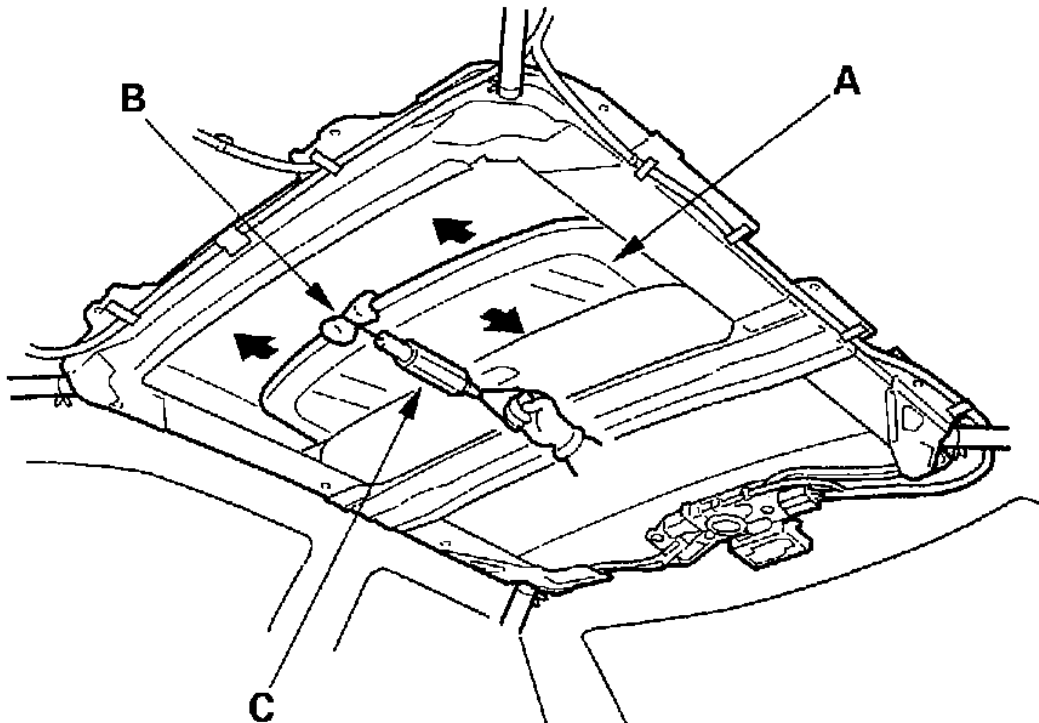
- Check that the switch plate contacts the switch bracket (F).
- Check the operation of the glass (from the tilt-up position to fully closed position, from the fully open position to the fully closed position) by operating the moonroof switch.

NOTE: Adjust the switch plate until the glass opens and closes correctly.

- Reinstall all remaining parts in the reverse order of removal.

CLOSING FORCE & OPENING DRAG CHECK

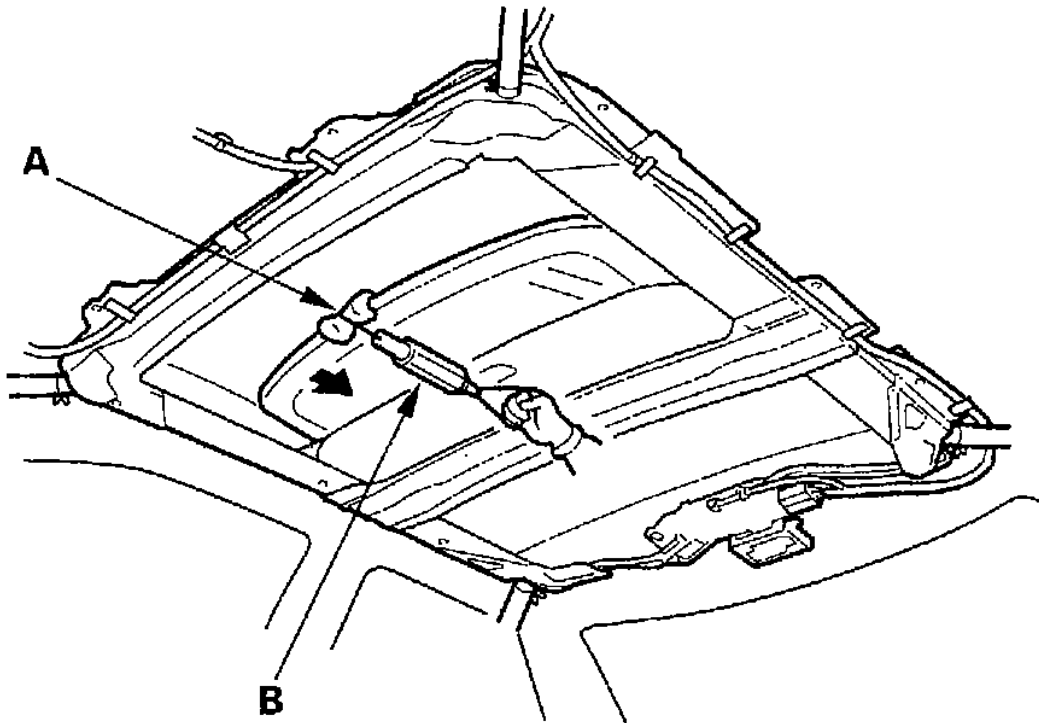
1. Remove the headliner (see HEADLINER REMOVAL/INSTALLATION).
2. Closing force check:
 - With a shop towel (A) on the leading edge of the glass (B), attach a spring scale (C) as shown.
 - Have an assistant hold the switch to close the glass while you measure the force required to stop it.
 - Read the force as soon as the glass stops moving, then immediately release the switch and spring scale.



G01818972

Fig. 32: Checking Closing Force

3. If the force is not within specification, remove the moonroof motor (see **MOTOR REPLACEMENT**), then check:
 - The gear portion and the inner cable for breakage and damage. If the gear portion is broken, replace the motor. If the inner cable is damaged, remove the frame (see **FRAME & DRAIN TUBE REPLACEMENT**), and replace the cable (see **DRAIN CHANNEL SLIDER & CABLE ASSEMBLY REPLACEMENT**).
 - The moonroof motor (see **MOTOR TEST**). If the motor fails to run or doesn't turn smoothly, replace it.
 - The opening drag. Go to step 4.
4. Opening drag check: Protect the leading edge of the glass with a shop towel (A). Measure the effort required to open the glass using a spring scale (B) as shown.

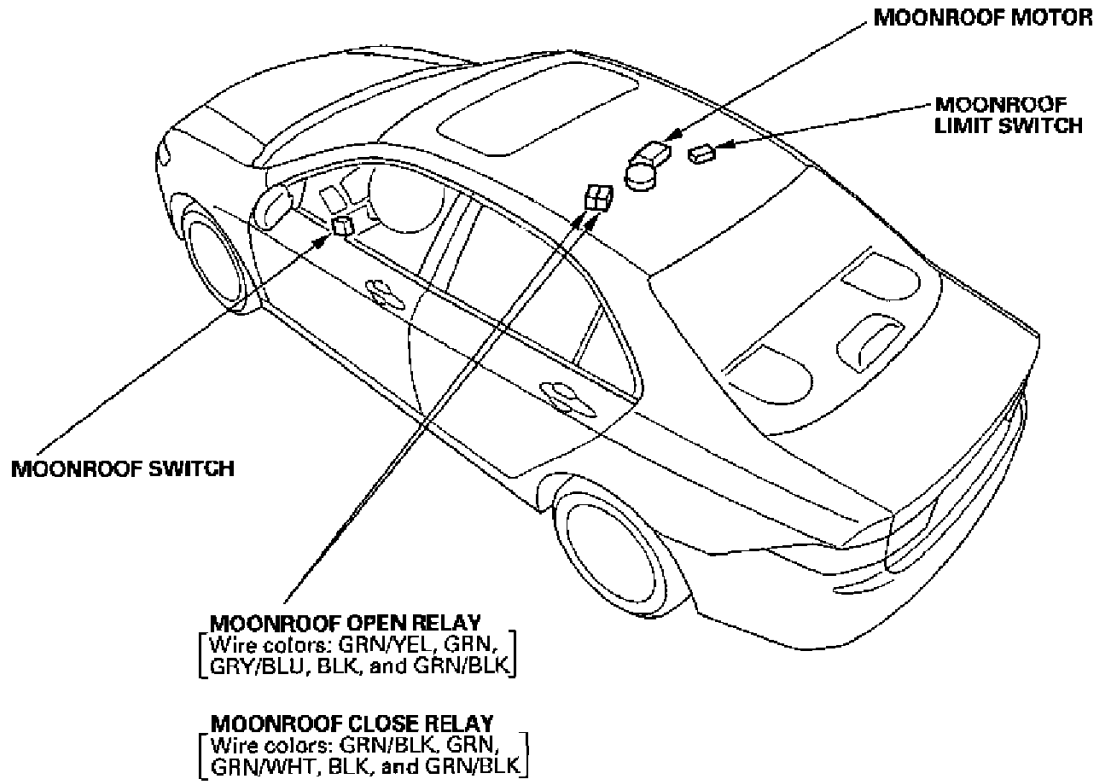


G01818973

Fig. 33: Checking Opening Drag

5. If the load is over 40 N (4 kgf, 9 lbf), check:
 - The side clearance and glass height adjustment (see **GLASS REPLACEMENT**).
 - For broken or damaged sliding parts. If any sliding parts are damaged, replace them.

COMPONENT LOCATION INDEX



G01821037

Fig. 34: Locating Moonroof Components

CIRCUIT DIAGRAM

2004 Acura TSX

2004 ACCESSORIES & EQUIPMENT Moonroof - TSX

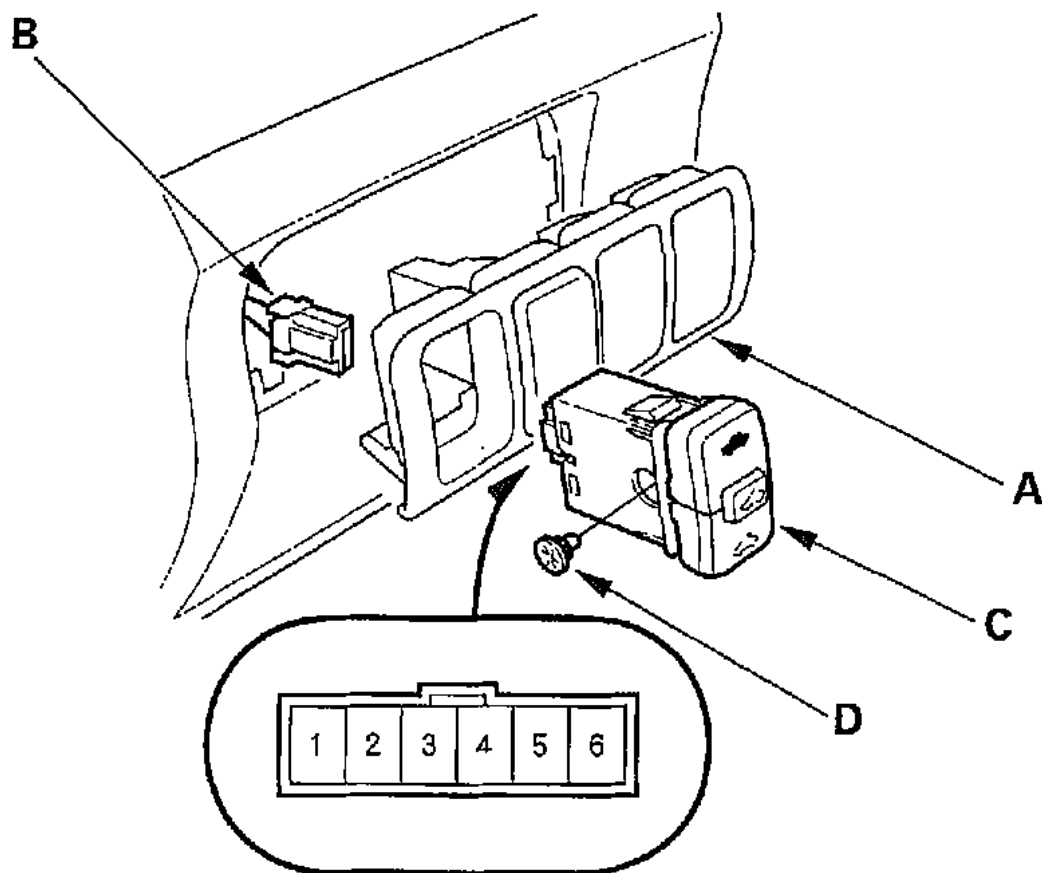


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Fig. 35: Moonroof Wiring Diagram**SWITCH TEST**

NOTE: The moonroof can still be operated for about 10 minutes after the ignition switch is turned from the "II" to the "I" or "O" positions, as long as none of the doors are opened.

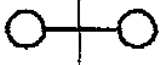
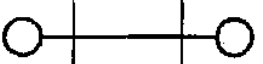
1. Carefully pry out the switch panel (A), then disconnect the 6P connector (B) from the switch.



G01821099

Fig. 36: Removing Moonroof Switch

2. Carefully push out the moonroof switch (C) from behind the switch panel.
3. Check for continuity between the terminals in each switch position according to the table.

Terminal Position	2		5	1	3	4	6
CLOSE							
TILT							
OPEN							

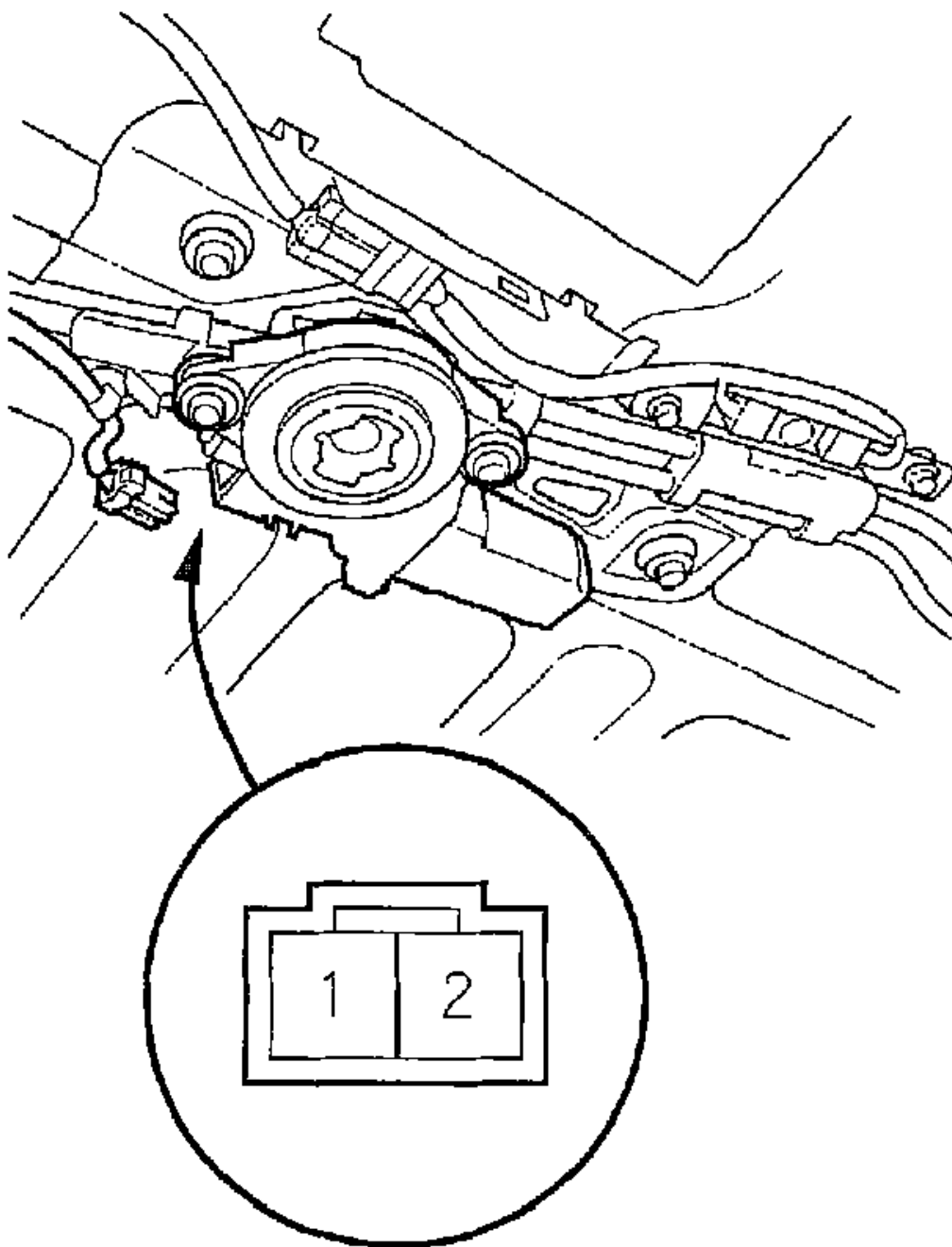
G01821100

Fig. 37: Moonroof Switch Test Table

- If the continuity is not as specified, replace the bulb (D) or the switch.

MOTOR TEST

- Remove the headliner (see **HEADLINER REMOVAL/INSTALLATION**).
- Disconnect the 2P connector from the moonroof motor.



G01821101

Fig. 38: Disconnecting The 2P Connector From The Moonroof Motor

3. Check the motor by connecting power and ground according to the table.

Terminal Position	1	2
OPEN	⊕	⊖
CLOSE	⊖	⊕

G01821102

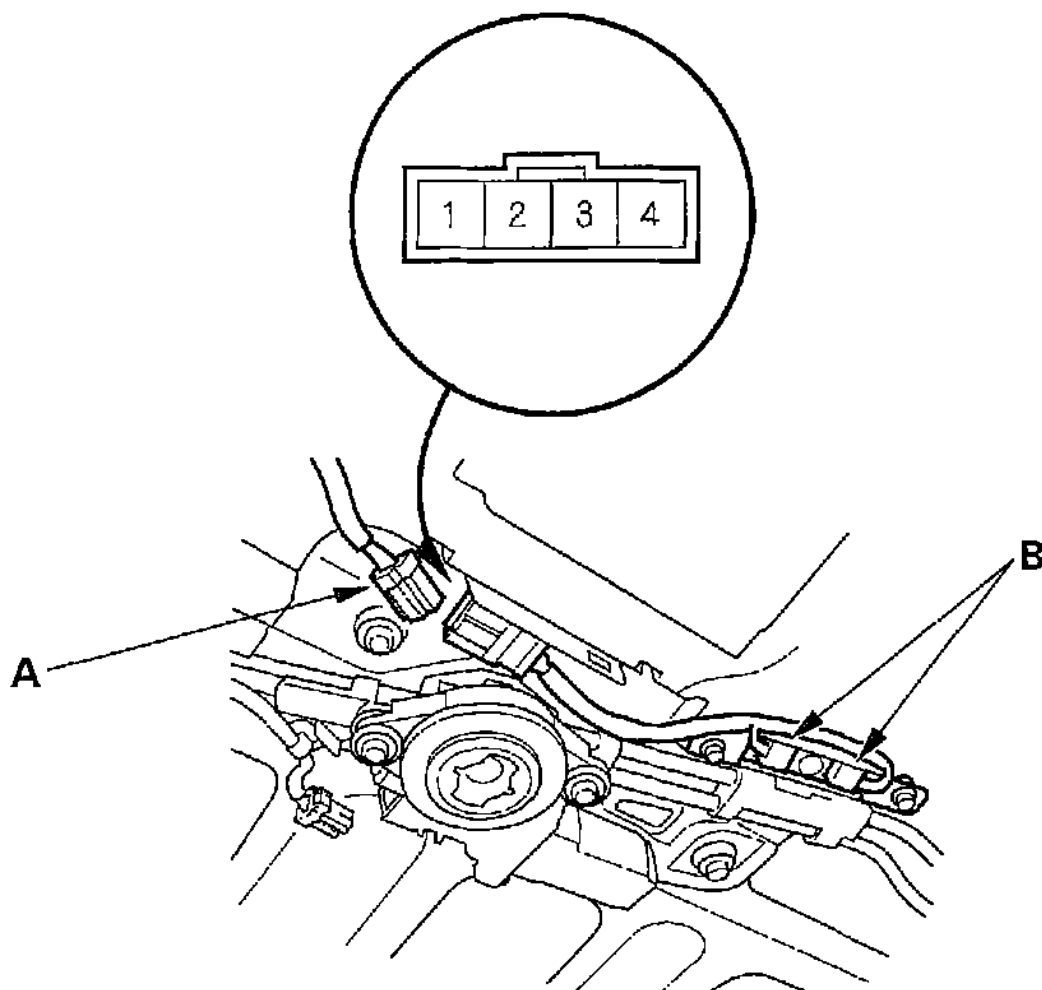
Fig. 39: Moonroof Motor Test Table

4. If the motor does not run, replace it.

NOTE: See closing force check (see CLOSING FORCE & OPENING DRAG CHECK) for motor clutch test.

LIMIT SWITCH TEST

1. Remove the headliner (see HEADLINER REMOVAL/INSTALLATION).
2. Disconnect the 4P connector (A) from the moonroof limit switch (B).



G01821103

Fig. 40: Disconnecting The 4P Connector From The Moonroof Limit Switch

3. Check for continuity between the terminals in each switch position according to the table.

Terminal Position	1	2	3	4
TILT				
OPEN				
CLOSE				

G01821104

Fig. 41: Limit Switch Test Table

4. If the continuity is not specified, replace the moonroof motor assembly.