

# BODY

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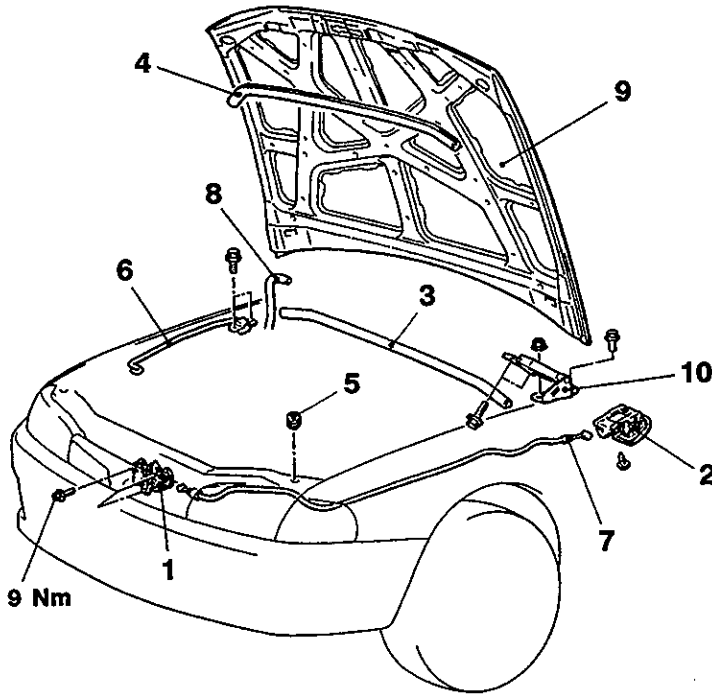
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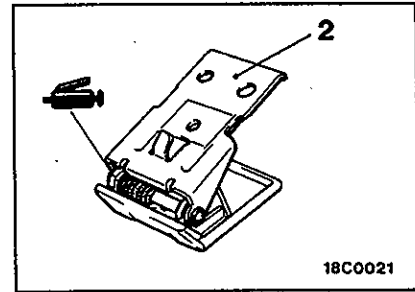
# HOOD

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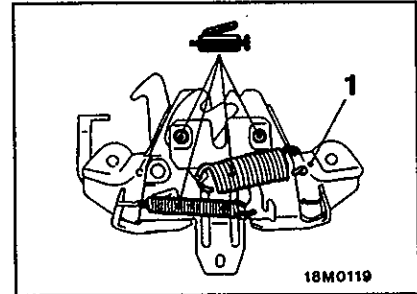
## REMOVAL AND INSTALLATION



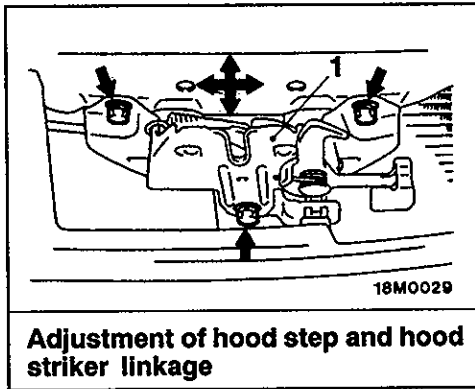
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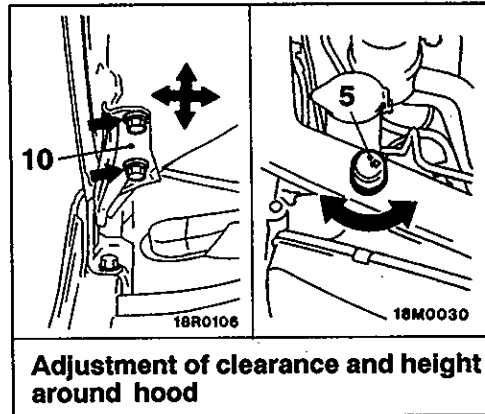


18M0119



18M0029

**Adjustment of hood step and hood striker linkage**



18R0106

18M0030

**Adjustment of clearance and height around hood**

1. Hood latch
2. Hood lock release handle
3. Hood weatherstrip
4. Hood weatherstrip  
<Vehicles with air conditioner>
5. Bumper
6. Hood support rod

### Hood lock release cable removal steps

- Splash shield <Driver's side>  
(Refer to P.42-7.)
- 7. Hood lock release cable

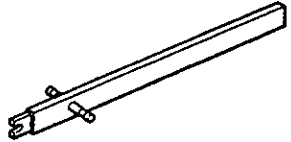
### Hood and hood hinge removal steps

8. Washer hose connection
9. Hood
10. Hood hinge

## TRUNK LID &lt;Sedan&gt;

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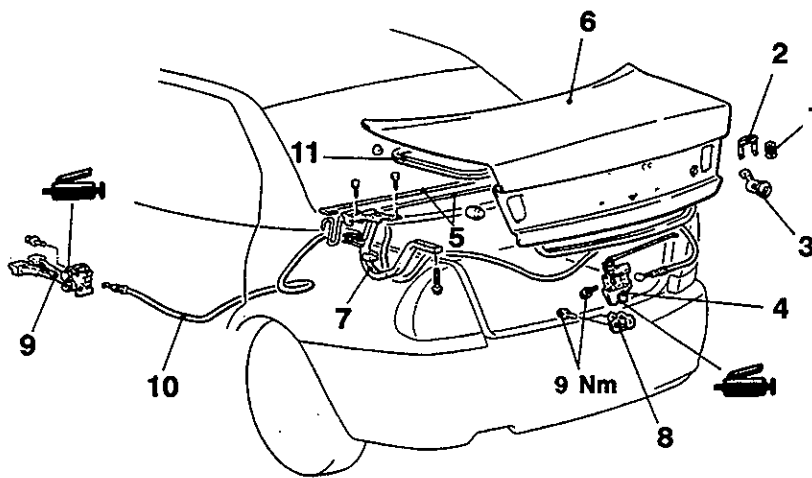
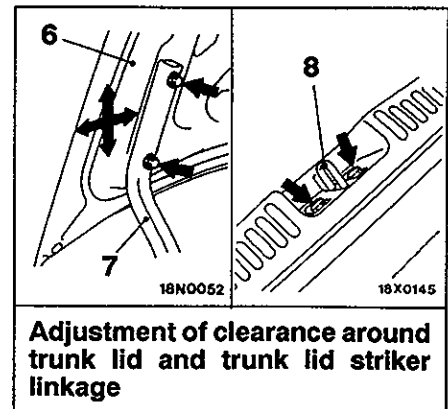
## SPECIAL TOOL

Tool	Number	Name	Use
	MB991244	Torsion bar remover and installer	Removal and installation of trunk lid torsion bar

## TRUNK LID

42100220057

## REMOVAL AND INSTALLATION

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00004658

## Trunk lid panel removal steps

- Licence plate lamp
  - Rear lid garnish
- ▶C◀
1. Bumper
  2. Cylinder lock retainer
  3. Trunk lid lock cylinder
  4. Trunk lid latch
  5. Trunk lid torsion bar
  6. Trunk lid panel

## Trunk lid latch removal

4. Trunk lid latch

## Trunk lid hinge removal steps

- Rear shelf trim (Refer to GROUP 52A.)
6. Trunk lid panel assembly
  7. Trunk lid hinge

## Trunk lid striker removal steps

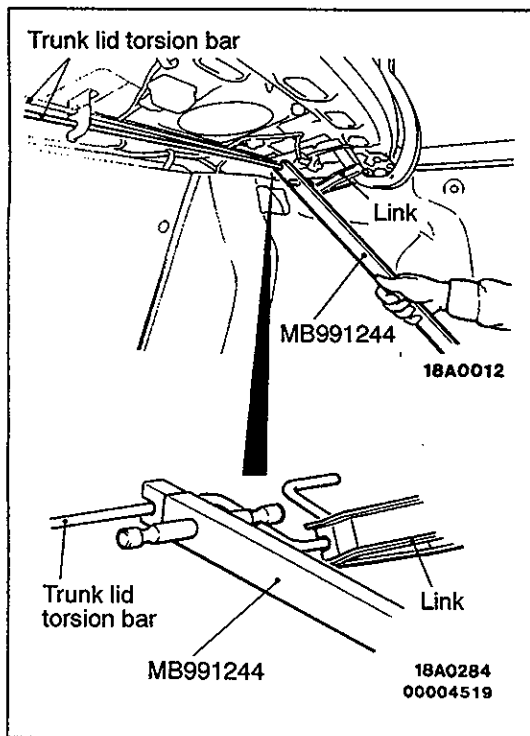
- Rear end trim (Refer to GROUP 52A.)
- 8. Trunk lid striker

## Trunk lid release handle and cable removal steps

- Front seat (driver's side) (Refer to GROUP 52A.)
  - Rear seat (Refer to GROUP 52A.)
  - Front scuff plate (driver's side) (Refer to GROUP 52A.)
  - Rear scuff plate (driver's side) (Refer to GROUP 52A.)
  - Trunk room side trim (driver's side) (Refer to GROUP 52A.)
4. Trunk lid latch
  9. Trunk lid release handle
  10. Trunk lid release cable

## Trunk lid weatherstrip removal

- ▶A◀ 11. Trunk lid weatherstrip removal



**REMOVAL SERVICE POINT**

**◀A▶ TRUNK LID TORSION BAR REMOVAL**

1. Disconnect the body harness and the harness connector of the rear shelf lower panel.
2. Install the special tool as shown in the illustration, and then remove the torsion bar from the link while pushing the special tool downwards. Next, repeat the procedure from the other side.

**Caution**

Be sure to attach the special tool properly, as the body or parts could be damaged when the torsion bar is removed from the special tool.

**INSTALLATION SERVICE POINTS**

**▶A◀ TRUNK LID WEATHER STRIP INSTALLATION**

Install the trunk lid weatherstrip so that the marking and the joint are aligned with the body centre line.

**▶B◀ TRUNK LID TORSION BAR INSTALLATION**

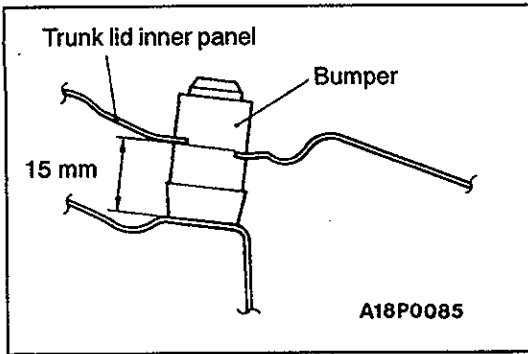
1. Check the colour of the identification mark at the middle of the torsion bars to make sure that the correct torsion bars are being used.

Torsion bar	Identification colour	
	Vehicles without rear spoiler	Vehicles with rear spoiler
L.H.	–	Green
R.H.	Red	Yellow

2. Insert the end of the torsion bar through the link side mating hole.
3. Install the special tool in the same way as when removing the torsion bar, and then twist the torsion bar while hooking it onto the link. After this, hook the torsion bar onto the holder.

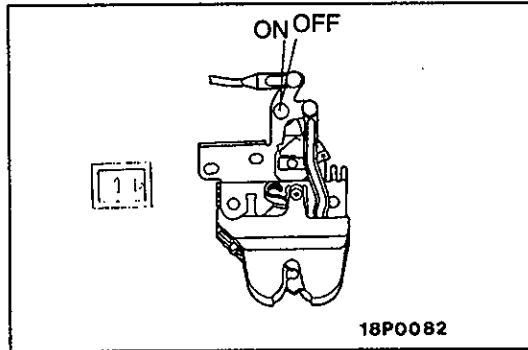
**Caution**

Be sure to attach the special tool properly, as the body or parts could be damaged when the torsion bar is removed from the special tool.



**▶◀ BUMPER INSTALLATION**

Install the bumper as shown in the figure.



**INSPECTION**

42100410027

**TRUNK LID LATCH CONTINUITY CHECK**

Switch position	Terminal No.1	Body earth
ON (Latch open)	○	○
OFF (Latch shut)		

**FENDER**

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**SEALANT**

Item	Specified sealant	Remark
Splash shield	3M ATD Part No. 8625 or equivalent	Ribbon sealer

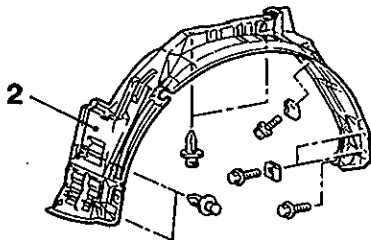
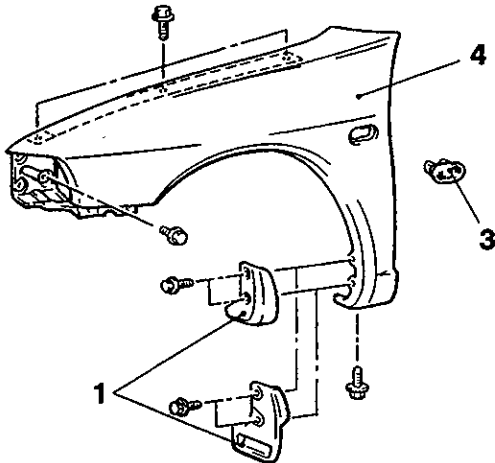
**FENDER**

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**REMOVAL AND INSTALLATION**

**Pre-removal and Post-installation Operation**

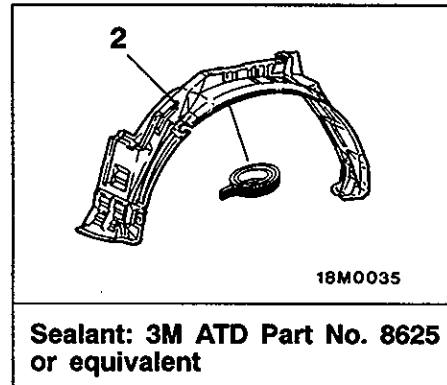
- (1) Front Bumper Removal and Installation  
(Refer to GROUP 51.)
- (2) Front Turn-signal Lamp Removal and Installation  
(Refer to GROUP 54.)
- (3) Side Airdam Removal and Installation  
(Refer to GROUP 51 – Aero Parts.)



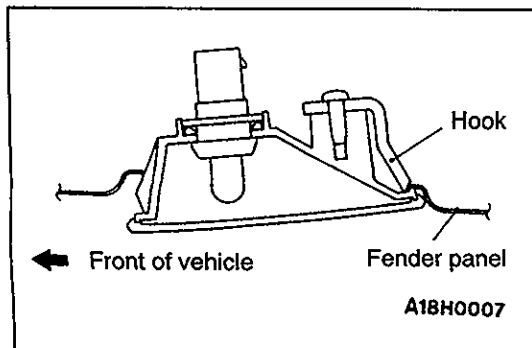
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**Removal steps**

- 1. Stone guard or mud guard
- 2. Splash shield



- ▶A◀ 3. Side turn signal lamp
- 4. Fender



**INSTALLATION SERVICE POINT**

▶A◀ **SIDE TURN-SIGNAL LAMP INSTALLATION**

Insert the hook into the fender panel, and then install the side turn signal lamp.

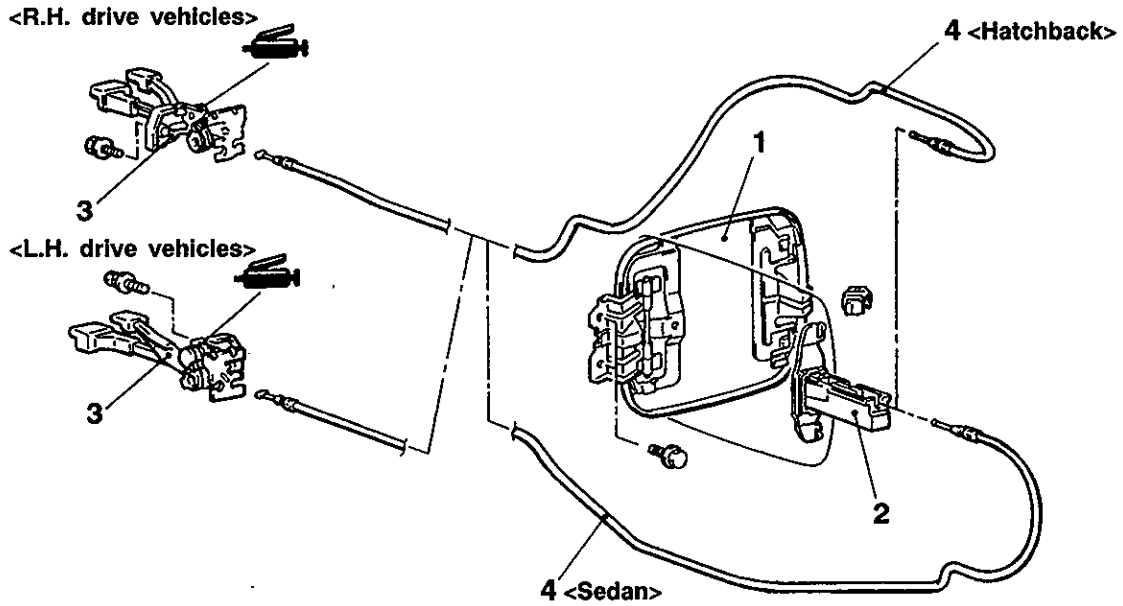
# FUEL FILLER DOOR

## REMOVAL AND INSTALLATION

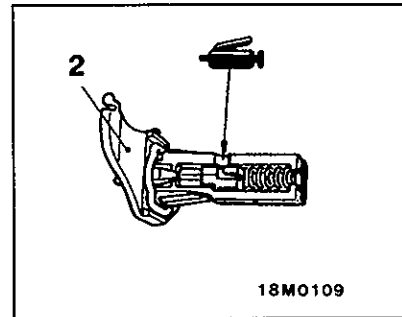
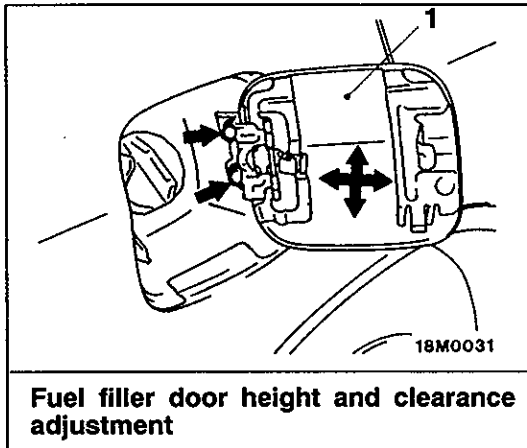
### Pre-removal and Post-installation Operation

- (1) Front Seat (driver's side), Rear Seat Removal and Installation (Refer to GROUP 52A.)
- (2) Front Scuff Plate (driver's side), Rear Scuff Plate (driver's side), Center Pillar Lower Trim (driver's side),

Quarter Trim (driver's side) <Hatchback>, Trunk Side Trim (driver's side) <Sedan> Removal and Installation (Refer to GROUP 52A.)



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### Removal steps

1. Fuel filler door pannel assembly
2. Fuel filler door hook assembly
3. Lid lock release handle
4. Fuel filler door lock release cable



# WINDOW GLASS

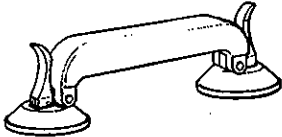

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## ADHESIVES

Items	Specified adhesives
Windshield	3M ATD Part No. 8609 Super Fast Urethane Auto Glass Sealants or equivalent
Quarter window glass	
Tailgate window glass	
Rear window glass	

## SPECIAL TOOLS

42200060065

Tool	Number	Name	Use
	MB990480	Glass holder	<ul style="list-style-type: none"> <li>● Removal and installation of windshield</li> <li>● Removal and installation of tailgate window glass</li> <li>● Removal and installation of rear window glass</li> </ul>
	MB990449	Window moulding remover	Removal of roof drip moulding

## WINDOW REPAIR

42200560046

The following glass sections are installed by means of a liquid urethane adhesive method.

- Windshield
- Quarter window glass
- Tailgate window glass
- Rear window glass

**ITEMS NEEDED**

Name	Remarks
Adhesive	3M ATD Part No. 8609 Super Fast Urethane Auto Glass Sealant or equivalent
Primer	3M ATD Part No. 8608 Super Fast Urethane Primer or equivalent
Spacers	Available as service part
Anti-rust solvent (or Tectyl 506T...Valvoline Oil Company)	For rust prevention
Isopropyl alcohol	For grease removal from bonded surface
Steel piano wire	Dia. x length...0.6mm x 1m For cutting adhesive
Adhesive gun	For pressing-out adhesive

**NOTE**

The TEROSON 127.37V auto window sealer kit can also be used. If using the TEROSON 127.37V auto window sealer kit, follow the instructions in the manual included with the kit.

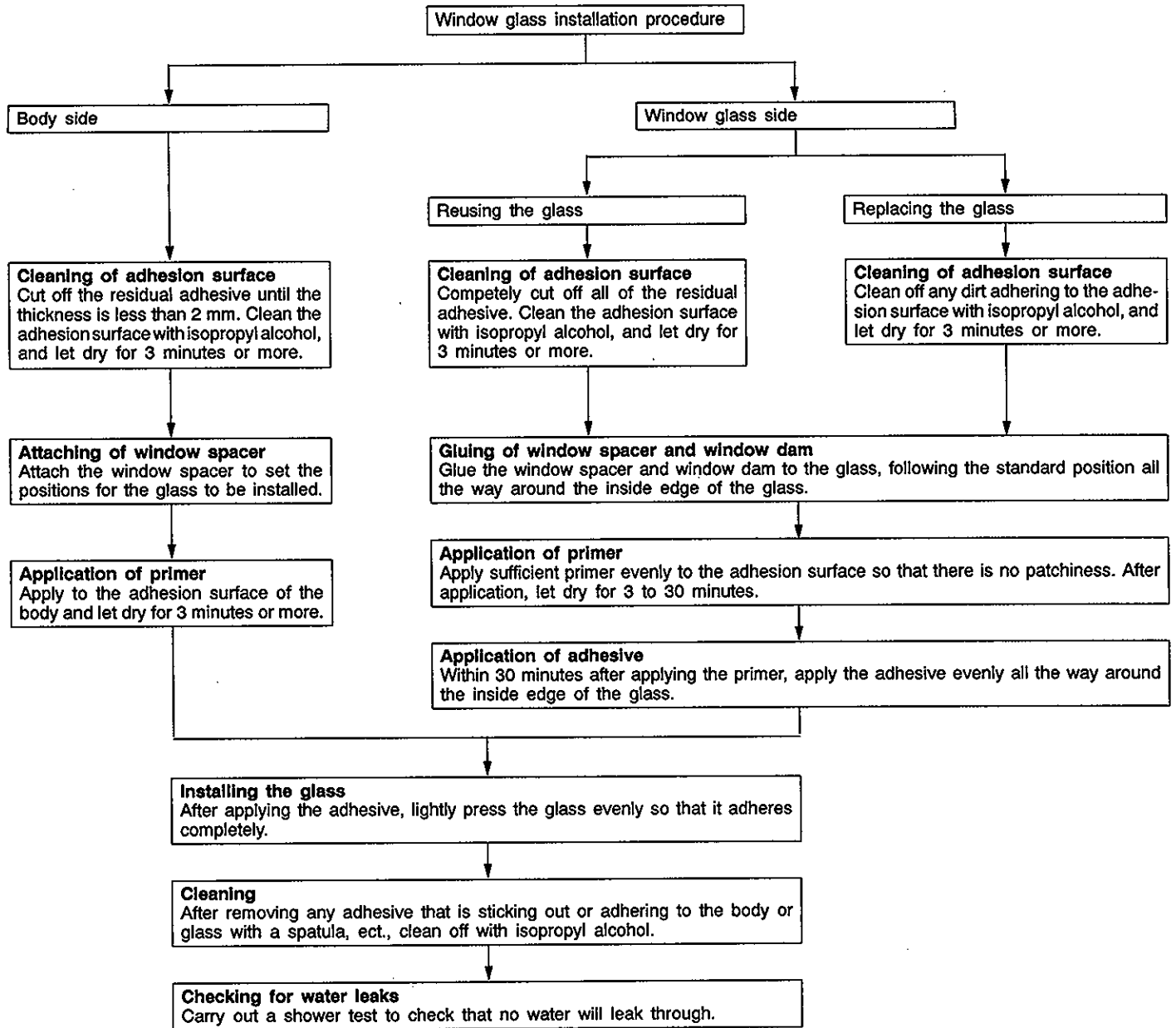
**HANDLING OF AUTO WINDOW SEALER**

Keep the sealant in a cool place, not exposed to the direct rays of the sun. Do not place any heavy article on the sealant nor press it, otherwise it will become deformed. Avoid storing the sealant for more than 6 months, because it will lose its sealing effect.

**BODY PINCH-WELD FLANGE SERVICING.**

Before servicing the body pinch-weld flange, remove old adhesive completely. If the flange requires painting, bake it after painting is completed.

**WORKING PROCESS**



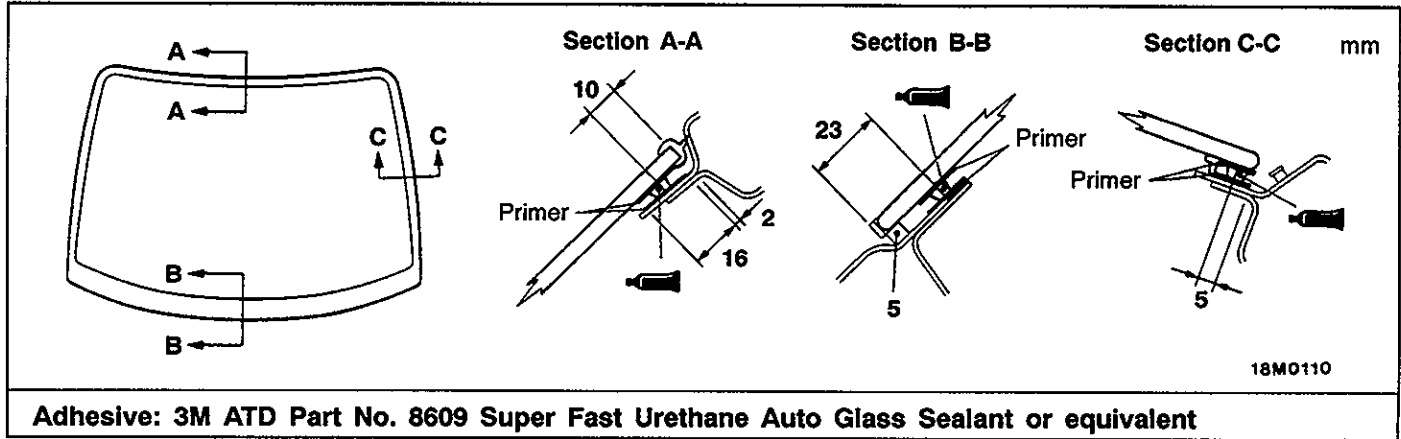
**WINDSHIELD**

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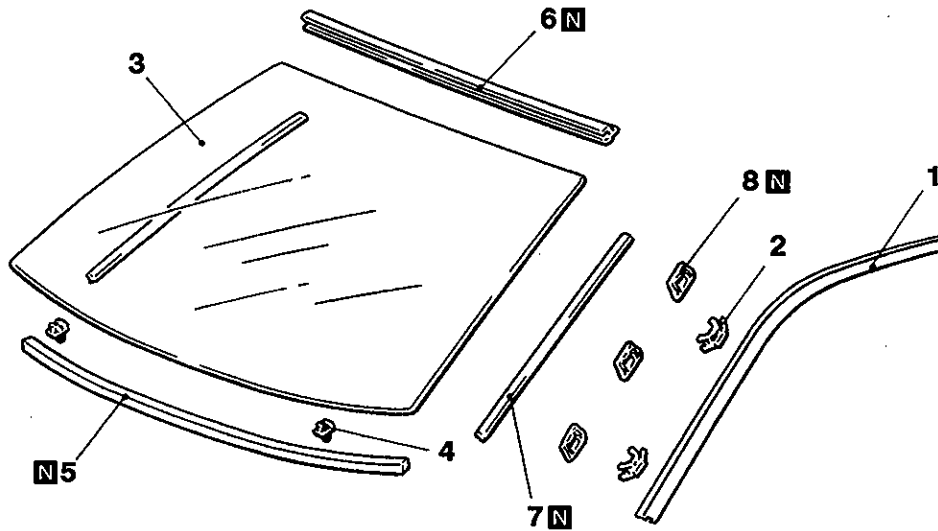
**REMOVAL AND INSTALLATION**

**Pre-removal and Post-Installation Operation**  
 (1) Front Pillar Trim Removal and Installation  
 (Refer to GROUP 52A.)

(2) Headlining Removal and Installation



**Adhesive: 3M ATD Part No. 8609 Super Fast Urethane Auto Glass Sealant or equivalent**

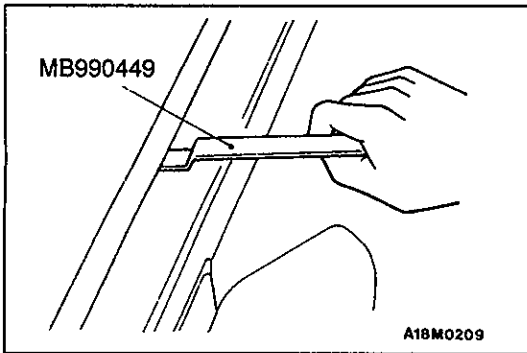


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**Removal steps**

- ◀A▶ 1. Roof drip moulding
- ▶▶ 2. Windshield clip
- Front deck garnish  
 (Refer to GROUP 51 – Windshield  
 Wiper and Washer.)
- ◀B▶ ▶A▶ 3. Windshield

- ▶▶▶▶ 4. Windshield spacer
- ▶▶▶▶ 5. Window spacer
- ▶▶▶▶ 6. Windshield upper moulding
- ▶▶▶▶ 7. Window dam
- ▶▶▶▶ 8. Clip



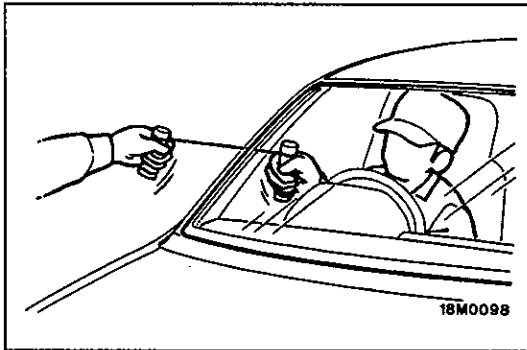
**REMOVAL SERVICE POINTS**

**◀A▶ ROOF DRIP MOULDING REMOVAL**

Use the special tool to lever out the moulding.

**Caution**

If the moulding has become warped, it should not be reused.



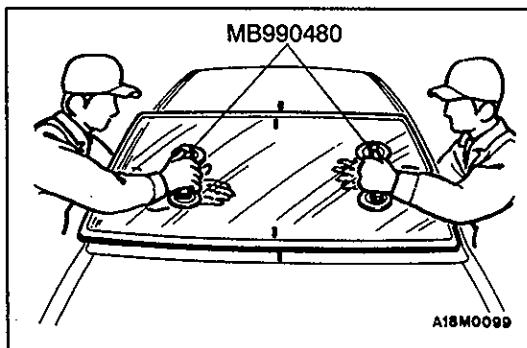
**◀B▶ WINDSHIELD REMOVAL**

1. In order to protect the body (paint surface), apply cloth tape to all body areas around the installed windshield glass.
2. Using a sharp-point drill, make hole in the windshield glass adhesive.
3. Pass the piano wire from the inside of the vehicle through the hole.
4. Pull the piano wire alternately from the inside and outside along the windshield glass to cut the adhesive.

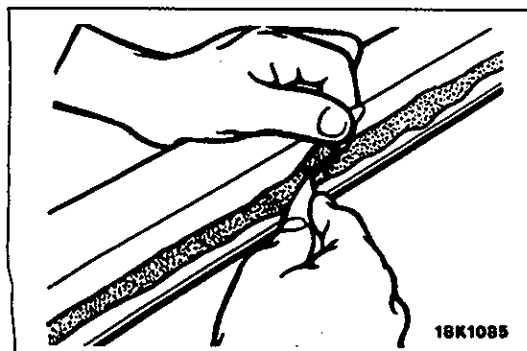
**Caution**

Do not let the piano wire touch the edge of the windshield glass.

5. Make mating marks on the windshield glass and body.



6. Use the special tool to remove the windshield glass.



7. Use a knife to cut away the remaining adhesive so that the thickness is within 2 mm around the entire circumference of the body flange.

8. Finish the flange surfaces so that they are smooth.

**Caution**

- (1) Be careful not to remove more adhesive than is necessary.
- (2) Be careful also not to damage the paintwork on the body surface with the knife. If the paintwork is damaged, repair the damaged area with repair paint or anti-rust agent.

9. When reusing the glass, remove the adhesive still adhering to the glass, and clean with isopropyl alcohol.
10. Clean the body side in the same way.

**Caution**

Let the cleaned places stand for 3 minutes or more, and carry out the next procedures after they have dried. Also, do not touch any surface that has been cleaned.

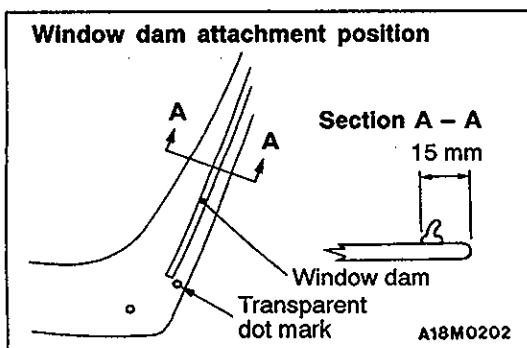
## INSTALLATION SERVICE POINTS

### ▶A◀ CLIP/WINDOW DAM/WINDOW SPACER/ WINDSHIELD UPPER MOULDING/WINDSHIELD INSTALLATION

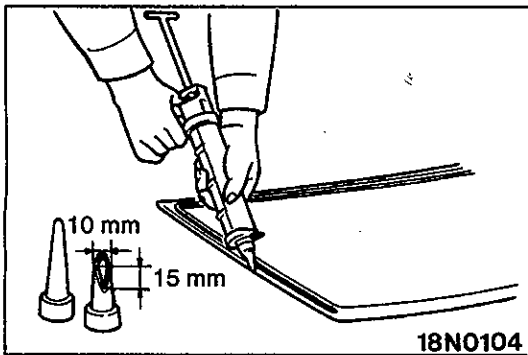
1. When replacing the glass, temporarily set the glass against the body, and place a mating mark on the glass and body.
2. Use isopropyl alcohol to degrease the inside and outside of the windshield glass and the body flanges.
3. Soak a sponge in the primer, and apply evenly to the glass and the body in the specified places.
4. Apply the primer, and then let it dry for 3 to 30 minutes.

**Caution**

- (1) The primer strengthens the adhesive, so be sure to apply it evenly around the entire circumference. However, a too thick application will weaken the adhesive.
- (2) Do not touch the coated surface.



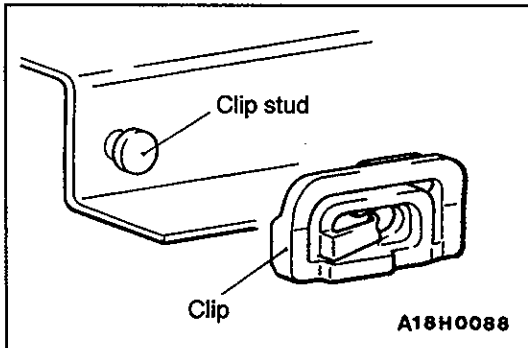
5. Attach the window dam in the specified positions so that there are no bends or lifts on the inside of the windshield.
6. Attach the window spacers so that the clearance at both left and right will be the same during installation.
7. Install the windshield upper moulding.



8. Fill a sealant gun with adhesive. Then apply the adhesive evenly around the windshield within 30 minutes after applying the primer.

**NOTE**

Cut the tip of the sealant gun nozzle into a V shape to simplify adhesive application.



9. Place the clips onto the clip studs.

10. Align the mating marks on the glass and the body, and lightly press the windshield glass evenly so that it adheres completely.
11. Use a spatula or the like to remove any excessive adhesive. Then clean the surface with isopropyl alcohol. Install the roof drip moulding before the adhesive hardens. Try not to move the vehicle until the adhesive sets.
12. Wait 30 minutes or more, and then test for water leakage.

**Caution**

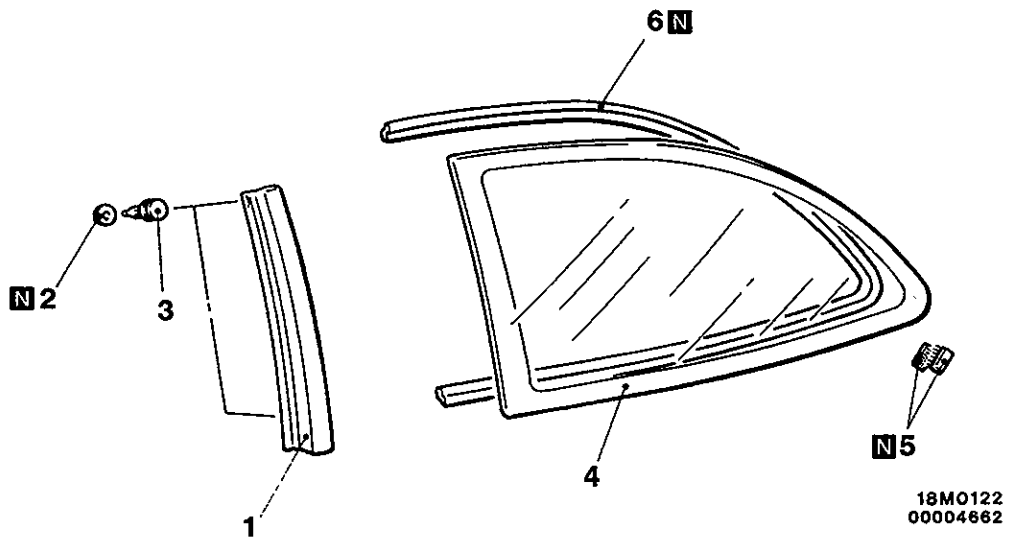
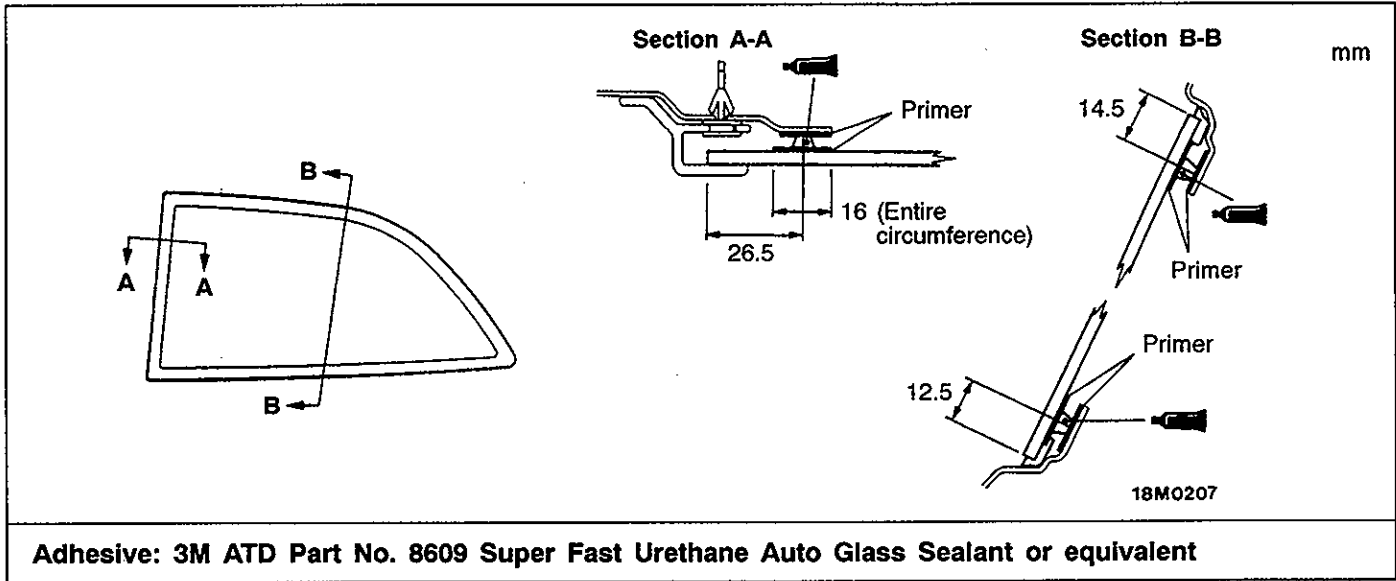
- (1) Do not move the vehicle unless absolutely necessary.
- (2) When testing for water leakage, do not pinch the end of the hose to spray the water.

**QUARTER WINDOW GLASS <Hatchback>**

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**REMOVAL AND INSTALLATION**

**Pre-removal and Post-installation Operation**  
 (1) Quarter Trim, Center Pillar Trim and Rear Pillar Trim Removal and Installation (Refer to GROUP 52A.)      (2) Headlining Removal and Installation



**Removal steps**

1. Quarter window garnish
2. Packing
3. Clip
4. Quarter window glass
5. Dual-lock fastener
6. Window dam



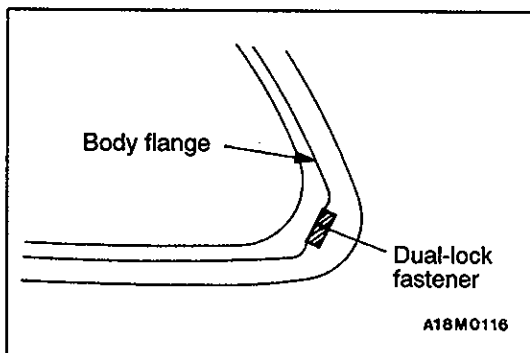


**REMOVAL SERVICE POINT****◀A▶ QUARTER WINDOW GLASS REMOVAL**

Remove the quarter window glass by the same procedure as for the windshield. (Refer to P.42-13.)

**INSTALLATION SERVICE POINTS****▶A◀ WINDOW DAM/DUAL-LOCK FASTENER/QUARTER WINDOW GLASS INSTALLATION**

1. Use isopropyl alcohol to degrease the window dam and dual lock fastener mounting surfaces on both the glass and the body.
2. Attach the window dam.
3. Install the dual lock fastener so that it is lined up with the body flange.
4. Apply primer and adhesive. (Refer to P.42-16.)
5. Install the glass in the same way as for the windshield. (Refer to P.42-14.)

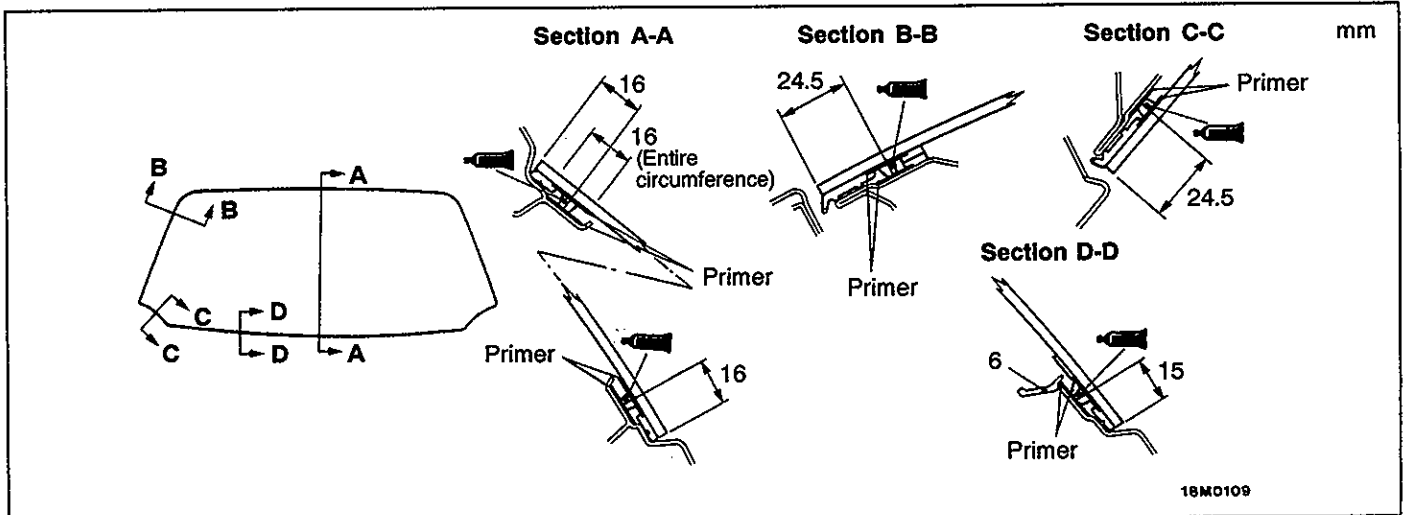


**TAILGATE WINDOW GLASS <Hatchback>**

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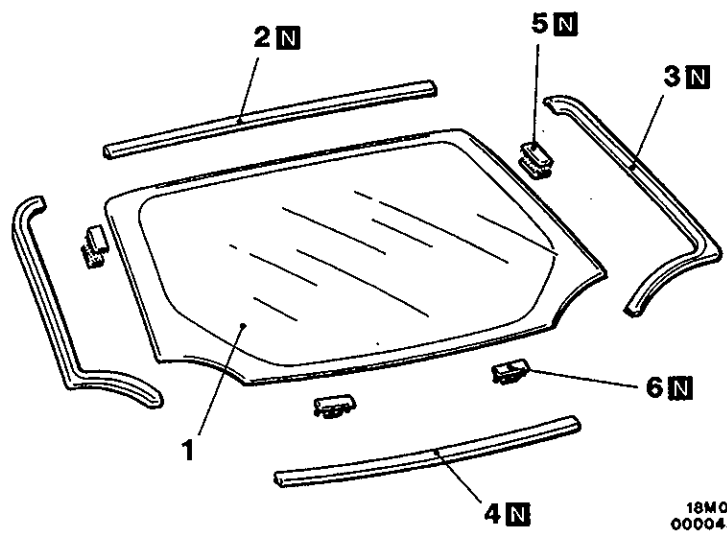
**REMOVAL AND INSTALLATION**

**Pre-removal and Post-Installation Operation**  
 (1) Tailgate Trim Removal and Installation (Refer to P.42-48.) (2) Roof Spoiler Removal and Installation (Refer to GROUP 51 – Aero Parts.)



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**Adhesive: 3M ATD Part No. 8609 Super Fast Urethane Auto Glass Sealant or equivalent**



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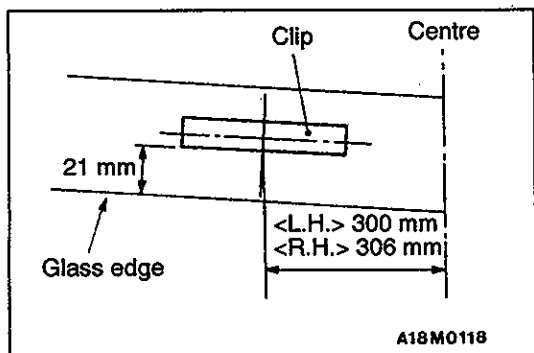
**Removal steps**

- ◀A▶ 1. Tailgate window glass
- ▶A▶ 2. Tailgate glass upper dam
- ▶A▶ 3. Tailgate glass side dam
- ▶A▶ 4. Tailgate glass lower dam
- ▶A▶ 5. Dual-lock fastener
- ▶A▶ 6. Clip

**REMOVAL SERVICE POINT**

**◀A▶ TAILGATE WINDOW GLASS REMOVAL**

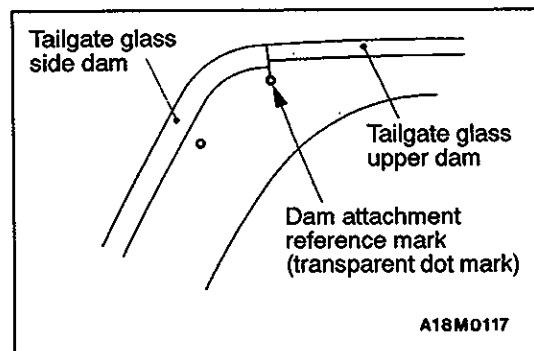
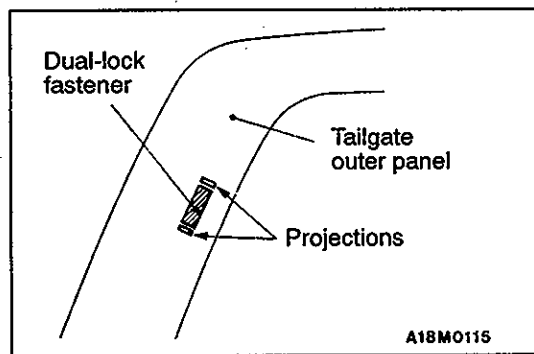
Remove the tailgate window glass by the same procedure as for the windshield. (Refer to P.42-13.)



**INSTALLATION SERVICE POINT**

**▶A◀ CLIP/DUAL-LOCK FASTENER/TAILGATE GLASS LOWER DAM/TAILGATE GLASS SIDE DAM/TAILGATE GLASS UPPER DAM/TAILGATE WINDOW GLASS INSTALLATION**

1. Use isopropyl alcohol to degrease the inside and outside edges of the tailgate window glass and the surface of the body flange.
2. Attach the clips to the inside of the tailgate glass in the positions shown in the illustration.
3. Install the dual lock fasteners between the projections on the tailgate outer panel, and then install them in matching positions on the glass.
4. Attach the tailgate glass dams to the edge of the tailgate glass, starting from the dam attachment reference marks.
5. Apply primer and adhesive. (Refer to P.42-18.)
6. Install the glass in the same way as for the windshield. (Refer to P.42-14.)



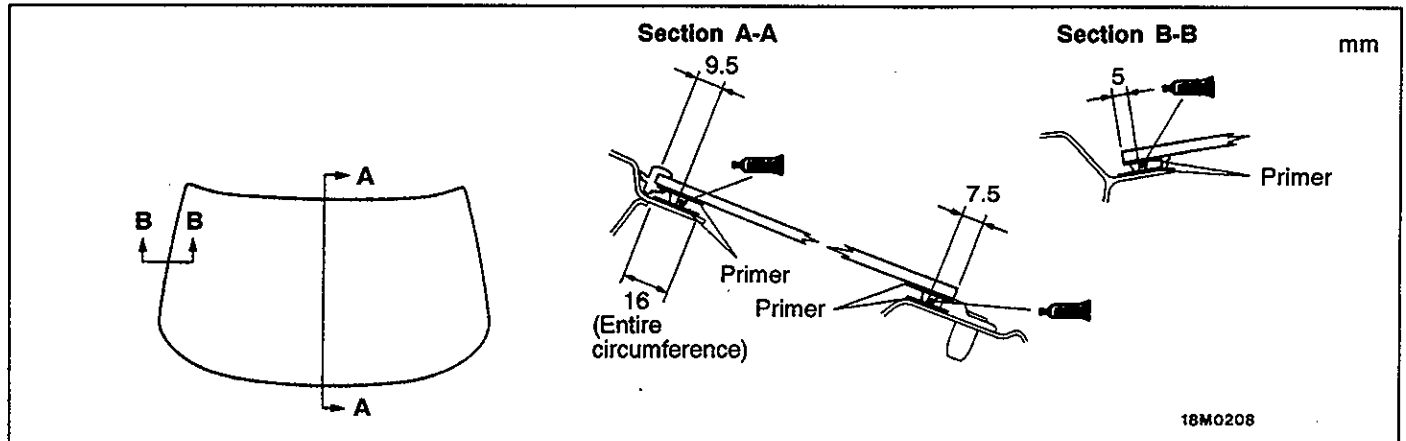
**REAR WINDOW GLASS <Sedan>**

42200160055

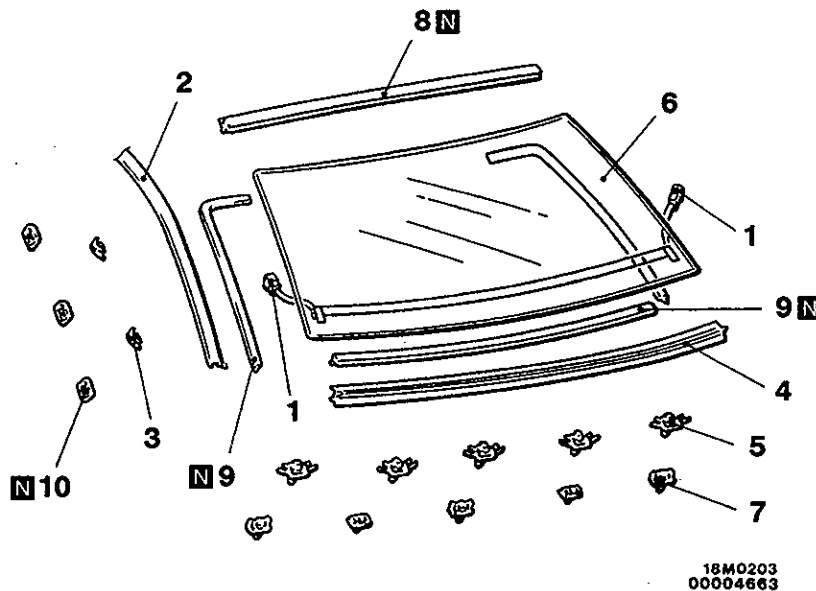
**REMOVAL AND INSTALLATION**

**Pre-removal and Post-Installation Operation**

- |  |   |
|--|---|
| (1) Rear Wiper Motor Removal and Installation (Refer to GROUP 51.)       | (3) Rear Pillar Trim Removal and Installation (Refer to GROUP 52A.) |
| (2) High Mounted Stop Lamp Removal and Installation (Refer to GROUP 54.) | (4) Headlining Removal and Installation                             |

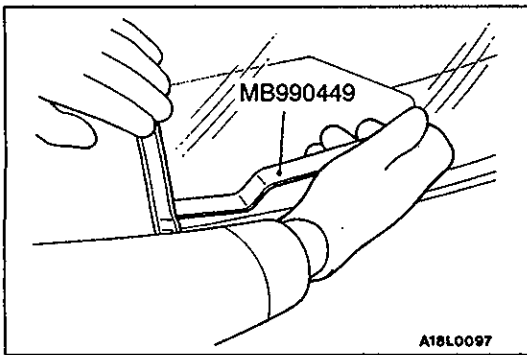


**Adhesive: 3M ATD Part No. 8609 Super Fast Urethane Auto Glass Sealant or equivalent**



**Removal steps**

- |                       |  |                               |   |
|-----------------------|--|-------------------------------|---|
| <p>◀A▶</p> <p>◀A▶</p> | <ol style="list-style-type: none"> <li>1. Harness connector</li> <li>2. Roof drip moulding</li> <li>3. Windshield clip</li> <li>4. Rear window lower moulding</li> <li>5. Rear window moulding clip</li> </ol> | <p>▶B▶ ▶A▶</p> <p>▶A▶ ▶A▶</p> | <ol style="list-style-type: none"> <li>6. Rear window glass</li> <li>7. Clip</li> <li>8. Rear window upper moulding</li> <li>9. Window dam</li> <li>10. Clip</li> </ol> |
|-----------------------|--|-------------------------------|---|



**REMOVAL SERVICE POINTS**

**◀A▶ ROOF DRIP MOULDING/ REAR WINDOW LOWER MOULDING REMOVAL**

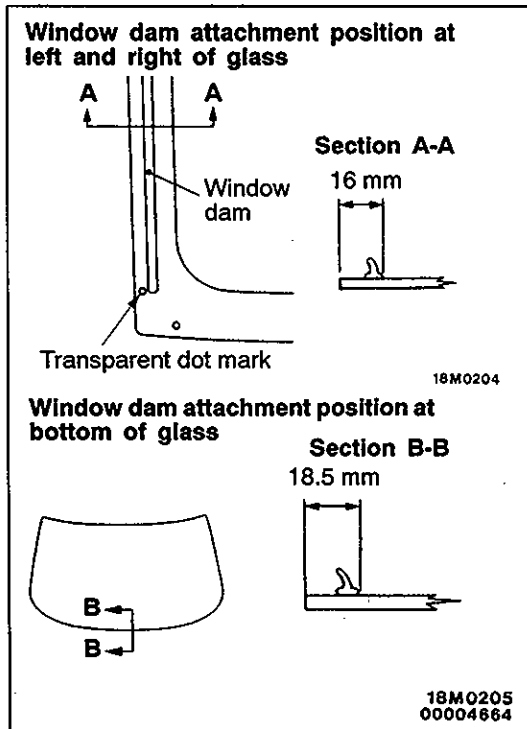
Use the special tool to lever out the moulding.

**Caution**

If the moulding has become warped, it should not be reused.

**◀B▶ REAR WINDOW GLASS REMOVAL**

Remove the rear window glass by the same procedure as for the windshield. (Refer to P.42-13.)



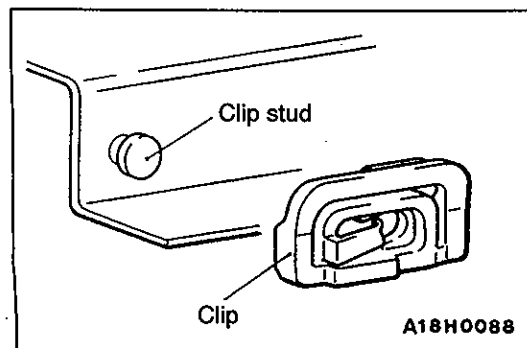
**INSTALLATION SERVICE POINT**

**▶A◀ CLIP/WINDOW DAM/REAR WINDOW GLASS INSTALLATION**

1. Use isopropyl alcohol to decrease the inside and outside edges of the rear window glass and the surface of the body flange.
2. Attach the window dam in the specified positions so that there are no bends or lifts on the inside of the rear window glass.

**NOTE**

Attach the dam at the bottom of the glass so that the clearance at both left and right will be the same during installation.



3. Place the clips onto the clip studs.
4. Apply primer and adhesive. (Refer to P.42-20.)
5. Install the glass in the same way as for the windshield. (Refer to P.42-14.)

**DOOR**

42300030052

**SERVICE SPECIFICATIONS**

Items	Standard value
Door outside handle play mm	3.6 or more
Power window operating current A	3–7 (for 14–15 V power supply at 25°C)
Door inside handle play mm	5.3 or more

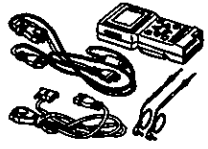

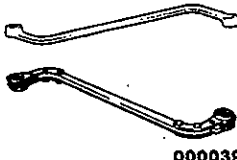
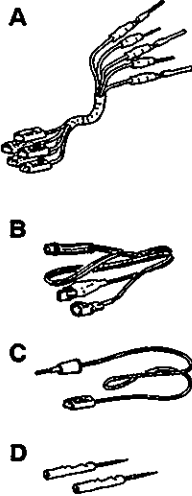
**SEALANT**

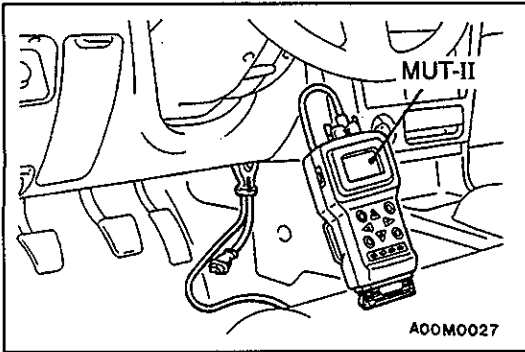
42300050034

Item	Specified sealant	Remark
Waterproof film	3M ATD Part No. 8625 or equivalent	Ribbon sealer

**SPECIAL TOOLS**

42300060051

Tool	Number	Name	Use
	MB991502	MUT-II sub assembly	ETACS-ECU input signal checking
	MB990784	Ornament remover	Removal of door trim
 00003936	MB990900 or MB991164	Door adjusting wrench	Adjustment of door fit
	MB991223 A: MB991219 B: MB991220 C: MB991221 D: MB991222	Harness set A: Test harness B: LET harness C: LED harness adapter D: probe	Measurement of terminal voltage A: Connector pin contact pressure inspection B, C: Power circuit inspection D: Commercial tester connection



**TROUBLESHOOTING**

42300070085

**DIAGNOSIS FUNCTION**

**INPUT SIGNAL INSPECTION POINTS <VEHICLES WITH ETACS-ECU>**

1. Connect the MUT-II to the diagnosis connector.
2. If buzzer of the MUT-II sounds once when door lock actuator switch is operated (LOCK/UNLOCK), the ETACS-ECU input signal for that switch circuit system is normal.

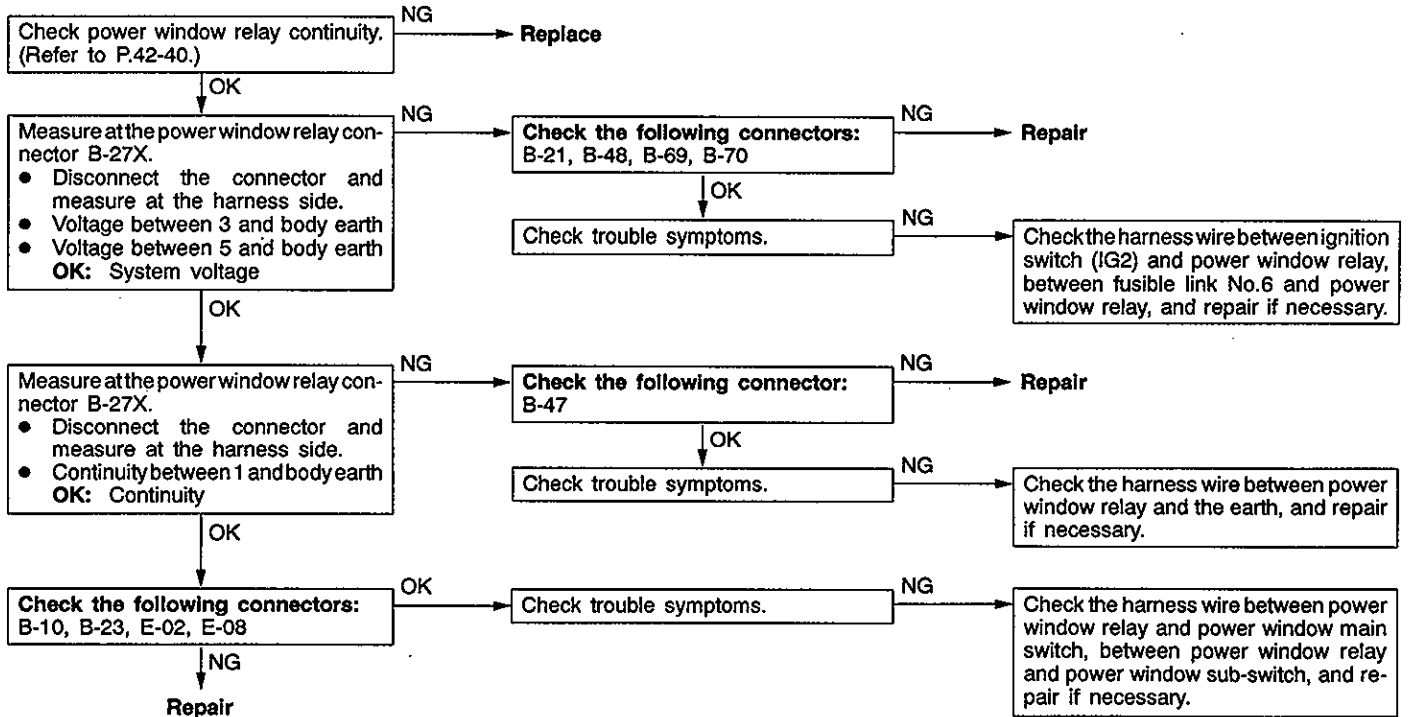
**INSPECTION CHART FOR TROUBLE SYMPTOMS**

Trouble symptom		Inspection procedure	Reference page
Power windows	The power windows cannot be operated by any of the power window switches.	1	42-24
	Driver's side power window cannot be operated by the power window main switch.	2	42-25
	Passenger's side and rear power windows cannot be operated by the power window main switch. (However, they can be operated by the power window sub-switches.)	3	42-26
	Passenger's side and rear power windows cannot be operated by the power window sub-switches. (However, they can be operated by the power window main switch.)	4	42-26
	Passenger's side and rear power windows cannot be operated by both the power window sub-switches and by the power window main switch.	5	42-27
	When the glass is raised, it then lowers automatically.	6	42-29
	The glass is not lowered when something is jammed in the window.	7	42-29
	When the glass is fully raised, it then lowers automatically.	8	42-30
Door locking mechanism	None of the door lock functions operate.	9	42-30
	None of the doors lock or unlock when the driver's side inside door locking knob is operated (including by means of the door key).	10	42-31
	Some doors do not lock or unlock.	11	42-31

**INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS**

**Inspection Procedure 1**

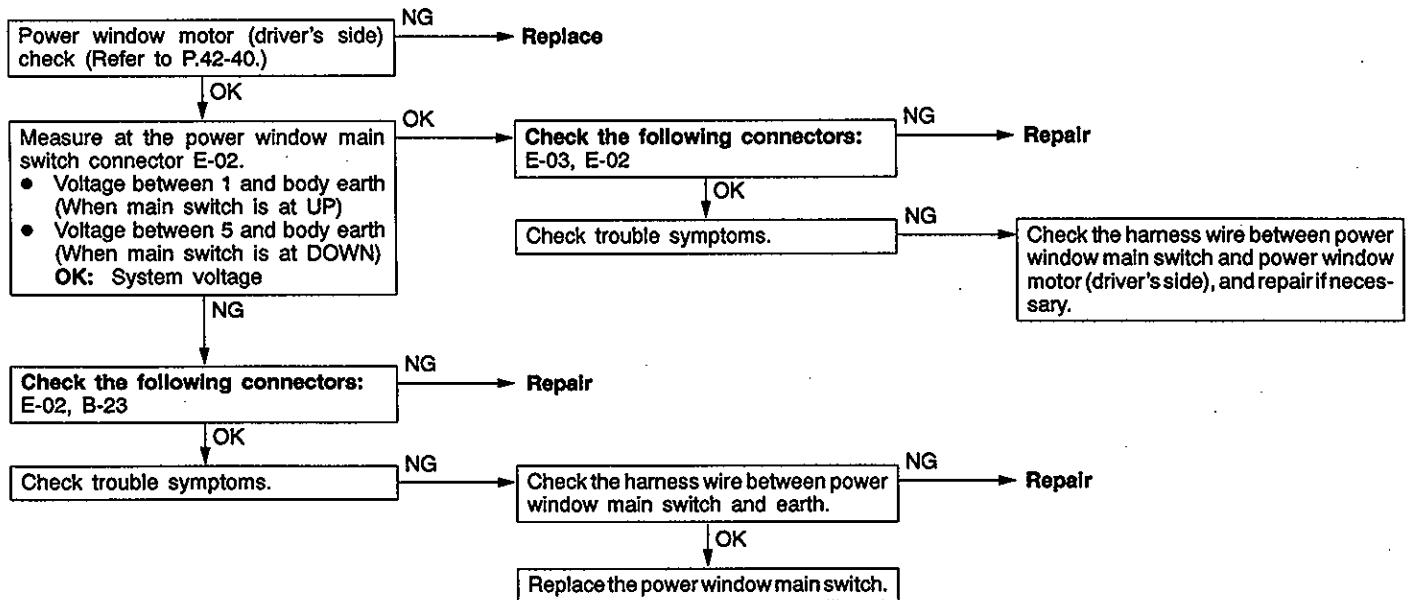
The power windows cannot be operated by any of the power window switches.	Probable cause
The cause may be a malfunction of the power window relay and of the power window relay drive circuit.	<ul style="list-style-type: none"> <li>● Malfunction of power window relay</li> <li>● Malfunction of wiring harness or connector</li> </ul>





Inspection Procedure 2

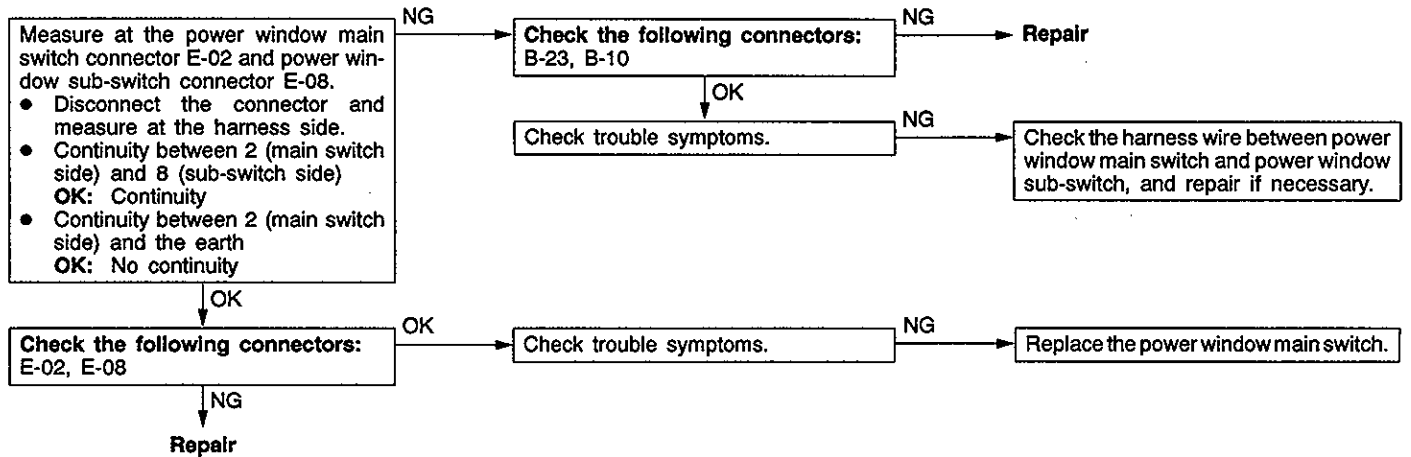
Driver's side power window cannot be operated by the power window main switch.	Probable cause
The cause may be a malfunction of the earth circuit in the power window main switch or of the power supply circuit for the power window motor. The cause may also be a malfunction of the control circuit inside the power window main switch.	<ul style="list-style-type: none"> <li>● Malfunction of power window motor</li> <li>● Malfunction of power window main switch</li> <li>● Malfunction of wiring harness or connector</li> </ul>



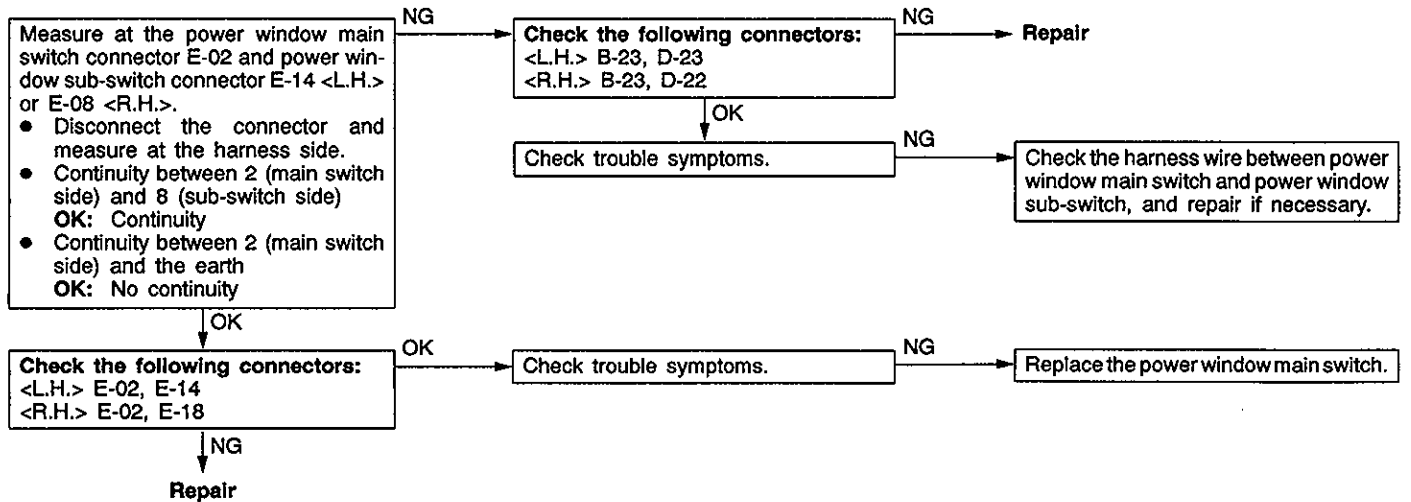
Inspection Procedure 3

<p><b>Passenger's side and rear power windows cannot be operated by the power window main switch. (However, they can be operated by the power window sub-switches.)</b></p>	<p><b>Probable cause</b></p>
<p>The cause may be a malfunction of the power window main switch, or an open circuit or short-circuit in the communication line.</p>	<ul style="list-style-type: none"> <li>● Malfunction of power window main switch</li> <li>● Malfunction of wiring harness or connector</li> </ul>

<If passenger's side power window does not operate>



<If a rear power window does not operate>



Inspection Procedure 4

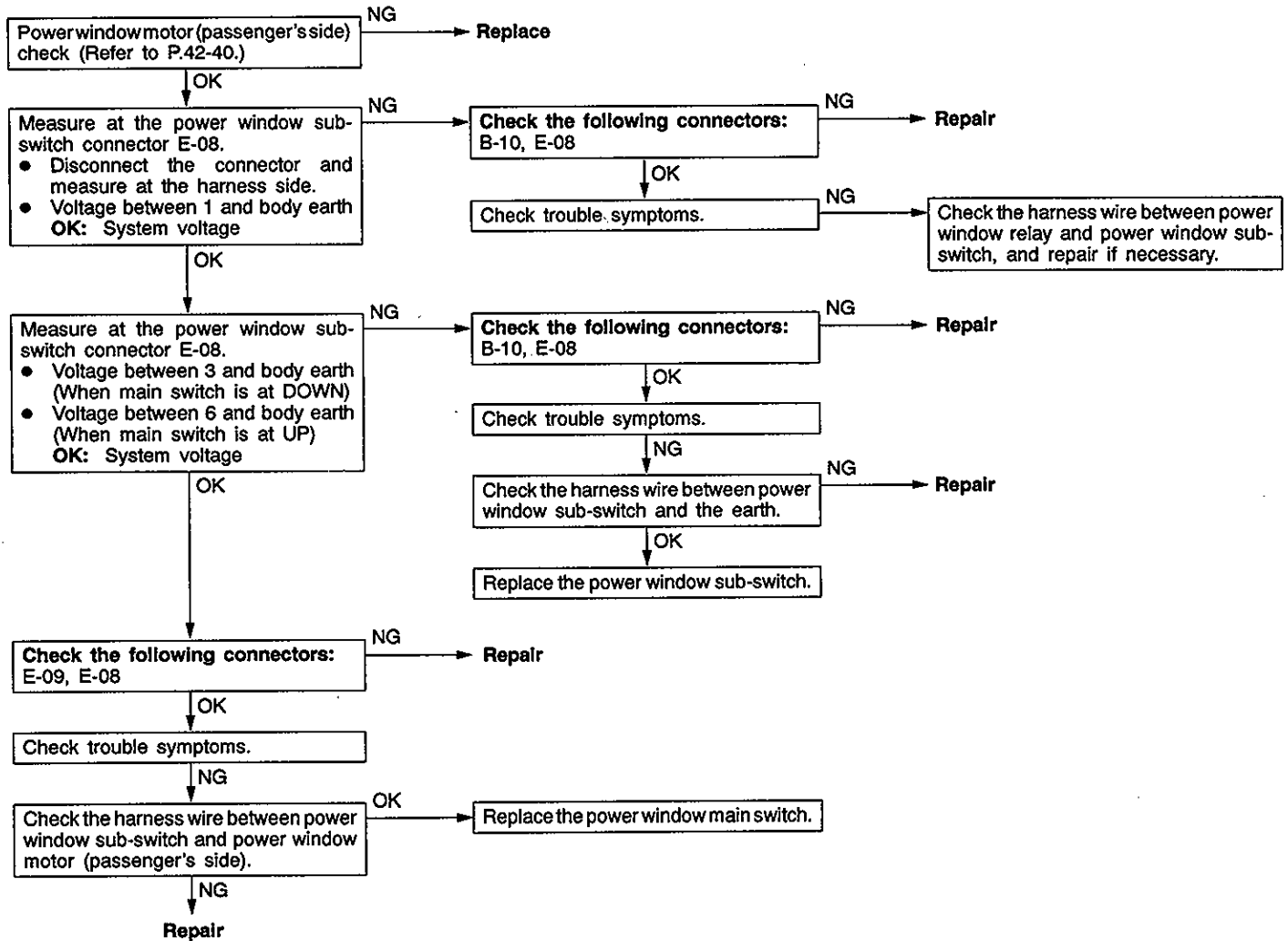
<p><b>Passenger's side and rear power windows cannot be operated by the power window sub-switches. (However, they can be operated by the power window main switch.)</b></p>	<p><b>Probable cause</b></p>
<p>The cause may be a malfunction of the power window sub-switch.</p>	<ul style="list-style-type: none"> <li>● Malfunction of power window sub-switch</li> </ul>

Replace the power window sub-switch

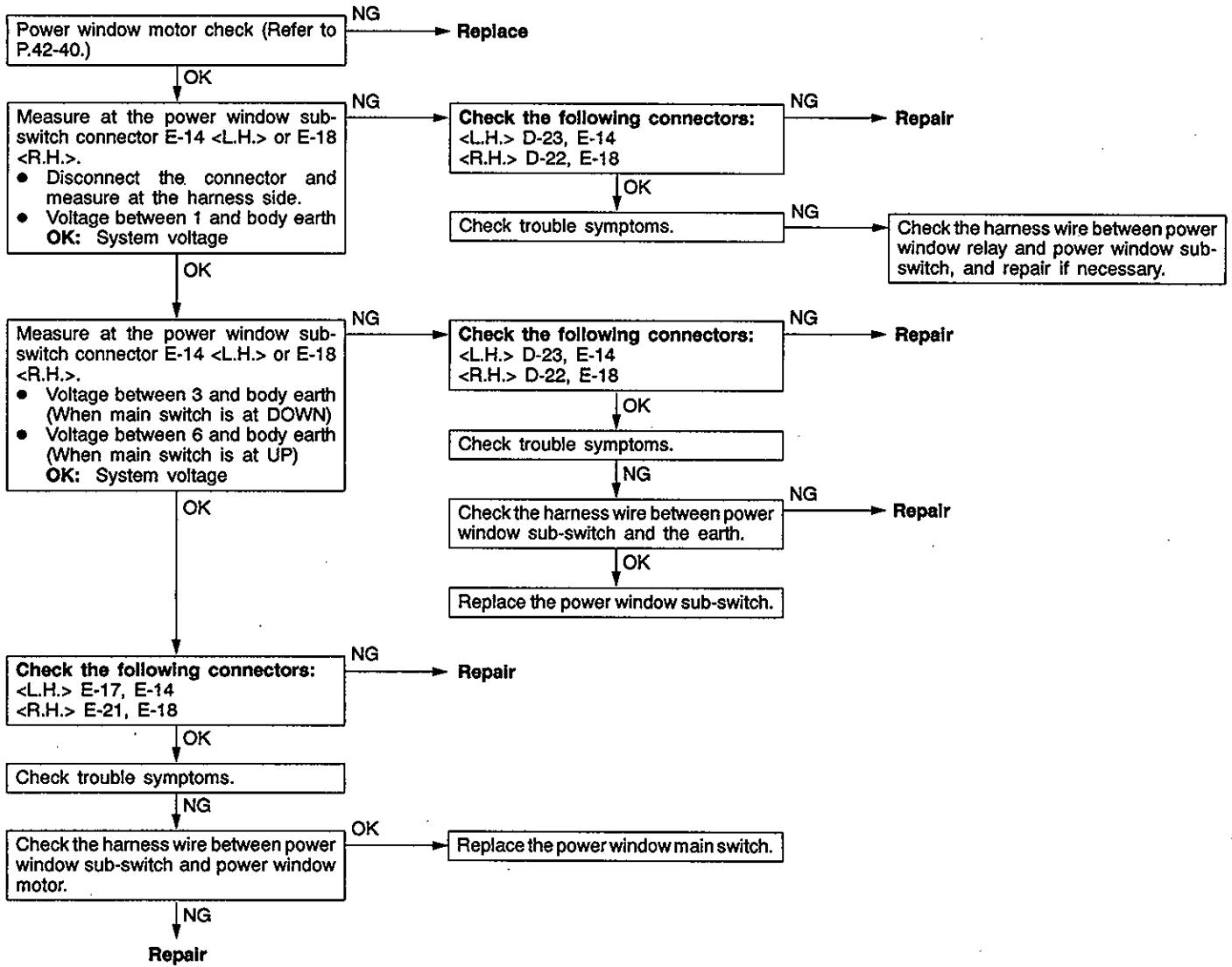
Inspection Procedure 5

Passenger's side and rear power windows cannot be operated by both the power window sub-switches and by the power window main switch.	Probable cause
One of the following items can be defective: <ul style="list-style-type: none"> <li>● Power supply circuit of the power window sub-switch</li> <li>● Earth circuit</li> <li>● Power window motor</li> <li>● Lock switch</li> <li>● Power window main switch</li> <li>● Power window sub-switch</li> </ul>	<ul style="list-style-type: none"> <li>● Malfunction of power window main switch</li> <li>● Malfunction of power window sub-switch</li> <li>● Malfunction of power window motor</li> <li>● Malfunction of wiring harness or connector</li> </ul>

<If passenger's side power window does not operate>

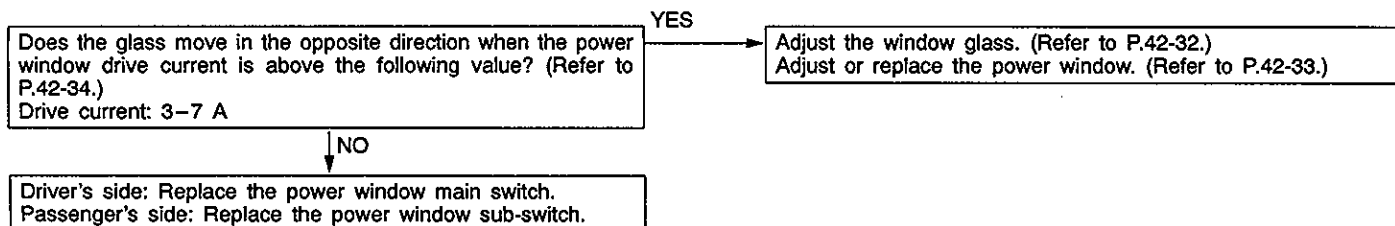


<If a rear power window does not operate>



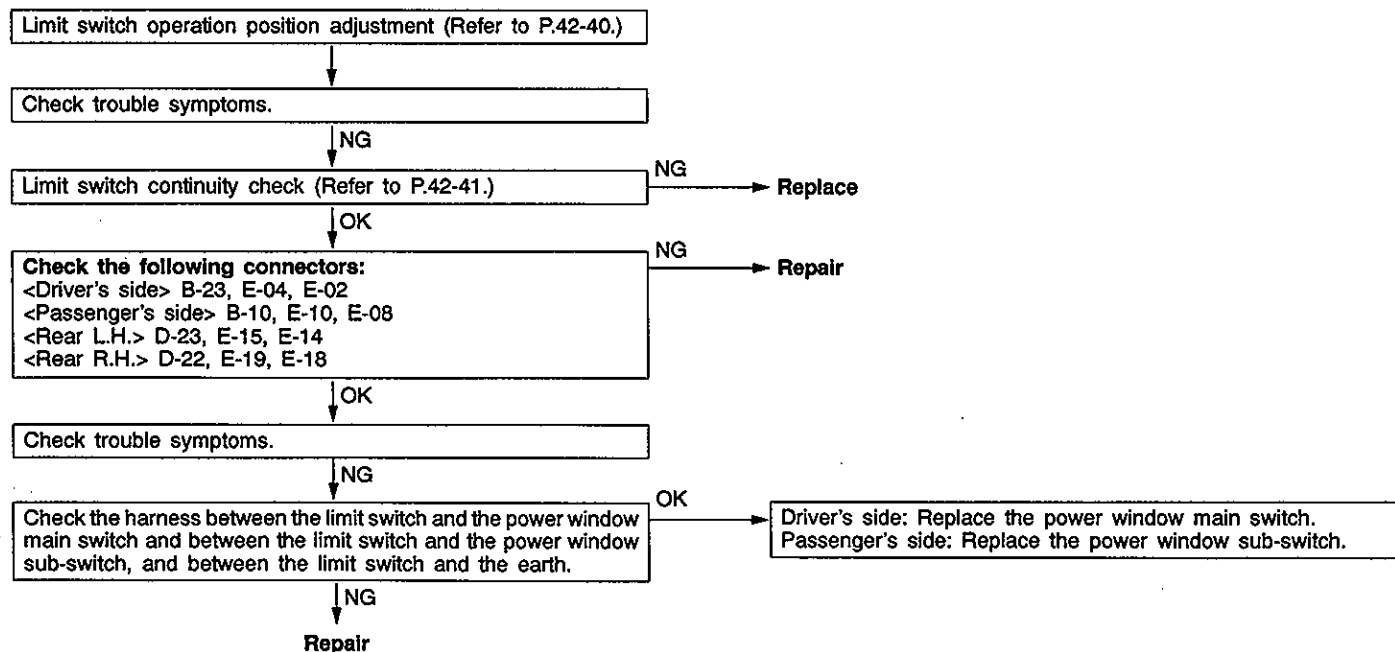
**Inspection Procedure 6**

When the glass is raised, it then lowers automatically.	Probable cause
If the sliding resistance is too large when the glass is being raised, it is judged that something is jammed in the window, and the window is lowered by approximately 150 mm.	<ul style="list-style-type: none"> <li>● Incorrect window glass adjustment</li> <li>● Glass slider is incorrectly installed or warped</li> <li>● Malfunction of power window main switch or sub-switch</li> </ul>



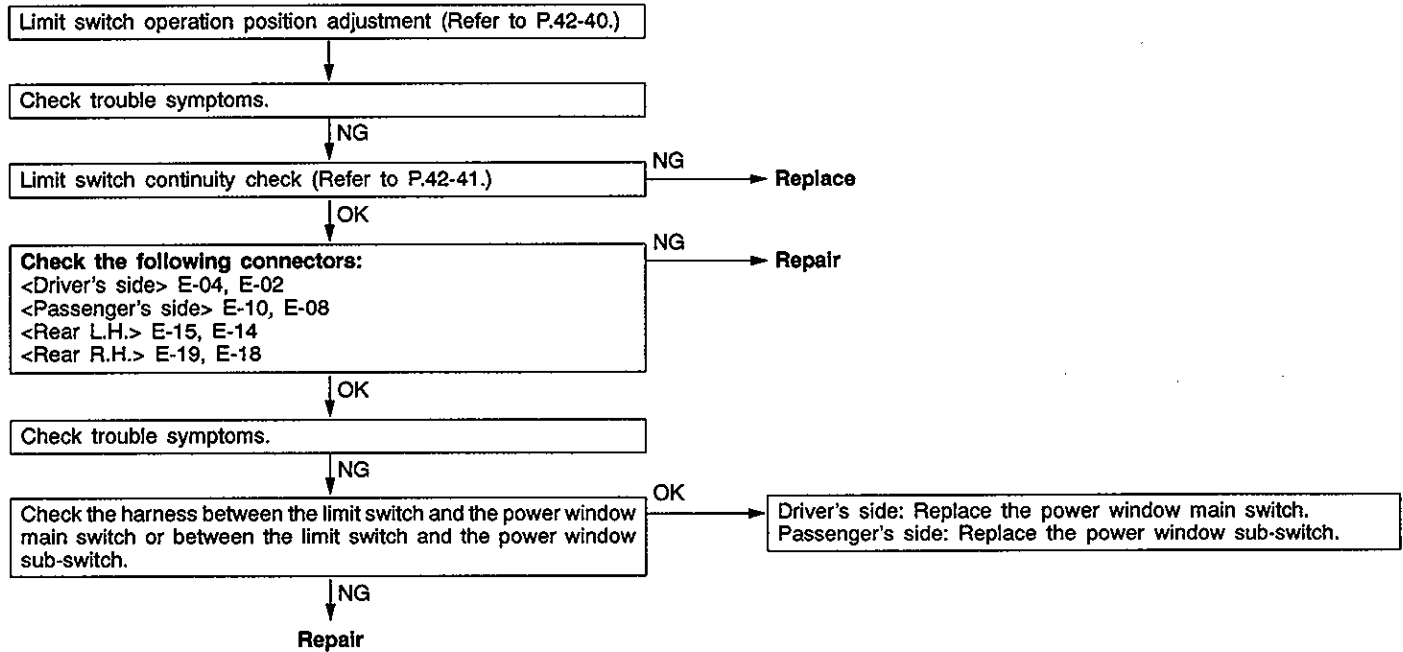
**Inspection Procedure 7**

The glass is not lowered when something is jammed in the window.	Probable cause
<p>The safety mechanism is released under the following conditions, and the window will not be lowered even if something becomes jammed in it.</p> <ul style="list-style-type: none"> <li>● If the limit switch is always off</li> <li>● If there is an open circuit in the harness between the limit switch and the power window main switch or the power window sub-switch</li> <li>● If the limit switch turns off before the set value is reached</li> <li>● If the window is within 15 mm of being fully closed (normal setting to prevent the window from being lowered)</li> </ul>	<ul style="list-style-type: none"> <li>● Malfunction of limit switch</li> <li>● Malfunction of wiring harness</li> <li>● Malfunction of power window main switch or sub-switch</li> <li>● Incorrect limit switch operation position</li> </ul>



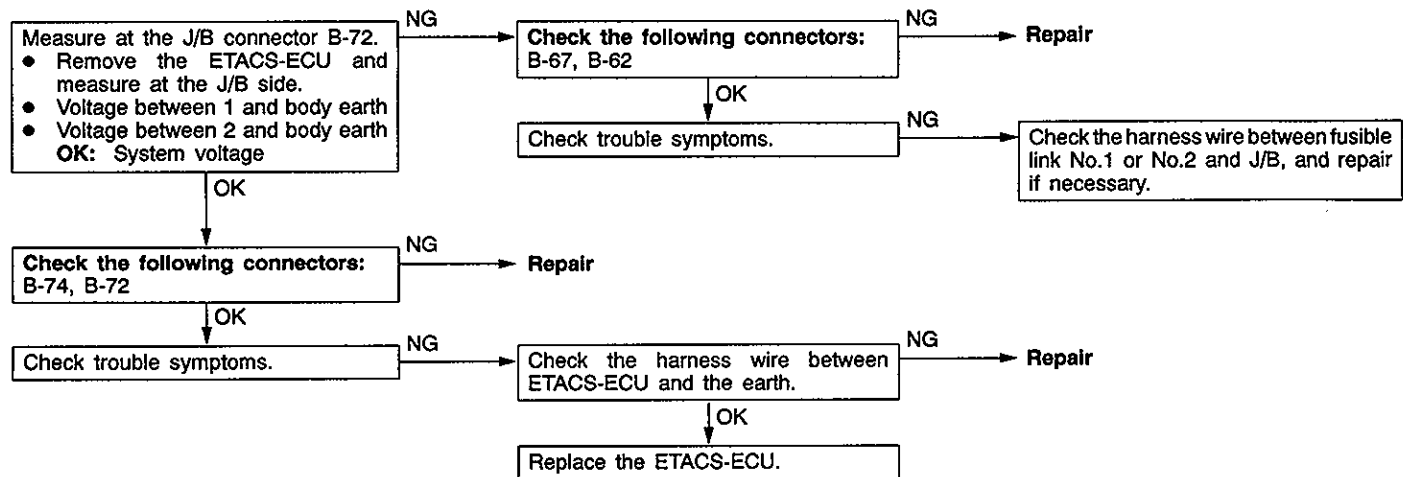
**Inspection Procedure 8**

When the glass is fully raised, it then lowers automatically.	Probable cause
When the window is within 15 mm of being fully closed, the limit switch turns off to prevent the window from being lowered. However, the above problem can occur if there is a malfunction of the limit switch or a short-circuit in a harness.	<ul style="list-style-type: none"> <li>● Malfunction of limit switch</li> <li>● Malfunction of wiring harness or connector</li> <li>● Malfunction of power window main switch or sub-switch</li> <li>● Incorrect limit switch operation position</li> </ul>



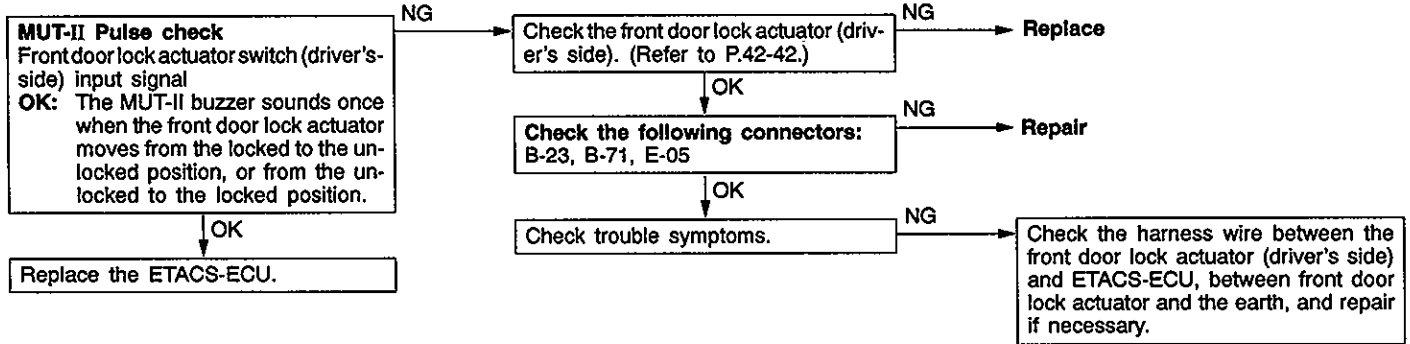
**Inspection Procedure 9**

None of the door lock functions operate.	Probable cause
The cause may be a malfunction of the ETACS-ECU power supply circuit system or of the earth circuit system.	<ul style="list-style-type: none"> <li>● Malfunction of ETACS-ECU</li> <li>● Malfunction of wiring harness or connector</li> </ul>



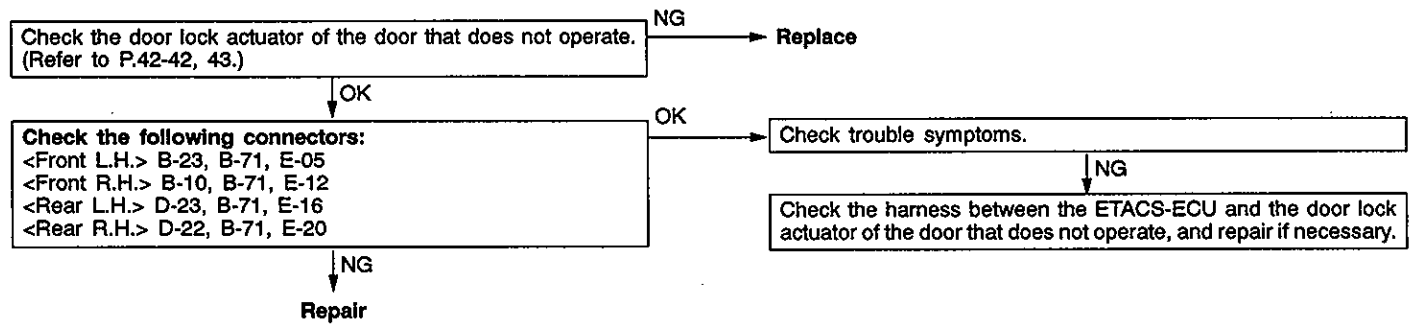
**Inspection Procedure 10**

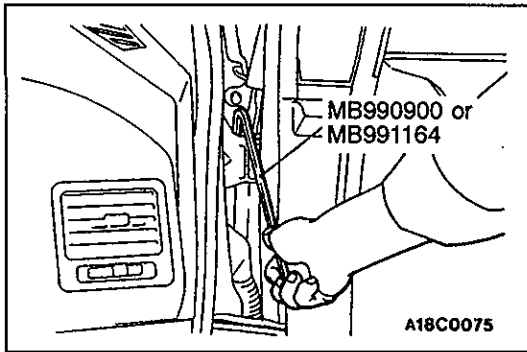
None of the doors lock or unlock when the driver's-side inside door locking knob is operated (including by means of the door key).	Probable cause
The cause may be a malfunction of the door lock actuator switch, the ETACS-ECU or of a wiring harness or connector.	<ul style="list-style-type: none"> <li>● Malfunction of front door lock actuator (driver's side)</li> <li>● Malfunction of ETACS-ECU</li> <li>● Malfunction of wiring harness or connector</li> </ul>



**Inspection Procedure 11**

Some doors do not lock or unlock.	Probable cause
The cause may be a malfunction of the door lock actuator or of a wiring harness or connector.	<ul style="list-style-type: none"> <li>● Malfunction of door lock actuator</li> <li>● Malfunction of wiring harness or connector</li> </ul>



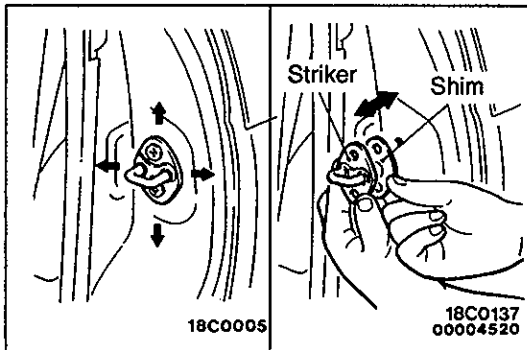


## ON-VEHICLE SERVICE

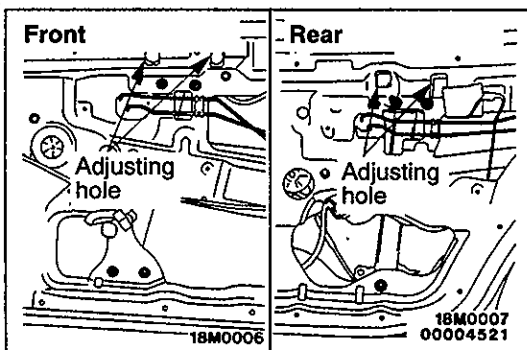
42300090074

### DOOR FIT ADJUSTMENT

1. If the clearance between the door and the vehicle body is uneven, affix protective tape to the fender around the hinge and to the edge of the door. Then use the special tool to loosen the door hinge mounting bolts on the body, and adjust the clearance around the door so that it becomes even.
2. If the door and the body are not flush with each other, use the special tool to loosen the door hinge mounting bolts. Then align the door.



3. If the door opening and closing is heavy, adjust the meshing of the striker and the door latch (in the longitudinal direction) by adding shims to the striker and by moving the striker up and down or to the left and right.

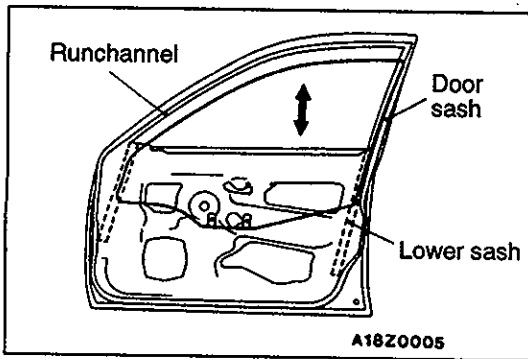


### DOOR WINDOW GLASS ADJUSTMENT 42300100104

Check that the door glass moves securely along the door glass runchannel when the window glass is fully raised and fully lowered. If the glass does not move correctly, adjust by the following procedure.

1. Remove the door trim and the waterproof film. (Refer to P.42-37.)
2. Loosen the mounting screw through the adjusting hole with the door window glass fully closed, and lower the door window glass slightly.
3. Close the door window glass fully again, and tighten the door glass mounting screw securely through the adjusting hole.





**ADJUSTMENT AND REPLACEMENT WHEN THERE IS A MALFUNCTION OF THE POWER WINDOWS**

42900190024

If the window glass automatically starts moving downwards at the wrong time while it is being raised, carry out the following adjustment or replacement procedures.

1. Remove the door trim and waterproof film. (Refer to P.42-37.)
2. Remove the window regulator assembly from the door window glass, and then raise and lower the door window glass by hand to check the operation force.

**NOTE**

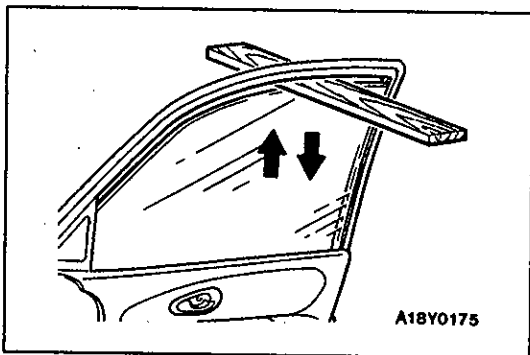
Insert a cushion or similar object to prevent damage to the glass if it should happen to fall down.

3. If the door window glass does not move up and down smoothly, check or repair the following points.
  - Check the installation condition of the runchannel.
  - Repair the twisting in the door sash.
  - Check the installation condition of the lower sash or the center sash.

**NOTE**

The lower sash cannot normally be adjusted, but it may be possible to adjust the sash span slightly within the range allowed by manufacturing tolerances by pushing the lower sash outwards while re-installing it.

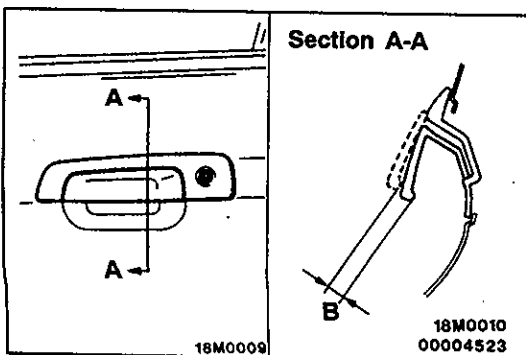
4. If repair or adjustment is not possible, replace the door assembly.



**POWER WINDOW SAFETY MECHANISM CHECK**

42900100041

1. Place a wooden board with a thickness of approximately 10 mm as shown in the illustration, and then raise the window glass.
2. Check that the window lowers by a distance of approximately 150 mm when the window clamps the wooden board. If this doesn't happen, refer to "Troubleshooting" (P.42-23).



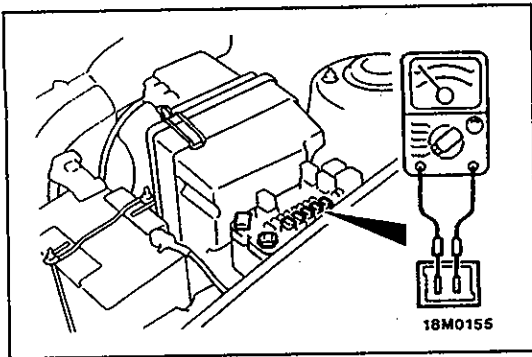
**DOOR OUTSIDE HANDLE PLAY CHECK**

42300160072

1. Check that the door outside handle play is within the standard value range.

**Standard value (B): 3.6 mm or more**

2. If the door outside handle play is not within the standard value range, check the door outside handle or the door latch assembly. Replace, if necessary.



### POWER WINDOW OPERATION CURRENT INSPECTION

42900110013

1. Remove the power window fuse and connect a circuit analyser as shown in the illustration.
2. When the power window switch is pressed to the UP position, a large amount of current flows at the time the window starts to close and when it is fully closed, so measure the operation current in the interval between these two points.

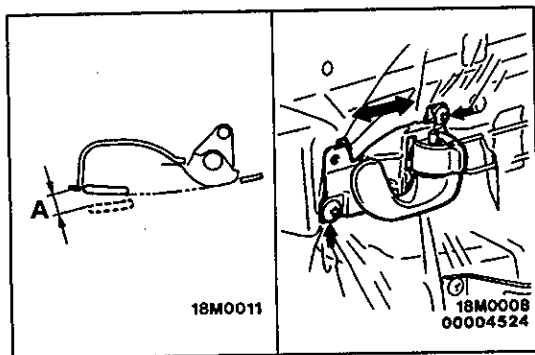
**Standard value: 3–7 A (for 14–15 V power supply voltage at 25°C)**

3. If the operation current is outside the standard value, refer to "Troubleshooting" (P.42-23).

### CIRCUIT BREAKER (INCORPORATED IN THE POWER WINDOW MOTOR) INSPECTION

42900170042

1. Press the power window switch to the UP position to fully close the window glass, and keep pressing the switch for a further 10 seconds.
2. Release the power window switch from the UP position and immediately press it to the DOWN position. The condition of the circuit breaker is good if the power window glass starts to move downwards within 60 seconds.



### DOOR INSIDE HANDLE PLAY CHECK AND ADJUSTMENT

42300150109

1. Check that the door inside handle play is within the standard value range.

**Standard value (A): 5.3 mm or more**

2. If the door inside handle play is outside the standard value range, remove the door trim. (Refer to P.42-37.)
3. Loosen the inside handle mounting screws, and then move the inside handle back and forth to adjust the play.

# DOOR ASSEMBLY

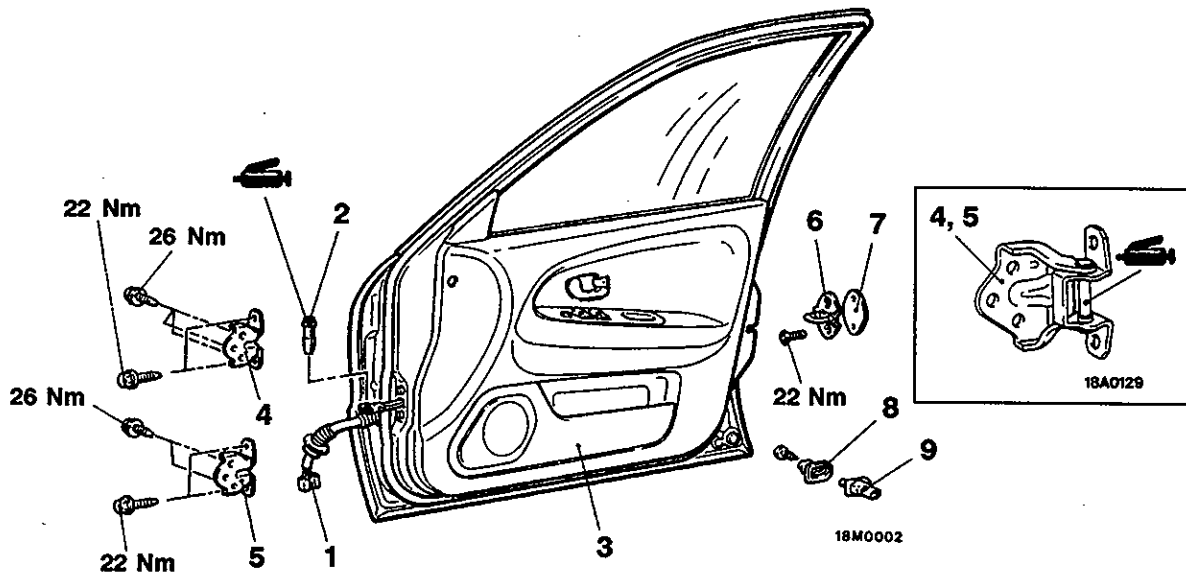
42300220138

## REMOVAL AND INSTALLATION

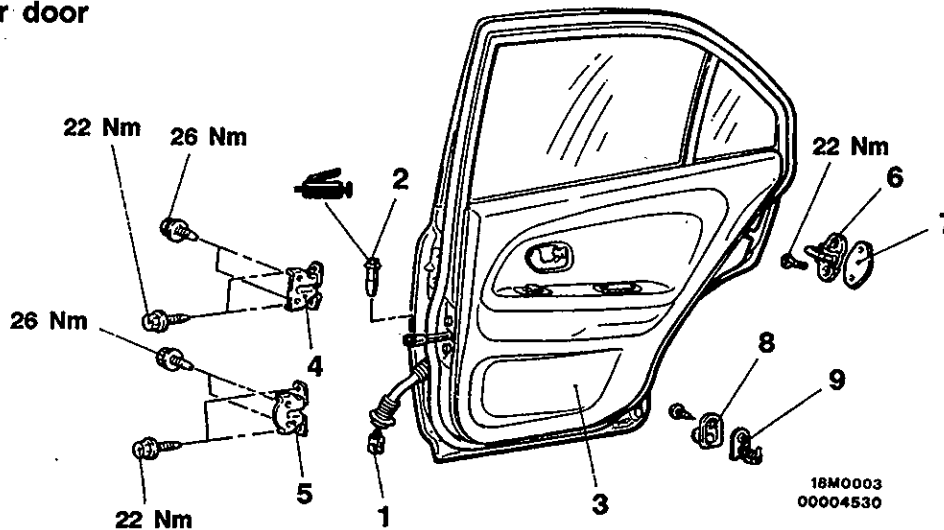
**Post-installation Operation**

- Door Adjustment (Refer to P.42-32.)

### Front door



### Rear door



**Door assembly removal steps**

1. Harness connector
2. Spring pin
3. Door assembly
4. Door upper hinge
5. Door lower hinge

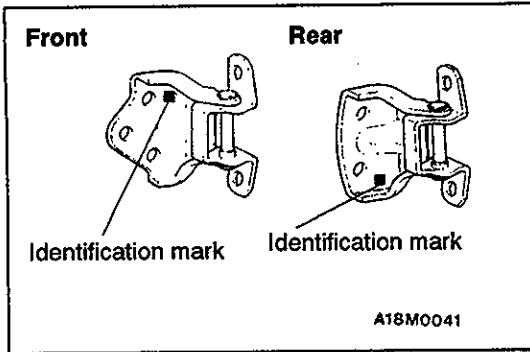


**Striker removal steps**

6. Striker
7. Striker shim

**Door switch removal steps**

8. Door switch cap
9. Door switch

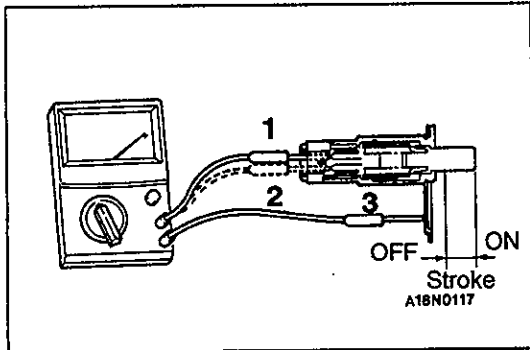


**INSTALLATION SERVICE POINT**

**▶◀ DOOR LOWER HINGE/DOOR UPPER HINGE INSTALLATION**

The door hinges differ according to where they are used, so check the identification marks before installation.

Applicable location		Identification mark
Front left side door	Upper hinge	F1
	Lower hinge	E1
Front right side door	Upper hinge	E1
	Lower hinge	F1
Rear left side door	Upper hinge	A1
	Lower hinge	K1
Rear right side door	Upper hinge	B1
	Lower hinge	L1



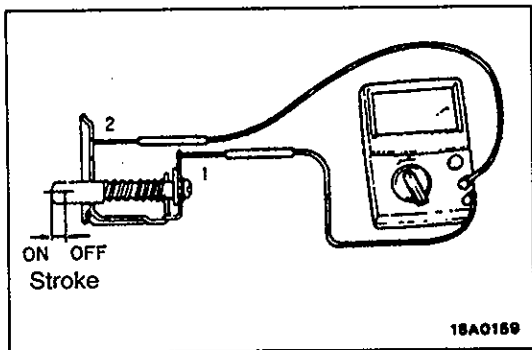
**INSPECTION**

42300600031

**DOOR SWITCH CONTINUITY CHECK**

**Driver's door switch**

Switch position	Terminal No.		
	1	2	3
Open (ON)	○	○	○
Depressed (OFF)			



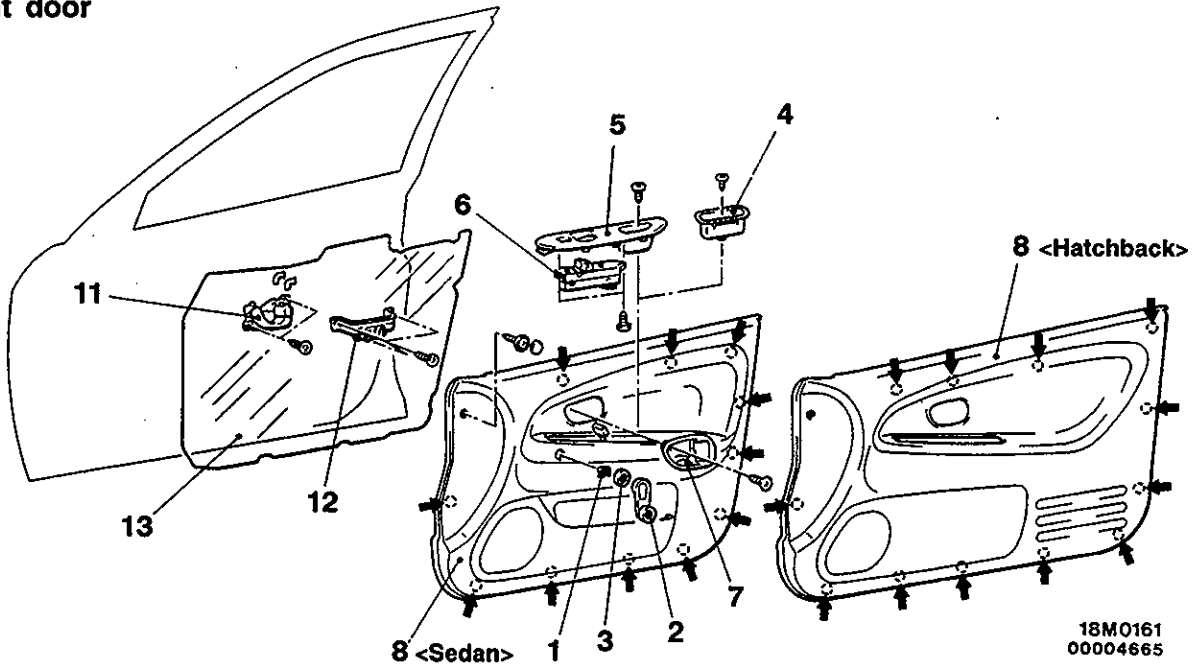
**Passenger's door and rear door switch**

Switch position	Terminal No.	
	1	2
Open (ON)	○	○
Depressed (OFF)		

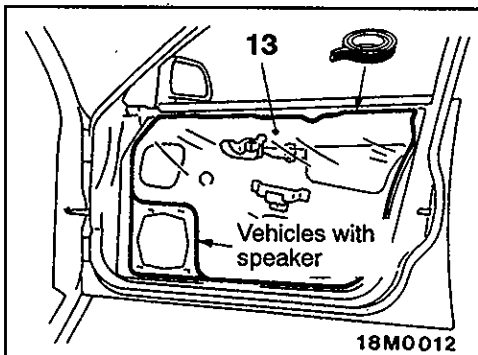
**DOOR TRIM AND WATERPROOF FILM  
REMOVAL AND INSTALLATION**

42300430128

Front door



18M0161  
00004665



**Sealant:**  
3M ATD Part. No. 8625 or equivalent

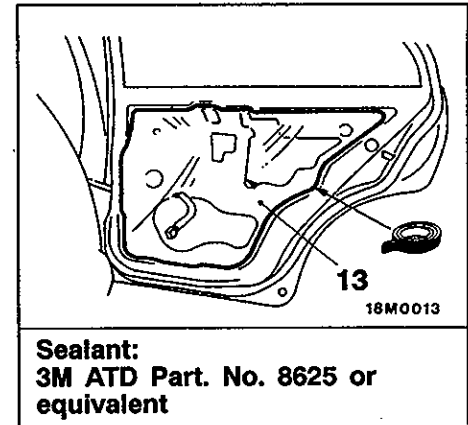
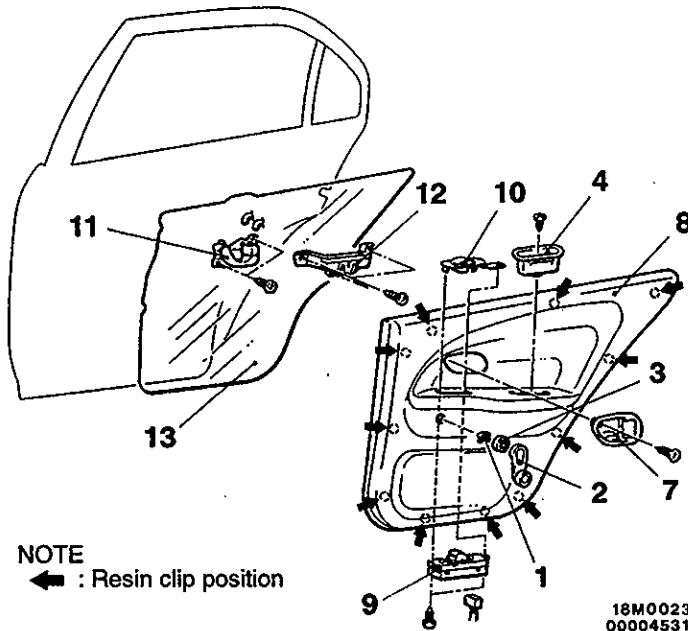
**NOTE**

◀ : Resin clip position

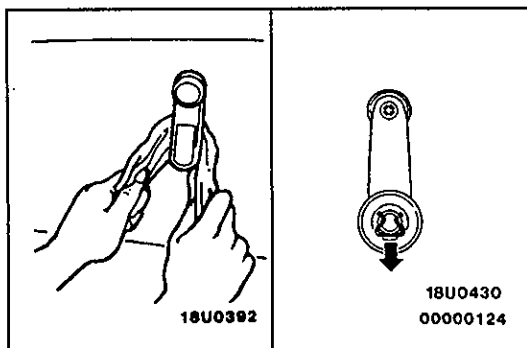
**Removal steps**

- |                                      |  |  |
|--------------------------------------|--|--|
| <p>◀A▶ ▶A▶</p> <p>▶A▶</p> <p>▶A▶</p> | <ol style="list-style-type: none"> <li>1. Clip &lt;Vehicles without power window&gt;</li> <li>2. Regulator handle &lt;Vehicles without power windows&gt;</li> <li>3. Escutcheon &lt;Vehicles without power windows&gt;</li> <li>4. Pull handle box &lt;Vehicles without power windows&gt;</li> <li>5. Power window switch panel &lt;Vehicles with power windows&gt;</li> </ol> | <ol style="list-style-type: none"> <li>6. Power window switch &lt;Vehicles with power windows&gt;</li> <li>7. Cover</li> <li>8. Door trim</li> <li>11. Door inside handle</li> <li>12. Pull handle bracket</li> <li>13. Waterproof film</li> </ol> |
|--------------------------------------|--|--|

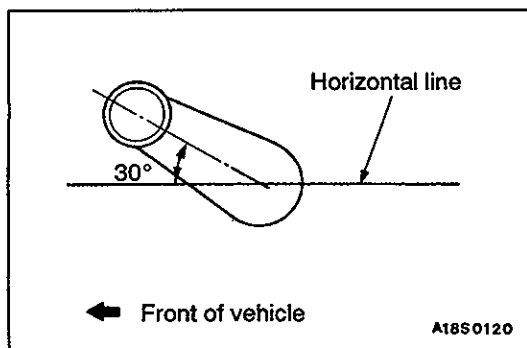
## Rear door

**Removal steps**

- ◀A▶ ▶A▶ 1. Clip <Vehicles without power windows>
- ▶A▶ 2. Regulator handle <Vehicles without power windows>
- ▶A▶ 3. Escutcheon <Vehicles without power windows>
4. Pull handle box <Vehicles without power windows>
7. Cover
8. Door trim
9. Power window switch <Vehicles with power windows>
10. Power window switch panel <Vehicles with power windows>
11. Door inside handle
12. Pull handle bracket
13. Waterproof film

**REMOVAL SERVICE POINT****◀A▶ CLIP REMOVAL**

Remove the clip by using a rag, and then remove the regulator handle.

**INSTALLATION SERVICE POINT****▶A▶ ESCUTCHEON/REGULATOR HANDLE/CLIP INSTALLATION**

1. Install the escutcheon and the clip to the regulator handle.
2. Fully close the front door glass, and install the regulator handle so that it faces as shown in the illustration.

# DOOR GLASS AND REGULATOR

42900130125

## REMOVAL AND INSTALLATION

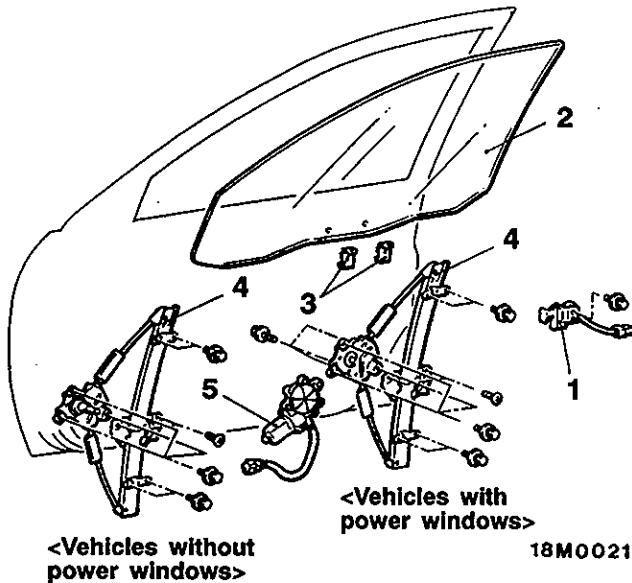
### Pre-removal Operation

- (1) Door Trim and Waterproof Film Removal (Refer to P.42-37.)
- (2) Door Beltline Inner Weatherstrip Removal (Refer to P.42-44.)

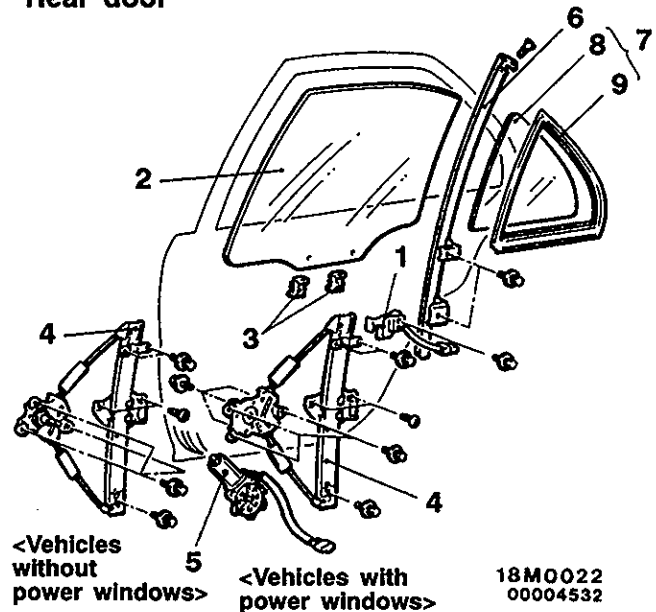
### Post-installation Operation

- (1) Door Window Glass Adjustment (Refer to P.42-32.)
- (2) Door Beltline Inner Weatherstrip Installation (Refer to P.42-44.)
- (3) Door Trim and Waterproof Film Installation (Refer to P.42-37.)

Front door



Rear door



### Front window regulator assembly removal steps

- ▶A◀
1. Door limit switch
  2. Door window glass
  3. Door window glass holder
  4. Window regulator assembly
  5. Power window motor

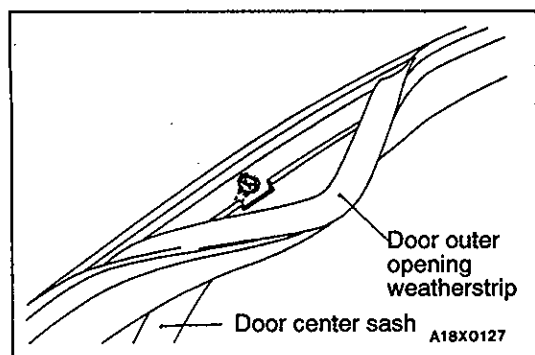
### Rear window regulator assembly removal steps

- ▶A◀
1. Door limit switch
  - Window glass runchannel (Refer to P.42-44.)
  2. Door window glass
  3. Door window glass holder
  4. Window regulator assembly
  5. Power window motor

### Stationary window glass removal steps

- Window glass runchannel (Refer to P.42-44.)
2. Door window glass
  6. Door center sash
  7. Stationary window glass and weatherstrip assembly
  8. Stationary window glass
  9. Stationary window weatherstrip





## REMOVAL SERVICE POINT

### ◀▶ DOOR CENTER SASH REMOVAL

1. Remove the door outer opening weatherstrip from the door center sash only.
2. Remove the door center sash mounting screws, and then remove the door center sash from the door panel.

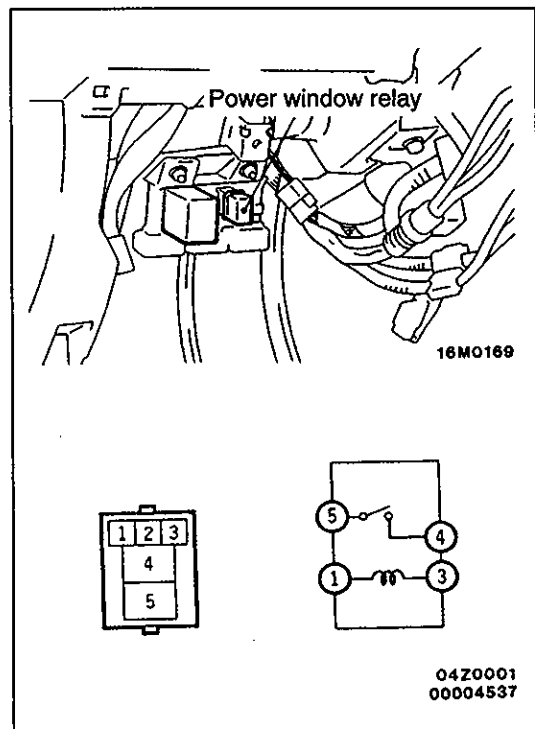
## INSTALLATION SERVICE POINT

### ▶◀ DOOR LIMIT SWITCH INSTALLATION

Install the door limit switch, and then fully raise the door window glass.

#### NOTE

Fully raising the door window glass will set the door limit switch to the correct position.



## INSPECTION

42900180045

### POWER WINDOW RELAY CONTINUITY CHECK

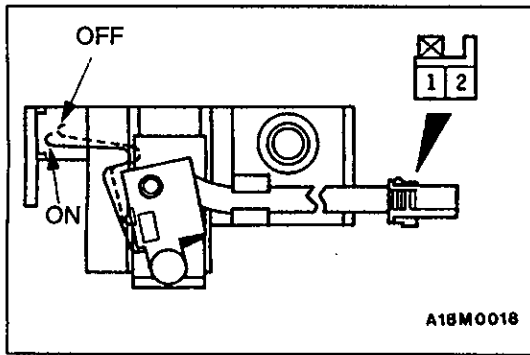
System voltage	Terminal No.			
	1	3	4	5
Not applied	○	○		
Applied	⊕	⊖	○	○

### POWER WINDOW MOTOR CHECK

42900150053

1. Connect a battery directly to the motor terminals and check that the motor runs smoothly.
2. Check that the motor runs in the opposite direction when the battery is connected with the polarity reversed.





DOOR LIMIT SWITCH CONTINUITY CHECK

42900220013

Switch position	Terminal No.	
	1	2
ON	○—○	○—○
OFF		

DOOR HANDLE AND LATCH  
REMOVAL AND INSTALLATION

42300460110

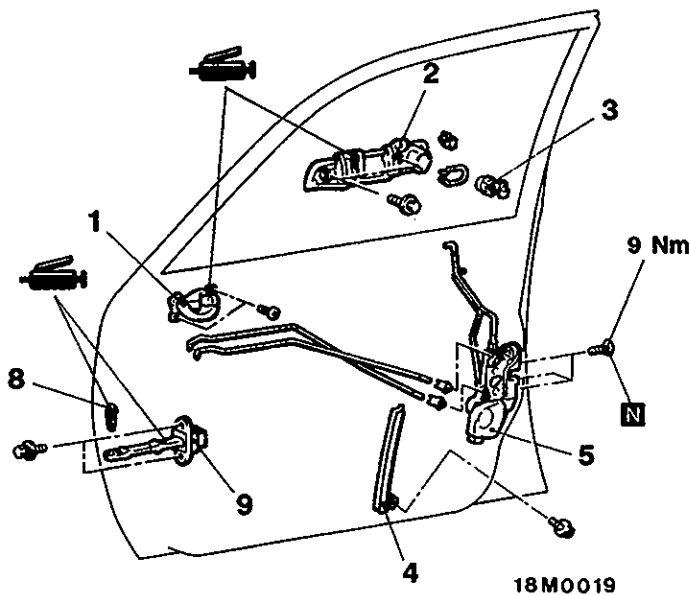
Pre-removal Operation

- Door Trim Removal (Refer to P.42-37.)

Post-installation Operation

- (1) Door Inside Handle Play Check (Refer to P.42-34.)
- (2) Door Outside Handle Play Check (Refer to P.42-33.)
- (3) Door Trim Installation (Refer to P.42-37.)

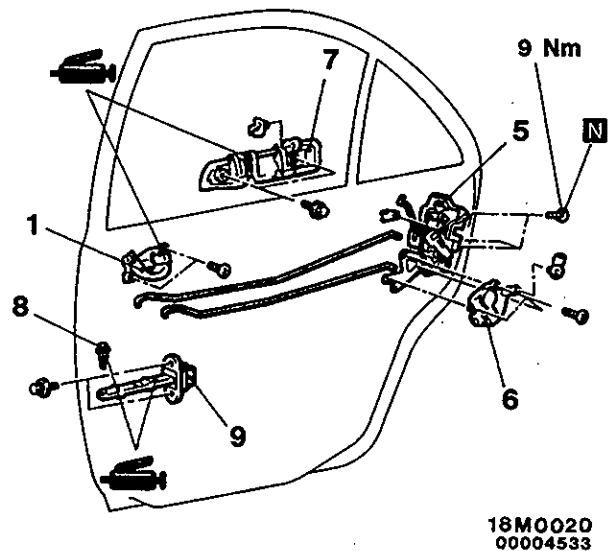
Front door



Front door handle and door latch assembly removal steps

1. Door inside handle
- Waterproof film (Refer to P.42-37.)
2. Door outside handle
3. Door lock key cylinder
4. Rear lower sash
5. Door latch assembly

Rear door

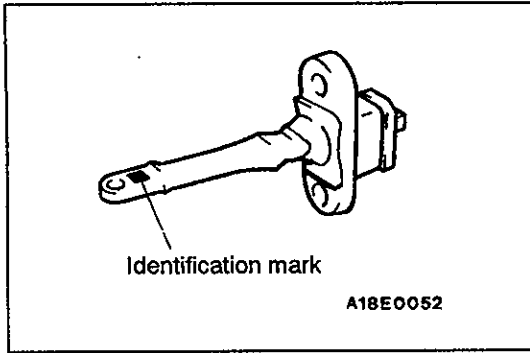


Door check removal steps

1. Door inside handle
  - Waterproof film (Refer to P.42-37.)
  8. Spring pin
  9. Door check
- ▶◀

Rear door handle and door latch assembly removal steps

1. Door inside handle
- Waterproof film (Refer to P.42-37.)
- Door center sash (Refer to P.42-39.)
5. Door latch assembly
6. Door lock actuator
7. Door outside handle

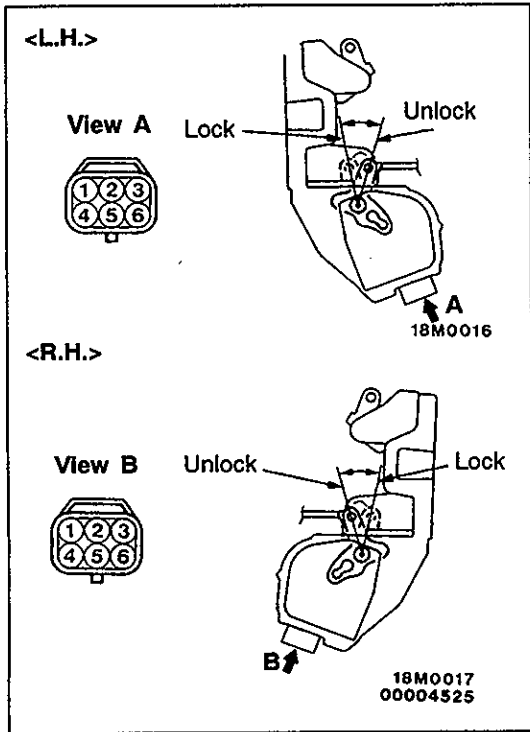


**INSTALLATION SERVICE POINT**

**▶A◀ DOOR CHECK INSTALLATION**

Install the door check so that the identification mark faces upwards.

Applicable location		Identification mark	
		Hatchback	Sedan
L.H.	Front door	YL	XL
	Rear door	–	16L
R.H.	Front door	YR	XR
	Rear door	–	16R



**INSPECTION**

**FRONT DOOR LOCK ACTUATOR CHECK**

42300610065

**<Driver's side>**

Rod position	Terminal No.					Rod operation
	1	2	3	4	6	
LOCK				⊕	⊖	LOCK position → UNLOCK position
UNLOCK				⊖	⊕	UNLOCK position → LOCK position
LOCK	○	○	○			
UNLOCK	○	○				

**<Passenger's side>**

Rod position	Terminal No.		Rod operation
	4	6	
LOCK	⊖	⊕	LOCK position → UNLOCK position
UNLOCK	⊕	⊖	UNLOCK position → LOCK position

42300620044

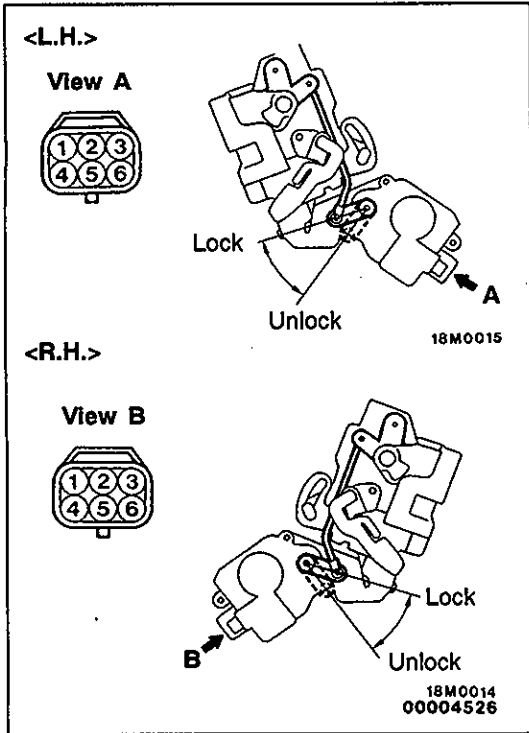
REAR DOOR LOCK ACTUATOR CHECK

<L.H.>

Rod position	Terminal No.		Rod operation
	2	3	
LOCK	⊕	⊖	LOCK position → UNLOCK position
UNLOCK	⊖	⊕	UNLOCK position → LOCK position

<R.H.>

Rod position	Terminal No.		Rod operation
	2	3	
LOCK	⊖	⊕	LOCK position → UNLOCK position
UNLOCK	⊕	⊖	UNLOCK position → LOCK position

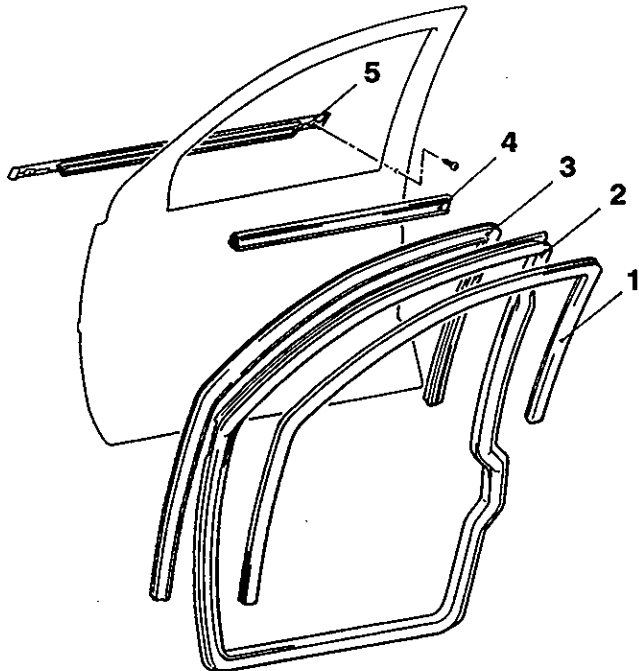


# WINDOW GLASS RUNCHANNEL AND DOOR OPENING WEATHERSTRIP

42300310095

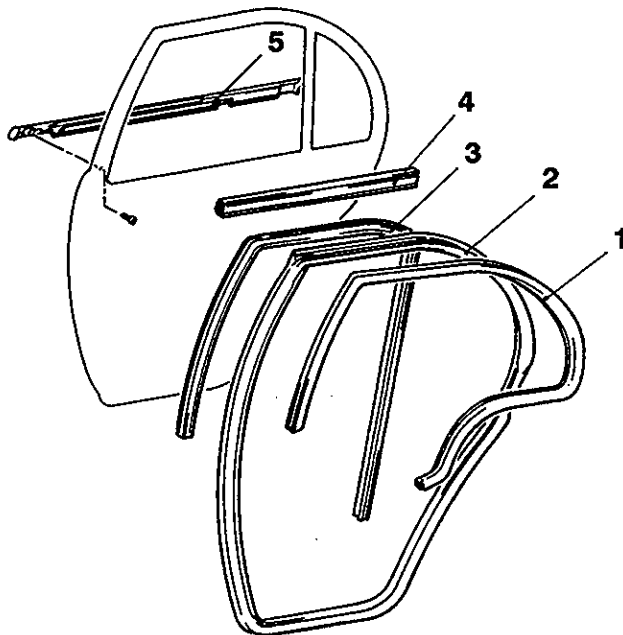
## REMOVAL AND INSTALLATION

Front door



18M0032

Rear door

18M0033  
00004527

### Door inner opening weatherstrip removal steps

- Cowl side trim (Refer to GROUP 52A.)
  - Quarter trim <Hatchback> (Refer to GROUP 52A.)
  - Center pillar lower trim <Sedan> (Refer to GROUP 52A.)
1. Door inner opening weatherstrip

### Door outer opening weatherstrip removal

- ◄A► ►A◄ 2. Door outer opening weatherstrip

### Door window glass runchannel removal

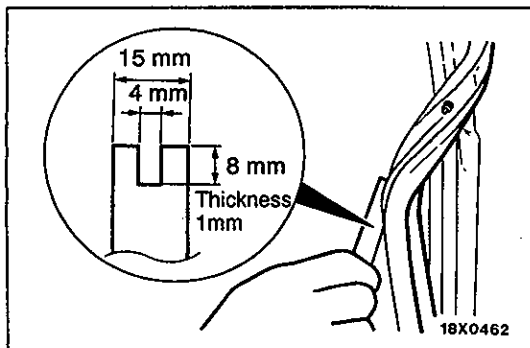
3. Door window glass runchannel

### Door beltline inner weatherstrip removal steps

- Door trim (Refer to P.42-37.)
- 4. Door beltline inner weatherstrip

### Door beltline moulding removal

- Door mirror (Refer to GROUP 51.)
- 5. Door beltline moulding



### REMOVAL SERVICE POINT

#### ◄A► DOOR OUTER OPENING WEATHERSTRIP REMOVAL

Make a tool as shown in the illustration to remove the door opening weatherstrip.

**INSTALLATION SERVICE POINT**

**▶◀ DOOR OUTER OPENING WEATHERSTRIP INSTALLATION**


The clip colour identifies the left and right weatherstrips, so be sure to use the colours so as to install correctly.

Applicable side	Identification colour
Left door	Pink
Right door	Dark brown

**TAILGATE <Hatchback>**

42400060016

**SPECIAL TOOL**

Tool	Number	Name	Use
	MB990784	Ornament remover	Removal of the tailgate trim

**TROUBLESHOOTING**

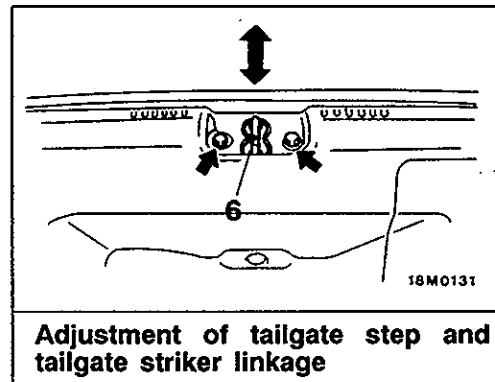
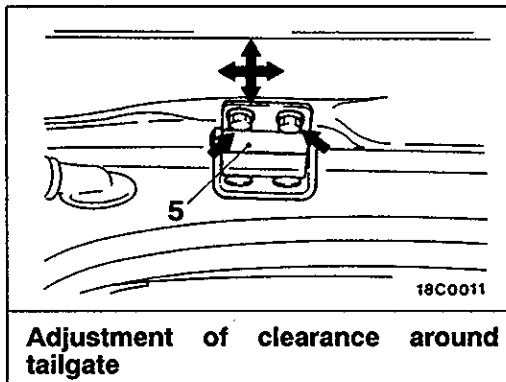
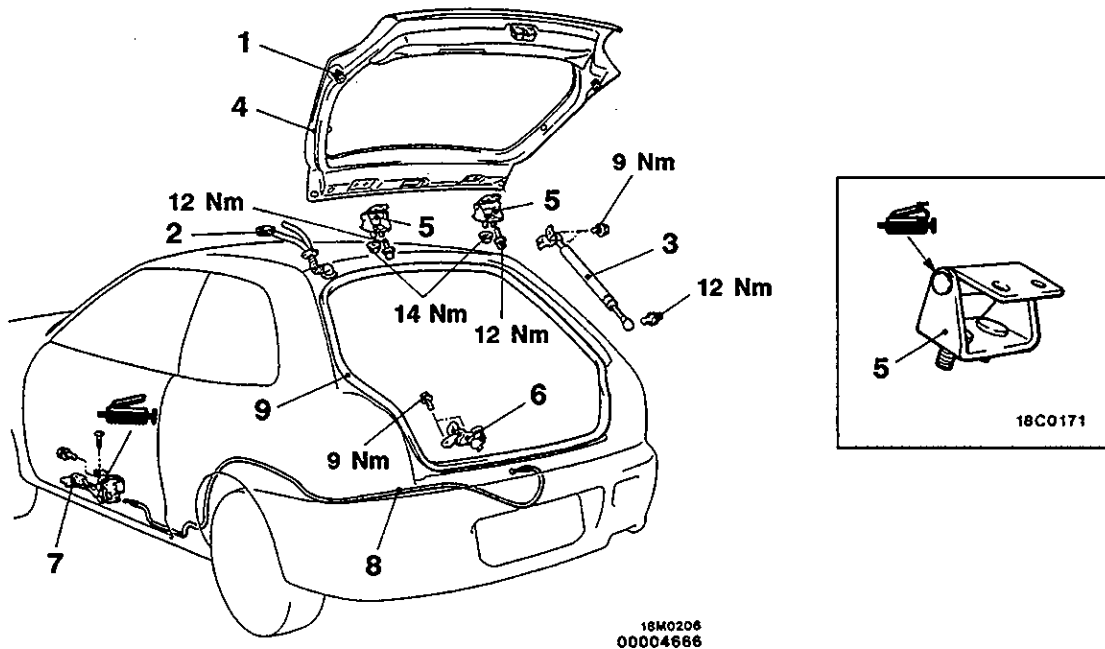
42400070040

**INSPECTION CHART FOR TROUBLE SYMPTOMS**

Trouble symptom	Reference page
Door lock mechanism does operate.	42-23.

**TAILGATE ASSEMBLY**

**REMOVAL AND INSTALLATION**



**Tailgate and tailgate hinge removal steps**

- 1. Bumper
- 2. Harness connector
- 3. Tailgate gas spring
- 4. Tailgate assembly
- Headlining
- 5. Tailgate hinge

**Tailgate striker removal steps**

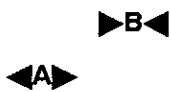
- Rear end trim (Refer to GROUP 52A.)
- 6. Tailgate striker

**Tailgate lock release handle and cable removal steps**

- Front seat (driver's side) (Refer to GROUP 52A.)
- Rear seat (Refer to GROUP 52A.)
- Scuff plate (driver's side) (Refer to GROUP 52A – Trims.)
- Rear end trim (Refer to GROUP 52A.)
- Quarter trim (driver's side) (Refer to GROUP 52A.)
- 7. Tailgate lock release handle
- 8. Tailgate lock release cable

**Tailgate opening weatherstrip removal**

- 9. Tailgate opening weatherstrip

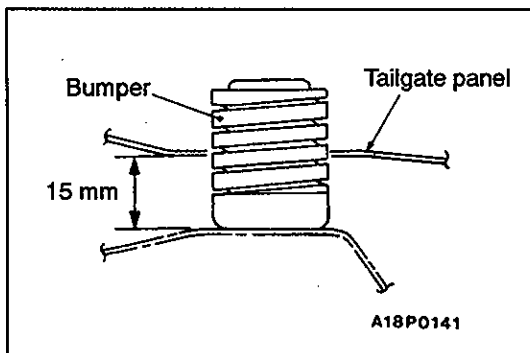


**REMOVAL SERVICE POINT****◀A▶ TAILGATE GAS SPRING REMOVAL****Caution**

1. Never try to disassemble the tailgate gas spring or burn it.
2. Always bore a hole in the tailgate gas spring to release the interior gas before the gas spring is discarded.

**INSTALLATION SERVICE POINTS****▶A◀ TAILGATE OPENING WEATHERSTRIP INSTALLATION**

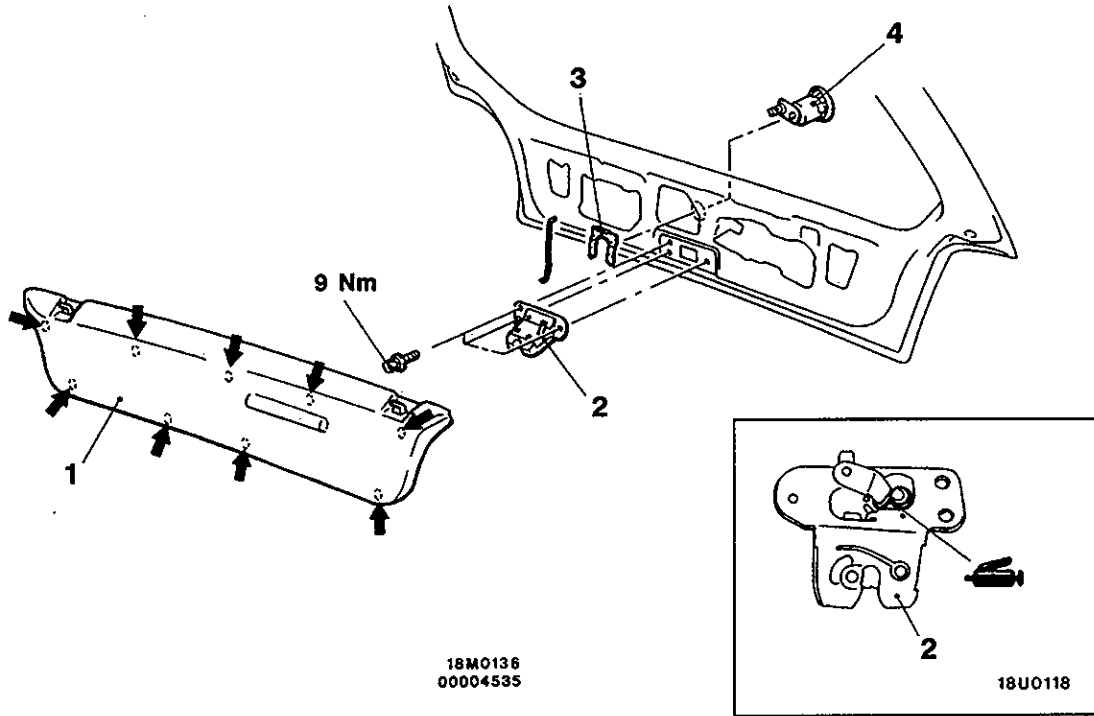
Install the tailgate opening weatherstrip so that the marked part is at the centre of the body.

**▶B◀ BUMPER INSTALLATION**

Install the bumper so that the amount of projection from the tailgate panel is as shown in the illustration.

**TAILGATE LATCH  
REMOVAL AND INSTALLATION**

42400170023



- 1. Tailgate trim

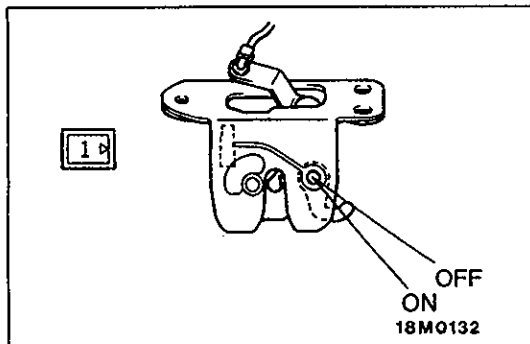
**Tailgate latch removal steps**

- 1. Tailgate trim
- 2. Tailgate latch

**Tailgate lock cylinder removal steps**

- 1. Tailgate trim
- 3. Cylinder lock retainer
- 4. Tailgate lock cylinder

NOTE  
← : Resin clip position



**INSPECTION**

42400180019

**TAILGATE LATCH CONTINUITY CHECK**

Switch position	Terminal No.1	Body earth
ON (Latch open)	○ — ○	○ — ○
OFF (Latch shut)		



# SUNROOF

42600030037

## SERVICE SPECIFICATIONS

Items	Standard value
Roof lid glass operating current A	7 or less (at 20°C)
Sunroof motor clutch slippage torque Nm	4.7 – 6.2

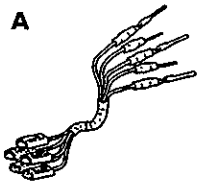



## SEALANT

42600050057

Item	Specified sealant
Rail cover assembly	3M ATD Part No.8531 or 3M Part No.8646 or equivalent

## SPECIAL TOOLS

42600060012

Tool	Number	Name	Use
<p><b>A</b></p>  <p><b>B</b></p>  <p><b>C</b></p>  <p><b>D</b></p> 	<p>MB991223</p> <p>A: MB991219</p> <p>B: MB991220</p> <p>C: MB991221</p> <p>D: MB991222</p>	<p>Harness set</p> <p>A: Test harness</p> <p>B: LED harness</p> <p>C: LED harness adapter</p> <p>D: Probe</p>	<p>Measurement of terminal voltage</p> <p>A: Connector pin contact pressure inspection</p> <p>B, C: Power circuit inspection</p> <p>D: Commercial tester connection</p>

**TROUBLESHOOTING**

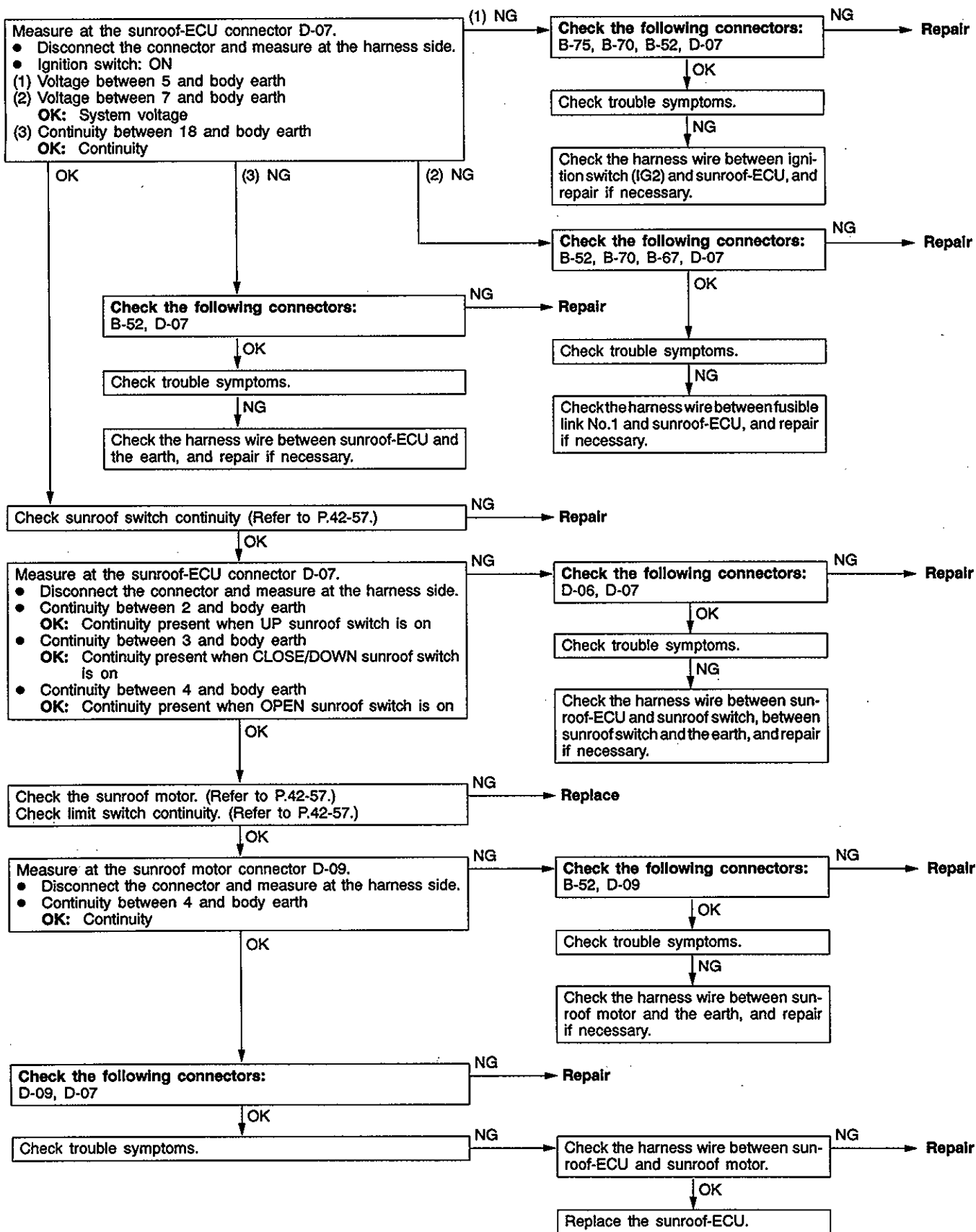
42600200020

**INSPECTION CHART FOR TROUBLE SYMPTOMS**

Trouble symptom	Inspection procedure	Reference page
The sunroof does not operate when the ignition switch is turned to ON.	1	42-50
The motor does not reverse its direction when a load of 140 N or more is applied while the sunroof is closing.	2	42-52
The timer does not operate for 30 seconds after the ignition switch is turned to OFF.	3	42-52
Opening or closing of the sunroof is possible immediately after turning the ignition switch to OFF, but the timer function does not operate continuously for another 30 seconds if the driver's side door is opened within 30 seconds.	4	42-52

**INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS****Inspection Procedure 1**

The sunroof does not operate when the ignition switch is turned to ON.	Probable cause
One of the following items may be defective. <ul style="list-style-type: none"> <li>● Sunroof switch</li> <li>● Sunroof motor</li> <li>● Sunroof-ECU</li> <li>● Power supply circuit</li> <li>● Earth circuit</li> </ul>	<ul style="list-style-type: none"> <li>● Malfunction of sunroof switch</li> <li>● Malfunction of sunroof motor</li> <li>● Malfunction of sunroof-ECU</li> <li>● Malfunction of wiring harness or connector</li> </ul>



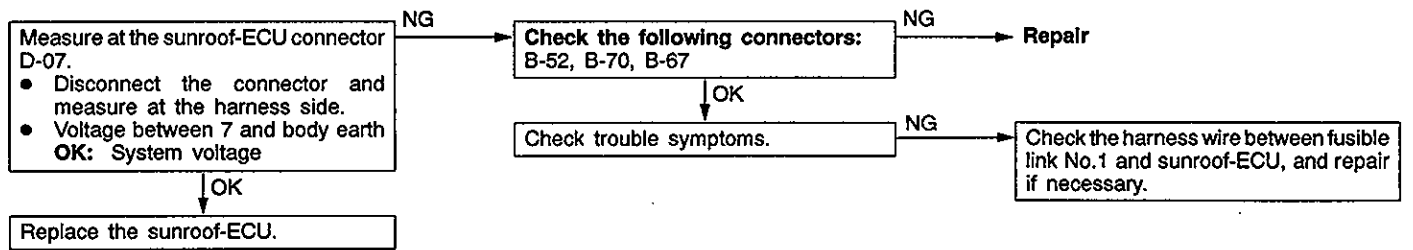
**Inspection Procedure 2**

<p><b>The motor does not reverse its direction when a load of 140 N or more is applied while the sunroof is closing.</b></p>	<p><b>Probable cause</b></p>
<p>The sunroof-ECU monitors the load conditions from the amount of current flowing to the motor. If more than the constant amount of current is flowing, the direction of motor operation is reversed to prevent jamming. If the motor does not reverse direction even when an excessive load is being applied, the cause may be a malfunction of the sunroof-ECU.</p>	<ul style="list-style-type: none"> <li>• Malfunction of sunroof-ECU</li> </ul>

Replace the sunroof-ECU.

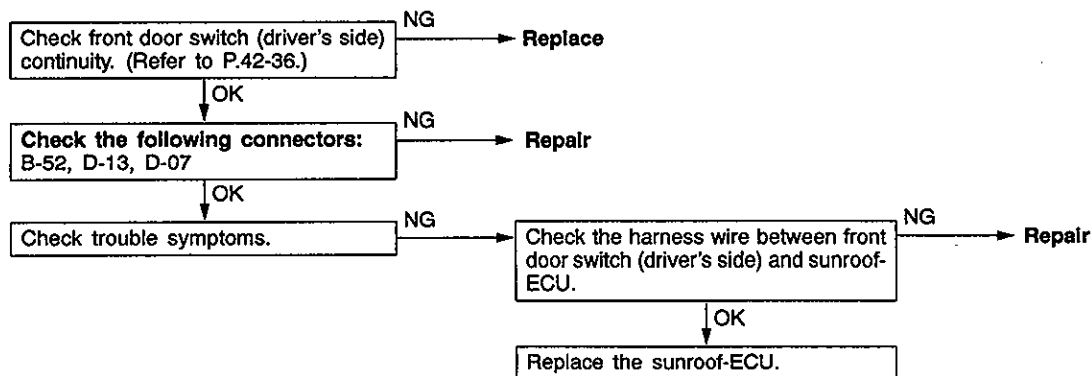
**Inspection Procedure 3**

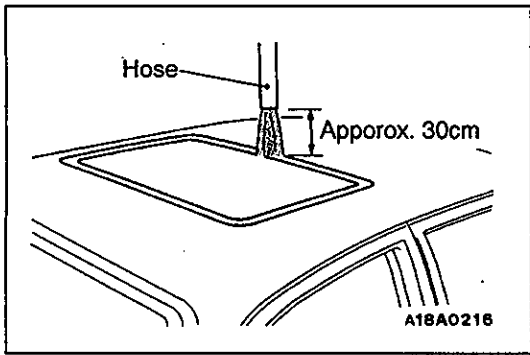
<p><b>The timer does not operate for 30 seconds after the ignition switch is turned to OFF.</b></p>	<p><b>Probable cause</b></p>
<p>The sunroof-ECU has a timer function which operates for 30 seconds after the ignition switch is turned to OFF. If the timer does not operate, the cause may be a malfunction of the sunroof-ECU or of the wiring harness or connector.</p>	<ul style="list-style-type: none"> <li>• Malfunction of sunroof-ECU</li> <li>• Malfunction of wiring harness or connector</li> </ul>



**Inspection Procedure 4**

<p><b>Opening or closing of the sunroof is possible immediately after turning the ignition switch to OFF, but the timer function does not operate continuously for another 30 seconds if the driver's side door is opened within 30 seconds.</b></p>	<p><b>Probable cause</b></p>
<p>The operation period for the sunroof timer is extended when an on signal is output from the driver's-side door switch. Because of this, if the timer operation period is not extended, the cause may be a malfunction of the door switch input circuit.</p>	<ul style="list-style-type: none"> <li>• Malfunction of the front door switch (driver's side)</li> <li>• Malfunction of sunroof-ECU</li> <li>• Malfunction of wiring harness or connector</li> </ul>





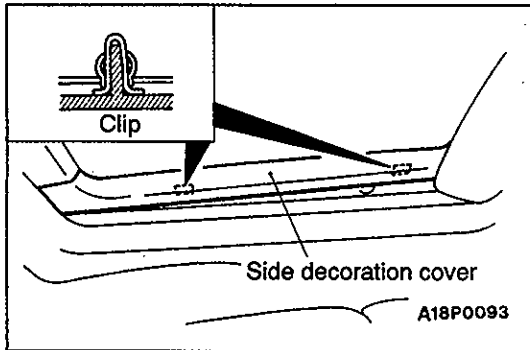
## ON-VEHICLE SERVICE

4260009073

### WATER TEST

Check if there are any leaks in the sunroof by the following procedure.

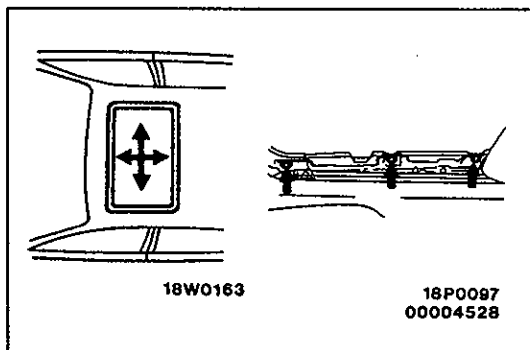
1. Fully close the roof lid glass.
2. Adjust the water pressure so that water comes out of the hose to a height of approximately 50 cm when the hose is held vertically facing upwards.
3. Hold the end of the hose approximately 30 cm above the roof and let the water run onto the weatherstrip for 5 minutes or more.
4. While doing this, check if any water leaks through into the passenger compartment from around the roof lid glass.



### SUNROOF FIT ADJUSTMENT

4260010073

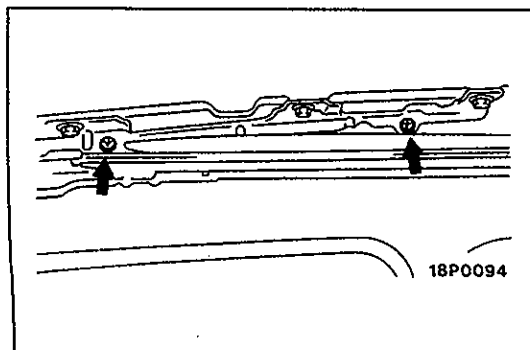
1. Fully close the roof lid glass.
2. Fully open the sunshade.
3. Remove the side decoration cover.



4. To adjust the forward, backward and sideways position of the roof lid glass, loosen the six roof lid glass assembly mounting nuts and then adjust the glass forward, backward or sideways.

#### NOTE

If the adjustment cannot be made by loosening the adjustment nuts, the roof lid glass or the motor have not been fully closed, so they should be adjusted to the fully closed positions.



5. To adjust the height of the roof lid glass, loosen the four guide (A) assembly mounting screws and then move the roof lid glass assembly along the slot in the guide (A) assembly to adjust the height of the roof lid glass.
6. After adjustment, check to be sure that the sunroof operates smoothly.

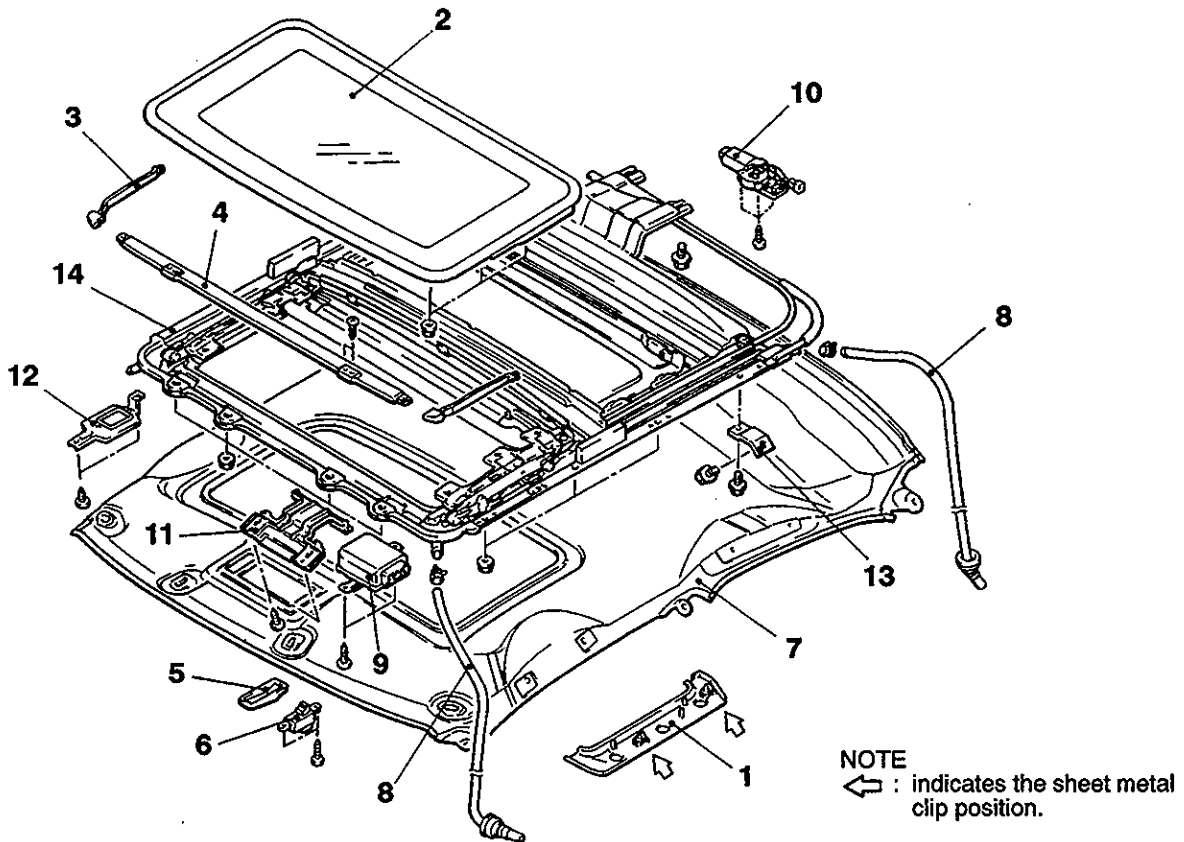
## SUNROOF

42600120093

## REMOVAL AND INSTALLATION

**Post-installation Operation****<Roof lid glass assembly, Sunroof assembly>**

- (1) Sunroof Water Test (Refer to P.42-53.)
- (2) Sunroof Fit Adjustment (Refer to P.42-53.)



A18M0138

**Roof lid glass assembly removal steps**

◀A▶

1. Side decoration cover
2. Roof lid glass assembly

**Deflector assembly removal steps**

3. Deflector link assembly <Hatchback>
4. Deflector assembly <Hatchback>

**Sunroof switch removal steps**

5. Sunroof switch cover
6. Sunroof switch

**Drain hose removal steps**

◀B▶ ▶B▶

- Splash shield (Front drain hose)
- 7. Headlining
- 8. Drain hose

**Sunroof-ECU removal steps**

7. Headlining
9. Sunroof-ECU

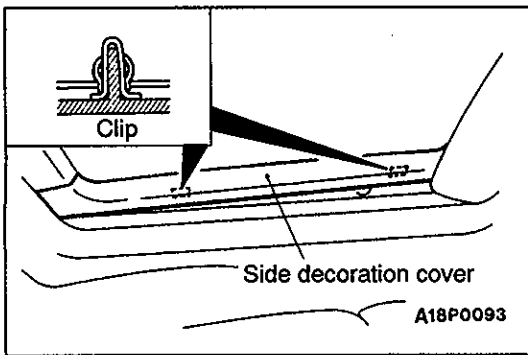
**Sunroof motor removal steps**

◀C▶ ▶A▶

7. Headlining
10. Sunroof motor

**Sunroof assembly removal steps**

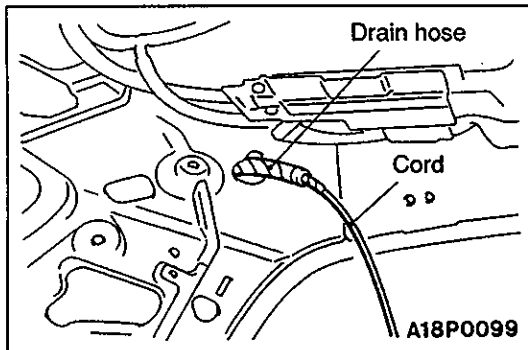
7. Headlining
8. Drain hose connection
11. Room lamp bracket
12. Sunroof switch bracket
13. Set bracket
14. Sunroof assembly



**REMOVAL SERVICE POINTS**

**◀A▶ SIDE DECORATION COVER REMOVAL**

Remove the clips, and then remove the side decoration cover.



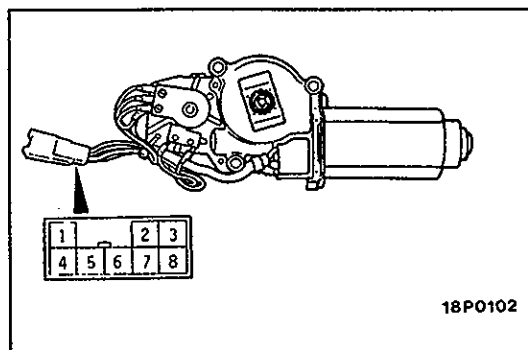
**◀B▶ DRAIN HOSE REMOVAL**

Tie a cord to the end of the drain hose, and wind tape around the tie until it is smooth. Then pull the drain hose out from the passenger compartment.

**◀C▶ SUNROOF MOTOR REMOVAL**

**Caution**

Always close the roof lid glass fully before removing the sunroof motor. If the fully-closed positions of the roof lid glass and the sunroof motor are not the same, the sunroof will not operate properly.

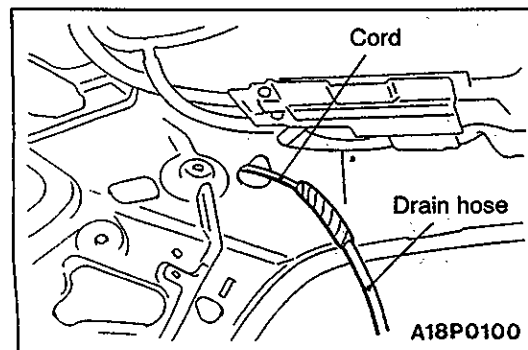


**INSTALLATION SERVICE POINTS**

**▶A▶ SUNROOF MOTOR INSTALLATION**

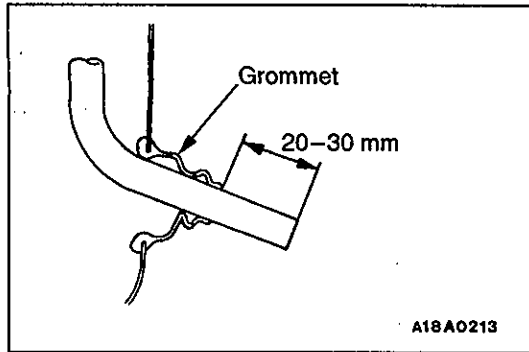
If the fully-closed position of the sunroof motor is incorrect, set the motor to the fully-closed position by the procedure given below before installing the motor.

1. Connect a circuit analyser between terminals (4) and (6) of the motor connector.
2. Operate the motor until the position is reached at which continuity switches from on to off or from off to on, and then install the motor.

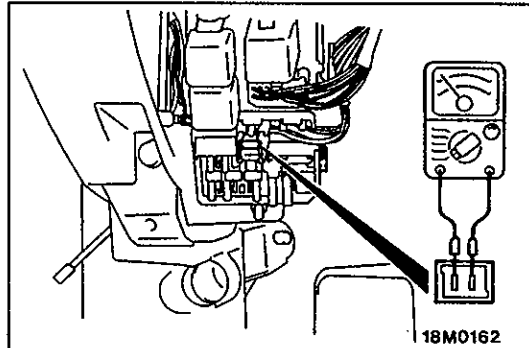


**▶B▶ DRAIN HOSE INSTALLATION**

1. Tie the cord that was used during removal to the end of the drain hose, and wind tape around it so that there is no unevenness.
2. Pull the cord to pull through the drain hose



3. Make the protrusion from the drain hose grommet as shown in the illustration.



## INSPECTION

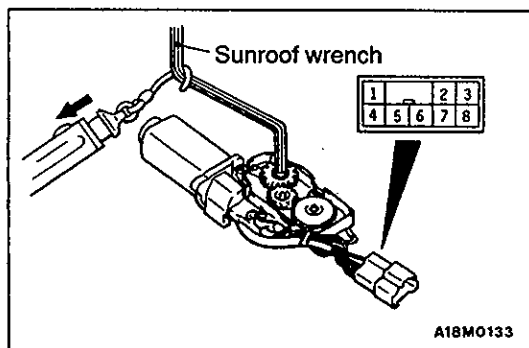
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### ROOF LID GLASS OPERATION CURRENT CHECK

1. Remove the sunroof fuse and connect a circuit analyser as shown in the illustration.
2. Press the sunroof switch to the ON position, and then measure the operation current in the intervals between the points when the sunroof starts to operate, when it is fully open, when it is fully closed and when it is fully tilted up.

**Standard value: 7 A or less (at 20°C)**

3. If the operation current is outside the standard value, check the following points.
  - Installation condition, warping or jamming of sunroof assembly
  - Sticking of drive cable
  - Tilt of roof lid glass



### SUNROOF-MOTOR CLUTCH SLIDING TORQUE CHECK

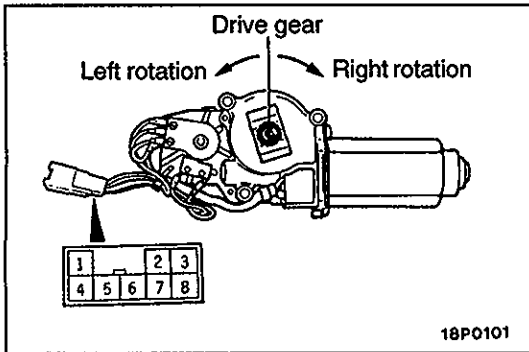
1. Insert the sunroof wrench of the on-board tools into the hexagonal hole in the motor drive shaft, and hook a spring balance as shown in the illustration.
2. Apply battery voltage between terminals (1) and (2) of the sunroof motor connector to operate the motor.
3. Measure the load on the spring balance at the point where the rotation torque of the motor matches the spring force of the spring balance.

**Standard value: 4.7–6.2 Nm**

#### Caution

1. The spring balance should be kept a right angle to the sunroof wrench.
2. If a wrench other than that in the on-board tools is used, the value for the clutch sliding torque will be different, so only the on-board tool should be used.
4. If the clutch sliding torque is outside the standard value, turn the motor adjuster to adjust it.

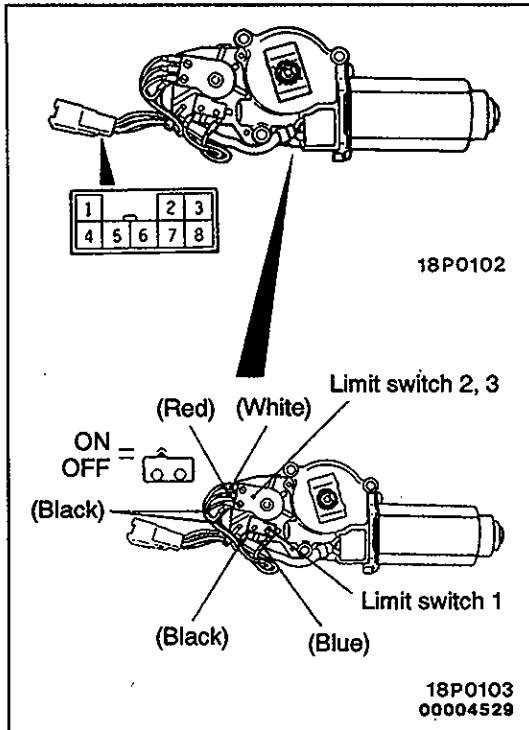




**SUNROOF MOTOR CHECK**

Check the direction of rotation of the drive gear when the battery is connected to the connector.

Battery connection terminal		Drive gear rotation direction
1	2	
⊖	⊕	Right
⊕	⊖	Left

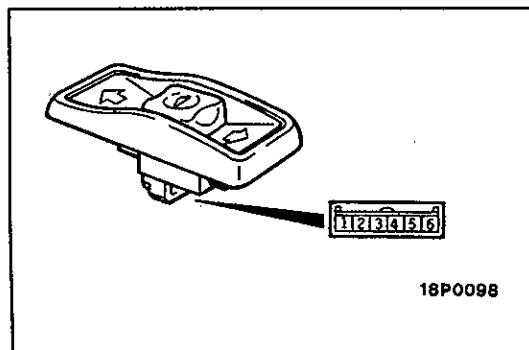


**LIMIT SWITCH CONTINUITY CHECK**

1. Remove the limit switches from the sunroof motor, and then check the operation of the limit switches.

Switch position		Terminal No.			
		4	5	6	7
Limit switch 1	ON	○—○			
	OFF				
Limit switch 2	ON	○—○		○	
	OFF				
Limit switch 3	ON	○			○
	OFF				

2. Check the identification colours. Then install the limit switches as shown in the illustration.

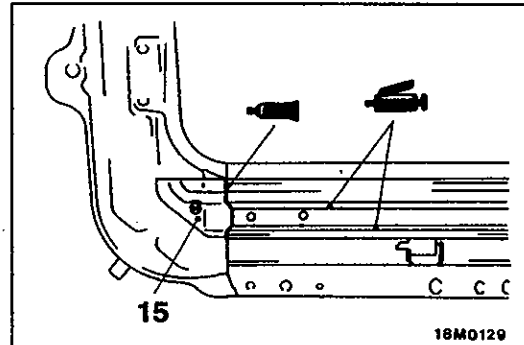
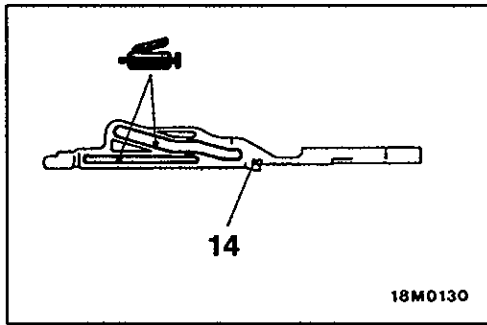


**SUNROOF SWITCH CONTINUITY CHECK**

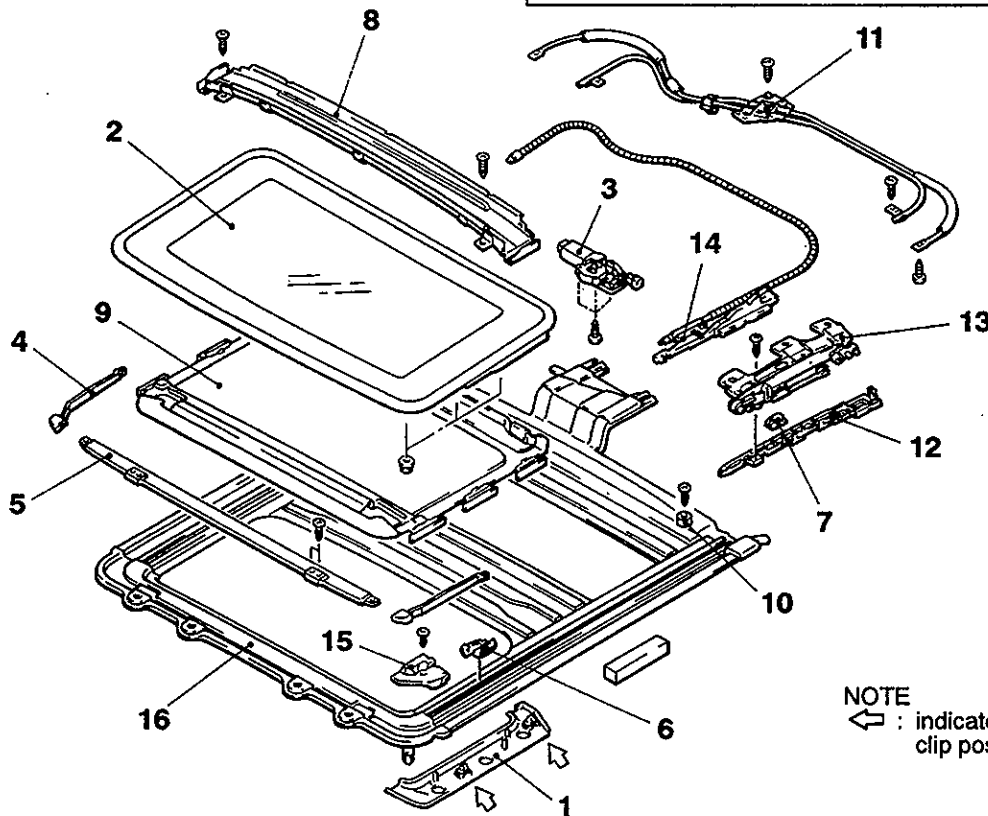
Switch position	Terminal No.			
	3	4	5	6
Slide open		○—○		
Off				
Tilt up	○—○			
Slide close, Tilt down		○—○		○

DISASSEMBLY AND REASSEMBLY

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Sealant:  
3M ATD Part No.8531 or 3M Part  
No.8646, or equivalent



NOTE  
↔ : indicates the sheet metal clip position.

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**Disassembly steps**

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. Side decoration cover (Refer to P.42-55.)</li> <li>2. Roof lid glass assembly</li> <li>3. Sunroof motor</li> <li>4. Deflector link assembly &lt;Hatchback&gt;</li> <li>5. Deflector assembly &lt;Hatchback&gt;</li> <li>6. Link connector &lt;Hatchback&gt;</li> <li>7. Shoe (C) &lt;Hatchback&gt;</li> </ol> | <ol style="list-style-type: none"> <li>8. Drip rail assembly</li> <li>9. Sunshade assembly</li> <li>10. Cushion (B) assembly</li> <li>11. Drive unit assembly</li> <li>12. Decoration link</li> <li>13. Guide (A) assembly</li> <li>14. Slider assembly</li> <li>15. Rail cover assembly</li> <li>16. Frame sub assembly</li> </ol> |
|---|---|