

BODY

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E42AA--

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SPECIFICATIONS

E42CA--

GENERAL SPECIFICATIONS

Items	Specifications
Hood Type	Rear hinged, front opening type
Front door Construction Regulator system Locking system	Front-hinged, sash construction Wire type Pin-fork type
Rear door Construction Regulator system Locking system	Front-hinged, sash construction Wire type Pin-fork type
Tailgate <Sedan> Hinge	Single-arm type (Torsion bar type)
Tailgate <Hatchback, Wagon> Type	Inner-hinged, with gas damper
Glass installation method Windshield Quarter window glass <Hatchback, Wagon> Rear window glass <Sedan> Tailgate window glass <Hatchback, Wagon>	Adhesive type Adhesive type Adhesive type Adhesive type
Glass thickness mm (in.) Windshield Rear window glass <Sedan> Tailgate window glass <Hatchback, Wagon> Front door glass Rear door glass Rear door stationary window glass <Sedan, Wagon> Quarter window glass <Hatchback, Wagon> Roof glass lid	5.3 (0.21) 3.5 (0.14) 3.5 (0.14) 3.5 (0.14) 3.5 (0.14) 3.5 (0.14) 3.5 (0.14) 3.5 (0.14) 5.0 (0.20)
Sunroof motor Speed at no load Speed at load At 1 Nm (0.1 kgm, 0.72 ft.lbs.) Bound current Turning direction	r/min. 140 or more r/min. 120–160 A 35 or less Both clockwise and counterclockwise

Items		Specifications
Power window motor		
Revolutions under no load	r/min.	94 or more
Revolutions under load	r/min.	54–74
At 3 Nm (0.3 kgm, 2.17 ft.lbs.)		
Bound current	A	21 or less
Direction of rotation		Clockwise and counterclockwise
Power window relay		
Maximum contact current	A	20
Rated coil current	A	0.2 or less
Door lock actuator		
Bound current (at 12V)	A	4.2–6.2
Operating voltage range	V	9–15
Tripping time* (at 12V)	Second	5–30

NOTE

*Tripping time is the time consumed until current reaches 0.5 A after power connection.

SERVICE SPECIFICATIONS

E42CB-

Items		Standard value
Tailgate handle play	mm (in.)	1.5–5.5 (0.06–0.22)
Sunroof sliding resistance	N (kg, lbs.)	150 (15, 33)
Slipping force of sunroof motor clutch	N (kg, lbs.)	50–70 (5.0–7.0, 11–15)

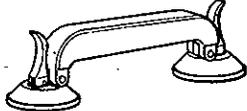
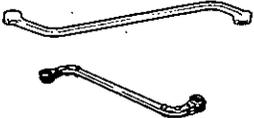
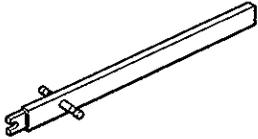
SEALANT AND ADHESIVE

E42CE-

Items	Specified sealant and adhesive	Remarks
Fender to body panel Sunroof assembly rear end	3M ATD Part No. 8531 or 3M Part No. 8646 or equivalent	Body sealer
Splash shield to fender Waterproof film Window glass runchannel and door panel Sunroof assembly and body	3M ATD Part No. 8625 or equivalent	Ribbon sealer
Windshield Quarter window glass <Hatchback> Quarter window glass <Wagon> Tailgate window glass <Hatchback> Tailgate window glass <Wagon> Rear window glass <Sedan>	3M ATD Part No. 8609 Super Fast Urethane Auto Glass sealant or equivalent	—

SPECIAL TOOLS

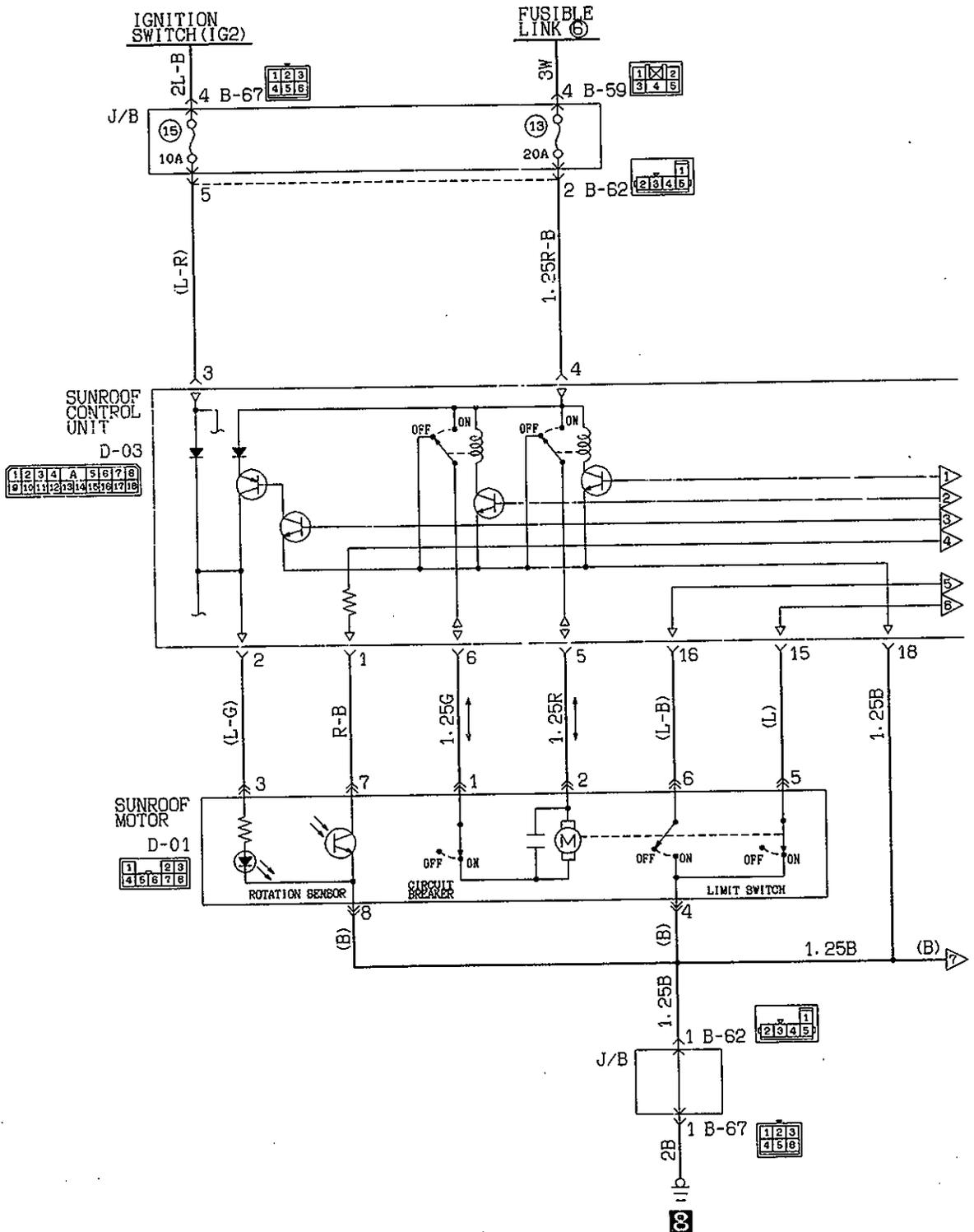
E42DA--

Tool	Number	Name	Use
	MB990784	Ornament remover	Removal of switch, trim, etc.
	MB990480	Glass holder	Removal and installation of window glass
	MB990449	Window moulding remover	Removal of the window moulding
	MB990900 or MB991164	Door adjusting wrench	Adjustment of door fit
	MB991244	Torsion bar remover and installer	Removal and installation of trunk lid torsion bar

TROUBLESHOOTING <Sunroof>

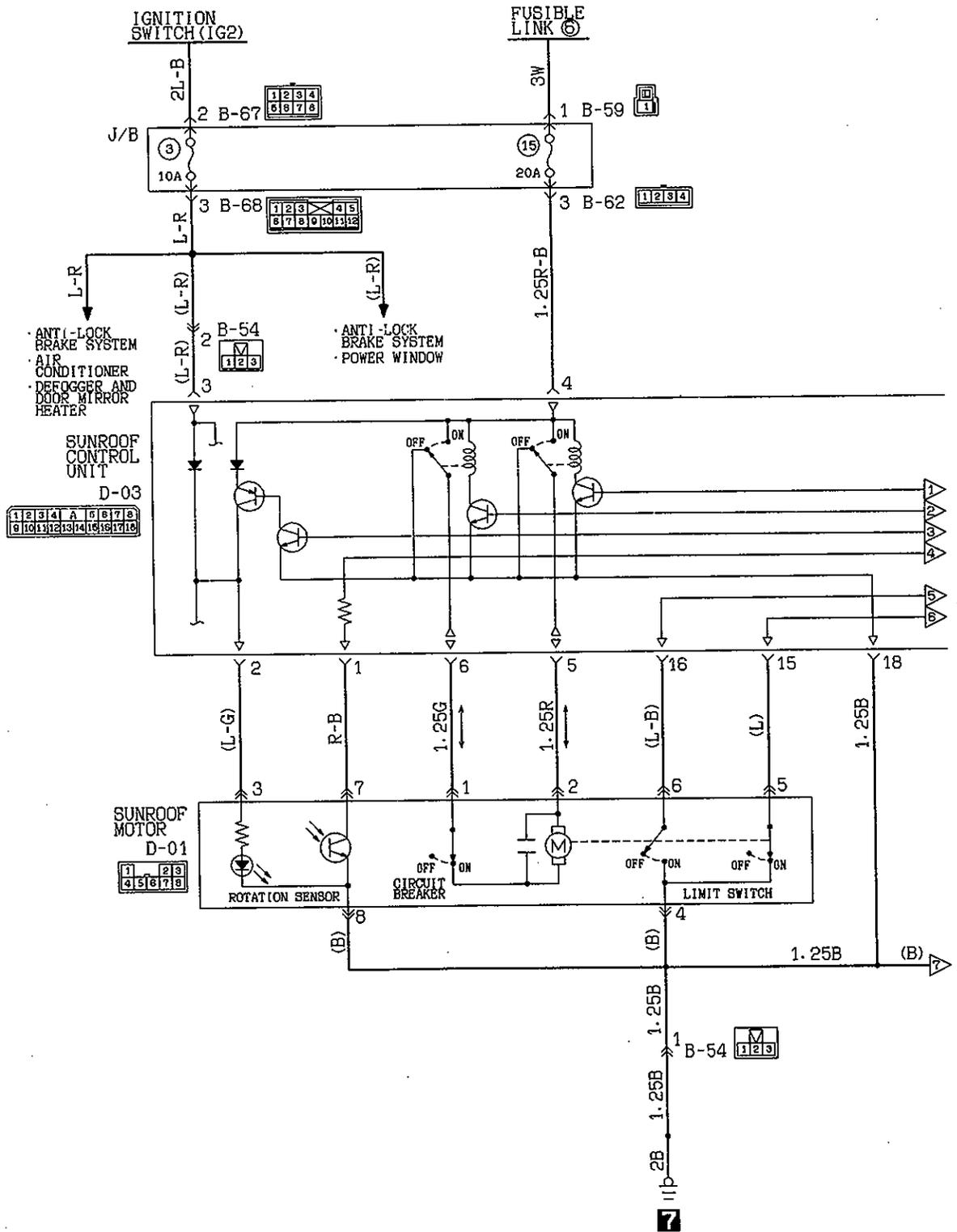
E42EE-

SUNROOF CIRCUIT DIAGRAM
L.H. drive vehicles

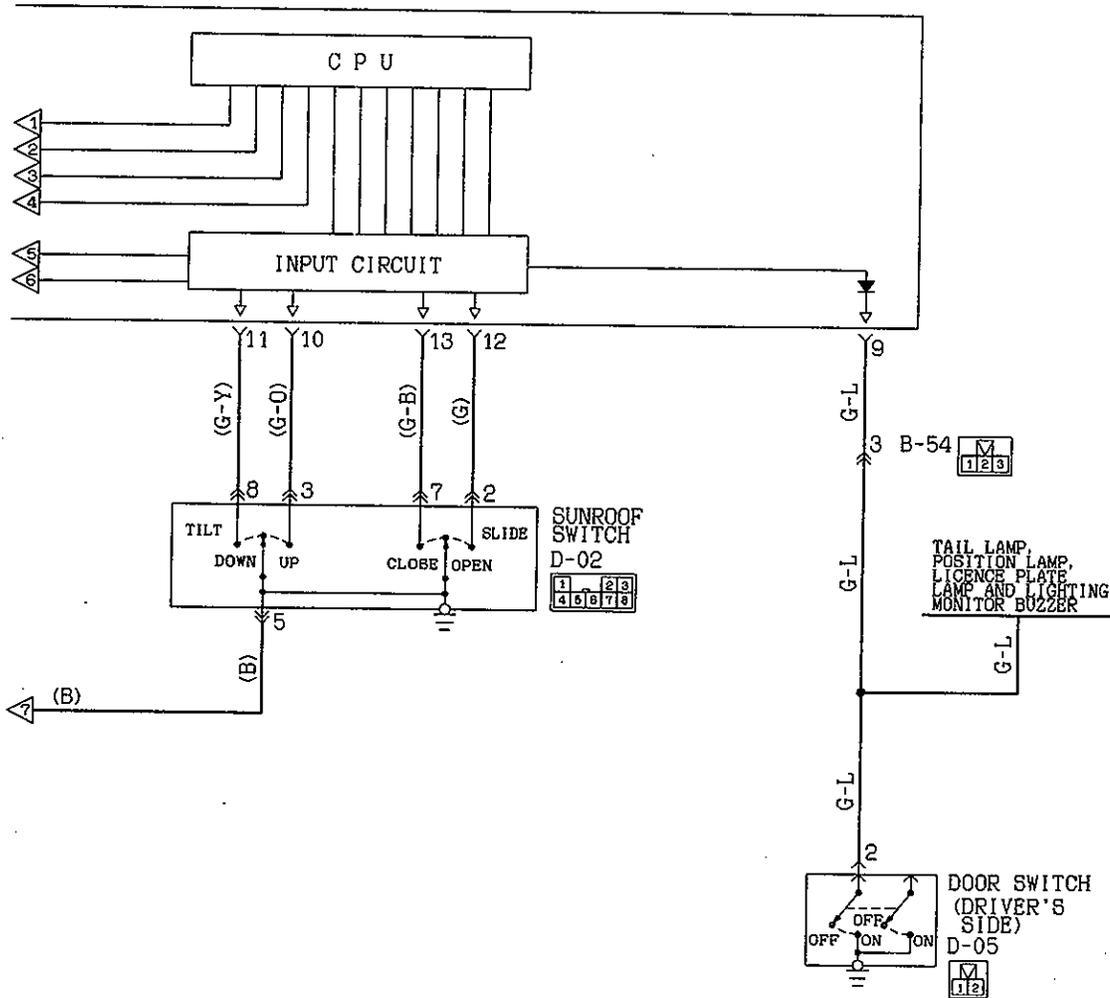


KX35-AC-E1501-EC

R.H. drive vehicles



KX35-AC-E1502-EC



Wire colour code
 B:Black LG:Light green G:Green L:Blue W:White Y:Yellow SB:Sky blue
 BR:Brown O:Orange GR:Gray R:Red P:Pink V:Violet

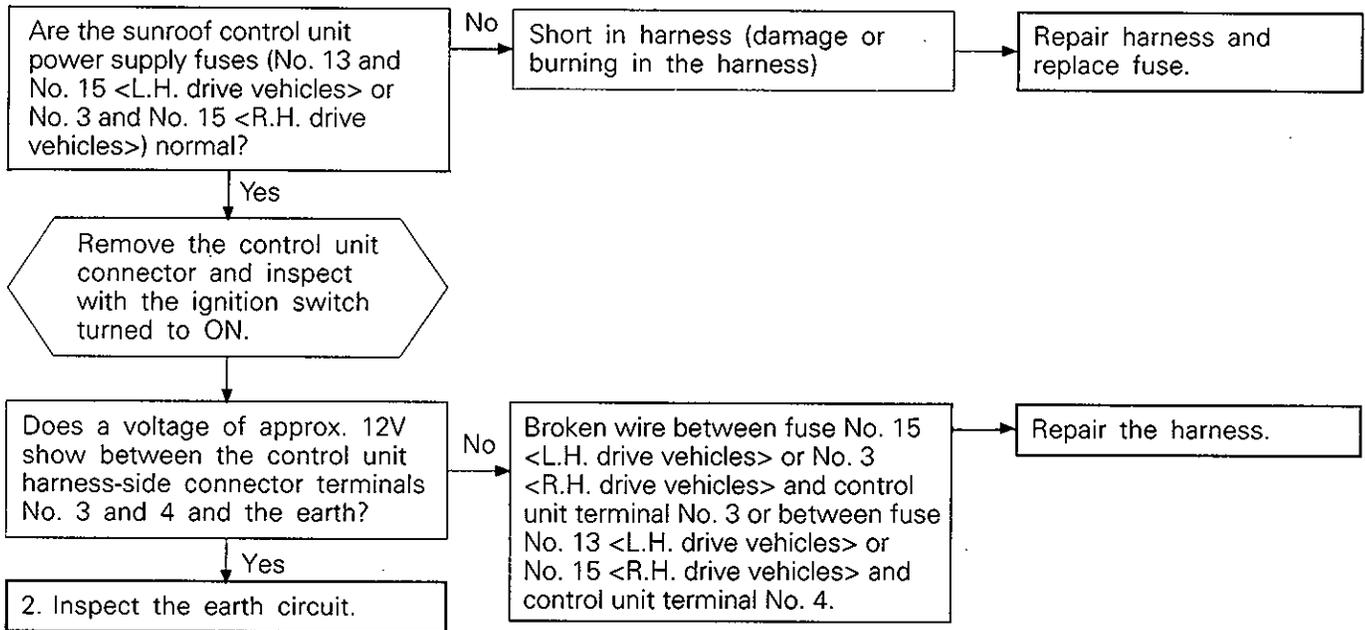
SUNROOF QUICK REFERENCE TABLE

Trouble symptom	Probable cause	Remedy
When ignition switch is turned to ON, sunroof does not operate.	<ul style="list-style-type: none"> ● Broken wire in sunroof control unit circuit or in each harness. ● Sunroof switch is faulty. ● Sunroof motor is faulty. ● Sunroof control unit is faulty. 	Inspect according to Flow Chart A (P.42-10).
When closing sunroof, motor does not reverse when a load of 270 Nm (27 kgm, 195 ft.lbs.) or more is applied.	<ul style="list-style-type: none"> ● Sunroof control unit is faulty. 	Replace sunroof control unit.
Sunroof will not close fully.	<ul style="list-style-type: none"> ● Limit switch contact is faulty. 	Replace sunroof motor.
When sunroof switch is pressed, motor operates for 0.2 seconds and then stops.	<ul style="list-style-type: none"> ● Lock plate is damaged. 	Replace sunroof motor.
Opening or closing of the sunroof is possible immediately after turning the ignition switch to OFF, but even if the driver's side door is opened within 30 seconds, the timer function does not operate continuously for another 30 seconds.	<ul style="list-style-type: none"> ● Broken wire in input circuit in driver's side door switch. ● Driver's side door switch is faulty. ● Sunroof control unit is faulty. 	Inspect according to Flow Chart B (P.42-11).
After turning the ignition switch to OFF, sunroof operation is possible even after timer operation period has elapsed.	<ul style="list-style-type: none"> ● Sunroof control unit is faulty. 	Replace sunroof control unit.
After turning the ignition switch to OFF, the timer does not operate.	<ul style="list-style-type: none"> ● Sunroof control unit is faulty. 	Replace sunroof control unit.

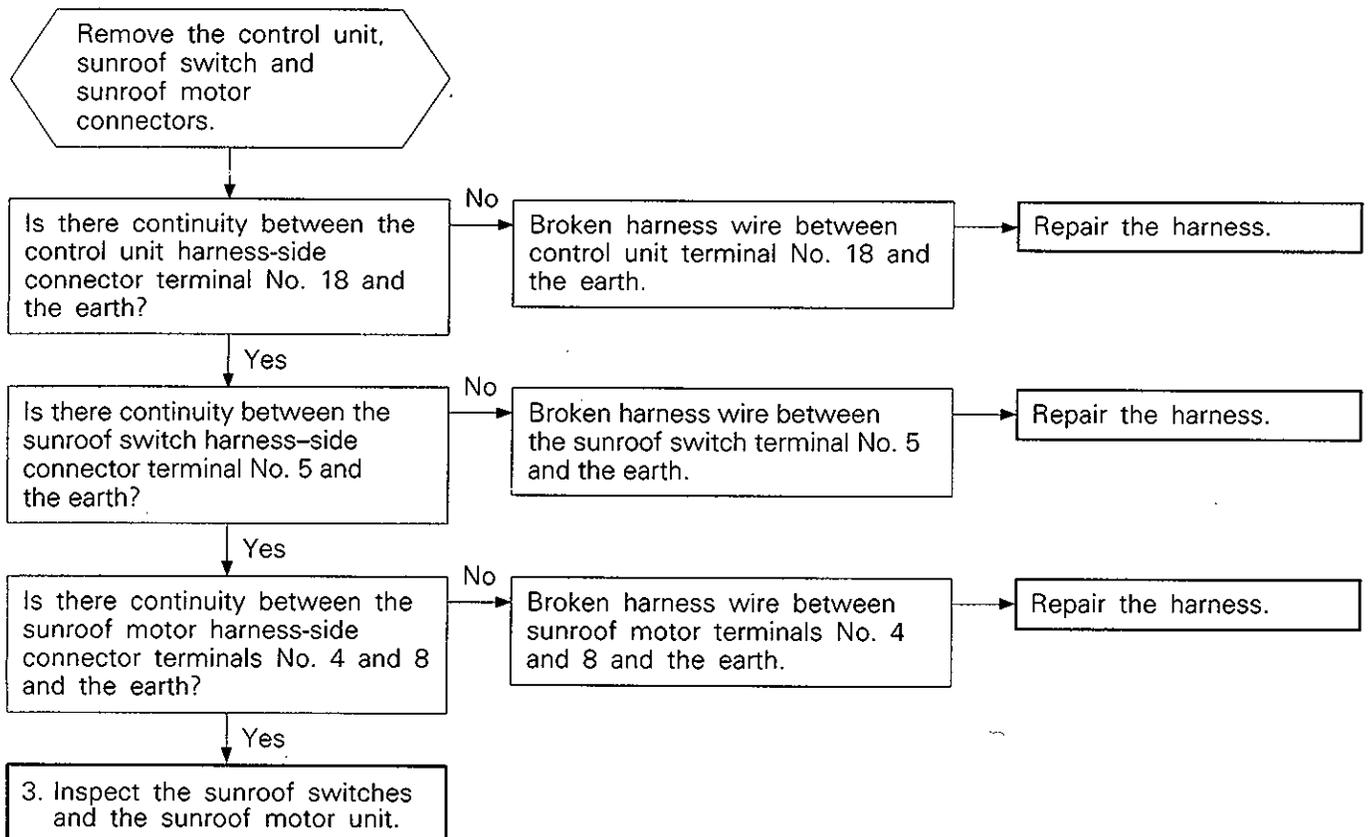
TROUBLE SYMPTOM INSPECTION CHART

A When ignition switch is turned to ON, sunroof does not operate.

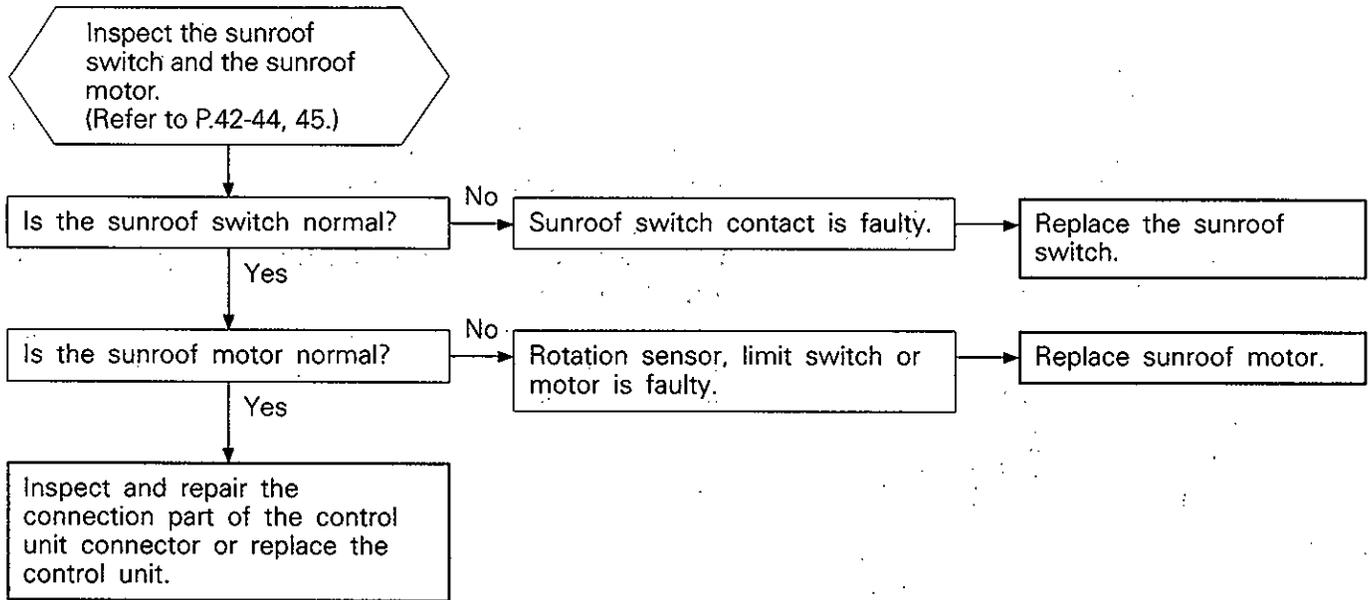
1. Inspection of power circuit.



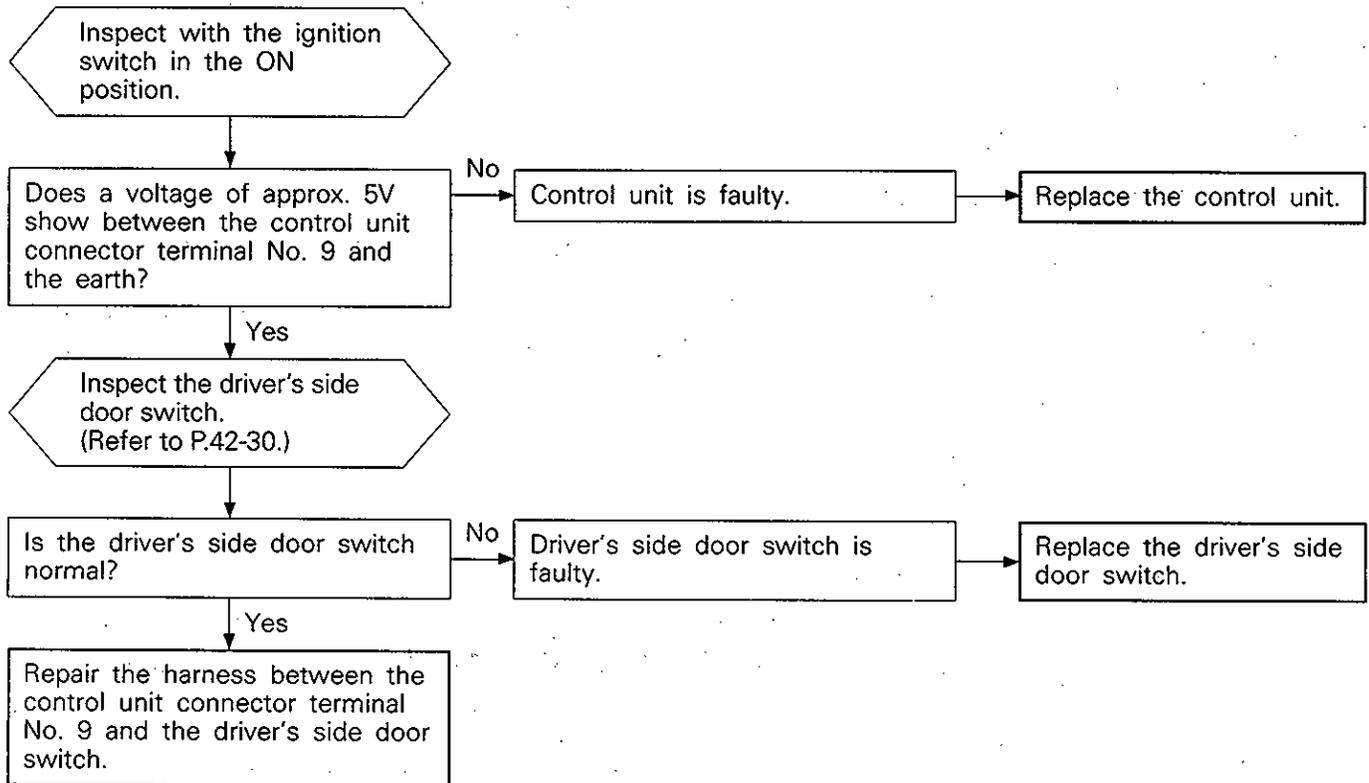
2. Inspection of earth circuit.

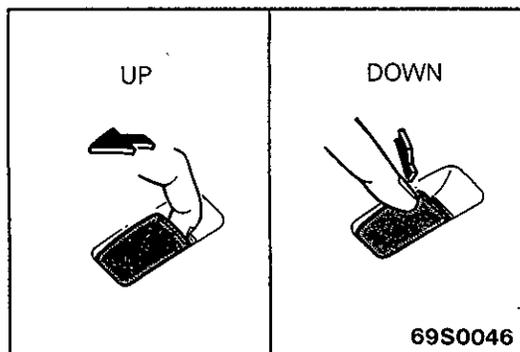
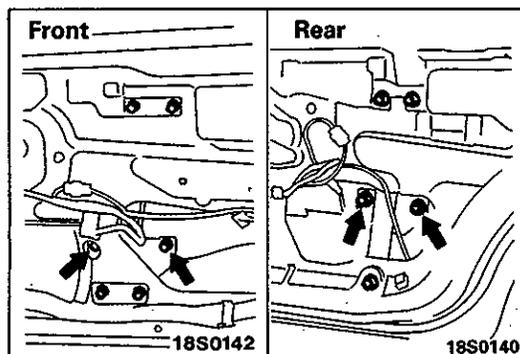
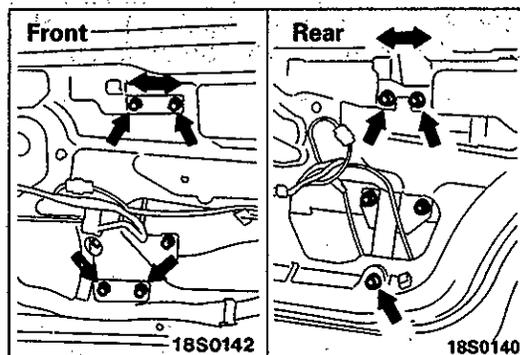
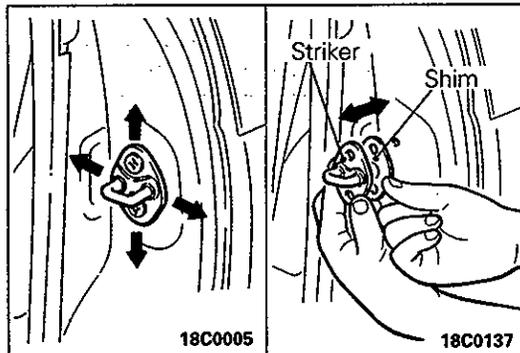
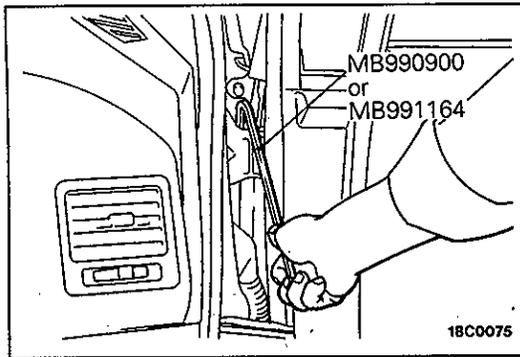


3. Inspection of sunroof switches and sunroof motor unit.



B Opening or closing of the sunroof is possible immediately after turning the ignition switch to OFF, but even if the driver's side door is opened within 30 seconds, the timer function does not operate continuously for another 30 seconds.





SERVICE ADJUSTMENT PROCEDURES

DOOR FIT ADJUSTMENT

E42FDAG

1. Use the special tool to loosen the hinge mounting bolts on the body side, and then adjust the clearance around the door so that it is uniform on all sides.
2. When there is a stepped section in the door and body, use the special tool to loosen the door hinge mounting bolt on the door side and adjust the door fit.

Caution

Attach protection tape to the fender edges where the hinge is installed.

3. If the door opening and closing is stiff, adjust the linking of the striker and the door latch using the shim, while moving the striker up and down, or left and right.

DOOR GLASS ADJUSTMENT

E42FEAH

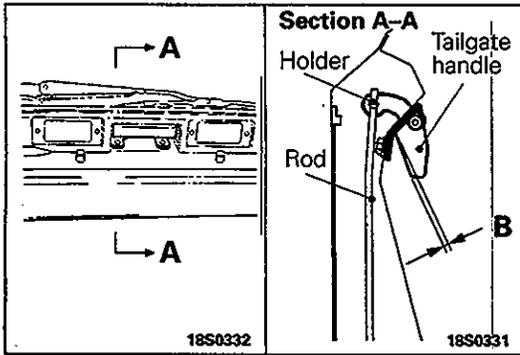
1. Remove the door trim and waterproof film. (Refer to P.42-31.)
2. Loosen the installation bolt of the window regulator assembly; then move the upper installation back and forth and adjust the tilted angle of the glass.

3. Lower the door window glass to the position of the access hole.
4. Loosen the door glass installation screw, and adjust the forward/backward position of the glass.

CIRCUIT BREAKER (INCORPORATED IN THE POWER WINDOW MOTOR) INSPECTION

E42FWAA

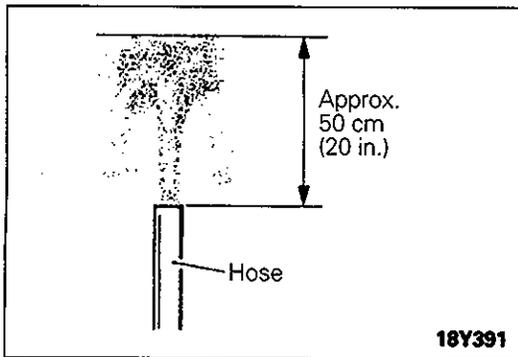
1. Lift the UP switch to fully close the window glass, and continue to lift the switch for 40 seconds.
2. At the moment that the UP switch is released, press the DOWN switch. The circuit breaker can be considered good if at this time the door window glass begins to open within 60 seconds.



TAILGATE HANDLE PLAY INSPECTION <WAGON> E42FHAI

- (1) Check if the tailgate handle play is within the standard value.
Standard value (B): **1.5–5.5 mm (0.06–0.22 in.)**
- (2) If the play is outside the standard value, open the holder of the tailgate handle and adjust the connection position of the tailgate latch rod and the tailgate handle.

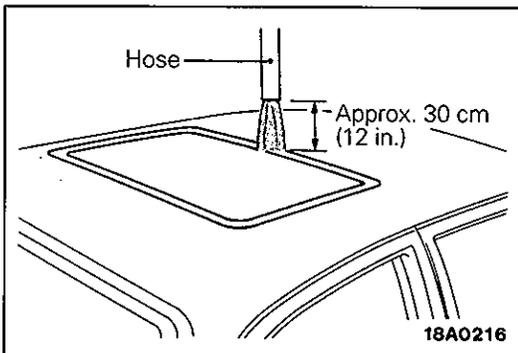
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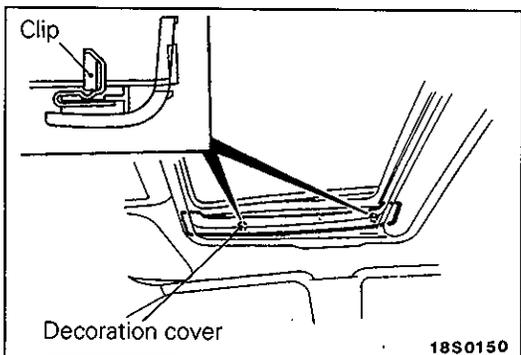
WATER TEST

E42FOAA

1. Close roof lid tightly.
2. Hold hose upward and adjust water fountain to about 50 cm (20 in.) high.



3. Pour water over the roof from about 30 cm (12 in.) above roof for more than 5 minutes.
4. While pouring water, check for leak around roof lid.
5. In the event of leakage, check drain pipe, weatherstrip contact and others.

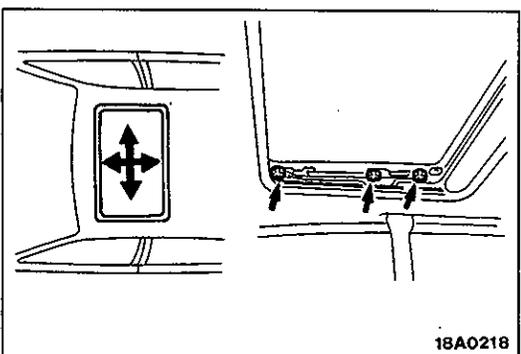


SUNROOF FIT ADJUSTMENT

E42FSAE

FORWARD, BACKWARD AND SIDWAYS ADJUSTMENT OF THE SUNROOF GLASS

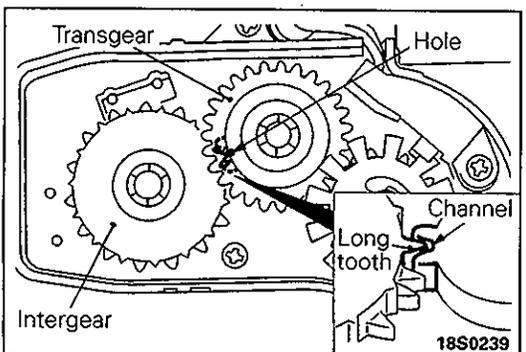
1. Fully close the roof lid glass.
2. Fully open the sun shade.
3. Remove the decoration cover.



4. Loosen the 6 roof lid glass mounting nuts and adjust the glass forward, backward or sideways.

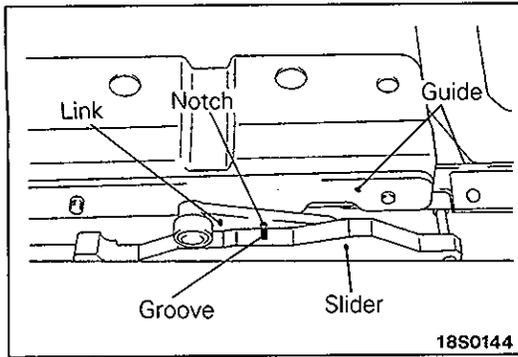
NOTE

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

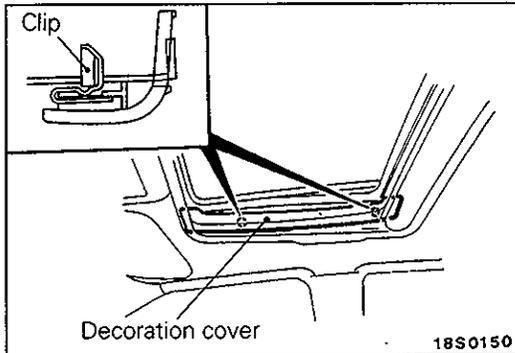


ADJUSTING SO THAT THE ROOF AND THE ROOF LID GLASS ARE PARALLEL, AND THE GLASS IS FULLY CLOSED

1. Remove the sunroof motor, and then remove the resin cover.
2. Align the long tooth of the motor intergear with the channel in the transgear. (Sunroof motor in fully closed position.)

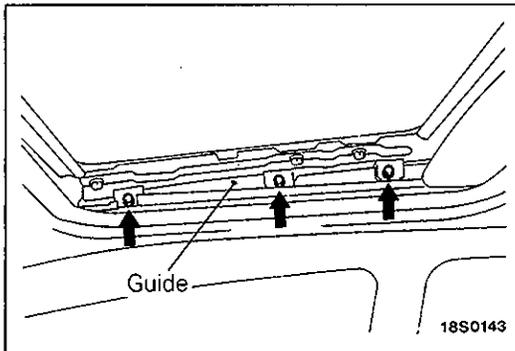


3. Remove the roof lid glass.
4. Align the groove on the link with the notch on the slider. (Roof lid glass in fully-closed position.)
5. Install the sunroof motor while roof lid glass is in the fully-closed position.
6. After adjustment, check that the sunroof operates smoothly.



ADJUSTING THE HEIGHT OF THE ROOF LID GLASS AND THE ROOF

1. Fully close the roof lid glass.
2. Fully open the sun shade.
3. Remove the decoration cover.



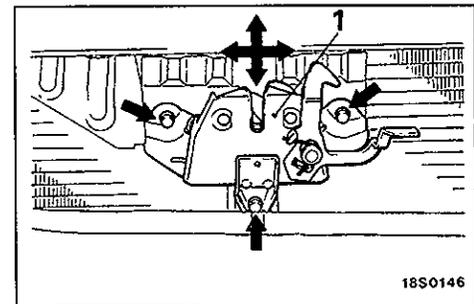
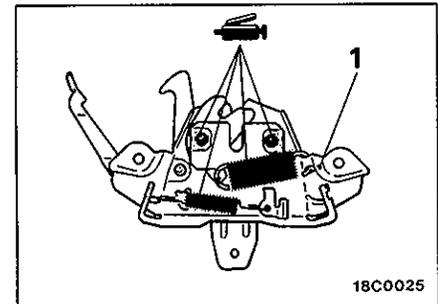
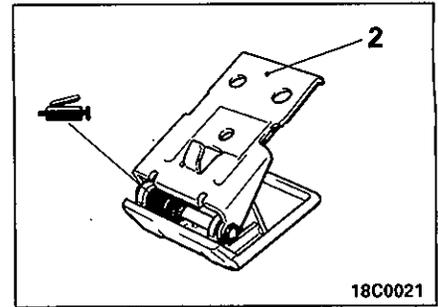
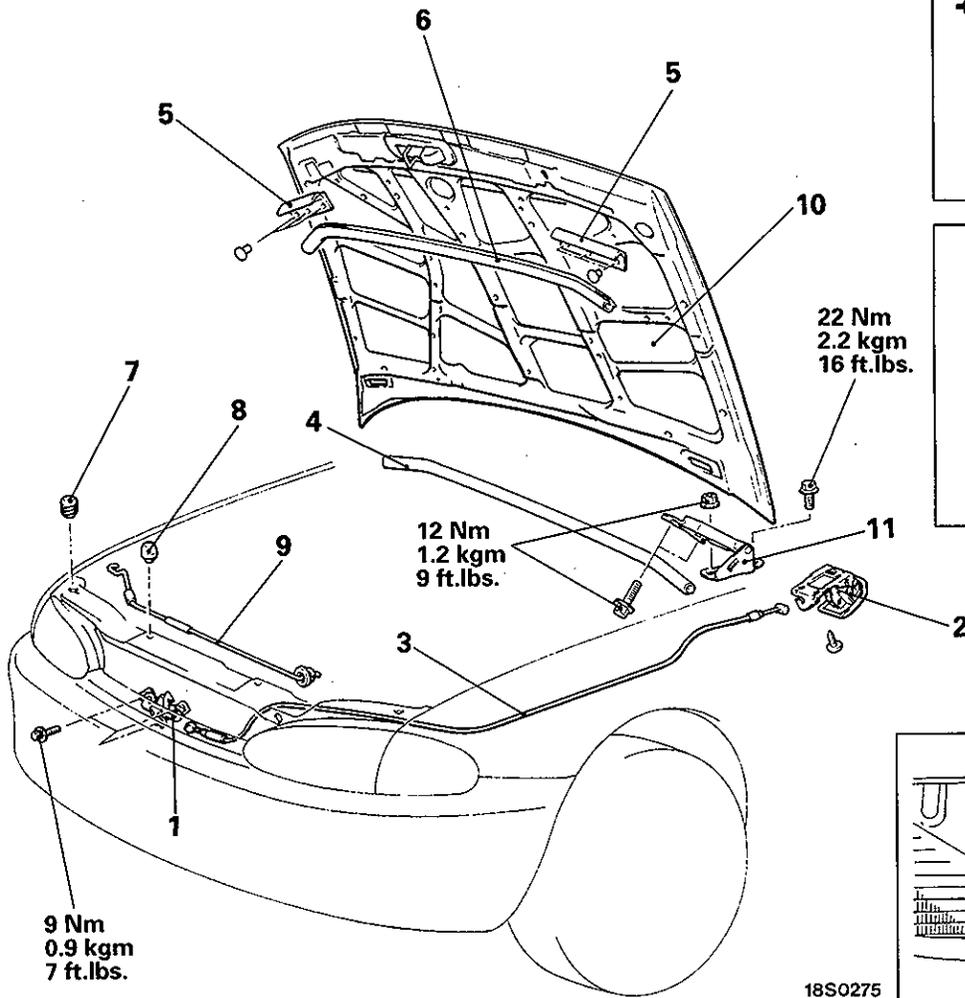
4. Loosen the three bolts on the guide section and adjust the height of the roof lid glass and the roof, and then tighten the bolts.

5. After adjustment, check that the sunroof operates smoothly.

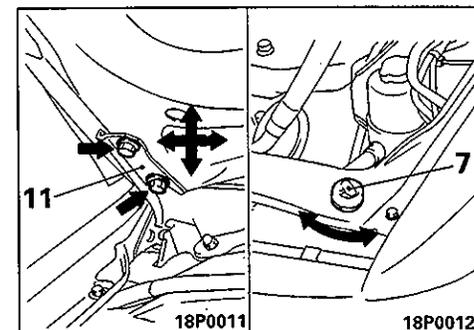
HOOD

E42HAAN

REMOVAL AND INSTALLATION



Adjustment of hood step and hood striker linkage



Adjustment of clearance around hood and height

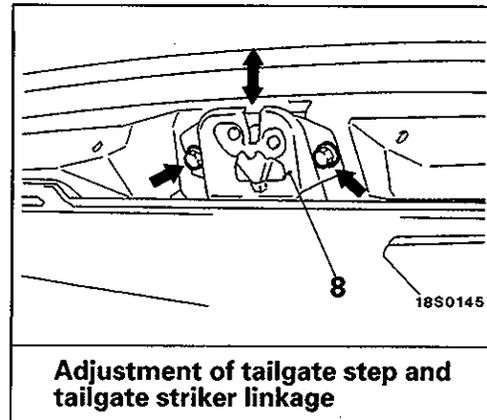
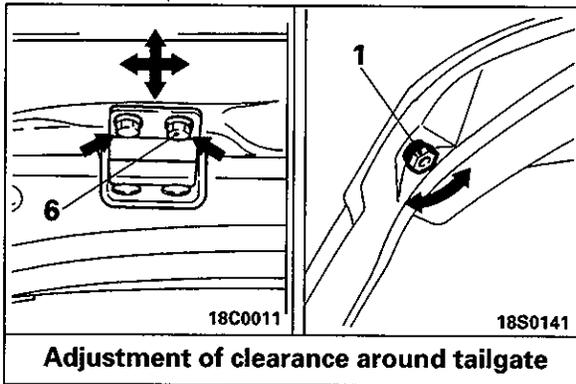
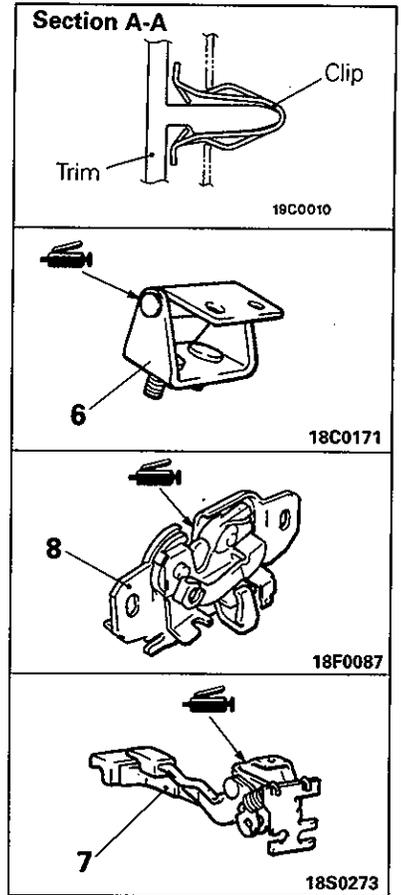
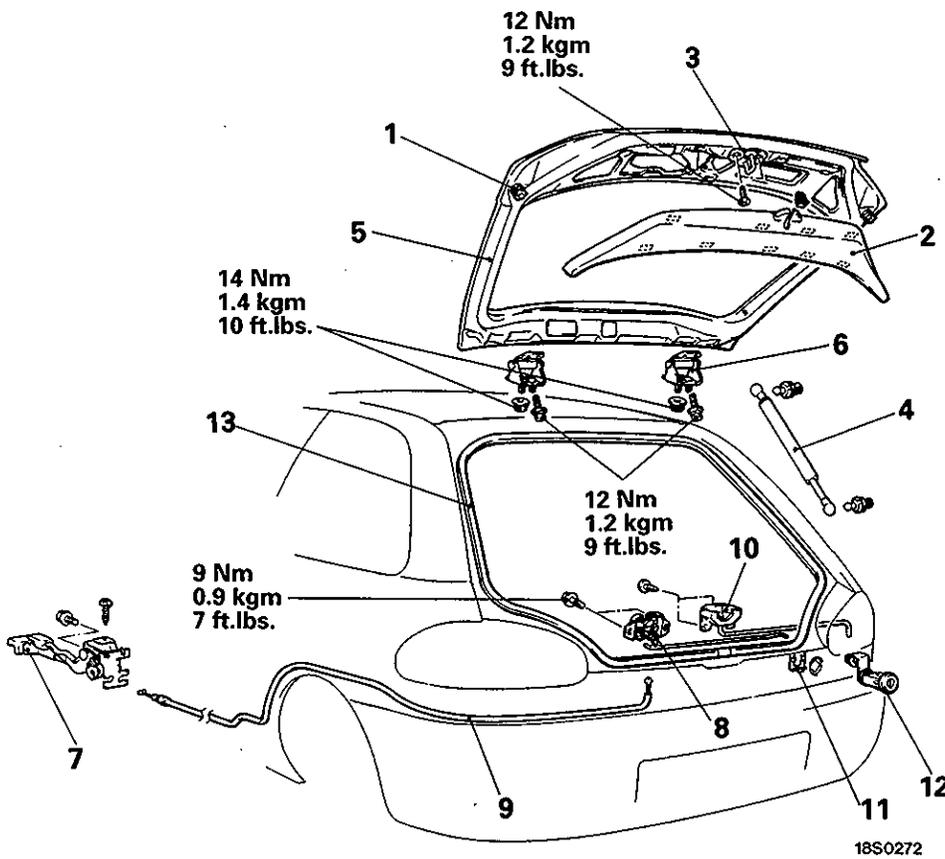
1. Hood latch
2. Hood lock release handle
3. Hood lock release cable
4. Hood weatherstrip
5. Hood front weatherstrip
6. Hood weatherstrip for air conditioner
7. Bumper
8. Bumper
9. Hood support rod

Removal steps of hood and hood hinge

- Washer hose (Refer to GROUP 51-Windshield wiper and washer.)
- 10. Hood
- 11. Hood hinge

TAILGATE <Hatchback>

REMOVAL AND INSTALLATION



Removal steps of tailgate and tailgate hinge

- ◆◆ 1. Bumper
- 2. Tailgate trim
- 3. Tailgate striker
- 4. Tailgate gas spring
- 5. Tailgate panel
 - Headlining (Refer to GROUP 52A-Headlining.)
- 6. Tailgate hinge

Removal steps of tailgate lock release handle and cable

- Front seat } (Refer to GROUP 52A-
- Rear seat } Front Seat and Rear Seat.)
- Scuff plate
- Rear end trim } (Refer to GROUP 52A-Trims.)
- Quarter trim }
- 7. Tailgate lock release handle
- 8. Tailgate latch
- 9. Tailgate lock release cable

Removal steps of tailgate latch

- Rear end trim (Refer to GROUP 52A-Trims.)
- 8. Tailgate latch

Removal steps of tailgate lock cylinder

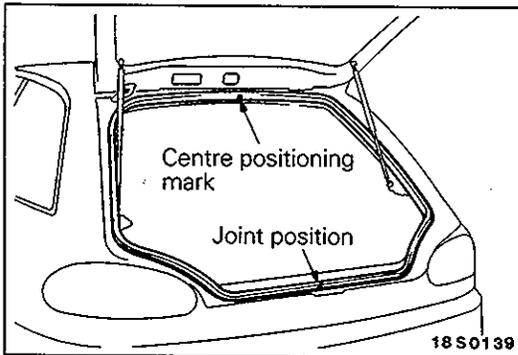
- Rear end trim (Refer to GROUP 52A-Trims.)
- 10. Cylinder cover
- 11. Cylinder lock retainer
- 12. Tailgate lock cylinder

Removal steps of tailgate opening weatherstrip

- 4. Tailgate gas spring
- ▶◀ 13. Tailgate opening weatherstrip

Caution

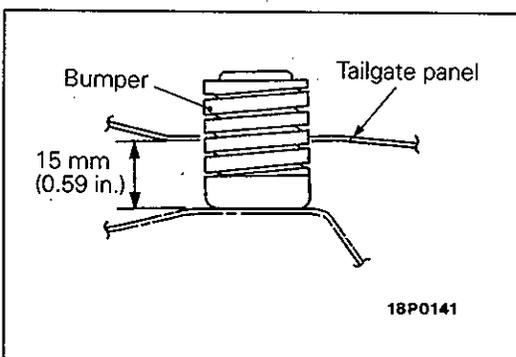
1. Never try to disassemble the tailgate gas spring or burn it.
2. Always bore a hole in the tailgate gas spring to release the interior gas before the gas spring is discarded.



SERVICE POINTS OF INSTALLATION

13. INSTALLATION OF TAILGATE OPENING WEATHERSTRIP

Install the tailgate opening weatherstrip so that the marked part is at the position shown in the illustration.

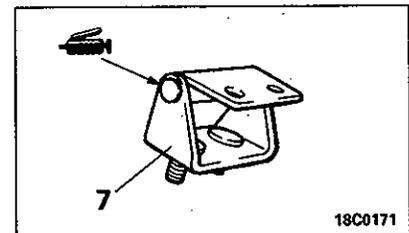
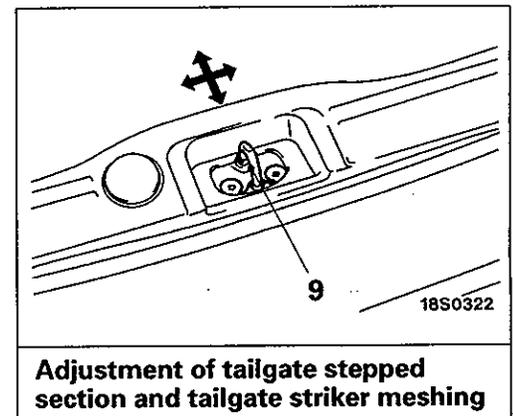
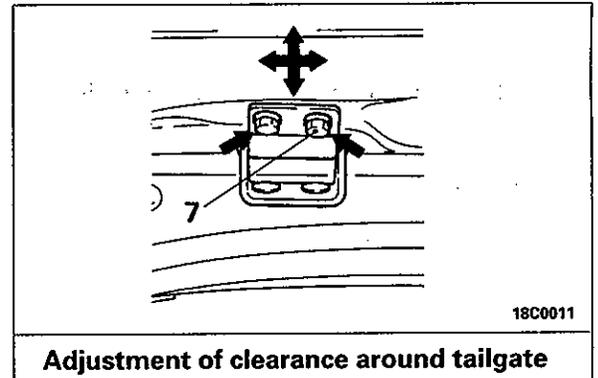
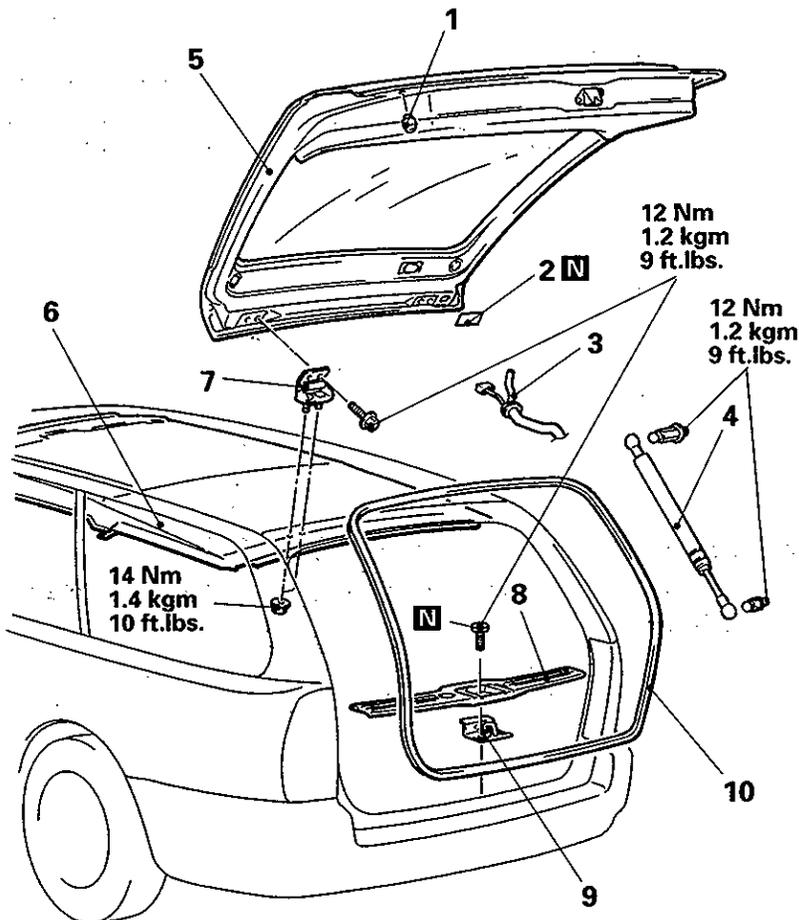


1. INSTALLATION OF BUMPER

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

TAILGATE <WAGON>

REMOVAL AND INSTALLATION

**Tailgate assembly removal steps**

1. Bumper
2. Tape
3. Harness connector assembly
4. Tailgate gas spring
5. Tailgate assembly

Tailgate striker removal steps

8. Step plate
9. Tailgate striker

Tailgate opening weatherstrip removal steps

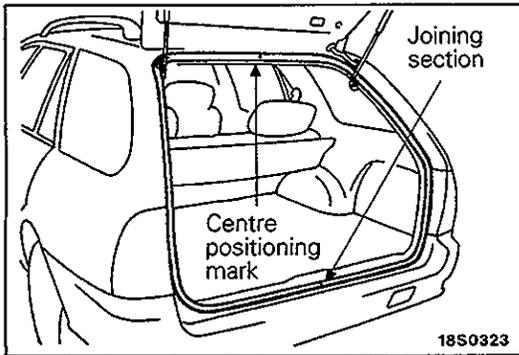
8. Step plate
- ◆◆ 10. Tailgate opening weatherstrip

Tailgate hinge removal steps

2. Tape
3. Harness connector assembly
4. Tailgate gas spring
5. Tailgate assembly
6. Headlining (Refer to GROUP 52A - Headlining)
7. Tailgate hinge

Caution

- (1) Do not dismantle the tailgate gas spring or throw it into fire.
- (2) When disposing of the tailgate gas spring, drill a hole to let the gas escape.



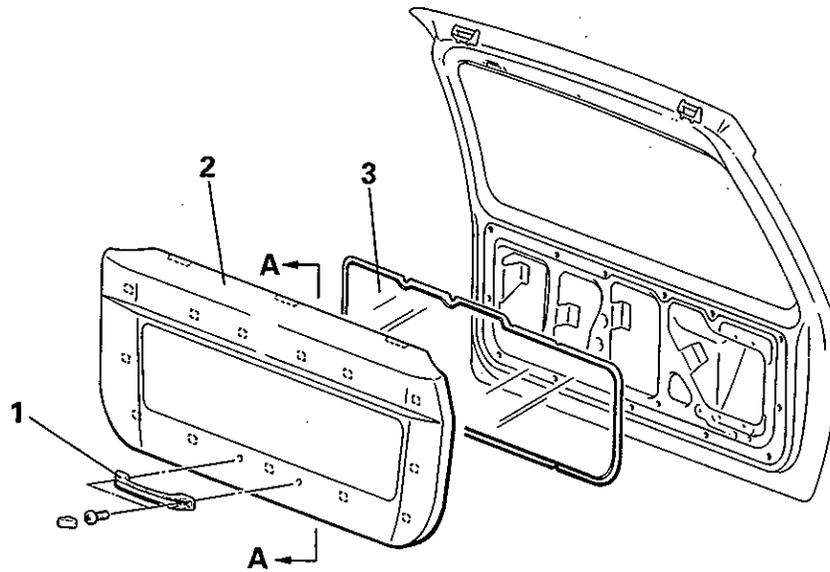
SERVICE POINTS OF INSTALLATION

10. INSTALLATION OF TAILGATE OPENING WEATHERSTRIP

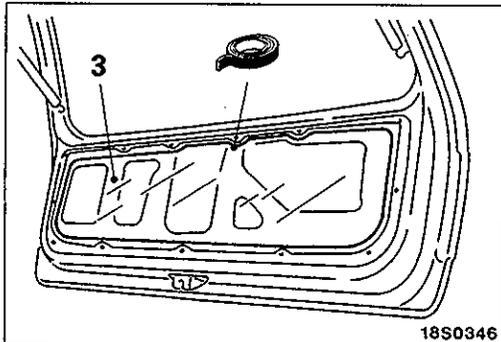
Install the tailgate opening weatherstrip so that the mark is in the position shown in the illustration.

TAILGATE TRIM AND WATERPROOF FILM <WAGON>

REMOVAL AND INSTALLATION



18S0264

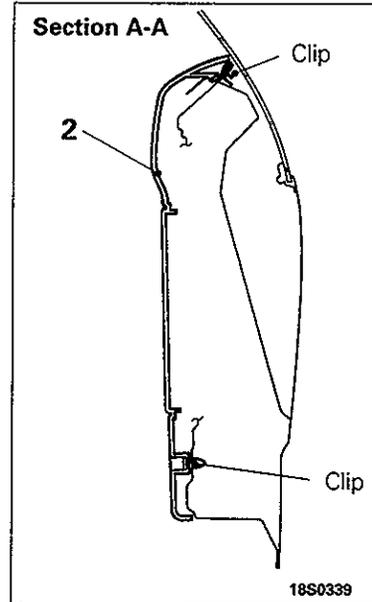


18S0346

Sealant:
3M ATD Part No. 8625 or equivalent

Removal steps

1. Door pull handle
 <Vehicles built from October, 1993>
2. Tailgate trim
3. Waterproof film



18S0339

TAILGATE HANDLE AND LATCH <WAGON>

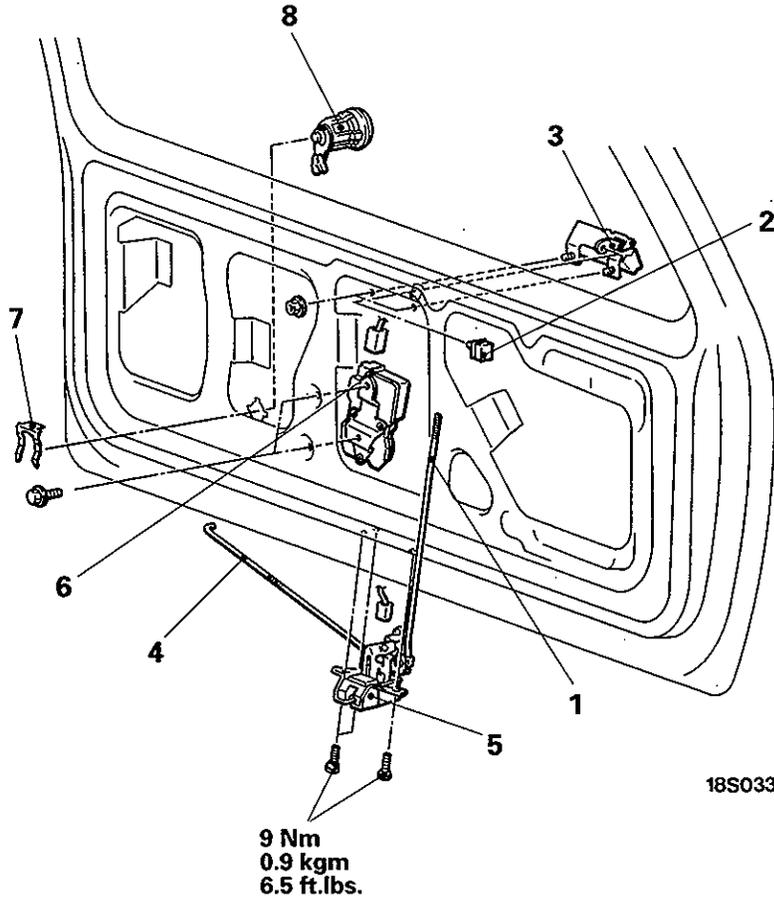
REMOVAL AND INSTALLATION

Pre-removal Operation

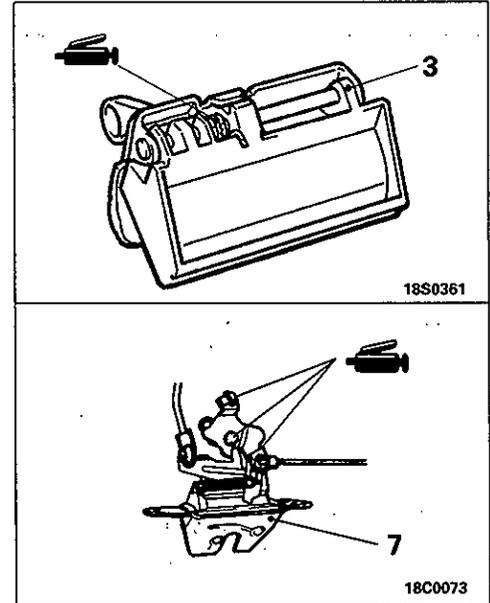
- Removal of Tailgate Trim and Waterproof Film (Refer to P.42-17-3.)

Post-installation Operation

- (1) Tailgate Handle Play Inspection (Refer to P.42-12-1.)
- (2) Installation of Tailgate Trim and Waterproof Film (Refer to P.42-17-3.)



18S0336



Tailgate handle removal steps

1. Rod
2. Holder
3. Tailgate handle

Tailgate latch removal steps

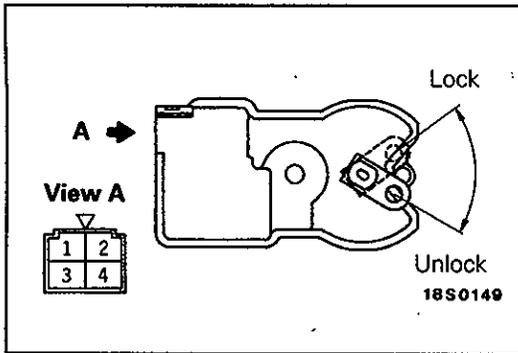
1. Rod
4. Rod
5. Tailgate latch

Tailgate lock actuator removal steps

4. Rod
6. Tailgate lock actuator

Tailgate lock cylinder removal steps

4. Rod
7. Cylinder lock retainer
8. Tailgate lock cylinder



INSPECTION

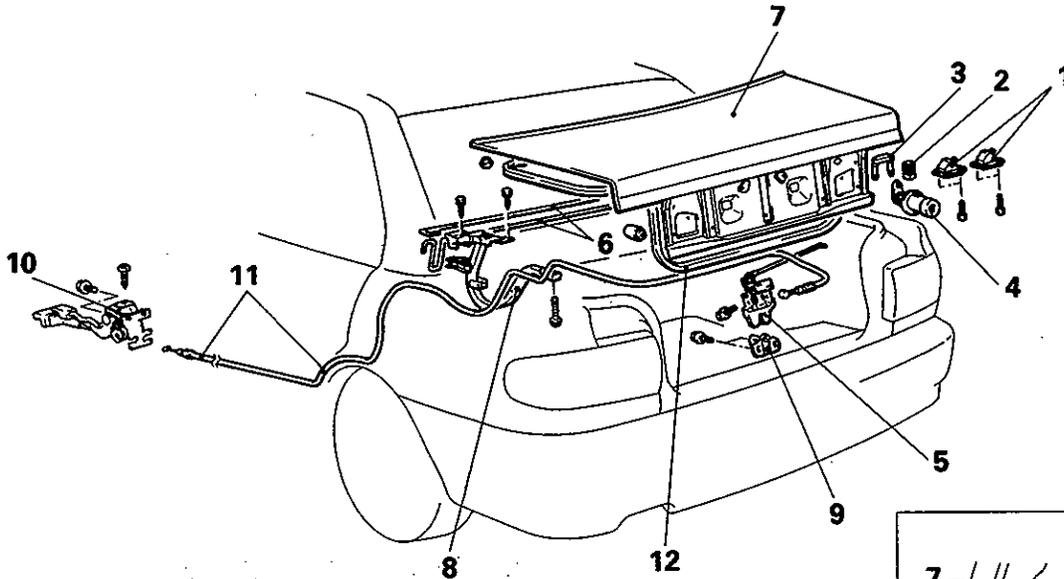
TAILGATE LOCK ACTUATOR INSPECTION

- (1) Set the rod to the LOCK position, apply battery voltage to terminal ③ and check to be sure that the rod moves to the UNLOCK position when terminal ① is earthed.
- (2) Set the rod to the UNLOCK position, apply battery voltage to terminal ① and check to be sure that the rod moves to the LOCK position when terminal ③ is earthed.

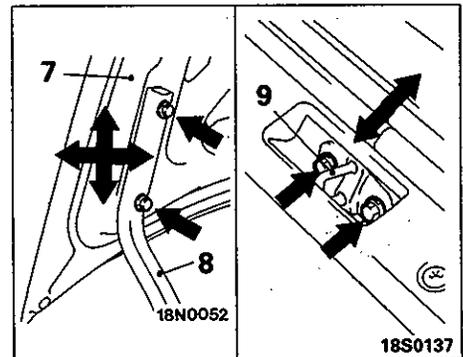
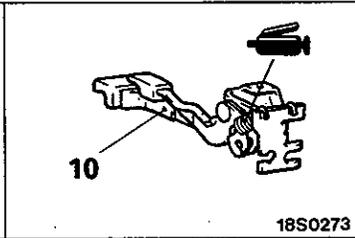
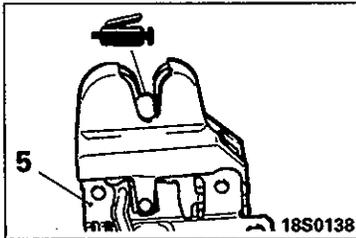
TRUNK LID <Sedan>

REMOVAL AND INSTALLATION

E42IAAG



18S0271



Adjustment of clearance around trunk lid and trunk lid striker linkage

Removal steps of trunk lid panel

- Rear panel side garnish } (Refer to GROUP 51-
- Rear panel garnish } Garnishes.)

- 1. License plate lamp
- ◆◆ 2. Bumper
- ◆◆ 3. Cylinder lock retainer
- 4. Trunk lid lock cylinder
- 5. Trunk lid latch
- ◆◆ ◆◆ 6. Trunk lid torsion bar
- 7. Trunk lid panel

Removal of trunk lid latch

- 5. Trunk lid latch

Removal steps of trunk lid striker

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

Removal steps of trunk lid hinge

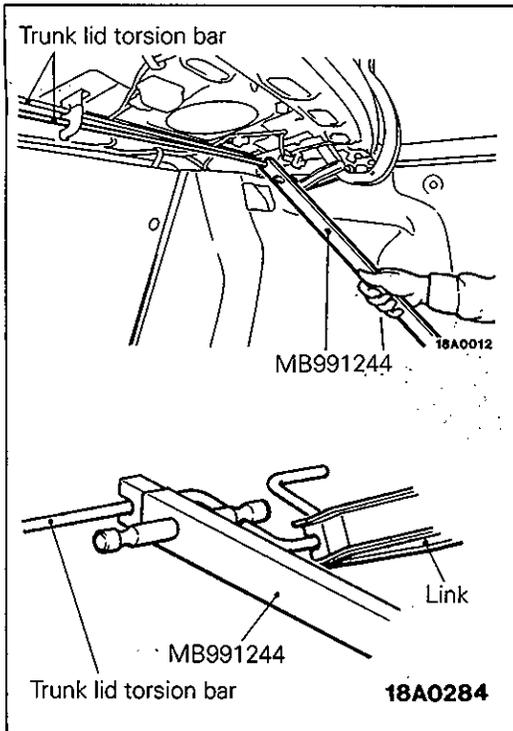
- Rear shelf trim (Refer to GROUP 52A-
- Trims.)
- 7. Trunk lid panel
- 8. Trunk lid hinge

Removal steps of trunk lid release handle and cable

- Front seat } (Refer to GROUP 52A-
- Rear seat } Seat and Rear Seat)
- Front scuff plate } (Refer to GROUP
- Rear scuff plate } 52A-Trims)
- Trunk room side trim }
- 5. Trunk lid latch
- 10. Trunk lid release handle
- 11. Trunk lid release cable

Removal of trunk lid weatherstrip

- ◆◆ 12. Trunk lid weatherstrip

**SERVICE POINTS OF REMOVAL****6. REMOVAL OF TRUNK LID TORSION BAR**

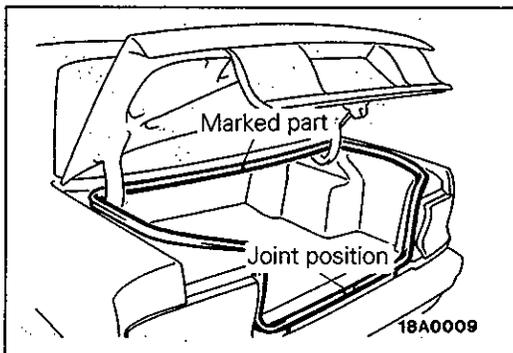
- (1) Disconnect the rear harness and the harness connector of the rear shelf panel.
- (2) Attach the special tool to the link side of the torsion bar as shown in the figure, and push downwards to remove the torsion bar from the link.

NOTE

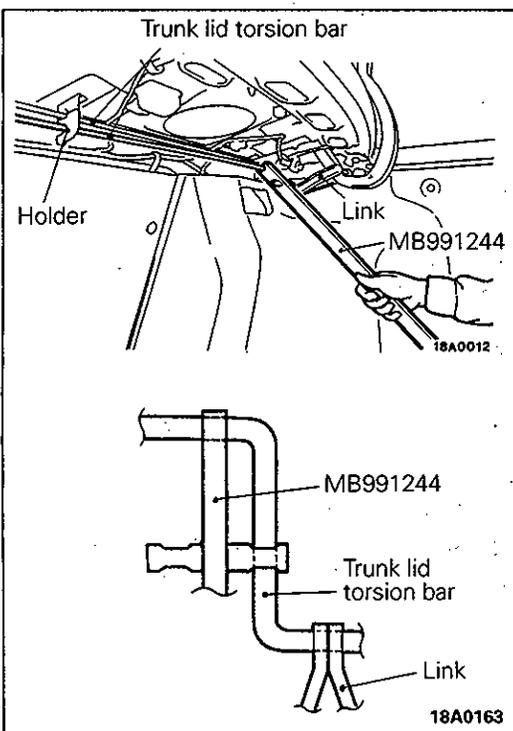
When removing the torsion bars, the left and right torsion bars cross at the centre, so the bar that is towards you at the crossed section should be removed first.

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.

**SERVICE POINTS OF INSTALLATION****12. INSTALLATION OF TRUNK LID WEATHERSTRIP**

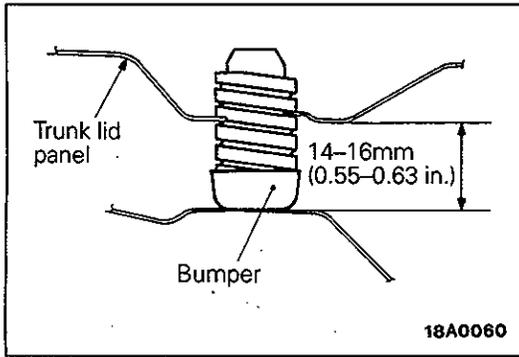
Install the trunk lid weatherstrip so that the marked part is at the position shown in the illustration.

**6. INSTALLATION OF TRUNK LID TORSION BAR**

- (1) Insert the ends of the trunk lid torsion bar into the installation holes.
- (2) Install the special tool as shown in the illustration, and then, after hooking to the link by twisting the trunk lid torsion bar, hook to 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.

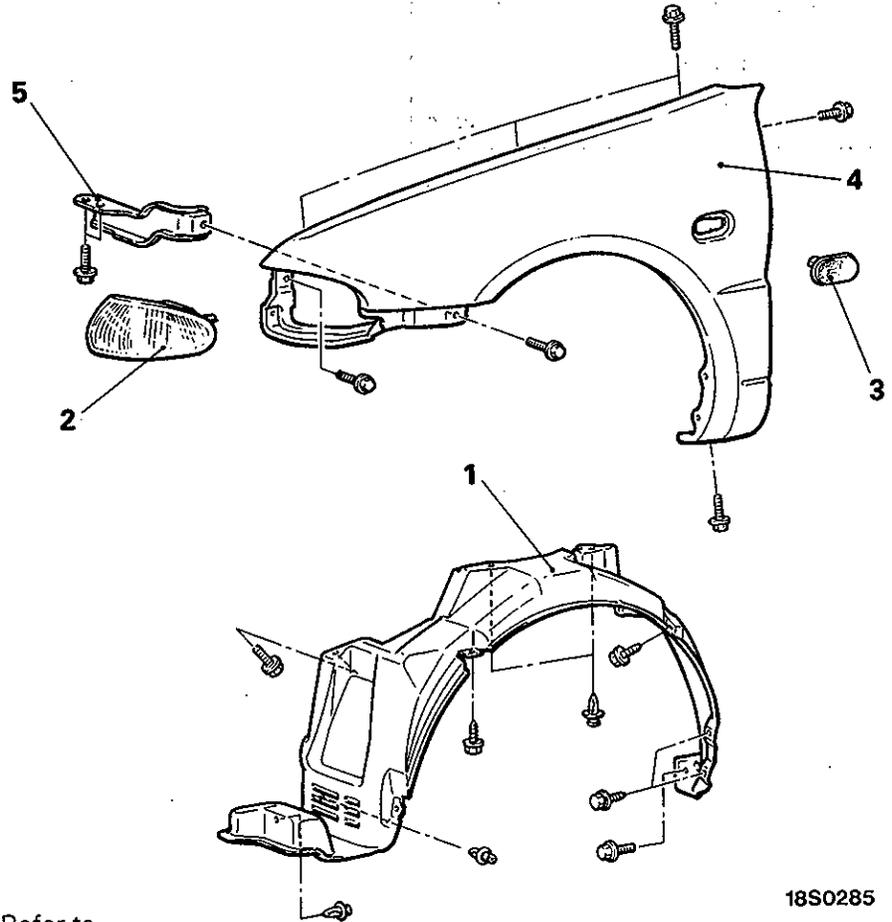


2. INSTALLATION OF BUMPER

Install the bumper as shown in the figure.

FENDER

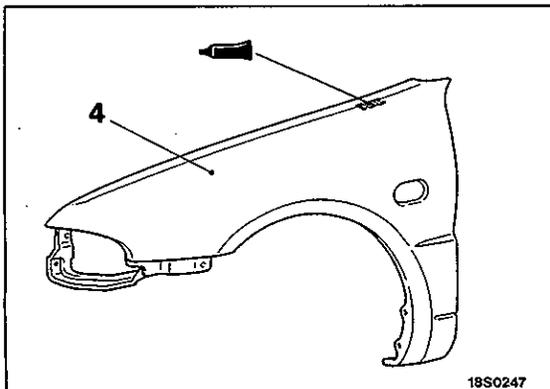
REMOVAL AND INSTALLATION



18S0285

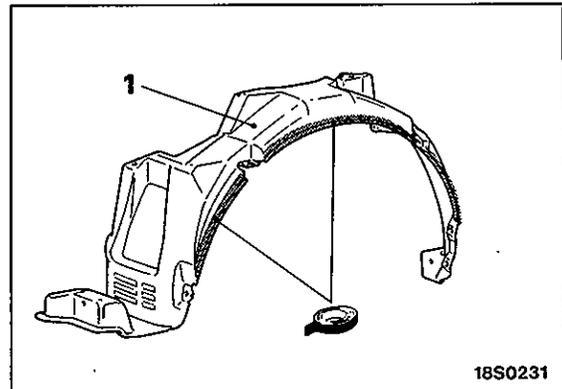
Removal steps

- Front bumper assembly (Refer to GROUP 51 – Front Bumper.)
- 1. Splash shield
- 2. Front turn signal lamp
- 3. Side turn signal lamp (Refer to GROUP 54 – Side Turn Signal Lamp.)
- 4. Front fender panel
- 5. Fender support bracket



18S0247

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



18S0231

Sealant: 3M ATD Part No. 8625 or equivalent

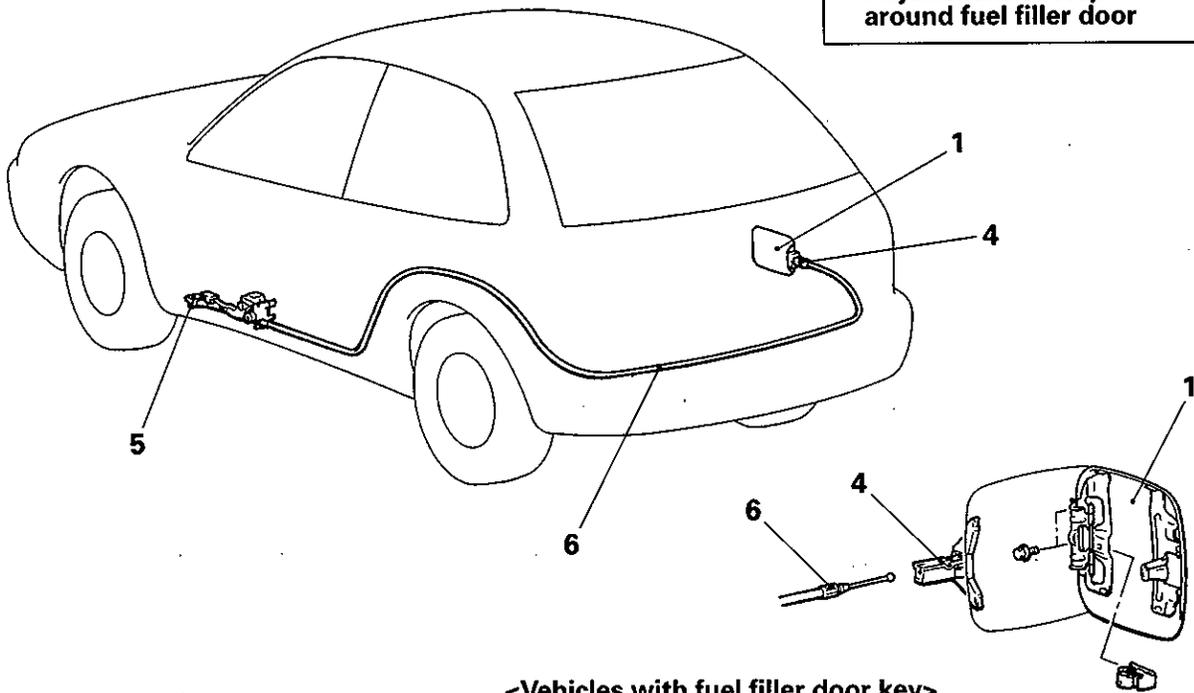
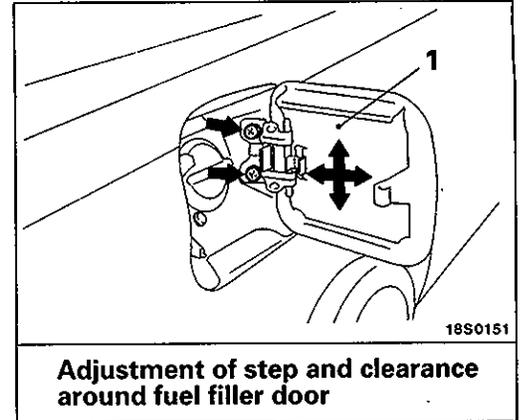
FUEL FILLER DOOR

REMOVAL AND INSTALLATION

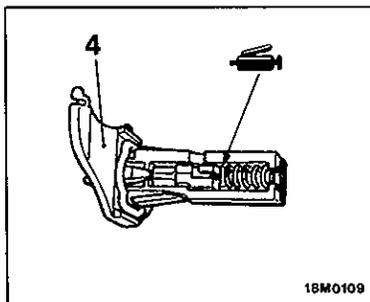
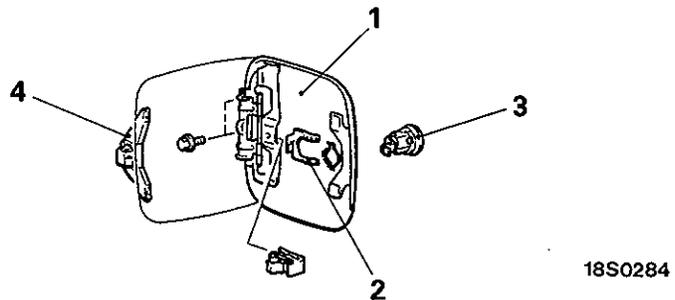
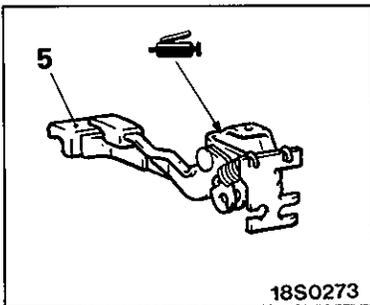
E42JBAQ

Pre-removal and Post-installation Operation

- Removal and Installation of Front Seat and Rear Seat (Refer to GROUP 52A – Front Seat and Rear Seat.)
- Removal and Installation of Front Scuff Plate and Quarter Trim (RH) (Refer to GROUP 52A – Trims.)



<Vehicles with fuel filler door key>



Removal steps

1. Fuel filler door assembly
2. Cylinder lock retainer
3. Fuel filler door lock cylinder
4. Fuel filler door lock hook assembly
5. Lid lock release handle
6. Fuel filler door release cable

WINDOW GLASS

E42LGAA

WINDOW REPAIR

<ul style="list-style-type: none"> ● 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 ● Auto Window Sealer Kit TEROSON-127, 37V 	
<ul style="list-style-type: none"> 1. Sealer 2. Nozzle 3. Primer container 4. Primer container cap 5. Piano wire 6. Brush 7. Cleaner 8. Primer 9. Filter 10. Gauge 11. Instruction manual 	

18P0466

NOTE

When using TEROSON-127, 37V, follow the instructions of the manual included in the kit.

Additional material required	
Spacers	Available as service part
Dam	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....0.6 mm x 1 m (0.024 in. x 3 ft.)
	For cutting adhesive
Adhesive gun	For pressing-out adhesive

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.

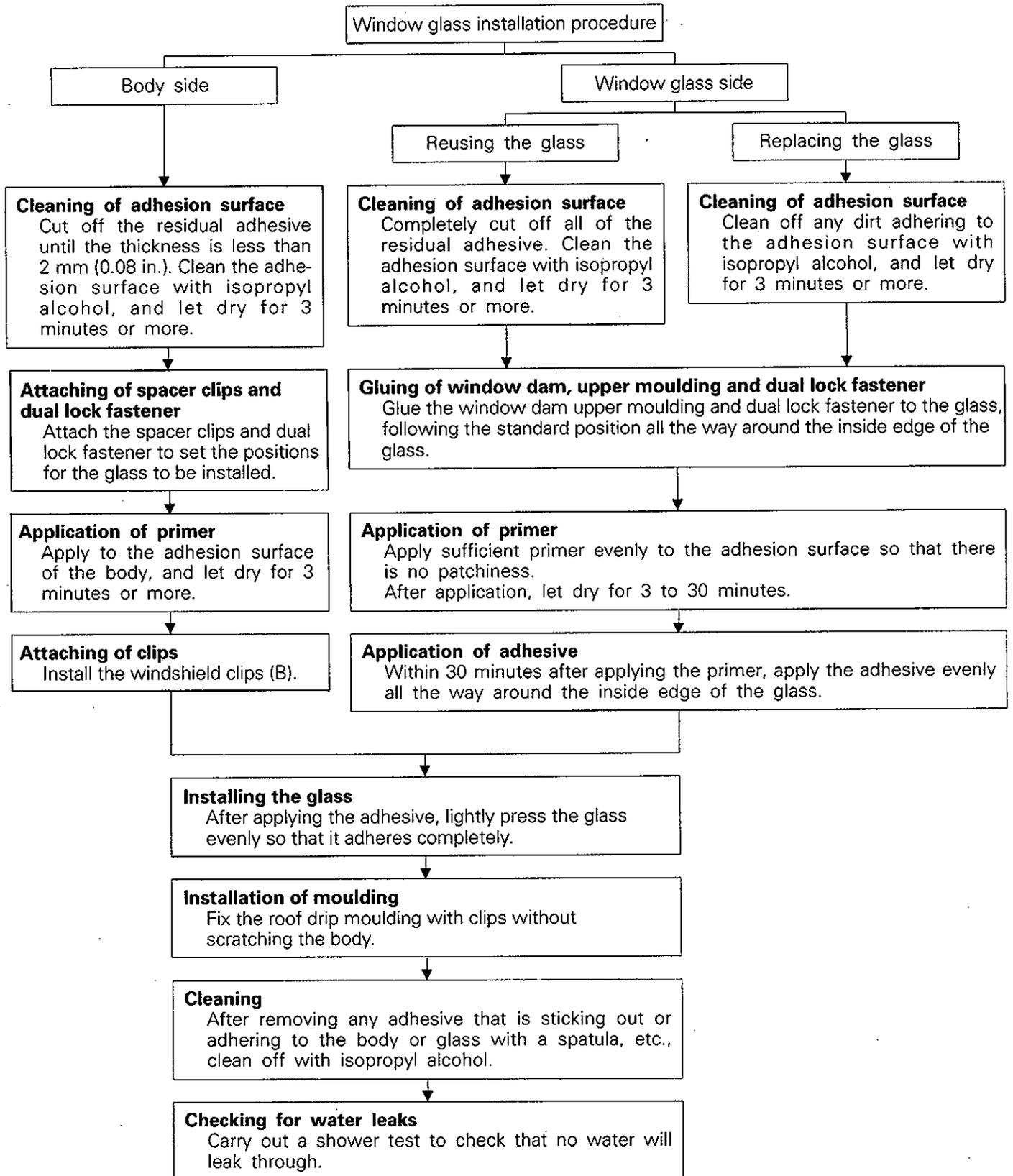
Avoid storing the sealant for more than 6 months, because it will lose its sealing effect.

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



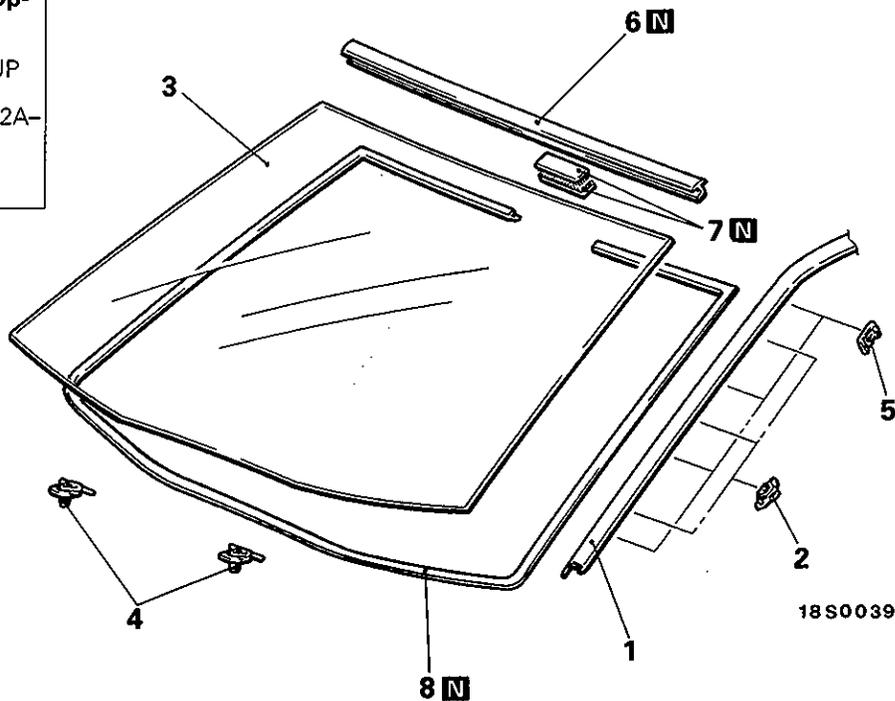
WINDSHIELD

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

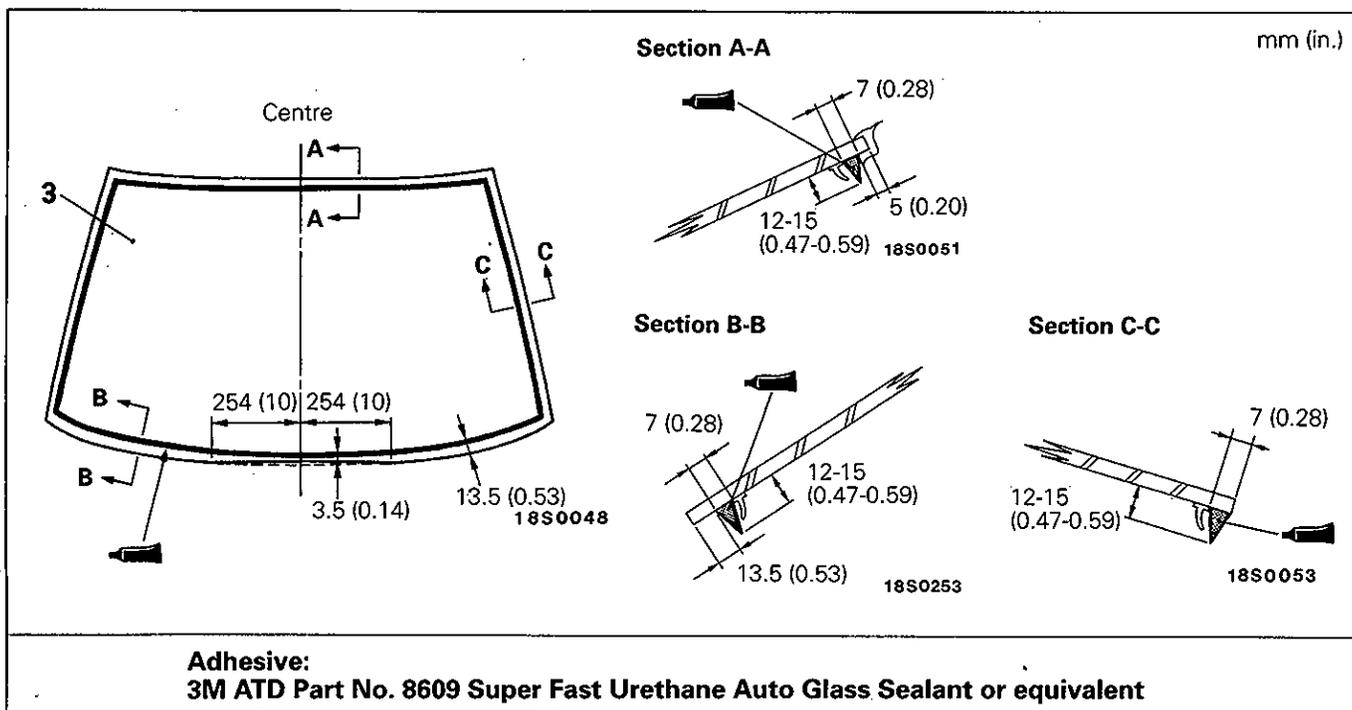
Removal and Installation

- Front Deck Garnish (Refer to GROUP 51-Garnishes.)
- Front Pillar Trim (Refer to GROUP 52A-Trims.)
- Headlining (Refer to GROUP 52A-Headlining.)

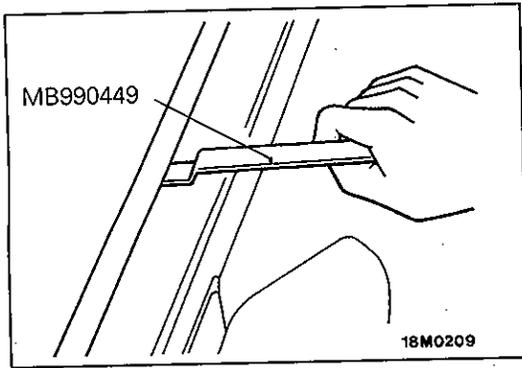


Removal steps

- ↔↔↔↔ 1. Roof drip moulding
- ↔↔↔↔ 2. Windshield clip (A)
- ↔↔↔↔ 3. Windshield
- ↔↔↔↔ 4. Spacer clip
- ↔↔↔↔ 5. Windshield clip (B)
- ↔↔ 6. Windshield upper moulding
- ↔↔ 7. Dual-lock fastener
- ↔↔ 8. Window dam



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



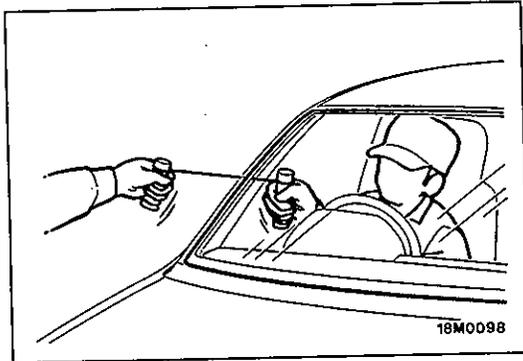
SERVICE POINTS OF REMOVAL

1. REMOVAL OF ROOF DRIP MOULDING

Remove by using the special tool to lever out only the windshield section of the roof drip moulding.

Caution

Mouldings that become warped should not be re-used.



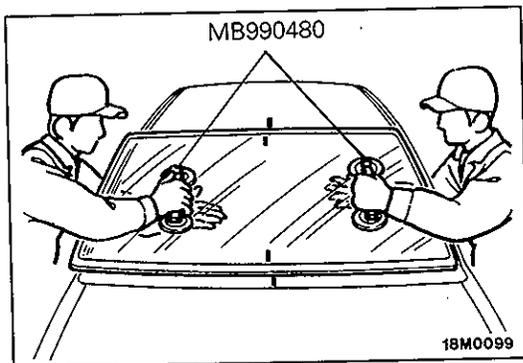
3. REMOVAL OF WINDSHIELD

- (1) In order to protect the body (paint surface), apply masking tape to all body areas around the installed windshield.
- (2) Using a sharp-point drill, make hole in the windshield 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 to cut the adhesive.

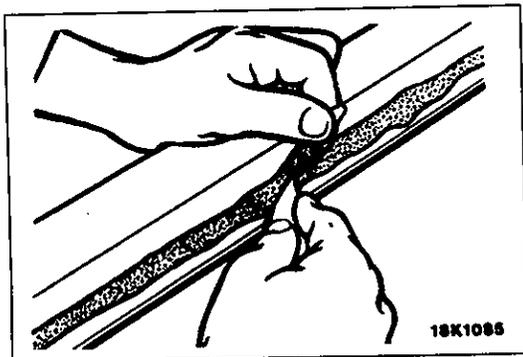
Caution

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

- (5) Make mating marks on the windshield and body.



- (6) Use the special tool to remove the windshield.



- (7) Use a knife to cut away the remaining adhesive so that the thickness is within 2 mm (0.08 in.) around the entire circumference of the body flange.

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

Caution

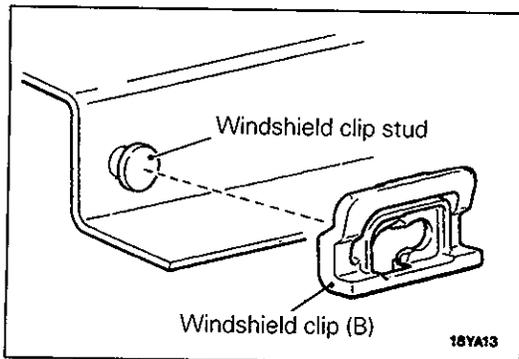
1. Be careful not to remove more adhesive than is necessary.
2. Be careful also not to damage the paintwork on the body surface with the knife. If the paintwork is damaged, repair the damaged area with repair paint or anti-rust agent.

(9) When reusing the glass, remove the adhesive and the chips of spacer clips 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.



WINDSHIELD CLIP STUD REPAIR

If the T-studs are broken, use a drill to make holes in the T-studs 3 mm (0.12 in.) in diameter, fill the holes with adhesive, and then use screws to mount the windshield clips (B).

Caution

After installing the clip, apply antirust solvent to the screw head to protect them from rust.

SERVICE POINTS OF INSTALLATION

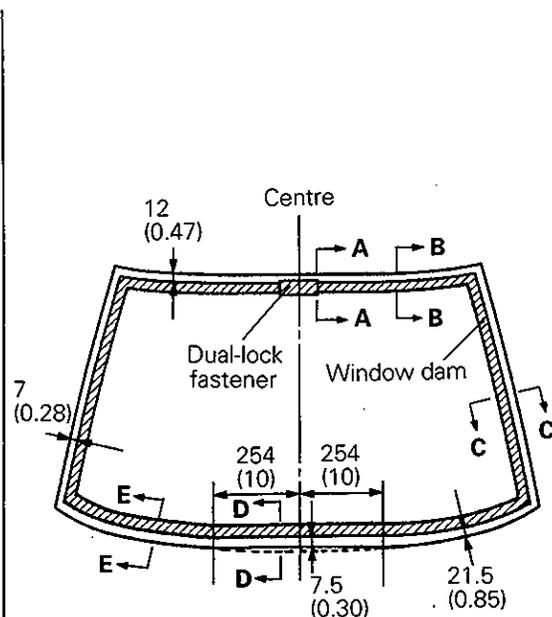
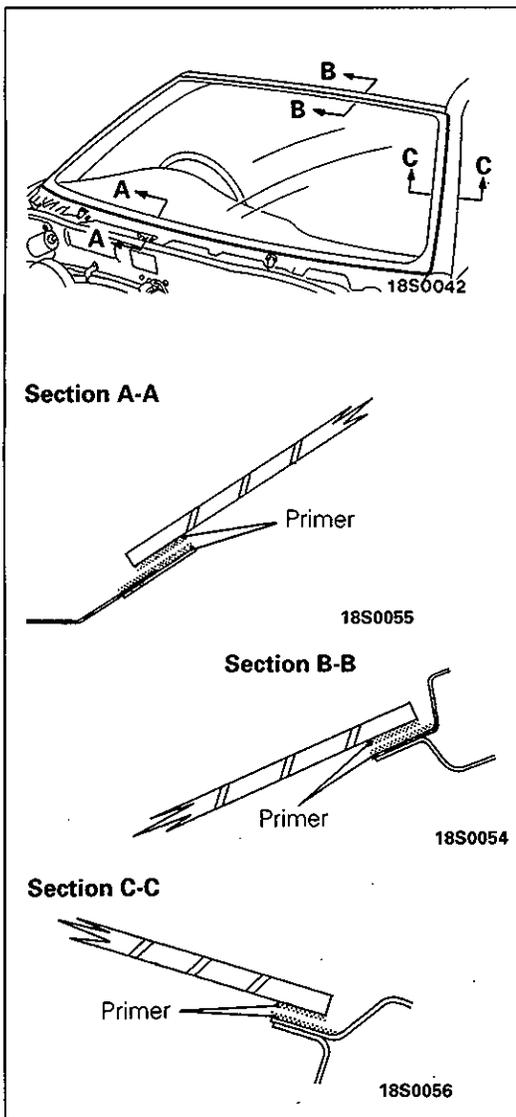
8. INSTALLATION OF WINDOW DAM/7. DUAL LOCK FASTENER/3. WINDSHIELD/1. ROOF DRIP MOULDING

- (1) When replacing the glass, temporarily set the glass against the body, and put mating marks on the glass and body where they match.
- (2) Clean the inside of the margin of the windshield and the body flange with isopropyl alcohol to remove all grease.
- (3) Soak a sponge in the primer, and apply evenly to the glass and the body in the places shown in the figure.

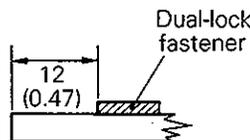
Specified primer: 3M ATD Part No. 8608 Super Fast Urethane Primer or equivalent

Caution

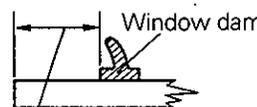
1. **The primer strengthens the adhesive strength, so be sure to apply it evenly around the entire circumference. Also, a too thick application will cause lowering of the adhesive strength.**
2. **Do not touch the coated surface.**
- (4) After applying the primer, let it dry for 3 to 30 minutes.
- (5) Install the window dam and the dual lock fastener correctly in the positions shown in the illustration so that there are no bends or lifts inside the windshield.
- (6) Install the dual lock fastener to the body flange that corresponds to the dual lock fastener installation section of the windshield.
- (7) Install the windshield upper moulding, windshield clip B and spacer clips.



Section A-A



Section B-B, Section E-E



Section C-C, Section D-D

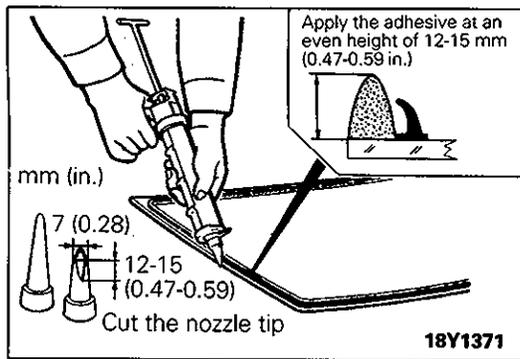


**Section B-B: 12 (0.47)
Section E-E: 21.5 (0.85)**

**Section C-C: 7 (0.28)
Section D-D: 7.5 (0.30)**

mm (in.)

18S0048

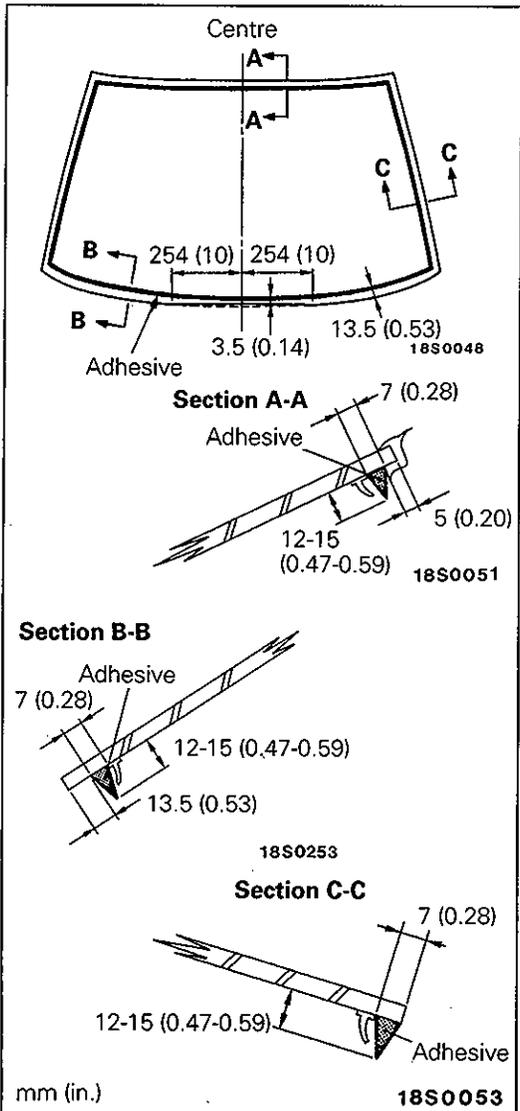


- (8) Within 30 minutes after applying the primer, fill the sealant gun with adhesive and apply the adhesive evenly around the entire circumference of the windshield.

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

NOTE

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



- (9) After applying the adhesive, match up the marks on the glass and the body.
 (10) Install the roof drip moulding before the adhesive sets.
 (11) After removing any adhesive that is sticking out or adhering to the body or glass with a spatula, etc., clean off with isopropyl alcohol.
 (12) After completion of this operation (after installing the glass), place it somewhere where it will not be disturbed, until the adhesive sets.

Caution

If heat is applied with an infra-red lamp to shorten the setting time, keep the surface temperature of the adhesive below 60°C (140°F).

- (13) After attaching the windshield to the body, let it stand for 30 minutes or more, and then test for water leakage.

Caution

1. If moving the vehicle, it should be done gently.
2. When testing for water leakage, do not pinch the end of the hose to spray the water.

QUARTER WINDOW GLASS <Hatchback>

REMOVAL AND INSTALLATION

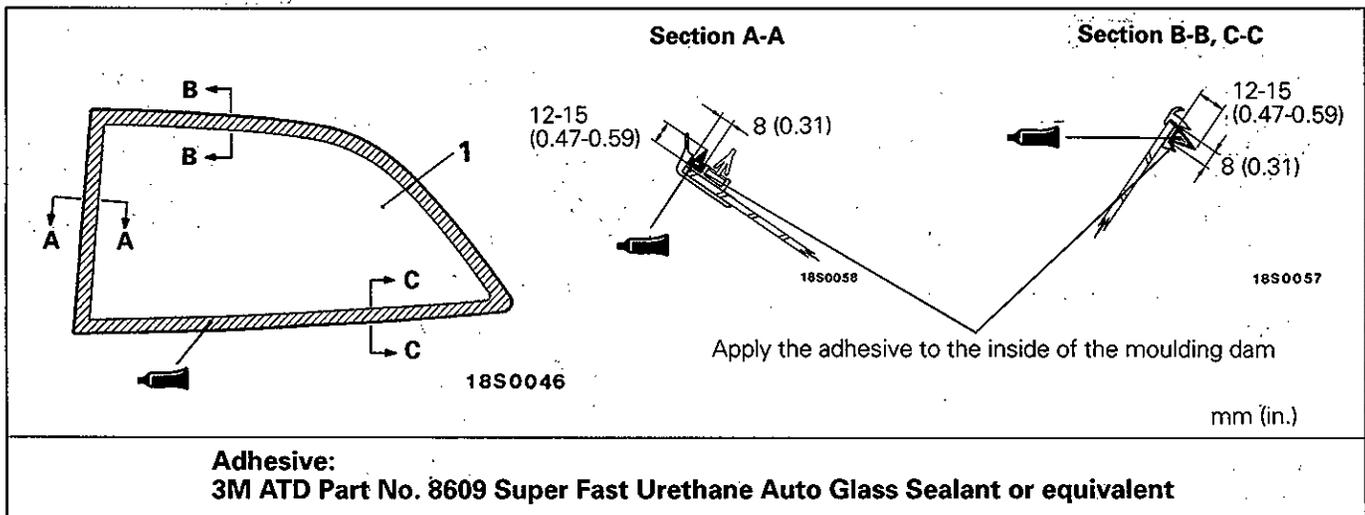
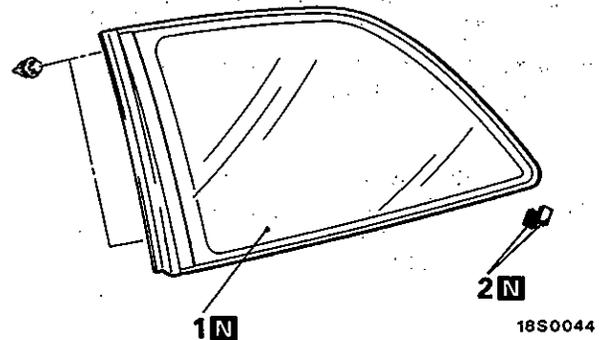
Pre-removal and Post-installation Operation

Removal and Installation

- Quarter Trim, Center Pillar Trim and Rear Pillar Trim (Refer to GROUP 52A – Trims.)
- Headlining (Refer to GROUP 52A – Headlining.)

Removal steps

1. Quarter window glass and moulding assembly
2. Dual-lock fastener



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

SERVICE POINTS OF REMOVAL

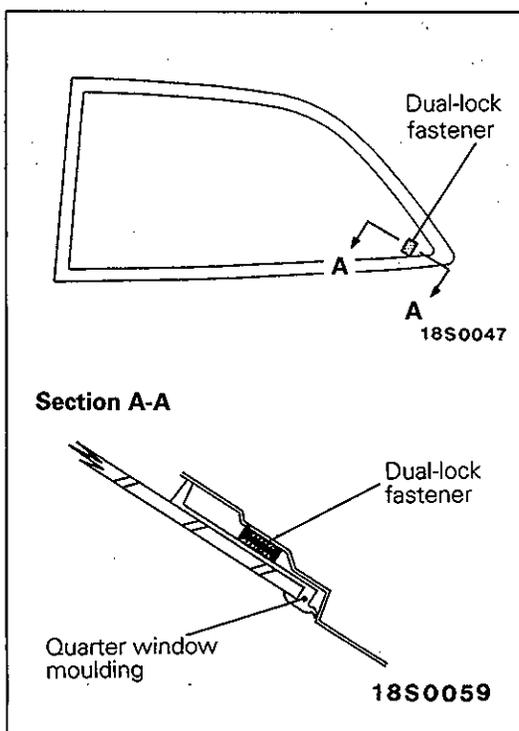
1. REMOVAL OF QUARTER WINDOW GLASS AND MOULDING ASSEMBLY

- (1) Apart from the quarter window glass and moulding assembly clip, remove by the same procedure as for the windshield. (Refer to P.42-23.)
- (2) Press the quarter window glass and moulding assembly from the passenger compartment and remove the clip section while removing the quarter window glass and moulding assembly.

SERVICE POINTS OF INSTALLATION

2. INSTALLATION OF DUAL LOCK FASTENER

Clean all grease from the quarter window moulding and body flange shown in the illustration with isopropyl alcohol, and install the dual lock fastener.



QUARTER WINDOW GLASS <WAGON>

E42L8BI

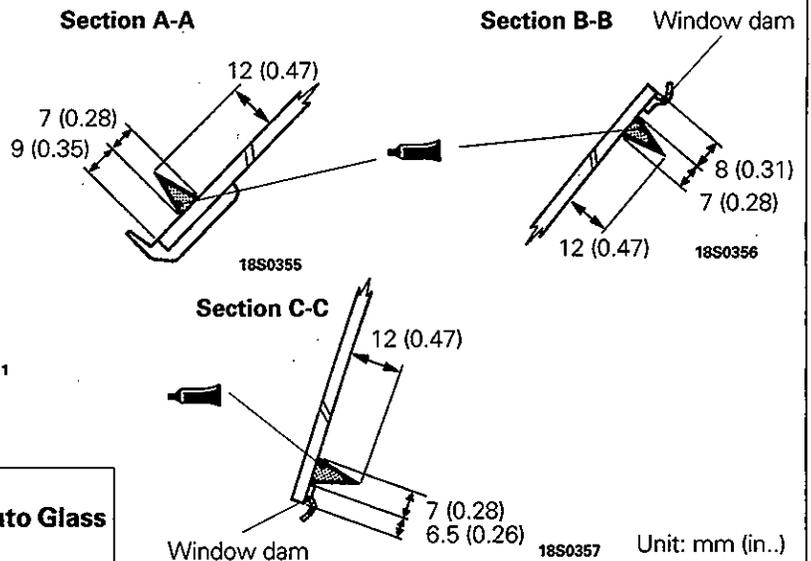
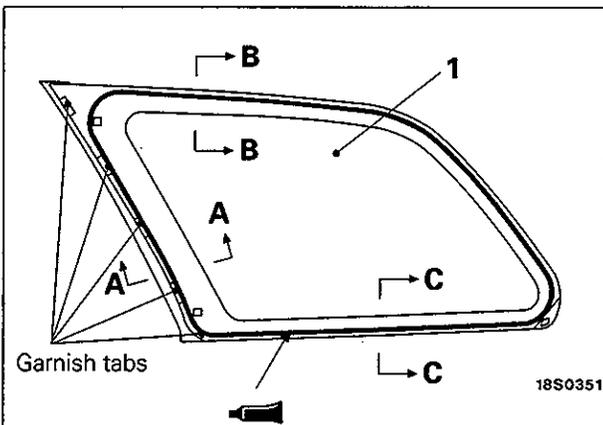
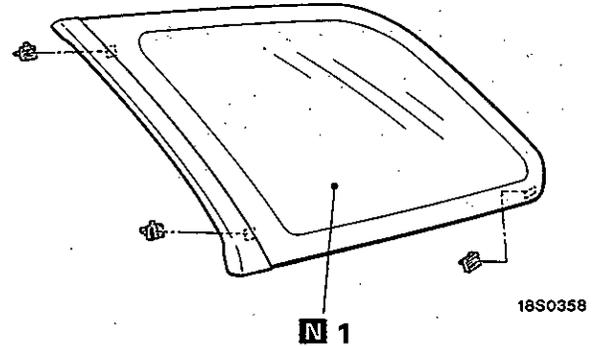
REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operations

- (1) Removal and Installation of Flange Trim <Cargo> or Quarter Trim, Rear Pillar Trim and Tailgate Pillar Trim <Wagon> (Refer to GROUP 52A - Trim.)
- (2) Removal and Installation of Headlining (Refer to GROUP 52A - Headlining.)

Removal

- ⇄ 1. Quarter window glass and garnish assembly (For service points of installation, refer to P.42-23.)



Adhesive:

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

SERVICE POINT OF REMOVAL

1. REMOVAL OF QUARTER WINDOW GLASS AND GARNISH ASSEMBLY

- (1) Apart from the clips of the quarter window glass and garnish assembly, remove by the same procedure as for the windshield. (Refer to P.42-23.)
- (2) Push out the quarter window glass and garnish assembly from inside the passenger compartment and remove the clips while removing the quarter window glass and garnish assembly.

NOTES

TAILGATE WINDOW GLASS <Hatchback>

E42LCBG

REMOVAL AND INSTALLATION

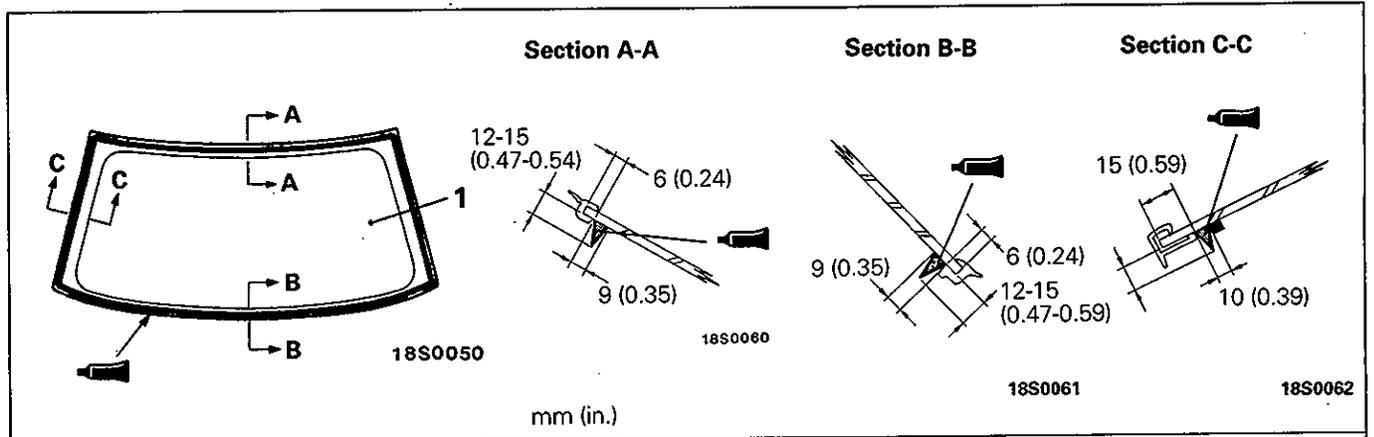
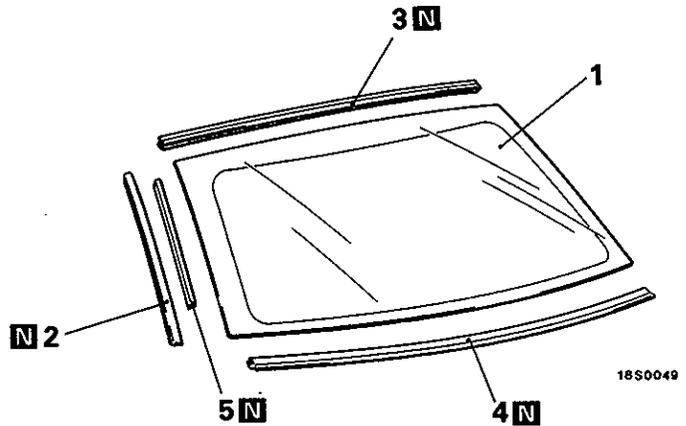
Pre-removal and Post-installation Operation

Removal and Installation

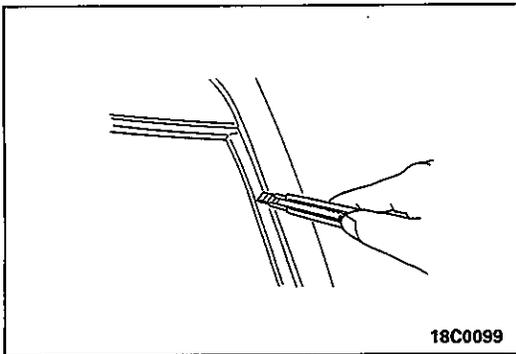
- Tailgate Trim (Refer to GROUP 52A - Trims.)
- Roof Spoiler (Refer to GROUP 51 - Aero Parts.)

Removal steps

- 1. Tailgate window glass (Refer to P.42-25 for the service point of removal.)
- 2. Tailgate side moulding
- 3. Tailgate upper moulding
- 4. Tailgate lower moulding
- 5. Window spacer



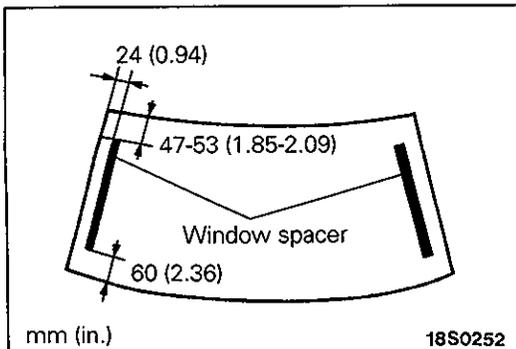
Adhesive:
3M ATD Part No. 8609 Super Fast Urethane Auto Glass Sealant or equivalent



SERVICE POINTS OF REMOVAL

1. REMOVAL OF TAILGATE WINDOW GLASS

- (1) To protect the tailgate (painted surface), apply protective tape to the entire circumference of the tailgate in the glass installation position.
- (2) Cut each tailgate moulding with a cutter knife.
- (3) Remove the tailgate window glass by the same procedure as for the windshield. (Refer to P.42-23.)



SERVICE POINTS OF INSTALLATION

5. INSTALLATION OF WINDOW SPACER

Clean all grease from the window spacer adhesion surface of the tailgate window glass with isopropyl alcohol, and attach the window spacer in the position shown in the illustration.

TAILGATE WINDOW GLASS <WAGON>

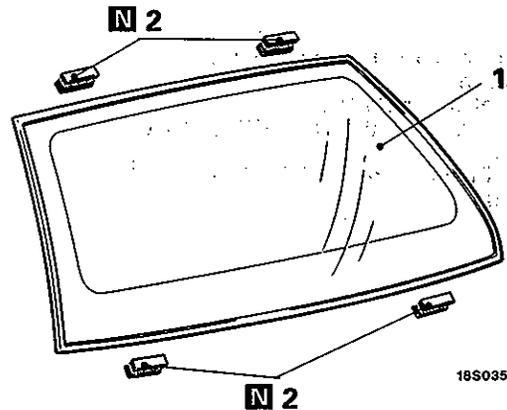
REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operations

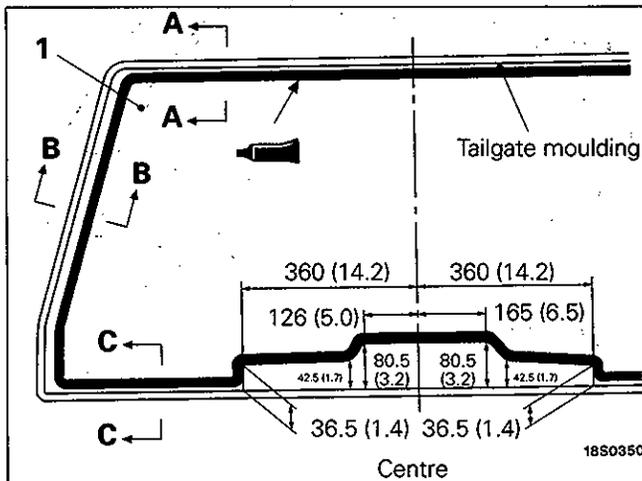
- (1) Removal and Installation of Tailgate Trim (Refer to P.42-17-3.)
- (2) Removal and Installation of Roof Spoiler (Refer to GROUP 51 – Exterior Parts.)

Removal

1. Tailgate window glass and moulding assembly (Refer to P.42-28.)
2. Dual lock fastener

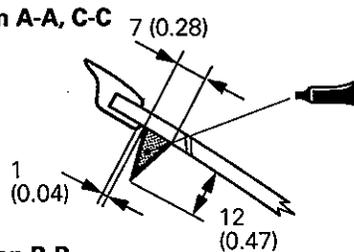


18S0359



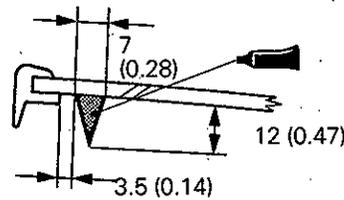
18S0350

Section A-A, C-C



18S0353

Section B-B



18S0352

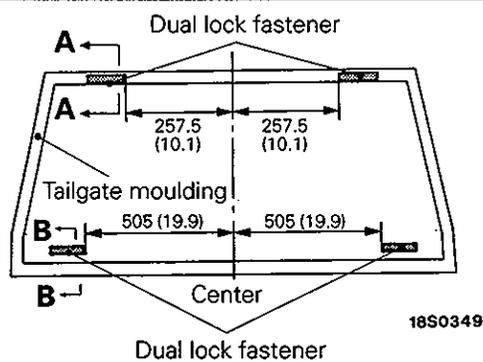
Adhesive:

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

SERVICE POINTS OF INSTALLATION

2. INSTALLATION OF DUAL LOCK FASTENER

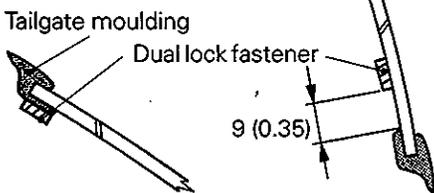
- (1) Wipe the tailgate moulding, tailgate window glass shown in the illustration with unleaded gasoline to remove all grease.
- (2) Install the dual lock fasteners to the tailgate moulding in the locations shown in the illustration.



18S0349

Section A-A

Section B-B



18S0354

mm (in.)

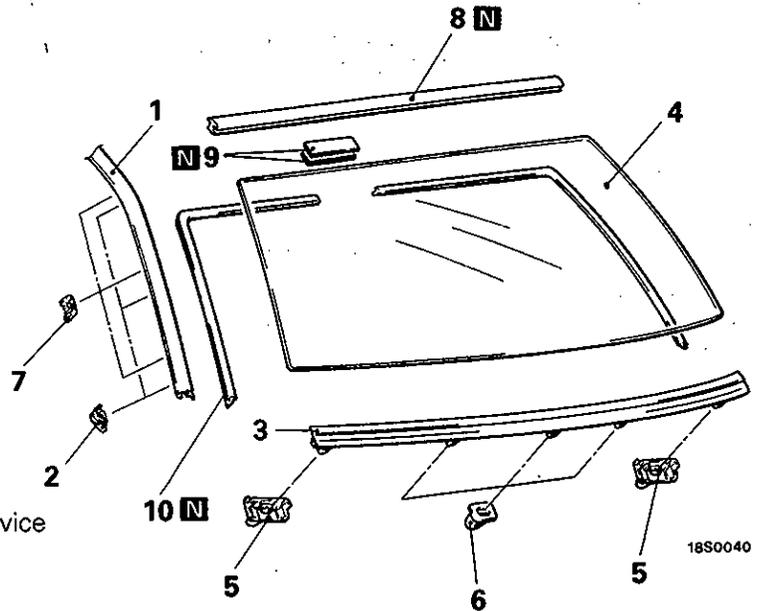
REAR WINDOW GLASS <Sedan>

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

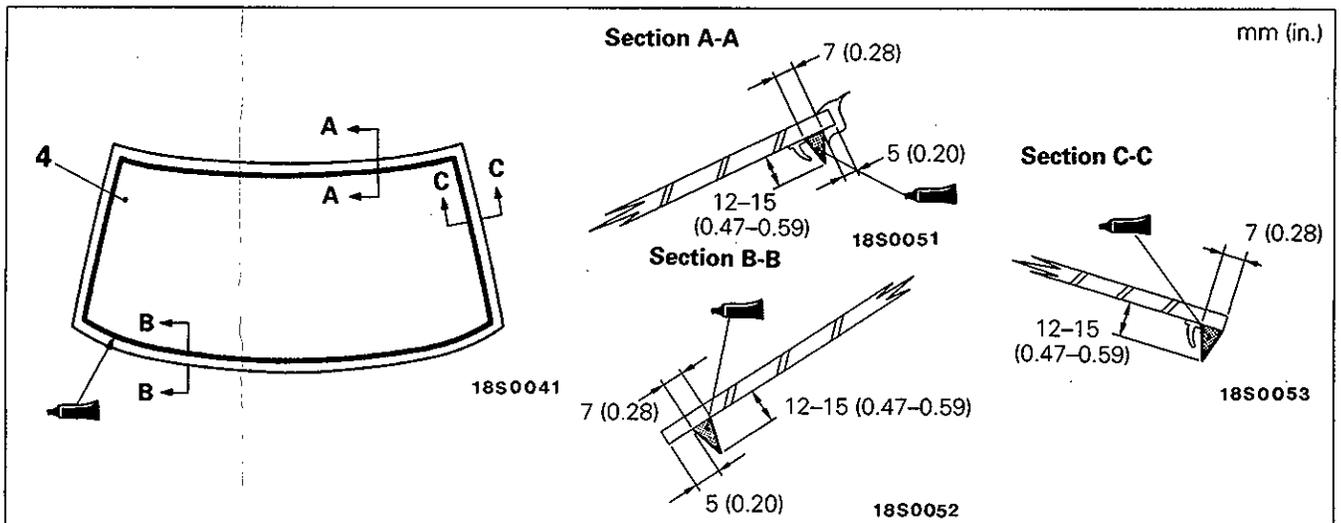
Removal and Installation

- Rear Pillar Trim (Refer to GROUP 52A – Trims.)
- Headlining (Refer to GROUP 52A – Headlining.)



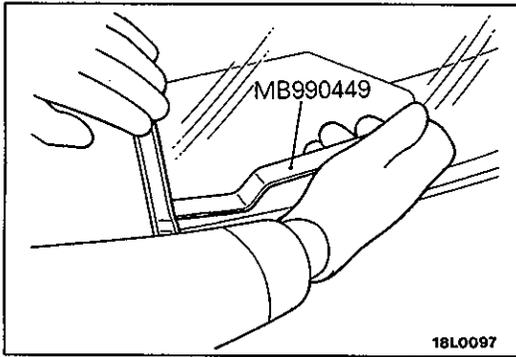
Removal steps

- ↔ 1. Roof drip moulding (Refer to P.42–23 with regard to Service Points of Installation.)
- ↔ 2. Windshield clip (A)
- ↔ 3. Rear window lower moulding
- 4. Rear window glass (Refer to P.42–20.)
- 5. Spacer clip
- 6. Grommet clip
- 7. Windshield clip (B)
- 8. Rear window upper moulding
- ↔↔ 9. Dual-lock fastener
- ↔↔ 10. Window dam



Adhesive:

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



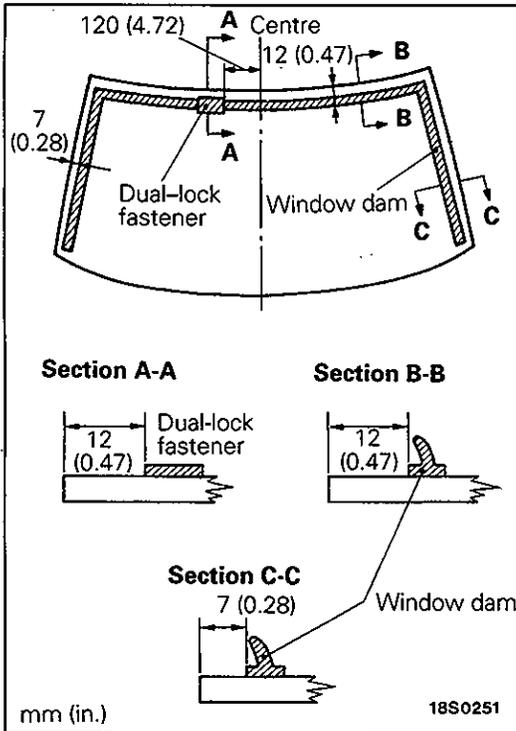
SERVICE POINTS OF REMOVAL

1. REMOVAL OF ROOF DRIP MOULDING/3. REAR WINDOW LOWER MOULDING

Remove by using the special tool to lever out the moulding. Note that the roof drip moulding should be levered out at only the rear window glass section.

Caution

Mouldings that become warped should not be re-used.



SERVICE POINTS OF INSTALLATION

10. INSTALLATION OF WINDOW DAM/9. DUAL LOCK FASTENER

- (1) After cleaning the inside of the margin of the rear window glass and the body flange with isopropyl alcohol to remove all grease, apply primer. (Refer to P.42-25.)
- (2) Install the window dam and the dual lock fastener correctly in the positions shown in the illustration so that there are no bends or lifts inside the rear window glass.

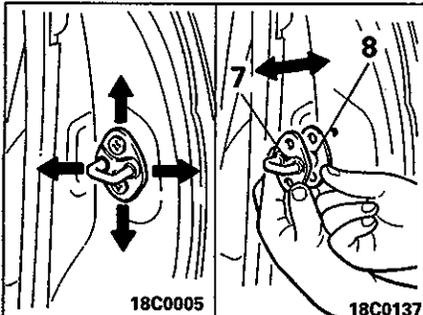
NOTES

DOOR ASSEMBLY

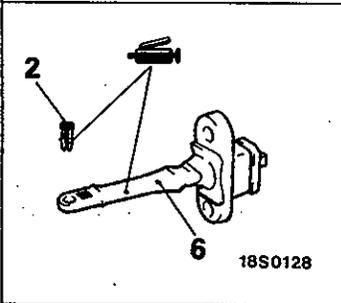
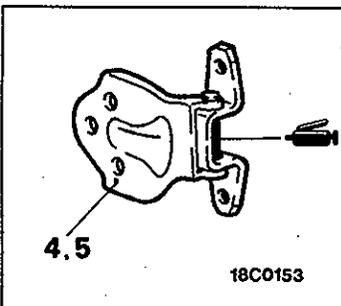
E42MAARa

REMOVAL AND INSTALLATION

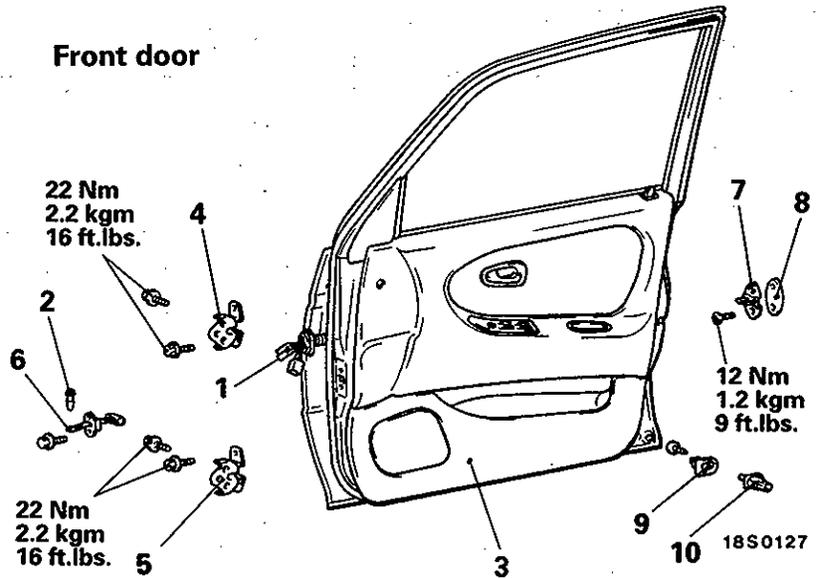
Door Post-installation Operation
 ● Door Adjustment (Refer to P.42-12.)



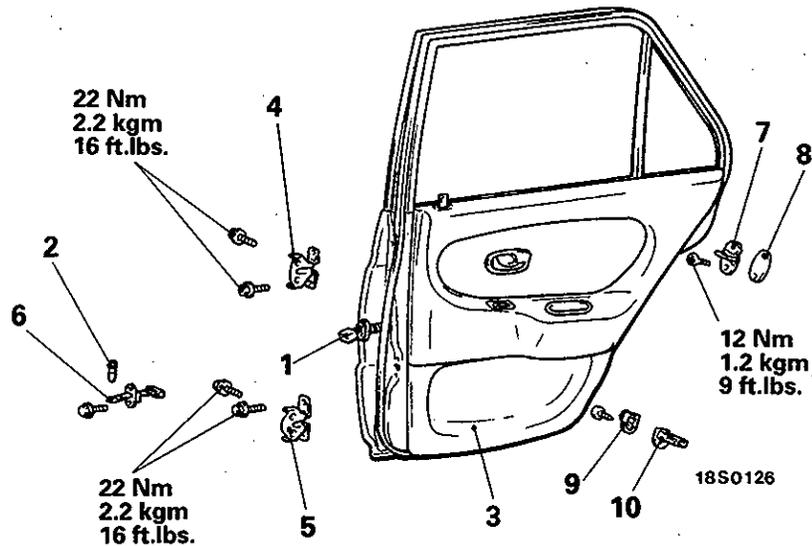
Adjustment of the door stepping and the door latch linkage



Front door



Rear door



Door assembly removal steps

1. Door harness connector
2. Spring pin
3. Door assembly
- ◆◆ 4. Door upper hinge
- ◆◆ 5. Door lower hinge

Door check removal steps

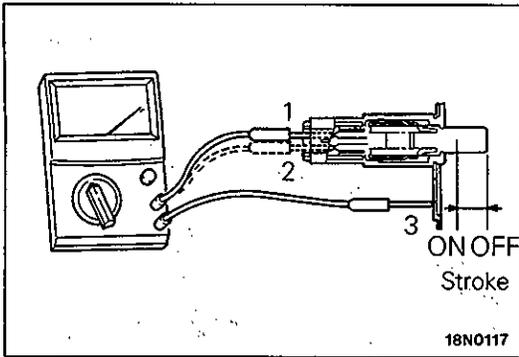
- Door trim
- Water proof film } (Refer to P.42-31.)
- ◆◆ 2. Spring pin
- ◆◆ 6. Door check

Striker removal steps

7. Striker
8. Striker shim

Door switch removal steps

9. Door switch cap
10. Door switch



INSPECTION

DOOR SWITCH

Operate the switch, and check the continuity between the terminals.

DRIVER'S SIDE DOOR SWITCH

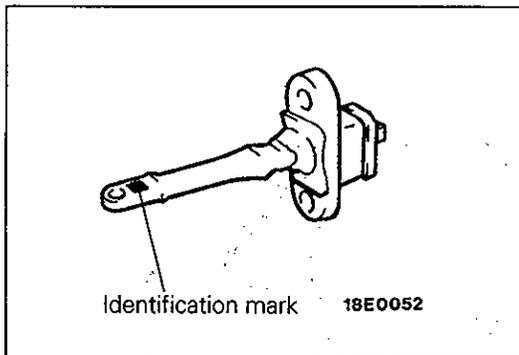
Terminal	1	2	3
Switch position			
Open (ON)	○—	○—	○—
Depressed (OFF)			

PASSENGER'S SIDE DOOR SWITCH

Terminal	1	3
Switch position		
Open (ON)	○—	○—
Depressed (OFF)		

NOTE

○—○ indicates that there is continuity between the terminals.

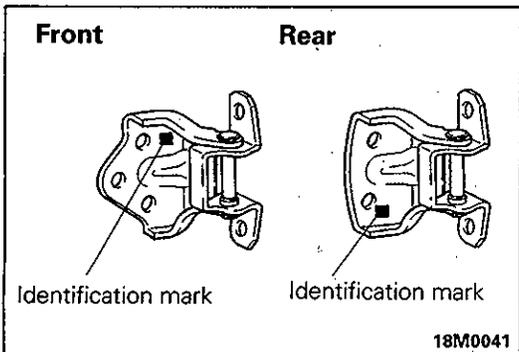


SERVICE POINTS OF INSTALLATION

6. INSTALLATION OF DOOR CHECK

Install the door check so that the identification marks shown below are facing upwards.

Applicable location		Identification mark	
		Hatchback	Sedan, Wagon
Front door	RH	YR	RR
	LH	YL	RL
Rear door	RH	—	SR
	LH	—	SL



5. INSTALLATION OF DOOR LOWER HINGE/4. DOOR UPPER HONGE

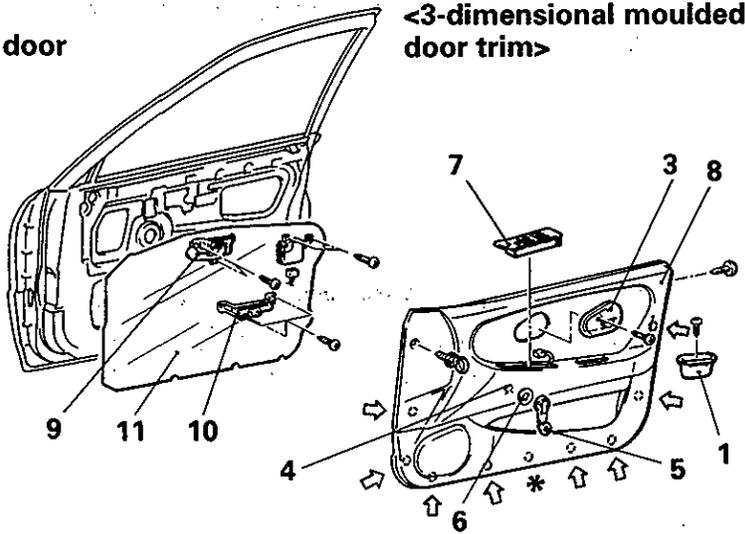
The door hinges differ according to where they are used, so check the identification marks before installation.

Applicable location		Identification mark	
Front door	RH	Upper hinge	E1
		Lower hinge	F1
	LH	Upper hnge	F1
		Lower hinge	E1
Rear door	RH	Upper hinge	B
		Lower hinge	L1
	LH	Upper hinge	A
		Lower hinge	K1

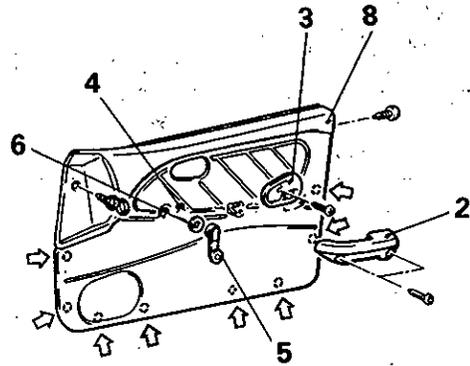
DOOR TRIM AND WATERPROOF FILM

REMOVAL AND INSTALLATION

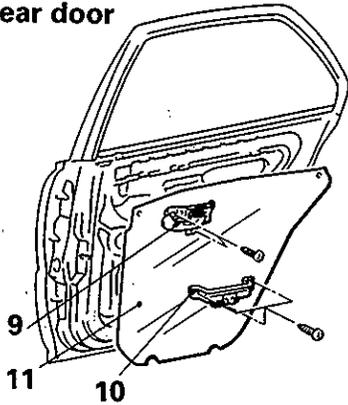
Front door



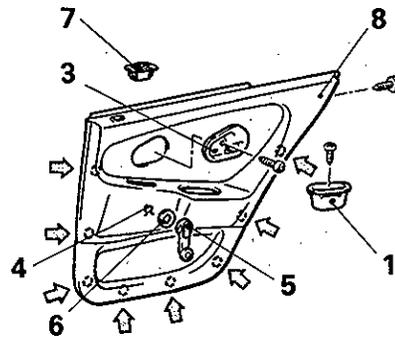
<Flat door trim>



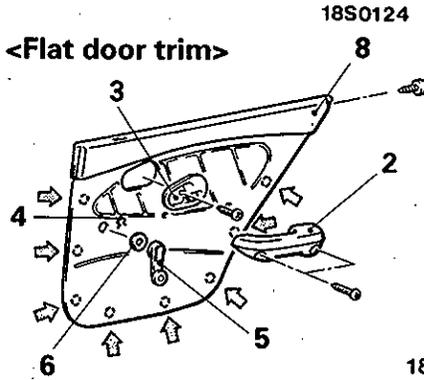
Rear door



<3-dimensional moulded door trim>

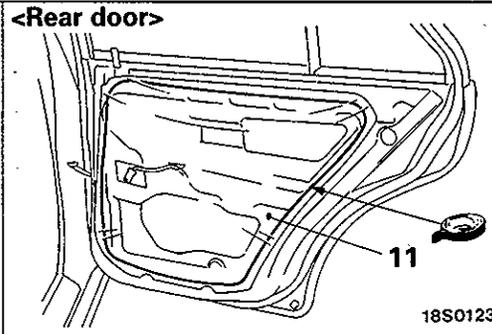
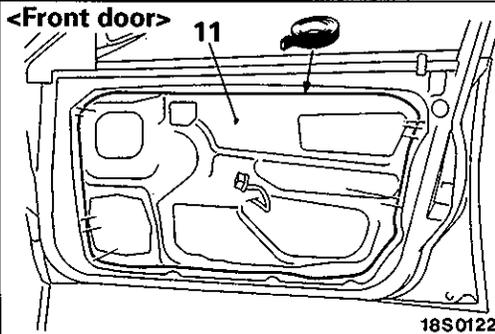


<Flat door trim>



18S0124

18S0125



NOTE

↔ : Indicates the clip positions

* : Hatchback only

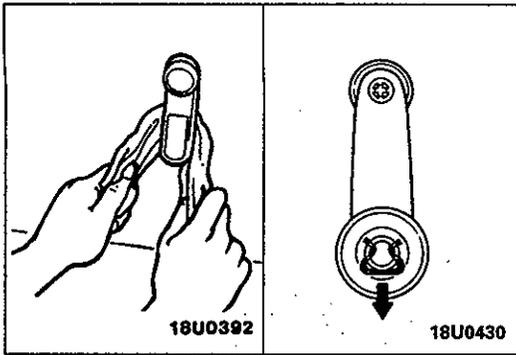
Sealant:
3M ATD Part No. 8625 or equivalent

Removal steps for 3-dimensional moulded door trim

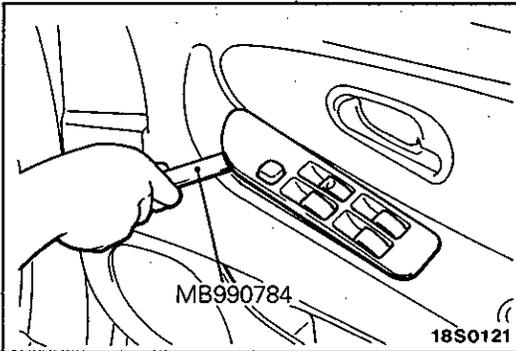
1. Pull handle
3. Cover
4. Clip
5. Regulator handle
6. Escutcheon
7. Power window switch
8. Door trim
9. Door inside handle
10. Pull handle bracket
11. Waterproof film

Removal steps for flat door trim

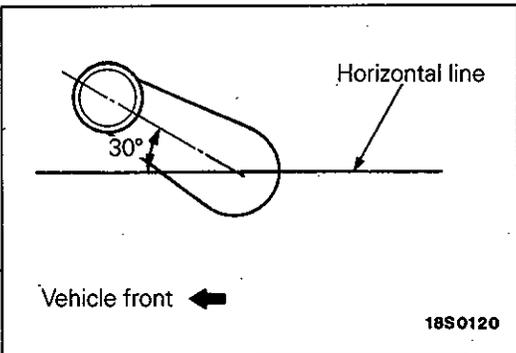
2. Armrest
3. Cover
4. Clip
5. Regulator handle
6. Escutcheon
8. Door trim
9. Door inside handle
11. Waterproof film

**SERVICE POINTS OF REMOVAL****4. REMOVAL OF CLIP**

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

**7. REMOVAL OF POWER WINDOW SWITCH**

The power window switch has clips at the front, so use the special tool to remove the switch from the front.

**SERVICE POINTS OF INSTALLATION****6. INSTALLATION OF ESCUTCHEON/5. REGULATOR HANDLE/4. CLIP**

- (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

REMOVAL AND INSTALLATION

Pre-removal Operation

- Removal of Door Trim and Waterproof Film (Refer to P.42-31.)

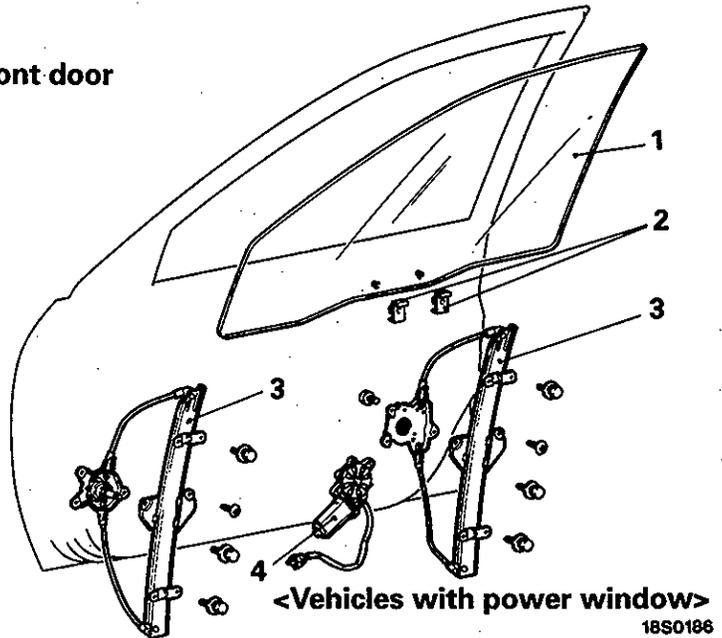
Post-installation Operation

- Door Window Glass Adjustment (Refer to P.42-12.)
- Installation of Door Trim and Waterproof Film (Refer to P.42-31)

Removal steps of front window regulator assembly

1. Door window glass
2. Door glass holder
3. Window regulator assembly
4. Power window motor

Front door

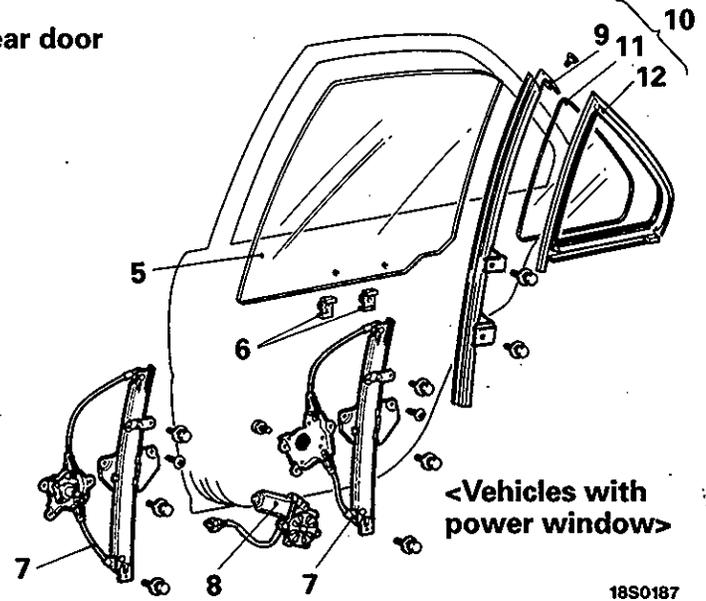


Removal steps of rear window regulator assembly

- Window glass runchannel (Refer to P.42-39.)
- 5. Door window glass
- 6. Door window glass holder
- 7. Window regulator assembly
- 8. Power window motor

<Vehicles without power window>

Rear door

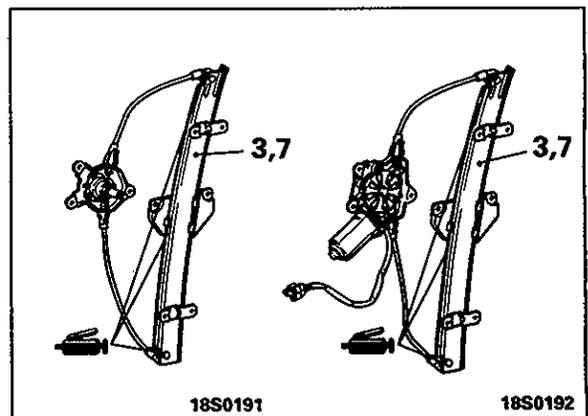


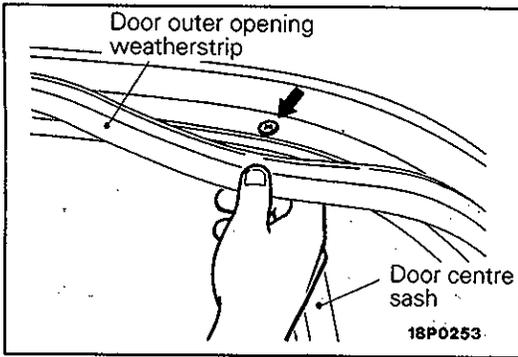
Removal steps of stationary window glass

- Window glass runchannel (Refer to P.42-39.)
- 5. Door window glass
- 9. Door centre sash
- 10. Stationary window glass and weatherstrip assembly
- 11. Stationary window glass
- 12. Stationary window weatherstrip



<Vehicles without power window>

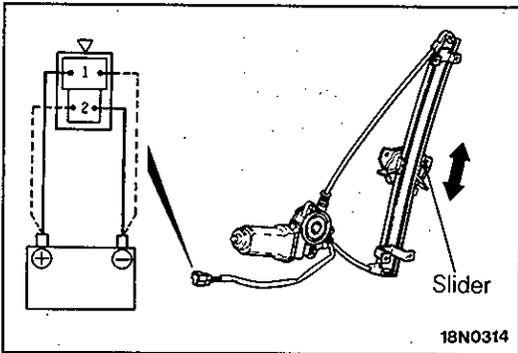




SERVICE POINTS OF REMOVAL

9. REMOVAL OF DOOR CENTRE SASH

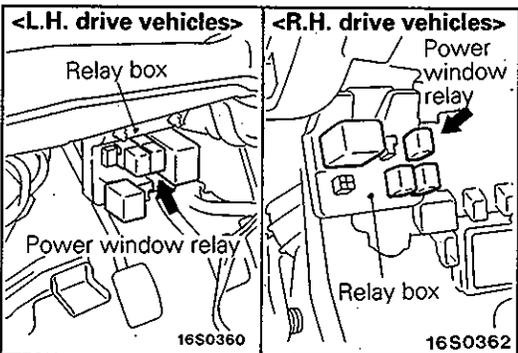
Remove the portion of the door outer opening weatherstrip which is shown in the illustration and remove the door centre sash mounting screw.



INSPECTION

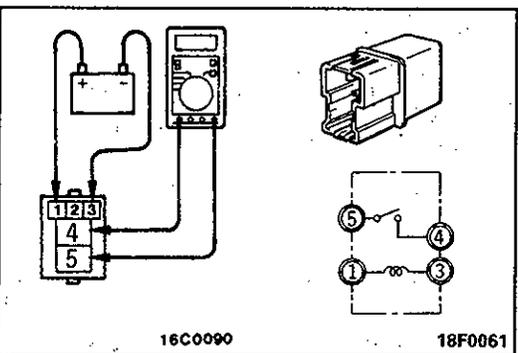
POWER WINDOW MOTOR

- (1) Check if the slider moves smoothly when the battery is directly connected to the motor terminals.
- (2) Check if the slider moves in the opposite direction when the battery is connected with the polarities reversed.



POWER WINDOW RELAY

- (1) Remove the power window relay from the relay box.

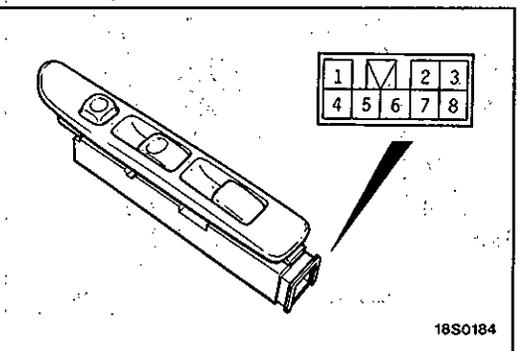


- (2) Check for continuity between the terminals.

Terminal	1	3	4	5
Battery voltage				
Not applied	○—○			
Applied	⊕---⊖		○—○	

NOTE

- (1) ○—○ indicates that there is continuity between the terminals.
- (2) ⊕---⊖ indicates connection of battery voltage.



POWER WINDOW SWITCH

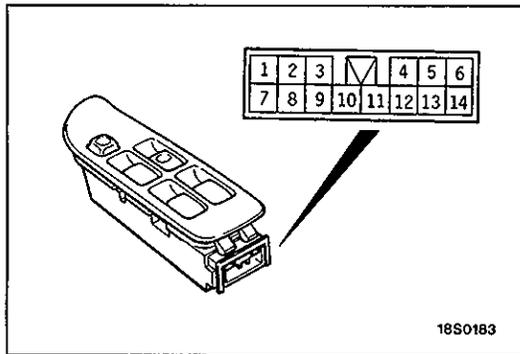
Operate the switch and check continuity between the terminals.

Main switch <Hatchback>

Switch position		Power window switch (normal)			Power window switch (lock)		
		UP	OFF	DOWN	UP	OFF	DOWN
Driver's side	5	○		○	○		○
	4	○	○	○	○	○	○
	6	○	○	○	○	○	○
	1	○	○	○	○	○	○
Passenger's side	5	○		○	○		○
	2	○	○	○	○	○	○
	3	○	○	○	○	○	○
	1	○	○	○			

NOTE

○—○ indicates that there is continuity between the terminals.



Main switch <Sedan, Wagon>

Switch position		Power window switch (normal)			Power window switch (lock)		
		UP	OFF	DOWN	UP	OFF	DOWN
Front (Driver's side)	4 (3)	○		○	○		○
	2 (11)	○	○	○	○	○	○
	10 (5)	○	○	○	○	○	○
	3 (4)	○	○	○	○	○	○
Front (Passenger's side)	4 (3)	○		○	○		○
	11 (2)	○	○	○	○	○	○
	5 (10)	○	○	○			
Rear (RH)	3 (4)	○	○	○			
	4 (3)	○		○	○		○
	6	○	○	○	○	○	○
	14	○	○	○			○
Rear (LH)	3 (4)	○	○	○			
	4 (3)	○		○	○		○
	7	○	○	○	○	○	○
	1	○	○	○			○
	3 (4)	○	○	○			

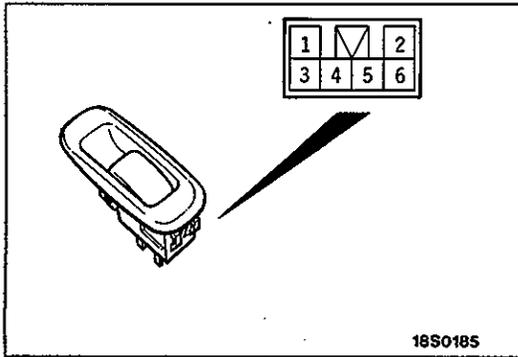
NOTE

(1) ○—○ indicates that there is continuity between the terminals.

(2) () Indicates R.H. drive vehicles.

42-34-2

NOTES



Sub switch

Switch position		Sub switch		
		UP	OFF	DOWN
Sub switch	1		○	○
	2	○	○	○
	3	○	○	○
	4	○	○	○
	6		○	

NOTE

○—○ indicates that there is continuity between the terminals.

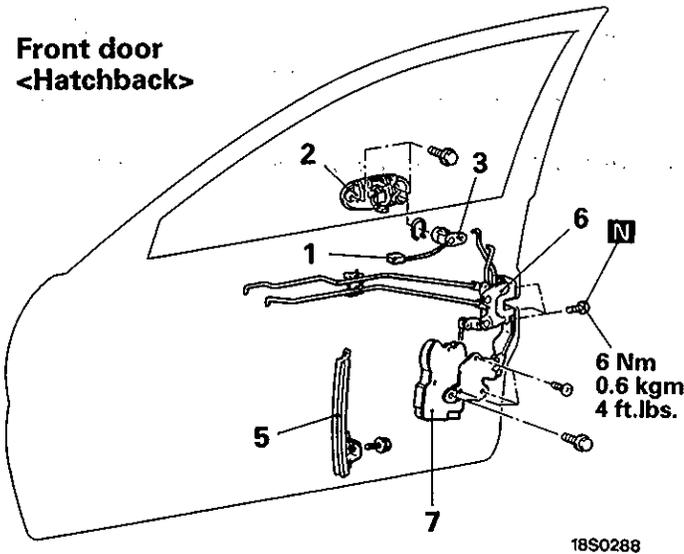
DOOR HANDLE AND LATCH

REMOVAL AND INSTALLATION

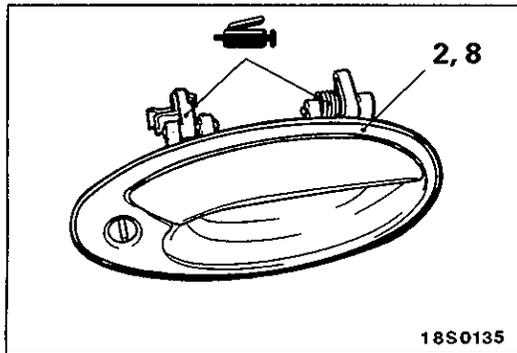
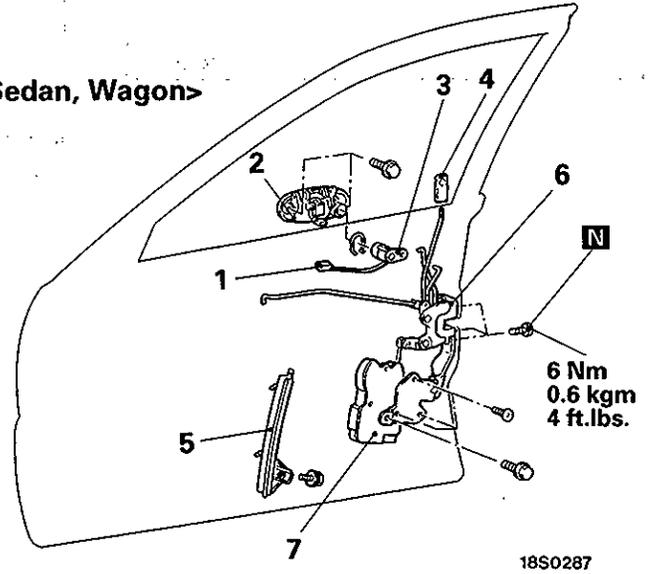
Pre-removal and Post-installation Operation

- Removal and Installation of the Door Trim, Door Inside Handle and Waterproof film (Refer to P.42-31.)

**Front door
<Hatchback>**



<Sedan, Wagon>



Removal steps of door lock key cylinder

1. Door lock key cylinder switch connector <Passenger's side>
2. Door outside handle
3. Door lock key cylinder

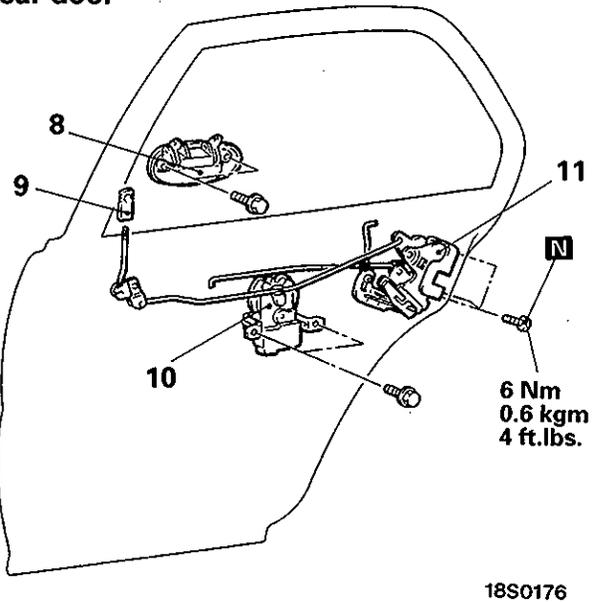
Removal steps of door latch assembly and door lock actuator <Front door>

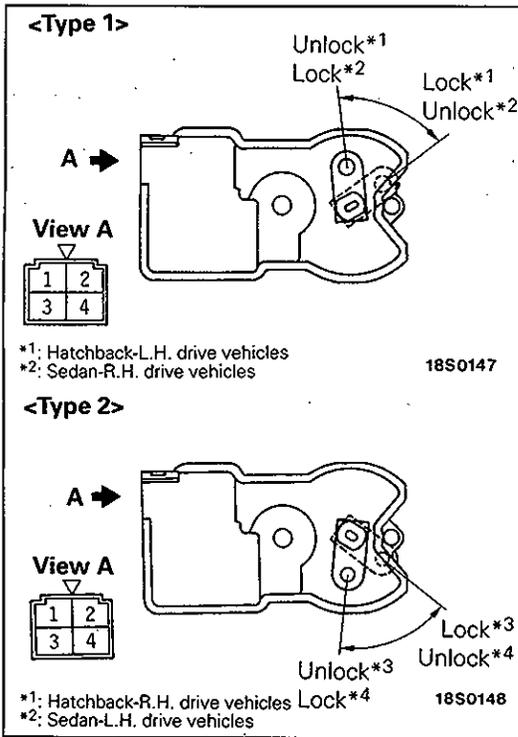
2. Door outside handle
4. Inside lock knob
5. Rear lower sash
6. Door latch assembly
7. Front door lock actuator

Removal steps of door latch assembly and door lock actuator <Rear door>

8. Door outside handle
9. Inside lock knob
10. Rear door lock actuator
11. Door latch assembly

Rear door



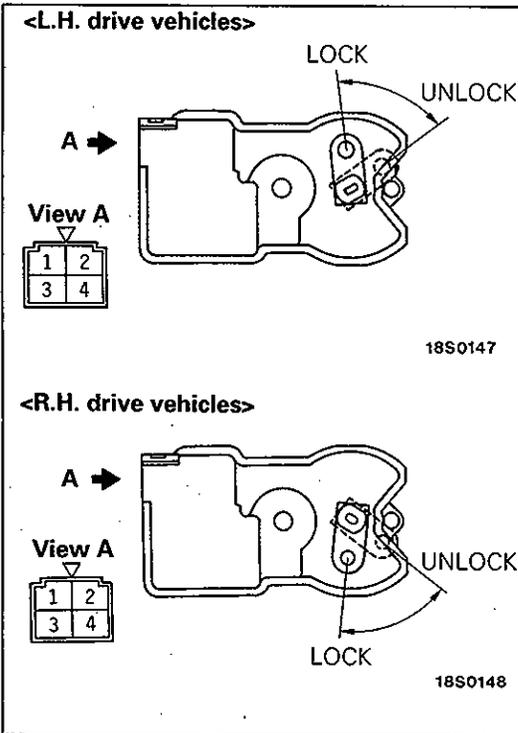


INSPECTION

DOOR LOCK ACTUATOR

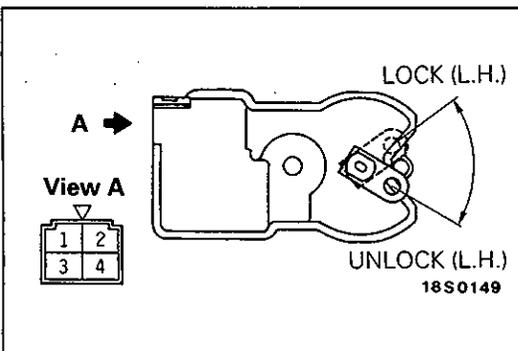
<Driver's side>

- (1) After setting the rod to the LOCK position, apply battery voltage to terminal ① (L.H. drive vehicles) or terminal ③ (R.H. drive vehicles) and check if the rod moves as far as the UNLOCK position when terminal ③ (L.H. drive vehicles) or terminal ① (R.H. drive vehicles) is earthed.
- (2) After setting the rod to the UNLOCK position and applying battery voltage to terminal ③ (L.H. drive vehicles) or terminal ① (R.H. drive vehicles), check if the rod moves as far as the LOCK position when terminal ① (L.H. drive vehicles) or terminal ③ (R.H. drive vehicles) is earthed.
- (3) When the rod is set to the UNLOCK position, check if there is continuity between terminal ② and terminal ④, and when the rod is set to the LOCK position, check that there is no continuity.



<Passenger's side>

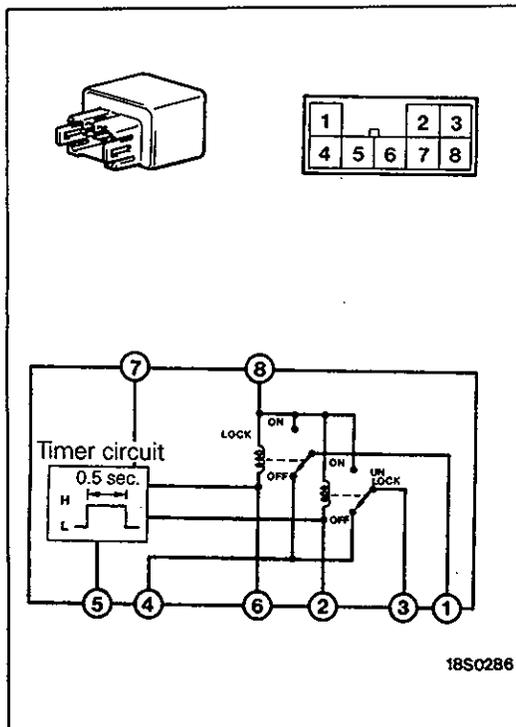
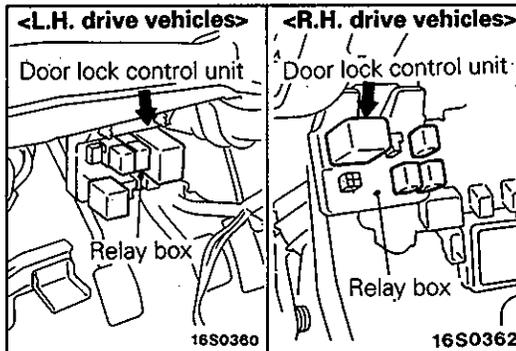
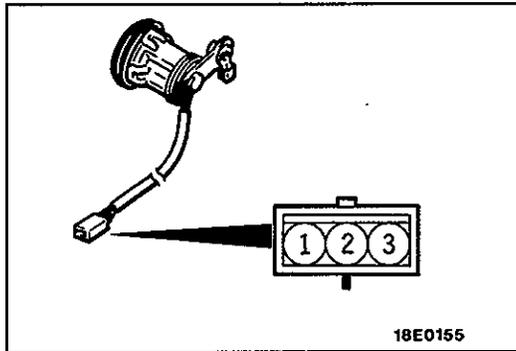
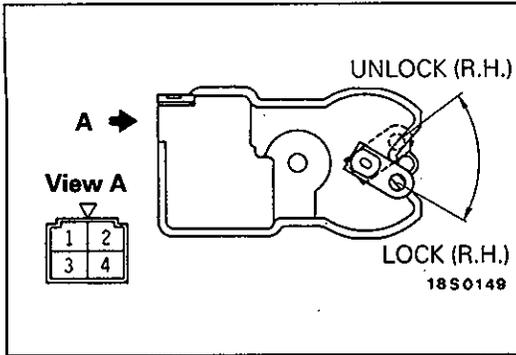
- (1) After setting the rod to the LOCK position, apply battery voltage to terminal ③ (L.H. drive vehicles) or terminal ① (R.H. drive vehicles) and check if the rod moves as far as the UNLOCK position when terminal ① (L.H. drive vehicles) or terminal ③ (R.H. drive vehicles) is earthed.
- (2) After setting the rod to the UNLOCK position and applying battery voltage to terminal ① (L.H. drive vehicles) or terminal ③ (R.H. drive vehicles), check if the rod moves as far as the LOCK position when terminal ③ (L.H. drive vehicles) or terminal ① (R.H. drive vehicles) is earthed.



REAR DOOR LOCK ACTUATOR

<L.H.>

- (1) After setting the rod to the LOCK position and applying battery voltage to terminal ③, check if the rod moves to the UNLOCK position when terminal ① is earthed.
- (2) After setting the rod to the UNLOCK position and applying battery voltage to terminal ①, check if the rod moves to the LOCK position when terminal ③ is earthed.



<R.H.>

- (1) After setting the rod to the LOCK position, apply battery voltage to terminal ① and check if the rod moves to the UNLOCK position when terminal ③ is earthed.
- (2) After setting the rod to the UNLOCK position and applying battery voltage to terminal ③, check if the rod moves to the LOCK position when terminal ① is earthed.

DOOR LOCK KEY CYLINDER SWITCH

Operate the switch and check for continuity between the terminals.

Terminal	1	2	3
Switch position			
LOCK		○—○	○—○
Neutral (OFF)			
UNLOCK	○—○	○—○	

NOTE

○—○ indicates that there is continuity between the terminals.

DOOR LOCK CONTROL UNIT

- (1) Remove the door lock control unit from the relay box.

- (2) Apply battery power to terminals ⑦ and ⑧, and earth terminals ④ and ⑤.
- (3) Connect a needle-type circuit tester between terminal ① and the earth, and after switching it to the DCV range, and check if the needle moves at the instant when the connection at terminal ⑤ is removed.
- (4) Next, connect the needle-type circuit tester between terminal ③ and the earth, and check if the needle moves at the instant when the connection at terminal ⑤ that was removed in (3) above is reconnected.
- (5) Also, check if there is a voltage of 12V between terminal ⑥ and the earth, and between terminal ② and the earth.

NOTE

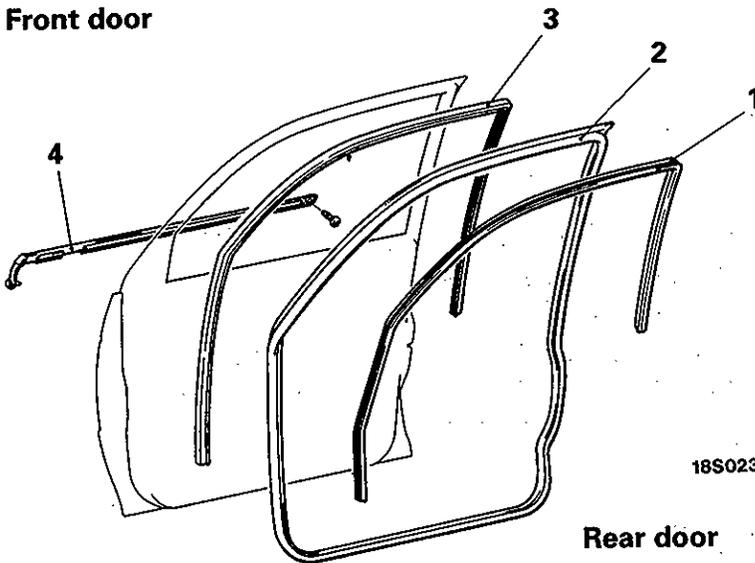
The reason why the needle of the circuit tester moves in (3) and (4) above is because battery voltage appears between terminals ① and ③ and the earth for approximately 0.5 seconds.

WINDOW GLASS RUNCHANNEL AND DOOR OPENING WEATHERSTRIP

E42MEAHa

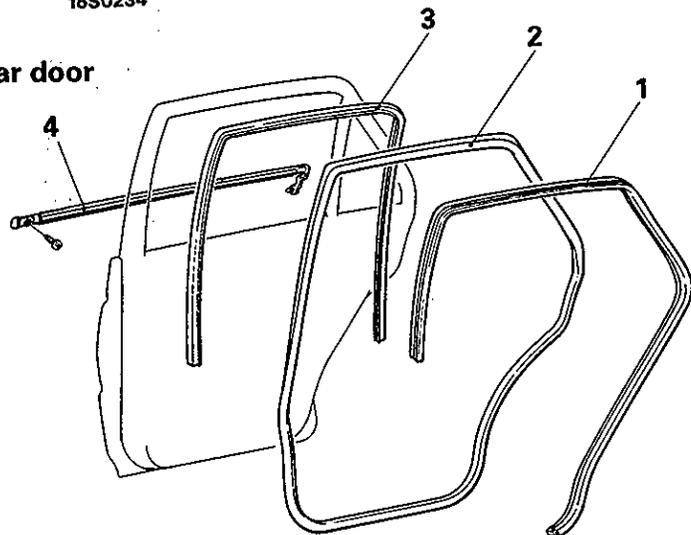
REMOVAL AND INSTALLATION

Front door



18S0234

Rear door



18S0235

Removal steps of door inner opening weatherstrip

- Front pillar trim
 - Centre pillar trim
 - Rear pillar trim
- (Refer to GROUP 52A-Trims.)
1. Door inner opening weatherstrip

Removal steps of door outer opening weatherstrip

- Spring pin (Refer to P.42-29.)
2. Door outer opening weatherstrip

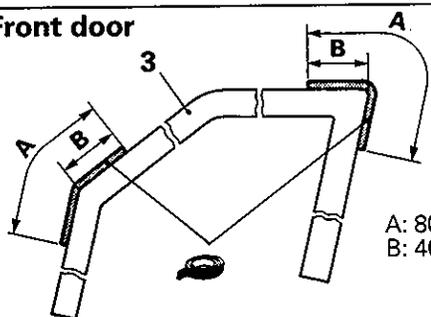
Removal of window glass runchannel

3. Window glass runchannel

Removal steps of beltline moulding

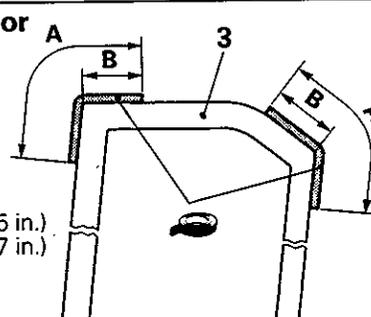
- Door mirror (Refer to GROUP 51 - Door Mirror.) <Front door>
4. Beltline moulding

Front door



18S0083

Rear door

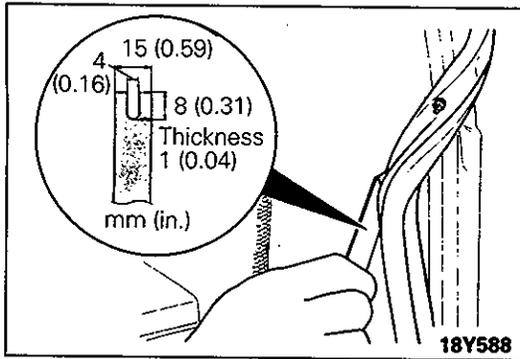


18S0084

A: 80 mm (3.15 in.)
B: 40 mm (1.57 in.)

Sealant: 3M ATD Part No. 8625 or equivalent

42-40 BODY – Window Glass Runchannel and Door Opening Weatherstrip



SERVICE POINTS OF REMOVAL

2. REMOVAL OF DOOR OUTER OPENING WEATHERSTRIP

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

SERVICE POINTS OF INSTALLATION

2. INSTALLATION OF DOOR OUTER OPENING WEATHERSTRIP

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

Applicable location	Vehicle type	
	Hatchback	Sedan, Wagon
Left door	Brown	White
Right door	Yellow	Pink

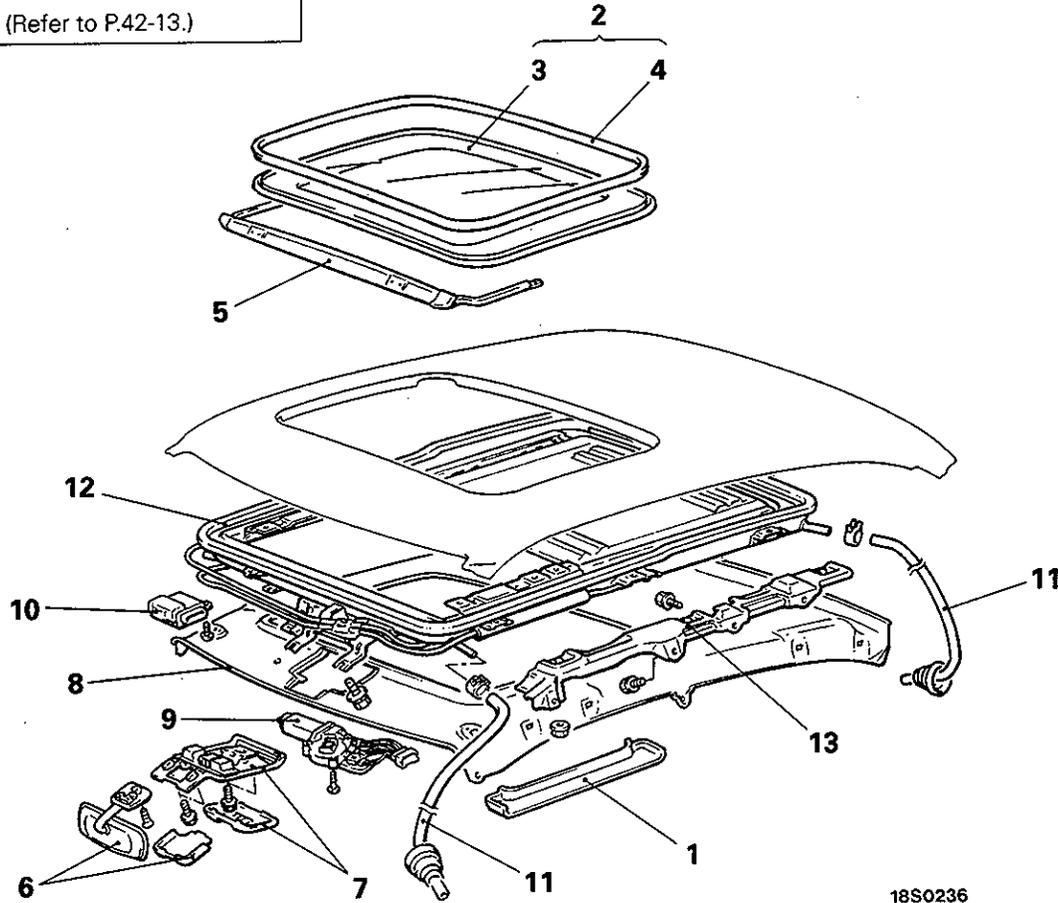
SUNROOF

REMOVAL AND INSTALLATION

E42TAAO

Post-installation Operation

- Sunroof Fit Adjustment (Refer to P.42-13.)
- Water Test (Refer to P.42-13.)



18S0236

Removal steps of roof lid glass



1. Decoration cover
2. Roof lid glass assembly
3. Roof lid glass
4. Weatherstrip

Removal steps of deflector

- Fully open roof lid glass
- 5. Deflector

Removal steps of sunroof switch and room lamp assembly

6. Inside rear view mirror
7. Sunroof switch and room lamp assembly

Removal steps of drain hose

- Splash shield <Front drain hose> (Refer to P.42-18.)
- 6. Inside rear view mirror
- 7. Sunroof switch and room lamp assembly
- 8. Headlining (Refer to GROUP 52A-Headlining.)



11. Drain hose

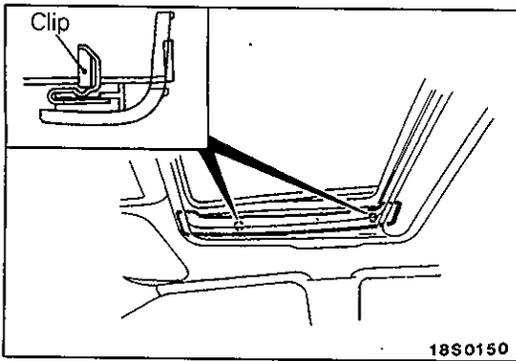
Removal steps of sunroof motor and sunroof control unit



6. Inside rear view mirror
7. Sunroof switch and room lamp assembly
8. Headlining (Refer to GROUP 52A-Headlining.)
9. Sunroof motor
10. Sunroof control unit

Removal steps of sunroof assembly

6. Inside rear view mirror
7. Sunroof switch and room lamp assembly
8. Headlining (Refer to GROUP 52A-Headlining.)
11. Drain hose connection
12. Sunroof assembly
13. Set bracket



SERVICE POINTS OF REMOVAL

1. REMOVAL OF DECORATION COVER

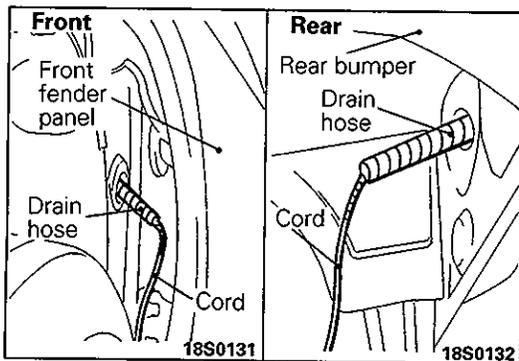
There are clips in the positions shown in the illustration, so be careful of them while pushing the decoration cover downwards with your hand to remove it.

9. REMOVAL OF SUNROOF MOTOR

Caution

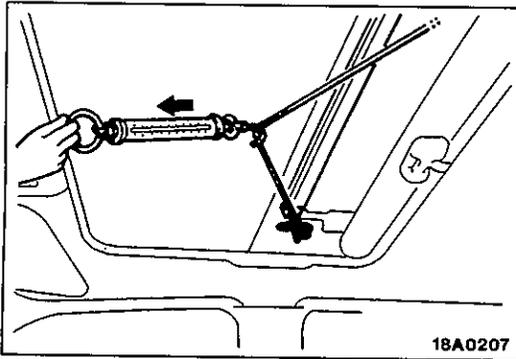
When removing the sunroof motor, always be sure to fully close the roof lid glass.

If the roof lid glass and the sunroof motor are not both in the fully-closed positions, the sunroof will not operate properly.



11. REMOVAL OF DRAIN HOSE

Remove the grommet. Tie a cord to the end of the drain hose, wind a tape around it so that there is no unevenness, and pull the drain hose into the inside of the passenger compartment.



INSPECTION

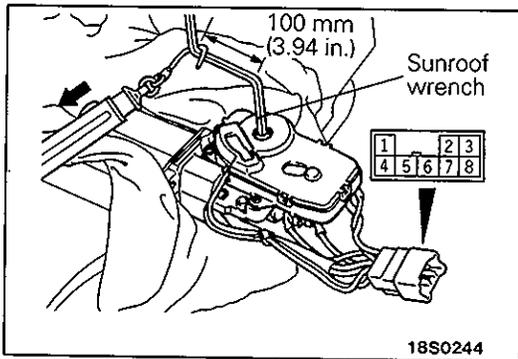
CHECKING THE SLIDING RESISTANCE OF THE ROOF LID GLASS

Check the sliding resistance of the roof lid glass by following the procedures below.

- (1) Remove the decoration cover.
- (2) Loosen the nut at the front end of the roof lid glass installation, and then tie with a cord.
- (3) Remove the motor after opening the roof lid glass.
- (4) Using a spring scale, measure the sliding resistance of the roof lid glass.

Standard value: 150 N (15 kg, 33 lbs.) or less

- (5) If the sliding resistance of the roof lid glass exceeds the standard value, check the following.
 - (1) Check the installed condition of the sunroof assembly, and check for deformation, or clogging due to foreign material.
 - (2) Check for sticking of the drive cable.
 - (3) Check for an offset position of the roof lid glass.
- (6) When installing the sunroof motor, install the roof lid glass and the sunroof motor in the fully closed position. (Refer to P.42-45.)



CHECKING THE SLIDING FORCE OF THE SUNROOF MOTOR'S CLUTCH

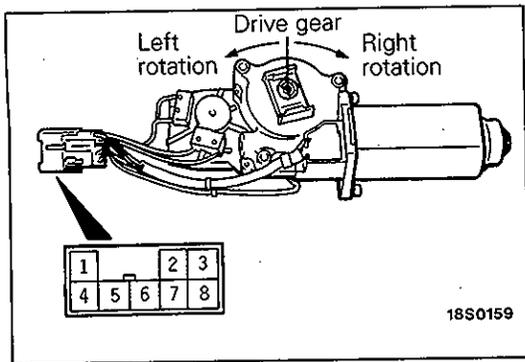
Inspect the sliding force of the clutch by the following procedure.

- (1) Place the sunroof wrench from the on-board tools into the hexagonal socket of the sunroof motor drive shaft, and set a spring balance in a position 100mm (3.94in.) from the drive shaft.
- (2) Connect the battery to sunroof motor connector terminals (1) and (2) to rotate the sunroof motor.
- (3) Measure the spring balance reading when the rotating force of the sunroof motor equals the spring force of the spring balance.

Standard value: 50–70N (5.0–7.0kg, 11–15lbs.)

Caution

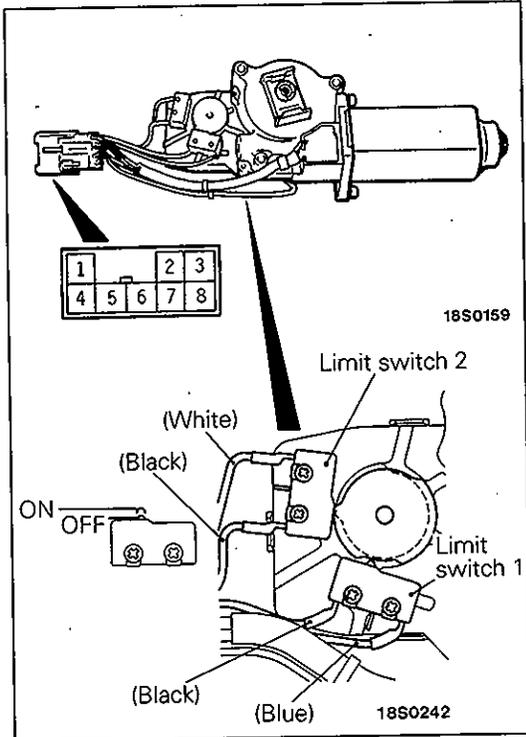
- (1) The spring balance should be kept a right angle to the sunroof wrench.
- (2) If a wrench other than that in the on-board tools is used, the value for the clutch sliding force will be different, so only the on-board tool should be used.
- (4) If the clutch sliding force is outside the standard value,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



CHECKING THE SUNROOF MOTOR

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

Terminal 1	Terminal 2	Drive gear rotation direction
-	+	Right
+	-	Left



CHECKING THE LIMIT SWITCH

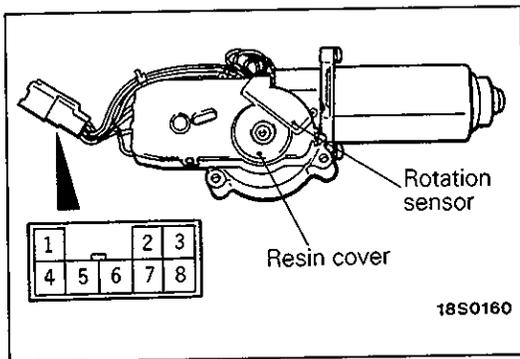
(1) Remove the limit switch from the sunroof motor; then operate the limit switch and check for continuity between the terminals.

Switch		Terminal	4	5	6
Limit switch 1	ON		○—○		
	OFF				
Limit switch 2	ON		○—		○—
	OFF				

NOTE

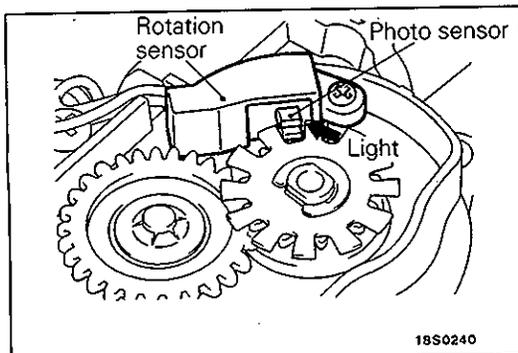
○—○ indicates that there is continuity between the terminals.

(2) When installing the limit switch, check the wire colours for the limit switches 1 and 2, and install so that the position and direction are as shown in the illustration.

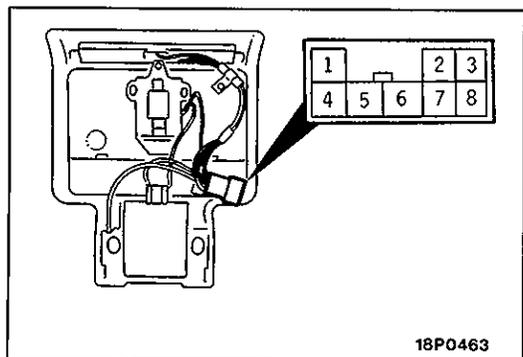


CHECKING THE ROTATION SENSOR

(1) Check that there is continuity when the (-) testing probe is connected to terminal ③, and the (+) testing probe is connected to terminal ⑧. Also, check that there is no continuity when the (+) testing probe is connected to terminal ③, and the (-) testing probe is connected to terminal ⑧.



(2) Remove the resin cover, and check that there is no continuity when the (-) testing probe is connected to terminal ⑦, and the (+) testing probe is connected to terminal ⑧. Also, with the testing probes in the same position, check that there is continuity when light is hitting the photo sensor.



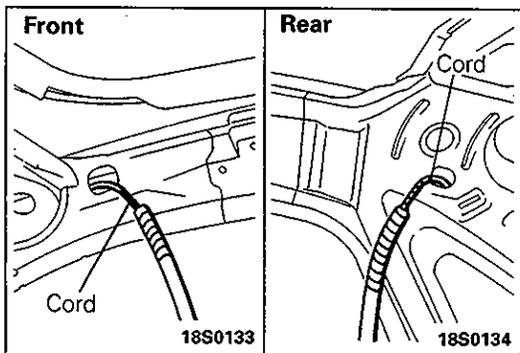
CHECKING THE SUNROOF SWITCH

Operate the switch and check for continuity between the terminals.

Switch		Terminal				
		2	3	5	7	8
Slide switch	Open	○	—	○		
	Close			○	—	○
Tilt switch	Up		○	—	○	
	Down			○	—	○

NOTE

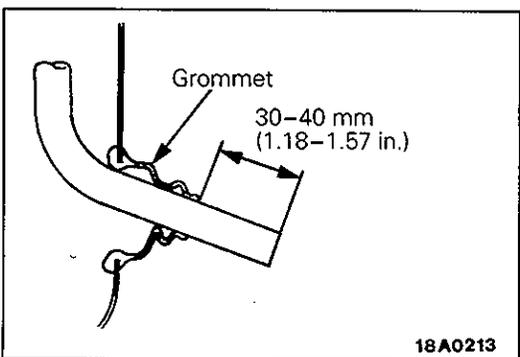
○—○ indicates that there is continuity between the terminals.



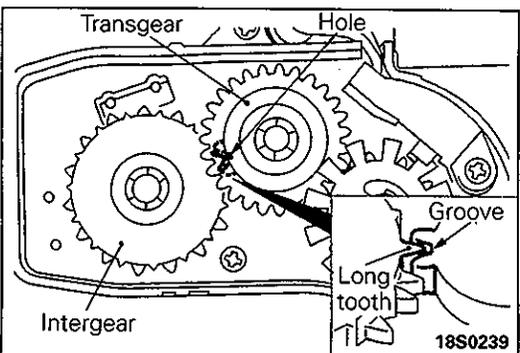
SERVICE POINTS OF INSTALLATION

11. INSTALLATION OF DRAIN HOSE

- (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 diagram.

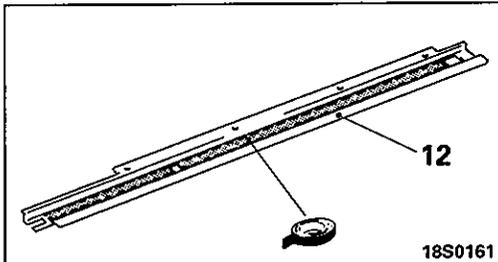


9. INSTALLATION OF SUNROOF MOTOR

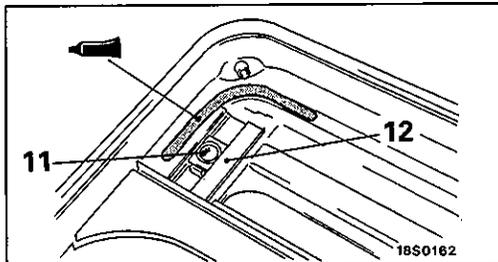
Set the sunroof motor to the fully-closed position by the following procedure.

- (1) Remove the resin cover.
- (2) Place the sunroof wrench from the on-board tools into the hexagonal socket of the sunroof motor drive shaft and turn the gear.
- (3) Align the long tooth of the sunroof motor intergear and the groove (hole) of the transgear.
- (4) Attach the resin cover and install the sunroof motor.

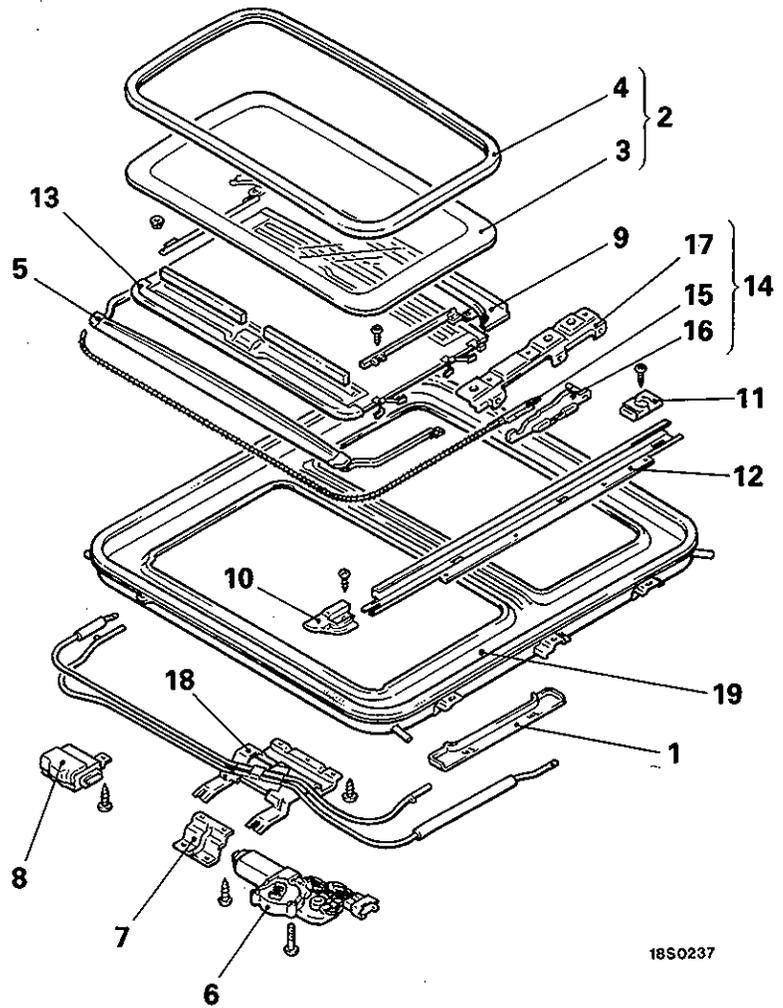
DISASSEMBLY AND REASSEMBLY



Sealant: 3M ATD Part No. 8625 or equivalent



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



18S0237

Disassembly steps

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Decoration cover (Refer to P.42-42.) 2. Roof lid glass assembly 3. Roof lid glass 4. Weatherstrip 5. Deflector 6. Sunroof motor (Refer to P.42-42.) 7. Inside rear view mirror bracket 8. Sunroof control unit 9. Drip rail | <ol style="list-style-type: none"> 10. Rail cover 11. Stopper 12. Rail assembly 13. Sunshade 14. Guide assembly 15. Cable 16. Slider 17. Guide 18. Drive unit 19. Housing assembly |
|--|--|