

BODY

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42109000126

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WARNINGS REGARDING SERVICING OF SUPPLEMENTAL RESTRAINT SYSTEM (SRS) EQUIPPED VEHICLES

WARNING!

- (1) Improper service or maintenance of any component of the SRS, or any SRS-related component, can lead to personal injury or death to service personnel (from inadvertent firing of the air bag) or to the driver (from rendering the SRS inoperative).
- (2) Service or maintenance of any SRS component or SRS-related component must be performed only at an authorized MITSUBISHI dealer.
- (3) MITSUBISHI dealer personnel must thoroughly review this manual, and especially its GROUP 52B – Supplemental Restraint System (SRS) and GROUP 00 – Maintenance Service before beginning any service or maintenance of any component of the SRS or any SRS-related component.

NOTE

The SRS includes the following components: impact sensors, SRS diagnosis unit, SRS warning light, air bag module, clock spring and interconnecting wiring. Other SRS-related components (that may have to be removed/installed in connection with SRS service or maintenance) are indicated in the table of contents by and asterisk (*).

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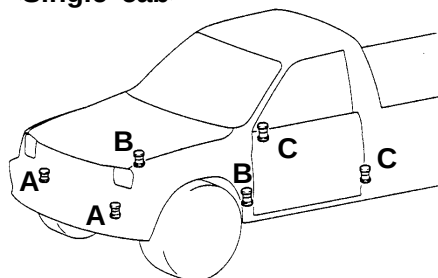
BODY MOUNTING

42100370035

CAB BODY

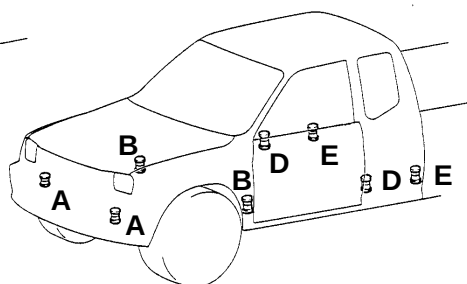
REMOVAL AND INSTALLATION

<Single cab>



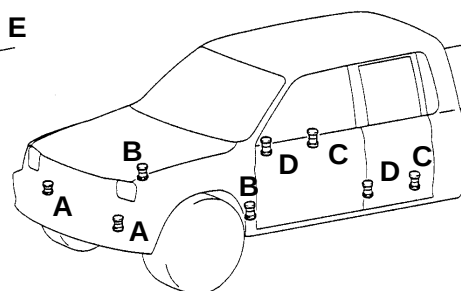
18V0013

<Club cab>



18V0072

<Double cab>



18V0160

A	B	C	D	E
47 Nm	47 Nm	24 Nm 47 Nm 24 Nm	47 Nm	24 Nm 47 Nm 24 Nm
		18V0011		18V0161

00005031

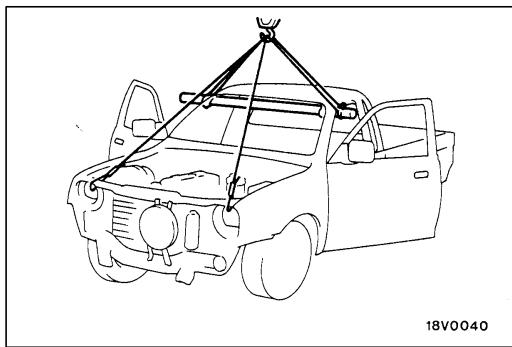
1. Special bolt
2. Mounting bolt
3. Plain washer
4. Body mounting rubber (A)
5. Spacer
6. Body mounting rubber (B)

7. Washer
8. Body mounting rubber
9. Plate
10. Self-locking nut
11. Nut

CAB BODY REMOVAL

1. Remove or disconnect the following parts.

- Hood
- Radiator grille
- Headlamp
- Front bumper assembly
- Front bumper bracket
- Oil cooler hose
- Radiator assembly
- Air cleaner duct
- Steering shaft joint
- Heater hose
- Power steering reservoir tank
- Brake booster vacuum hose
- Accelerator cable
- Fuel hose
- Brake pipe
- A/C piping
- Clutch release cylinder
- Speedometer cable
- Parking brake cable
- Shift lever knob
- Idle up vacuum hose
- Engine harness
- Transmission harness
- A/C harness
- Frame harness
- Ground strap
- Engine earth
- Door opening trim
- Floor carpet
- Cab body mounting bolt



2. After removing the body mounting bolts and the body shims, insert wooden blocks to the body and gently lift with a crane.

Caution

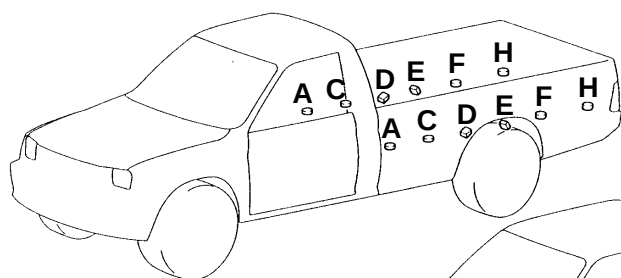
Before lifting, check to be sure that all the connections between cab body and frame and engine are separated.

Connect sling wires to a suitable bar or frame, fitting protection covers as necessary.

REAR BODY

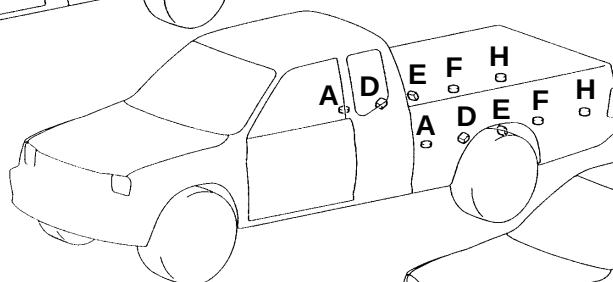
REMOVAL AND INSTALLATION

<Single cab>



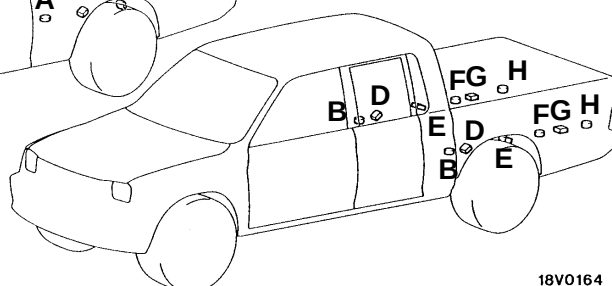
18V0162

<Club cab>



18V0163

<Double cab>



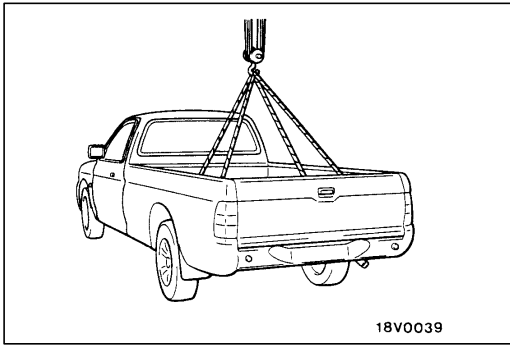
18V0164

A	B	C, F	D, E	G	H
27 – 31 Nm	27 – 31 Nm 18V0166	27 – 31 Nm		18V0165	27 – 31 Nm

00005032

1. Mounting bolt
2. Body shim (A)
3. Plain washer

4. Body shim (B) assembly
5. Self-locking nut
6. Body shim (C)



REAR BODY REMOVAL

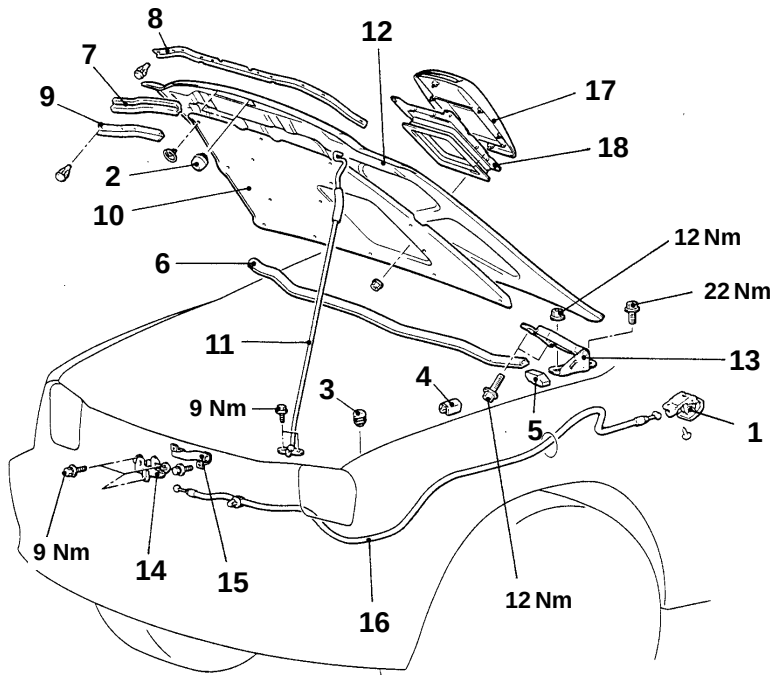
1. Remove or disconnect the following parts.
 - Filler neck <Single cab, Club cab>
 - Rear body wiring harness connector
 - Rear body mounting bolts
2. Hook wires onto the rope hocks on the rear body, and then use a crane to raise the rear body.

Caution

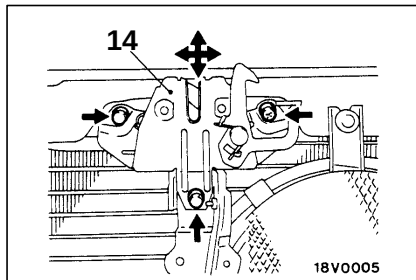
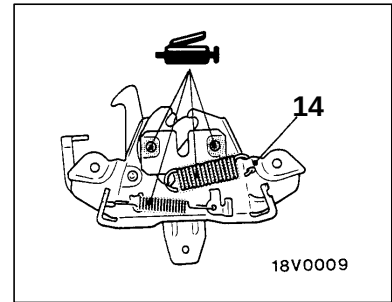
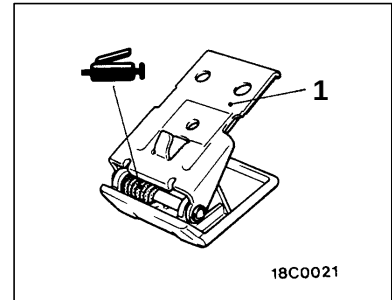
Make sure that the rear body doesn't hit the cab while it is being raised.

HOOD

REMOVAL AND INSTALLATION

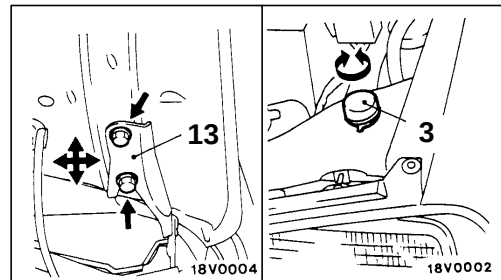


16V016



18V0005

Adjustment of hood step and hood striker linkage



18V0004

18V0002

Adjustment of clearance and height around hood

00005033

1. Hood lock release handle
2. Hood bumper
3. Hood bumper
4. Hood damper
5. Hood side weatherstrip
6. Hood weatherstrip
7. Front hood weatherstrip
8. Hood seal
9. Hood weatherstrip
10. Hood silencer
11. Hood support rod

Hood latch and hood lock release cable removal steps

- Radiator grille
- 14. Hood latch
- 15. Cable protector
- Junction block
- 16. Hood lock release cable

Hood and hood hinge removal steps

- Washer hose connection
- 12. Hood
- Front deck garnish (Refer to GROUP 51 – Windshield Wiper and Washer.)
- 13. Hood hinge

Hood garnish removal steps

<Vehicles with intercooler>

- 17. Hood garnish
- 18. Hood intercooler weatherstrip

FENDER

SEALANT

42100050090

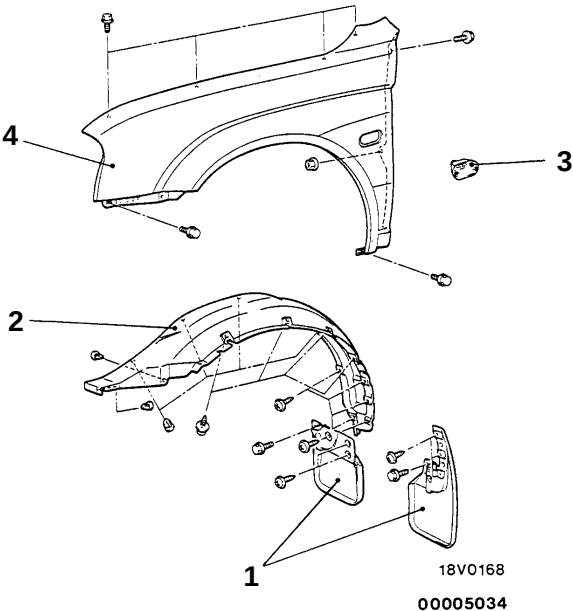
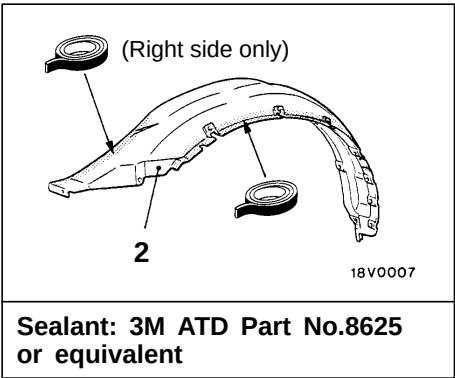
Item	Specified sealant	Remark
Splash shield	3M ATD Part No. 8625 or equivalent	Ribbon sealer

FENDER

REMOVAL AND INSTALLATION

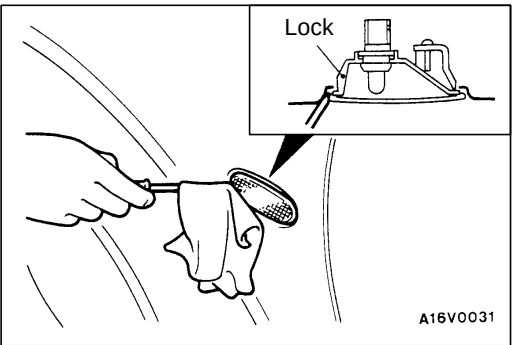
CAUTION: SRS
When removing and installing the fender from the vehicles equipped with SRS, do not let it bump against the front impact sensor.

- Pre-removal and Post-installation Operation**
- Front Bumper Removal and Installation (Refer to GROUP 51.)
 - Front Deck Garnish Removal and Installation (Refer to GROUP 51 – Windshield Wiper and Washer.)



Removal steps

1. Mud guard
2. Splash shield
3. Side turn signal lamp
4. Fender



REMOVAL SERVICE POINT

◀A▶ SIDE TURN SIGNAL LAMP REMOVAL

Use a flat-tipped (–) screwdriver or similar tool to remove the lock from the fender panel, and remove the side turn signal lamp.

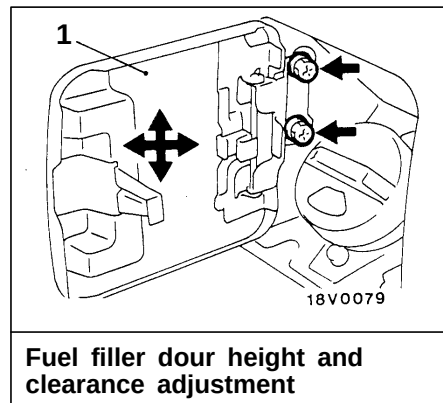
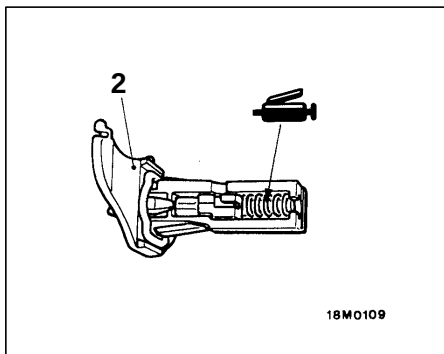
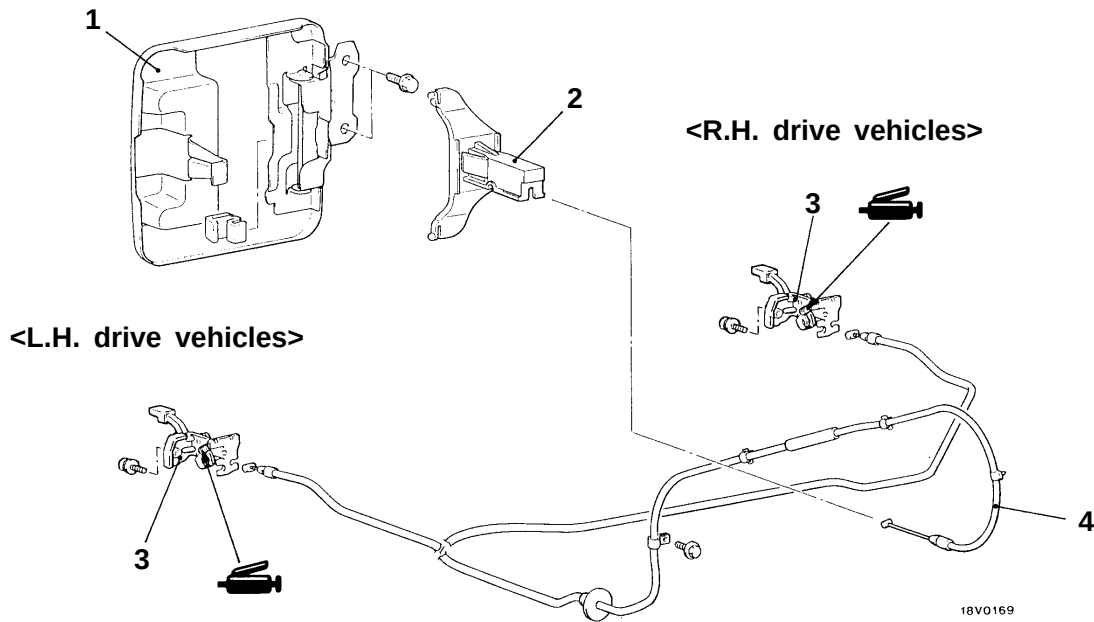
FUEL FILLER DOOR

REMOVAL AND INSTALLATION

<Single cab>

Pre-removal and Post-installation Operation

- Rear Floor Console Removal and Installation <Vehicles with heated seat> (Refer to GROUP 52A.)
- Driver's Seat Removal and Installation (Refer to GROUP 52A.)
- Scuff Plate (driver's side) Removal and Installation (Refer to GROUP 52A – Trims.)
- Rear Splash Shield (L.H.) Removal and Installation



00005035

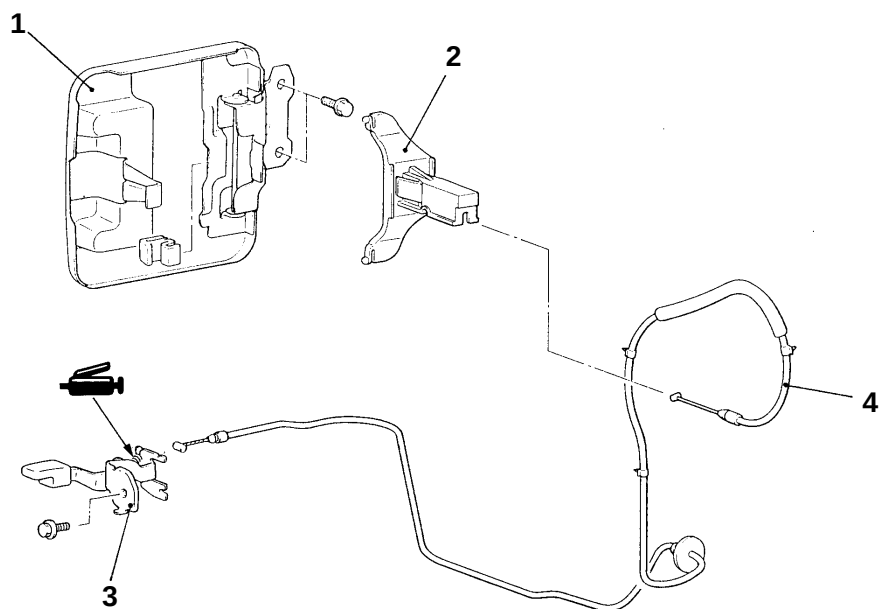
Removal steps

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

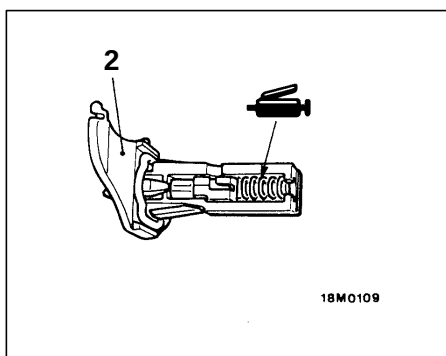
<Club cab>

Pre-removal and Post-installation Operation

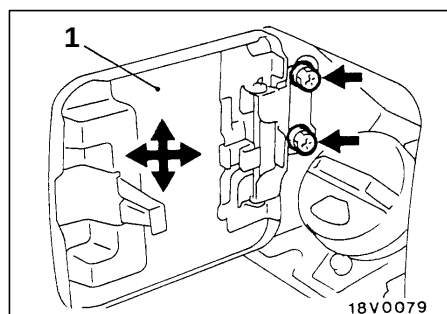
- Rear Floor Console Removal and Installation <Vehicles with heated seat> (Refer to GROUP 52A.)
- Driver's Seat Removal and Installation (Refer to GROUP 52A.)
- Scuff Plate (driver's side) Removal and Installation (Refer to GROUP 52A – Trims.)
- Rear Splash Shield (L.H.) Removal and Installation



18V0170



18M0109



18V0079

Fuel filler door height and clearance adjustment

00005036

Removal steps

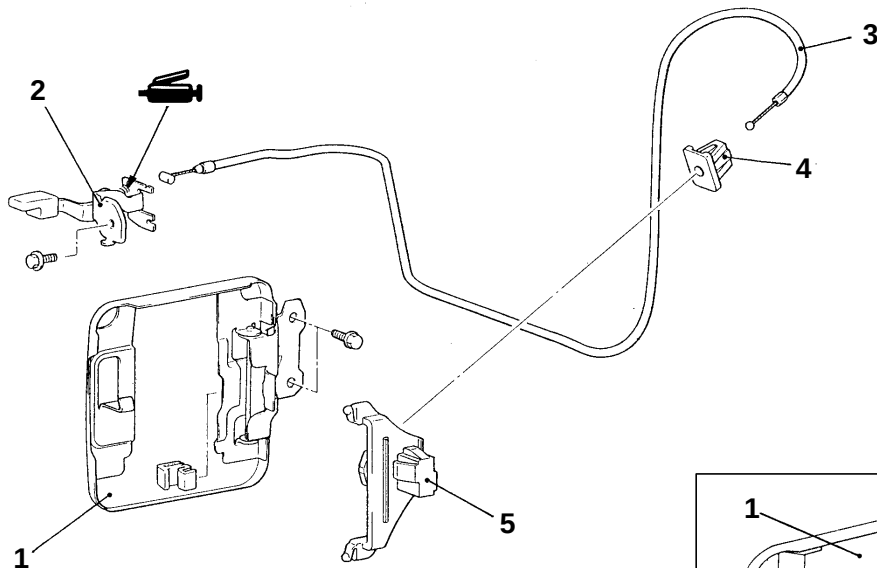
1. Fuel filler door panel assembly
2. Fuel filler door hook assembly
3. Lid lock release handle
4. Fuel filler door lock release cable

<Double cab>

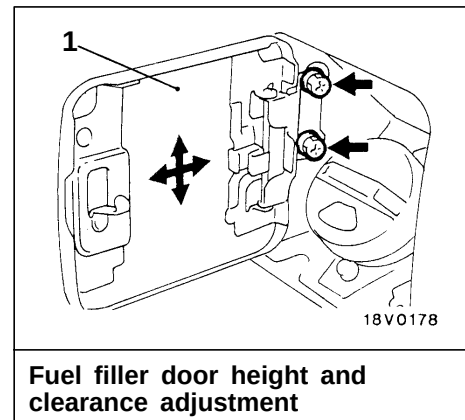
Pre-removal and Post-installation Operation

- Rear Floor Console Removal and Installation <Vehicles with heated seat> (Refer to GROUP 52A.)
- Driver's Seat, Rear Seat Removal and Installation (Refer to GROUP 52A.)
- Front Scuff Plate (driver's side), Rear Scuff Plate (driver's side), Center Pillar Lower Trim (driver's side),

Strap Assembly, ELR Cover, Back Panel Lower/Upper Trim, Rear Seat Belt ELR (L.H.), Rear Pillar Lower Trim Removal and Installation (Refer to GROUP 52A – Trims.)



18V0171



Fuel filler door height and clearance adjustment

00005037

Removal steps

1. Fuel filler door panel assembly
2. Lid lock release handle
3. Fuel filler door lock release cable
4. Cable holder
5. Fuel filler door hook assembly

WINDOW GLASS

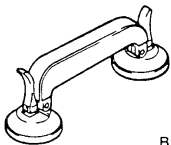
42200050093

ADHESIVES

Items	Specified adhesives
Windshield	3M ATD Part No. 8609 Super Fast Urethane Auto Glass Sealants or equivalent

SPECIAL TOOL

42200060089

Tool	Number	Name	Use
 B990480	MB990480	Glass holder	Removal and installation of windshield

WINDOW REPAIR

42200560060

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

- Windshield

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
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. × length...0.6mm × 1m For cutting adhesive
Adhesive gun	For pressing-out adhesive

NOTE

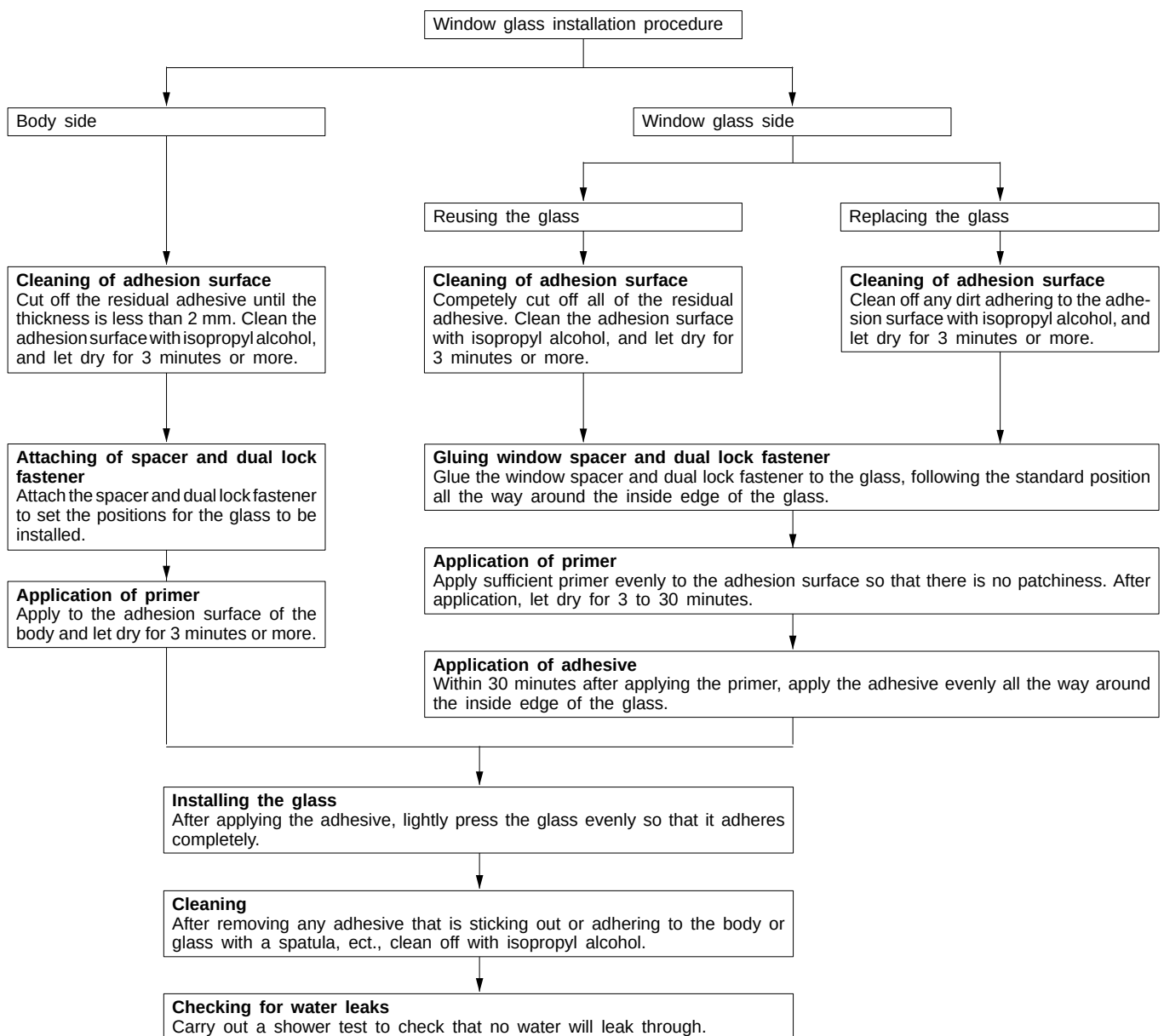
The TEROSON 127.37V auto window sealer kit can also be used. If using the TEROSON 127.37V auto window sealer kit, follow the instructions in the manual included with the kit.

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

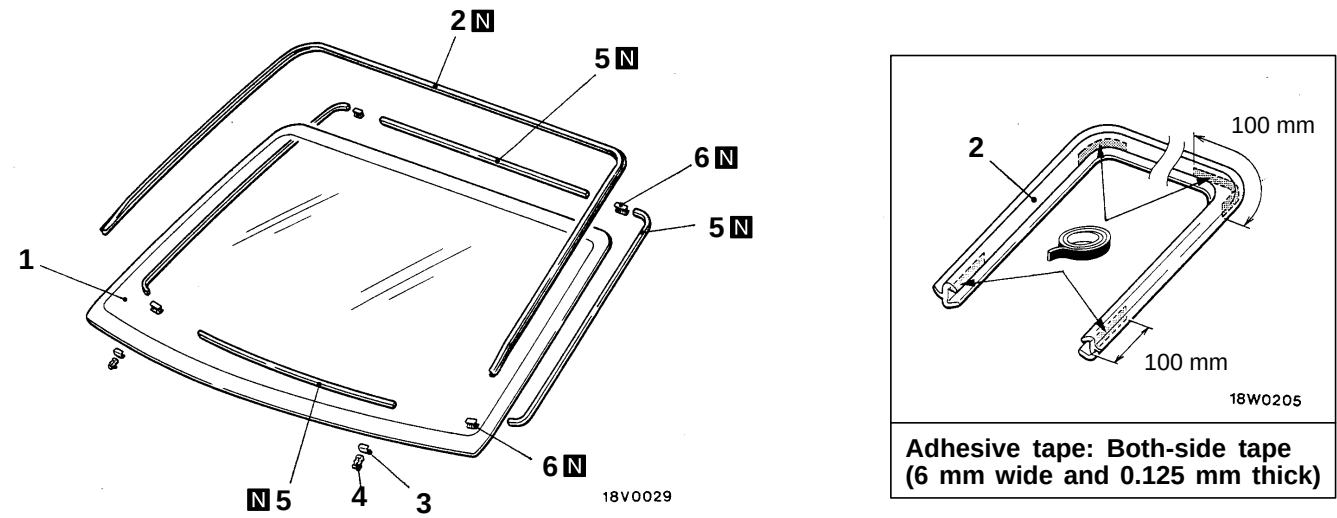
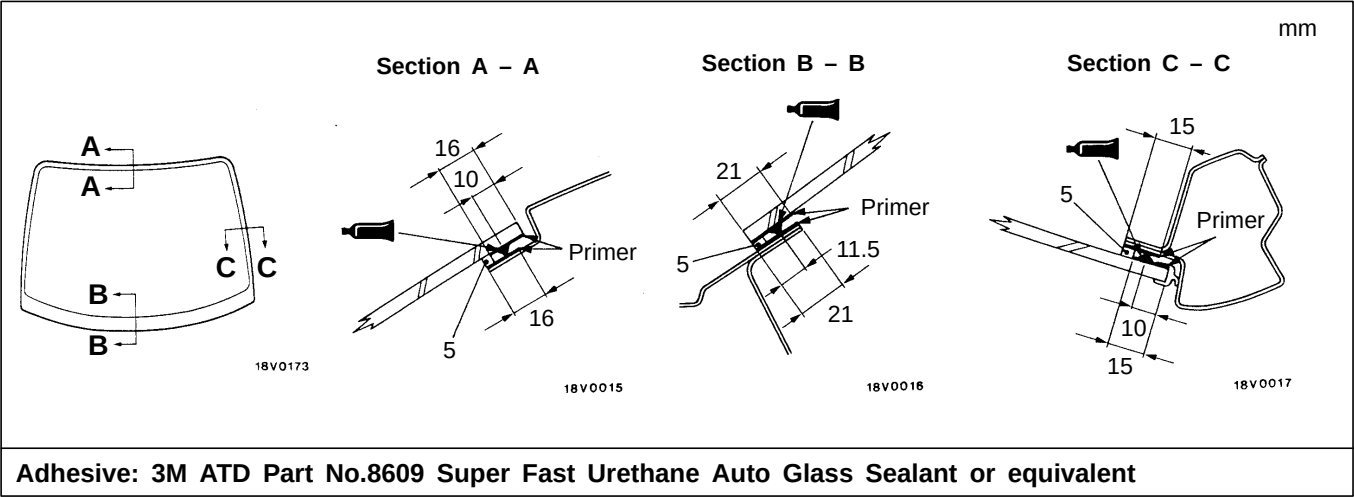
WINDSHIELD

42200100132

REMOVAL AND INSTALLATION

- Pre-removal and Post-installation Operation**

 - Front Deck Garnish Removal and Installation
(Refer to GROUP 51.)
 - Front Pillar Trim Removal and Installation
(Refer to GROUP 52A.)
 - Headlining



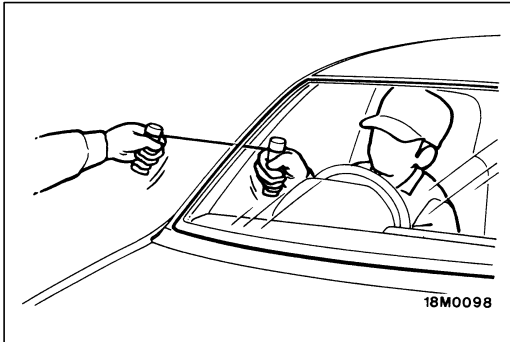
00005038

- Removal steps**
- ◀A▶ ▶A▶
1. Windshield
 2. Windshield moulding
 3. Windshield protector

- ▶A◀
4. Window spacer
 5. Window spacer
 6. Dual lock fastener

REMOVAL SERVICE POINT**◀▶ WINDSHIELD REMOVAL**

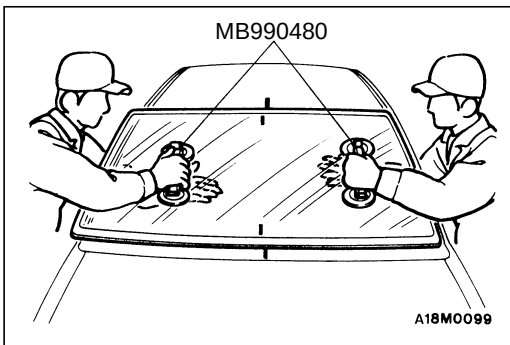
1. In order to protect the body (paint surface), apply cloth tape to all body areas around the installed windshield glass.
2. Cut the moulding with a cutter knife.



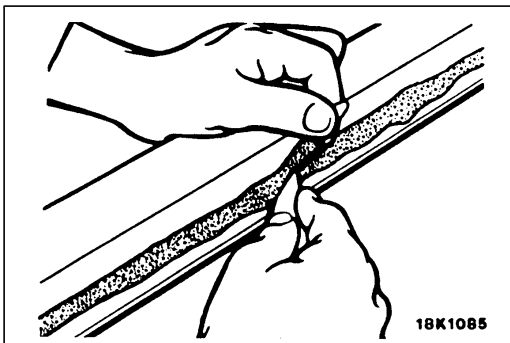
3. Using a sharp-point drill, make hole in the windshield glass adhesive.
4. Pass the piano wire from the inside of the vehicle through the hole.
5. Pull the piano wire alternately from the inside and outside along the windshield glass to cut the adhesive.

Caution

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



6. Make mating marks on the windshield glass and body.
7. Use the special tool to remove the windshield glass.



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

Caution

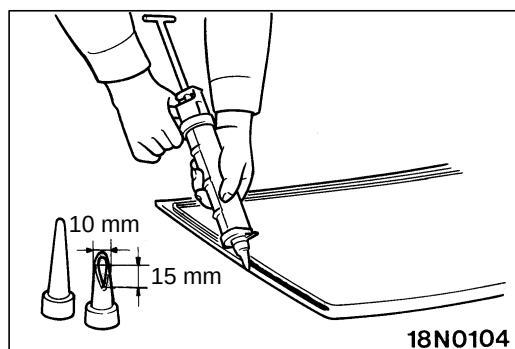
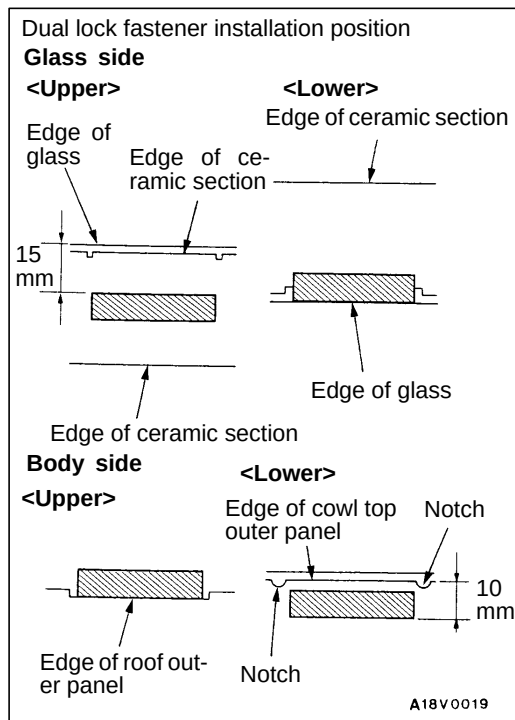
(1) Be careful not to remove more adhesive than is necessary.

(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.

10. When reusing the glass, remove the adhesive still adhering to the glass, and clean with isopropyl alcohol.
11. 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◄ DUAL LOCK FASTENER/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. Install the dual lock fasteners to the windshield in the position shown in the illustration.
6. Install the dual lock fasteners to the body flange in the positions that are corresponding to those on the windshield.
7. 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.

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

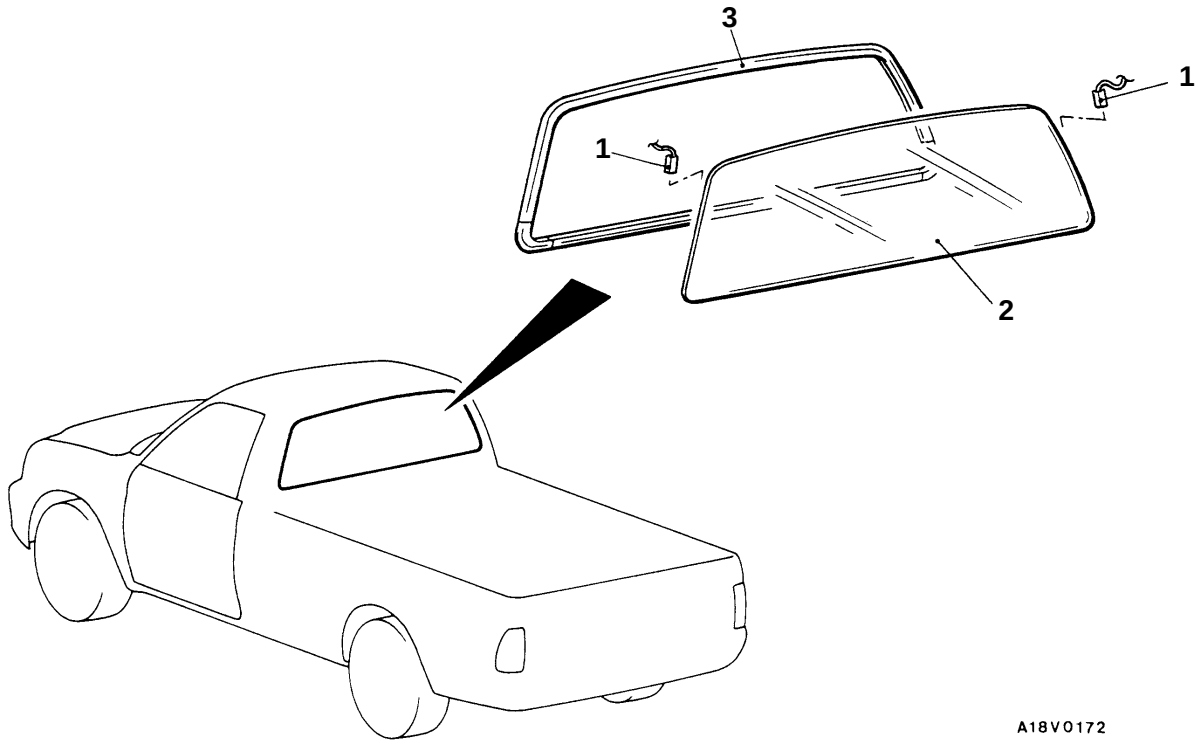
Caution

(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.

REAR WINDOW GLASS REMOVAL AND INSTALLATION

42200160079



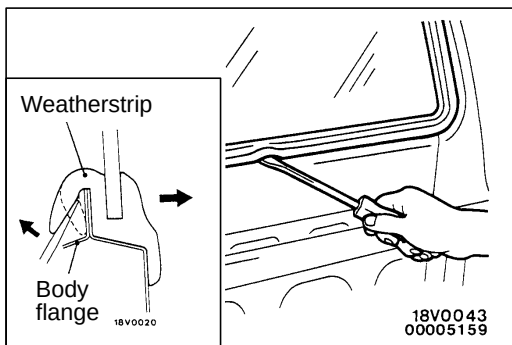
A18V0172

Removal steps

1. Harness connector <Vehicles with rear window defogger>



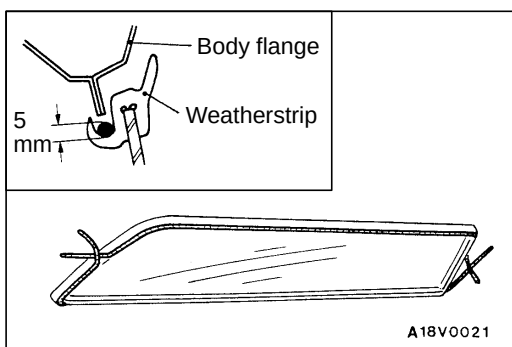
2. Rear window glass
3. Rear window glass weatherstrip



REMOVAL SERVICE POINT

◀A▶ REAR WINDOW GLASS/REAR WINDOW GLASS WEATHERSTRIP REMOVAL

Push the rear window glass out from the inside of the cabin with the lip of the weatherstrip straightened along the entire periphery with a screwdriver.



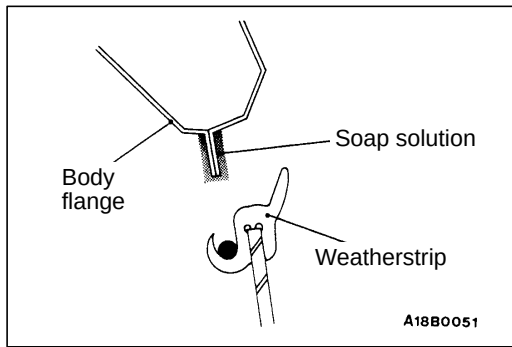
INSTALLATION SERVICE POINT

▶A◀ REAR WINDOW GLASS WEATHERSTRIP/REAR WINDOW GLASS INSTALLATION

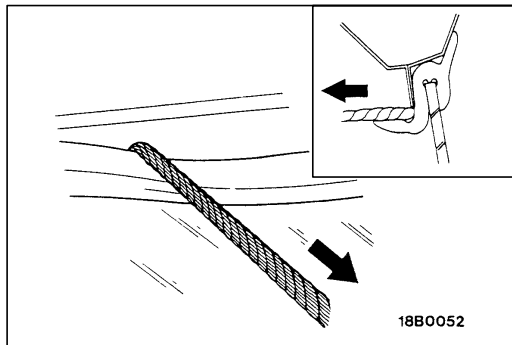
1. Set round strings in the weatherstrip groove.

NOTE

Make certain that the strings overlap other at both ends.



2. Apply soap solution to the entire periphery of the body flange.
3. Place the rear window glass in position from outside with the strings placed inside the cabin.



4. With the aid of an assistant to push the rear window glass from outside, slowly pull one end of the string at right angles to the rear window glass and fit the lips of the weatherstrip correctly on the body flange.

NOTE

Pull the strings, working from both sides of the rear window glass toward the centre and tapping the glass.

Caution

Tap the rear window glass repeatedly until it is lightly held against the body flange surface.

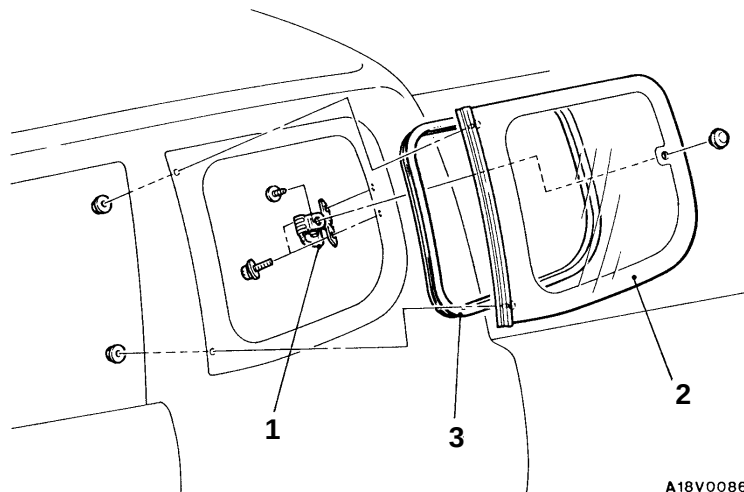
QUARTER WINDOW GLASS <CLUB CAB>

42200250103

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

- Quarter Upper Trim Removal and Installation (Refer to GROUP 52A – Trims.)



Removal steps

1. Link assembly
2. Quarter window glass assembly
3. Quarter window weatherstrip

DOOR

42300030083

SERVICE SPECIFICATIONS

Items		Standard value	
Door outside handle play mm		2.8 or more	
Power window operation current A	Single cab, Double cab		4 – 7 (at 20°C)
	Club cab		3.5 – 6.5 (at 20°C)
Door inside handle play mm		7.3 or more	
Glass pad and glass holder installation position mm	Distance (A) between glass holder and rear edge of glass	Single cab, Double cab	107 – 108
		Club cab	217 – 218
	Distance (B) between glass holders		418 – 420
	Distance (C) between glass holder and front edge of glass	Vehicles without power window	161 – 165
		Vehicles with power window	223 – 227

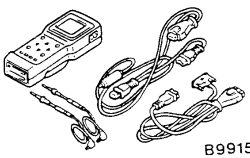
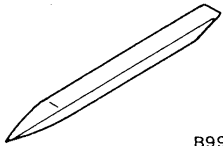
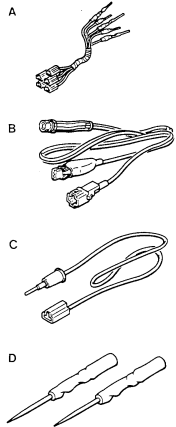
SEALANT

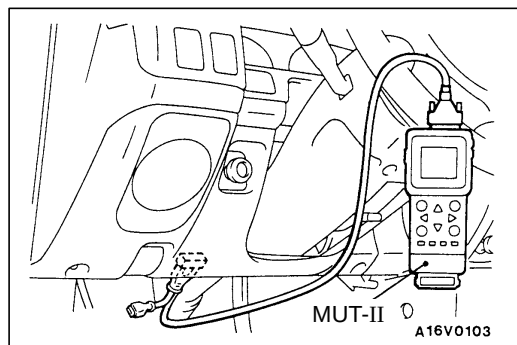
42300050034

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

SPECIAL TOOLS

42300060075

Tool	Number	Name	Use
 B991502	MB991502	MUT-II sub assembly	ETACS-ECU input signal checking
 B990784	MB990784	Ornament remover	Removal of door trim
 B991223	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

42300070115

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.

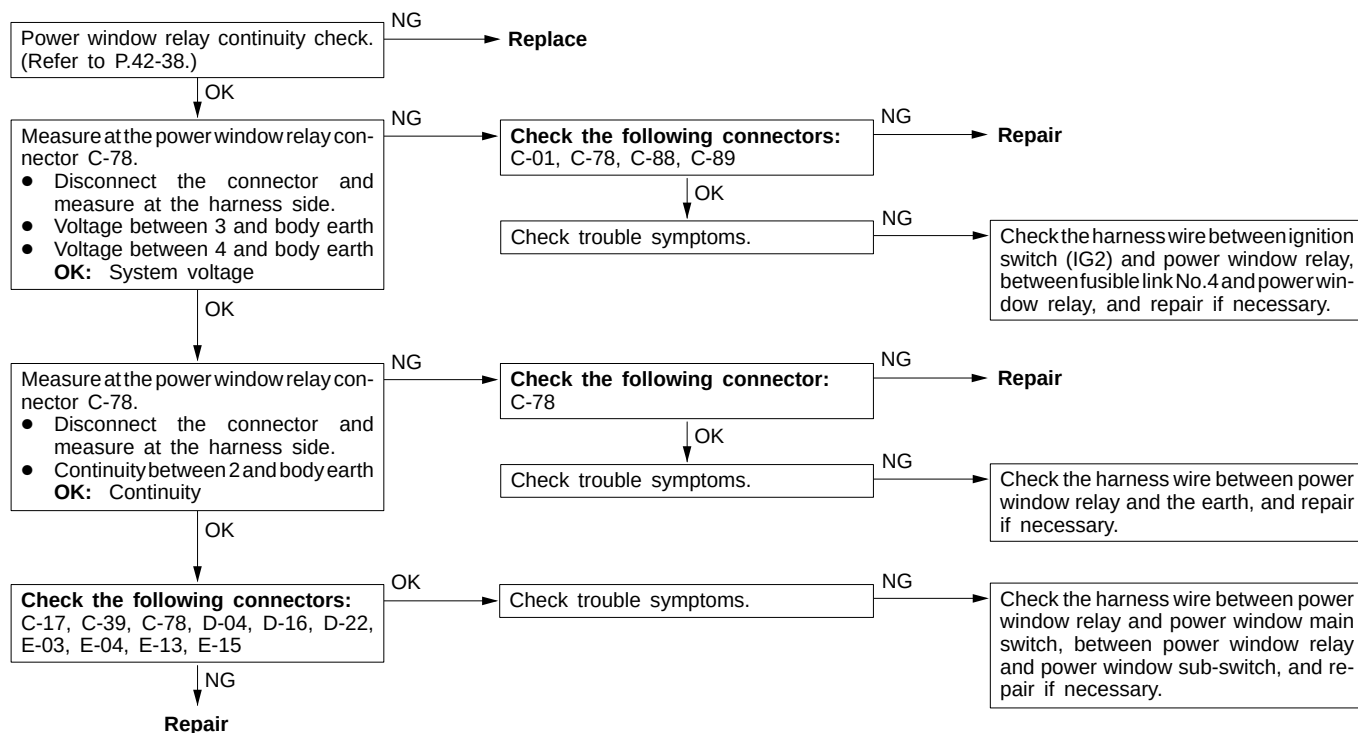
INSPECTION CHART FOR TROUBLE SYMPTOMS

Trouble symptom		Inspection procedure	Reference page
Power windows	The power windows cannot be operated by any of the power window switches.	1	42-21
	Driver's side power window cannot be operated by the power window main switch.	2	42-22
	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	42-23
	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	42-23
	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	42-24
	When the glass is raised, it then lowers automatically.	6	42-26
	The glass is not lowered when something is jammed in the window.	7	42-26
	When the glass is fully raised, it then lowers automatically.	8	42-27
Door locking mechanism	None of the door lock functions operate.	9	42-27
	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	42-28
	Some doors do not lock or unlock.	11	42-28

INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS

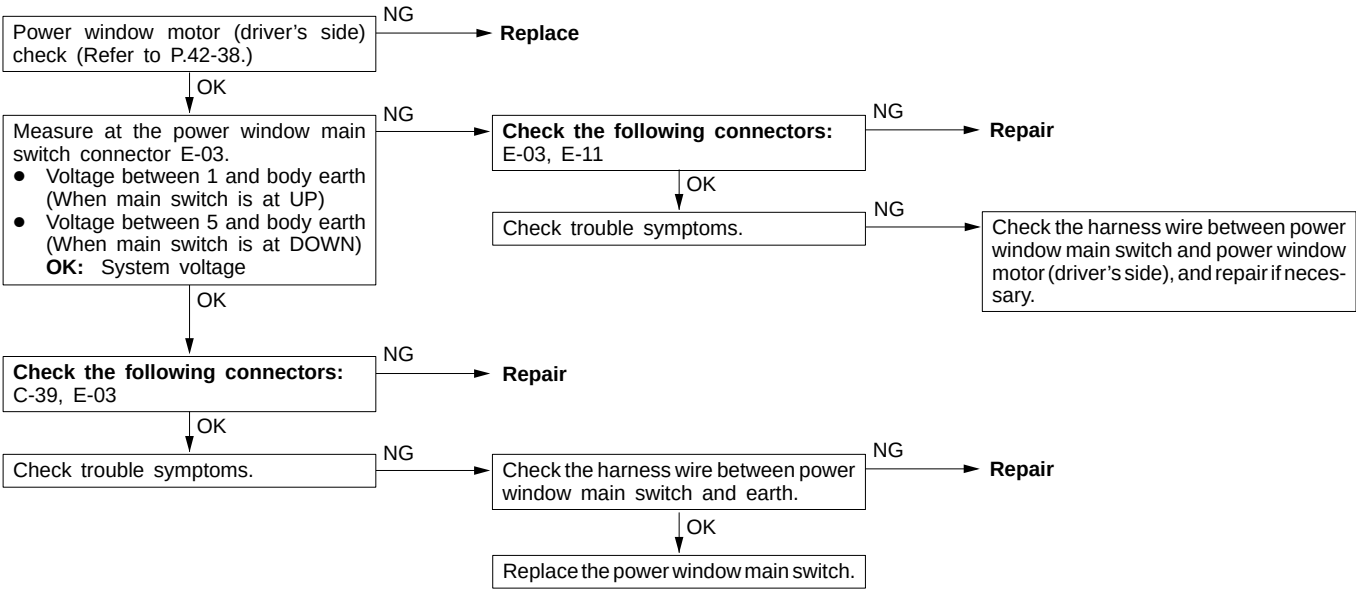
Inspection Procedure 1

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.	- Malfunction of power window relay - Malfunction of wiring harness or connector



Inspection Procedure 2

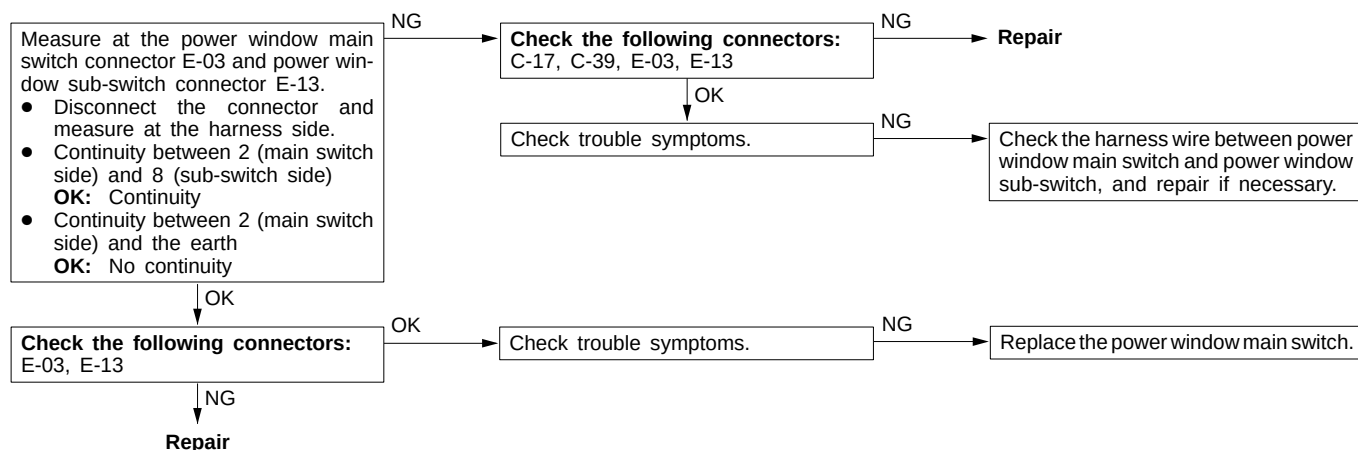
Driver's side power window cannot be operated by the power window main switch.	Probable cause
The cause may be a malfunction of the earth circuit in the power window main switch or of the power supply circuit for the power window motor. The cause may also be a malfunction of the control circuit inside the power window main switch.	• Malfunction of power window motor • Malfunction of power window main switch • Malfunction of wiring harness or connector



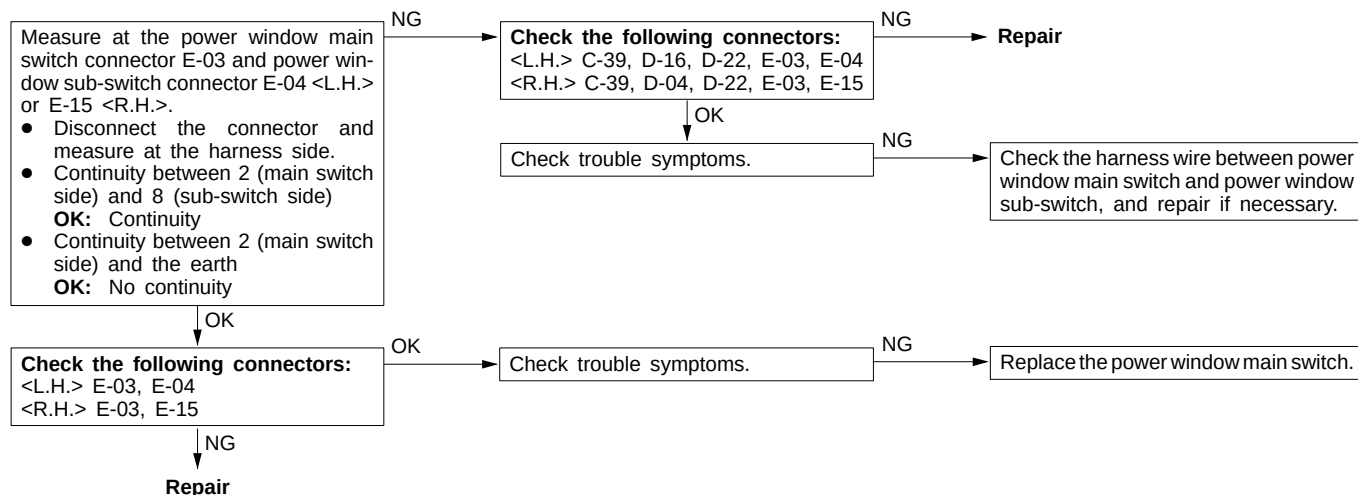
Inspection Procedure 3

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.)	Probable cause
The cause may be a malfunction of the power window main switch, or an open circuit or short-circuit in the communication line.	- Malfunction of power window main switch - Malfunction of wiring harness or connector

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



<If a rear power window does not operate>



Inspection Procedure 4

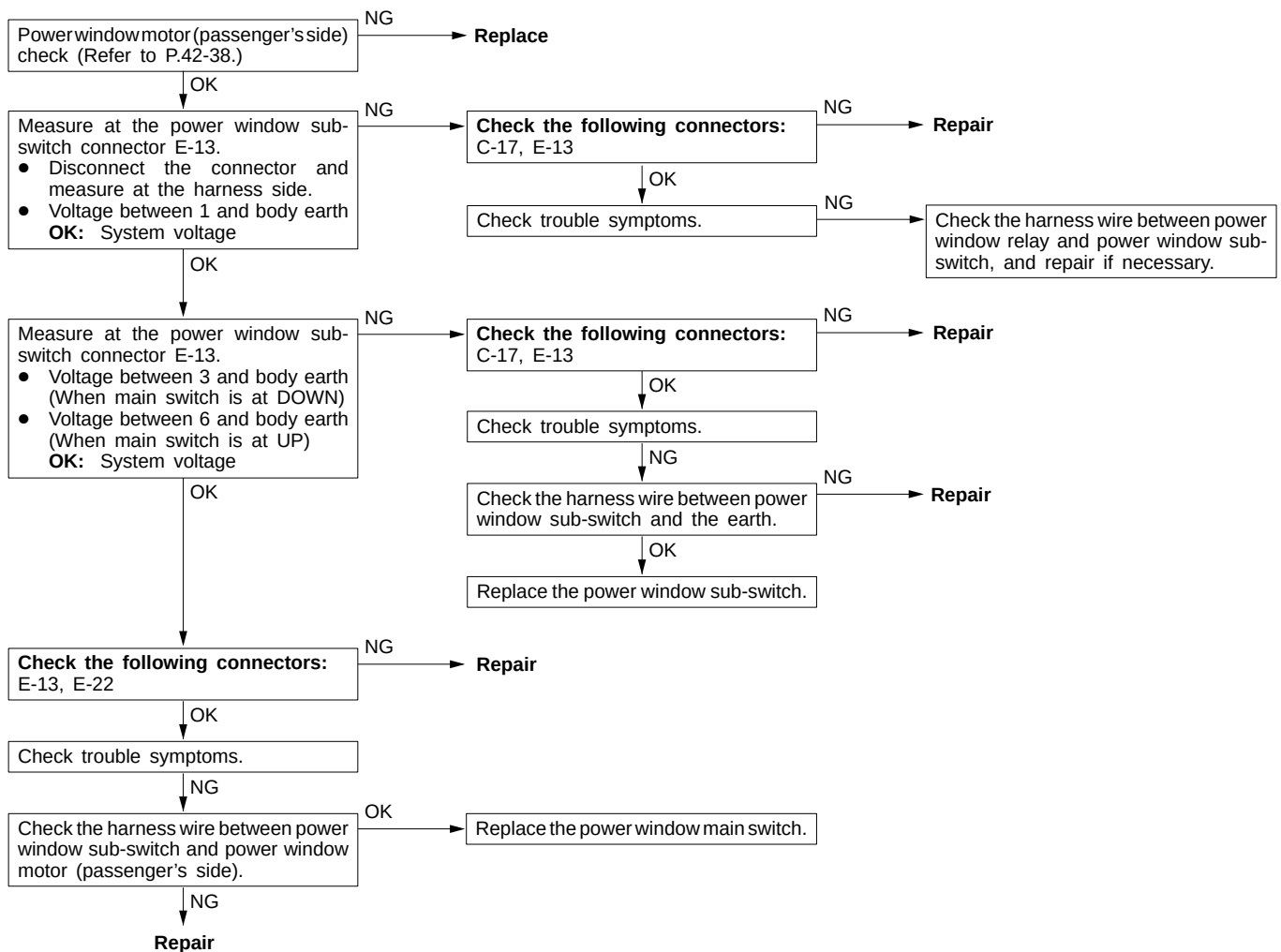
Passenger's side and rear power windows cannot be operated by the power window sub-switches. (However, they can be operated by the power window main switch.)	Probable cause
The cause may be a malfunction of the power window sub-switch.	Malfunction of power window sub-switch

Replace the power window sub-switch

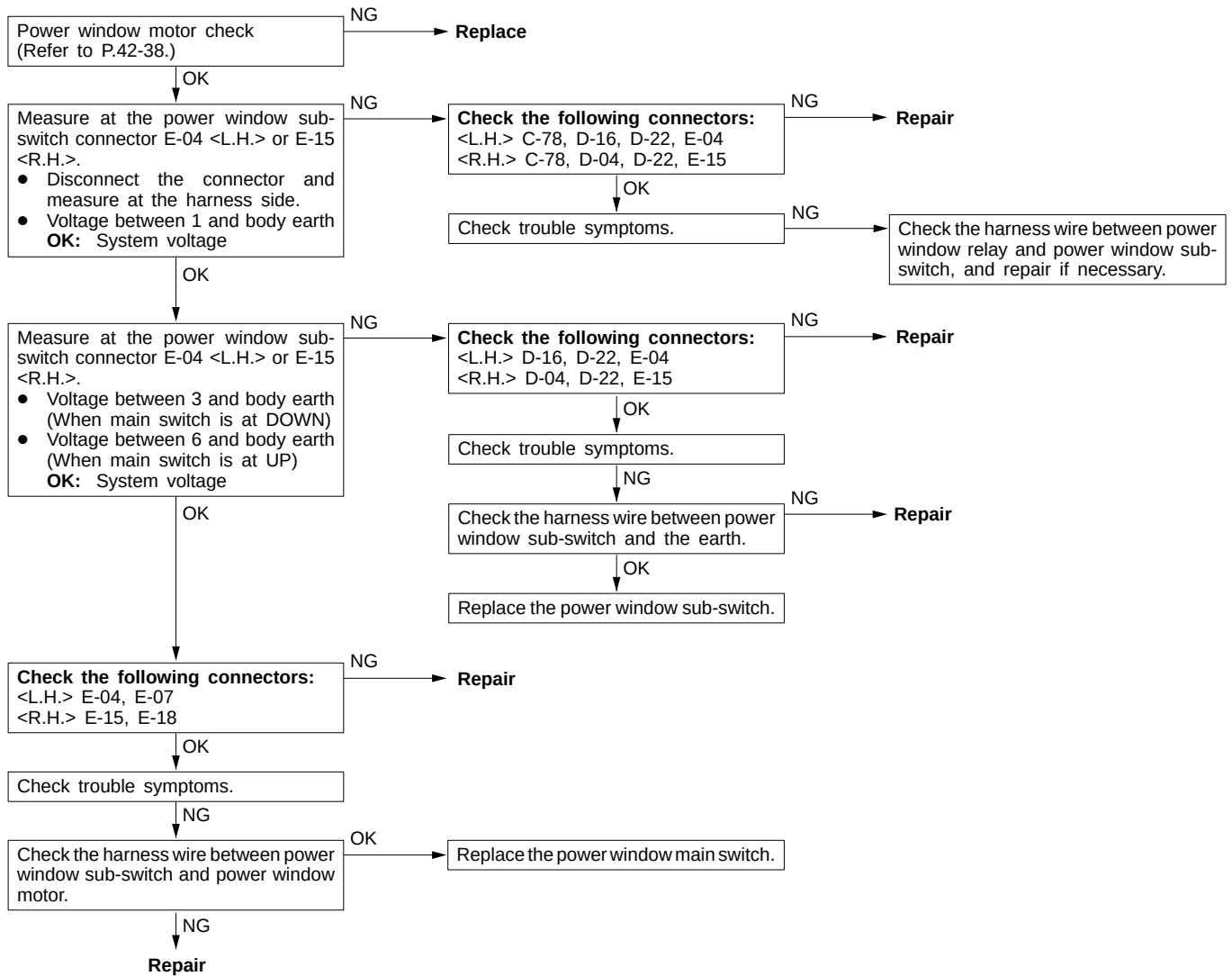
Inspection Procedure 5

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: • Power supply circuit of the power window sub-switch • Earth circuit • Power window motor • Lock switch • Power window main switch • Power window sub-switch	• Malfunction of power window main switch • Malfunction of power window sub-switch • Malfunction of power window motor • Malfunction of wiring harness or connector

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

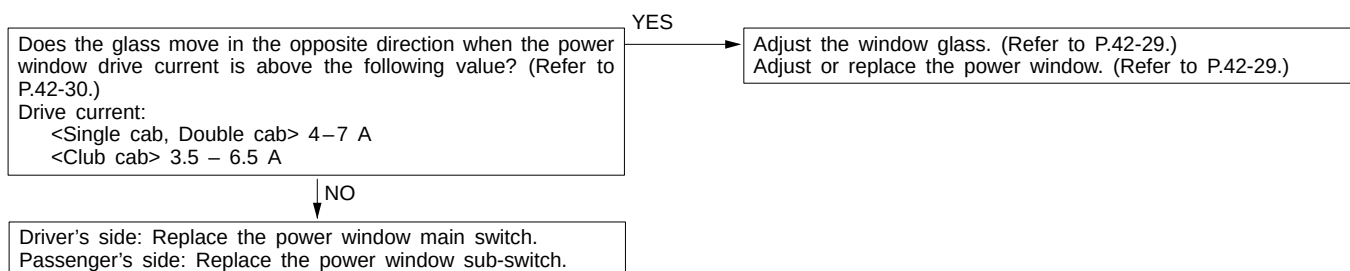


<If a rear power window does not operate>



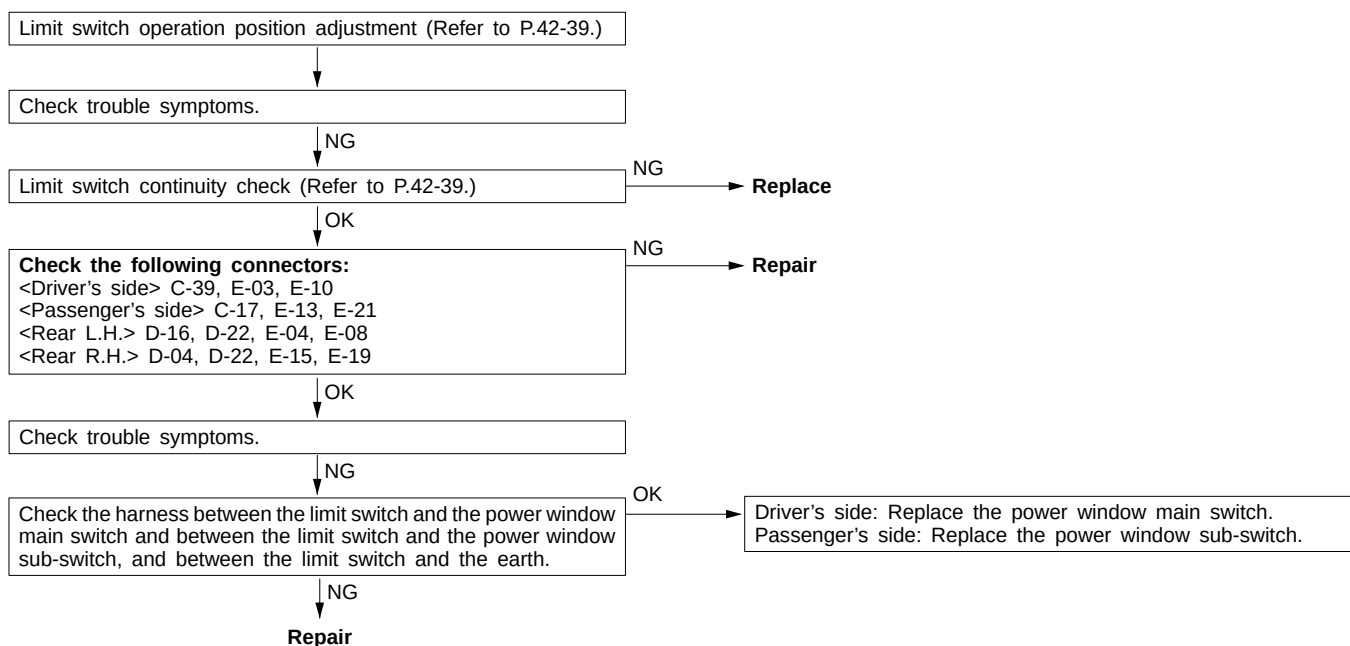
Inspection Procedure 6

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.	• Incorrect window glass adjustment • Glass slider is incorrectly installed or warped • Malfunction of power window main switch or sub-switch



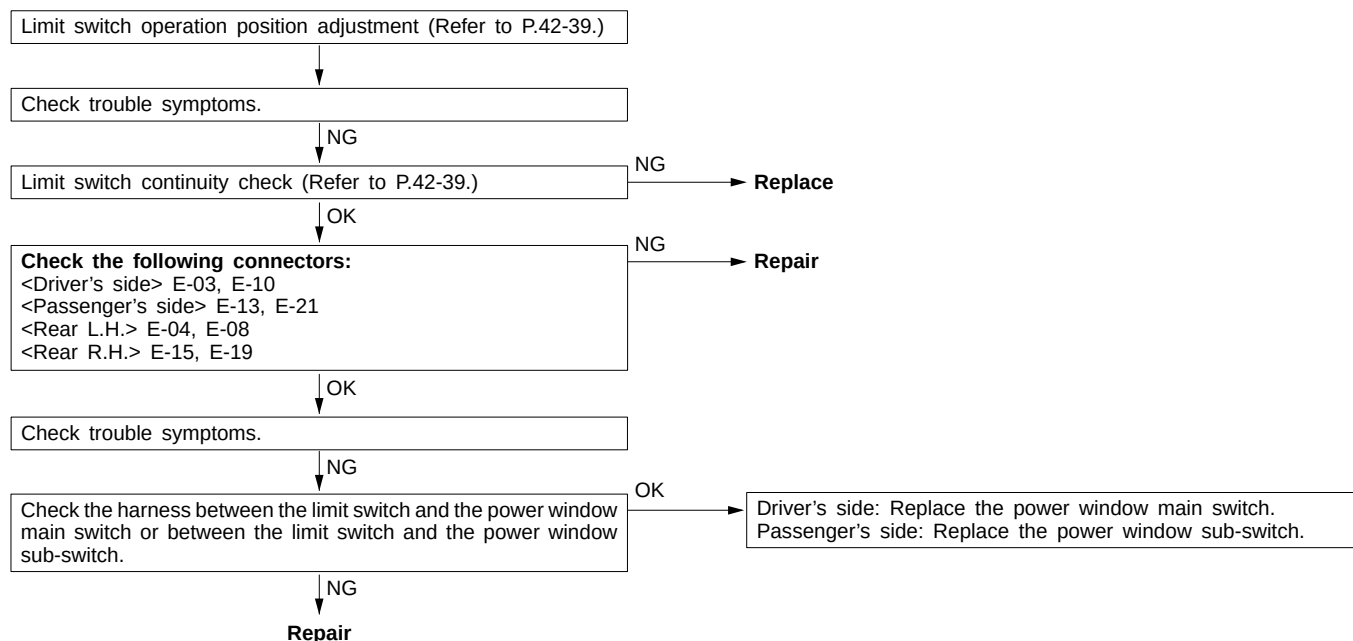
Inspection Procedure 7

The glass is not lowered when something is jammed in the window.	Probable cause
The safety mechanism is released under the following conditions, and the window will not be lowered even if something becomes jammed in it. • If the limit switch is always off • 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 • If the limit switch turns off before the set value is reached • If the window is within 12 mm of being fully closed (normal setting to prevent the window from being lowered)	• Malfunction of limit switch • Malfunction of wiring harness • Malfunction of power window main switch or sub-switch • Incorrect limit switch operation position



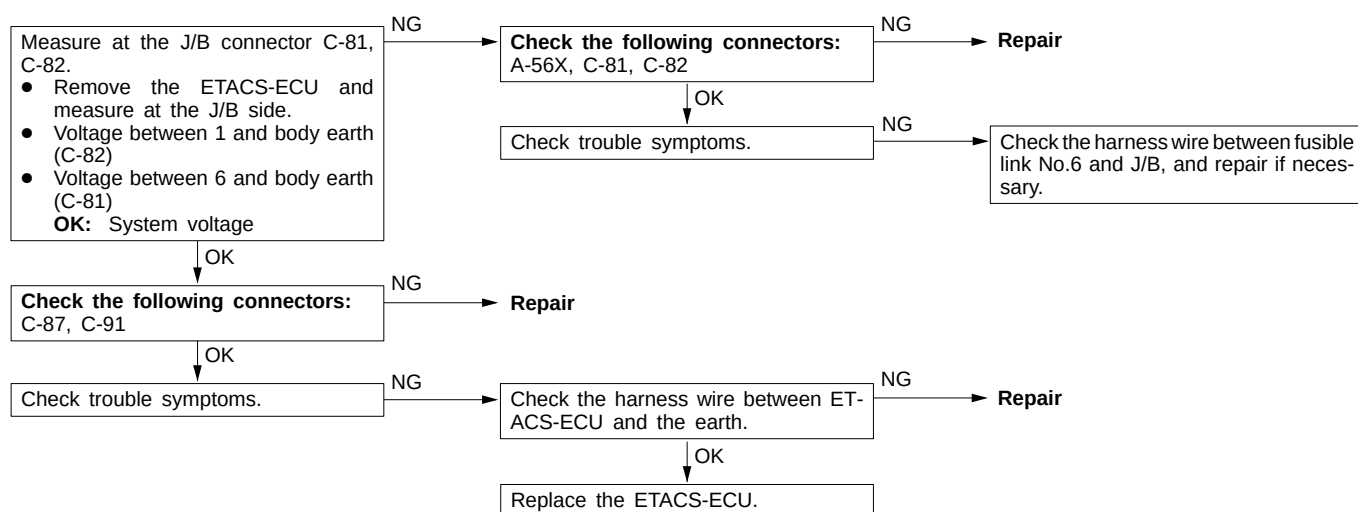
Inspection Procedure 8

When the glass is fully raised, it then lowers automatically.	Probable cause
When the window is within 12 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.	• Malfunction of limit switch • Malfunction of wiring harness or connector • Malfunction of power window main switch or sub-switch • Incorrect limit switch operation position



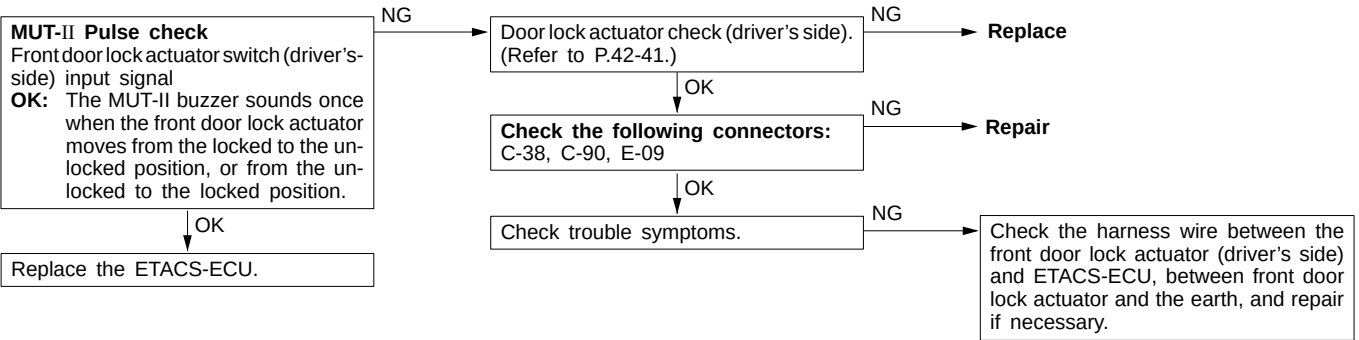
Inspection Procedure 9

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.	• Malfunction of ETACS-ECU • Malfunction of wiring harness or connector



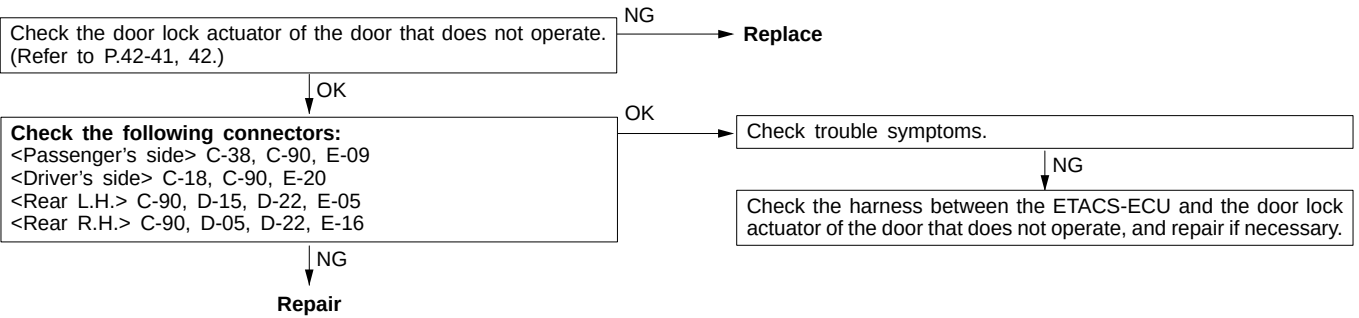
Inspection Procedure 10

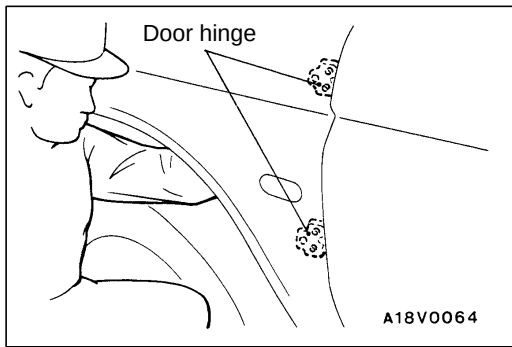
None of the doors lock or unlock when the driver's-side inside door locking knob is operated (including by means of the door key).	Probable cause
The cause may be a malfunction of the door lock actuator switch, the ETACS-ECU or of a wiring harness or connector.	• Malfunction of front door lock actuator (driver's side) • Malfunction of ETACS-ECU • Malfunction of wiring harness or connector



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.	• Malfunction of door lock actuator • Malfunction of wiring harness or connector



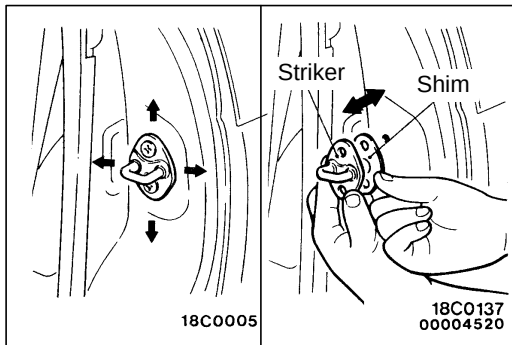


ON-VEHICLE SERVICE

42300090081

DOOR FIT ADJUSTMENT

1. If the clearance between the door and body is uneven, remove the splash shield, loosen the mounting bolt of the body side door hinges from inside the fender, and then move the door to adjust so that the clearance is even.
2. 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.

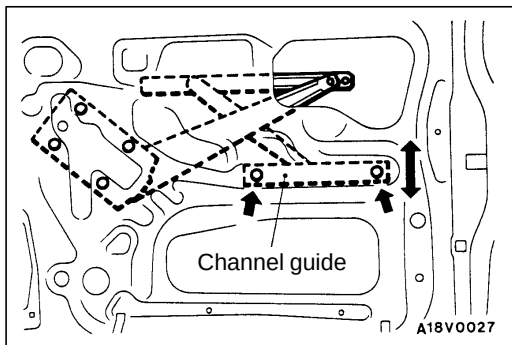


DOOR WINDOW GLASS ADJUSTMENT

42300100135

Check that the window glass moves smoothly and touches the glass runchannel firmly when it is fully raised and fully lowered. If the window glass doesn't move properly, adjust by the following procedure.

1. Remove the door trim and waterproof film. (Refer to P.42-34, 35.)
2. Raise the window glass, loosen the channel guide mounting bolts and adjust the vertical tilt of the glass.



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

42900190048

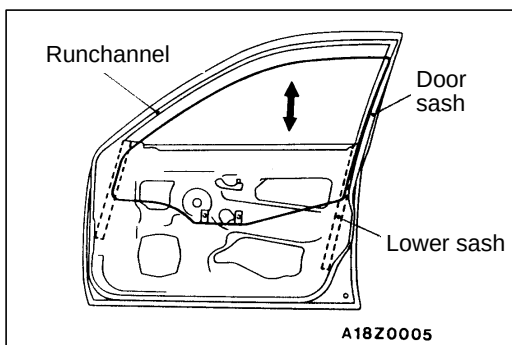
If the window glass automatically starts moving downwards at the wrong time while it is being raised, carry out the following adjustment or replacement procedures.

1. Remove the door trim and waterproof film. (Refer to P.42-34, 35.)
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.

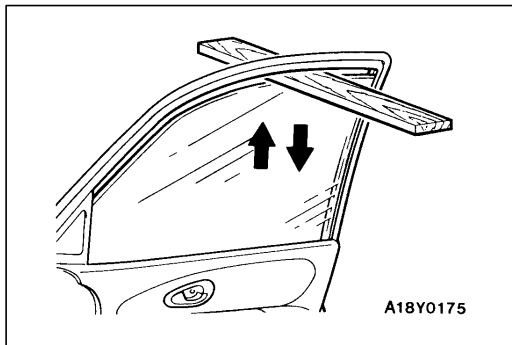
3. If the door window glass does not move up and down smoothly, check or repair the following points.
 - Check the installation condition of the runchannel.
 - Repair the twisting in the door sash.
 - Check the installation condition of the lower sash or the center sash.



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.

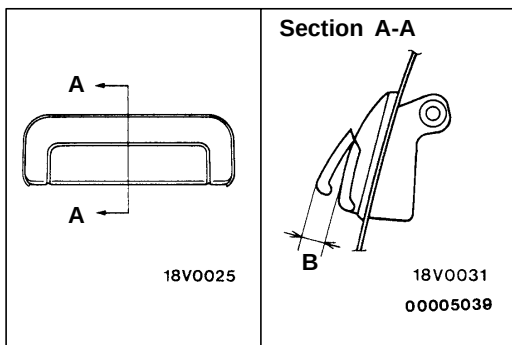
4. If repair or adjustment is not possible, replace the door assembly.



POWER WINDOW SAFETY MECHANISM CHECK

42900100058

1. Place a wooden board with a thickness of approximately 15 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.42-26).



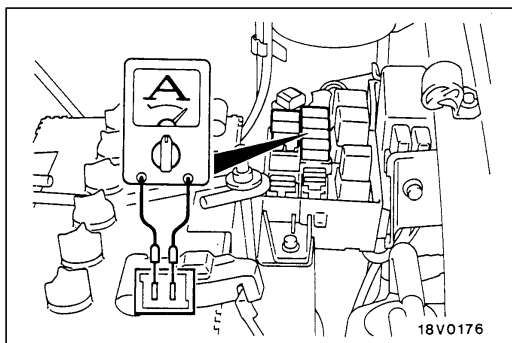
DOOR OUTSIDE HANDLE PLAY CHECK

42300160096

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

Standard value (B): 2.8 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 CHECK

42900110020

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:

<Single cab, Double cab>

4 – 7 A (for 14 – 15 V power supply voltage at 20°C)

<Club cab>

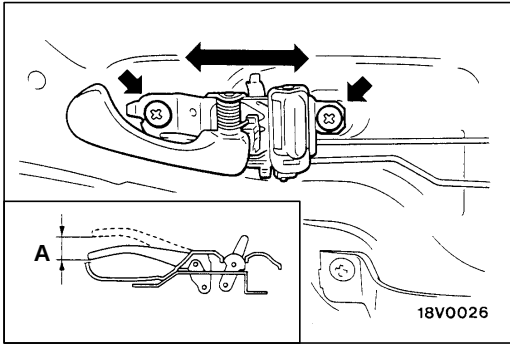
3.5 – 6.5 A (for 14 – 15 V power supply voltage at 20°C)

3. If the operation current is outside the standard value, refer to "Troubleshooting" (P.42-25).

CIRCUIT BREAKER (INCORPORATED IN THE POWER WINDOW MOTOR) CHECK

42900170059

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**

42300150130

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

Standard value (A): 7.3 mm or more

2. If the door inside handle play is outside the standard value range, remove the door trim. (Refer to P.42-33, 34.)
3. Loosen the inside handle mounting screws, and then move the inside handle back and forth to adjust the play.

DOOR ASSEMBLY

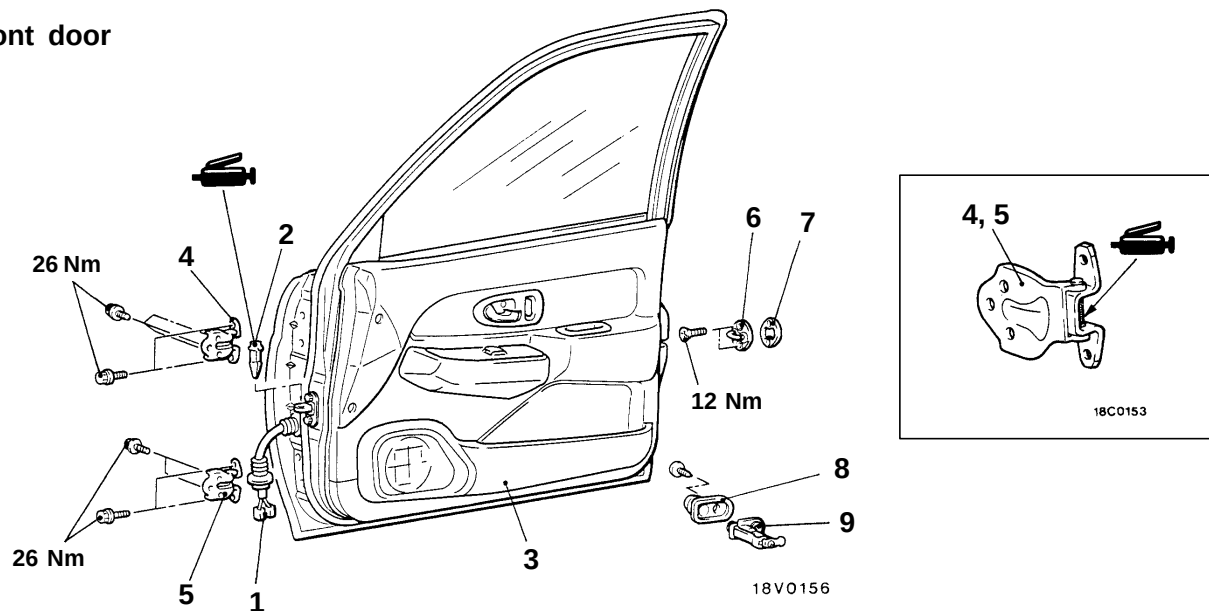
42300220169

REMOVAL AND INSTALLATION

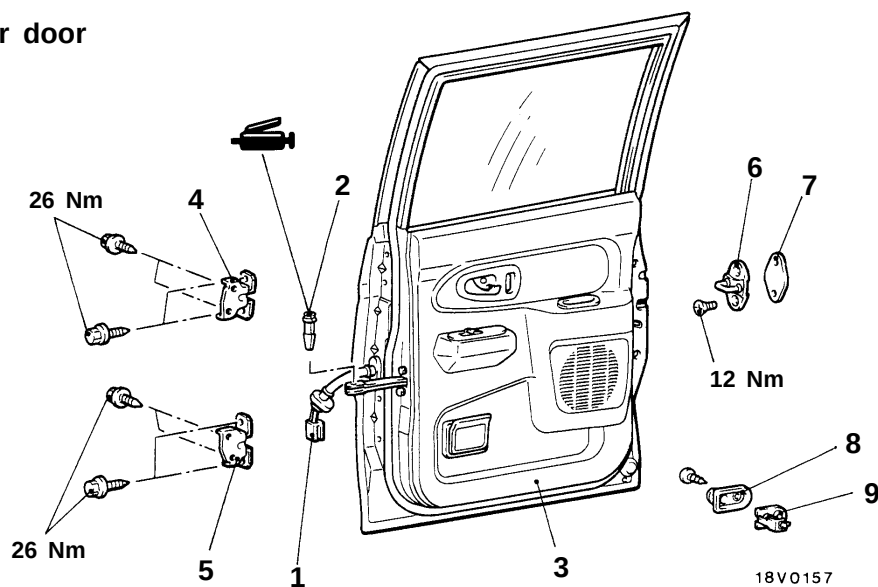
Post-installation Operation

- Door Adjustment (Refer to P.42-29.)

Front door



Rear door



00005040

Door assembly removal steps

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

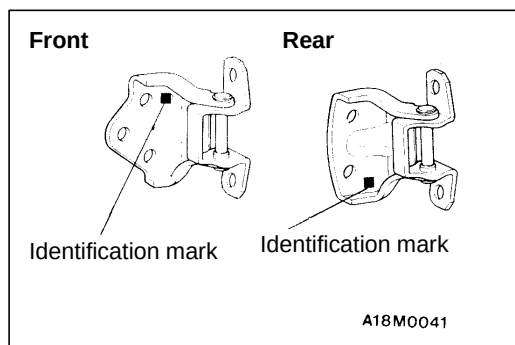


Striker removal steps

6. Striker
7. Striker shim

Door switch removal steps

8. Door switch cap
9. Door switch

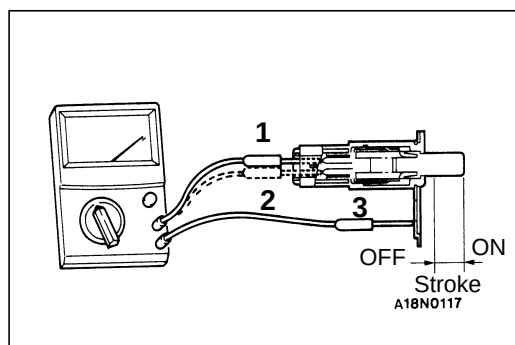


INSTALLATION SERVICE POINT

▶A◀ 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	B1
Rear right side door	Upper hinge	B1
	Lower hinge	L1



INSPECTION

42300600031

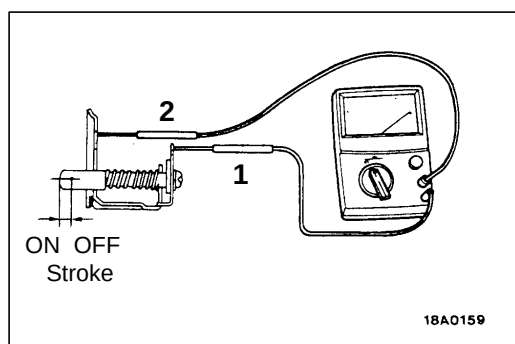
DOOR SWITCH CONTINUITY CHECK

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)		

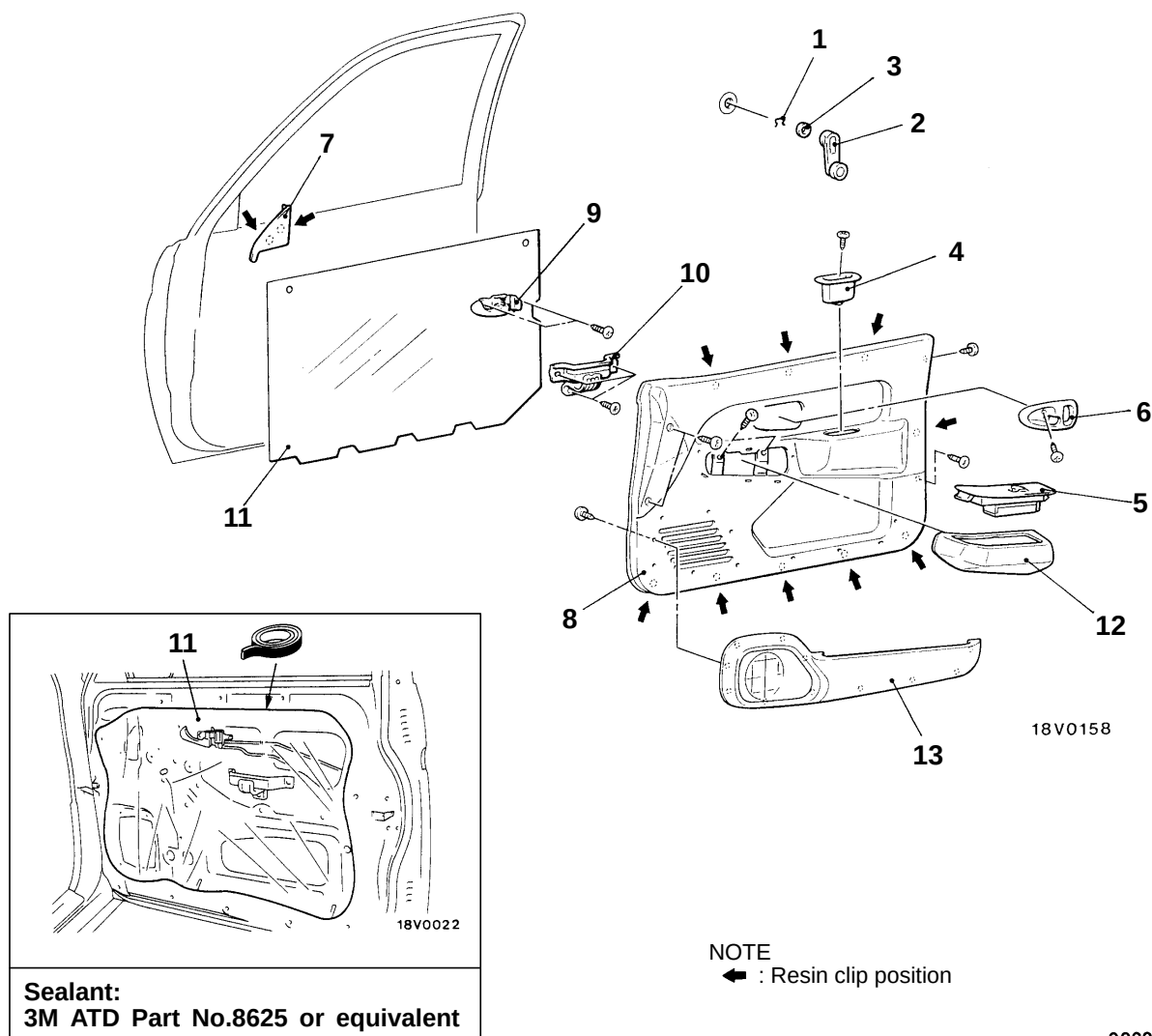


DOOR TRIM AND WATERPROOF FILM REMOVAL AND INSTALLATION

42300430142

Front door

<Vehicles without power window>



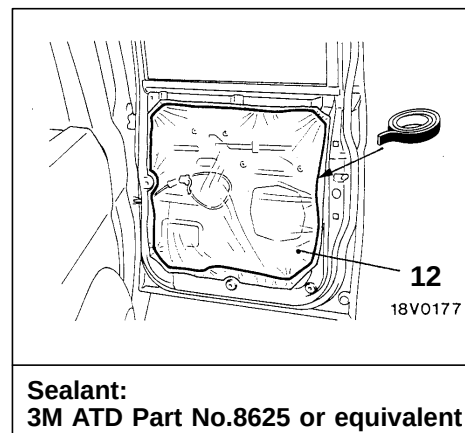
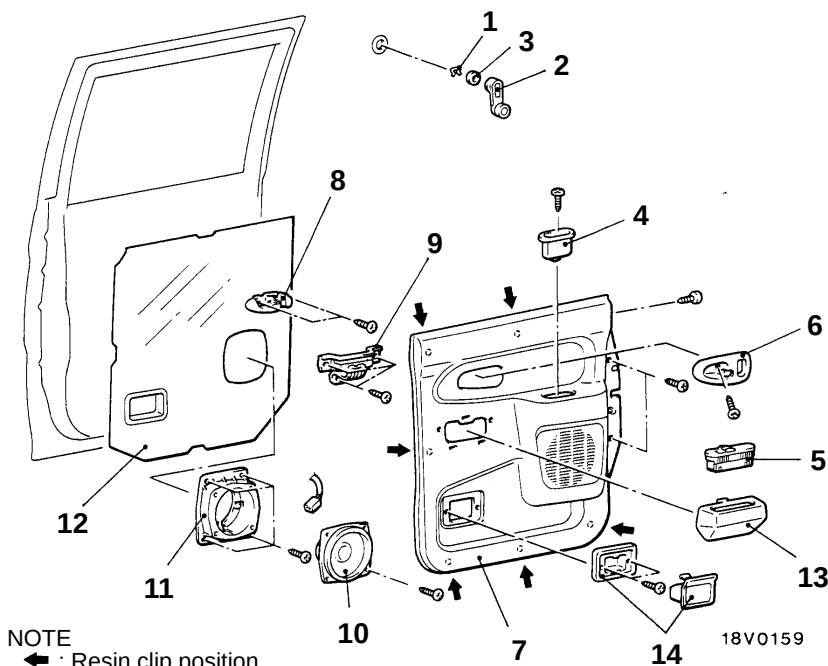
00005041

Removal steps

- | | |
|---|---|
| <p>◀A▶ ▶A◀ 1. Clip
<Vehicles without power window></p> <p>▶A◀ 2. Regulator handle <Vehicles without power window></p> <p>▶A◀ 3. Escutcheon
<Vehicles without power window></p> <p>4. Pull handle box</p> <p>5. Power window switch
<Vehicles with power window></p> | <p>6. Cover</p> <p>7. Inner delta cover</p> <p>8. Door trim</p> <p>9. Door inside handle</p> <p>10. Pull handle bracket</p> <p>11. Waterproof film</p> <p>12. Power window switch cover
<Vehicles with power window></p> <p>13. Door pocket</p> |
|---|---|

Rear door

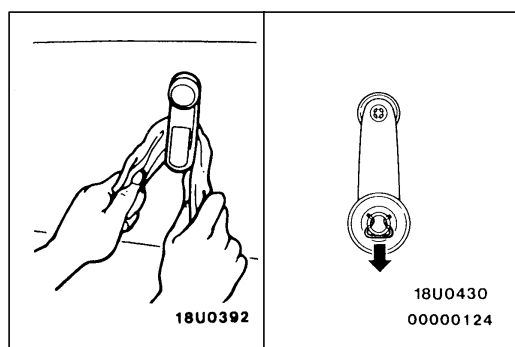
<Vehicles without power window>



00005042

Removal steps

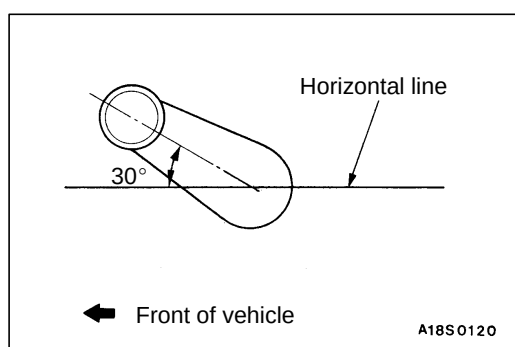
- ◀A▶ ▶A▶ 1. Clip
<Vehicles without power window>
▶A▶ 2. Regulator handle
<Vehicles without power window>
▶A▶ 3. Escutcheon
<Vehicles without power window>
4. Pull handle box
5. Power window switch
<Vehicles with power window>
6. Cover
7. Door trim
8. Door inside handle
9. Pull handle bracket
10. Speaker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



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

42900130156

REMOVAL AND INSTALLATION

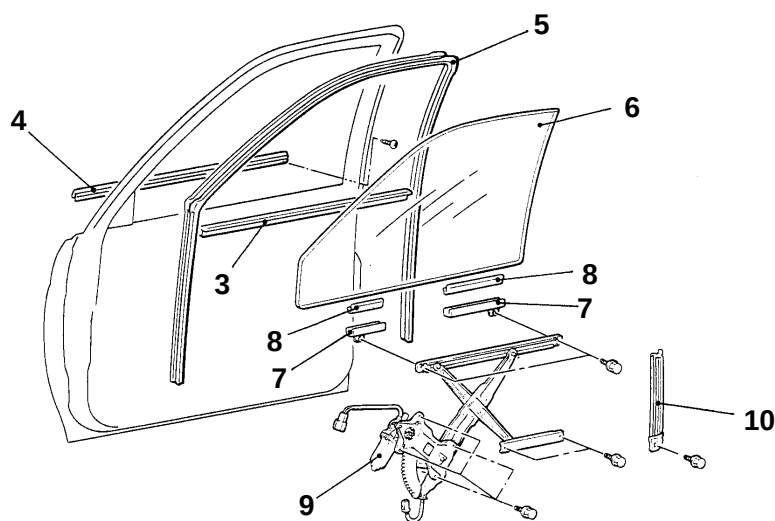
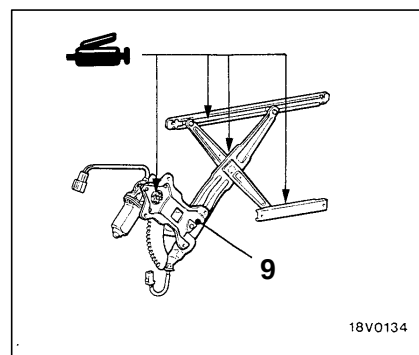
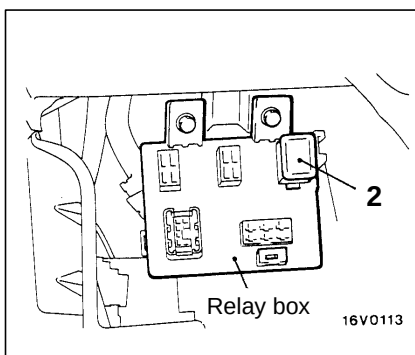
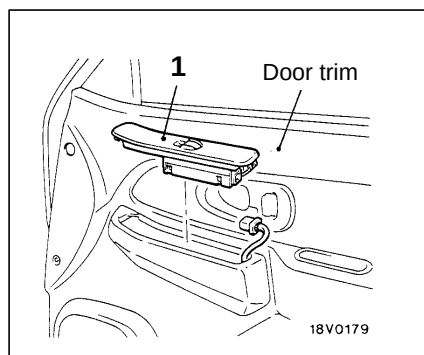
Front door

Pre-removal Operation

- Door Trim and Waterproof Film Removal (Refer to P.42-34.)
- Door Mirror Removal (Refer to GROUP 51.)

Post-installation Operation

- Door Trim and Waterproof Film Installation (Refer to P.42-34.)
- Door Mirror Installation (Refer to GROUP 51.)
- Door Window Glass Adjustment (Refer to P.42-29.)
- Power Window Safety Mechanism Check (Refer to P.42-30.)



18V0152

00005043

1. Power window switch
<Vehicles with power window>

Power window relay removal steps

- Driver's side under cover (Refer to GROUP 52A – Instrument Panel.)
2. Power window relay
<Vehicles with power window>

**Front window regulator assembly removal steps**

3. Door window inner weatherstrip
4. Door beltline moulding assembly
5. Door window glass runchannel
6. Door window glass
7. Door glass holder
8. Door glass pad
9. Window regulator assembly
10. Rear lower sash

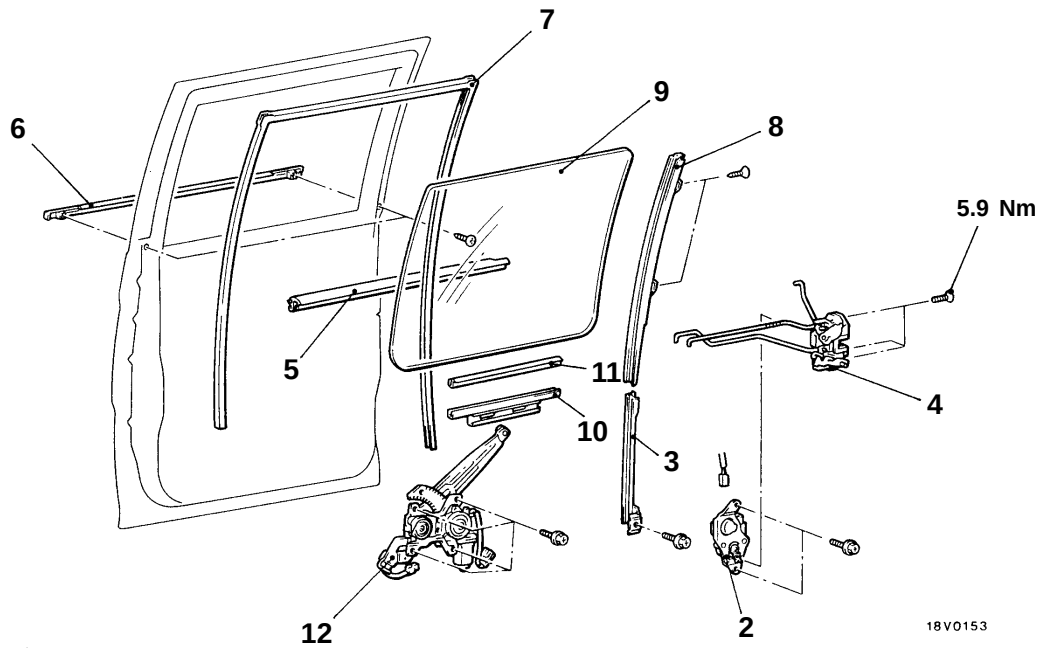
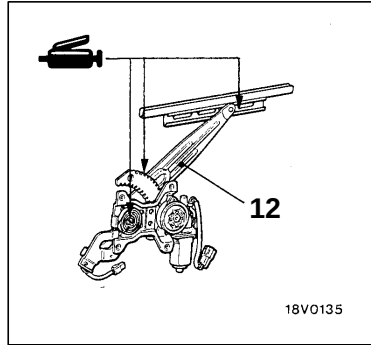
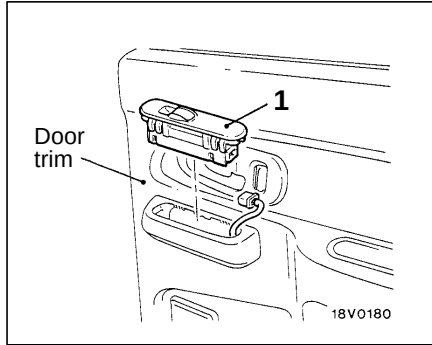
Rear door

Pre-removal Operation

- Door Trim and Waterproof Film Removal (Refer to P.42-35.)

Post-installation Operation

- Door Trim and Waterproof Film Installation (Refer to P.42-35.)
- Door Window Glass Adjustment (Refer to P.42-29.)
- Power Window Safety Mechanism Check (Refer to P.42-30.)



00005044

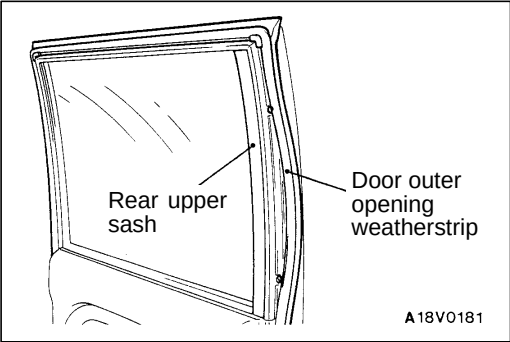
1. Power window switch
<Vehicles with power window>

Power window regulator assembly removal steps

2. Door lock actuator assembly
<Vehicles with power window>
3. Rear lower sash



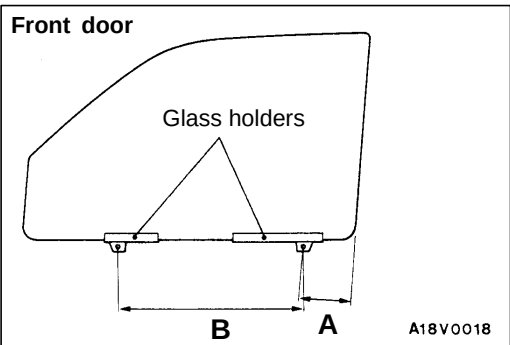
4. Latch assembly
5. Door window inner weatherstrip
6. Door beltline moulding assembly
7. Door window glass runchannel
8. Rear upper sash
9. Door window glass
10. Door glass holder
11. Door glass pad
12. Window regulator assembly



REMOVAL SERVICE POINT

◀A▶ REAR UPPER SASH REMOVAL (REAR DOOR)

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



INSTALLATION SERVICE POINTS

▶A◀ DOOR GLASS HOLDER INSTALLATION

Install the glass pad and the glass holders to the window glass as shown in the illustration.

Standard value:

Single cab, Double cab

(A) 107 – 108 mm

(B) 418 – 420 mm

Club cab

(A) 217 – 218 mm

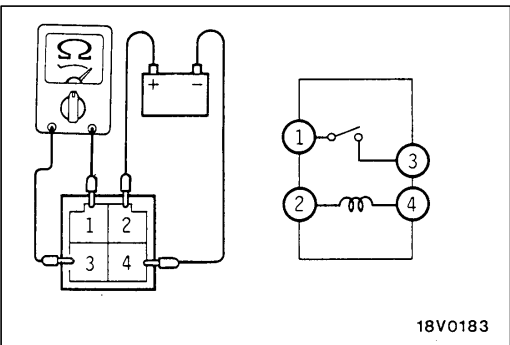
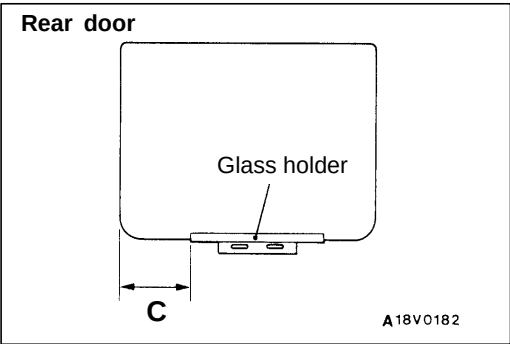
(B) 418 – 420 mm

Double cab

(C) 161 – 165 mm

<Vehicles without power window>

(C) 223 – 227 mm <Vehicles with power window>



INSPECTION

42900180069

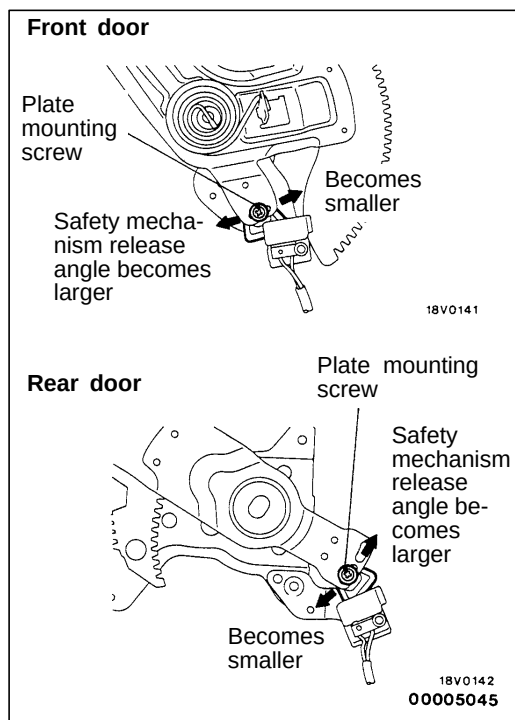
POWER WINDOW RELAY CONTINUITY CHECK

System voltage	Terminal No.			
	1	2	3	4
Not applied		○	○	○
Applied	○	⊕	○	⊖

POWER WINDOW MOTOR CHECK

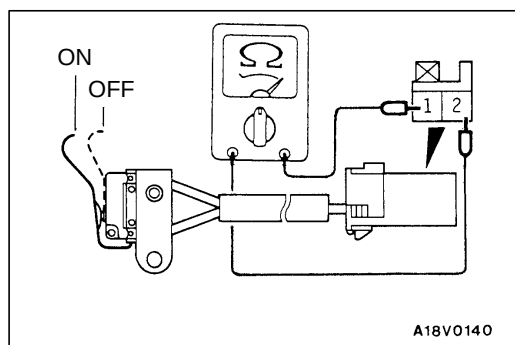
42900150053

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.

**LIMIT SWITCH OPERATION POSITION ADJUSTMENT**

42900230016

Loosen the plate mounting screw and move the plate to the left or right to adjust where the limit switch starts working (safety mechanism stops working).

**LIMIT SWITCH CONTINUITY CHECK**

42900220020

Switch position	Terminal No.	
	1	2
ON		
OFF		

DOOR HANDLE AND LATCH

42300460141

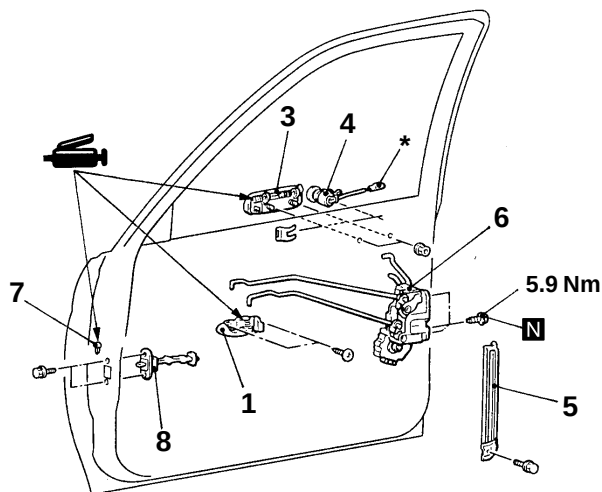
REMOVAL AND INSTALLATION

Pre-removal Operation

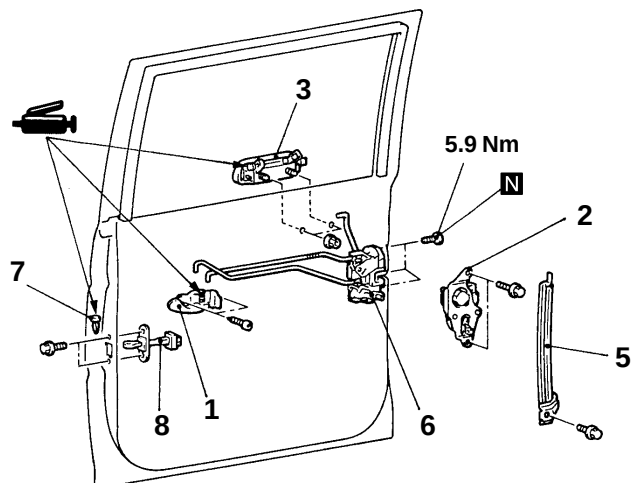
- Door Trim Removal (Refer to 42-34, 35.)

Post-installation Operation

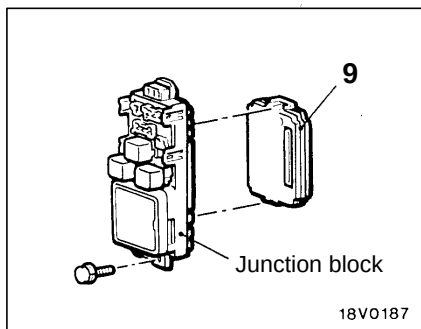
- Door Inside Handle Play Check (Refer to 42-31.)
- Door Trim Installation (Refer to 42-34, 35.)
- Door Fit Adjustment (Refer to 42-29.)

Front door

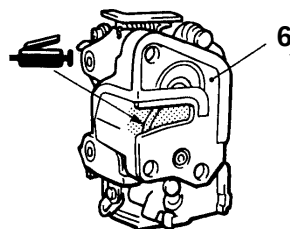
18V0154

Rear door

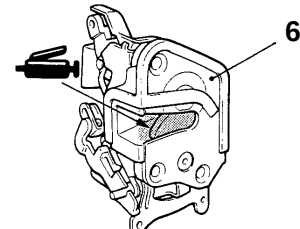
18V0155



18V0187

Front door

18V0037

Rear door

18V0184

00005046

Front door handle and door latch assembly removal steps

1. Door inside handle
 - Waterproof film (Refer to 42-34.)
3. Door outside handle
4. Door lock key cylinder
5. Rear lower sash
6. Door latch assembly

Rear door handle and door latch assembly removal steps

1. Door inside handle
 - Waterproof film (Refer to 42-35.)
2. Rear door lock actuator assembly <Vehicles with central door locking system>
3. Door outside handle
5. Rear lower sash

6. Door latch assembly**Door check removal steps**

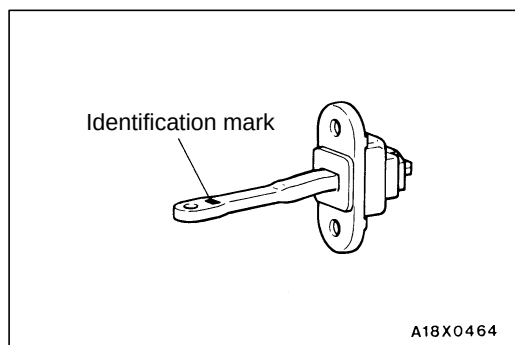
1. Door inside handle
 - Waterproof film (Refer to 42-34, 35.)
7. Spring pin
8. Door check

**ETACS-ECU removal**

9. ETACS-ECU <Vehicles with central door locking system> (Refer to GROUP 54 – Ignition Switch and Immobilizer System.)

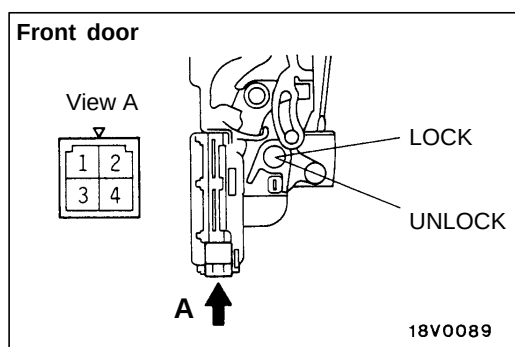
NOTE

*: This is equipped on passenger's side door lock key cylinder of vehicles with central door locking system.

**INSTALLATION SERVICE POINT****►A◄ DOOR CHECK INSTALLATION**

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

Applicable location		Identification mark
L.H.	Front door	YL
	Rear door	MR
R.H.	Front door	YR
	Rear door	ML

**INSPECTION**

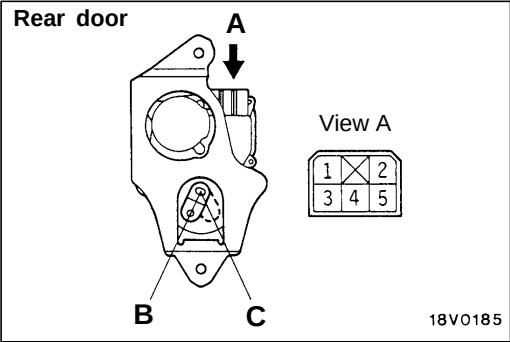
42300610089

FRONT DOOR LOCK ACTUATOR CHECK
<Vehicles with central door locking system>
Driver's side

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

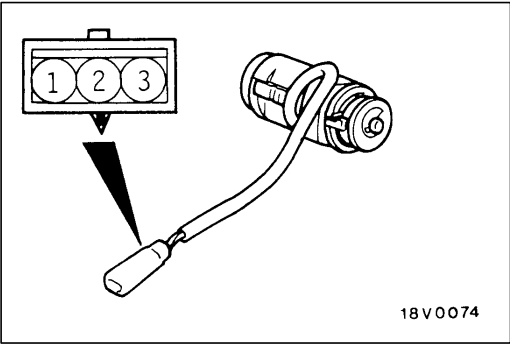
Passenger's side

Rod position	Terminal No.		Rod operation
	3	4	
LOCK	⊕	⊖	LOCK position → UNLOCK position
UNLOCK	⊖	⊕	UNLOCK position → LOCK position



REAR DOOR LOCK ACTUATOR CHECK
<Vehicles with central door locking system> 42300620068

Rod position	Terminal No.		Rod operation
	1	2	
B	⊕	⊖	B position → C position
C	⊖	⊕	C position → B position



DOOR LOCK KEY CYLINDER SWITCH CONTINUITY CHECK
<Vehicles with central door locking system> 42300630092

Passenger's side only

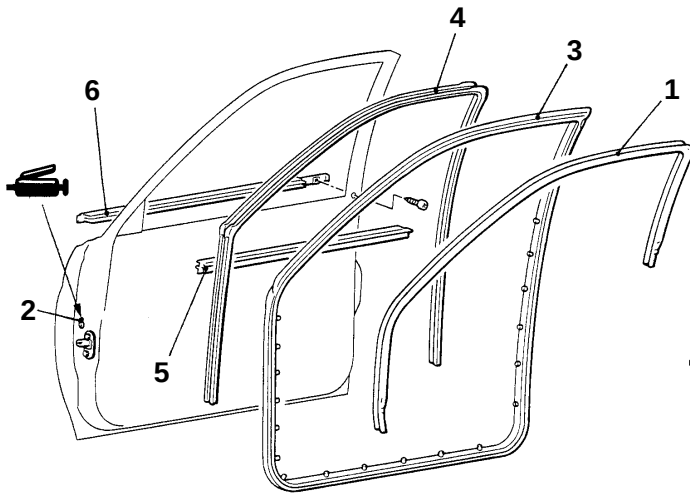
Switch position	Terminal No.		
	1	2	3
LOCK	○	○	
Neutral (OFF)			
UNLOCK		○	○

WINDOW GLASS RUNCHANNEL AND DOOR OPENING WEATHERSTRIP

42300310125

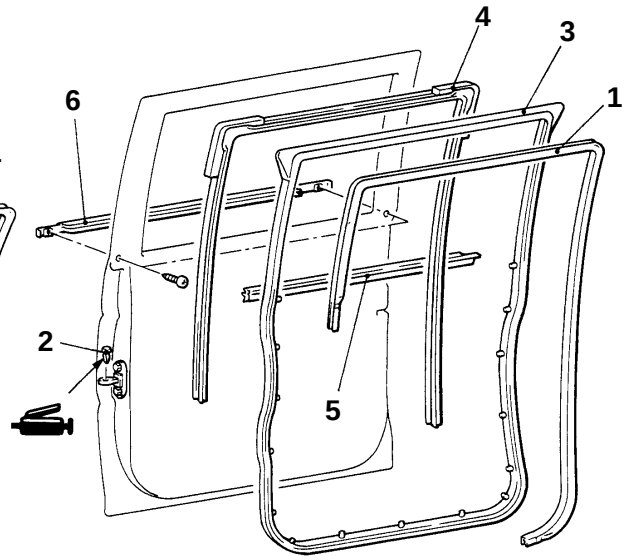
REMOVAL AND INSTALLATION

Front door



18V0150

Rear door



18V0151

00005047

Door inner opening weatherstrip removal steps <Vehicles with map lamp>

- Front scuff plate
(Refer to GROUP 52A – Trims.)
- Rear scuff plate
(Refer to GROUP 52A – Trims.)
- Centre pillar lower trim
(Refer to GROUP 52A – Trims.)
- Cowl side trim
(Refer to GROUP 52A – Trims.)
- 1. Door inner opening weatherstrip

Door outer opening weatherstrip removal

- 2. Spring pin
- 3. Door outer opening weatherstrip

Window glass runchannel removal

- 4. Window glass runchannel

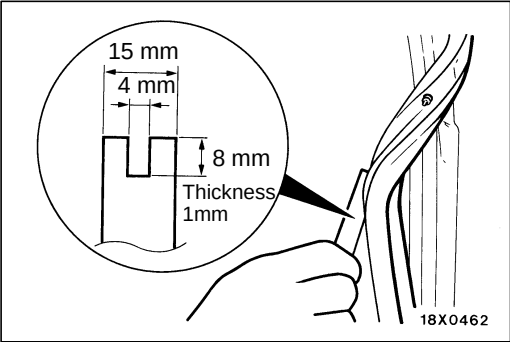
Door beltline inner weatherstrip removal steps

- Door trim (Refer to P.42-34, 35.)
- 5. Door beltline inner weatherstrip

Door beltline outer weatherstrip removal steps

- Door mirror (Refer to GROUP 51.)
- 6. Door beltline outer weatherstrip





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

▶A◀ 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.

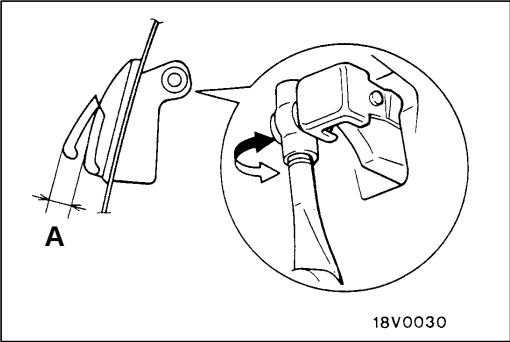
Applicable side	Identification colour
Left door	Brown
Right door	Natural

REAR GATE

42500030010

SERVICE SPECIFICATION

Item	Standard value
Tailgate handle play mm	1 – 3



ON-VEHICLE SERVICE

42500090018

REAR GATE OUTSIDE HANDLE PLAY CHECK AND ADJUSTMENT

Check that play is within the standard value. If not within the standard value, adjust as follows.

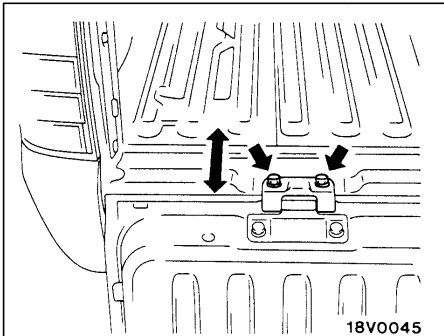
1. Remove the rear gate panel.
2. Remove the outside handle rod from outside handle. Turn upper rod to adjust outside handle play.

Standard value (A): 1 – 3 mm

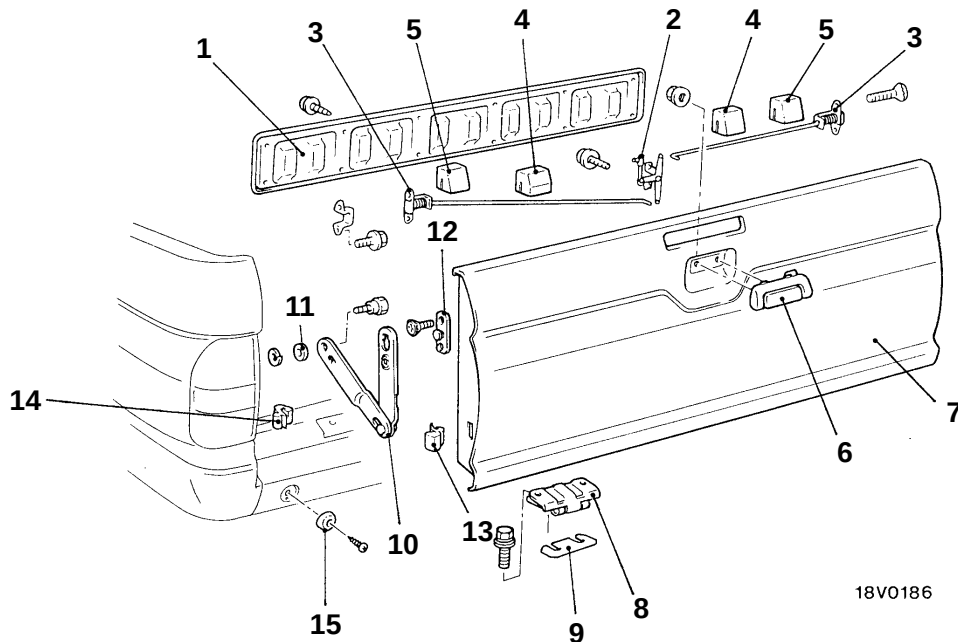
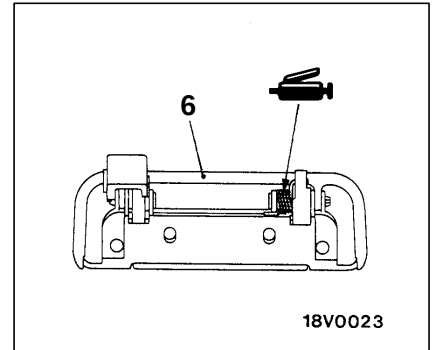
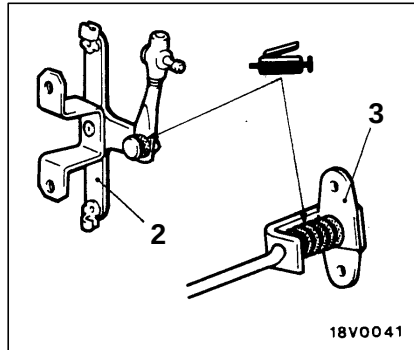
REAR GATE

42500170019

REMOVAL AND INSTALLATION



Rear gate height adjustment



Removal steps

1. Rear gate panel
2. Remote control assembly
3. Latch assembly
4. Cushion
5. Cushion
6. Outside handle
7. Rear gate
8. Rear gate hinge
9. Shim
10. Rear gate link assembly
11. Spacer
12. Link hook
13. Rear gate link damper (A)
14. Rear gate link damper (B)
15. Cushion rubber

00005225

NOTES