
BODY

Click on the applicable bookmark to selected the required model year.

BODY

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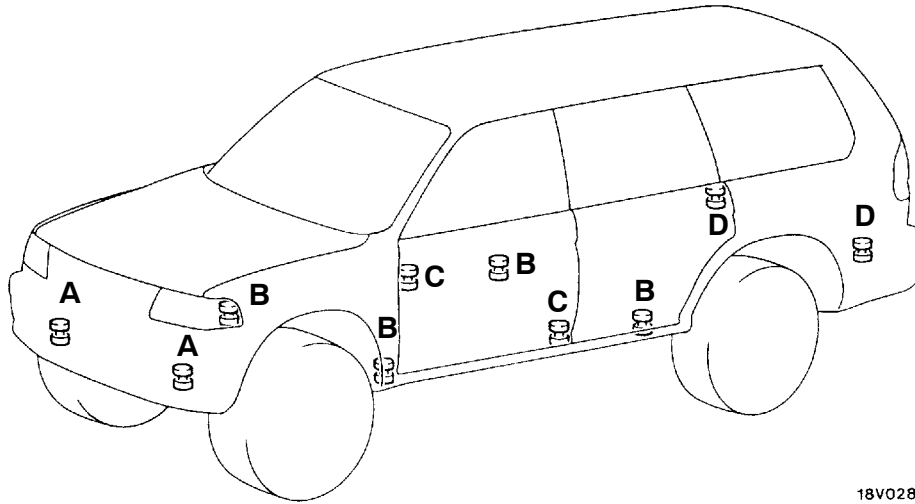
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BODY MOUNTING

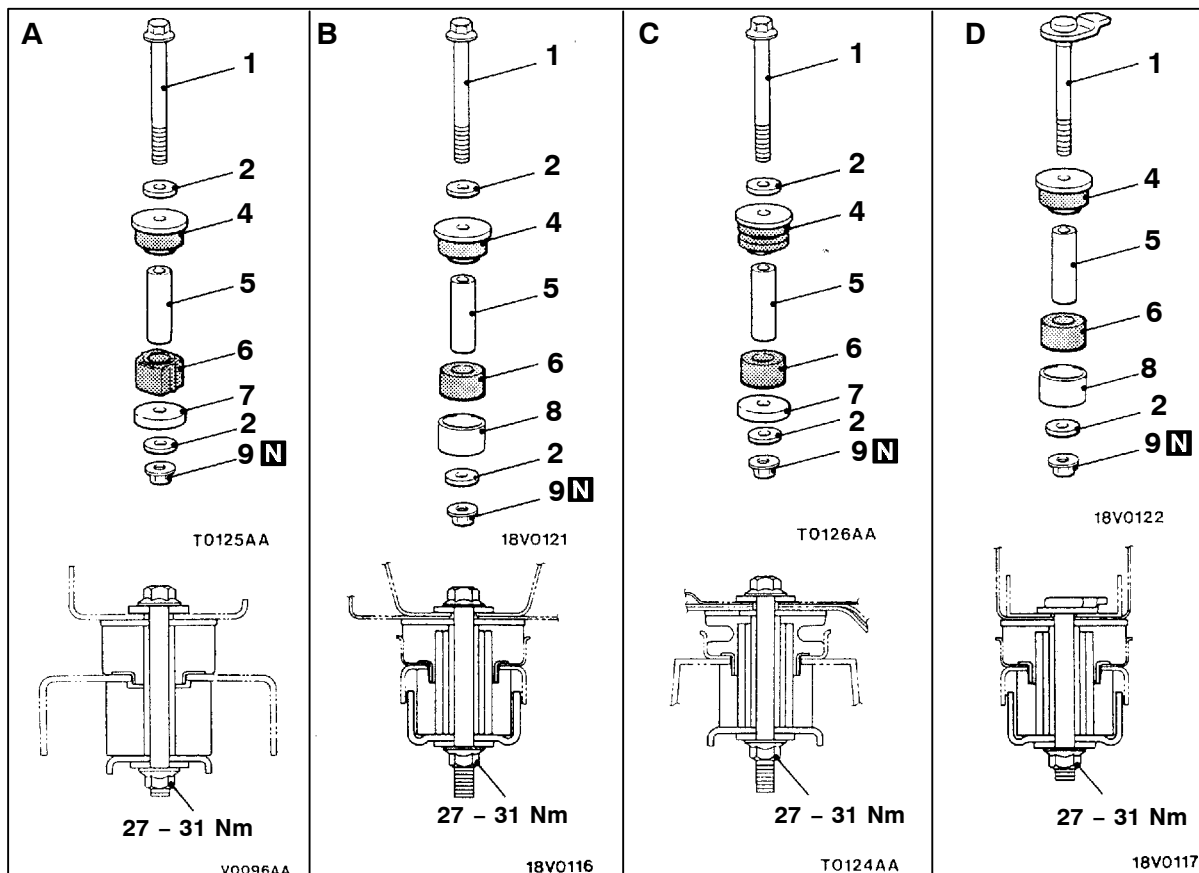
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REMOVAL AND INSTALLATION



18V0280

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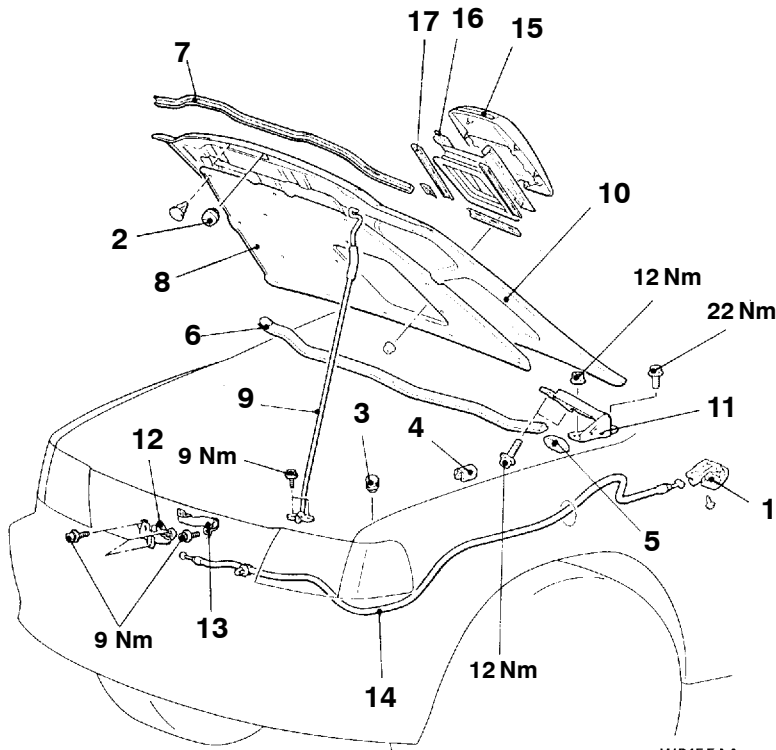
1. Mounting bolt
2. Plain washer
3. Body mounting rubber
4. Body mounting rubber A
5. Spacer

6. Body mounting rubber B
7. Body mount washer
8. Body mount stopper
9. Self locking nut

HOOD

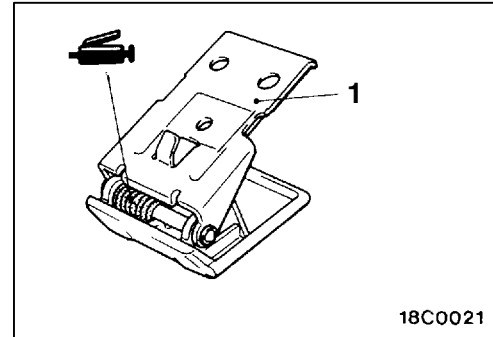
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REMOVAL AND INSTALLATION

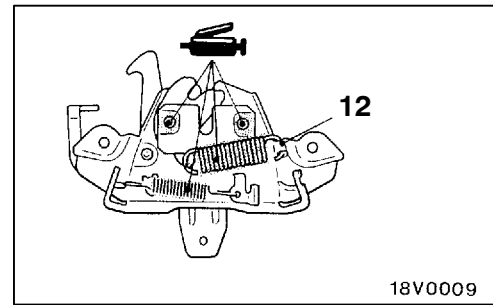


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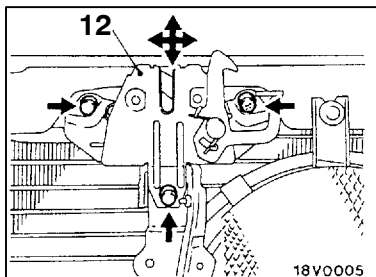
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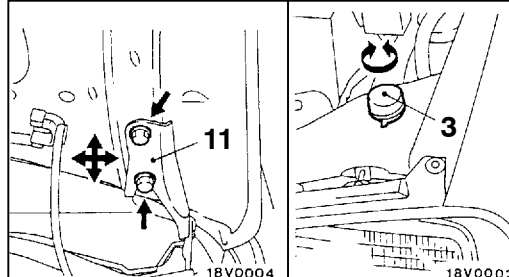


18V0009



18V0005

Adjustment of hood step and hood striker linkage



18V0004

18V0002

Adjustment of clearance and height around hood

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

Hood and hood hinge removal steps

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

Hood latch and hood lock release cable removal steps

- Radiator grille
- 12. Hood latch
- 13. Cable protector
- Junction block
- 14. Hood lock release cable

Hood garnish removal steps

- 15. Hood garnish
- 16. Hood intercooler weatherstrip
- 17. Hood intercooler weatherstrip plate

FENDER

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SEALANT

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

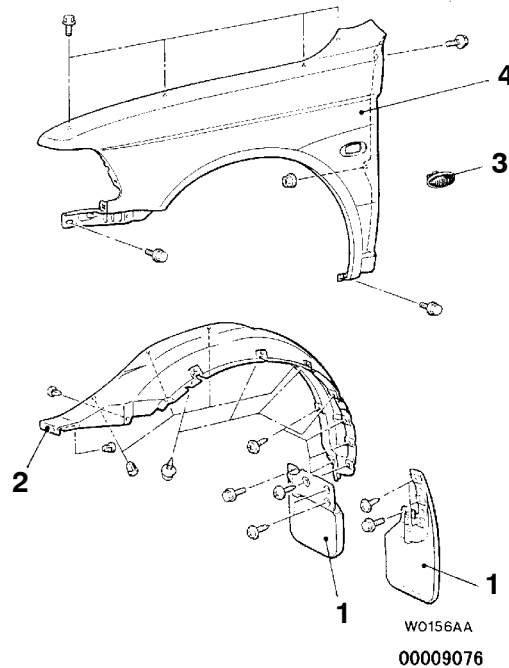
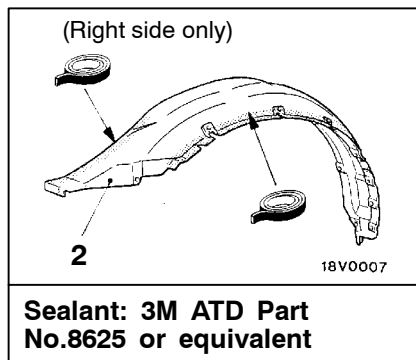
FENDER

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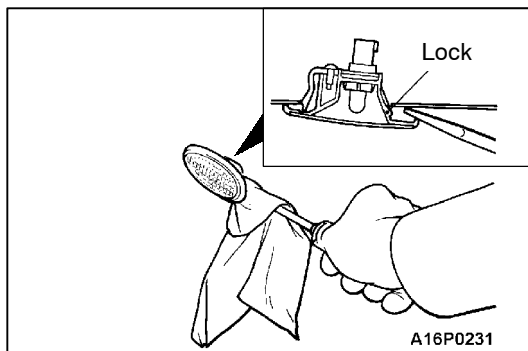
REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

- Front Bumper Removal and Installation (Refer to GROUP 51 – Front Bumper.)
- Front Deck Garnish Removal and Installation (Refer to GROUP 51 – Windshield Wiper and Washer.)
- Headlamp Removal and Installation (Refer to GROUP 54 – Headlamp and Front Combination Lamp.)
- Wide Fender Removal and Installation (Refer to GROUP 51 – Wide Fender.)

**Removal steps**

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

**REMOVAL SERVICE POINT****◀A▶ SIDE TURN-SIGNAL LAMP REMOVAL**

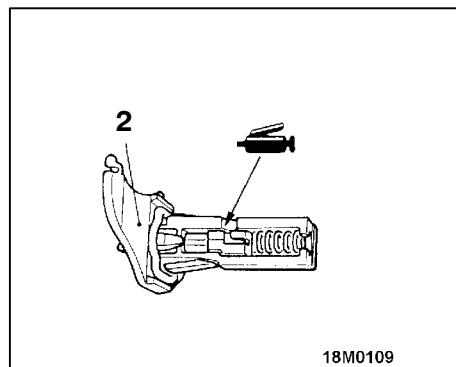
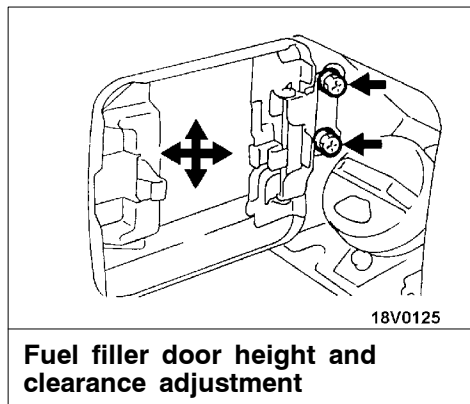
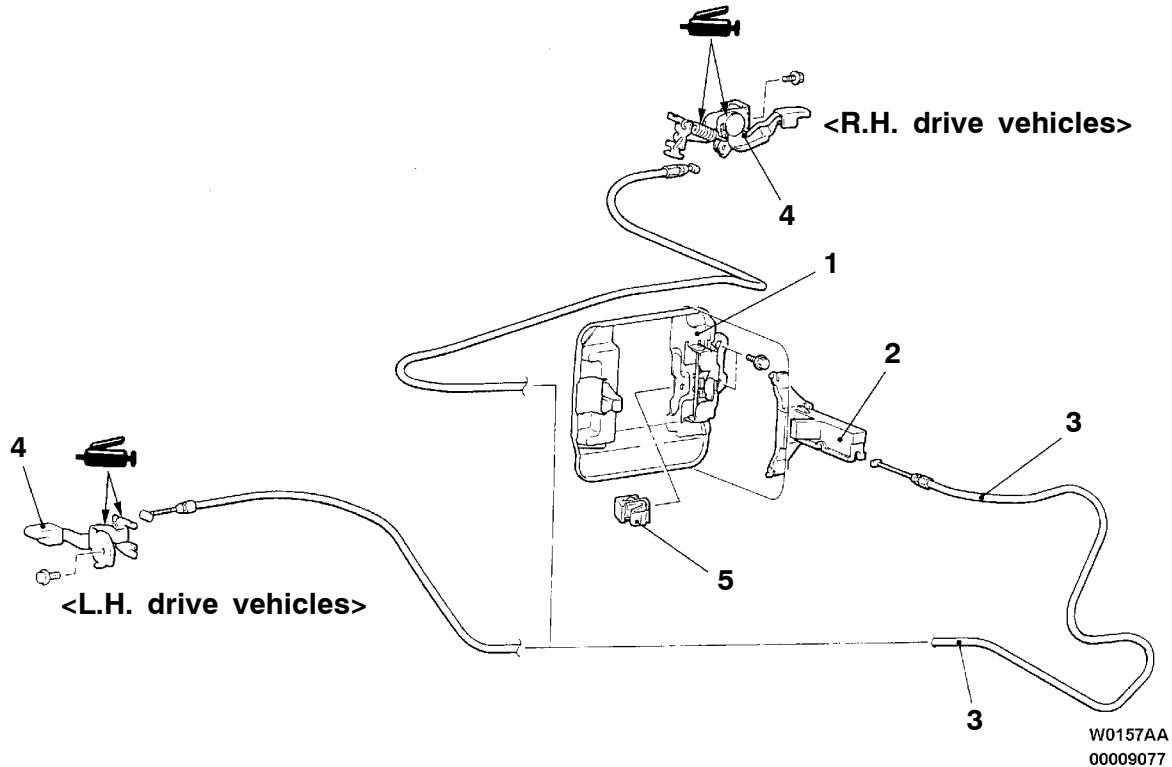
Use a flat-tipped (–) screwdriver or similar tool to remove the lock from the fender panel, and remove the side turn-signal lamp.

FUEL FILLER DOOR

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

- Driver's Side Front Seat Removal and Installation (Refer to GROUP 52A – Front Seat.)
- Rear Seat Removal and Installation (Refer to GROUP 52A – Rear Seat.)
- Quarter Trim Lower (L.H.) Removal and Installation (Refer to GROUP 52A – Trims.)



Removal steps

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

WINDOW GLASS

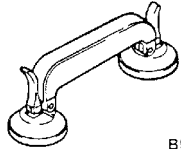
42200050154

ADHESIVES

Items	Specified adhesives
<ul style="list-style-type: none"> • Windshield • Quarter window glass • Tailgate window glass 	3M ATD Part No. 8609 Super Fast Urethane Auto Glass Sealants or equivalent
Windshield moulding	Double-sided tape (6 mm wide and 0.125 mm thick)

SPECIAL TOOL

42200060089

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

WINDOW REPAIR

42200560107

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

- Windshield
- Quarter window glass
- Tailgate window glass

ITEMS NEEDED

Name	Remarks
Adhesive	3M ATD Part No. 8609 Super Fast Urethane Auto Glass Sealant or equivalent
Primer	3M ATD Part No. 8608 Super Fast Urethane Primer or equivalent
Spacers	Available as service part
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

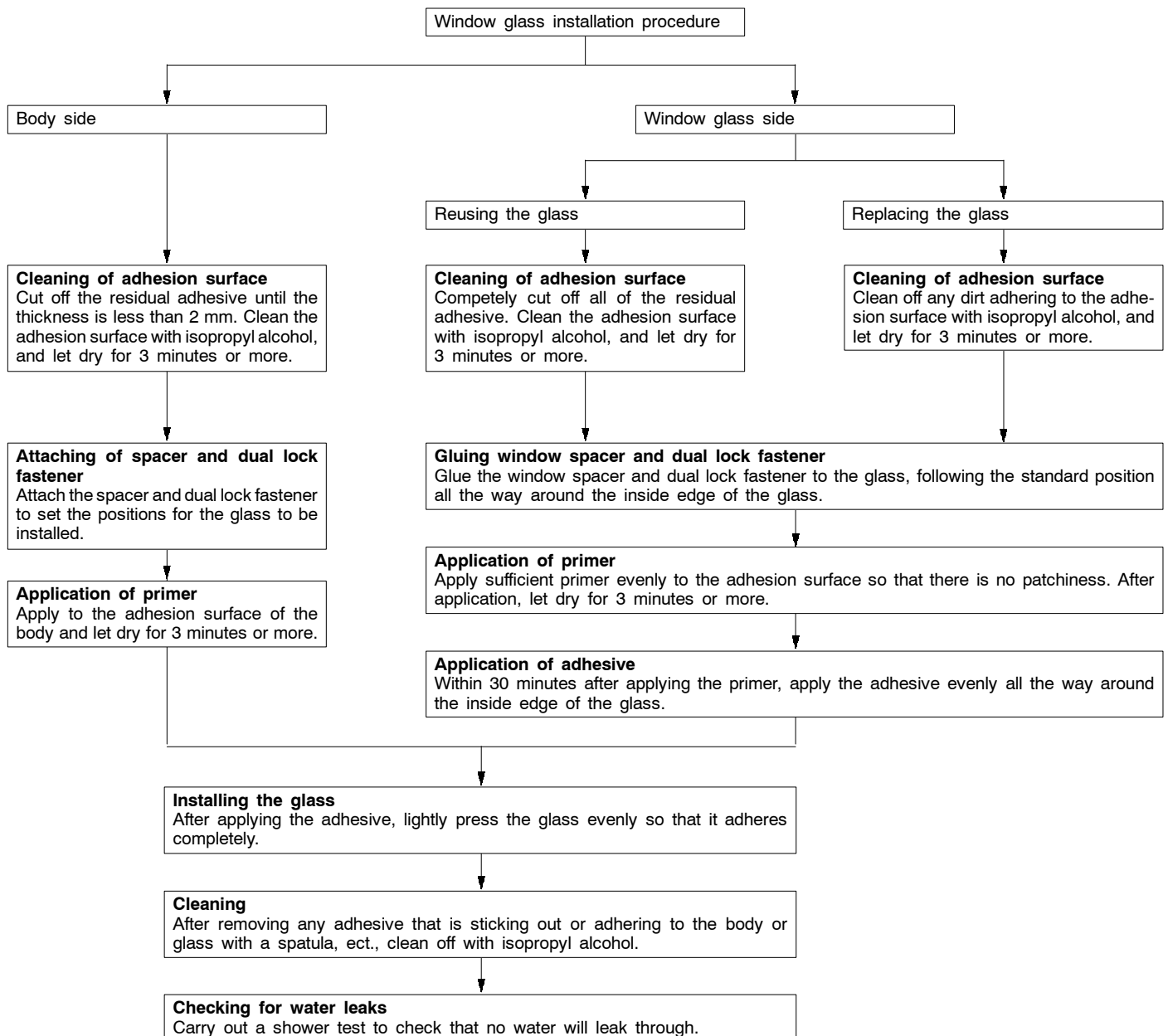
The TEROSON 127.37V auto window sealer kit can also be used. If using the TEROSON 127.37V auto window sealer kit, follow the instructions in the manual included with the kit.

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

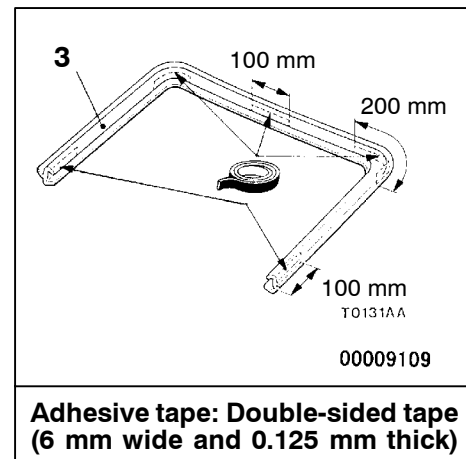
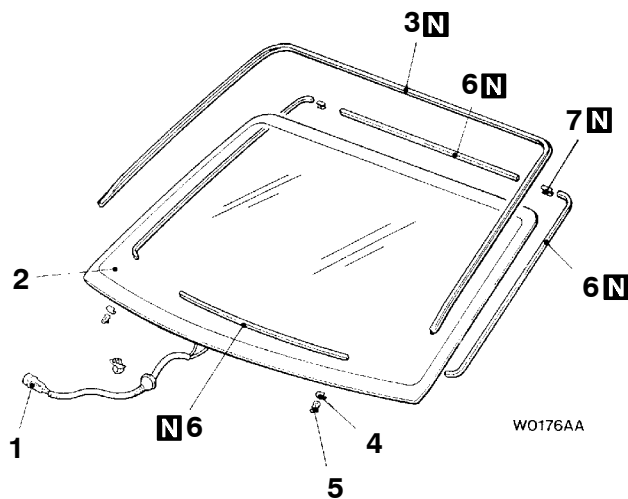
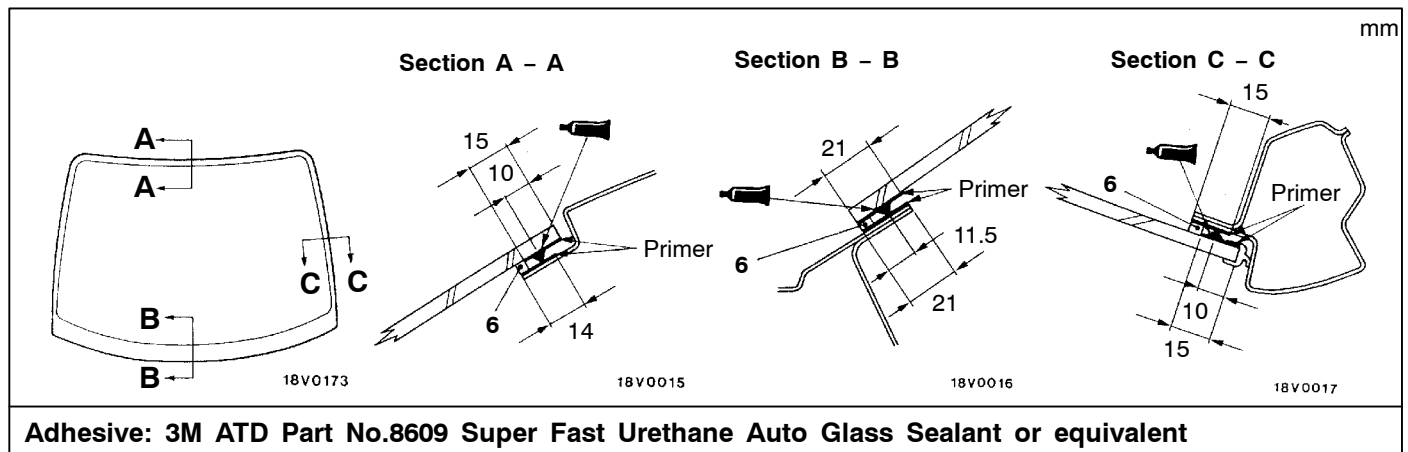
WINDSHIELD

42200100316

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

- Front Deck Garnish Removal and Installation
(Refer to GROUP 51 – Windshield Wiper and Washer.)
- Front Pillar Trim Removal and Installation
(Refer to GROUP 52A – Trims.)
- Headlining Removal and Installation

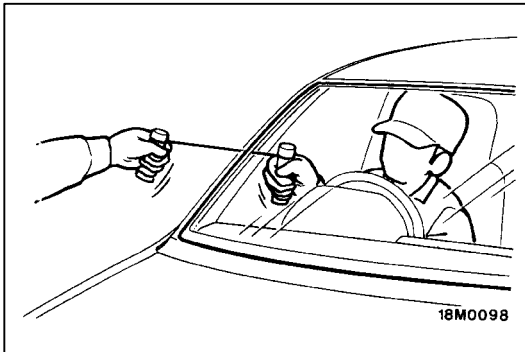
**Removal steps**

- ◀A▶ ▶A▶
1. Wiper deicer connector
 2. Windshield
 3. Windshield moulding
 4. Windshield protector

- ▶A▶
5. Window spacer
 6. Window spacer
 7. Dual lock fastener

REMOVAL SERVICE POINT**◀A▶ WINDSHIELD REMOVAL**

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

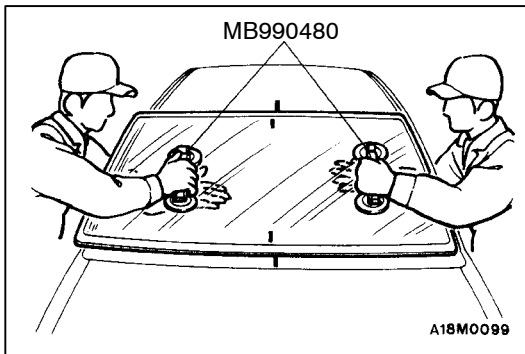


3. Using a sharp-point drill, make hole in the windshield adhesive.
4. Pass the piano wire from the inside of the vehicle through the hole.
5. Pull the piano wire alternately from the inside and outside along the windshield to cut the adhesive.

Caution

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

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



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

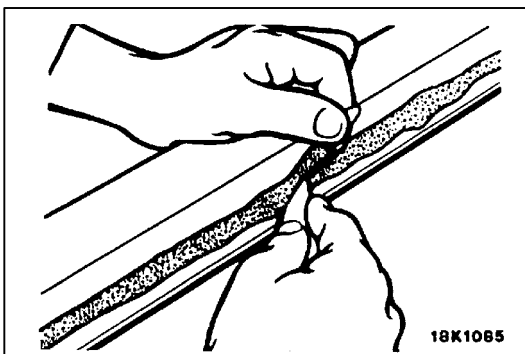
Caution

- (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.**

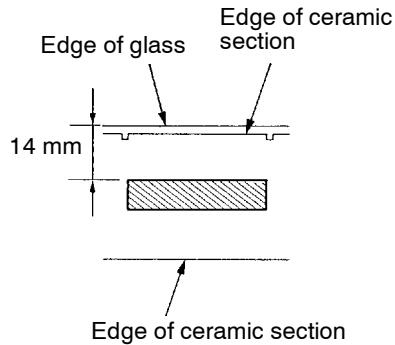
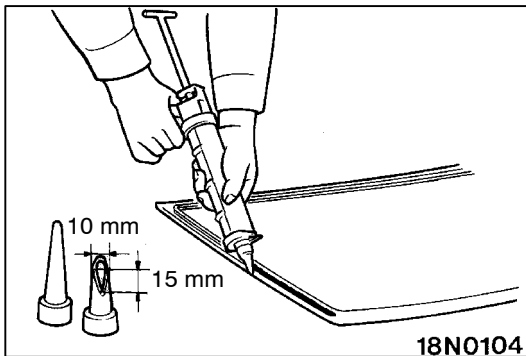
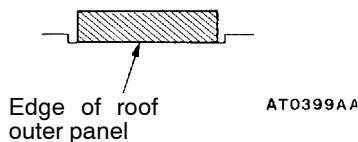
10. When reusing the windshield, remove the adhesive still adhering to the windshield, and clean with isopropyl alcohol.
11. Clean the body side in the same way.

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.



Dual lock fastener installation position

Glass side**Body side****INSTALLATION SERVICE POINT****►A◄ DUAL LOCK FASTENER/WINDSHIELD INSTALLATION**

1. When replacing the windshield, temporarily set the windshield against the body, and place a mating mark on the windshield and body.
2. Use isopropyl alcohol to degrease the inside and outside of the windshield and the body flanges.
3. Soak a sponge in the primer, and apply evenly to the windshield 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 windshield and the body, and lightly press the windshield 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.**

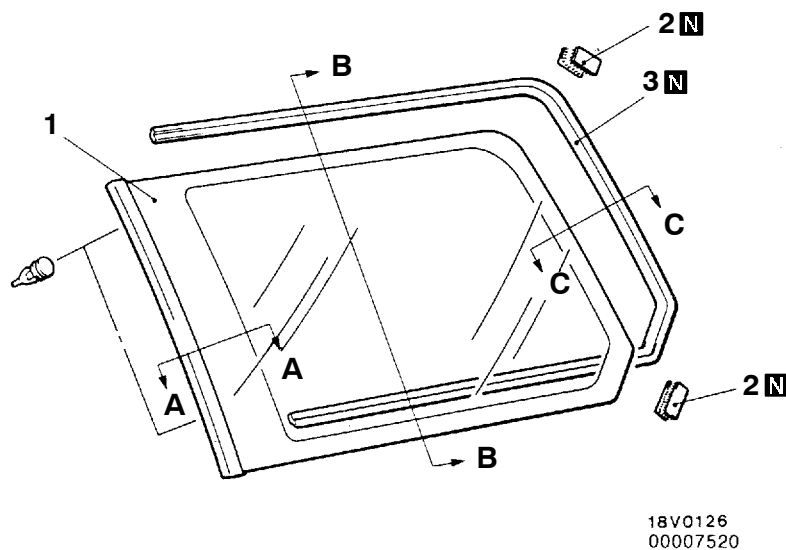
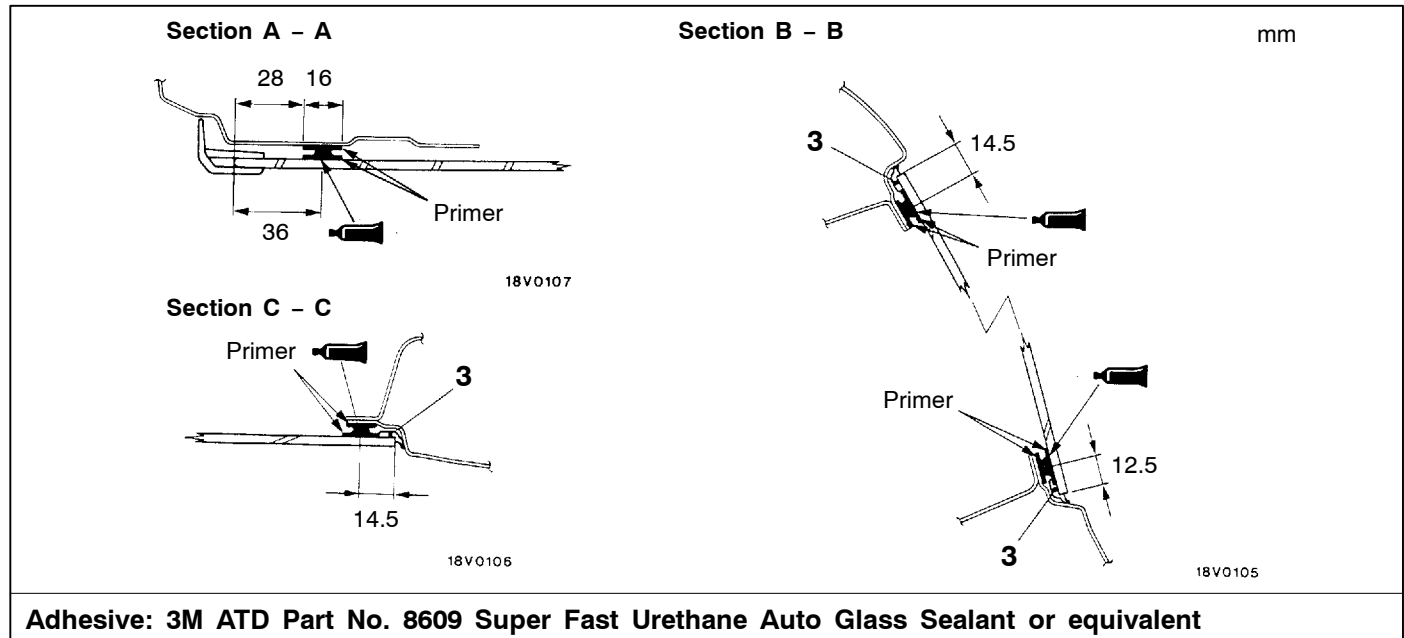
(2) **When testing for water leakage, do not pinch the end of the hose to spray the water.**

QUARTER WINDOW GLASS

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

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



Removal steps

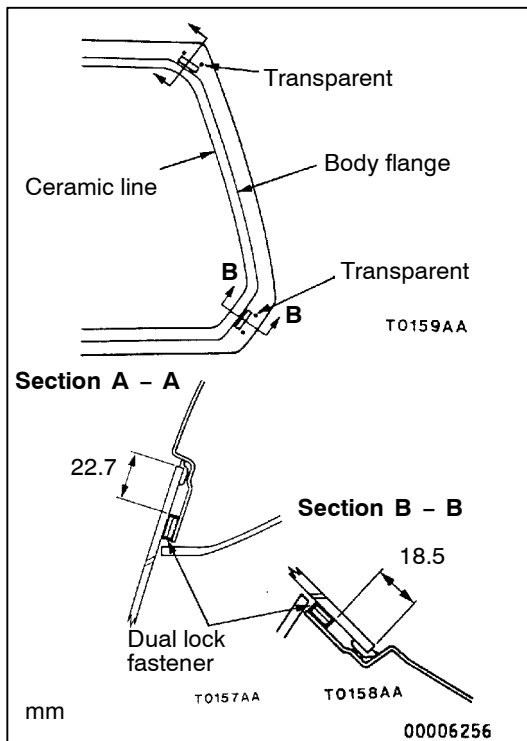
- ◀A▶ ▶A▶ 1. Quarter window glass assembly
- ▶A▶ ▶A▶ 2. Dual lock fastener
- ▶A▶ ▶A▶ 3. Window dam

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

Remove the quarter window glass by the same procedure as for the windshield. (Refer to P.42-10.)

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

1. Use isopropyl alcohol to degrease the window dam and dual lock fastener mounting surface on both the glass and the body.
2. Attach the window dam.
3. Install the dual lock fastener to the shown position.
4. Apply primer and adhesive. (Refer to P.42-12.)
5. Install the glass in the same way as for the windshield. (Refer to P.42-11.)



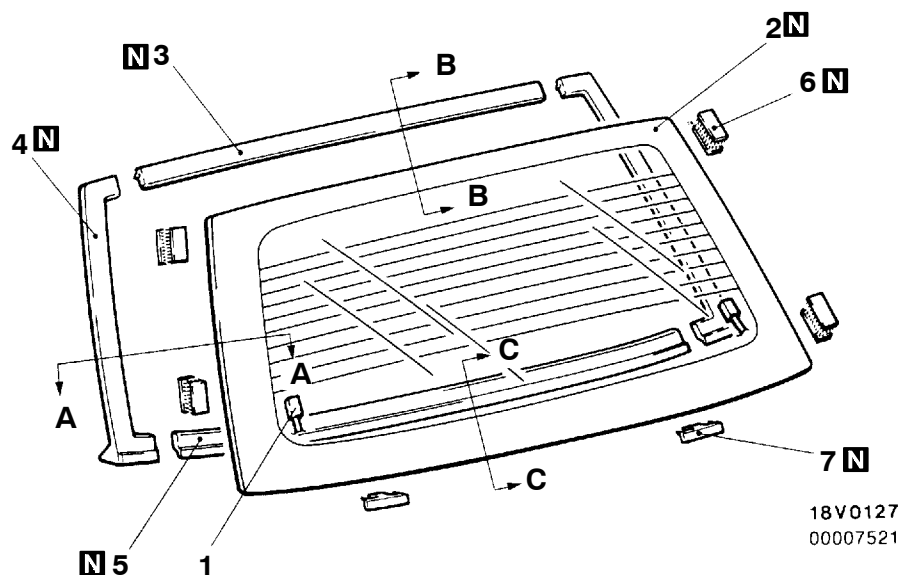
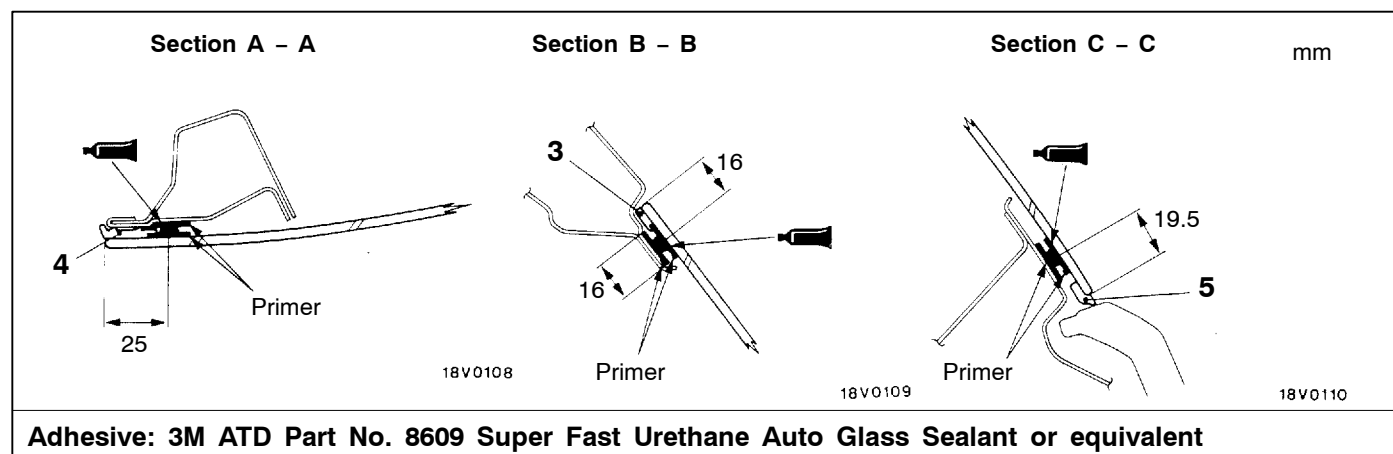
TAILGATE WINDOW GLASS

42200370199

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

- Tailgate Garnish Removal and Installation (Refer to GROUP 51 – Grill, Moulding and Garnish.)
- High-mounted Stop lamp Removal and Installation <Vehicles without roof spoiler> (Refer to GROUP 54 – High-mounted Stop lamp.)
- Tailgate Trim Removal and Installation (Refer to P.42-47.)



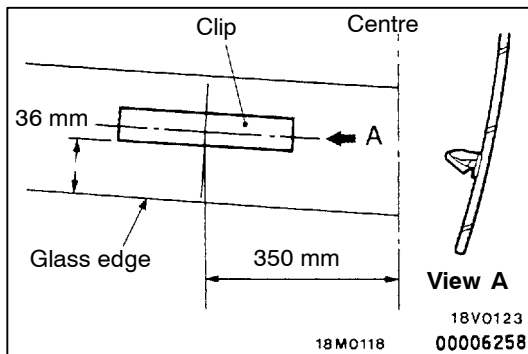
Removal steps

- ◀A▶ ▶A▶
1. Harness connector
 2. Tailgate window glass
 3. Tailgate window glass upper dam
 4. Tailgate window glass side dam

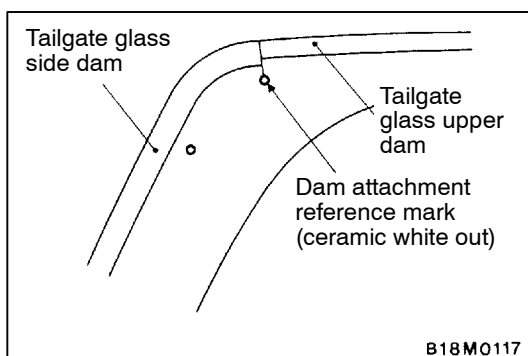
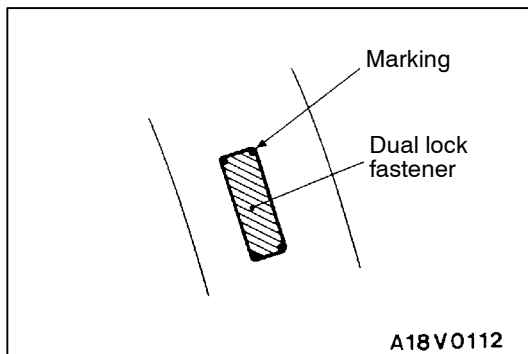
- ▶A▶ ▶A▶ ▶A▶
5. Tailgate window glass lower dam
 6. Dual lock fastener
 7. Clip

REMOVAL SERVICE POINT**►A► TAILGATE WINDOW GLASS REMOVAL**

Remove the tailgate window glass by the same procedure as for the windshield. (Refer to P.42-10.)

**INSTALLATION SERVICE POINT**
►A◄ CLIP/DUAL LOCK FASTENER/TAILGATE WINDOW GLASS LOWER DAM/TAILGATE WINDOW GLASS SIDE DAM/TAILGATE WINDOW GLASS UPPER DAM/TAILGATE WINDOW GLASS

1. Use isopropyl alcohol to degrease the inside and outside edges of the tailgate window glass and the surface of the body flange.
2. Face the clip's claws downward, and attach to the inner side of the tailgate window glass as shown in the illustration.
3. Align the dual lock fastener to the markings on the glass, and install. Then, install the tailgate outer panel so that it is aligned.
4. Attach the tailgate glass dam from the dam attachment reference mark to the edge of the glass.
5. Apply primer and adhesive (Refer to P.42-14.)
6. Install the glass in the same way as for the windshield. (Refer to P.42-11.)



DOOR

42300030151

SERVICE SPECIFICATIONS

Items		Standard value
Door outside handle play mm		2.8 or more
Power window operation current A		7 or more (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	106.7 – 108.2
	Distance (B) between glass holders	417.5 – 420.5
	Distance (C) between glass holder and rear edge of glass	127 – 131

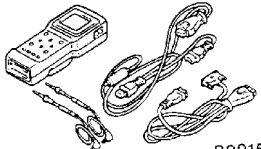
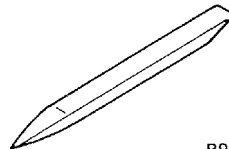
SEALANT

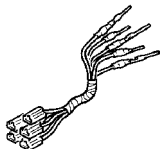
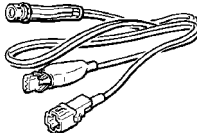
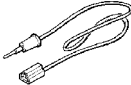

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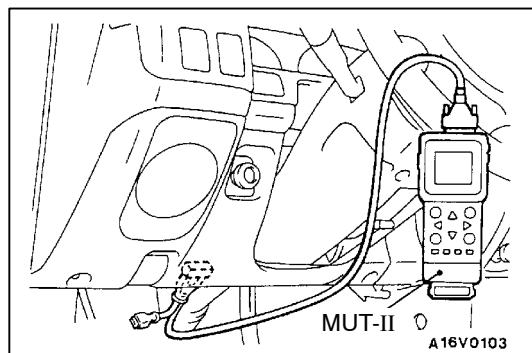
Items	Specified sealant	Remark
Waterproof film	3M ATD Part No. 8625 or equivalent	Ribbon sealer

SPECIAL TOOLS

42300060136

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

Tool	Number	Name	Use
<p>A</p>  <p>B</p>  <p>C</p>  <p>D</p>  <p>C991223</p>	<p>MB991223</p> <p>A: MB991219</p> <p>B: MB991220</p> <p>C: MB991221</p> <p>D: MB991222</p>	<p>Harness set</p> <p>A: Test harness</p> <p>B: LED harness</p> <p>C: LED harness adapter</p> <p>D: probe</p>	<p>Measurement of terminal voltage</p> <p>A: Connector pin contact pressure inspection</p> <p>B: Power circuit inspection</p> <p>C: Power circuit inspection</p> <p>D: Commercial tester connection</p>



TROUBLESHOOTING

42300070207

DIAGNOSIS FUNCTION

INPUT SIGNAL INSPECTION POINTS

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.

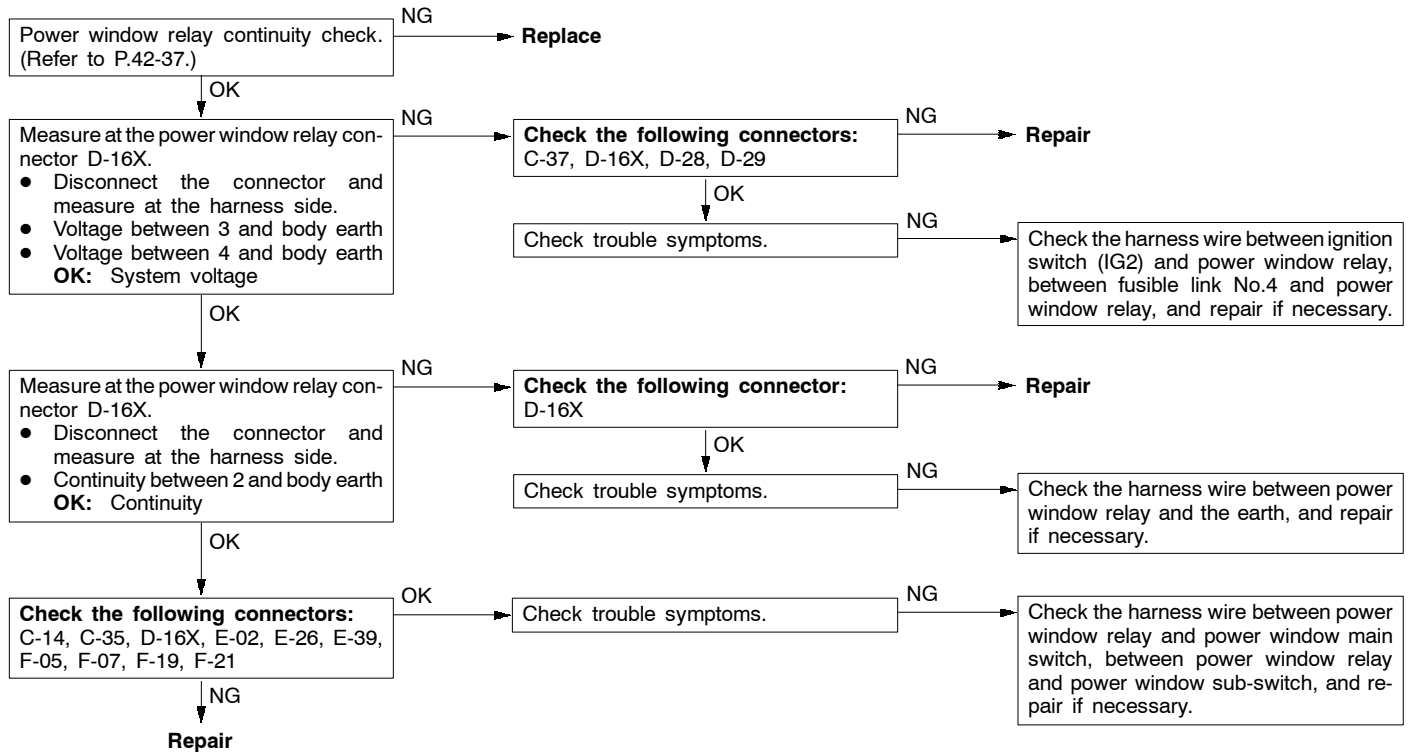
INSPECTION CHART FOR TROUBLE SYMPTOMS

Trouble symptom		Inspection procedure	Reference page
Power windows	The power windows cannot be operated by any of the power window switches.	1	42-19
	Driver's side power window cannot be operated by the power window main switch.	2	42-20
	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	42-21
	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	42-21
	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	42-22
	When the glass is raised, it then lowers automatically.	6	42-24
	The glass is not lowered when something is jammed in the window.	7	42-24
	When the glass is fully raised, it then lowers automatically.	8	42-25
Door locking mechanism	None of the door lock functions operate.	9	42-25
	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	42-26
	Some doors do not lock or unlock.	11	42-26

INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS

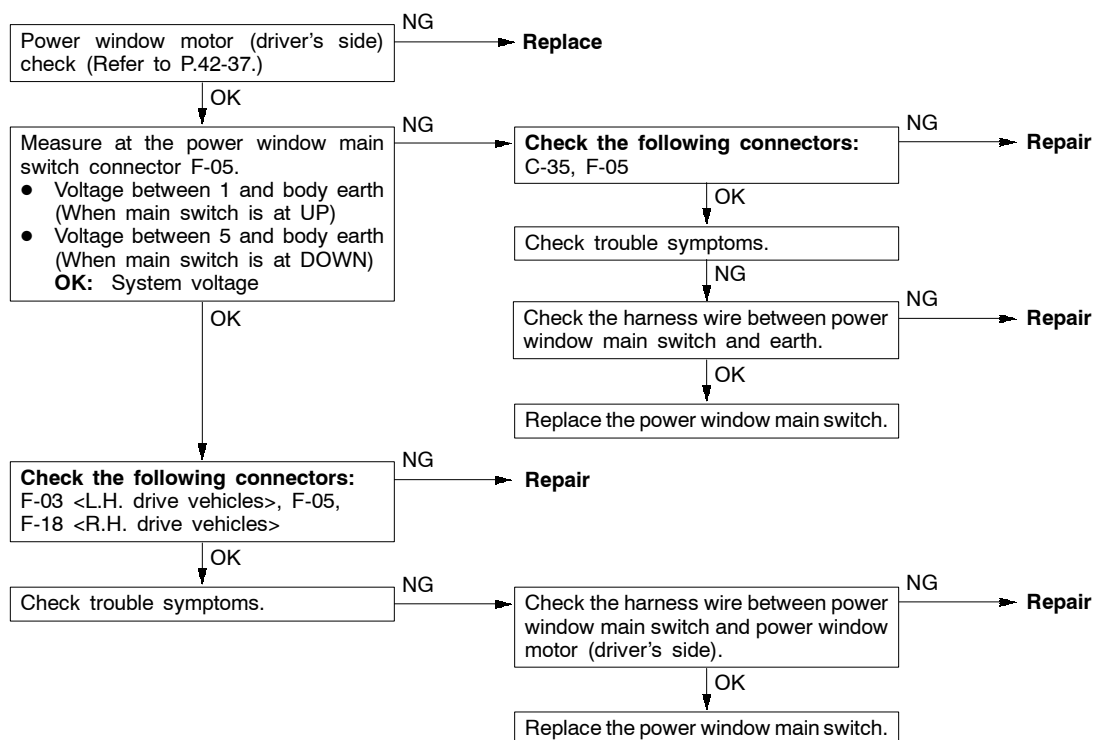
Inspection Procedure 1

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



Inspection Procedure 2

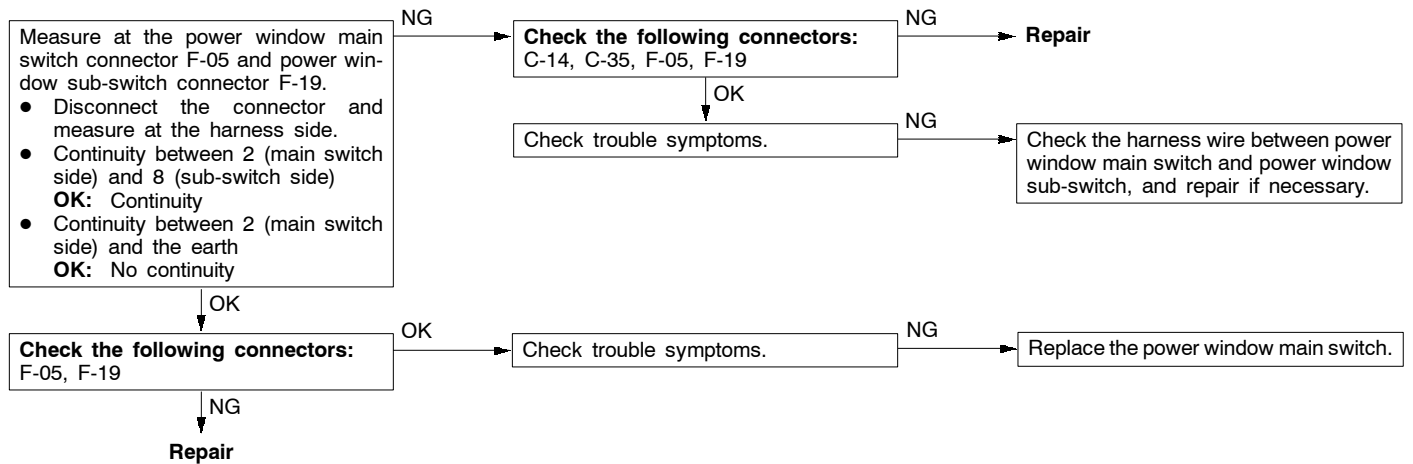
Driver's side power window cannot be operated by the power window main switch.	Probable cause
<p>The cause may be a malfunction of the earth circuit in the power window main switch or of the power supply circuit for the power window motor.</p> <p>The cause may also be a malfunction of the control circuit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



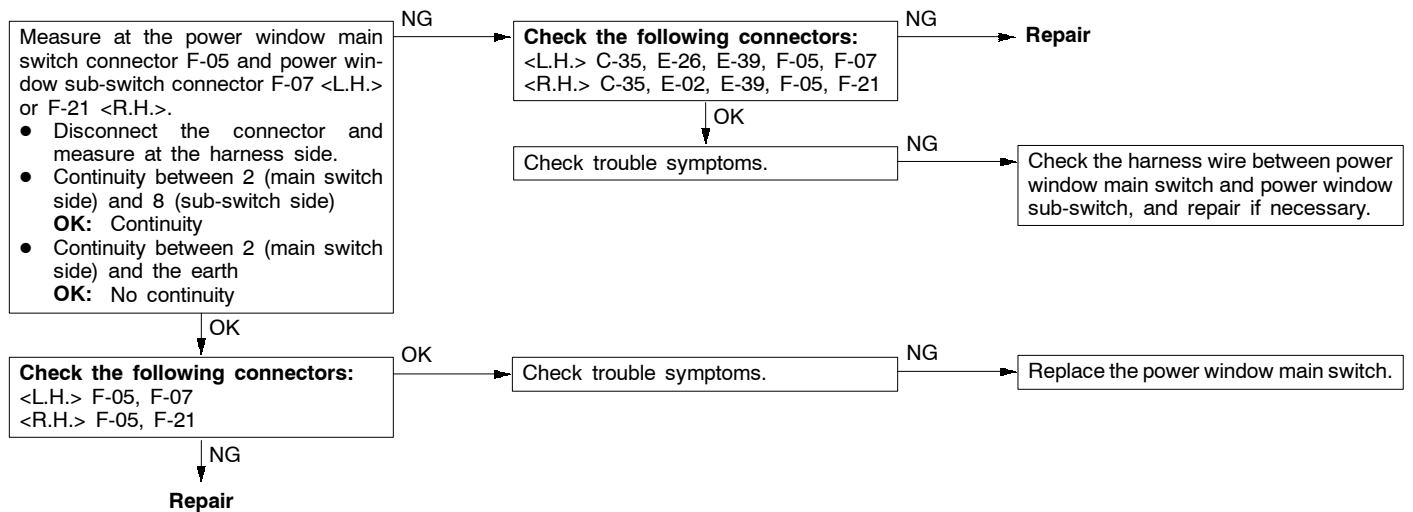
Inspection Procedure 3

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.	<ul style="list-style-type: none"> 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

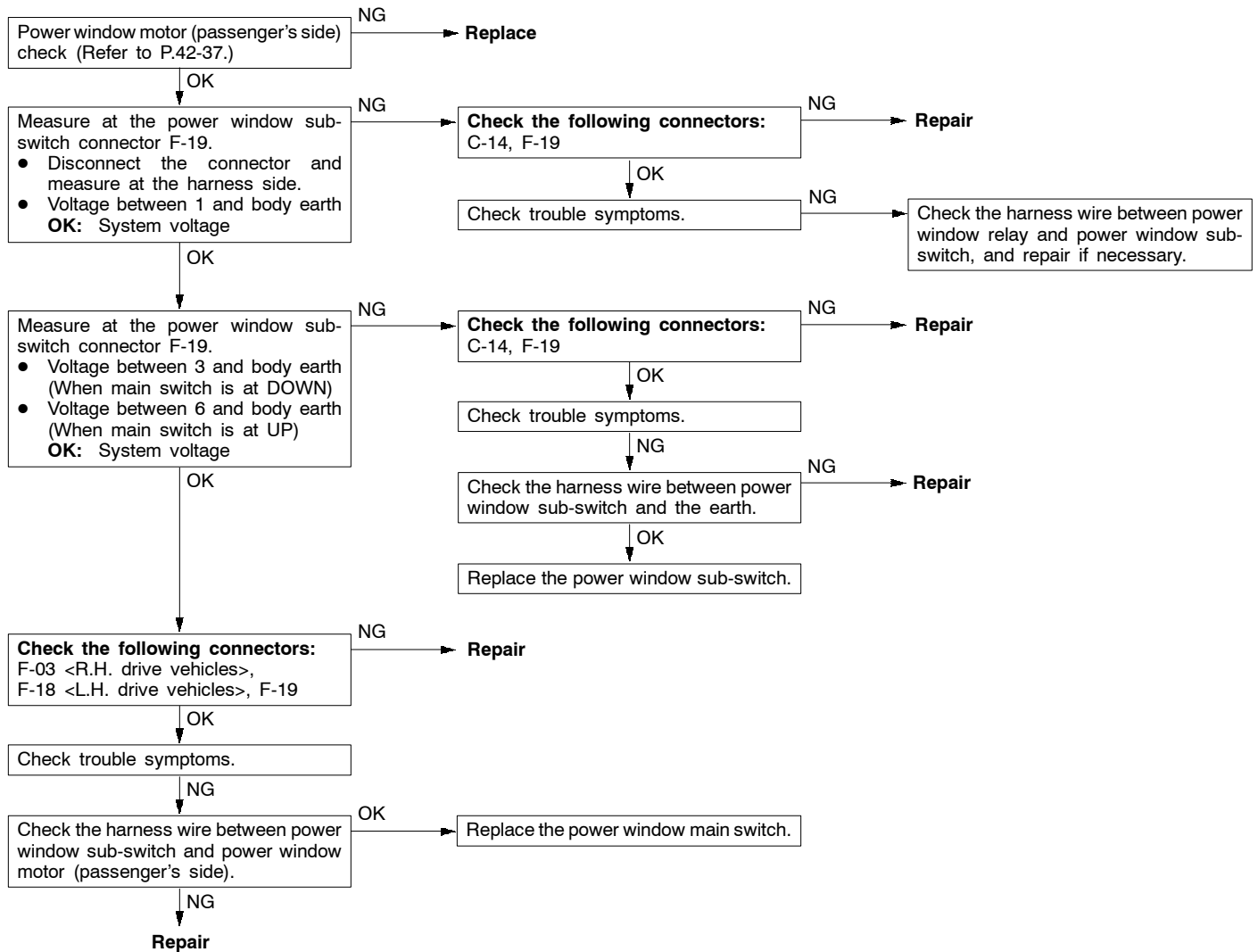
Passenger's side and rear power windows cannot be operated by the power window sub-switches. (However, they can be operated by the power window main switch.)	Probable cause
The cause may be a malfunction of the power window sub-switch.	<ul style="list-style-type: none"> Malfunction of power window sub-switch

Replace the power window sub-switch

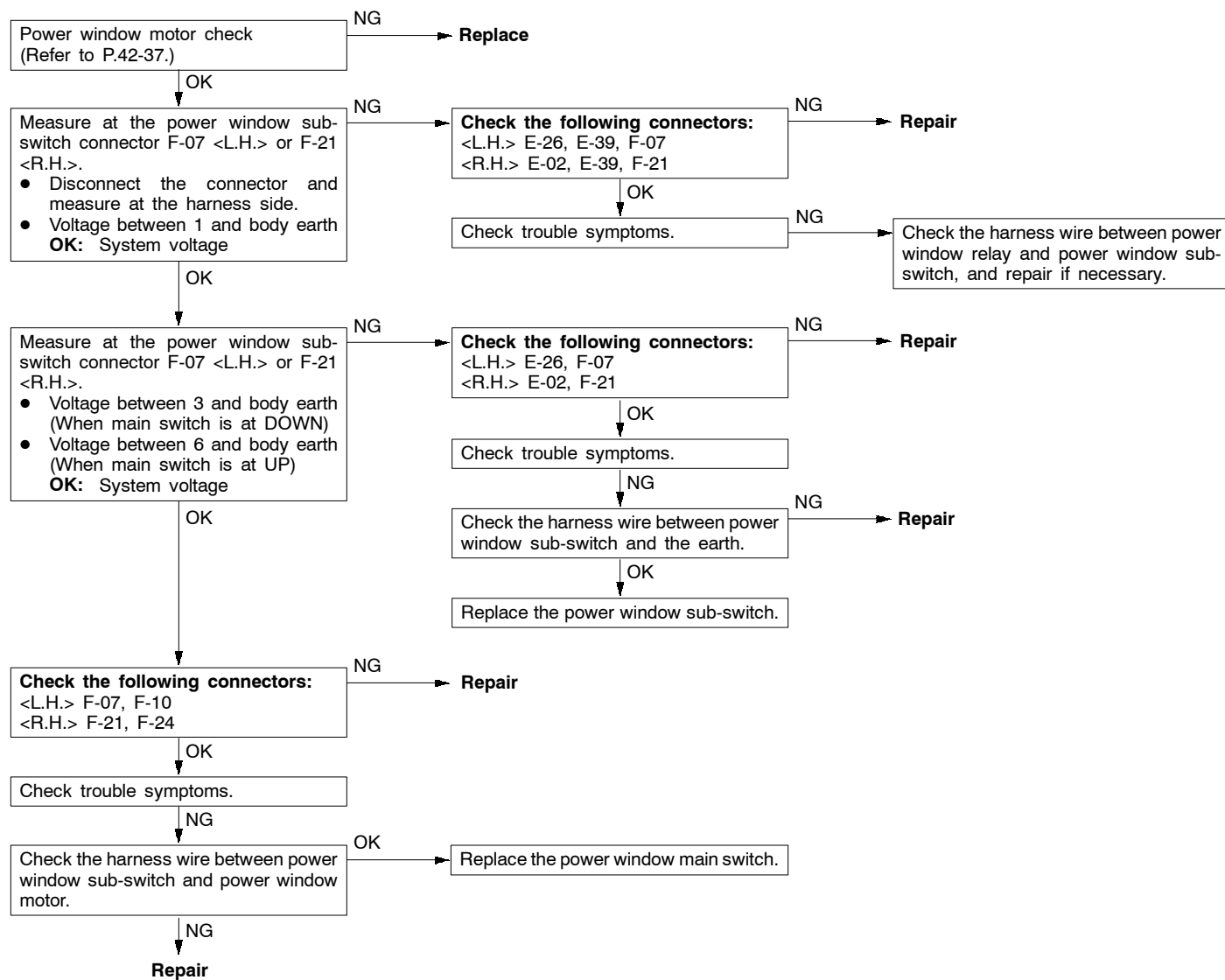
Inspection Procedure 5

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: <ul style="list-style-type: none"> • Power supply circuit of the power window sub-switch • Earth circuit • Power window motor • Lock switch • Power window main switch • Power window sub-switch 	<ul style="list-style-type: none"> • 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>

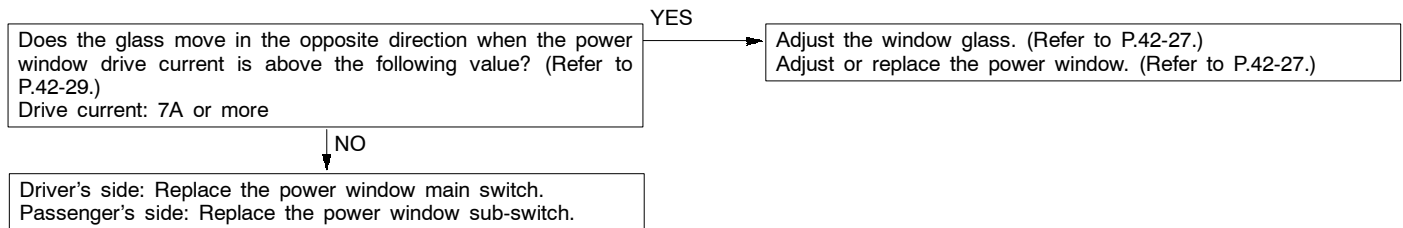


<If a rear power window does not operate>



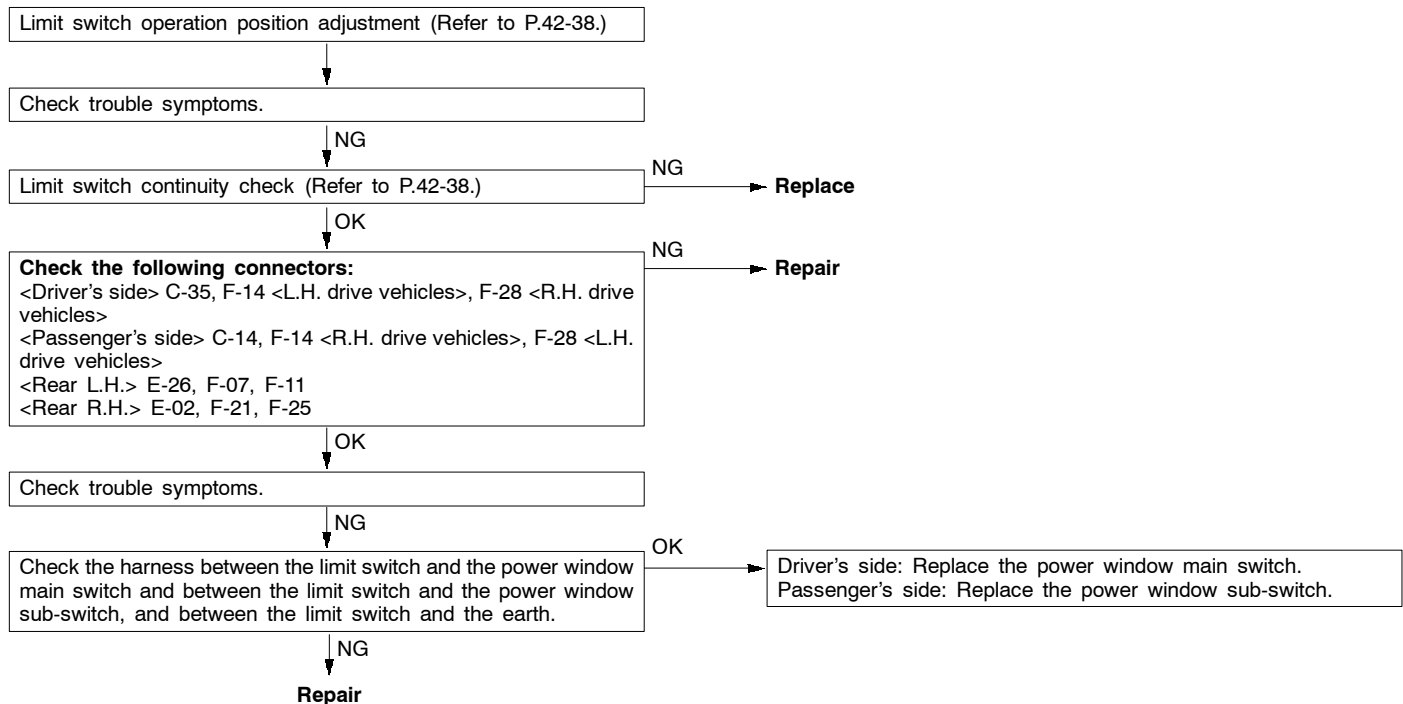
Inspection Procedure 6

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.	<ul style="list-style-type: none"> Incorrect window glass adjustment Glass slider is incorrectly installed or warped Malfunction of power window main switch or sub-switch



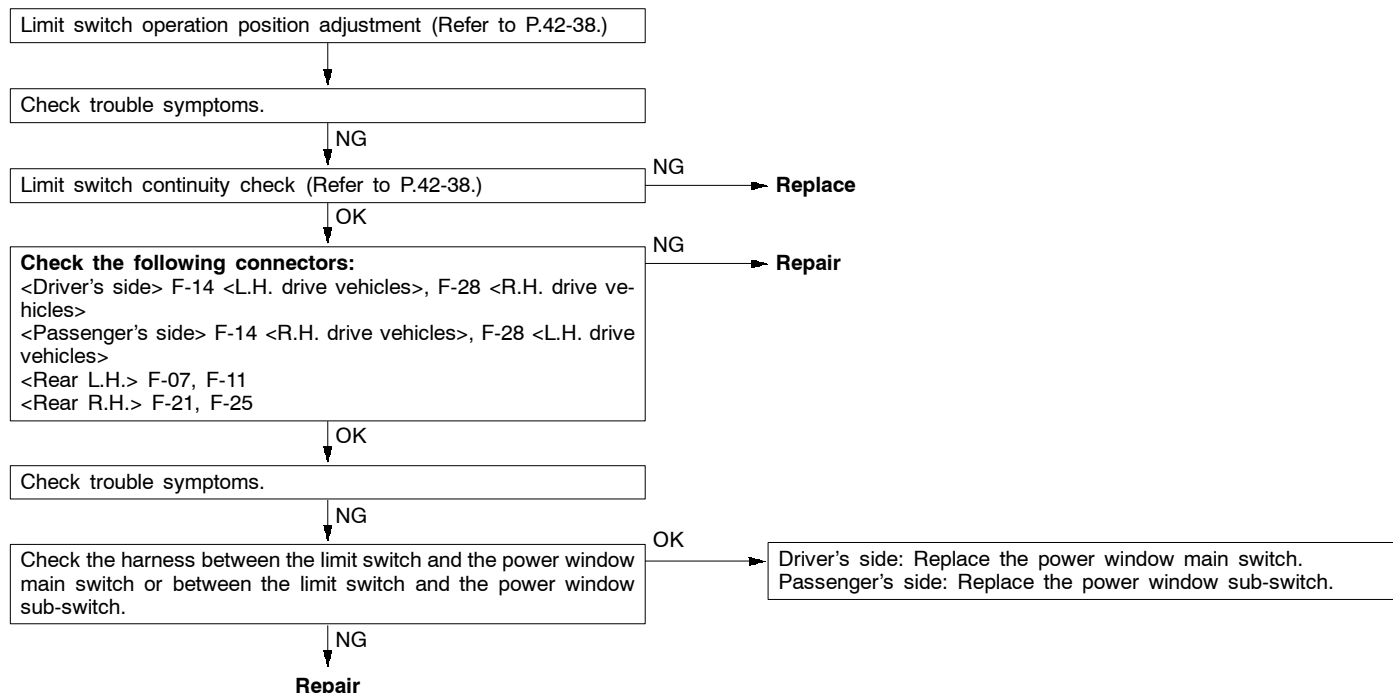
Inspection Procedure 7

The glass is not lowered when something is jammed in the window.	Probable cause
<p>The safety mechanism is released under the following conditions, and the window will not be lowered even if something becomes jammed in it.</p> <ul style="list-style-type: none"> 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 10 mm of being fully closed (normal setting to prevent the window from being lowered) 	<ul style="list-style-type: none"> Malfunction of limit switch Malfunction of wiring harness Malfunction of power window main switch or sub-switch Incorrect limit switch operation position



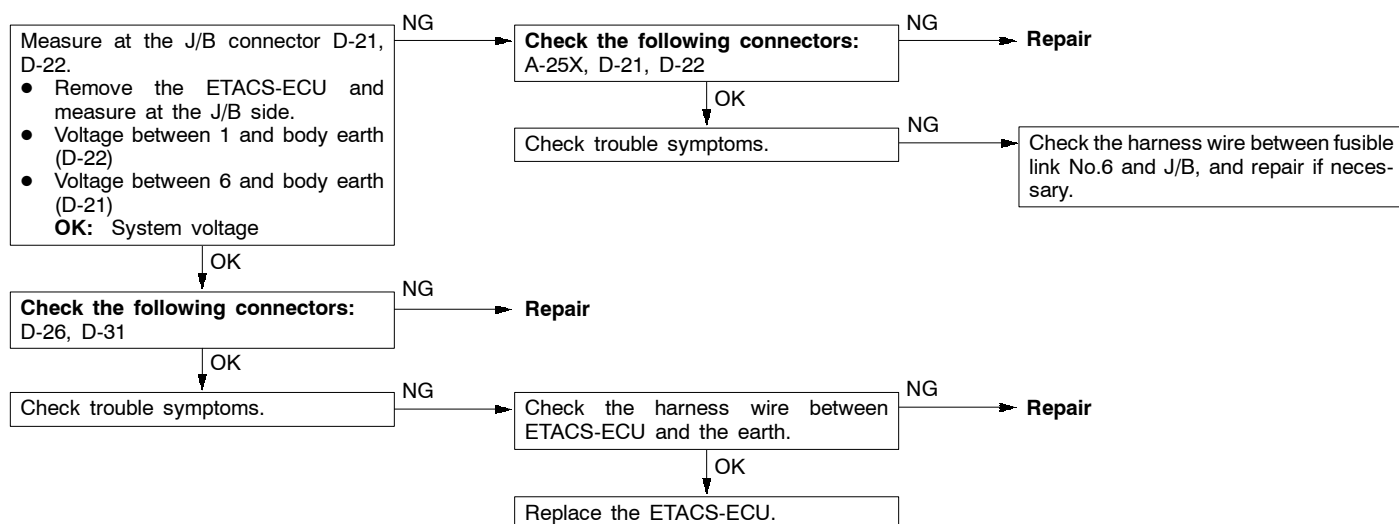
Inspection Procedure 8

When the glass is fully raised, it then lowers automatically.	Probable cause
When the window is within 10 mm of being fully closed, the limit switch turns off to prevent the window from being lowered. However, the above problem can occur if there is a malfunction of the limit switch or a short-circuit in a harness.	<ul style="list-style-type: none"> • Malfunction of limit switch • Malfunction of wiring harness or connector • Malfunction of power window main switch or sub-switch • Incorrect limit switch operation position



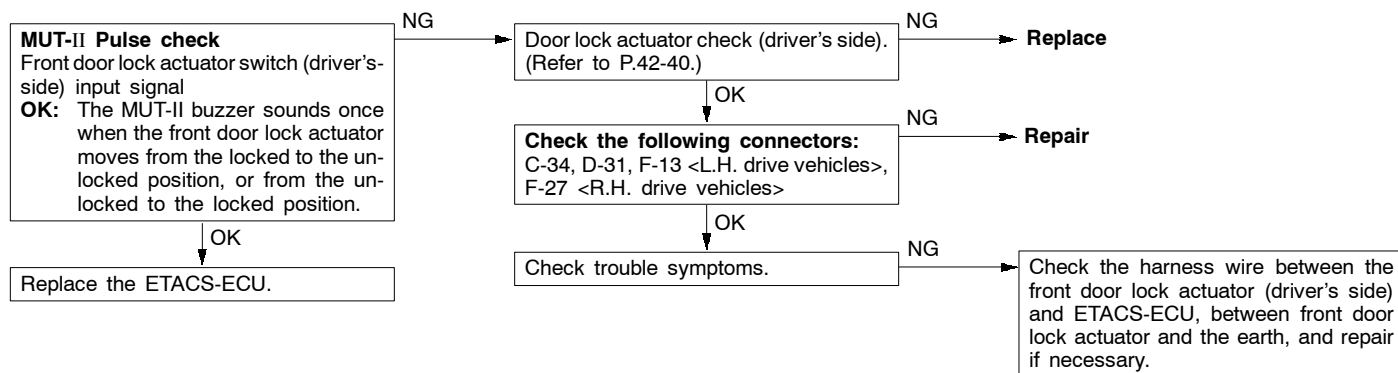
Inspection Procedure 9

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.	<ul style="list-style-type: none"> • Malfunction of ETACS-ECU • Malfunction of wiring harness or connector



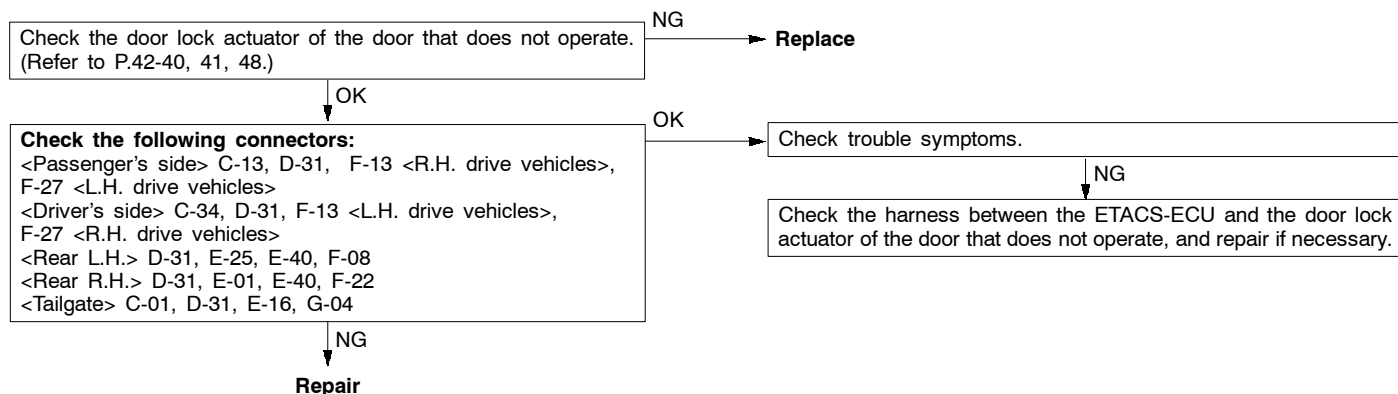
Inspection Procedure 10

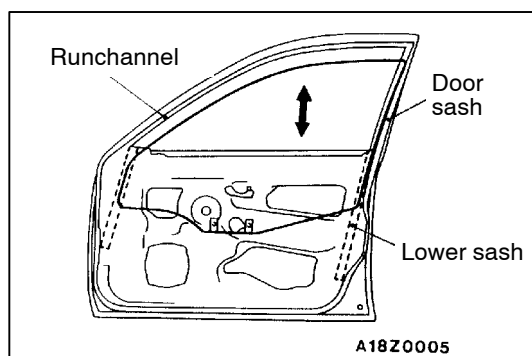
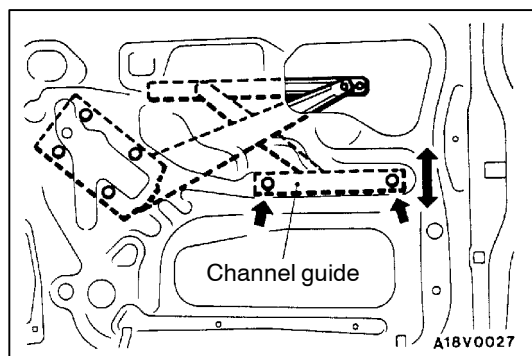
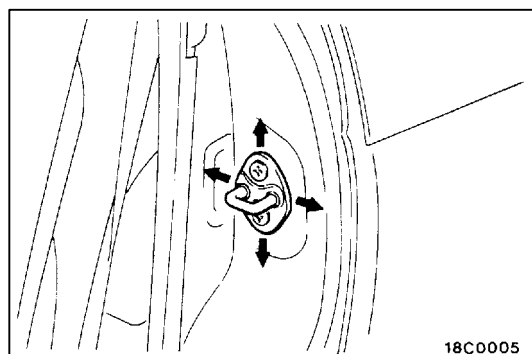
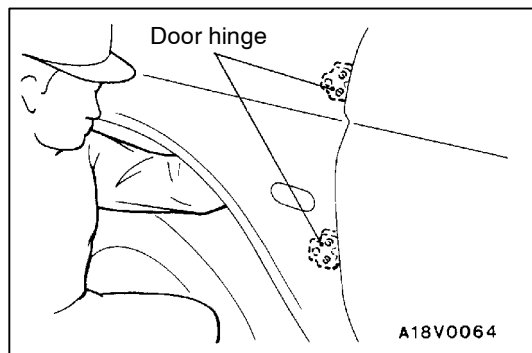
None of the doors lock or unlock when the driver's-side inside door locking knob is operated (including by means of the door key).	Probable cause
The cause may be a malfunction of the door lock actuator switch, the ETACS-ECU or of a wiring harness or connector.	<ul style="list-style-type: none"> • Malfunction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





ON-VEHICLE SERVICE

42300090159

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 there is a step between the door and body, loosen the mounting bolts and nuts of the door hinges, and adjust the door alignment.
3. If the striker and latch do not engage properly, move the striker up and down or to the left and right.

DOOR WINDOW GLASS ADJUSTMENT

42300100272

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.42-32.)
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

42900190093

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.42-32.)
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

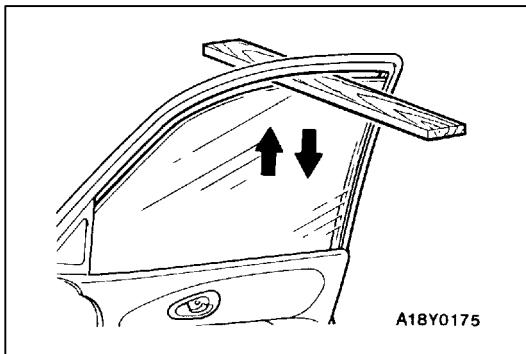
Insert a cushion or similar object to prevent damage to the glass if it should happen to fall down.

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

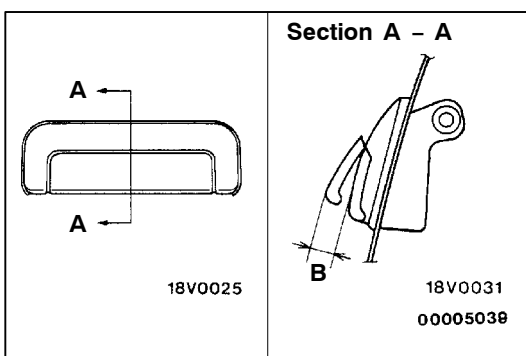
The lower sash cannot normally be adjusted, but it may be possible to adjust the sash span slightly within the range allowed by manufacturing tolerances by pushing the lower sash outwards while re-installing it.

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

**POWER WINDOW SAFETY MECHANISM CHECK**

42900100096

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.42-24).

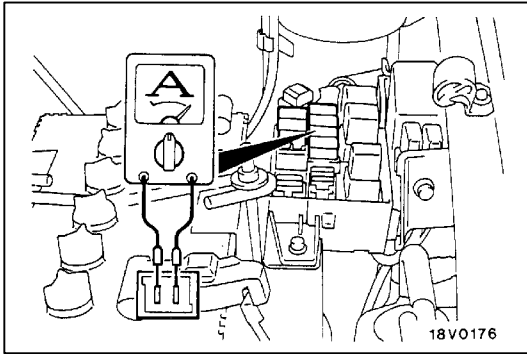
**DOOR OUTSIDE HANDLE PLAY CHECK**

42300160157

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

42900110099

1. Remove the power window fuse and connect a circuit analyzer as shown in the illustration.
2. When the power window switch is pulled 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.

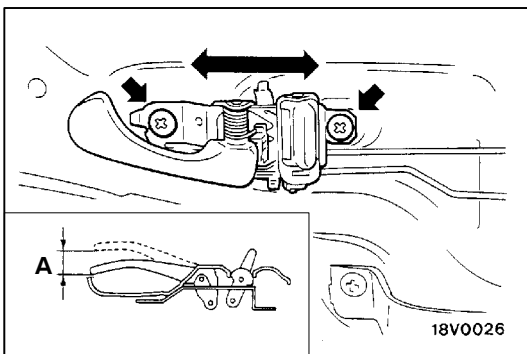
Standard value: 7A or more (at 20°C)

3. If the operation current is outside the standard value, refer to "Troubleshooting" (P.42-18).

CIRCUIT BREAKER (INCORPORATED IN THE POWER WINDOW MOTOR) CHECK

42900170127

1. Pull the power window switch to the UP position to fully close the window glass, and keep pulling 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

42300150253

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

Standard value (A): 7.3 mm or more

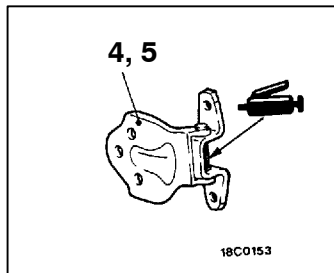
2. If the door inside handle play is outside the standard value range, remove the door trim. (Refer to P.42-32.)
3. Loosen the inside handle mounting screws, and then move the inside handle back and forth to adjust the play.

DOOR ASSEMBLY

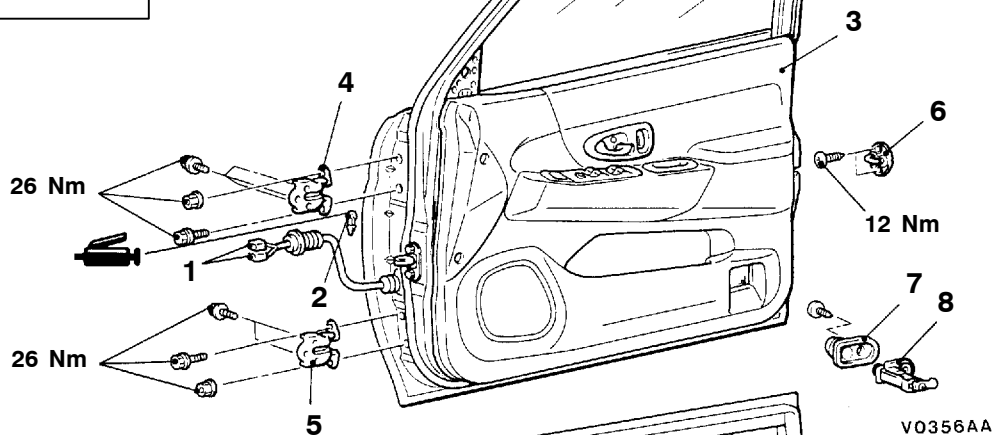
REMOVAL AND INSTALLATION

Post-installation Operation

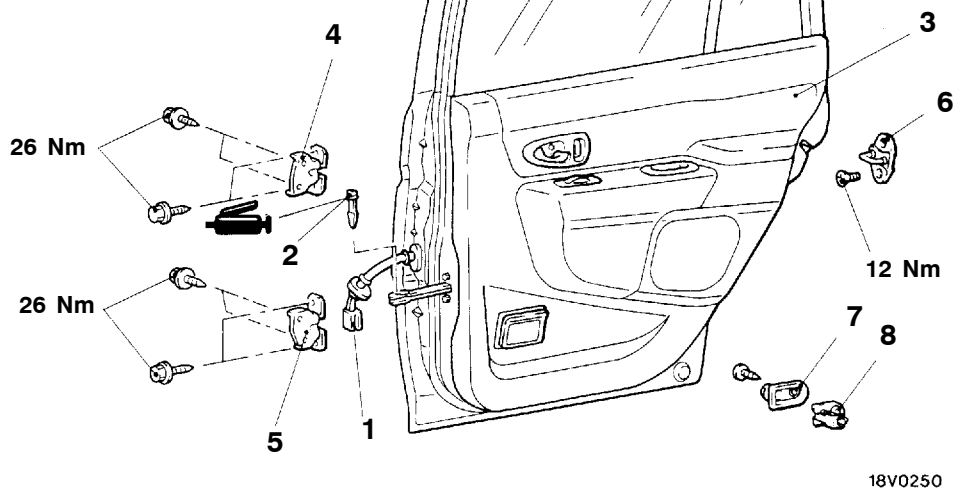
- Door Fit Adjustment (Refer to P.42-27.)



Front door



Rear door



00007522

Door assembly removal steps

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

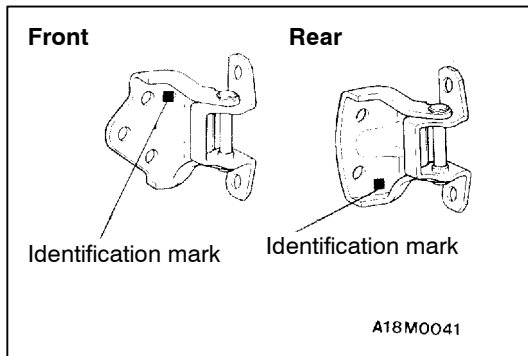


Striker removal

6. Striker

Door switch removal steps

7. Door switch cap
8. Door switch

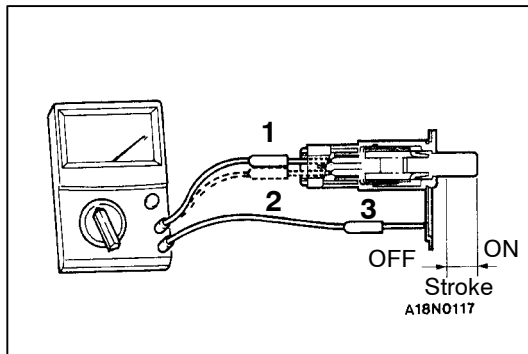


INSTALLATION SERVICE POINT

►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	A1



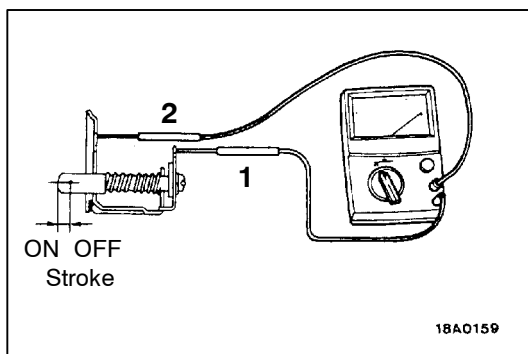
INSPECTION

42300600031

DOOR SWITCH CONTINUITY CHECK

Driver's door switch

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



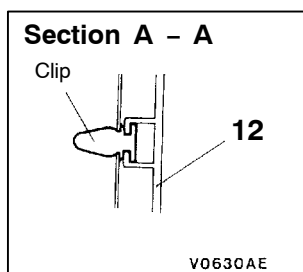
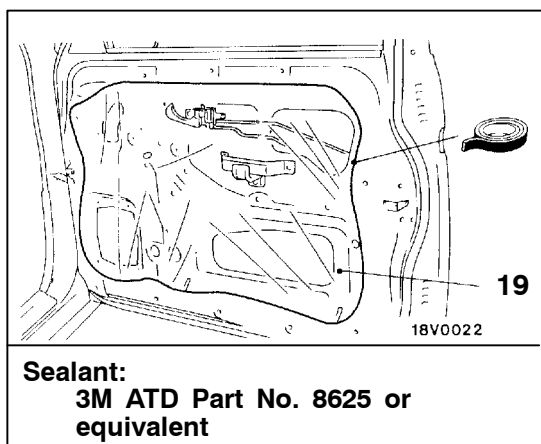
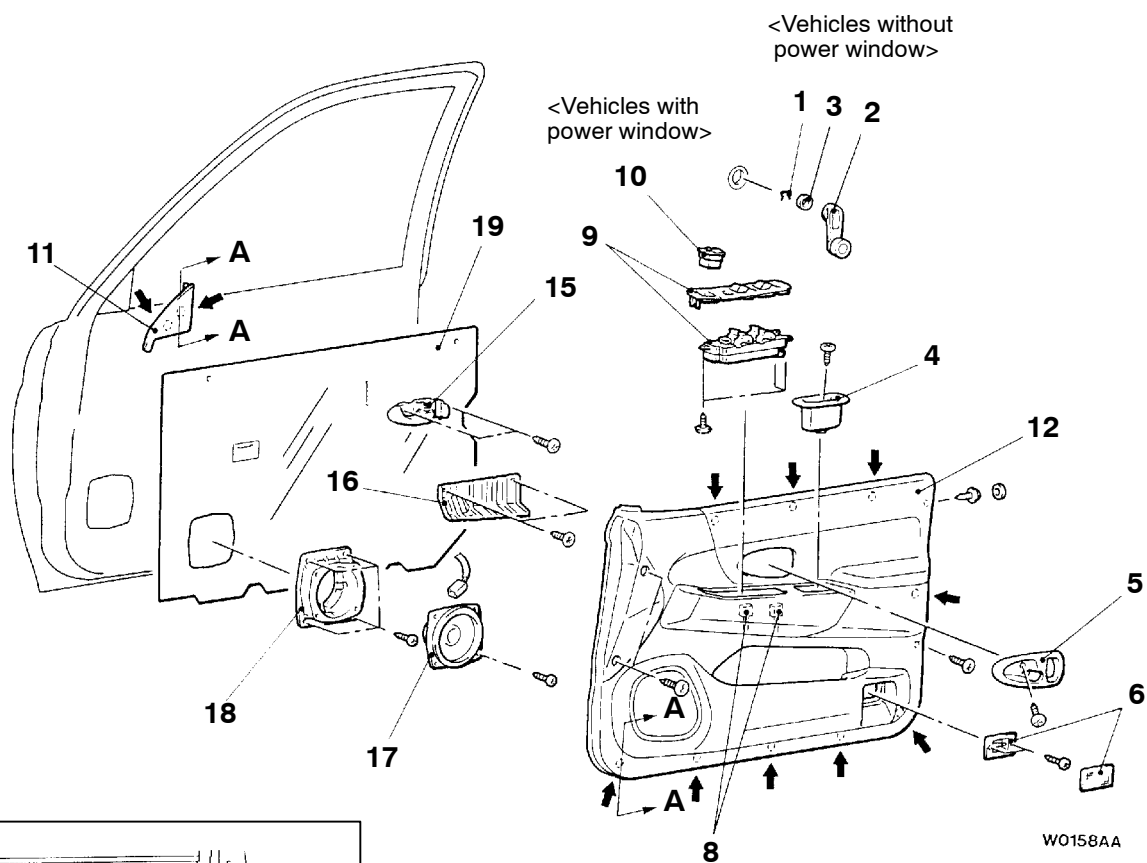
Passenger's door and rear door switch

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

DOOR TRIM AND WATERPROOF FILM

REMOVAL AND INSTALLATION

Front door



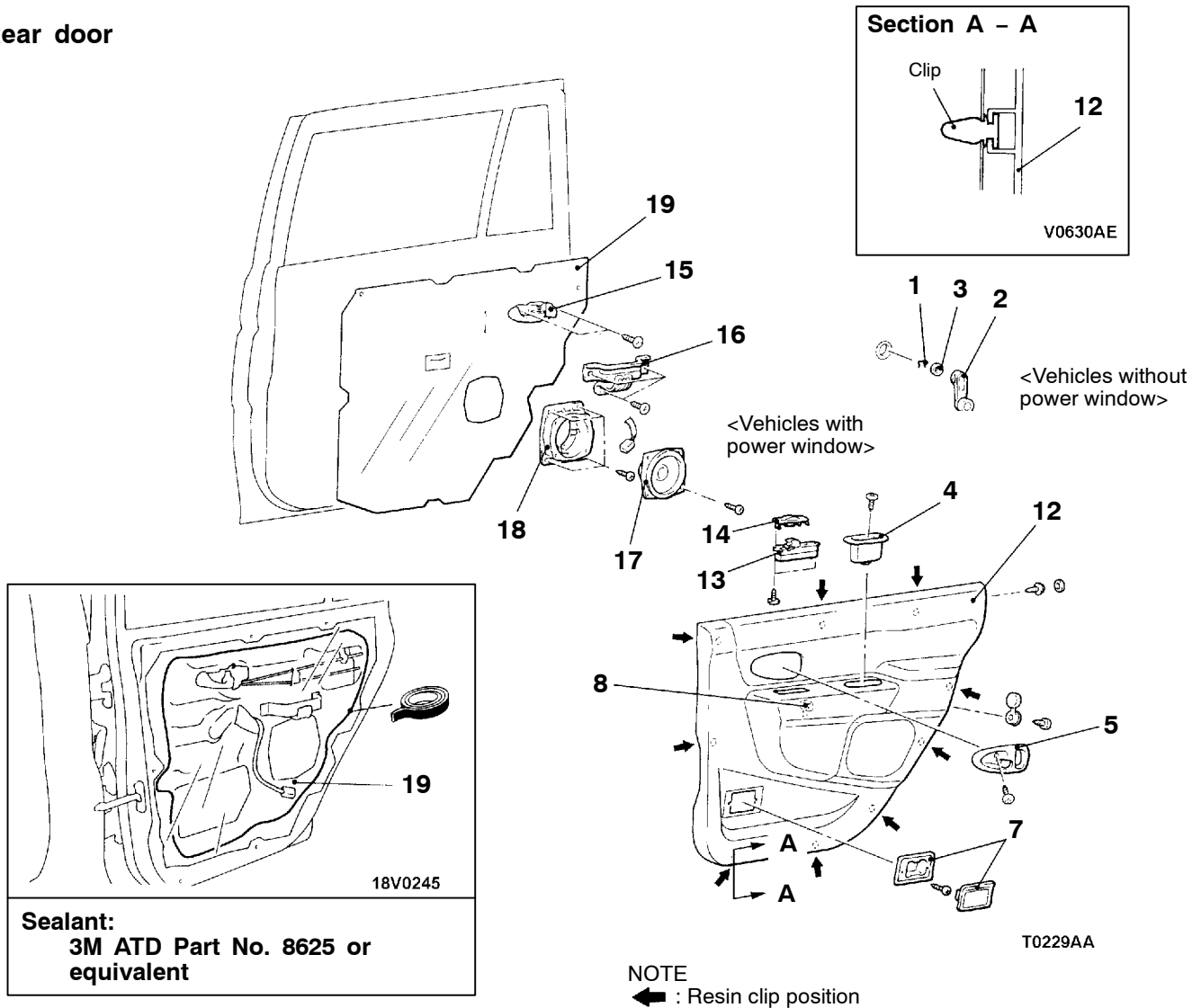
NOTE
← : Resin clip position

Removal steps

- ◀A▶ ▶A▶
1. Clip
 2. Regulator handle
 3. Escutcheon
 4. Pull handle box
 5. Cover
 6. Door lamp
 8. Harness connector
 9. Power window switch assembly
- ◀B▶

10. Remote controlled mirror switch
11. Inner delta cover
12. Door trim
15. Door inside handle
16. Pull handle bracket
17. Speaker
18. Speaker cover
19. Waterproof film

Rear door

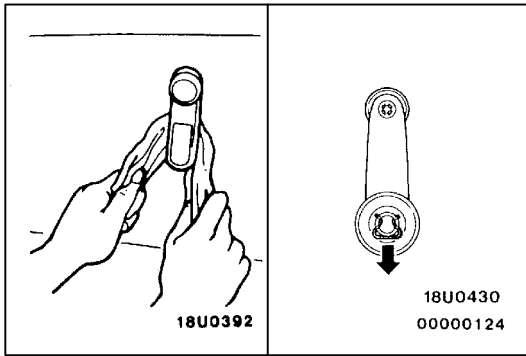


Removal steps

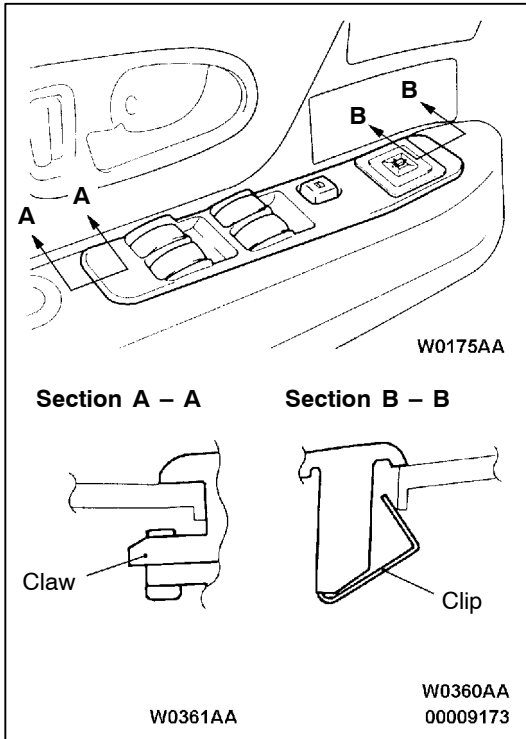


1. Clip
2. Regulator handle
3. Escutcheon
4. Pull handle box
5. Cover
7. Ashtray
8. Harness connector
12. Door trim

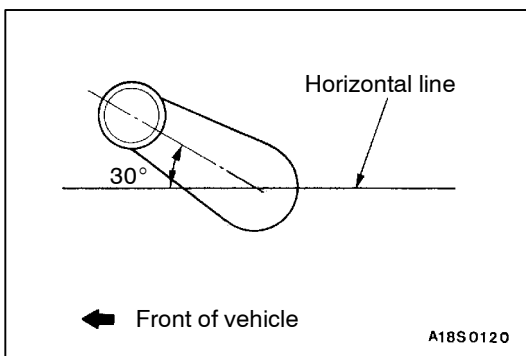
13. Power window switch
14. Power window switch cover
15. Door inside handle
16. Pull handle bracket
17. Speaker
18. Speaker cover
19. Waterproof film

**REMOVAL SERVICE POINTS****◀A▶ CLIP REMOVAL**

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

**◀B▶ POWER WINDOW SWITCH ASSEMBLY**

1. Use the special tool to remove the front area clip engagement.
2. Remove the back claw engagement.

**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

42900130316

REMOVAL AND INSTALLATION

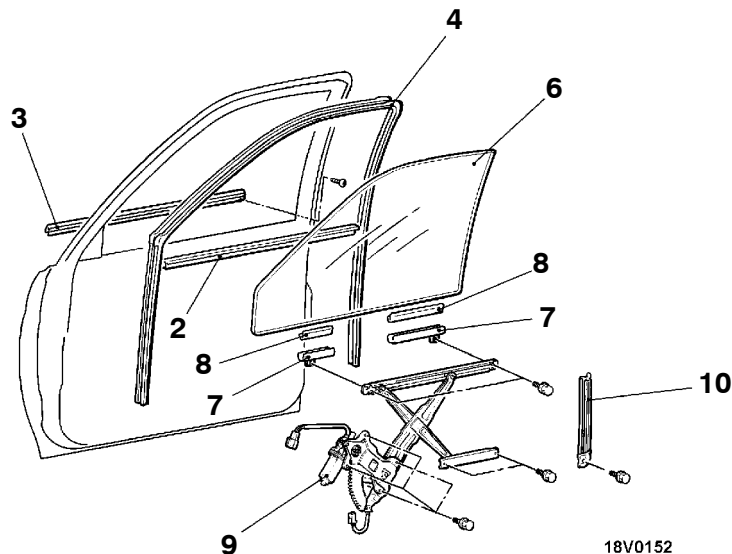
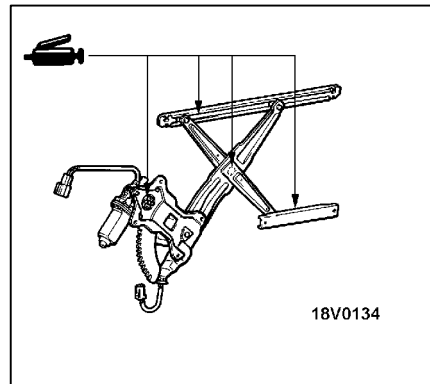
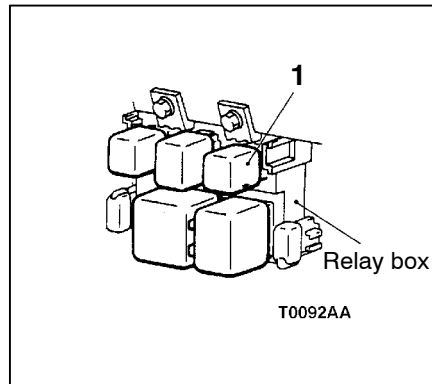
Front door

Pre-removal Operation

- Door Trim and Waterproof Film Removal (Refer to P.42-32.)
- Door Mirror Removal (Refer to GROUP 51 – Door Mirror.)

Post-installation Operation

- Door Trim and Waterproof Film Installation (Refer to P.42-32.)
- Door Mirror Installation (Refer to GROUP 51 – Door Mirror.)
- Door Window Glass Adjustment (Refer to P.42-27.)



18V0152

00009080

Power window relay removal steps

- Driver's side under cover (Refer to GROUP 52A – Instrument Panel.)
1. Power window relay

Front window regulator assembly removal steps

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

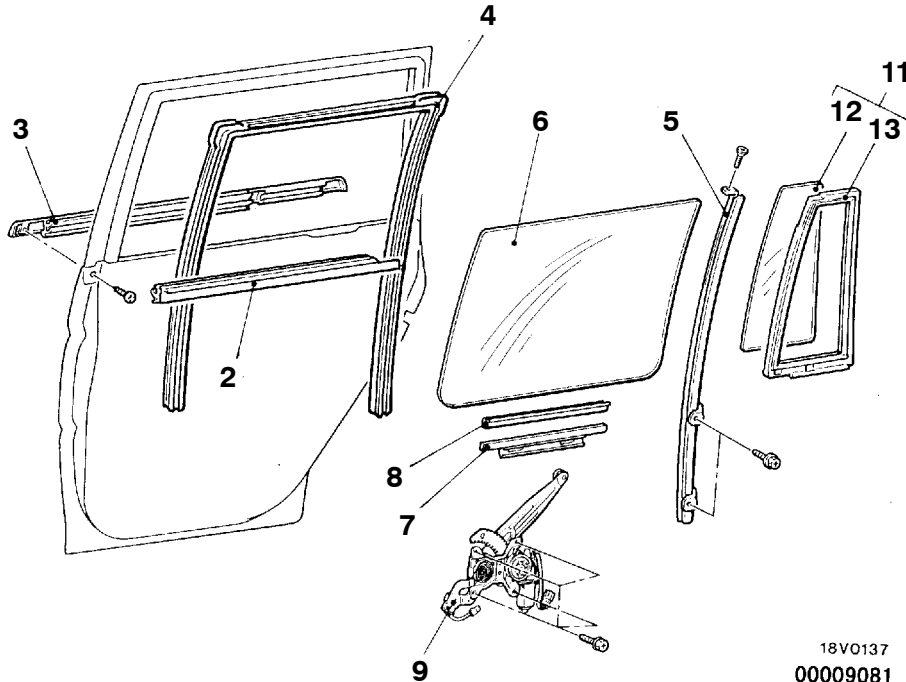
Rear door

Pre-removal Operation

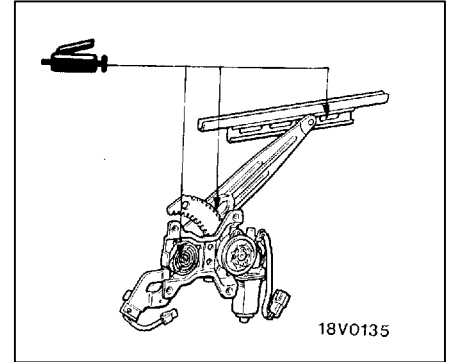
- Door Trim and Waterproof Film Removal (Refer to P.42-33.)

Post-installation Operation

- Door Trim and Waterproof Film Installation (Refer to P.42-33.)
- Door Window Glass Adjustment (Refer to P.42-27.)



18V0137
00009081

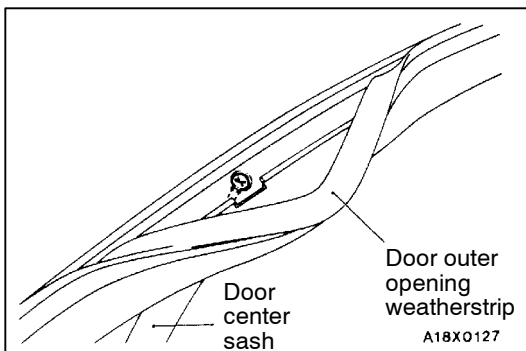
**Removal steps**

2. Door beltline inner weatherstrip
3. Door beltline moulding assembly
4. Door window glass runchannel
5. Door center sash
6. Door window glass
7. Door window glass

8. Door glass pad
9. Window regulator assembly
11. Stationary window glass and weatherstrip assembly
12. Stationary window glass
13. Stationary window weatherstrip

◀A▶

▶B◀

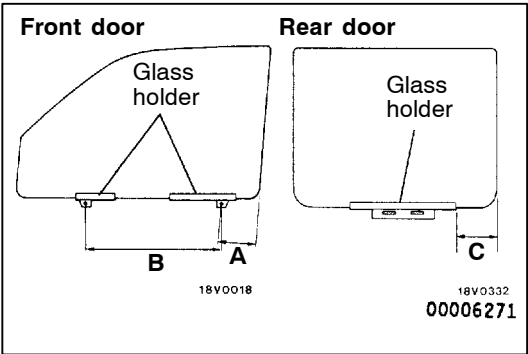
**REMOVAL SERVICE POINT****◀A▶ DOOR CENTER SASH REMOVAL (REAR DOOR)**

1. Remove the door outer opening weatherstrip from the door center sash section only.
2. Remove the mounting screw for the door center sash, and remove the door center sash from the door panel.

INSTALLATION SERVICE POINTS

►A◄ REAR LOWER SASH INSTALLATION

Securely insert the rear lower sash into the window rear sash.

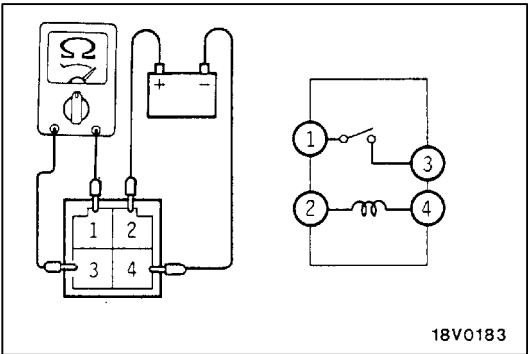


►B◄ DOOR GLASS HOLDER INSTALLATION

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

Standard value:

- (A) 106.7 – 108.2 mm
- (B) 417.5 – 420.5 mm
- (C) 127 – 131 mm



INSPECTION

42900180069

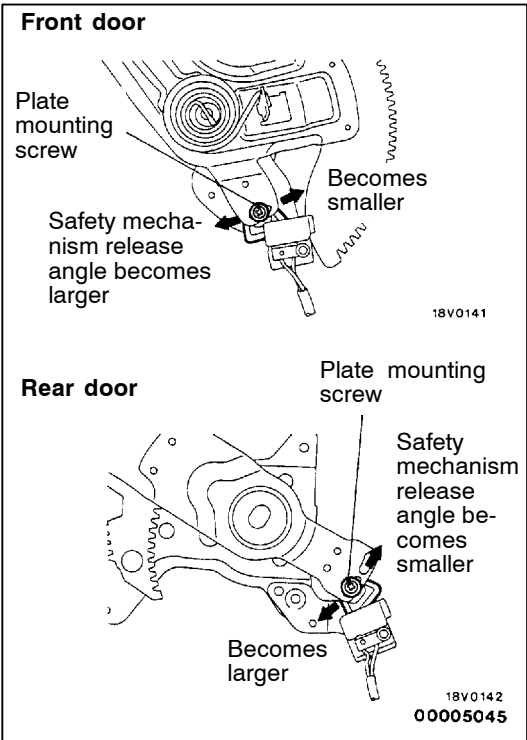
POWER WINDOW RELAY CONTINUITY CHECK

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

POWER WINDOW MOTOR CHECK

42900150053

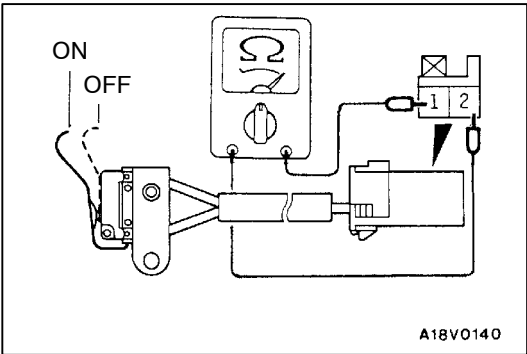
1. Connect a battery directly to the motor terminals and check that the motor runs smoothly.
2. Check that the motor runs in the opposite direction when the battery is connected with the polarity reversed.



LIMIT SWITCH OPERATION POSITION ADJUSTMENT

42900230023

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

42300460301

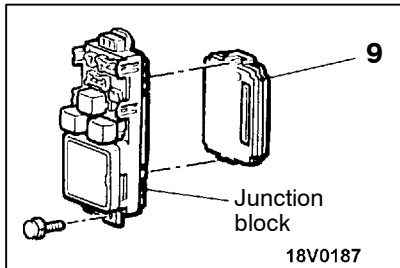
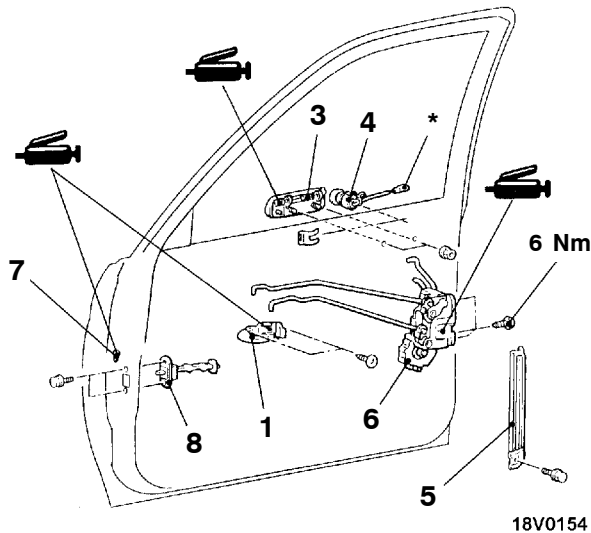
REMOVAL AND INSTALLATION

Pre-removal Operation

- Door Trim Removal (Refer to P.42-32.)

Post-installation Operation

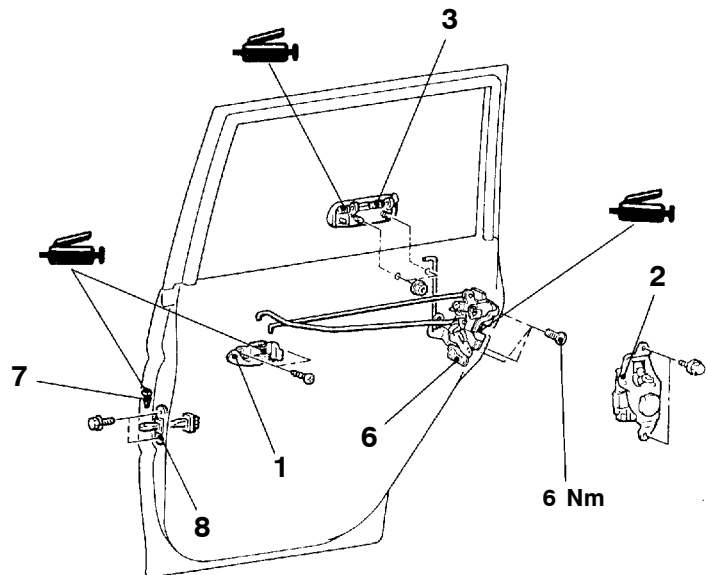
- Door Inside Handle Play Check (Refer to P.42-29.)
- Door Outside Handle Play Check (Refer to P.42-28.)
- Door Trim Installation (Refer to P.42-32.)
- Door Fit Adjustment (Refer to P.42-27.)

**Front door****Front door handle and door latch assembly removal steps**

1. Door inside handle
- Waterproof film (Refer to P.42-32.)
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 P.42-32.)

Rear door

18V0139

00009082



2. Rear door lock actuator assembly
3. Door outside handle
6. Door latch assembly

Door check removal steps

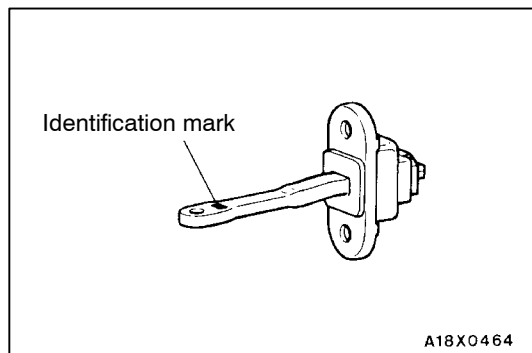
7. Spring pin
8. Door check

ETACS-ECU removal

9. ETACS-ECU

NOTE

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



INSTALLATION SERVICE POINTS

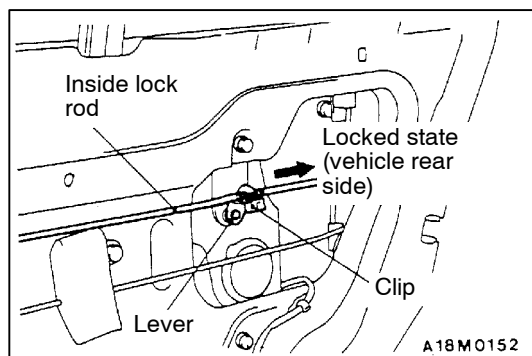
►A◄ DOOR CHECK INSTALLATION

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

Applicable location		Identification mark
L.H.	Front door	19L
	Rear door	25L
R.H.	Front door	19R
	Rear door	25R

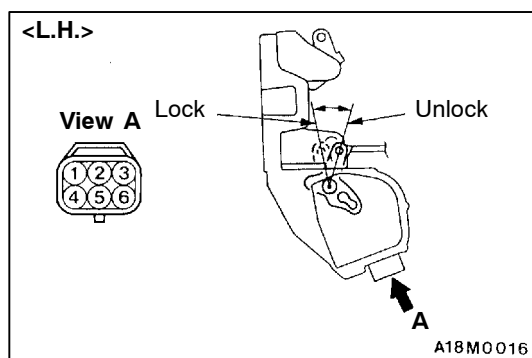
►B◄ REAR LOWER SASH INSTALLATION

Securely insert the rear lower sash into the window rear sash.



►C◄ REAR DOOR LOCK ACTUATOR ASSEMBLY

1. Lock the inside lock knob.
2. Lock the actuator lever and install.
3. Fit the clip into the inside lock rod.



INSPECTION

42300610133

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

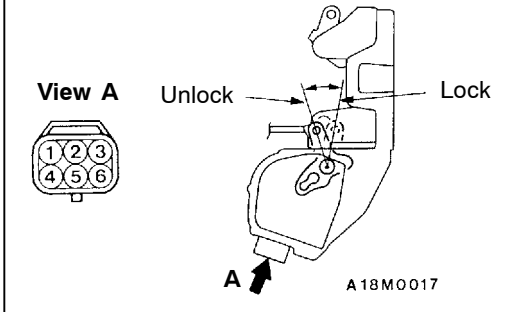
<L.H.>

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

NOTE

*: Driver's side only

<R.H.>



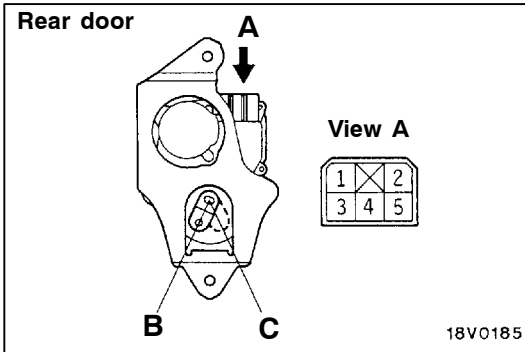
<R.H.>

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

NOTE

*: Driver's side only

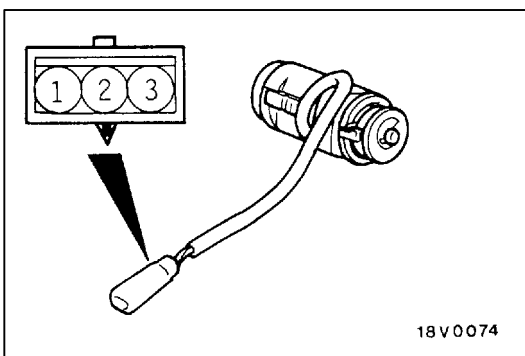
Rear door



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

42300620112

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>

42300630160

Passenger's side only

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

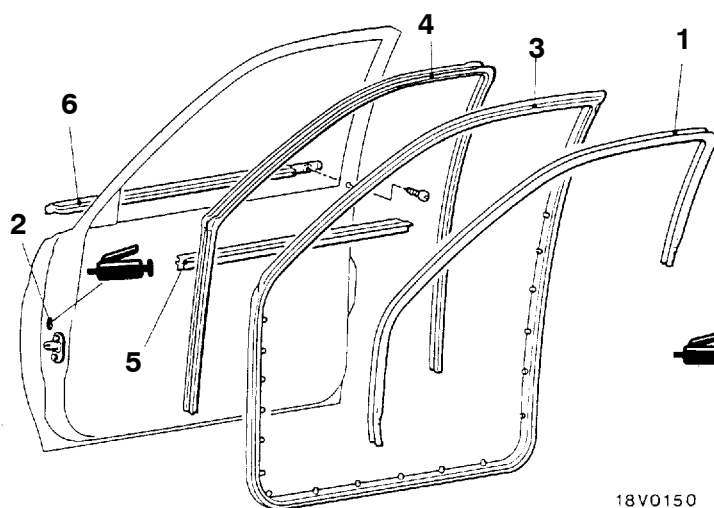
WINDOW GLASS RUNCHANNEL AND DOOR OPENING WEATHERSTRIP

42300310231

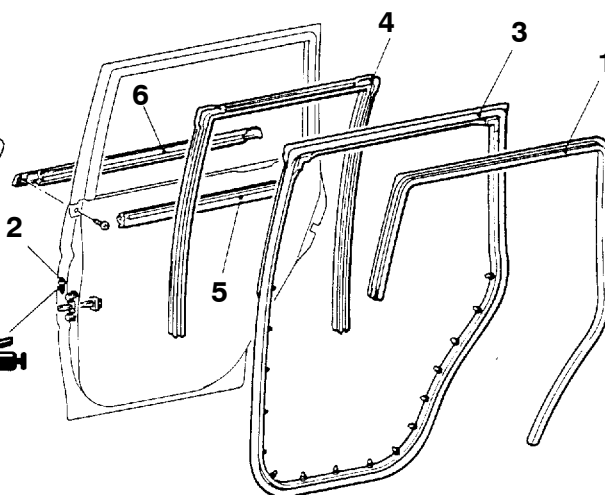
REMOVAL AND INSTALLATION

Front door

Rear door



18V0150



18V0138

00007529

Door inner opening weatherstrip removal steps

- Front scuff plate, rear scuff plate, centre pillar lower trim and cowl side trim (Refer to Group 52A – Trims.)

1. Door inner opening weatherstrip

Door outer opening weatherstrip removal steps

2. Spring pin

3. Door outer opening weatherstrip

Window glass runchannel removal

4. Window glass runchannel

Door beltline inner weatherstrip removal steps

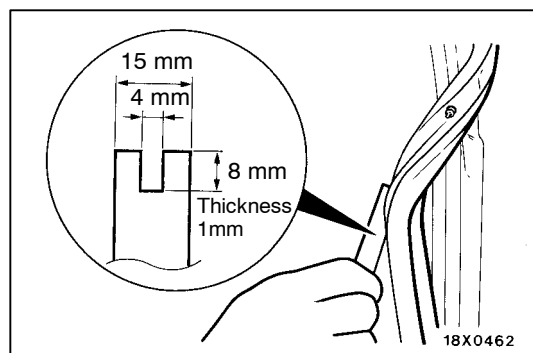
- Door trim (Refer to P.42-32.)

5. Door beltline inner weatherstrip

Door beltline outer weatherstrip removal steps

- Door mirror (Refer to Group 51 – Door Mirror.)

6. Door beltline outer weatherstrip



18X0462

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	Natural (white)
Right door	Brown or yellow

TAILGATE

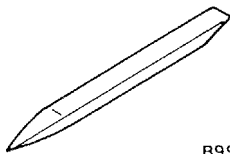
42400050068

SEALANT

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

SPECIAL TOOL

42400060061

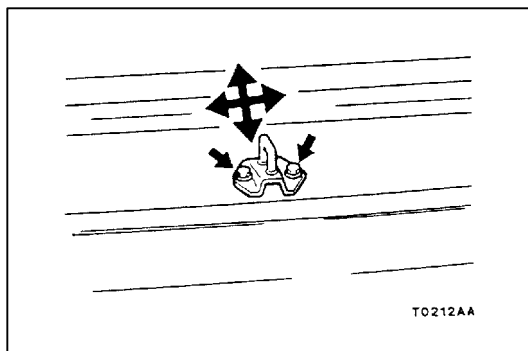
Tool	Number	Name	Use
 B990784	MB990784	Ornament remover	Removal of the tailgate trim

TROUBLESHOOTING

42400070101

INSPECTION CHART FOR TROUBLE SYMPTOMS

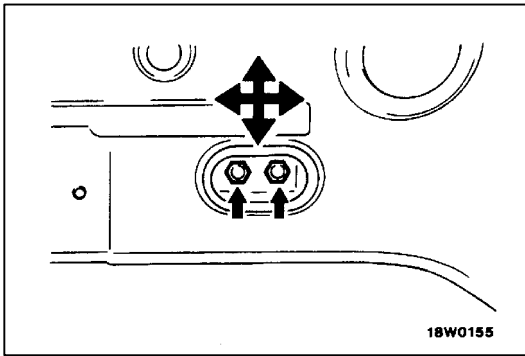
Trouble symptom	Reference page
Door lock mechanism does operate.	42-18.

**ON-VEHICLE SERVICE**

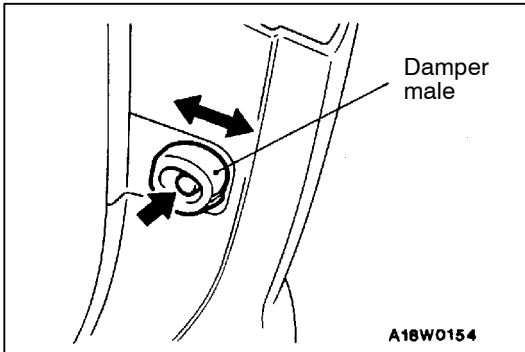
42400090053

TAILGATE FIT ADJUSTMENT

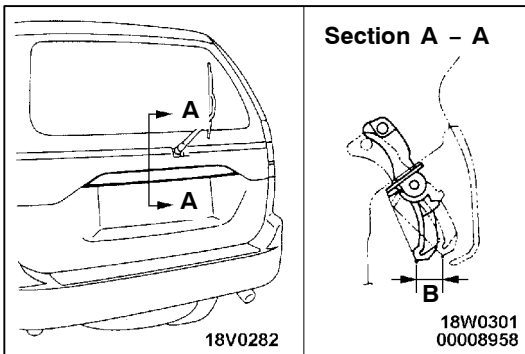
1. If the striker and latch do not mesh properly, move the striker up and down and to the left and right.



2. If the clearance around the tailgate is not even when the tailgate is closed, move the tailgate hinge forward and back or to the left and right.



3. Check the fitting of the damper male when the tailgate is closed. If the position is not correct, move the damper male forward and back.



TAILGATE HANDLE PLAY INSPECTION 42400180057

1. Check the tailgate handle play.
Standard value (B): 1.5 – 5.5 mm
2. If the play is not within the standard value range, check and replace the tailgate handle or the tailgate latch assembly.

TAILGATE ASSEMBLY

42400110179

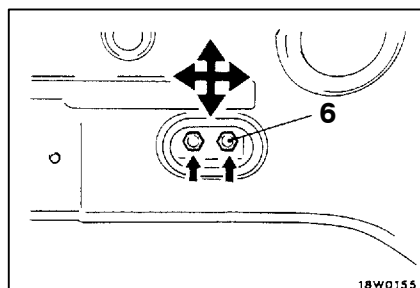
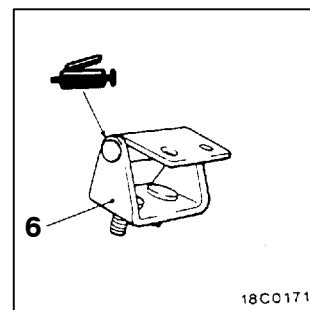
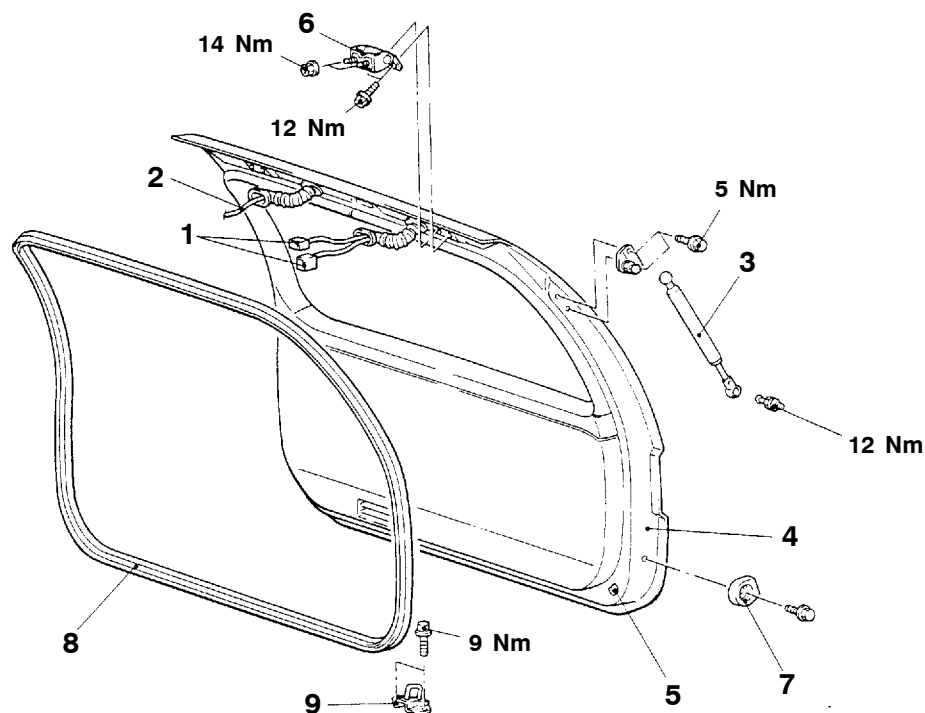
REMOVAL AND INSTALLATION

Pre-removal Operation

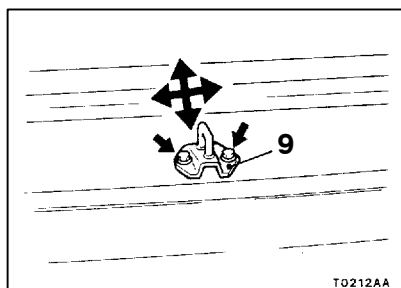
- Rear Headlining Removal

Post-installation Operation

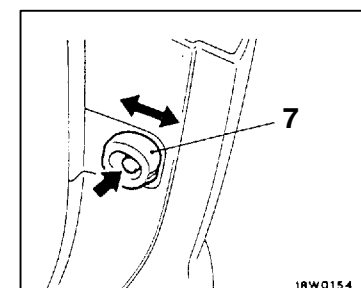
- Rear Headlining Installation
- Tailgate Fit Adjustment (Refer to P.42-43.)



Tailgate clearance adjustment



Tailgate height and tailgate striker meshing adjustment



Tailgate fit adjustment

Removal steps

1. Harness connector
2. Rear window washer tube connection
3. Tailgate gas spring
4. Tailgate assembly
5. Tailgate bumper
6. Tailgate hinge
7. Damper male

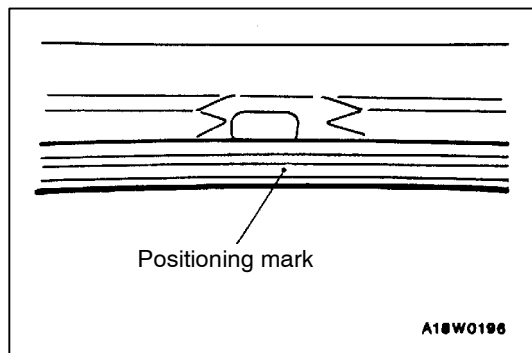
- A◄ 8. Tailgate opening weatherstrip

Striker removal

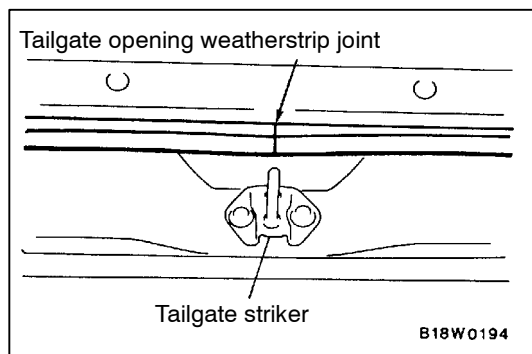
9. Striker

Caution

1. Do not disassemble or throw the tailgate gas spring into fire.
2. Punch a hole in the gas spring before disposal to release the gas inside.

**INSTALLATION SERVICE POINT****►A◄ TAILGATE OPENING WEATHERSTRIP INSTALLATION**

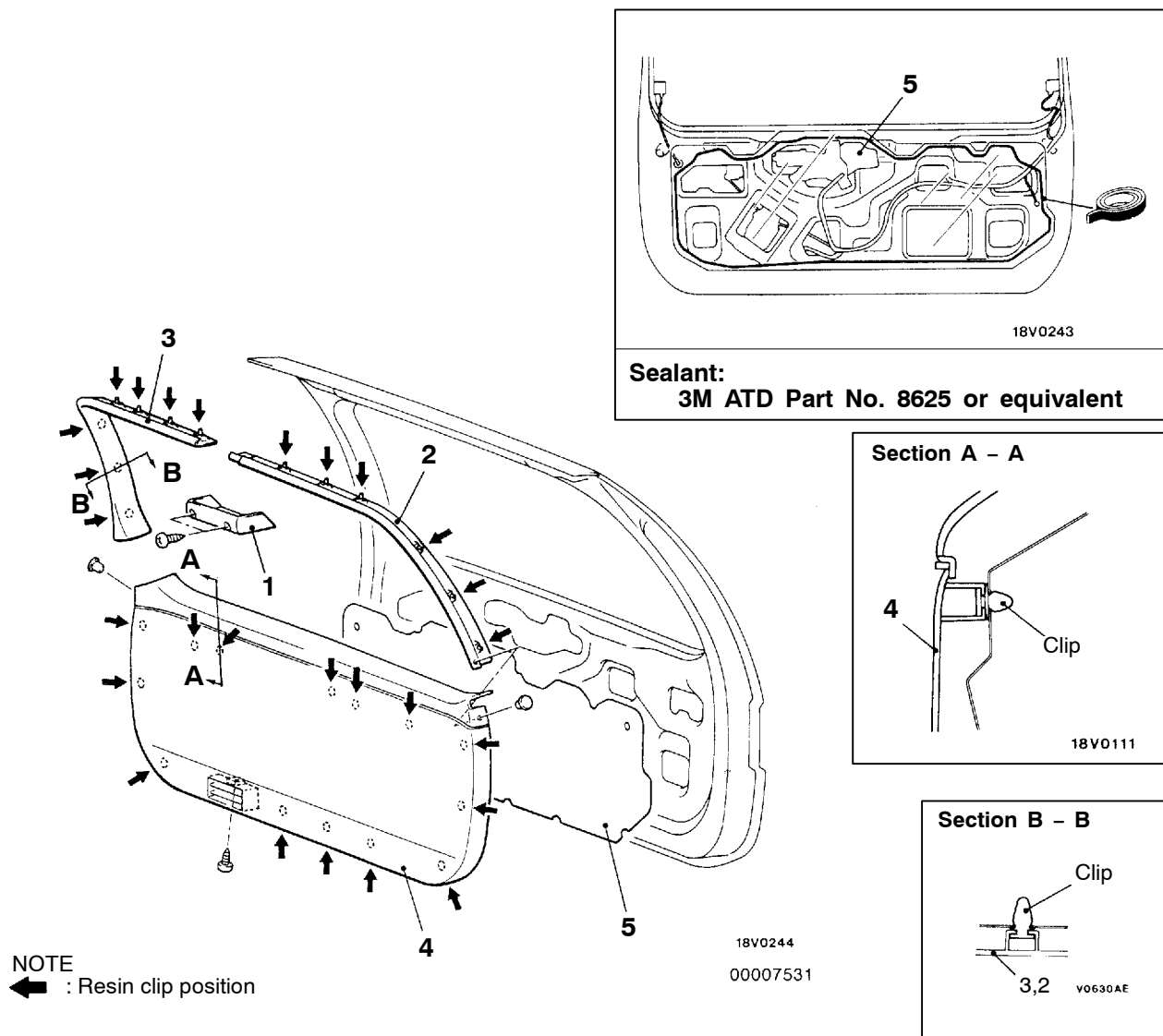
1. Check the identification colour, and then align the positioning mark with the top center of the tailgate to install the weatherstrip.
2. Check that the tailgate opening weatherstrip joint is centred.



TAILGATE TRIM AND WATERPROOF FILM

42400140062

REMOVAL AND INSTALLATION



Removal steps

1. Cover <vehicles without roof spoiler>
2. Tailgate upper trim <L.H.>

3. Tailgate upper trim <R.H.>
4. Tailgate lower trim
5. Waterproof film

TAILGATE HANDLE AND LATCH

42400170078

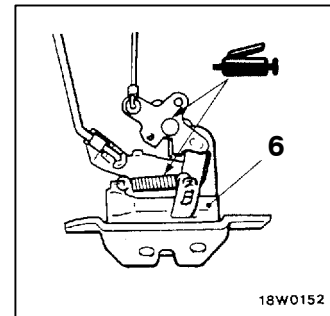
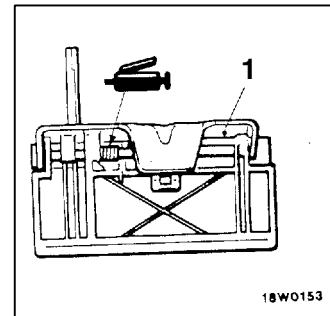
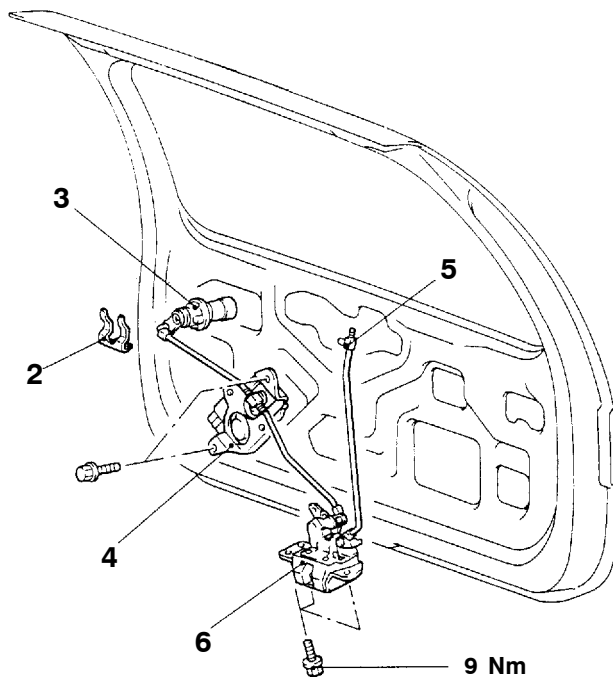
REMOVAL AND INSTALLATION

Pre-removal Operation

- Tailgate Garnish Removal (Refer to GROUP 51 – Grill, Moulding and Garnish.)
- Tailgate Trim and Waterproof Film Removal (Refer to P.42-47.)

Post-installation Operation

- Tailgate Handle Play Inspection (Refer to P.42-44.)
- Tailgate Trim and Waterproof Film Installation (Refer to P.42-47.)
- Tailgate Garnish Installation (Refer to GROUP 51 – Grill, Moulding and Garnish.)

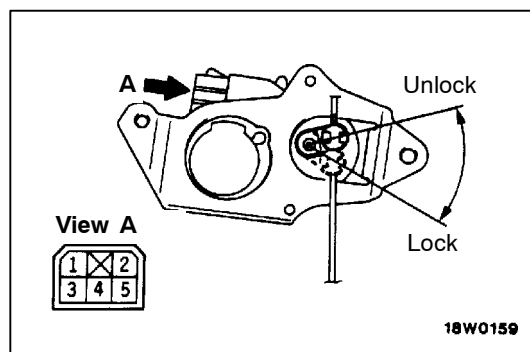


Tailgate lock key cylinder removal steps

1. Tailgate handle
2. Cylinder lock retainer
3. Tailgate lock key cylinder

Tailgate latch removal steps

4. Tailgate lock actuator
5. Holder
6. Tailgate latch assembly



INSPECTION

42400210039

TAILGATE LOCK ACTUATOR INSPECTION

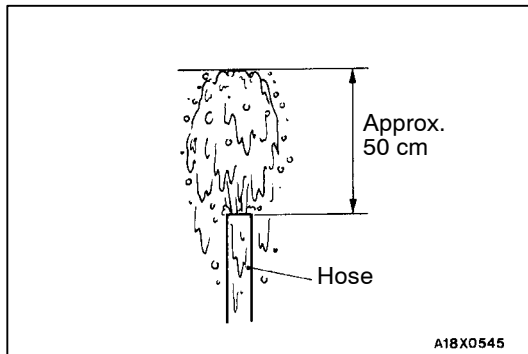
Rod position	Terminal No.		Rod movement
	1	2	
LOCK	⊕	⊖	LOCK → UNLOCK
UNLOCK	⊖	⊕	UNLOCK → LOCK

SUNROOF

42600050071

SEALANT AND ADHESIVE

Items	Specified sealant and adhesive	Remarks
Sunroof glass attaching screws	3M Stud locking Part No. 4170 or equivalent	Anaerobic sealant
Sunroof glass sealing	3M Part No. 8155 or equivalent	Quick fix adhesive

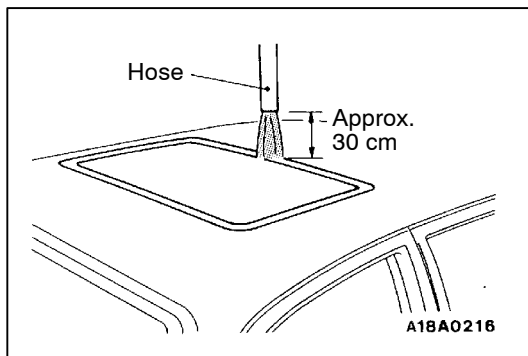


ON-VEHICLE SERVICE

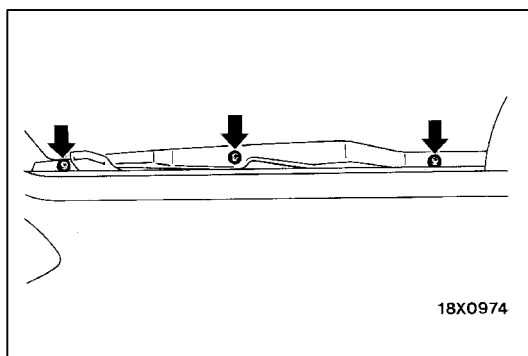
42600090141

WATER TEST

1. Close the roof lid tightly.
2. Hold the hose upward and adjust water fountain to approx. 50 cm high.



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



SUNROOF FIT ADJUSTMENT

42600100165

With the sunroof in the closed position, adjust the sunroof glass to 1 mm below roof surface at front of the glass and 1 mm above roof surface at rear of the glass and tighten the sunroof glass attaching screws.

OPERATION CHECK

42600260047

Check the following items. If defective, replace the sunroof control unit.

Caution

Check that the following items are normal before carrying out this operation check.

- (1) Installation condition of the sunroof assembly
- (2) Installation condition, deforms and foreign material of the sunroof drive cable
- (3) Unfitted sunroof lid glass
- (4) Sunroof switch and sunroof motor

No.	Sunroof initial position	Switch operation	Judgment (normal)
01	Fully closed	Ignition switch: ON 1. Sunroof switch: Open 2. Sunroof switch: Release the open button	1. Sunroof tilts up. 2. Sunroof stops before tilt-up finishes.
02	From fully closed position to tilted position	Ignition switch: ON ● Sunroof switch: Close	● Sunroof closes fully and stops
03	Fully closed	Ignition switch: ON ● Sunroof switch: Open	● Sunroof tilts up and stops.
04	Fully closed	Ignition switch: ON ● Sunroof switch: Open Block the sunroof between fully closed position and tilted position	● Sunroof moves until the blocking force reaches 98N. At this time check the current to the sunroof motor. If the motor stops at more than 15 A, the motor is normal. [approx. 15 A at 98 N]
05	Tilt	Ignition switch: ON ● Sunroof switch: Open Block the sunroof between fully tilted position* and fully open position.	● Sunroof moves until the blocking force reaches 98 N. Sunroof stops when the force has reached 98 N.
06	Fully open	Ignition switch: ON ● Sunroof switch: Close Block the sunroof at 200 mm before the sunroof is fully closed.	● Sunroof moves until the blocking force reaches 98 N. Sunroof stops in one seconds after the blocking force has reached 98 N.
07	Fully open	Ignition switch: ON ● Sunroof switch: Close Block the sunroof at 5 mm before the sunroof is fully closed.	● Sunroof moves toward close until the blocking force reaches 98 N. Then the sunroof moves back toward open when the blocking force reaches 98 N and stops after second.

NOTE

*: "Fully tilted position" is the position where the sunroof has tilted up and begins sliding.

No.	Sunroof initial position	Switch operation	Judgment (normal)
08	Fully open	Ignition switch: ON <ul style="list-style-type: none"> • Sunroof switch: Close Block the sunroof at 3 mm before the sunroof is fully closed. 	<ul style="list-style-type: none"> • Sunroof moves toward close until the blocking force reaches 98 N. Then the sunroof stops when the blocking force reaches 98 N. (The sunroof does not move back toward open.)
09	Fully open	Ignition switch: ON <ul style="list-style-type: none"> • Sunroof switch: Close Block the sunroof at 18 mm before the sunroof is fully closed. 	<ul style="list-style-type: none"> • Sunroof moves toward close before the blocking force reaches 98 N. Then the sunroof moves back toward open when the blocking force reaches 98 N and stops after one second.
10	Fully open	Ignition switch: ON <ul style="list-style-type: none"> • Sunroof switch: Close Block the sunroof at 16 mm before the sunroof is fully closed. 	<ul style="list-style-type: none"> • Sunroof moves toward close until the blocking force reaches 98 N. Then the sunroof stops when the blocking force reaches 98 N. (The sunroof does not move back toward open.)
11	Fully closed	Ignition switch: ON <ol style="list-style-type: none"> 1. Sunroof switch: Open 2. Sunroof switch: Release the open button 	<ol style="list-style-type: none"> 1. Sunroof tilts up. 2. Sunroof stops before tilt-up finishes.
12	Tilt up	Ignition switch: ON <ol style="list-style-type: none"> 1. Sunroof switch: Open 2. Ignition switch: OFF (before the sunroof is fully open) 	<ol style="list-style-type: none"> 1. Sunroof moves toward open. 2. Sunroof stops.
13	Fully open	Ignition switch: ON <ol style="list-style-type: none"> 1. Sunroof switch: Close 2. Ignition switch: OFF (before tilt-up finishes) 	<ol style="list-style-type: none"> 1. Sunroof tilts up. 2. Sunroof stops
14	Tilt up	Ignition switch: ON <ul style="list-style-type: none"> • Sunroof switch: Open Block the sunroof between fully tilted position and fully open position. 	<ul style="list-style-type: none"> • Sunroof moves toward close until the blocking force reaches 98 N. Then the sunroof stops when the blocking force reaches 98 N.

SUNROOF

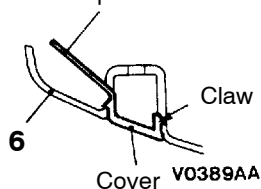
REMOVAL AND INSTALLATION

Post-installation Operation

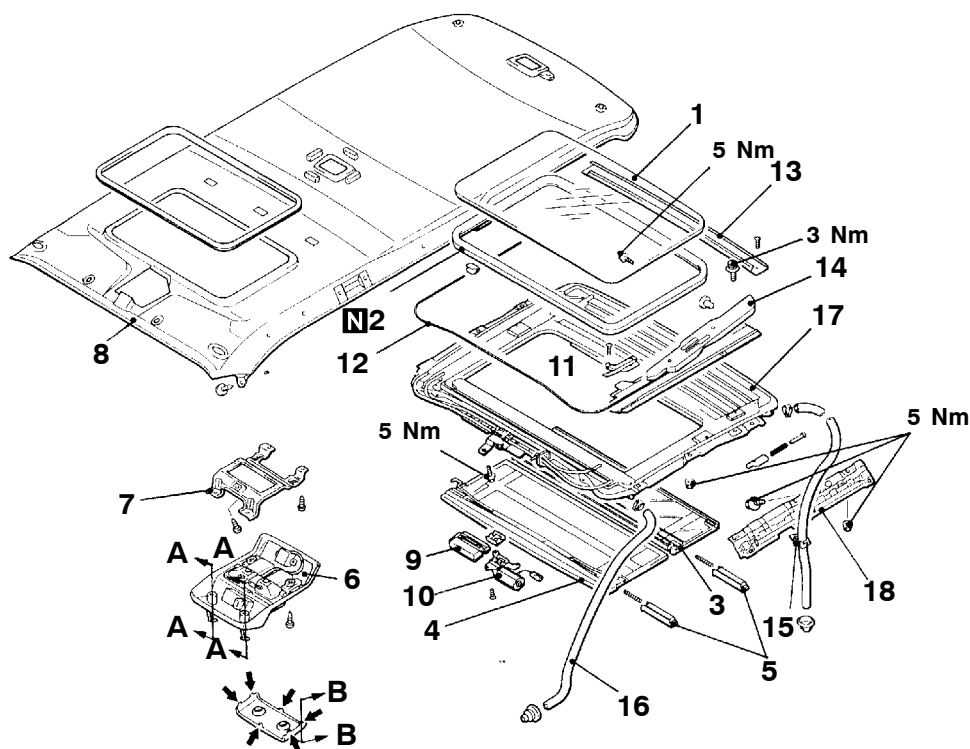
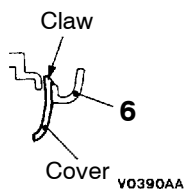
- Sunroof Fit Adjustment (Refer to P.42-49.)
- Water Test (Refer to P.42-49.)

Section A – A

Removal prevention fork



Section B – B



NOTE

← : Shows the claw position

V0391AA

00007533

6. Sunroof switch map lamp assembly

8. Headlining
10. Sunroof motor

Sunroof glass seal removal steps



1. Sunroof glass
2. Sunroof glass seal

Sunroof sunshade removal steps



1. Sunroof glass
3. Rear sunroof sunshade
4. Front sunroof sunshade
5. Sunshade slide block

Sunroof-ECU

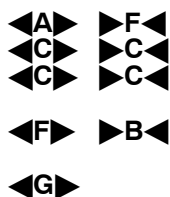


6. Sunroof switch map lamp assembly
7. Bracket
8. Headlining
9. Sunroof-ECU

Sunroof motor removal steps

6. Sunroof switch map lamp assembly
7. Bracket

Sunroof guide assembly removal steps



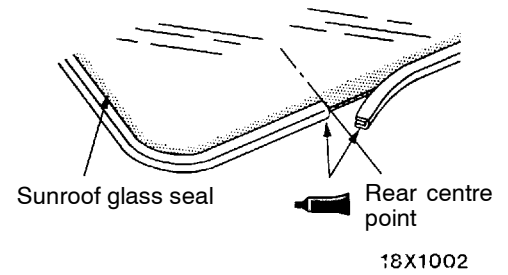
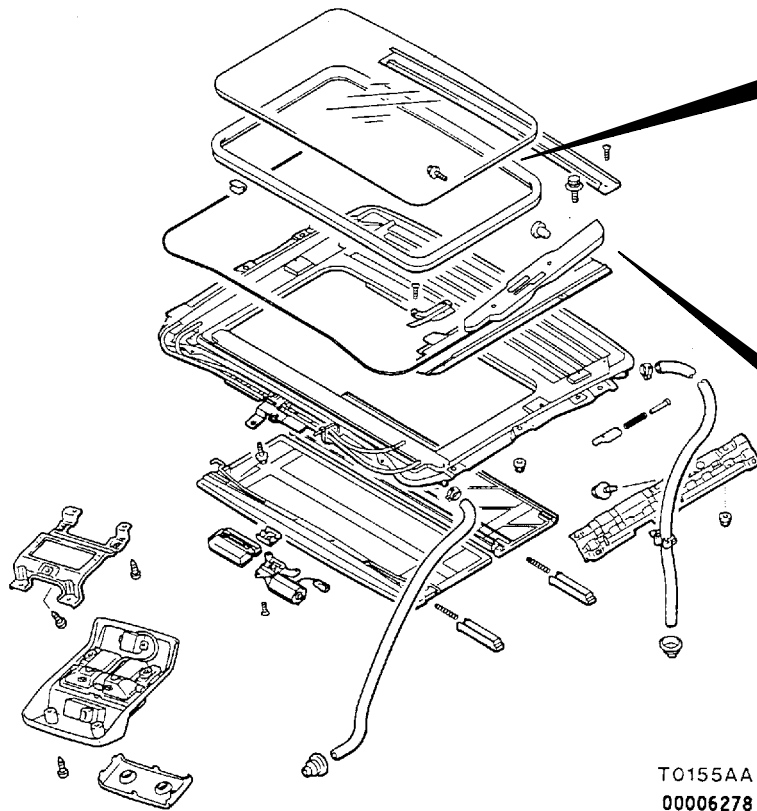
1. Sunroof glass
3. Rear sunroof sunshade
4. Front sunroof sunshade
11. Locator
12. Sunroof drive cable connection
13. Drain channel
14. Sunroof guide assembly

Sunroof assembly

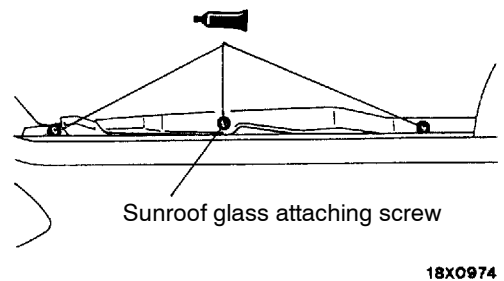


6. Sunroof switch map lamp assembly
7. Bracket
8. Headlining
15. Clip
16. Drain hose
17. Sunroof assembly
18. Set bracket

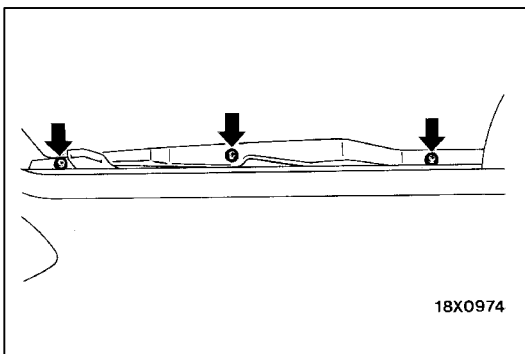
ADHESION POINTS



Adhesive:
3M Part No. 8155 or equivalent



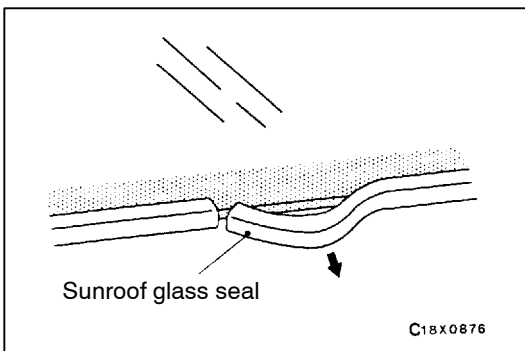
Sealant:
3M Stud locking Part No. 4170 or equivalent



REMOVAL SERVICE POINTS

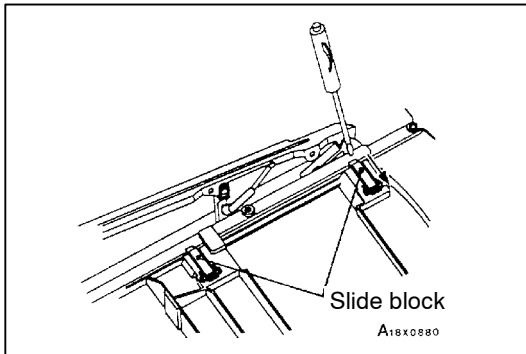
◀A▶ SUNROOF GLASS REMOVAL

1. Tilt the sunroof.
2. Remove the screws attaching sunroof glass to the guide assemblies, and then lift the glass out of roof opening.



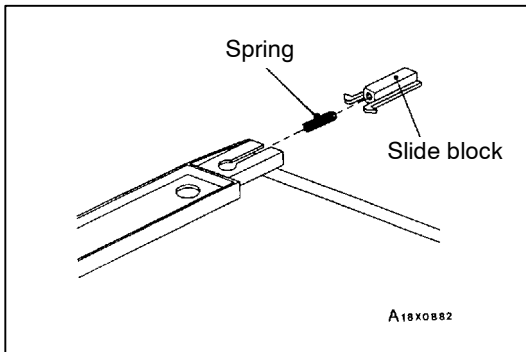
◀B▶ SUNROOF GLASS SEAL REMOVAL

Remove the seal by pulling it off of glass starting at the splice joint.



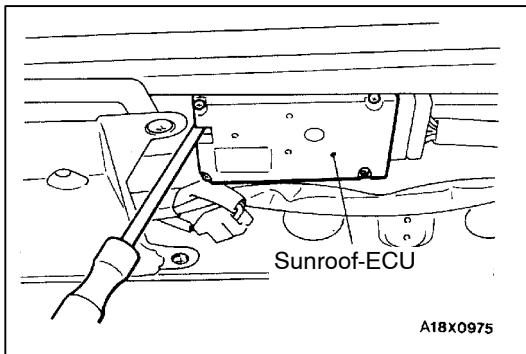
◀C▶ REAR SUNROOF SUNSHADE/FRONT SUNROOF SUNSHADE REMOVAL

1. Remove the rear sunroof sunshade first by pushing in the slide blocks to release them from the sunroof guide assembly on one side of the sunshade. Remove the rear sunroof sunshade out of roof opening.
2. Repeat the step 1 for the front sunroof sunshade.



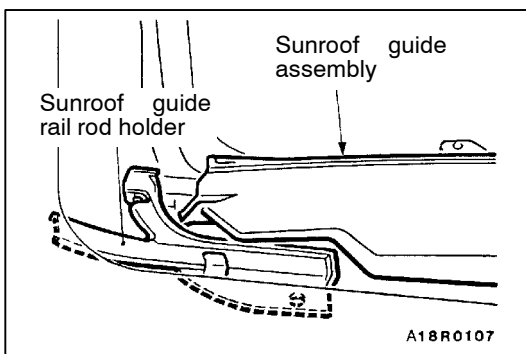
◀D▶ SUNSHADE SLIDE BLOCK REMOVAL

Squeeze together your fingers on inboard end of the slide block to allow the slide block to slide out of it's channel, and then remove the slide block and spring.



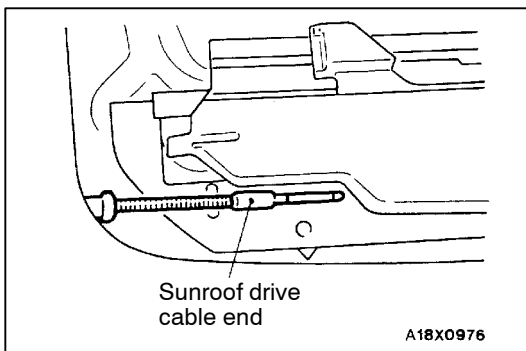
◀E▶ SUNROOF-ECU REMOVAL

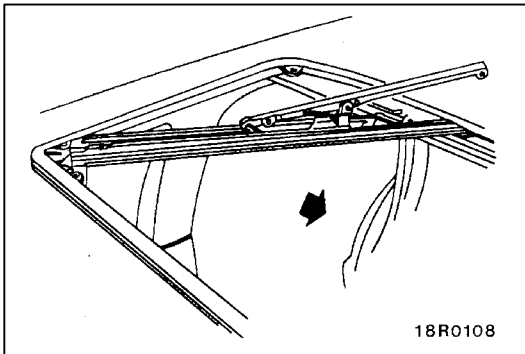
1. Close the sunroof glass fully.
2. Insert a flat-tipped screwdriver, place it on the tab, and then press it to the right.
3. Lower sunroof-ECU and slide to left.



◀F▶ SUNROOF DRIVE CABLES REMOVAL

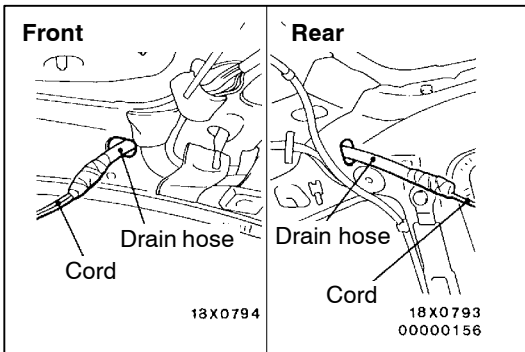
1. Tilt the sunroof guide assembly and then remove the sunroof guide rail rod holder.
2. Close the sunroof guide assembly and disconnect the sunroof drive cable end from the sunroof guide assembly.





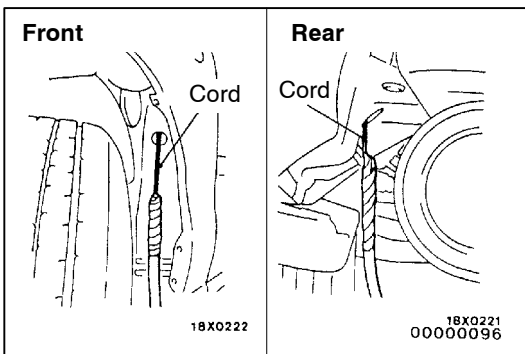
◀G▶ SUNROOF GUIDE ASSEMBLY REMOVAL

1. Slide the roof drip rear channel backward, and then remove the guide assembly screws, the rear screw and spacer.
2. Slide the rear of the guide assembly toward center of the vehicle and remove the guide assembly.



◀H▶ DRAIN HOSE REMOVAL

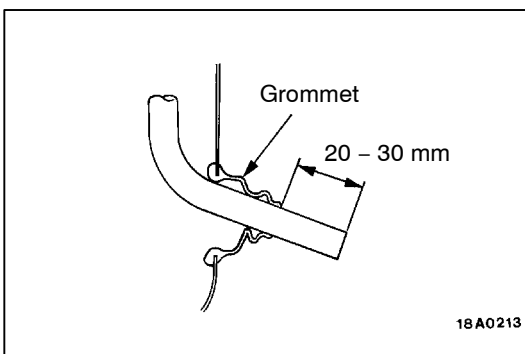
Remove the grommet. Tie a cord to the end of the drain hose, wind plastic tape around it so that there is no unevenness, and pull the drain hose out into the wheel house.



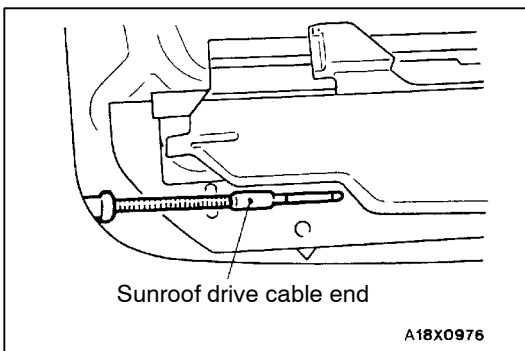
INSTALLATION SERVICE POINTS

▶A◀ DRAIN HOSE INSTALLATION

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



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

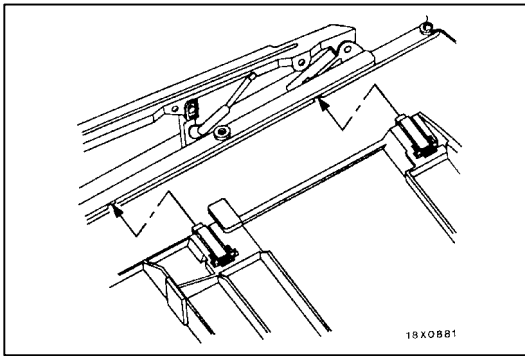


▶B◀ SUNROOF DRIVE CABLES INSTALLATION

Caution

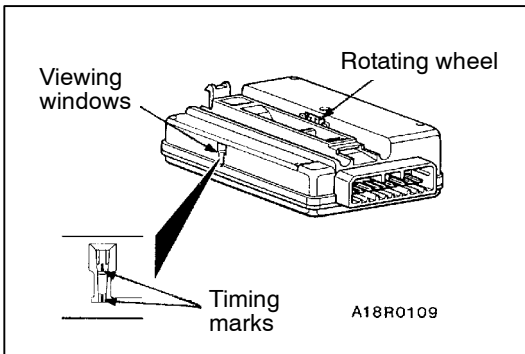
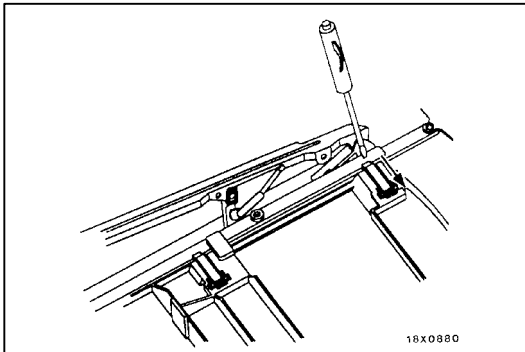
If cables are kinked, replace them. Always replace the cables in pair and grease them before installation.

Close the sunroof guide assembly and install the sunroof drive cable end to the sunroof guide assembly.



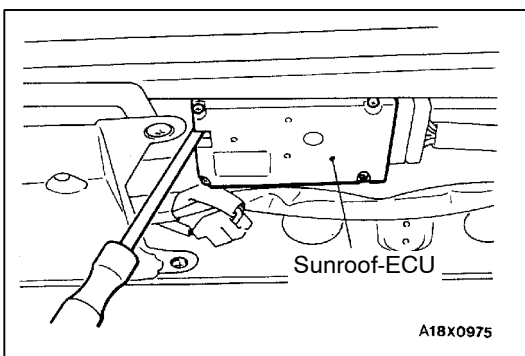
►C◄ FRONT SUNROOF SUNSHADE/REAR SUNROOF SUNSHADE INSTALLATION

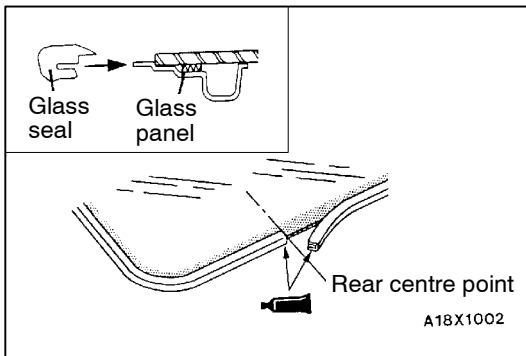
1. Install the front sunroof sunshade first by inserting the slide blocks on the right side of the sunshade into the lower slide position of the right guide assembly.
2. Push the sunshade slide blocks on the left side of the sunshade into the sunshade to allow the front sunroof sunshade to drop into position. Once in position, engage the slide blocks into the lower channel of the left guide assembly.
3. Push the front sunroof sunshade to full forward position.
4. Position the rear sunroof sunshade so that the stop tabs are against the stop bumpers on the guide assembly. Engage the right side slide blocks of the upper half of the sunshade into the upper channel on the right guide assembly. Engage the slide blocks on the left side of the sunshade into the upper channel in the left guide assembly.
5. Slide the sunshade back and forth to check that it functions smoothly.



►D◄ SUNROOF-ECU INSTALLATION

1. Look into the “viewing windows” while turning the rotating wheel. Turn the rotating wheel until the white timing marks appear. When the white timing marks appear in the “viewing windows” at the same time, stop turning the rotating wheel.
2. Close the sunroof fully. Install the timed sunroof-ECU. Make sure that the sunroof cable is properly inserted into the sunroof-ECU.
3. Insert a flat-tipped screwdriver, place it on the tab, and press it to the right, being careful not to pinch wiring.





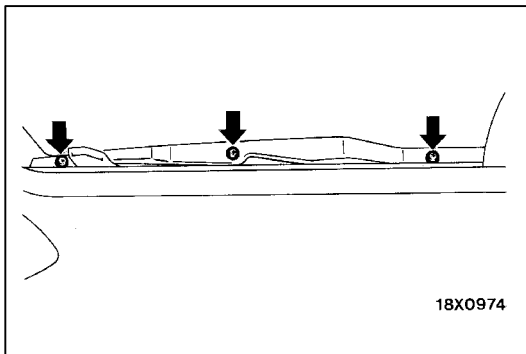
►E◄ SUNROOF GLASS SEAL INSTALLATION

1. Starting at the rear centre of the sunroof glass, begin installing the seal by pushing it onto the edge of the glass panel and gently pulling on it while installing.
2. Approximately 102 mm before completing installation, lay the end of the seal over top of the beginning of the seal. Cut the seal so there is an extra 3.18 mm of the seal past the point where the seal lines up with the beginning of the seal.
3. Apply the specified adhesive to the splice joint area where two ends of the seal meet.

Specified adhesive:

3M Part No. 8155 or equivalent

4. With the approximately 102 mm of the seal unattached, push two ends of the seal together at glue joint.
5. Install remainder of the seal by pushing the seal onto the edge of the glass panel. The 3.18 mm of extra seal material should strengthen the seal at the splice joint.

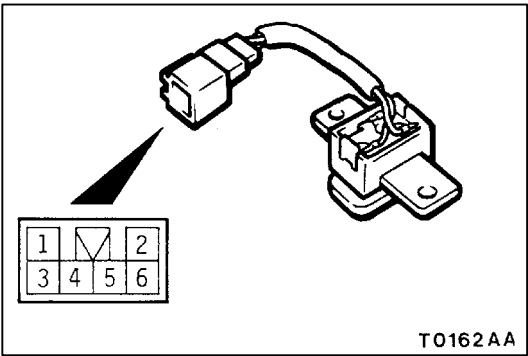


►F◄ SUNROOF GLASS INSTALLATION

1. Position the sunroof glass onto the guide assemblies and align the mounting holes.
2. Apply the specified sealant to the sunroof glass attaching screws and install them, going to the next step before tightening.

Specified sealant:

3M Stud locking Part No. 4170 or equivalent



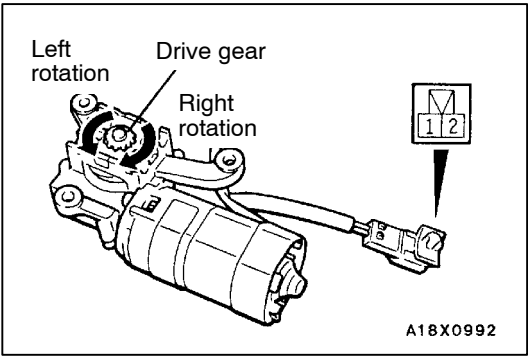
INSPECTION

42600160132

SUNROOF SWITCH CHECK

Operate the sunroof switch and check the continuity between each of the terminals.

Switch position	Terminal No.		
	1	3	4
OPEN		○	○
OFF			
CLOSE	○		○



SUNROOF MOTOR CHECK

42600250105

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

Terminal No.		Drive gear rotation direction
1	2	
⊖	⊕	Right
⊕	⊖	Left

GROUP 42

BODY

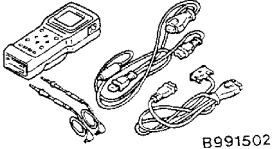
GENERAL

OUTLINE OF CHANGE

The following service procedures have been added due to the addition of keyless entry system.

KEYLESS ENTRY SYSTEM

SPECIAL TOOL

Tool	Number	Name	Use
 B991502	MB991502	MUT-II sub assembly	Encrypted codes recording

TROUBLESHOOTING

DIAGNOSIS FUNCTION

INPUT SIGNAL INSPECTION PROCEDURE

1. Connect the MUT-II or a voltmeter to the diagnosis connector to check input signal. (Refer to Basic Manual GROUP 00 – How to Use Troubleshooting/Inspection Service Points.)
2. The following input signals can be checked:
 - Ignition switch (IG1, ACC)
 - Driver's door switch
 - Every door switch
 - Key reminder switch
 - Driver's door lock actuator
 - Keyless entry transmitter (LOCK, UNLOCK)

NOTE

If the MUT-II cannot check all the input signals, the diagnosis circuit may be defective.

ETACS FUNCTION ADJUSTMENT PROCEDURE

The following functions can be adjusted by operating input switches. The adjustments will be stored in the ECU memory even after a battery cable is disconnected:

- Switching of keyless entry answerback function (From activation to desactivation, or viceversa)
 - Initialisation of the above function (From desactivation to activation)
1. Entry conditions to the adjustment mode
The ETACS-ECU sounds a buzzer once when all of the following conditions are satisfied, and then enters the adjustment mode:
 - Diagnosis control: ON (Connect the MUT-II or earth the diagnosis connector No. 1 terminal.)
 - Key reminder switch: OFF
 - Ignition switch: LOCK (OFF)
 - Door switch: OFF (Close the door.)
 - If all of the conditions above are satisfied, the tailgate switch will be turned on for more than 10 seconds.

2. Exit conditions from the adjustment mode

The ETACS-ECU cancels the adjustment mode when any of the following conditions is satisfied:

- Diagnosis control: OFF (Disconnect the MUT-II or disconnect the diagnosis connector No. 1 terminal from the earth.)
- Key reminder switch: ON (Pull out the ignition key.)
- Ignition switch: Other than LOCK (OFF)
- Door switch: ON (Open the door.)
- After the ETACS-ECU has entered the adjustment mode, no adjustment is made within 3 minutes (If any adjustment is made within 3 minutes, the ETACS-ECU monitors a adjustment operation for other 3 minutes.)
- Other warning buzzer(s) sounds

3. Adjustment of functions

Function	Adjustment procedure
Keyless entry answerback function	<p>When the transmitter lock switch is turned on twice continuously within 2 seconds, the lock answerback function toggles on and off.</p> <ul style="list-style-type: none"> ● If the function toggles on, the buzzer sounds once (default condition). ● If the function toggles off, the buzzer sounds twice. <p>When the transmitter unlock switch is turned on twice continuously within 2 seconds, the unlock answerback function toggles on and off.</p> <ul style="list-style-type: none"> ● If the function toggles on, the buzzer sounds once (default condition). ● If the function toggles off, the buzzer sounds twice.
Initialization of all the ETACS functions (From desactivation to activation)	<p>When the tailgate switch remains on for more than 20 seconds, the buzzer sounds twice and the answerback function of the keyless entry system is initialized.</p> <p>The buzzer will sound in 10 seconds (indicating that the ETACS-ECU enters the adjustment mode), but the washer switch must remains off for 20 seconds in order to initialize all the functions.</p> <p>If the tailgate switch remains on for more than 20 seconds without entering the adjustment mode, the system enters the adjustment mode in 10 seconds, but does not initialize all of the functions.</p>

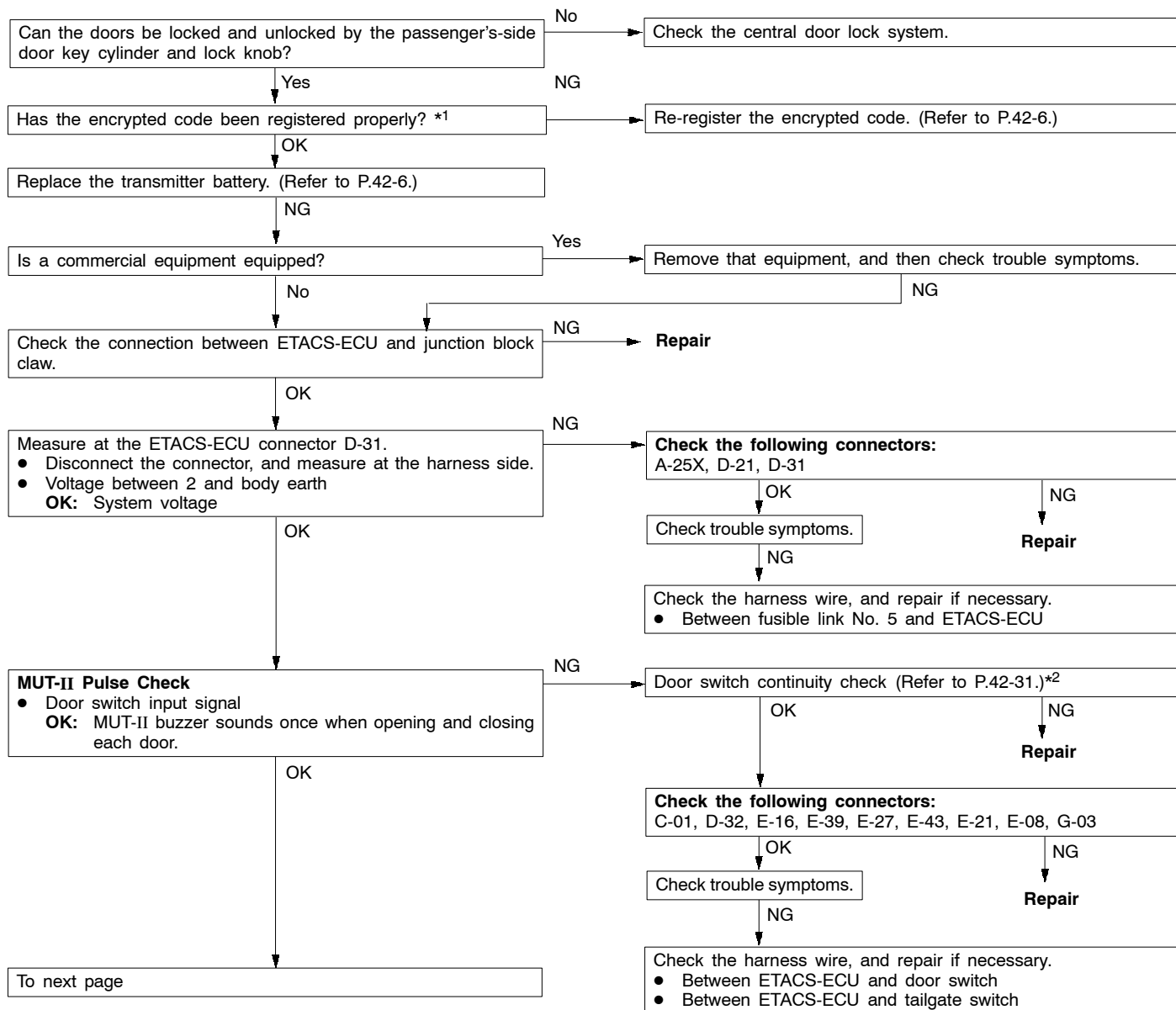
INSPECTION CHART FOR TROUBLE SYMPTOMS

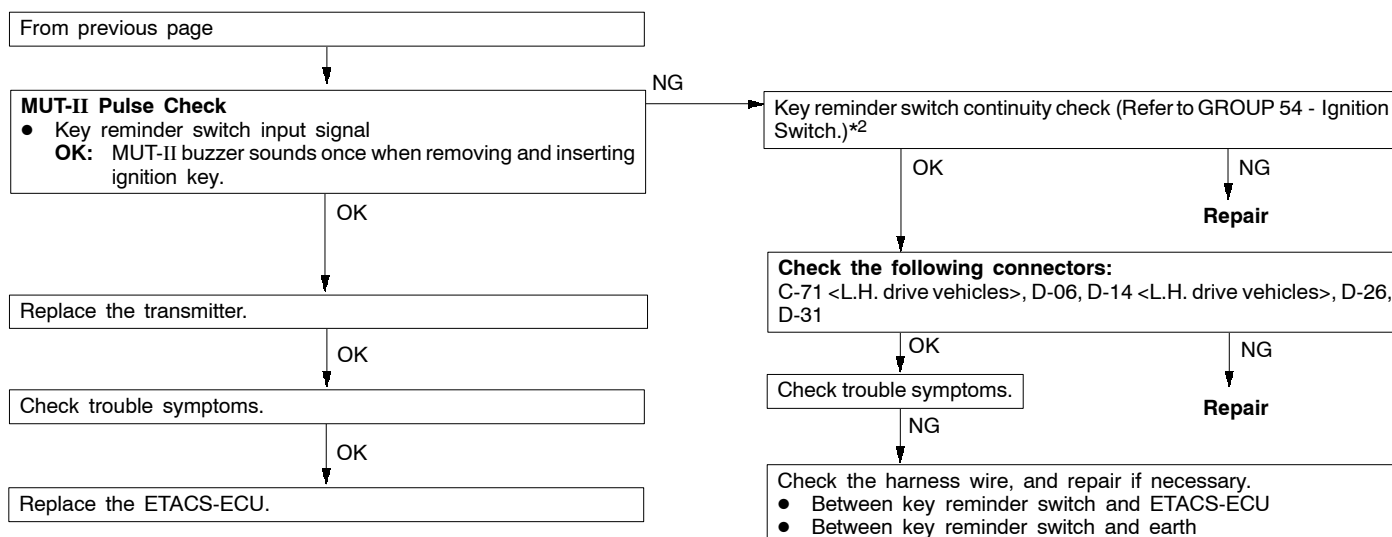
Trouble symptom	Inspection procedure No.	Reference page
None of the doors can be locked or unlocked using the transmitter.	1	42-3
All of the doors can be locked and unlocked using the transmitter, but the room lamp or turn-signal lamp does not flash or illuminate. (However, the room lamp operates normally when the doors are opened and closed.)	2	42-4
Encrypted codes cannot be registered.	3	42-5

INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS

INSPECTION PROCEDURE 1

None of the doors can be locked or unlocked using the transmitter.	Probable cause
The cause may be a malfunction of the transmitter or ETACS-ECU, defective connection between ETACS-ECU and junction block, defective power supply voltage to ETACS-ECU input line due to commercial equipment, or the lock and unlock signals are not being sent to the ETACS-ECU.	<ul style="list-style-type: none"> • Malfunction of transmitter • Malfunction of ETACS-ECU • Malfunction of key reminder switch • Malfunction of wiring harness or connector • Malfunction of door switch • Defective connection between ETACS-ECU and junction block • Defective power supply voltage to ETACS-ECU input line due to commercial equipment





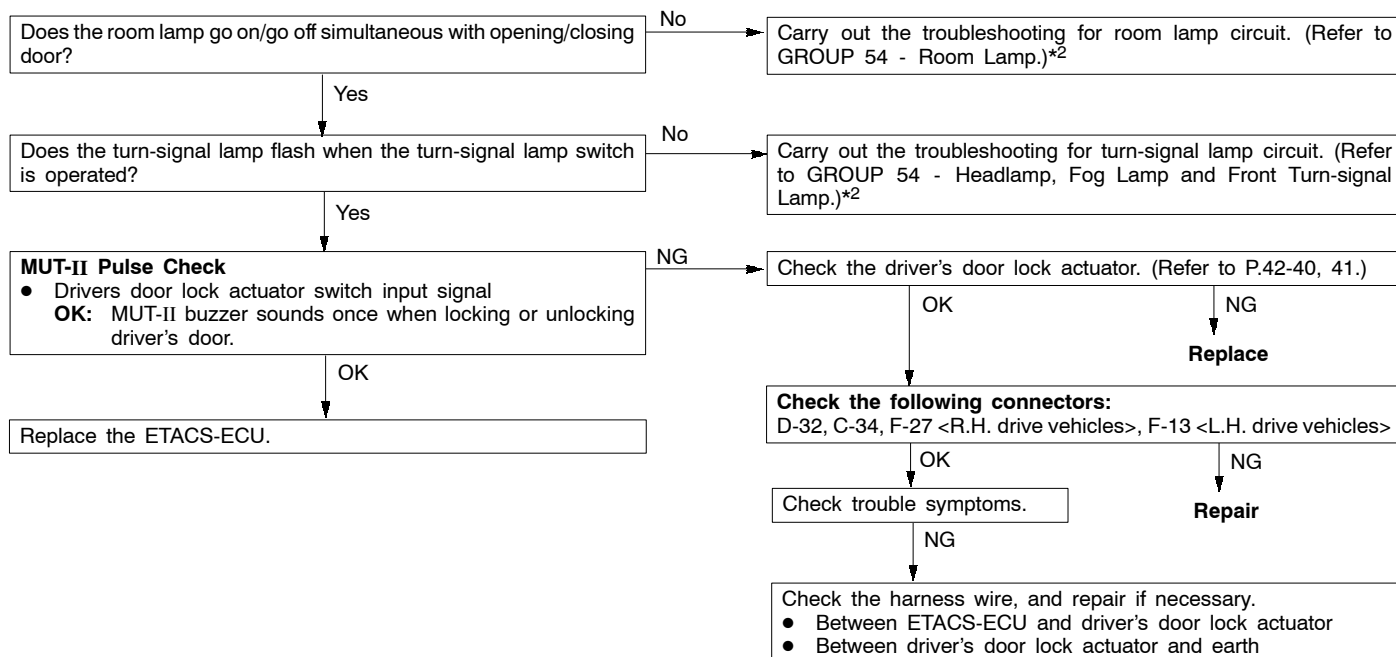
NOTE

*1: This should be done if a transmitter, receiver or ETACS-ECU has been replaced, and if a secret code has not been registered properly.

*2: For service points, refer to Basic Manual.

INSPECTION PROCEDURE 2

All of the doors can be locked and unlocked using the transmitter, but the room lamp or turn-signal lamp does not flash or illuminate. (However, the room lamp operates normally when the doors are opened and closed.)	Probable cause
<p>If neither room lamp nor turn-signal lamp flash/illuminate, the cause may be a malfunction of the ETACS-ECU or driver's-side door lock actuator.</p> <p>If either room lamp or turn-signal lamp does not flash/illuminate, the cause may be a malfunction of the room lamp circuit or turn-signal lamp.</p>	<ul style="list-style-type: none"> • Malfunction of ETACS-ECU • Malfunction of driver's door lock actuator • Burnt turn-signal lamp bulb • Malfunction of connector or wiring harness

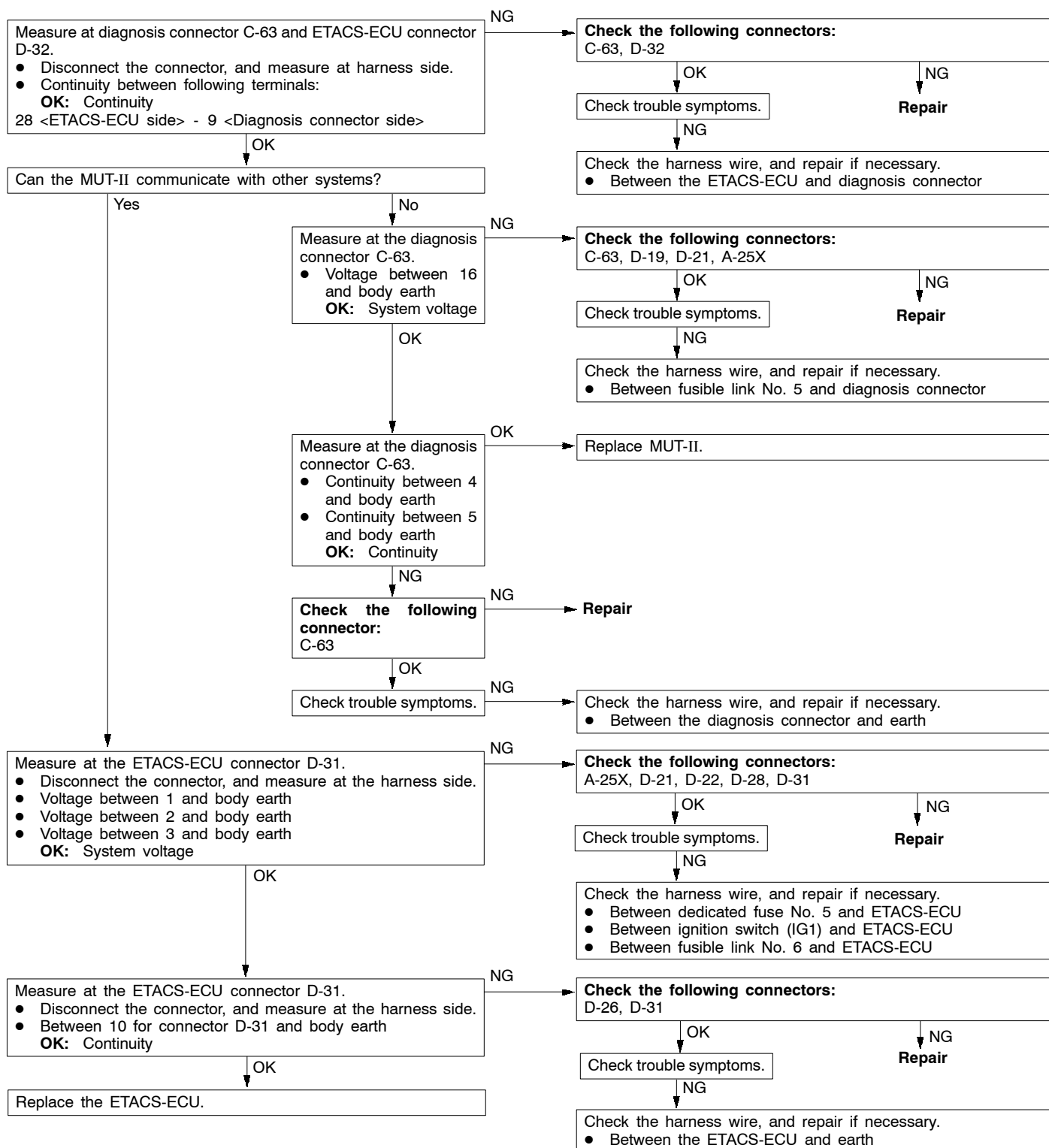


NOTE

*2: For service points, refer to Basic Manual.

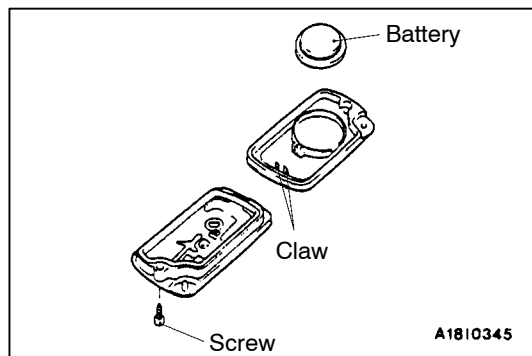
INSPECTION PROCEDURE 3

Encrypted codes cannot be registered.	Probable cause
The cause may be a malfunction of the diagnosis connector, ETACS-ECU or diagnosis output circuit.	<ul style="list-style-type: none"> • Malfunction of MUT-II • Malfunction of connector or wiring harness • Malfunction of ETACS-ECU



NOTE

*2: For service points, refer to Basic Manual.



ON-VEHICLE SERVICE

HOW TO REPLACE A BATTERY OF THE TRANSMITTER

1. Remove the set screw to remove the battery from the transmitter.
2. Install a battery with its (+) side face-down.

Battery required for replacement:

Coin type battery CR2032

3. Insert the claw, and then assemble the transmitter.

Caution

Do not let water or dust stick to the inside of the transmitter when it is open. Also, do not touch the precision electronic device.

4. Check to see if the keyless entry system operates.

SECRET CODE REGISTRATION METHOD

Each individual secret code is registered inside the transmitter, and so it is necessary to register these codes with the EEPROM inside the keyless entry receiver-ECU in the following cases.

- When either the transmitter or keyless entry receiver-ECU is replaced;
- If a second transmitter is to be used;
- If it appears that a problem is occurring because of faulty registration of a code.

A maximum of two different codes can be stored in the memory area of the EEPROM (two different transmitters can be used). When the code for the first transmitter is registered, the previously-registered codes for two transmitters are cleared. Therefore, if you are using more than two transmitters or are adding a second transmitter, the codes for all the transmitters must be registered at the same time.

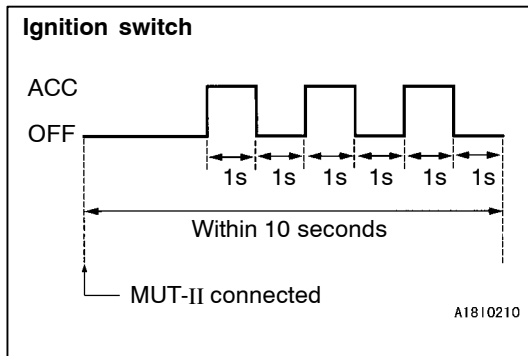
1. Check that the doors lock normally when the key is used.
2. Connect the MUT-II to the diagnosis connector.

NOTE

This will connect terminal (1) of the diagnosis connector to earth, and the system will be in secret code registration standby mode.

Caution

Always turn the ignition switch to OFF before connecting and disconnecting the MUT-II.



3. Within 10 seconds after connecting the MUT-II, turn the ignition switch to ACC ON for 1 second and then to OFF for 1 second; repeat this procedure three times.

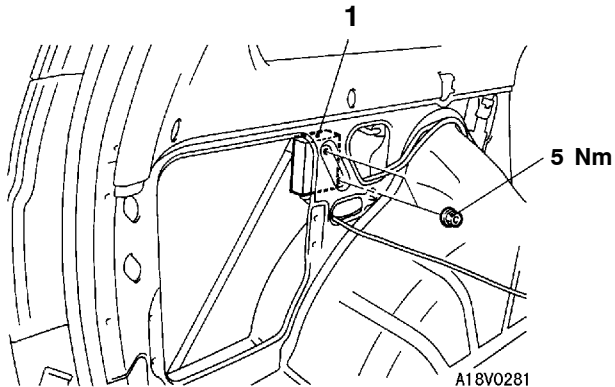
NOTE

The doors will lock and unlock once at this time and the system will switch to registration mode.

4. Press the lock switch or unlock switch of the transmitter switch, and then press it two times within 10 seconds of the first press. This will register the code.
5. After registration is completed, the doors will be automatically locked and unlocked once.
6. If you are using two transmitters or have added a second transmitter, the same registration procedure should be carried out for the second transmitter, and it should be carried out within one minute after registration of the code for the first transmitter has been completed. After the second registration is completed, the doors will be automatically locked and unlocked once.
7. Registration mode will be terminated under the following conditions.
 - When the secret codes for two transmitters have been registered;
 - When one minute has passed after registration mode started;
 - If the MUT-II is disconnected (earth is released);
 - If the ignition switch is turned to ON;
8. After registration mode has been completed, carry out the followings to make sure that the keyless entry system operates.
 - Pull the ignition key out.
 - Close the all doors.

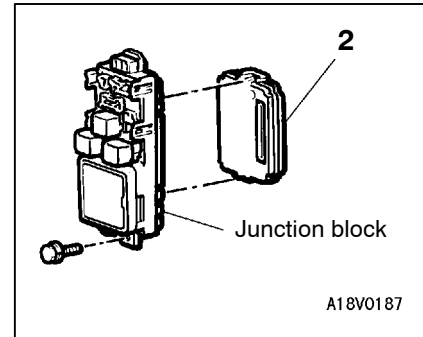
KEYLESS ENTRY SYSTEM

REMOVAL AND INSTALLATION



Keyless entry receiver-ECU removal steps

- Quarter trim, lower (Refer to GROUP 51 - Trims.)*2
1. Keyless entry receiver-ECU



ETACS-ECU removal

2. ETACS-ECU

NOTE

*2: For service points, refer to Basic Manual.

GROUP 42

BODY

GENERAL

OUTLINE OF CHANGE

The following service procedures have been established due to the changes on the rear door lock actuator assembly and the addition of the rear door plate. The other service procedures are the same as before.

DOOR

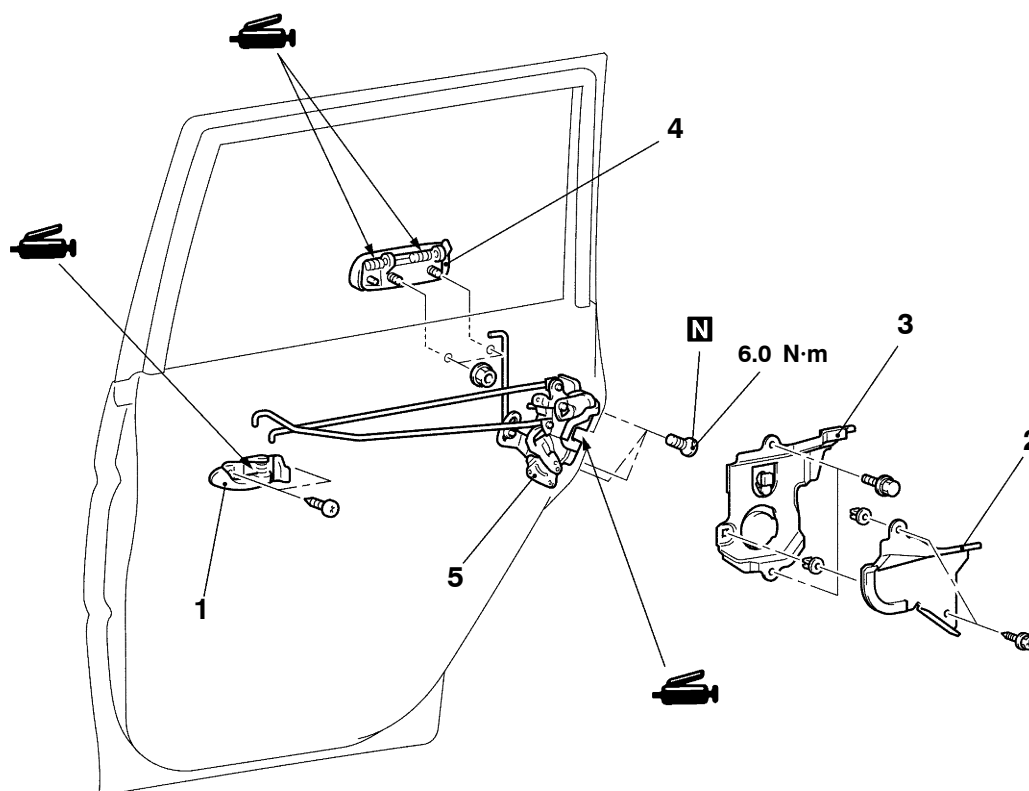
REMOVAL AND INSTALLATION

Pre-removal Operation

- Door Trim Removal

Post-installation Operation

- Door Inside Handle Play Check
- Door Outside Handle Play Check
- Door Trim Installation
- Door Fit Adjustment

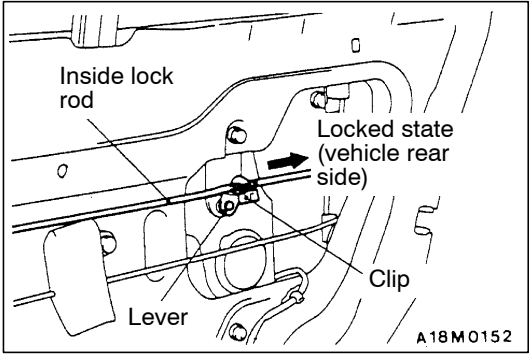


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Removal steps

1. Door inside handle
 - Waterproof film
2. Rear door plate

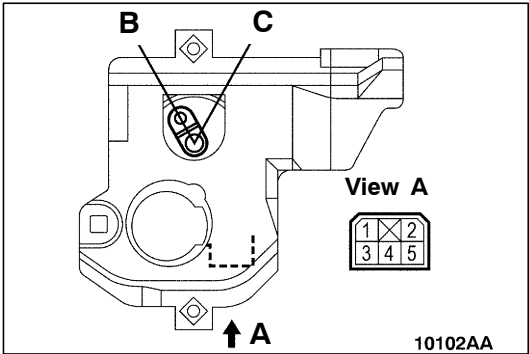
- A◄
3. Rear door lock actuator assembly
 4. Door outside handle
 5. Door latch assembly



INSTALLATION SERVICE POINT

►A◄ REAR DOOR LOCK ACTUATOR ASSEMBLY

1. Lock the inside lock rod.
2. Move the door lock actuator lever to the lock position, and then install the actuator.
3. Fit the clip into the inside lock rod.



INSPECTION

REAR DOOR LOCK ACTUATOR CHECK

<Vehicles with central door locking system>

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