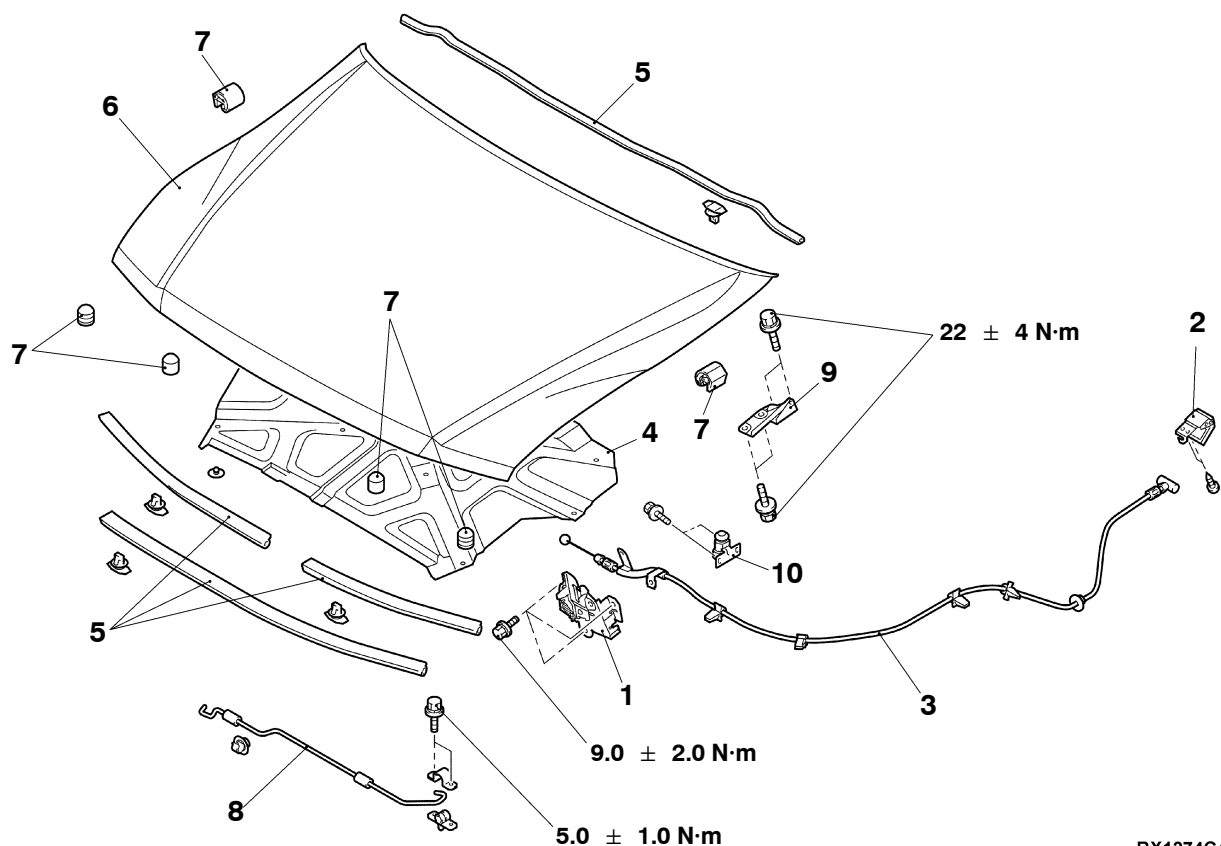
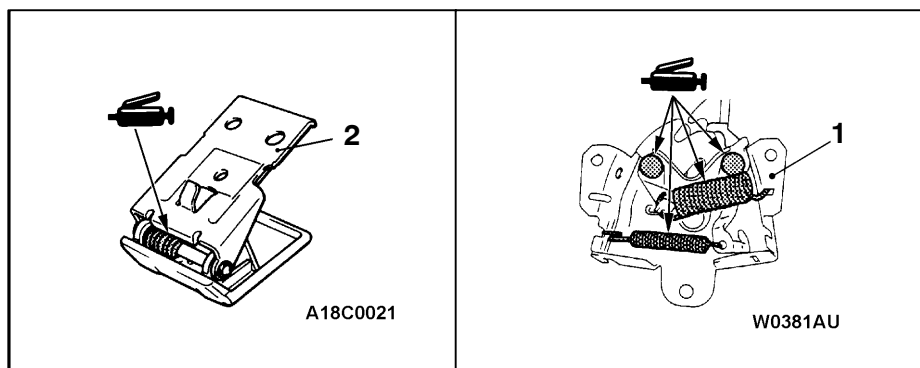


HOOD

REMOVAL AND INSTALLATION



BX1274CA



Hood latch removal steps

- Radiator grille
(Refer to GROUP 51.)
1. Hood latch

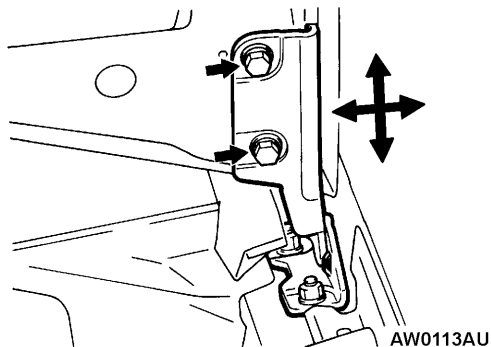
Hood lock release cable removal steps

2. Hood lock release handle
3. Hood lock release cable

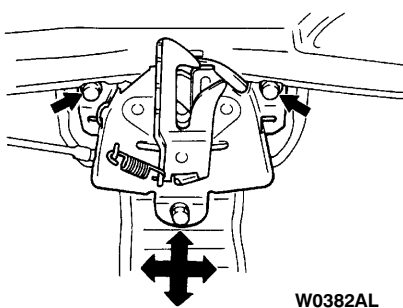
Hood removal steps

4. Hood silencer
5. Hood weatherstrip
 - Hood top mark
(Refer to GROUP 51.)
 - Washer hose
(Refer to GROUP 51.)
6. Hood
7. Hood bumper
8. Hood support rod
 - Front deck garnish
(Refer to GROUP 51.)
9. Hood hinge
10. Hood switch
<Vehicles with theft-alarm system>

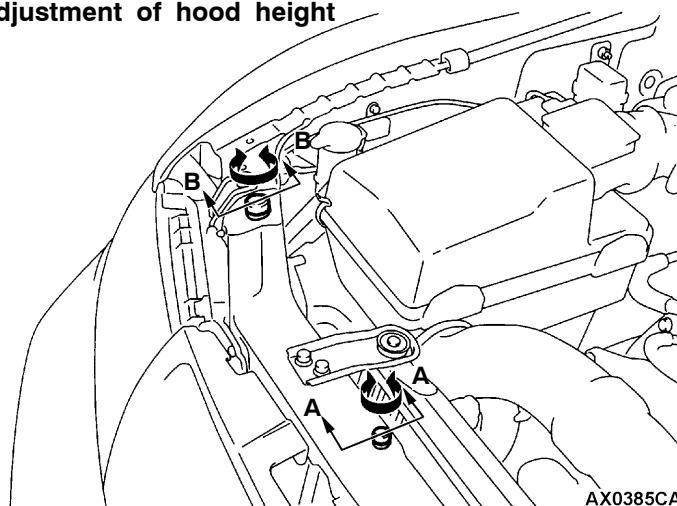
Adjustment of clearance around hood



Adjustment of hood step and hood striker linkage

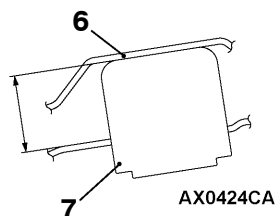
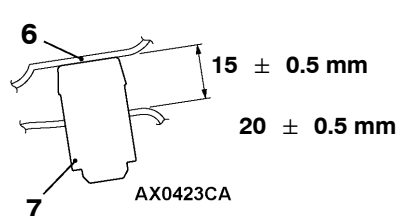


Adjustment of hood height

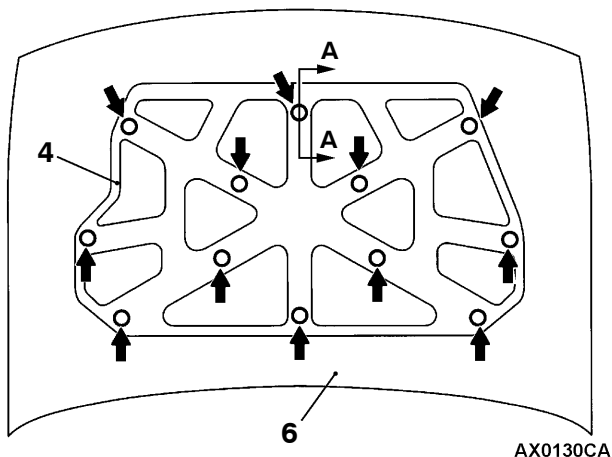


Section A – A

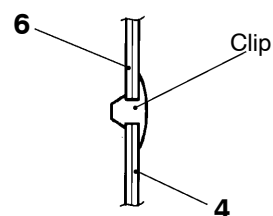
Section B – B



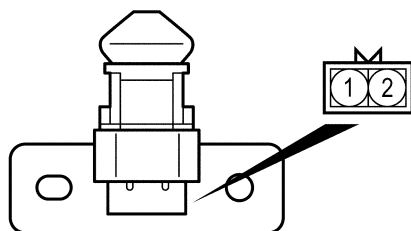
Clip positions



Section A – A



← : Clip positions



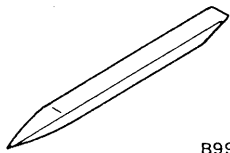
INSPECTION

HOOD SWITCH CONTINUITY CHECK
<Vehicles with theft-alarm system>

| Switch position | Terminal number | |
|-----------------|-----------------|---|
| | 1 | 2 |
| Released (ON) | | |
| Depressed (OFF) | | |

FENDER

SPECIAL TOOL

| Tool | Number | Name | Use |
|--|----------|-----------------------|-------------------------------|
|  B990784 | MB990784 | Ornament remov- er | Side turn signal lamp removal |

FENDER

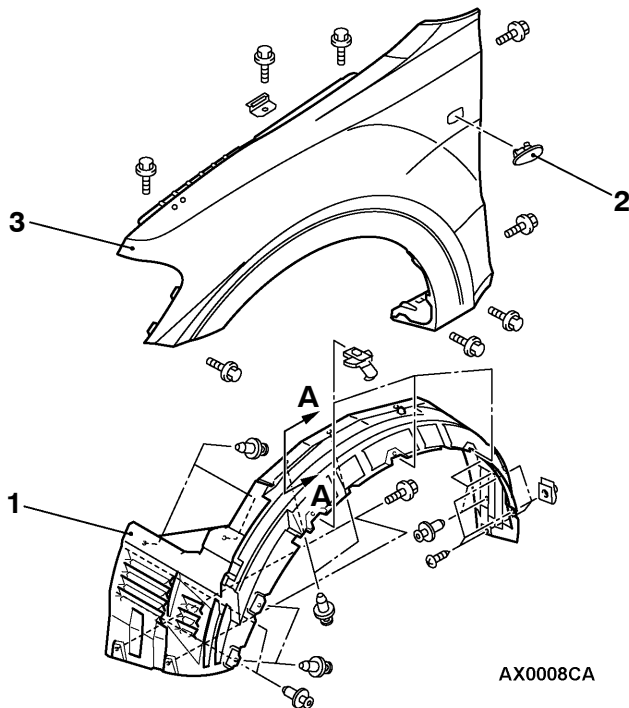
REMOVAL AND INSTALLATION

Caution: SRS

Do not strike the front impact sensor when removing or installing the fender.

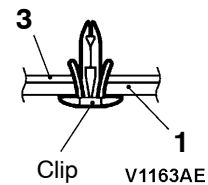
Pre-removal and Post-installation Operation

- Front Bumper Removal and Installation (Refer to GROUP 51.)
- Front Mud Guard Removal and Installation (Refer to GROUP 51.)
- Overfender Removal and Installation (Refer to GROUP 51.)



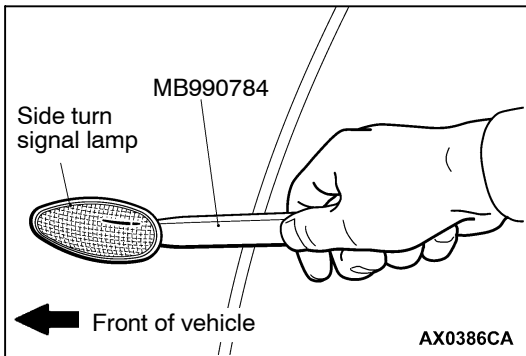
AX0008CA

Section A – A

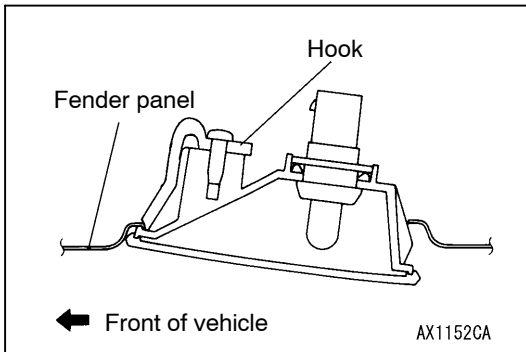


Removal steps

- ◀A▶ ▶A▶
1. Splash shield
 2. Side turn signal lamp
 3. Fender

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

Use the special tool to unhook the fender, and then remove the side turn-signal lamp.

**INSTALLATION SERVICE POINT****▶A◀ SIDE TURN SIGNAL LAMP INSTALLATION**

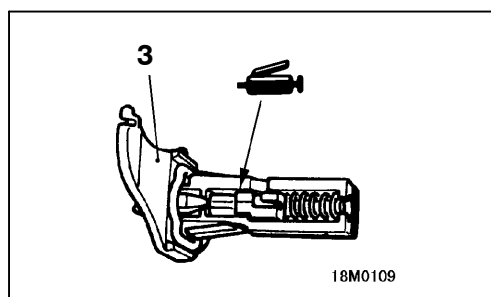
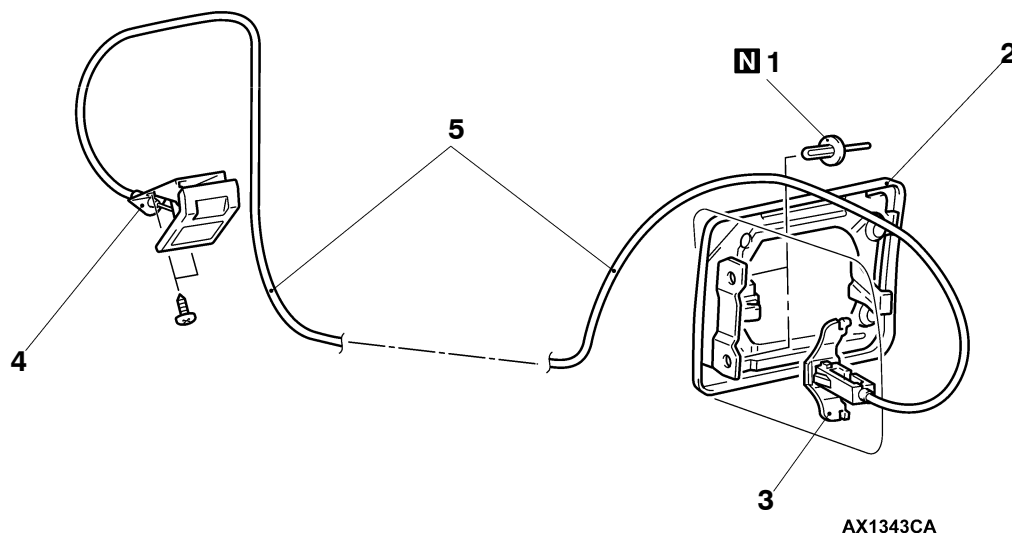
Engage the hook into the fender panel, and then install the side turn signal lamp.

FUEL FILLER DOOR

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operations

- Quarter Trim, Lower (R.H.) Removal and Installation (Refer to GROUP 52A.)
- Center Pillar Trim, Lower <Long Wheelbase – R.H.> Removal and Installation (Refer to GROUP 52A.)

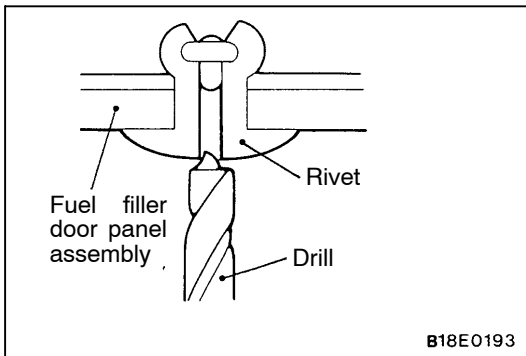


Removal steps



1. Rivet
2. Fuel filler door panel assembly
3. Fuel filler door lock hook assembly
4. Lid lock release handle
 - Heater deck cross assembly (Refer to GROUP 55.)

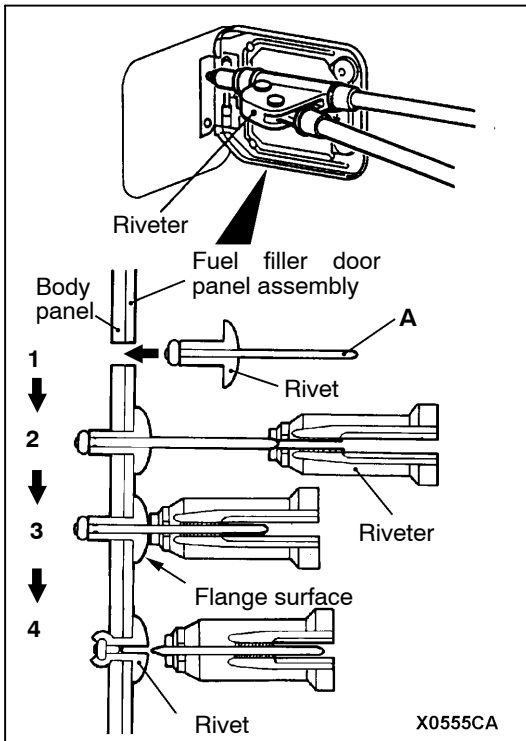
- AC inverter <Long wheelbase> (Refer to GROUP 54.)
- 5. Fuel filler door lock release cable



REMOVAL SERVICE POINT

◀A▶ RIVET REMOVAL

Use a drill (Ø6.5 – 7.5 mm) to break the rivet by drilling a hole, and then remove the rivet.



INSTALLATION SERVICE POINT

▶A◀ RIVET INSTALLATION

Use a riveter shown to install rivets as follows:

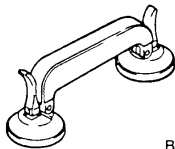
1. Insert a rivet in the body panel and fuel filler door panel assembly.
2. Insert the riveter to the rod (A shown) of a rivet.
3. Pressing the flange surface of the rivet with the riveter, handle the riveter.
4. The rod is cut at its thinnest point and the rivet is held in position.

WINDOW GLASS

ADHESIVE

| Items | Specified adhesive |
|------------------------|---|
| Windshield | 3M ATD Part No. 8609 Super Fast Urethane Auto Glass Sealant or equivalent |
| Quarter window glass | |
| Back door glass | |
| Quarter window garnish | 3M ATD Part No. 8513 Grommited Windshield Sealant or equivalent |

SPECIAL TOOL

| Tool | Number | Name | Use |
|--|----------|---------------------|--|
|  B990480 | MB990480 | Window glass holder | Removal and installation of windshield |

WINDOW REPAIR

The following glass parts are installed with a liquid urethane adhesive method:

- Windshield
- Quarter window glass
- Back door window glass

ITEMS NEEDED

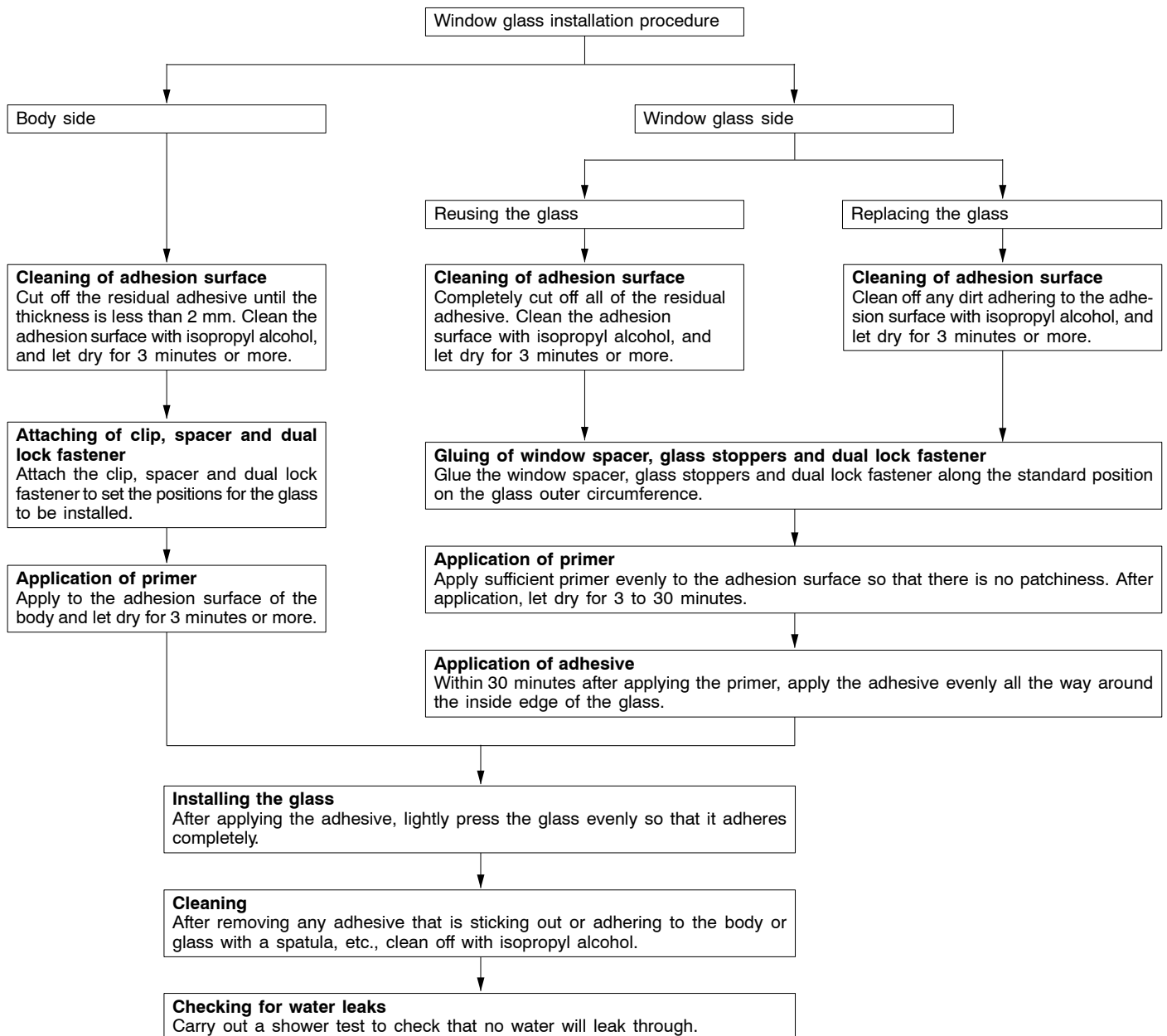
| Name | Remarks |
|--|---|
| Adhesive | 3M ATD Part No. 8609 Super Fast Urethane Auto Glass Sealant or equivalent |
| Primer | 3M ATD Part No. 8608 Super Fast Urethane Primer or equivalent |
| Spacers | Available as service part |
| Dam | Available as service part |
| Anti-rust solvent (or Tectyl 506T...Valvoline 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 |

HANDLING OF AUTO WINDOW SEALER

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

BODY PINCH-WELD FLANGE SERVICING

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

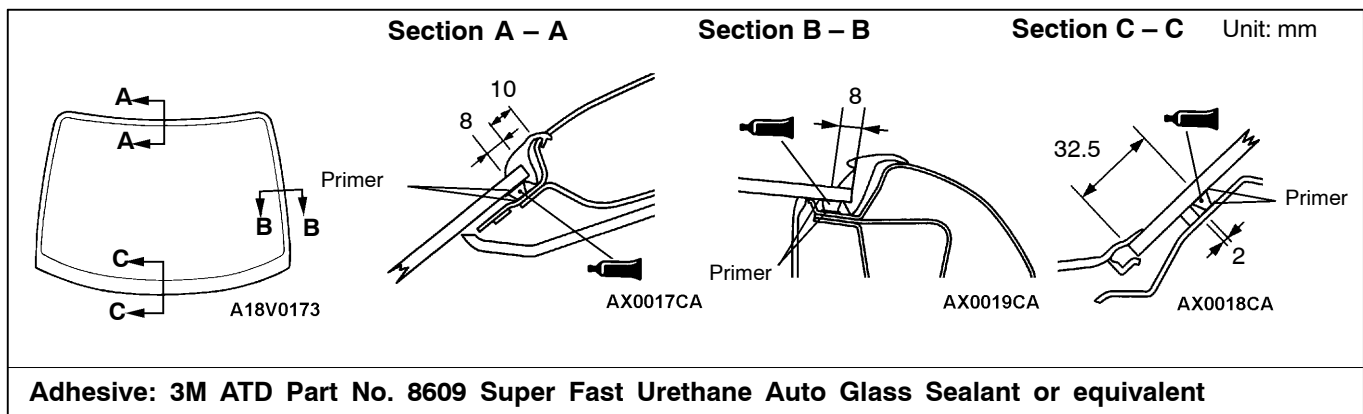
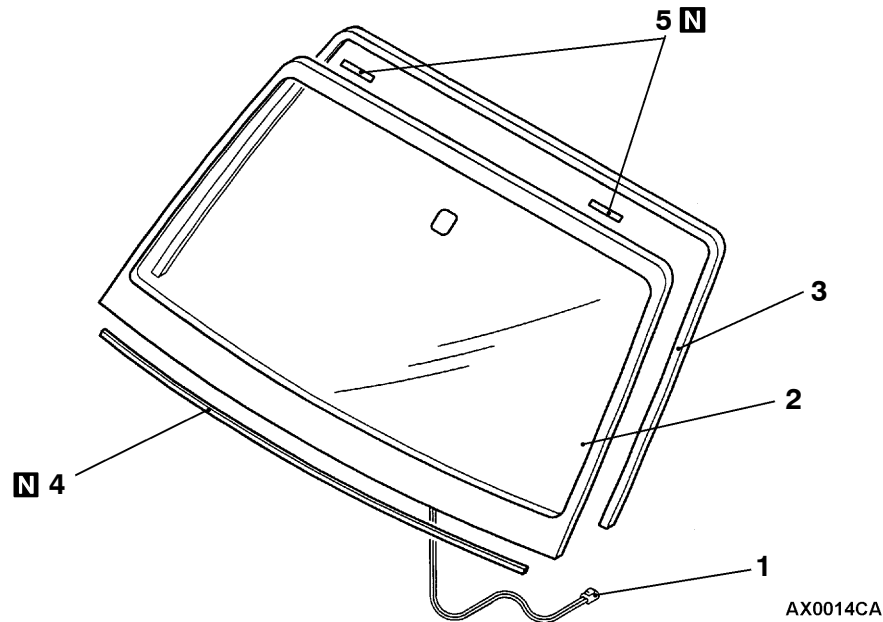
WORKING PROCESS

WINDSHIELD

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operations

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

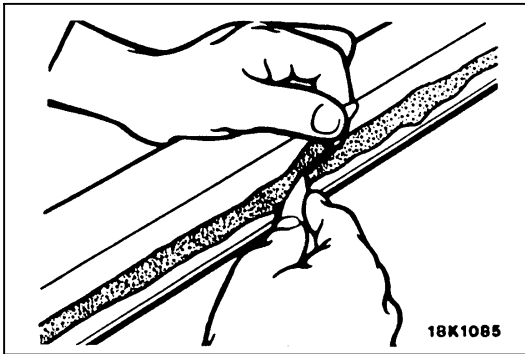
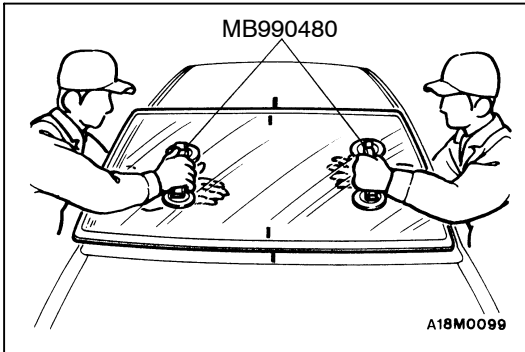
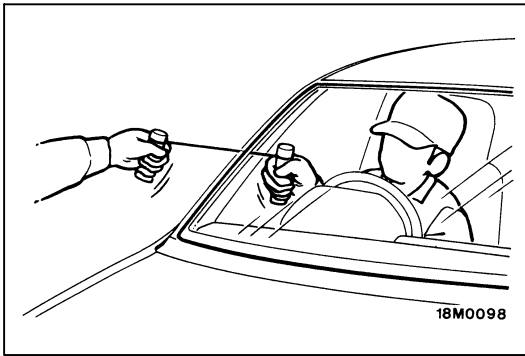


Removal steps

1. Wiper deicer connector
(Refer to GROUP 51.)
2. Windshield



- ▶A◀ 3. Windshield moulding
- ▶A◀ 4. Windshield spacer
- ▶A◀ 5. Glass stopper



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

Caution

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

5. Make alignment marks on the windshield and body.
6. Use the special tool to remove the windshield.

7. Use a knife to cut away remaining adhesive to 2 mm thick or less around the entire circumference of the body flange.
8. Smooth the flange surface.

Caution

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

9. When reusing windshield, remove the remaining adhesive on the windshield completely. Then, decrease the windshield with isopropyl alcohol.
10. Decrease the body flange in the same way.

Caution

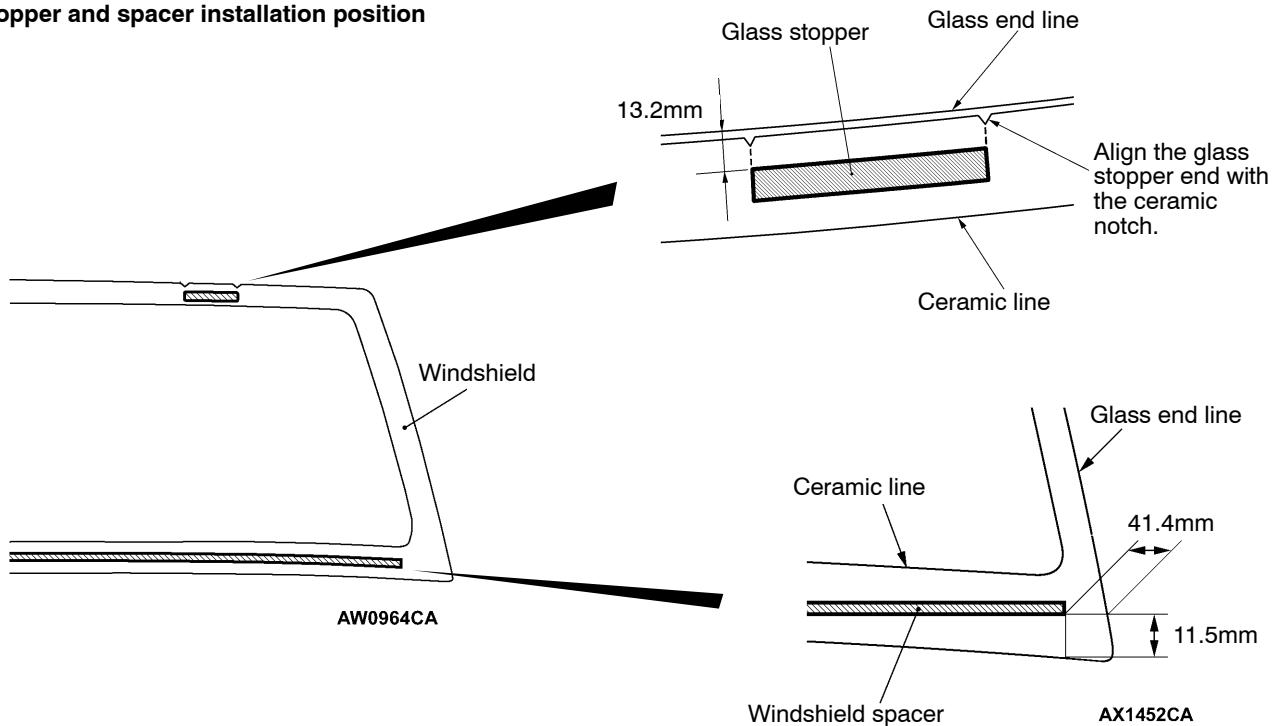
Before the next job, leave the decreased parts for 3 minutes or more to dry. Also, do not touch any cleaned surface.

INSTALLATION SERVICE POINT

►A◄ GLASS STOPPER/WINDSHIELD MOULDING/WINDSHIELD SPACER/WINDSHIELD INSTALLATION

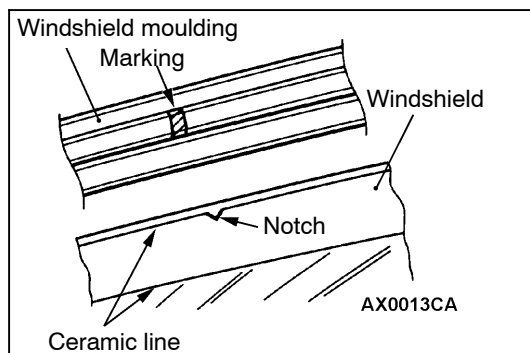
1. When replacing the windshield, first align it with the body, and then matchmark them.
2. Use isopropyl alcohol to clean the inside edge of the windshield and the body flange.
3. Use a primer dampened sponge to apply the clear gasoline to the specified area around the windshield and the body evenly.
4. After the application, let it dry for at least three minutes.
5. Position the glass stopper and the windshield spacer as shown, ensuring that there are no bends or warpages inside the windshield.

Glass stopper and spacer installation position

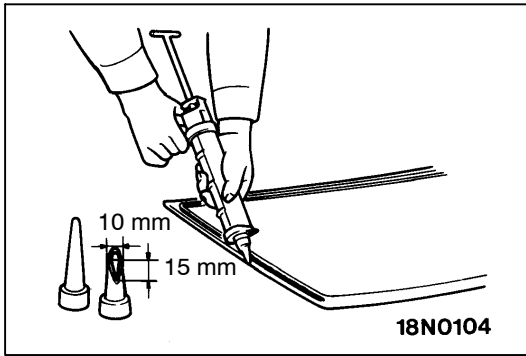


Caution

- (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) Never touch the primer-applied surface.



6. Align the marking on the windshield moulding with the windshield notch, and then install the windshield moulding.



7. Within thirty minutes after the primer application, fill a sealant gun with adhesive, and then apply the adhesive evenly around the windshield.

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. Install the windshield moulding before the adhesive sets. After the windshield is installed, wait until the adhesive sets. (Refer to P.42-9.)
10. Wait thirty minutes or more, and then test for water leakage.

Caution

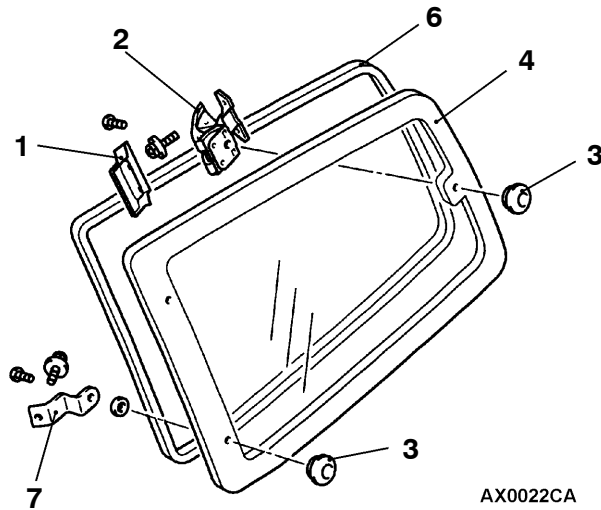
- (1) Do not move the vehicle unless absolutely necessary.
- (2) When testing for water leakage, do not pinch the end of the hose to spray the water.

QUARTER WINDOW GLASS

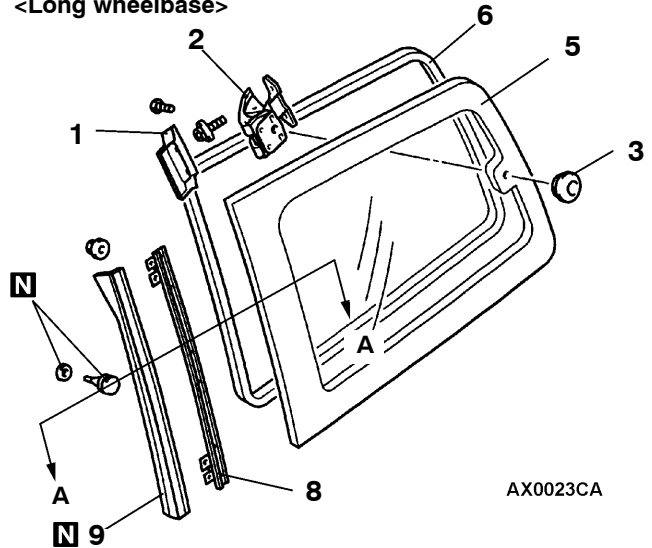
REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation
Quarter Trim, Upper Removal and Installation
(Refer to GROUP 52A.)

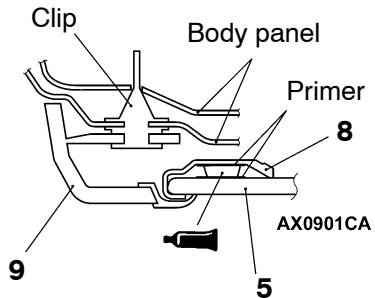
<Short wheelbase>



<Long wheelbase>



Section A – A



Adhesive: 3M ATD Part No. 8513 Grommated Windshield Sealant or equivalent

Removal steps

1. Lever
2. Quarter window link
3. Rubber and nut
4. Quarter window glass
5. Quarter window glass

6. Quarter window weatherstrip
7. Quarter window hinge
8. Quarter window moulding
9. Quarter window garnish



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

Remove by the same procedure as for the windshield. (Refer to P.42-12.)

INSTALLATION SERVICE POINT**▶A◀ QUARTER WINDOW MOULDING INSTALLATION**

1. Wipe away all adhesive which is adhering to the channel in the quarter window moulding and to the quarter window glass, and then clean the surfaces with unleaded petrol.

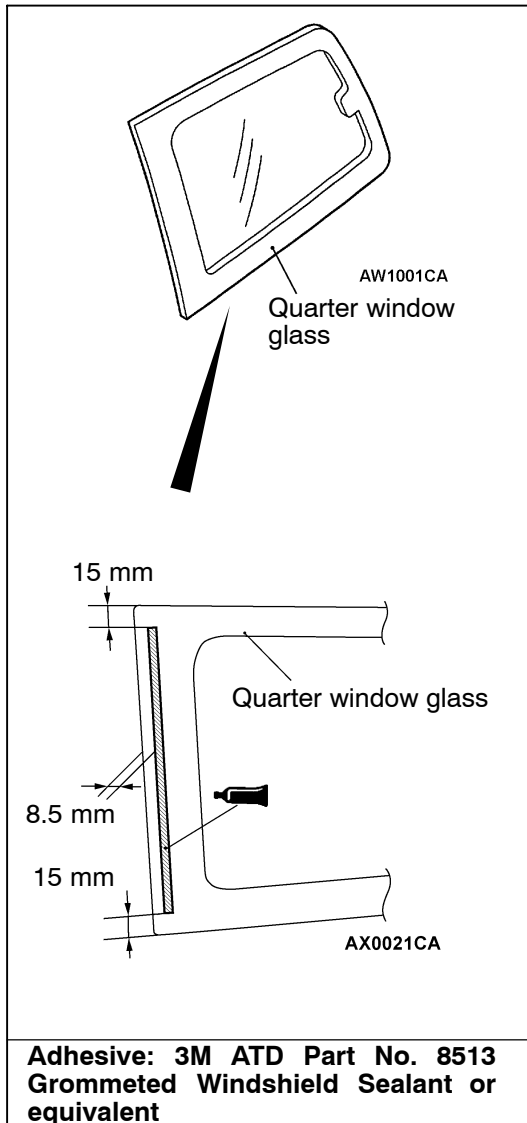
Caution

The areas which have been cleaned of adhesive should be allowed to stand for three minutes or more until they are completely dry before continuing to the next step. Furthermore, do not touch the surfaces after they have been cleaned.

2. Apply an even coating of primer to the adhesion surface of the quarter window glass, while being careful not to miss any places.
3. Apply the specified sealant to the quarter window glass in the locations specified, and then install the quarter window moulding to the quarter window glass.

Adhesive:

3M ATD part No.8513 Grommited Sealant or equivalent

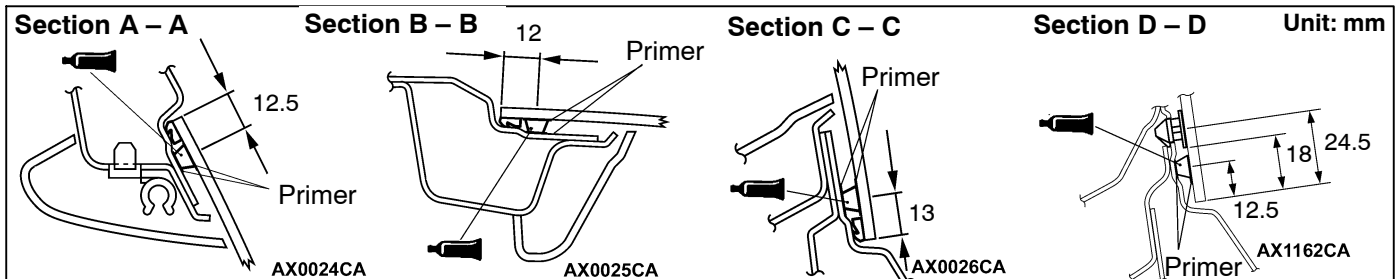
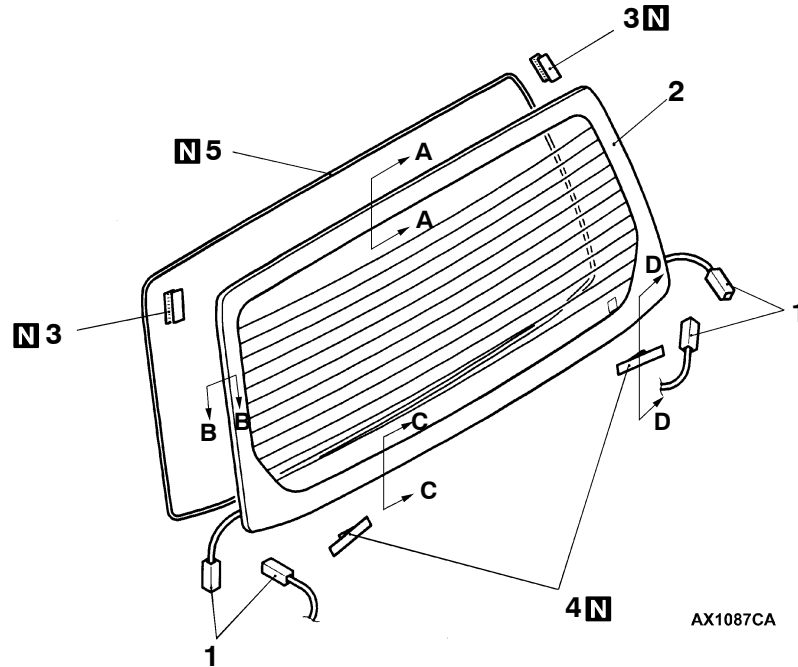


BACK DOOR GLASS

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operations

- Back Door Upper Trim Removal and Installation (Refer to P.42-52.)
- Spare Tyre Removal and Installation (Refer to GROUP31.)



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

Removal steps

1. Harness connector
2. Back door glass
3. Dual lock fastener

4. Glass stopper
5. Window dam

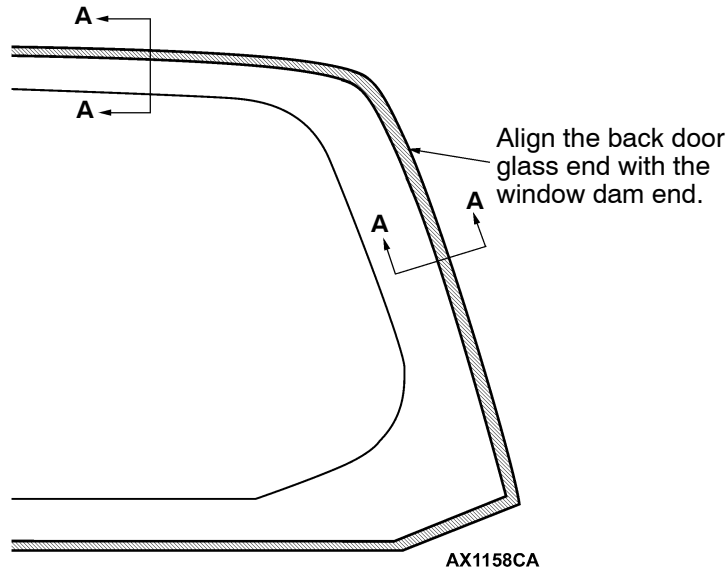
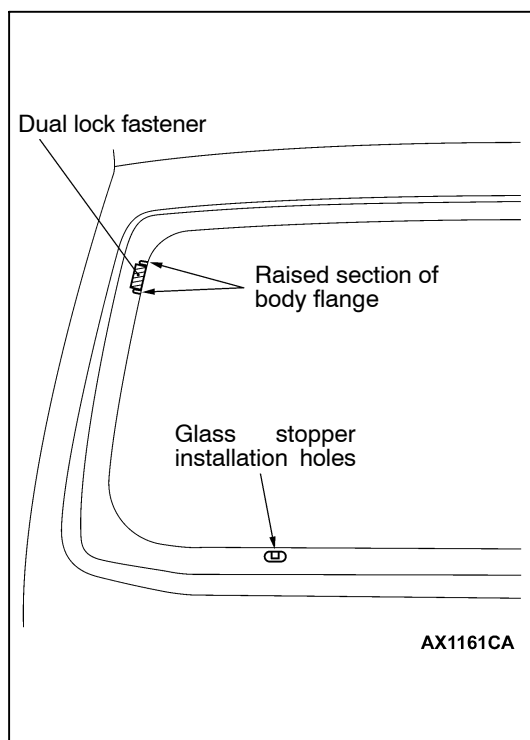
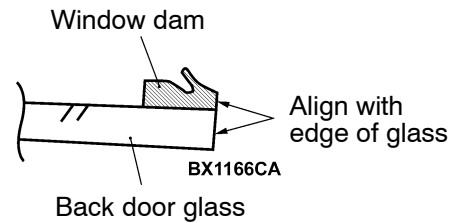
REMOVAL SERVICE POINT

BACK DOOR GLASS REMOVAL

Remove the back door glass in the same manner as for the windshield. (Refer to P42-12.)

INSTALLATION SERVICE POINT**►A◀ WINDOW DAM/GLASS STOPPER/DUAL LOCK FASTENER/BACK DOOR GLASS INSTALLATION**

1. Clean both the glass side and vehicle body side of the window dam, dual lock fastener and glass stopper mounting surfaces with unleaded petrol.
2. Install the window dam.

Window dam installation position**Section A – A**

3. Attach the dual lock fastener to the body flange in the correct position.
4. Attach the dual lock fastener and glass stopper to the back door window glass in the positions which correspond to the dual lock fastener and glass stopper mounting sections of the body flange.
5. Apply the primer and adhesive.
6. Install the glass by the same procedure as for the windshield. (Refer to P.42-13.)

DOORS

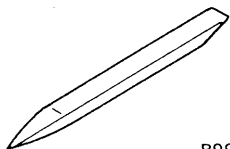
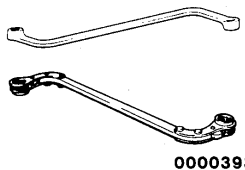
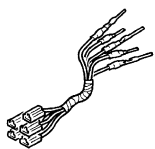
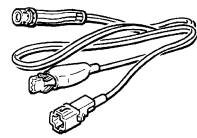
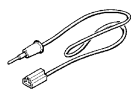

SERVICE SPECIFICATIONS

| Items | Standard value |
|----------------------------------|--|
| Door outside handle play mm | 2.0 or more |
| Power window operating current A | 5.0 ± 2 (power supply 14.5 ± 0.3 V at 23°C) |
| Door inside handle play mm | 5.3 or more |

SEALANT

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

SPECIAL TOOLS

| Tool | Number | Name | Use |
|---|--|--|--|
|  B990784 | MB990784 | Ornament remover | Door trim removal |
|  00003936 | MB990900 or MB991164 | Door hinge adjusting wrench | Adjustment of door fit |
| A  B  C  D  C991223 | MB991223 A: MB991219 B: MB991220 C: MB991221 D: MB991222 | Harness set A: Test harness B: LED harness C: LED harness adapter D: Probe | Terminal voltage measurement A: Connector pin contact pressure check B: Power circuit check C: Power circuit check D: Commercial tester connection |

TROUBLESHOOTING

DIAGNOSIS FUNCTION

The power window <Vehicles with power window safety mechanism> and central door locking is controlled by the Smart Wiring System (SWS). For troubleshooting, refer to GROUP 54B – Troubleshooting.

INSPECTION CHART FOR TROUBLE SYMPTOMS

<Vehicles without power window safety mechanism>

| Symptom | Inspection procedure | Reference page |
|---|----------------------|----------------|
| None of power window switches can operate any of windows. | 1 | 42-21 |
| Power window main switch can not operate any of windows. (However, each power window sub-switch can operate window.) | 2 | 42-21 |
| Power window main switch can not operate driver's window. (However, power window main switch can operate window except driver's window.) | 3 | 42-22 |
| Power window main switch can not operate passenger's window. (However, passenger's power window sub-switch can operate passenger's window.) | 4 | 42-22 |
| Power window main switch can not operate rear door windows. (However, rear power window sub-switches can operate rear door windows.) | 5 | 42-23 |
| Passenger's power window sub-switch can not operate passenger's window. (However, power window main switch can operate passenger's window.) | 6 | 42-23 |
| Rear power window sub-switches can not operate rear door windows. (However, power window main switch can operate rear door windows.) | 7 | 42-24 |

INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS

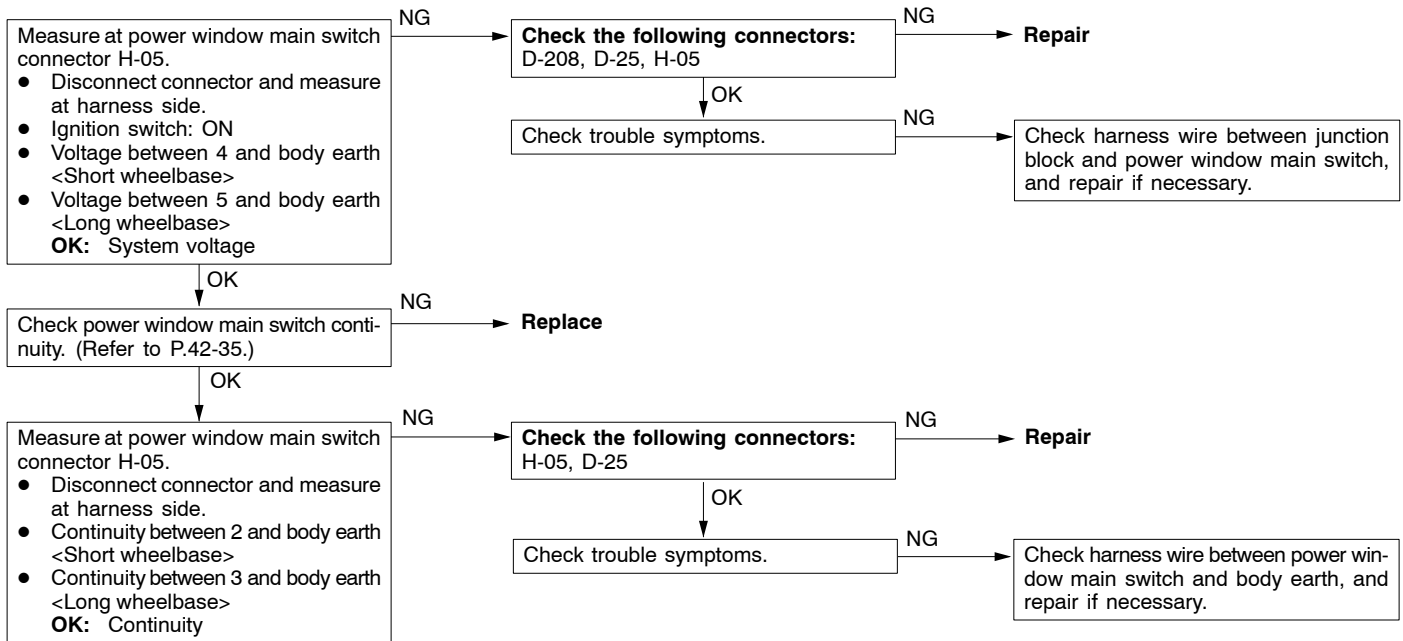
Inspection Procedure 1

| None of power window switches can operate any of windows. | Probable cause |
|---|--|
| Power window relay, power window relay drive circuit or ETACS-ECU may be defective. | <ul style="list-style-type: none"> • Malfunction of power window relay • Malfunction of ETACS-ECU • Malfunction of junction block • Malfunction of wiring harness or connector |

Refer to GROUP 54B – SWS.

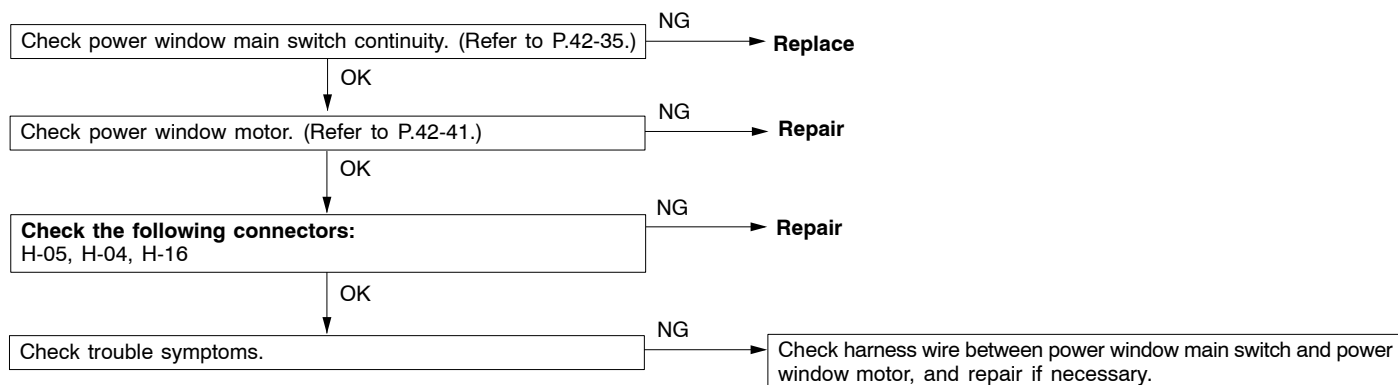
Inspection Procedure 2

| Power window main switch can not operate any of windows. (However, each power window sub-switch can operate window.) | Probable cause |
|--|---|
| Power window main switch or its power supply circuit or earth circuit may be defective. | <ul style="list-style-type: none"> • Malfunction of power window main switch • Malfunction of wiring harness or connector |



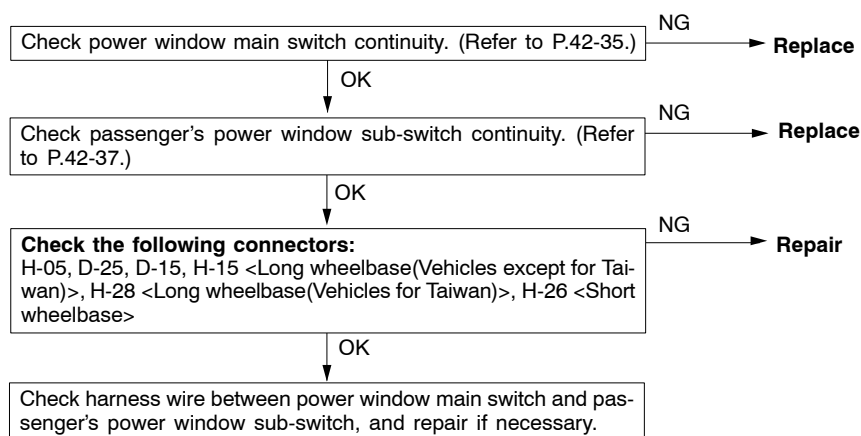
Inspection Procedure 3

| Power window main switch can not operate driver's window. (However, power window main switch can operate window except driver's window.) | Probable cause |
|---|--|
| Power window main switch, power window motor, or harness or connector between power window main switch and power window motor may be defective. | <ul style="list-style-type: none"> • Malfunction of power window main switch • Malfunction of power window motor • Malfunction of wiring harness or connector |



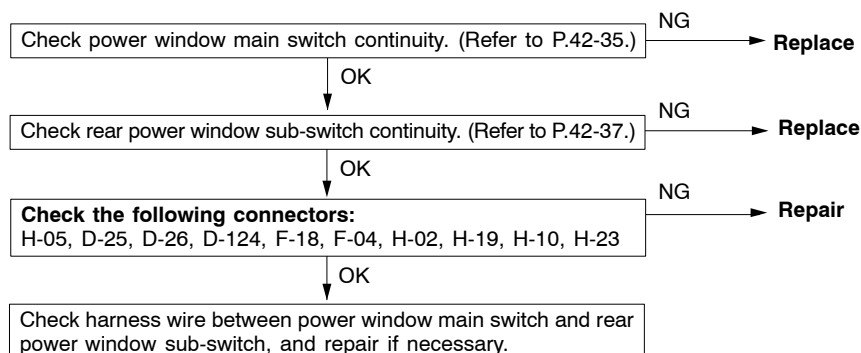
Inspection Procedure 4

| Power window main switch can not operate passenger's window. (However, passenger's power window sub-switch can operate passenger's window.) | Probable cause |
|---|---|
| There may be short circuit or open circuit in communication line from the power window main switch to passenger's power window sub-switch, or passenger's power window sub-switch or power window main switch may be defective. | <ul style="list-style-type: none"> • Malfunction of power window main switch • Malfunction of passenger's power window sub-switch • Malfunction of wiring harness or connector |



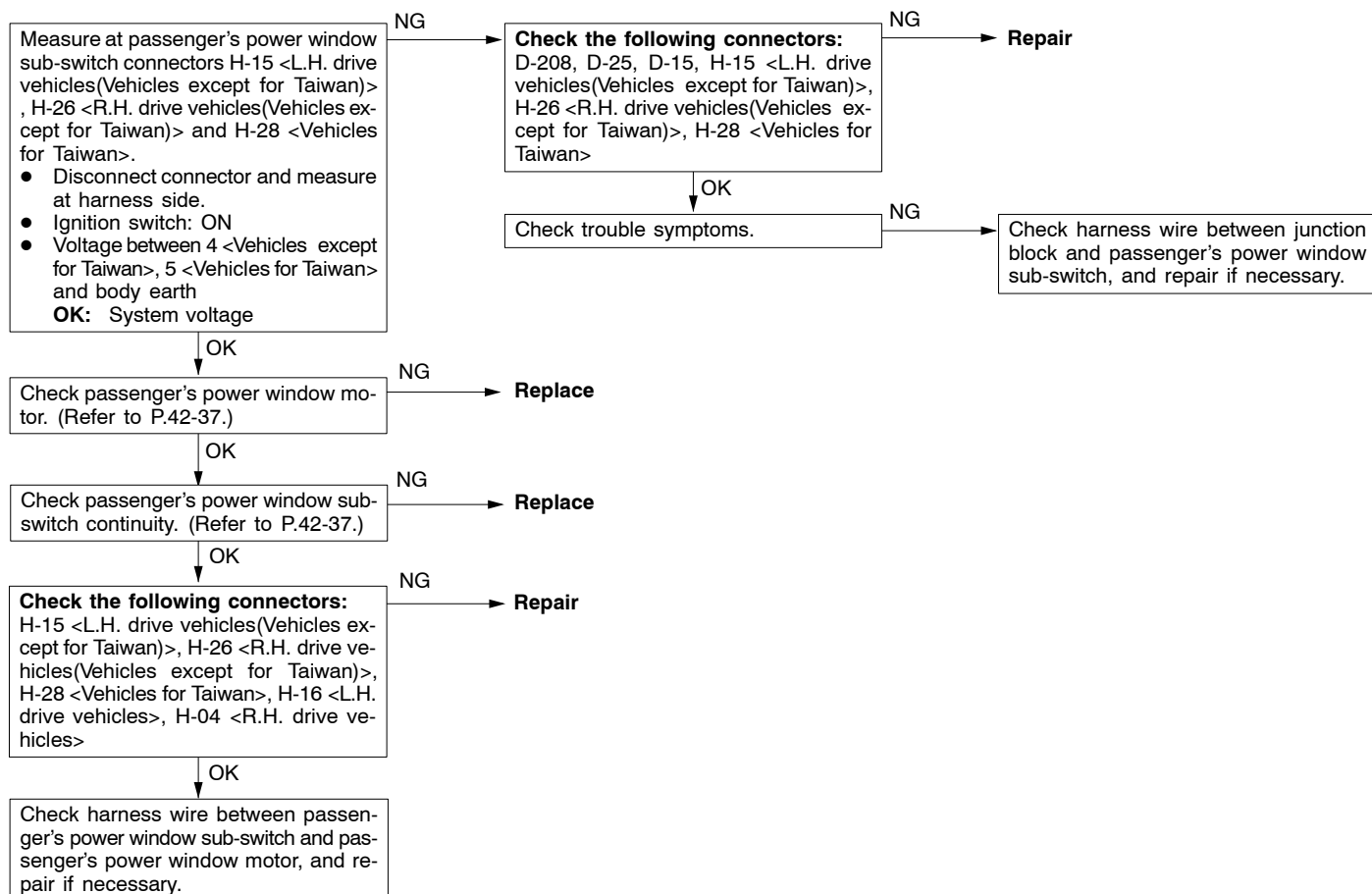
Inspection Procedure 5

| Power window main switch can not operate rear door windows. (However, rear power window sub-switches can operate rear door windows.) | Probable cause |
|---|--|
| There may be short circuit or open circuit in communication line from the power window main switch to rear power window sub-switch, or rear power window sub-switch or power window main switch may be defective. | <ul style="list-style-type: none"> • Malfunction of power window main switch • Malfunction of rear power window sub-switch • Malfunction of wiring harness or connector |



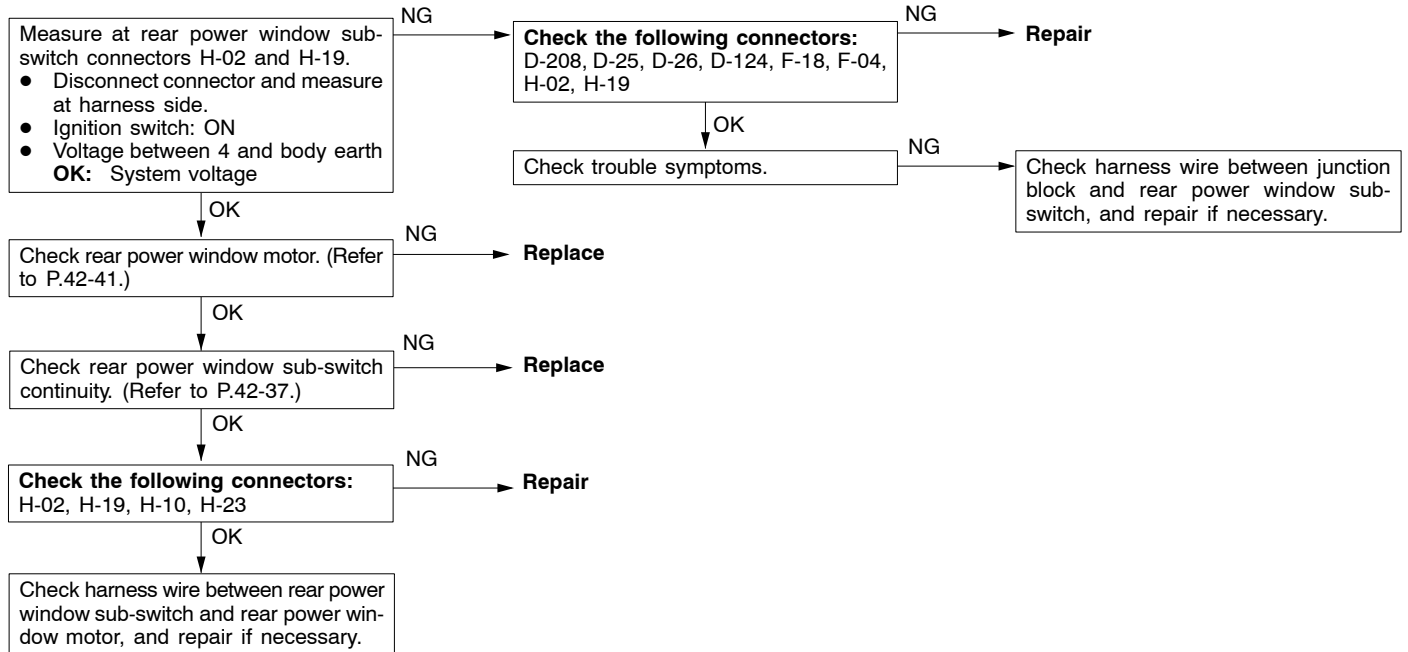
Inspection Procedure 6

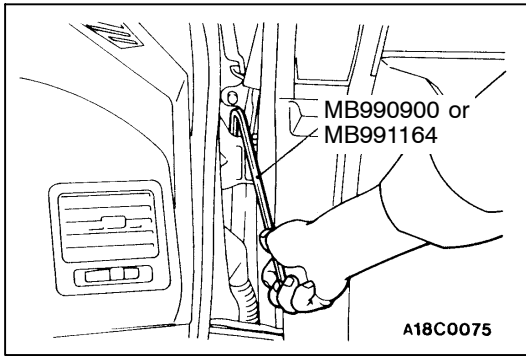
| Passenger's power window sub-switch can not operate passenger's window. (However, power window main switch can operate passenger's window.) | Probable cause |
|---|---|
| Power supply circuit or earth circuit of the passenger's power window sub-switch, passenger's power window sub-switch or passenger's power window motor may be defective. | <ul style="list-style-type: none"> • Malfunction of passenger's power window sub-switch • Malfunction of passenger's power window motor • Malfunction of wiring harness or connector |



Inspection Procedure 7

| Rear power window sub-switches can not operate rear door windows. (However, power window main switch can operate rear door windows.) | Probable cause |
|---|--|
| Power supply circuit or earth circuit of the rear power window sub-switches, rear power window sub-switches or rear power window motors may be defective. | <ul style="list-style-type: none"> • Malfunction of rear power window sub-switches • Malfunction of rear power window motors • Malfunction of wiring harness or connector |





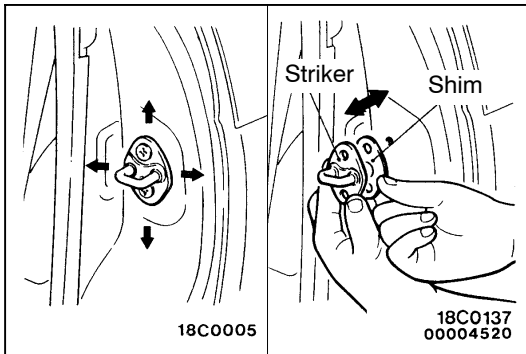
ON-VEHICLE SERVICE

DOOR FIT ADJUSTMENT

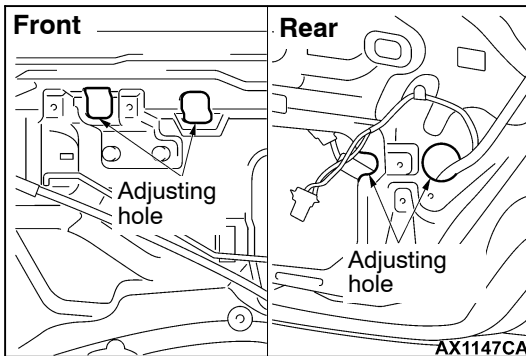
1. If clearance between the door and body is uneven, affix protective tape to the fender around the hinge and to the edge of the door. Then use the special tool to loosen the door hinge mounting bolts on the body, and adjust the clearance around the door so that it becomes even.
2. If the door and body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

Caution

Do not load more than 98 N·m on the special tool.



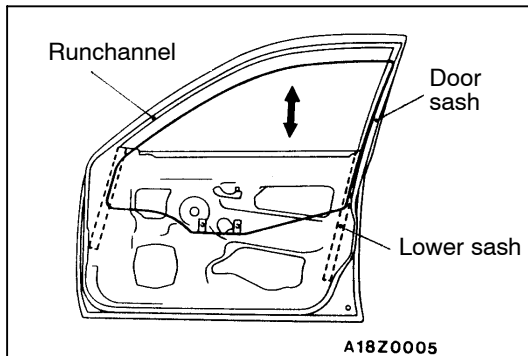
3. If the door opening and closing is heavy, adjust the meshing of the striker and the door latch (forward and backward) by adding shims to the striker and by moving the striker up and down or to the left and right.



DOOR WINDOW GLASS ADJUSTMENT

Check that the door glass operates smoothly and moves along the door glass runchannel when the door window glass is fully raised and fully lowered. If there is a problem, adjust by the following procedure.

1. Remove the door trim and waterproof film. (P.42-30, 31)
2. With the door window glass fully closed, loosen the door glass mounting screws through the adjusting holes, and then lower the door window glass slightly.
3. Fully close the door window glass again, and then fully tighten the door glass mounting screws through the adjusting holes.



DEFECTIVE POWER WINDOW ADJUSTMENT AND REPLACEMENT

If the window glass wrongly, automatically lowers while being raised, adjust or replace as follows:

1. Remove the door trim and the waterproof film. (Refer to P.42-30, 31.)
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

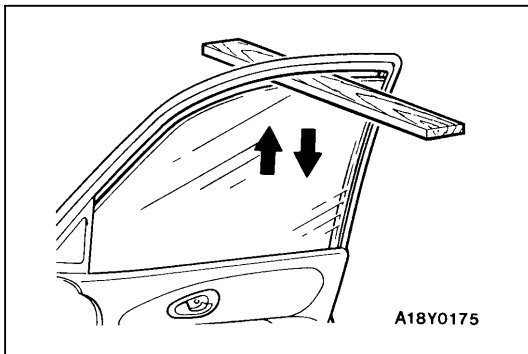
Insert soft stuff like cushion to prevent damage to the glass if it falls down.

3. If the door window glass does not move up and down smoothly, do as follows:
 - Check the installation condition of the runchannel.
 - Straighten twist in the door sash.
 - Check the installation condition of the lower sash or the center sash.

NOTE

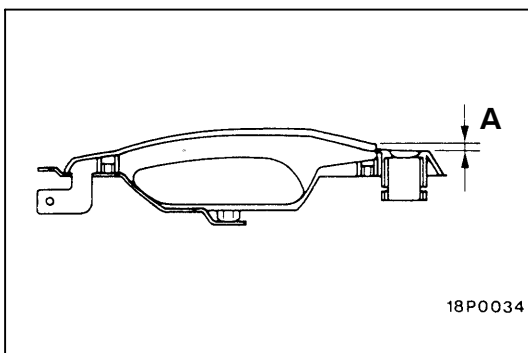
The lower sash cannot normally be adjusted, but it may be possible to adjust the sash span slightly within the range allowed by manufacturing tolerances by pushing the lower sash outwards while re-installing it.

4. If repair or adjustment is impossible, replace the door assembly.



POWER WINDOW SAFETY MECHANISM CHECK <Vehicles with power window safety mechanism>

1. Place a wooden board about 10 mm thick as shown. Then, raise the window glass.
2. Check that the window lowers by about 150 mm when the window clamps the board. If this doesn't happen, do troubleshooting. (Refer to P.42-20.)



DOOR OUTSIDE HANDLE PLAY CHECK

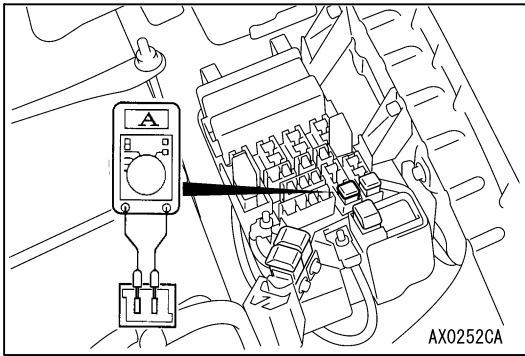
1. Check that the door outer handle play is at the standard value.

Standard value (A):

Front 2.0 mm or less

Rear 1.7 mm or less

2. Check the door outside handle and door latch assembly, and replace the assembly if there is a malfunction.



POWER WINDOW OPERATION CURRENT CHECK

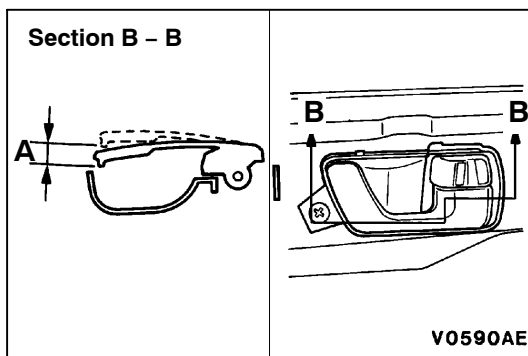
1. Remove the power window fuse, and connect a multimeter as shown in the illustration.
2. When the power window switch is pressed to the UP side, a large amount of operating current flows when the window starts and stops moving, so measure the current during the period between these two extremes.

Standard value: 5.0 ± 2 A (Power supply voltage 14.5 ± 0.3 V, at 23°C)

3. If the current is outside the standard value, refer to Troubleshooting (Refer to P.42-20.)

CIRCUIT BREAKER (INCORPORATED IN THE POWER WINDOW MOTOR) CHECK

1. Turn the power window switch to UP to close the window glass. Keep the switch at the fully-closed position for another 10 seconds.
2. Release the power window switch and immediately turn it to DOWN. Under this condition if the window glass starts to lower within 60 seconds, the circuit breaker can be judged good.



DOOR INSIDE HANDLE PLAY CHECK AND ADJUSTMENT

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

Standard value (A): 5.3 mm or less

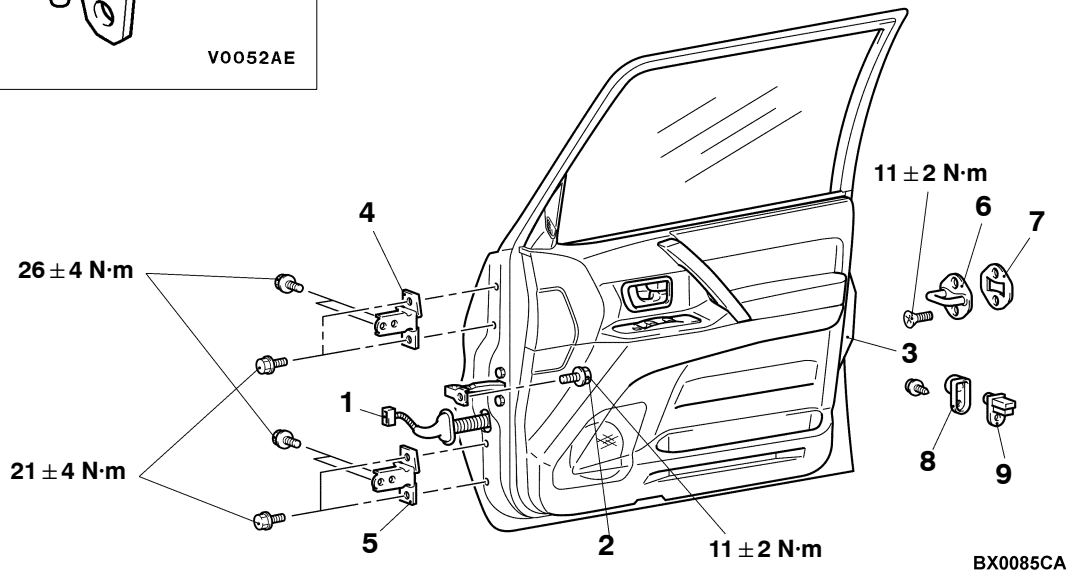
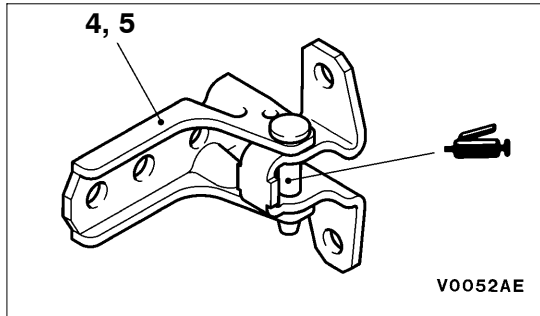
2. If the play is outside the standard value, remove the door trim. (Refer to P.42-30, 31.)
3. Adjust the door inside handle play by using the clip which connects the door inside handle and the rod.

DOOR ASSEMBLY

REMOVAL AND INSTALLATION

Post-installation Operation
Door Fit Adjustment (Refer to P.42-25.)

FRONT DOOR



Door assembly removal steps

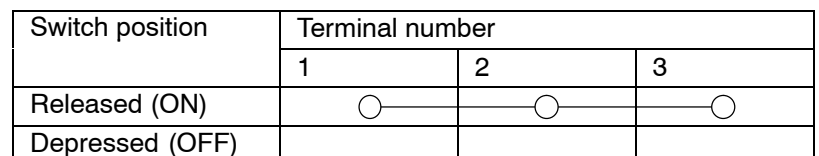
1. Harness connector
2. Door check connecting bolt
3. Door assembly
4. Door upper hinge
5. Door lower hinge

Striker removal steps

6. Striker
7. Striker shim

Door switch removal steps

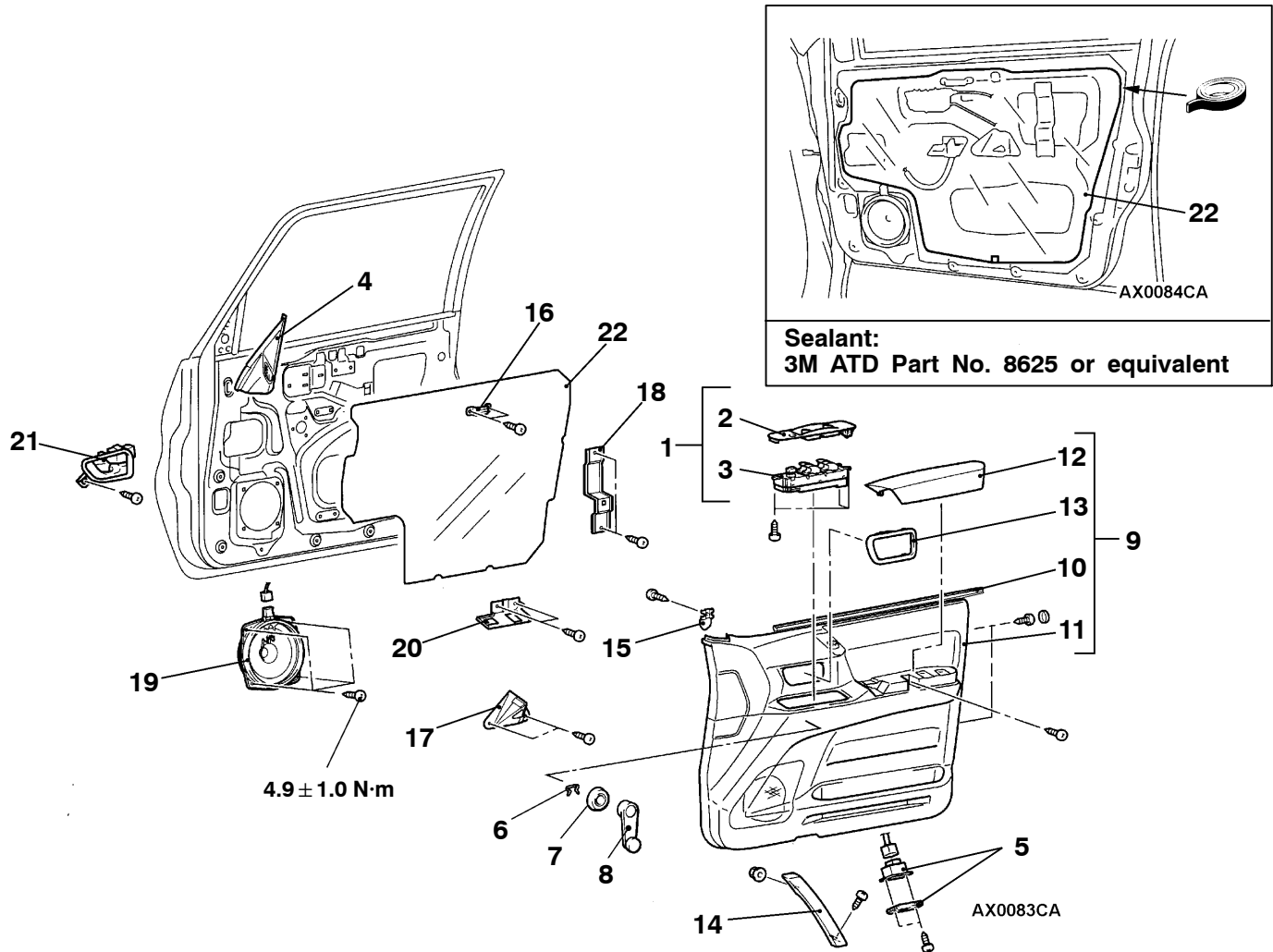
8. Door switch cap
9. Door switch



DOOR TRIM AND WATERPROOF FILM

REMOVAL AND INSTALLATION

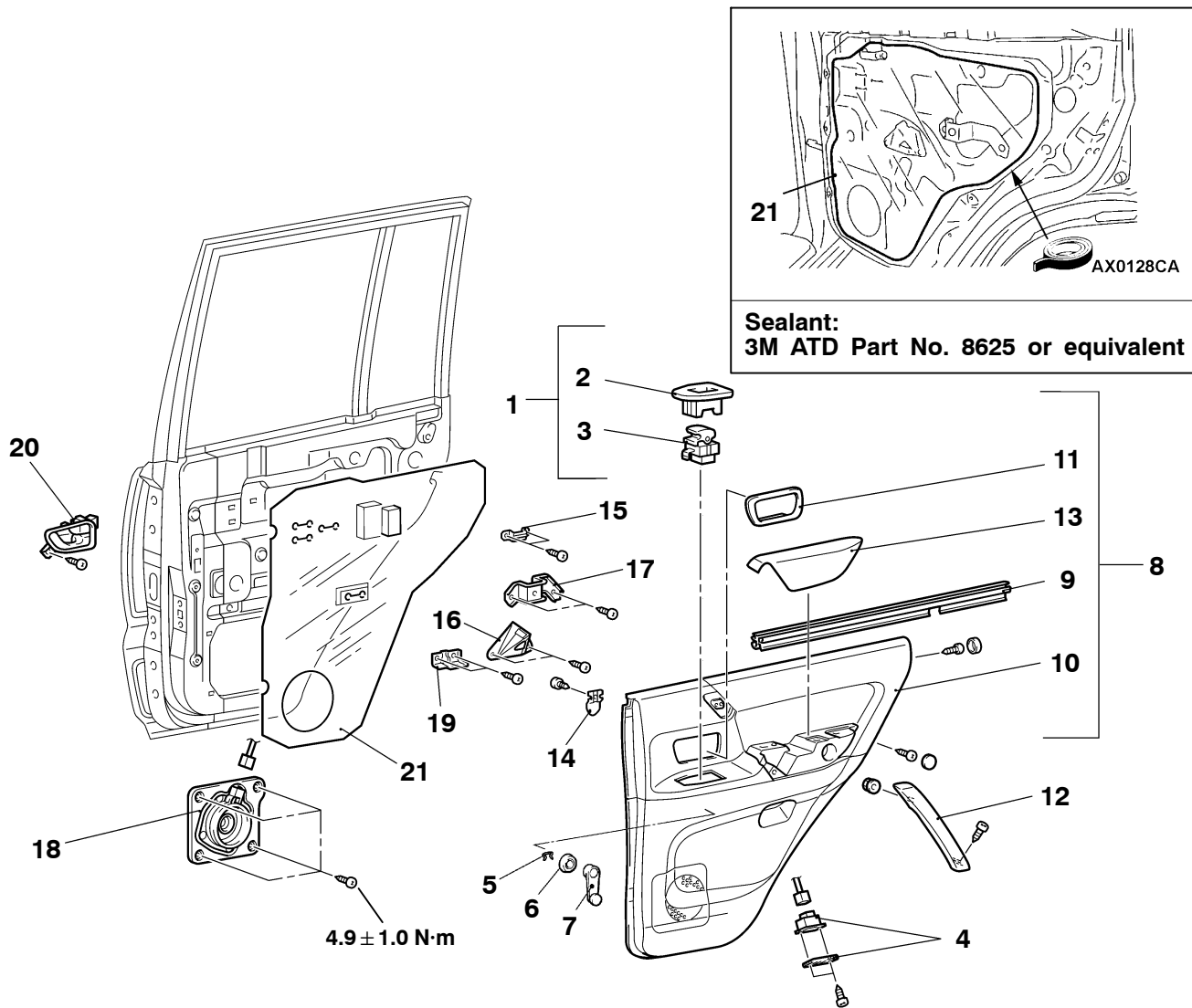
FRONT DOOR



Removal steps

- | | | | |
|---|--|-----------------------|---|
| <p>◀A▶</p> <p>▶B▶ ▶B▶</p> <p>▶B▶</p> <p>▶B▶</p> | <p>1. Power window switch and power window switch panel assembly</p> <p>2. Power window switch panel</p> <p>3. Power window switch</p> <p>4. Delta cover, inner</p> <p>5. Door lamp assembly</p> <p>6. Clip <Vehicles without power windows></p> <p>7. Escutcheon <Vehicles without power windows></p> <p>8. Regulator handle <Vehicles without power windows></p> <p>9. Door inside handle cover and door trim assembly</p> | <p>◀C▶</p> <p>▶A▶</p> | <p>10. Door belt line moulding assembly</p> <p>11. Door trim</p> <p>12. Front arm restraint cover</p> <p>13. Door inside handle cover</p> <p>14. Door grip</p> <p>15. Grip bracket</p> <p>16. Door grip upper retainer</p> <p>17. Door grip lower bracket</p> <p>18. Arm restraint bracket</p> <p>19. Speaker</p> <p>20. Power window switch bracket</p> <p>21. Door inside handle (Refer to P.42-41.)</p> <p>22. Waterproof film</p> |
|---|--|-----------------------|---|

REAR DOOR

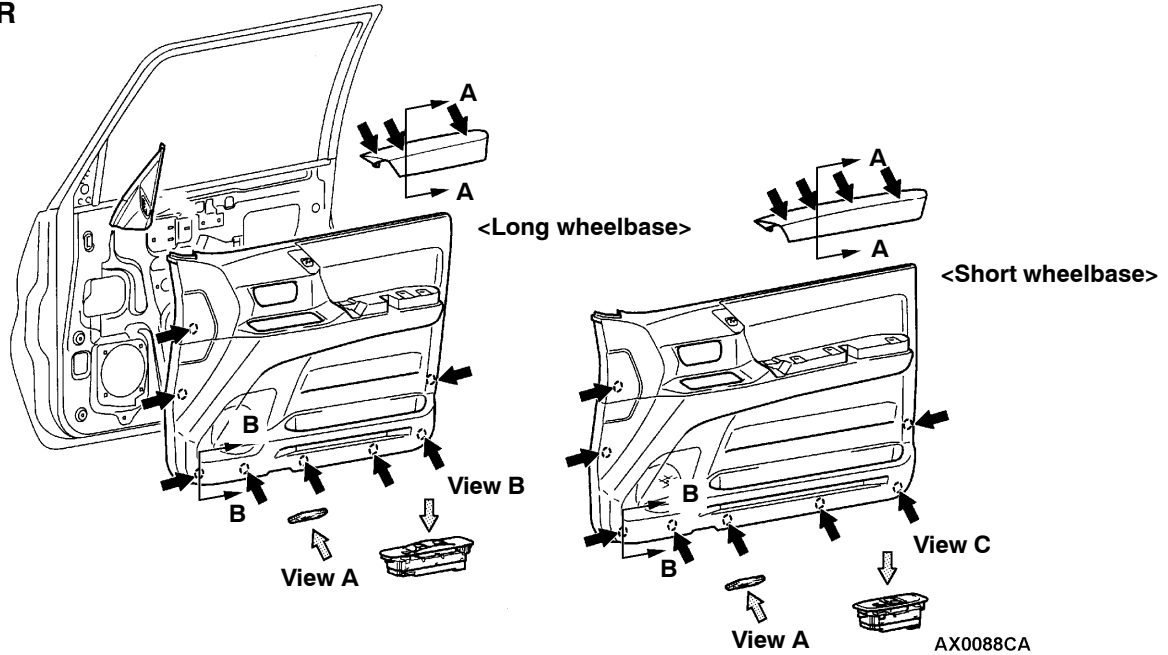


Removal steps

- | | |
|---|---|
| <p>◀A▶ 1. Power window switch and power window switch panel assembly</p> <p>2. Power window switch panel</p> <p>3. Power window switch</p> <p>4. Door lamp assembly</p> <p>▶B▶ 5. Clip <Vehicles without power windows></p> <p>▶B▶ 6. Escutcheon <Vehicles without power windows></p> <p>▶B▶ 7. Regulator handle <Vehicles without power windows></p> <p>8. Door inside handle cover</p> <p>9. Door belt line moulding assembly</p> | <p>◀C▶ 10. Door trim</p> <p>11. Door inside handle cover</p> <p>12. Door grip</p> <p>13. Rear arm restraint cover</p> <p>14. Door grip bracket</p> <p>15. Door grip upper retainer</p> <p>16. Door grip lower bracket</p> <p>17. Arm restraint bracket</p> <p>18. Speaker</p> <p>19. Power window switch bracket</p> <p>20. Door inside handle (Refer to P.42-41.)</p> <p>▶A▶ 21. Waterproof film</p> |
|---|---|

CLIP AND CLAW POSITIONS

FRONT DOOR

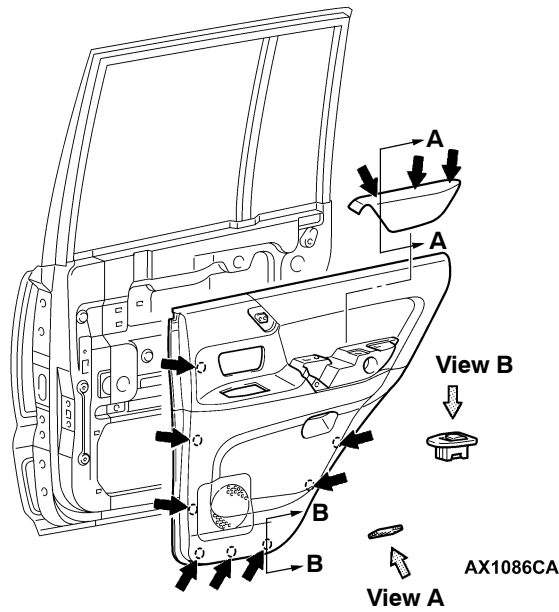


| | | |
|--|--|---|
| <p>View A</p> <p>Door lamp lens</p> <p>AX0650CA</p> | <p>View B</p> <p>Power window switch panel assembly</p> <p>AX0649CA</p> | <p>View C</p> <p>Power window switch panel assembly</p> <p>AX0648CA</p> |
| <p>Section A – A</p> <p>Front arm restraint cover</p> <p>Clip</p> <p>Door trim</p> <p>AX0090CA</p> | <p>Section B – B</p> <p>Door trim</p> <p>Clip</p> <p>AX0089CA</p> | <p>Section C – C</p> <p>Door lamp lens</p> <p>Door lamp lens cover</p> <p>AX0092CA</p> |
| <p>Section D – D</p> <p>Power window switch panel assembly</p> <p>Clip</p> <p>Door trim</p> <p>AX0900CA</p> | <p>Section E – E</p> <p>Power window switch panel assembly</p> <p>Door trim</p> <p>Claw</p> <p>AX0094CA</p> | |

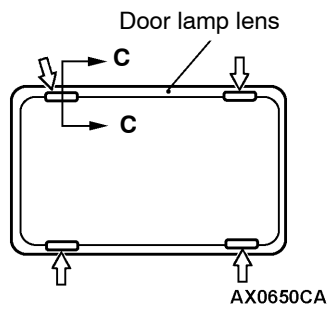
NOTE

- ➡ : Clips positions
- ↪ : Claws positions

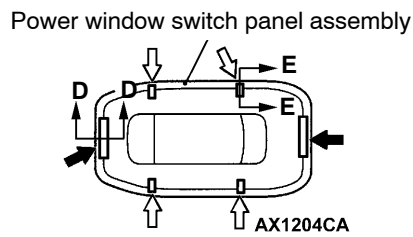
REAR DOOR



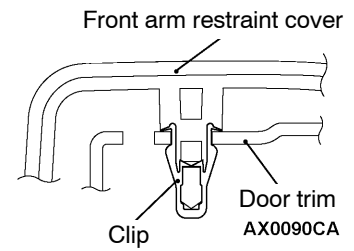
View A



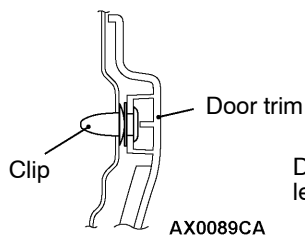
View B



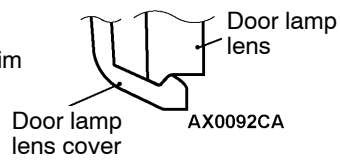
Section A – A



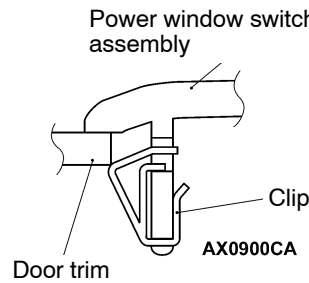
Section B – B



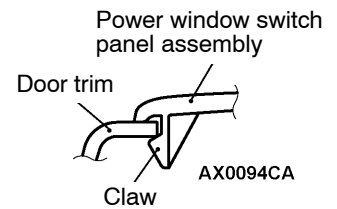
Section C – C



Section D – D

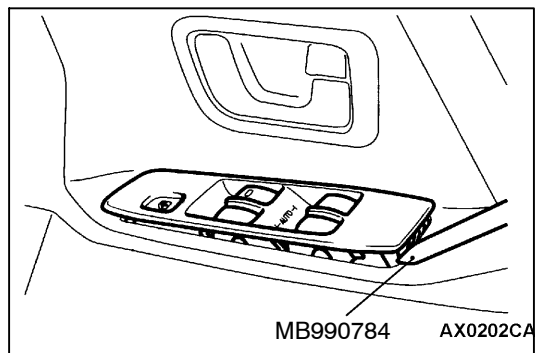


Section E – E



NOTE

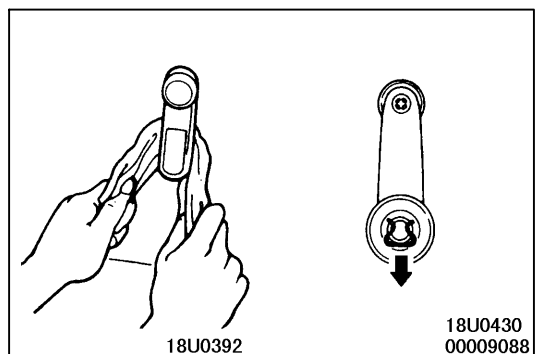
- ◄ : Clips positions
- ◁ : Claws positions



REMOVAL SERVICE POINTS

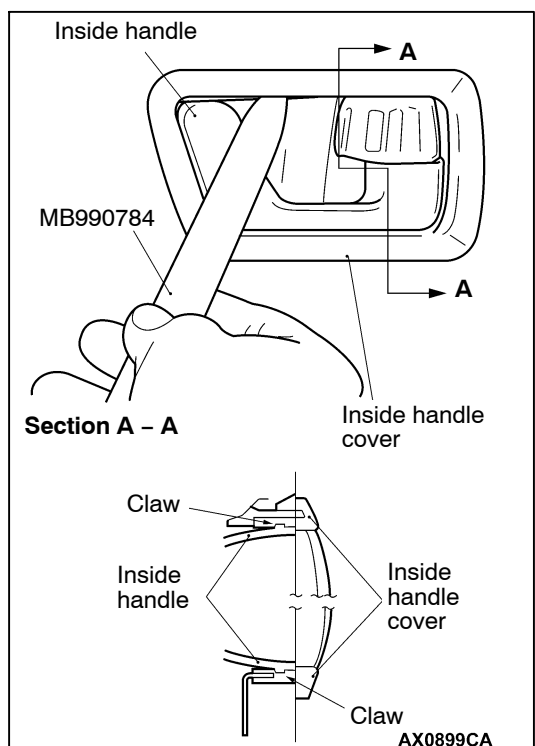
◀A▶ POWER WINDOW SWITCH AND POWER WINDOW SWITCH PANEL ASSEMBLY REMOVAL

Use the special tool to twist the front and rear of the power window switch and panel assembly to remove it. (Refer to P.42-30, 31, Clip and claw positions.)



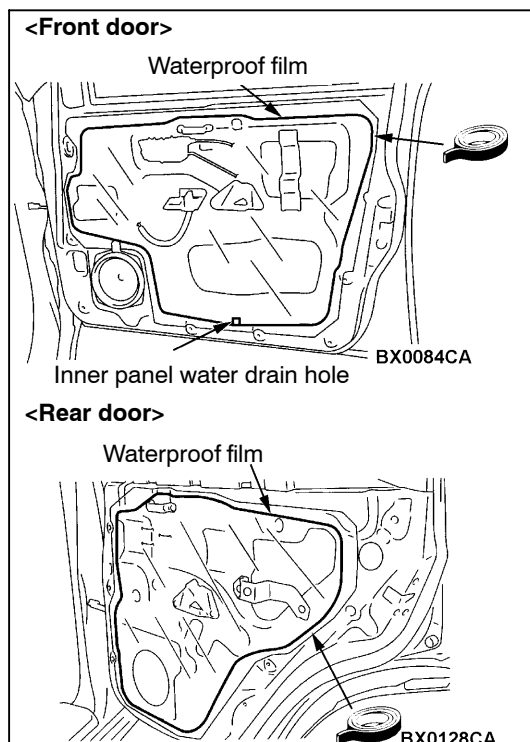
◀B▶ CLIP REMOVAL

Use a cloth to remove the clip as shown in the illustration.



◀C▶ DOOR INSIDE HANDLE COVER REMOVAL

1. Insert the special tool between the inside handle upper part and the inside handle cover, and then disengage the upper claw of the inside handle.
2. Disengage the lower claw of the inside handle in the same manner as for the upper claw.
3. Remove the door trim.
4. Remove the inside handle cover from the door trim.



INSTALLATION SERVICE POINTS

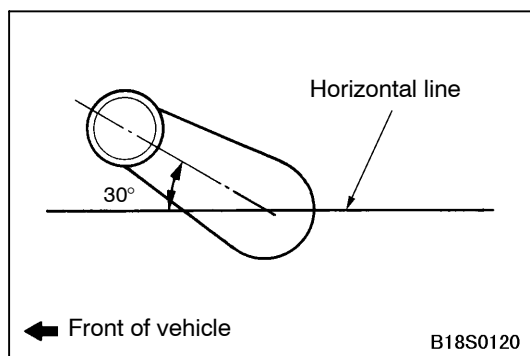
►A◄ WATERPROOF FILM INSTALLATION

Apply the specified sealant to the shown positions of waterproof film, and then attach the waterproof film.

Specified sealant: 3M ATD Part No. 8625 or equivalent

Caution

Be sure to apply the sealant below the inner panel water drain holes so as not to plug them.



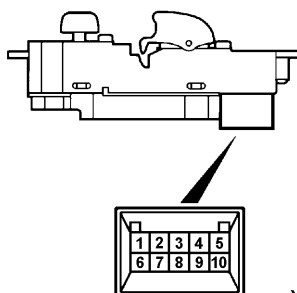
►B◄ REGULATOR HANDLE/ESCUTCHEON/CLIP INSTALLATION

1. Install the clip and escutcheon to the regulator handle.
2. Close the front door window glass fully, and then install the regulator handle as shown in the illustration.

INSPECTION

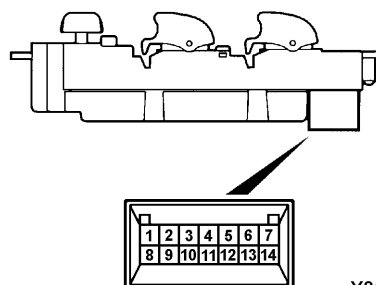
POWER WINDOW MAIN SWITCH CONTINUITY CHECK <Vehicles without power window safety mechanism>

<Short wheelbase>



Y0126CA

<Long wheelbase>



Y0127CA

<Short wheelbase>

| Switch position | | Terminal No. | | | | | | | |
|-----------------|------|---------------|---|---|---|------------------|---|---|----|
| | | Driver's side | | | | Passenger's side | | | |
| | | 2 | 4 | 5 | 6 | 1 | 2 | 4 | 10 |
| Un-lock | UP | | | | | | | | |
| | OFF | | | | | | | | |
| | DOWN | | | | | | | | |
| Lock | UP | | | | | | | | |
| | OFF | | | | | | | | |
| | DOWN | | | | | | | | |

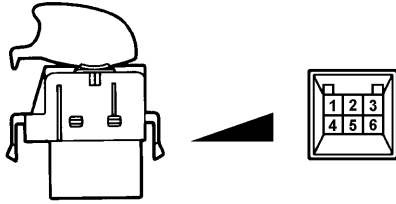
<Long wheelbase>

| Switch position | | Terminal No. | | | | | | | | | | | | | | | |
|-----------------|------|---------------|---|---|---|------------------|---|---|----|---------------|---|---|----|------------------|---|---|---|
| | | Front door | | | | | | | | Rear door | | | | | | | |
| | | Driver's side | | | | Passenger's side | | | | Driver's side | | | | Passenger's side | | | |
| | | 3 | 5 | 7 | 8 | 1 | 3 | 5 | 14 | 3 | 5 | 6 | 13 | 2 | 3 | 5 | 9 |
| Un-lock | UP | | | | | | | | | | | | | | | | |
| | OFF | | | | | | | | | | | | | | | | |
| | DOWN | | | | | | | | | | | | | | | | |
| Lock | UP | | | | | | | | | | | | | | | | |
| | OFF | | | | | | | | | | | | | | | | |
| | DOWN | | | | | | | | | | | | | | | | |

NOTE <Vehicles with power window safety mechanism>

Power window main switch uses SWS system, for the power window main switch check, refer to GROUP 54B – SWS.

<Rear doors for Taiwan, and vehicles except for Taiwan>



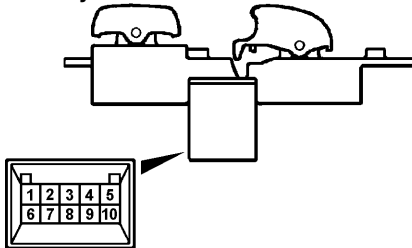
Y0094CA

POWER WINDOW SUB SWITCH CONTINUITY CHECK

<Vehicles without power window safety mechanism
(Rear doors for Taiwan, and vehicles except for Taiwan)>

| Switch position | Terminal No. | | | | |
|-----------------|--------------|---|---|---|---|
| | 1 | 2 | 4 | 5 | 6 |
| UP | | | | | |
| OFF | | | | | |
| DOWN | | | | | |

<Passenger's side for Taiwan only>



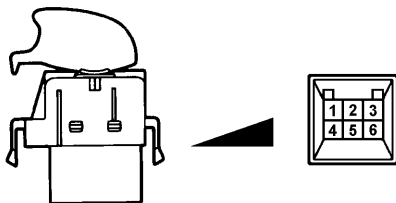
Y0107CA

<Vehicles without power window safety mechanism
(Passenger's side for Taiwan only)>

| Switch position | Terminal No. | | | | |
|-----------------|--------------|---|---|---|----|
| | 4 | 5 | 6 | 8 | 10 |
| UP | | | | | |
| OFF | | | | | |
| DOWN | | | | | |

<Vehicles with power window safety mechanism>

| Switch position | Terminal No. | | |
|-----------------|--------------|---|---|
| | 1 | 4 | 6 |
| UP | | | |
| DOWN | | | |



Y0094CA

DOOR GLASS AND REGULATOR

REMOVAL AND INSTALLATION

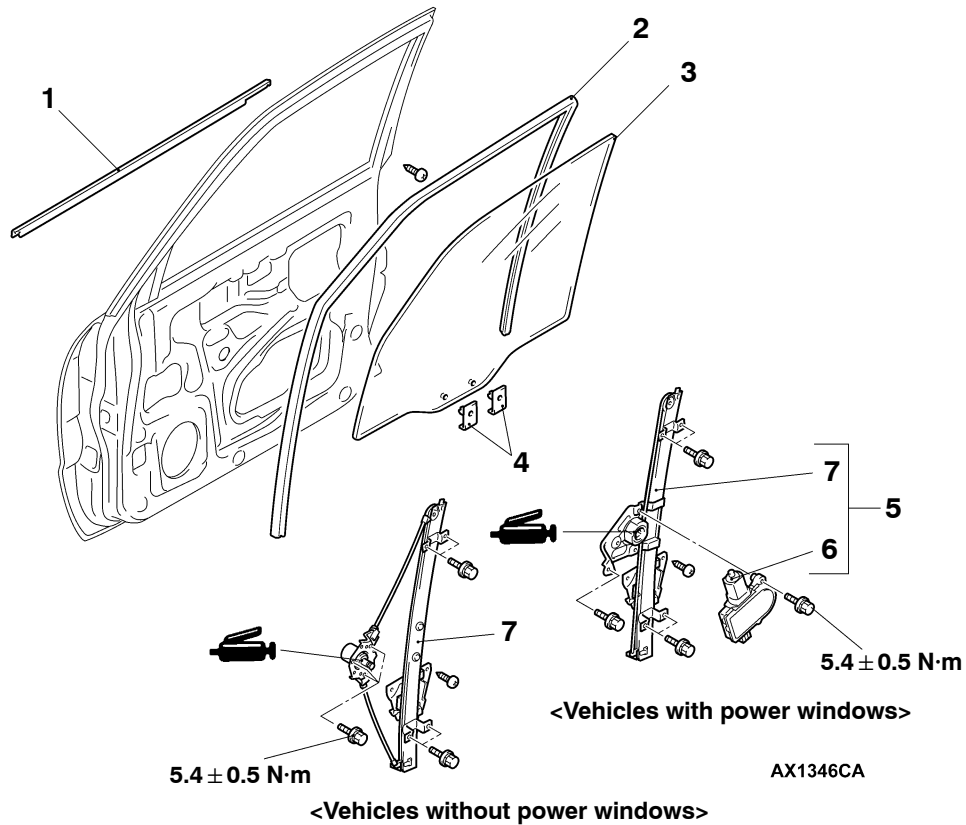
FRONT DOOR

Pre-removal Operation

Door Trim and Waterproof Film Removal
(Refer to P.42-30.)

Post-installation Operation

- Door Window Glass Adjustment (Refer to P.42-25.)
- Door Trim and Waterproof Film Installation (Refer to P.42-30.)



Door window glass removal steps

1. Door belt line moulding assembly
2. Door window glass runchannel
3. Door window glass
4. Glass holder



Power window regulator and motor assembly removal steps

5. Power window regulator and motor assembly
6. Power window motor assembly
7. Power window regulator assembly



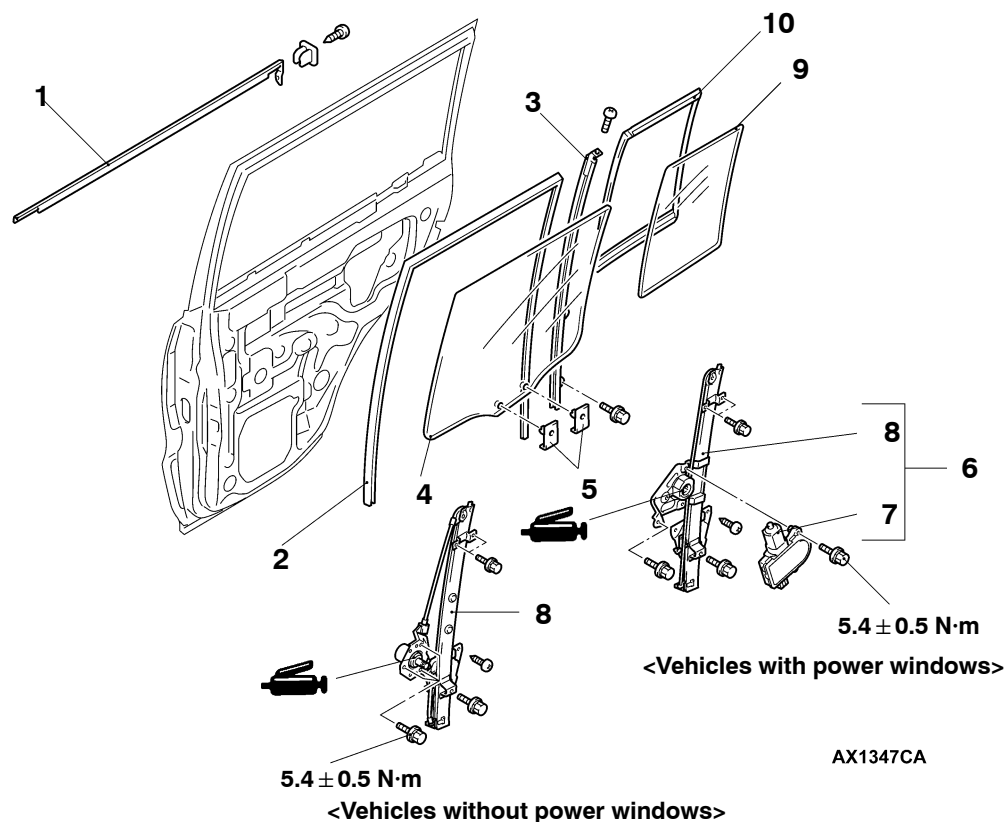
REAR DOOR

Pre-removal Operation

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

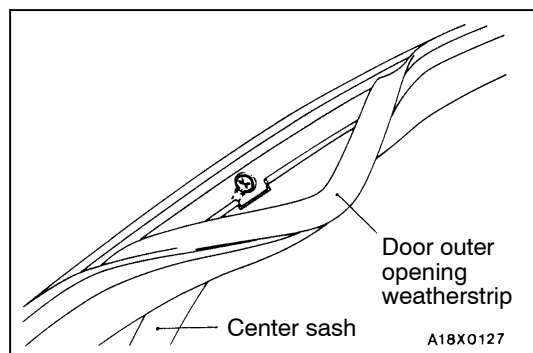
Post-installation Operation

- Door Window Glass Adjustment (Refer to P.42-25.)
- Door Trim and Waterproof Film Installation (Refer to P.42-31.)

**Removal steps**

- ◀A▶ ▶C▶
▶B▶
1. Door belt line moulding assembly
 2. Door window glass runchannel
 3. Center sash
 - Check operation
 4. Rear door window glass
 5. Glass holder

- ▶A▶ ▶A▶
6. Power window regulator and motor assembly
 7. Power window motor assembly
 8. Power window regulator assembly
 9. Stationary window glass
 10. Stationary window weatherstrip

**REMOVAL SERVICE POINT****◀A▶ CENTER SASH REMOVAL**

1. Remove only the section of the door outer opening weatherstrip which is attached to the center sash.
2. Remove the center sash mounting screws, and then remove the center sash from the door panel.

INSTALLATION SERVICE POINTS**►A◀ POWER WINDOW MOTOR ASSEMBLY/POWER WINDOW REGULATOR ASSEMBLY INSTALLATION**

Power window motor assembly and window regulator assembly pre-installation operations

1. Connect the power window motor assembly to the body side harness connector, and then turn the ignition switch ON.
2. Operate the power window motor assembly for 5–10 seconds by pressing the power window switch to the UP position.

NOTE

This operation will cause the limit switch inside the power window motor assembly to be reset.

Caution

- (1) The power window motor assembly should not be operated again until it is installed to the glass.
- (2) The clamping prevention function does not operate the first time that the glass is fully closed.

►B◀ CHECK OPERATION

1. Install the glass to the power window motor assembly.
2. Press the power window switch to fully-close the glass, and then return the glass to the fully-open position.

NOTE

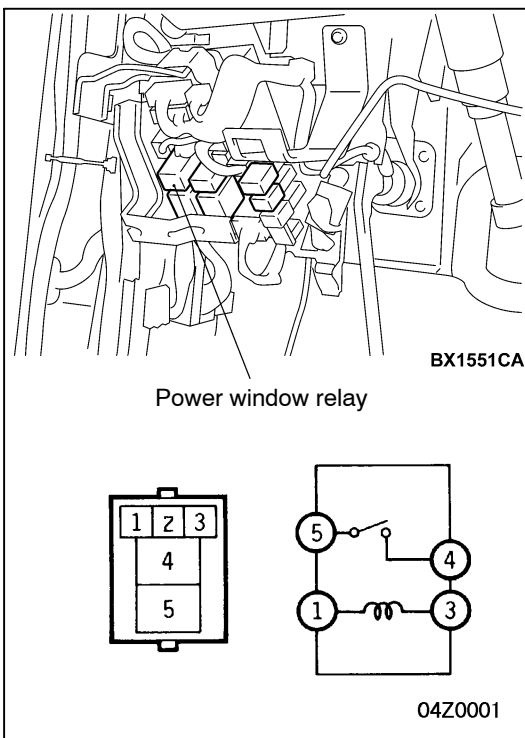
This operation will program the power window-ECU.

►C◀ CENTER SASH INSTALLATION

Securely insert the center sash into the window rear sash (door).

INSPECTION**POWER WINDOW RELAY CONTINUITY CHECK**

| Battery voltage | Terminal No. | | | |
|-----------------|--------------|---|---|---|
| | 1 | 3 | 4 | 5 |
| Not applied | ○ | ○ | | |
| Applied | ⊕ | ⊖ | ○ | ○ |



POWER WINDOW MOTOR CHECK <Vehicles without power window safety mechanism>

1. Connect the battery directly to the motor terminals. Check that the motor rotates smoothly.
2. Reconnect the battery to the motor terminals vice versa. Check that the motor rotates in the reverse direction.
3. If malfunction is present, replace the window regulator assembly.

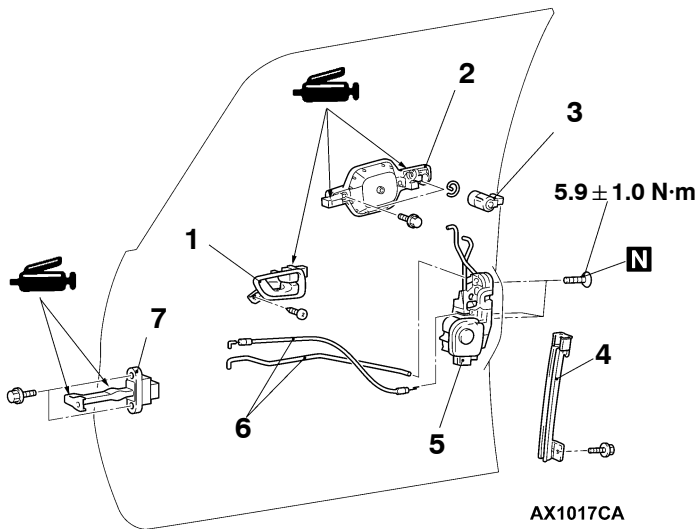
**DOOR HANDLE AND LATCH
REMOVAL AND INSTALLATION**

Pre-removal Operation
Door Trim Removal (Refer to P.42-30, 31.)

Post-installation Operation

- Door Inside Handle Play Check (Refer to P.42-27.)
- Door Outside Handle Play Check (Refer to P.42-26.)
- Door Trim Installation (Refer to P.42-30, 31.)

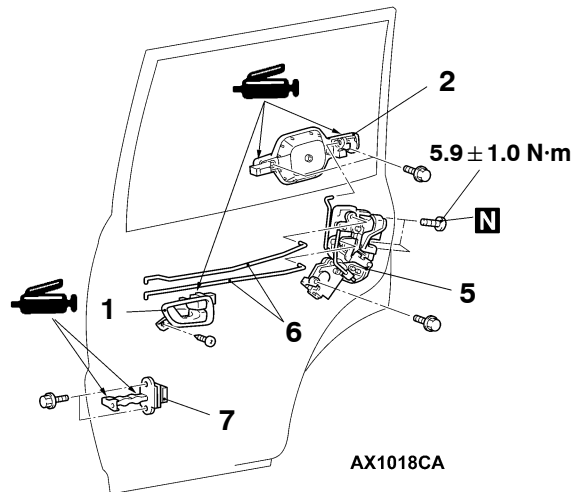
FRONT DOOR



Door handle and door latch assembly removal steps

- C◄ 1. Door inside handle
- Waterproof film (Refer to P.42-30, 31.)
2. Door outside handle
3. Door lock key cylinder
- B◄ 4. Rear lower sash

REAR DOOR

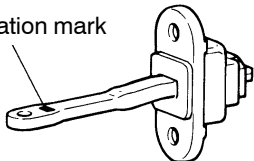


5. Door latch assembly
6. Link assembly

Door check removal steps

- A◄ • Waterproof film (Refer to P.42-30, 31.)
7. Door check

Identification mark



A18X0464

INSTALLATION SERVICE POINTS

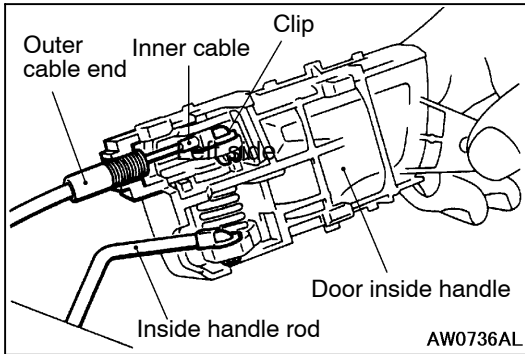
►A◄ DOOR CHECK INSTALLATION

Install with the following identification marks upward.

| Items | | Identification mark |
|------------|------------|---------------------|
| Front door | Left door | 20L |
| | Right door | 20R |
| Rear door | Left door | 26L |
| | Right door | 26R |

►B◄ REAR LOWER SASH INSTALLATION

Be sure to install the rear lower sash to the window rear sash (at door) securely.



►C◄ DOOR INSIDE HANDLE INSTALLATION

1. Install the inside lock cable to the door inside handle as follows:
 - (1) Install the inner cable end in the inside lock cable to the clip in the door inside handle.
 - (2) Turn the inside lock knob to the door lock position.
 - (3) Install the outer cable end to the door inside handle securely.
 - (4) Install the clip to the inner cable.
2. Install the inside handle rod to the door inside handle.
3. Install the door inside handle to the door.

INSPECTION

DOOR LOCK ACTUATOR CHECK

Front door

<Driver's side>

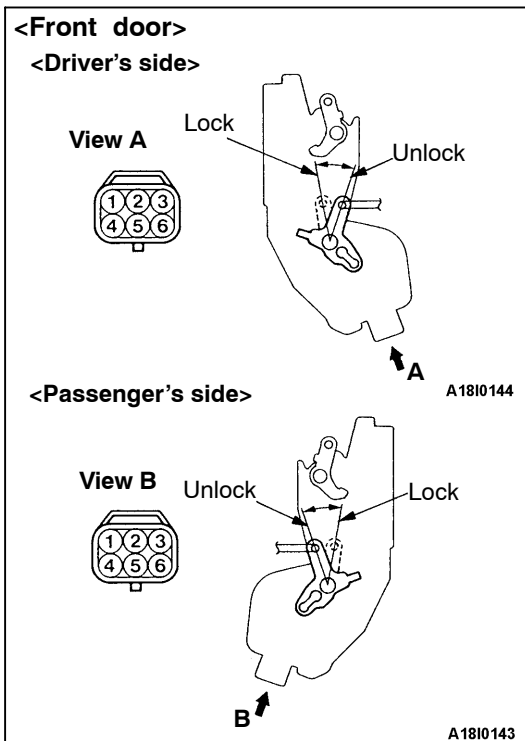
| Rod position | Terminal No. | | | | | Rod operation |
|--------------|--------------|---|---|---|---|----------------|
| | 1 | 2 | 3 | 4 | 6 | |
| LOCK | | | | ⊖ | ⊕ | LOCK to UNLOCK |
| UNLOCK | | | | ⊕ | ⊖ | UNLOCK to LOCK |
| LOCK | ○ | | ○ | | | |
| UNLOCK | | ○ | ○ | | | |

<L.H. drive vehicles (Passenger's side)>

| Rod position | Terminal No. | | Rod operation |
|--------------|--------------|---|----------------|
| | 4 | 6 | |
| LOCK | ⊕ | ⊖ | LOCK to UNLOCK |
| UNLOCK | ⊖ | ⊕ | UNLOCK to LOCK |

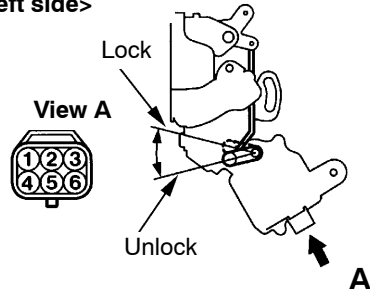
<R.H. drive vehicles (Passenger's side)>

| Rod position | Terminal No. | | Rod operation |
|--------------|--------------|---|----------------|
| | 4 | 6 | |
| LOCK | ⊖ | ⊕ | LOCK to UNLOCK |
| UNLOCK | ⊕ | ⊖ | UNLOCK to LOCK |

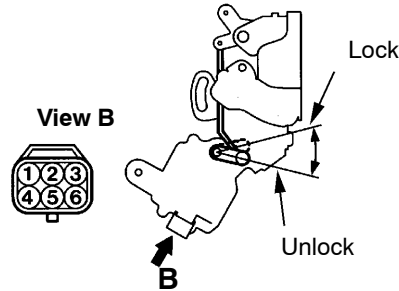


<Rear door>

<Left side>



<Right side>



AW0900AL

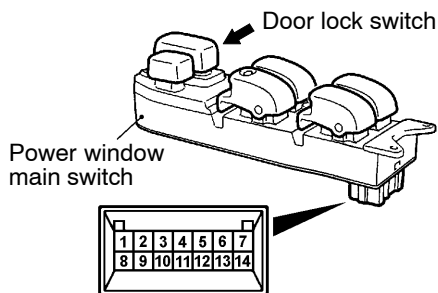
Rear door

<Left side>

| Rod position | Terminal No. | | Rod operation |
|--------------|--------------|---|----------------|
| | 2 | 3 | |
| LOCK | ⊖ | ⊕ | LOCK to UNLOCK |
| UNLOCK | ⊕ | ⊖ | UNLOCK to LOCK |

<Right side>

| Rod position | Terminal No. | | Rod operation |
|--------------|--------------|---|----------------|
| | 2 | 3 | |
| LOCK | ⊕ | ⊖ | LOCK to UNLOCK |
| UNLOCK | ⊖ | ⊕ | UNLOCK to LOCK |



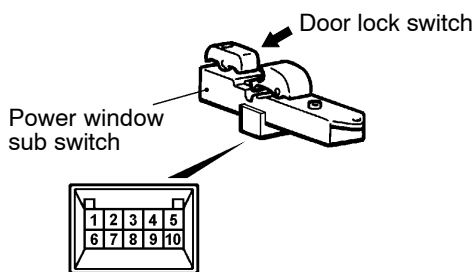
AY0121CA

DOOR LOCK SWITCH CONTINUITY CHECK

<Vehicles for Taiwan>

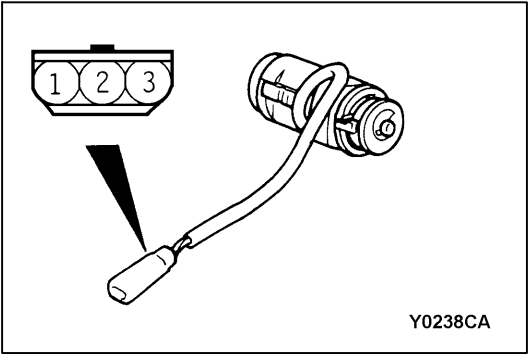
Remove the power window switch. (Refer to P.42-30, 31.)

| Switch position | Terminal No. | | |
|-----------------|--------------|----|----|
| | 3 | 10 | 12 |
| LOCK | ○ | | ○ |
| OFF | | | |
| UNLOCK | ○ | ○ | |



AY0122CA

| Switch position | Terminal No. | | |
|-----------------|--------------|---|---|
| | 1 | 2 | 3 |
| LOCK | ○ | ○ | |
| OFF | | | |
| UNLOCK | | ○ | ○ |



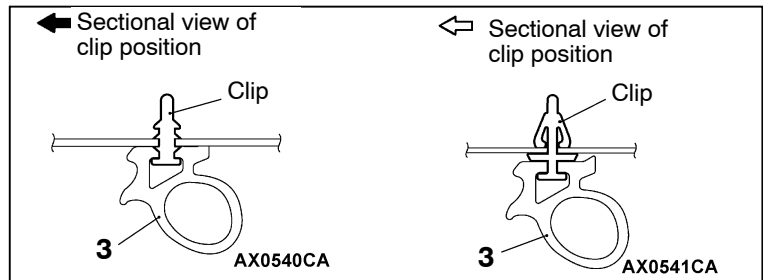
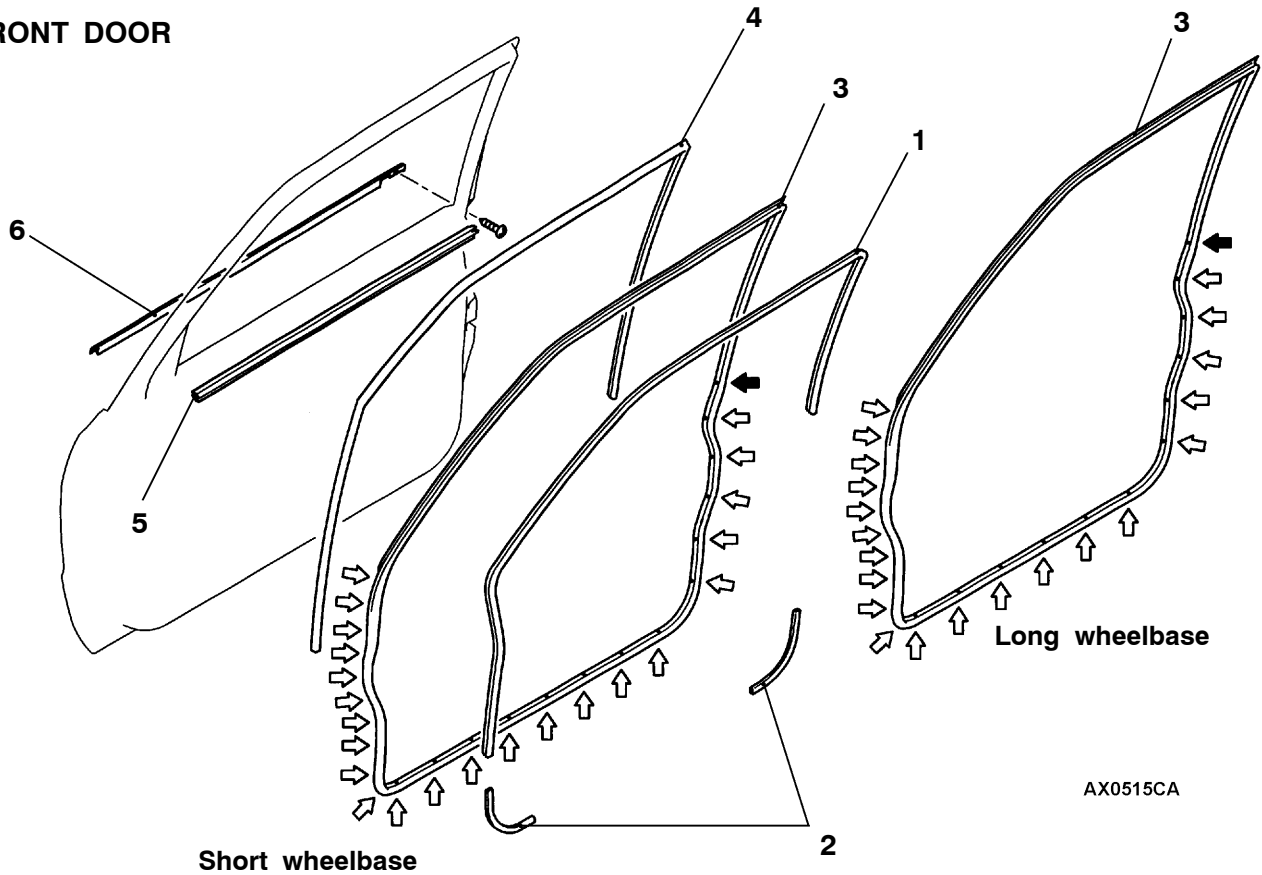
DOOR LOCK KEY CYLINDER SWITCH CONTINUITY
CHECK <Vehicles with central door locking system>

| Switch position | Terminal No. | | | | | |
|-----------------|--|-------|---|------------------|-------|---|
| | Driver's side <Vehicles for Taiwan> | | | Passenger's side | | |
| | 1 | 2 | 3 | 1 | 2 | 3 |
| LOCK | | ○ — ○ | ○ | ○ — ○ | | |
| OFF | | | | | | |
| UNLOCK | ○ — ○ | | | | ○ — ○ | |

WINDOW GLASS RUNCHANNEL AND DOOR OPENING WEATHERSTRIP

REMOVAL AND INSTALLATION

FRONT DOOR



Door inner opening weatherstrip removal steps

- B◄ 1. Door inner opening weatherstrip
 - Scuff plate (Refer to GROUP 52A.)
 - Cowl side trim (Refer to GROUP 52A.)
 - Center pillar lower trim (Refer to GROUP 52A.)
- B◄ 2. Edge seal rubber

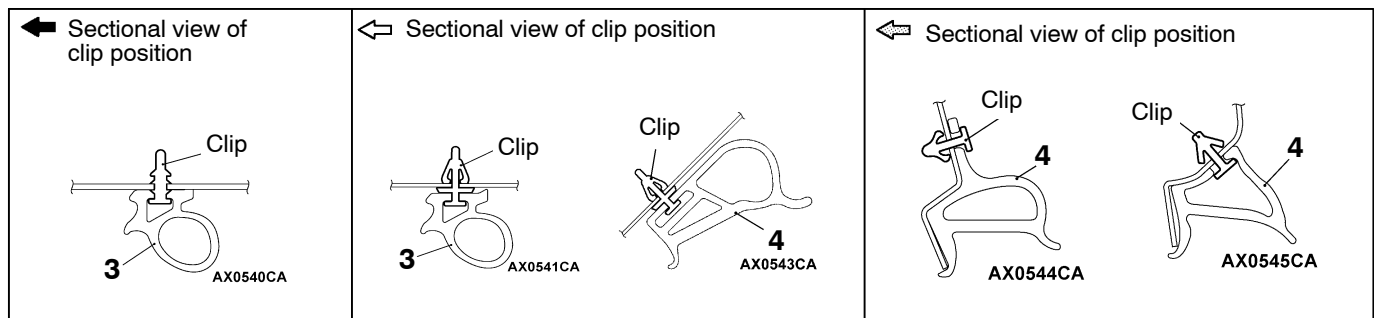
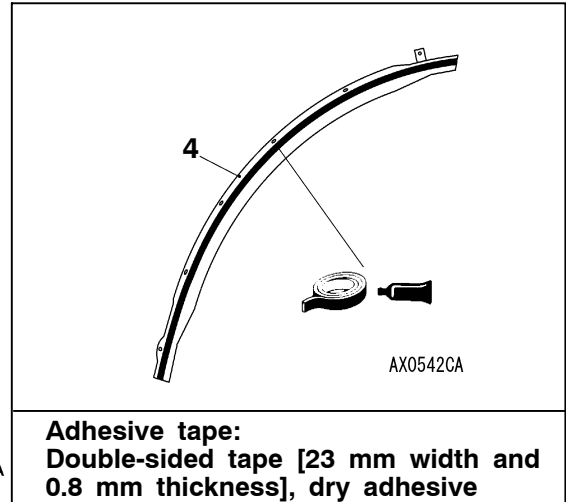
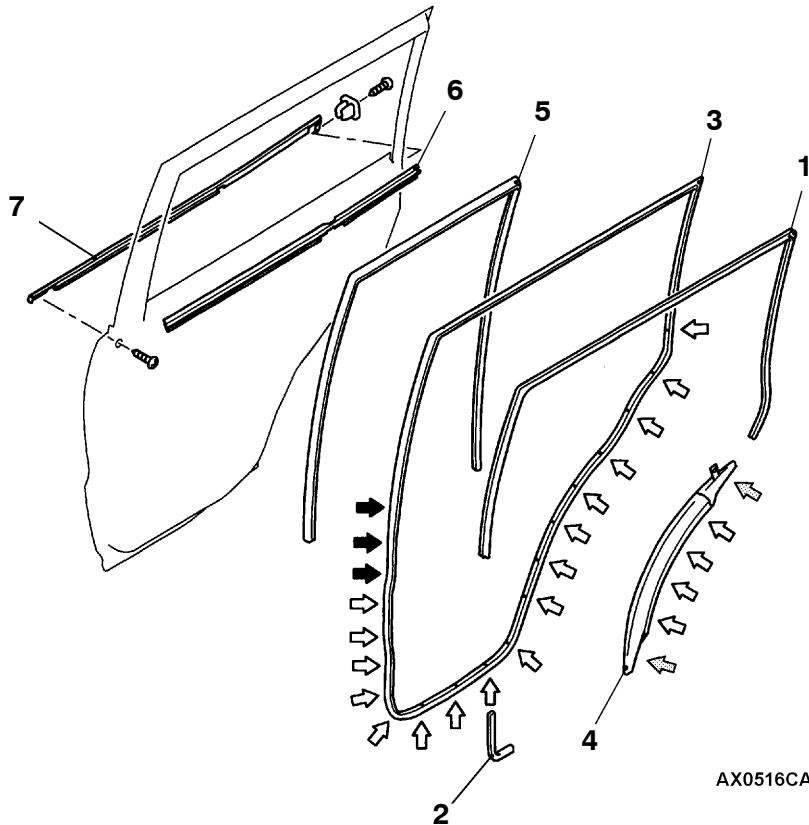
Door outer opening weatherstrip removal steps

- Front door check mounting bolts (door side) (Refer to P.42-28.)
- 3. Door outer opening weatherstrip

Door window glass runchannel removal steps

- A◄ 4. Door window glass runchannel
 - Front door trim (Refer to P.42-30.)
 - 5. Door belt line inner weatherstrip
- Door beltline moulding removal**
- 6. Door beltline moulding

REAR DOOR



Door inner opening weatherstrip removal steps

- B◄ 1. Door inner opening weatherstrip
 - Center pillar lower trim (Refer to GROUP 52A.)
- B◄ 2. Edge seal rubber

Door outer opening weatherstrip removal steps

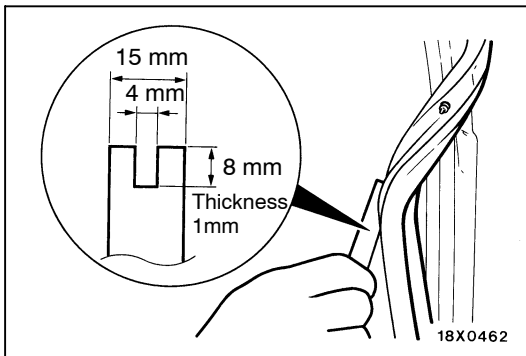
- Rear door check mounting bolts (door side) (Refer to P.42-29.)
- 3. Door outer opening weatherstrip
- 4. Door outer opening lower weatherstrip

Door window glass runchannel removal steps

- A◄ 5. Door window glass runchannel
 - Rear door trim (Refer to P.42-31.)
- 6. Door belt line inner weatherstrip

Door beltline moulding removal

- 7. Door beltline moulding

**REMOVAL SERVICE POINT****◀A▶ DOOR OUTER OPENING WEATHERSTRIP REMOVAL**

Make a tool as shown and remove the door opening weatherstrip.

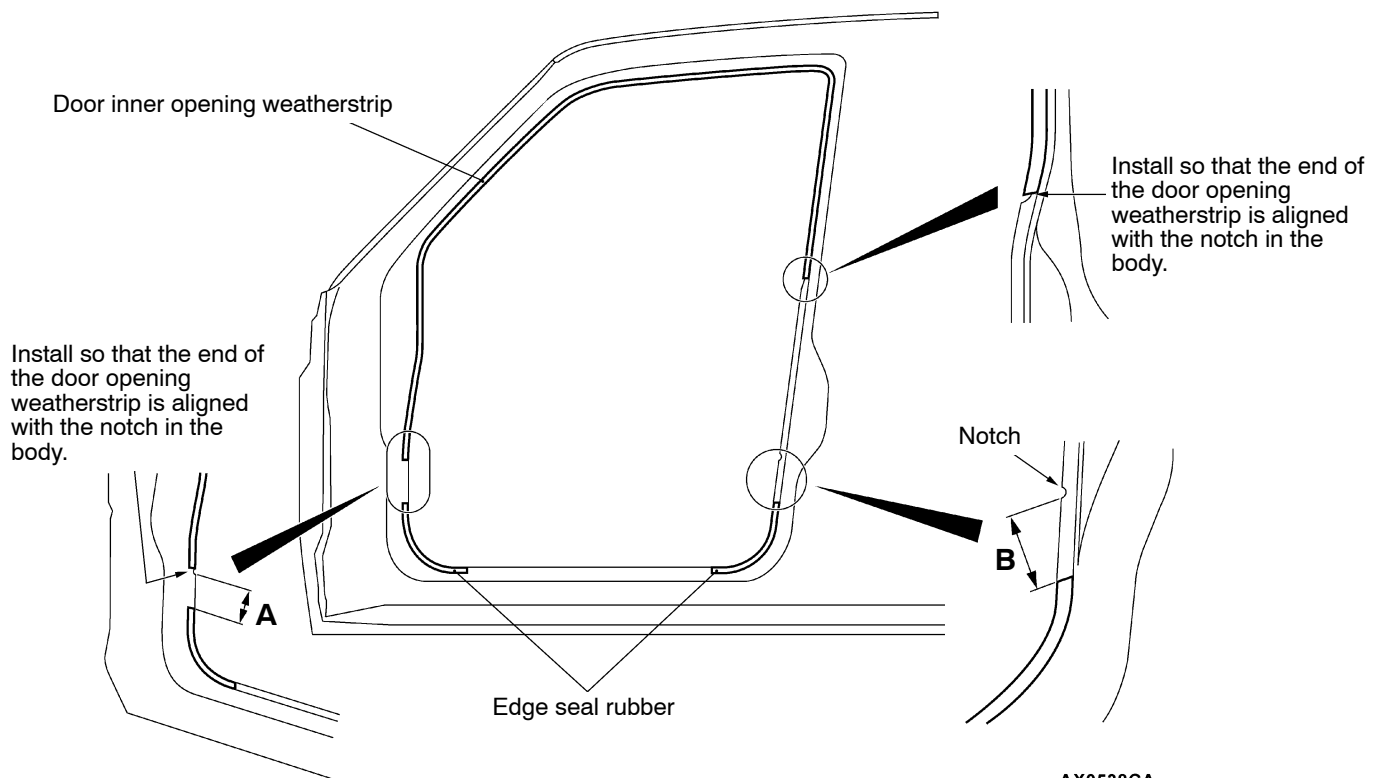
INSTALLATION SERVICE POINTS**▶A◀ DOOR WINDOW GLASS RUNCHANNEL INSTALLATION**

When installing the door window glass runchannel, remove the waterproof film.

▶B◀ EDGE SEAL RUBBER/DOOR INNER OPENING WEATHERSTRIP INSTALLATION

Attach the edge seal rubber and door inner opening weatherstrip in the places specified below.

Edge seal rubber and door inner opening weatherstrip attachment locations

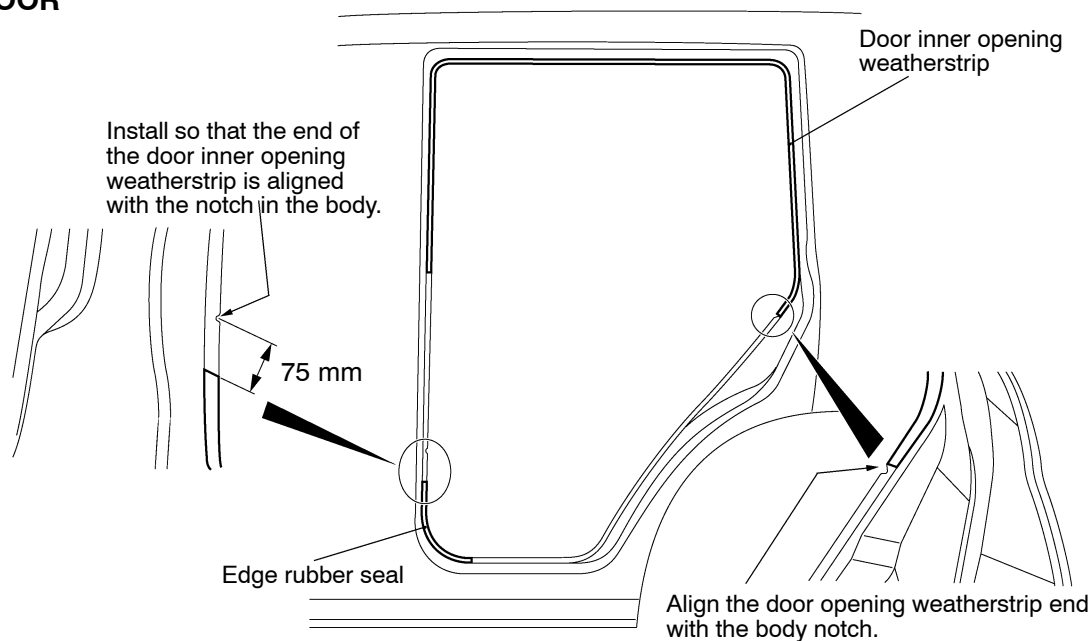
FRONT DOOR

A: 87 mm

B: 106 mm (Long wheelbase)

B: 98 mm (Short wheelbase)

REAR DOOR



AX0539CA

BACK DOOR

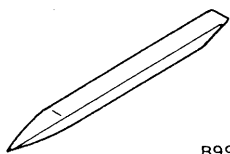
SERVICE SPECIFICATION

| Item | Standard value |
|----------------------------------|----------------|
| Back door outside handle play mm | 2.3 |
| Back door inside handle play mm | 5.3 or less |

SEALANT

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

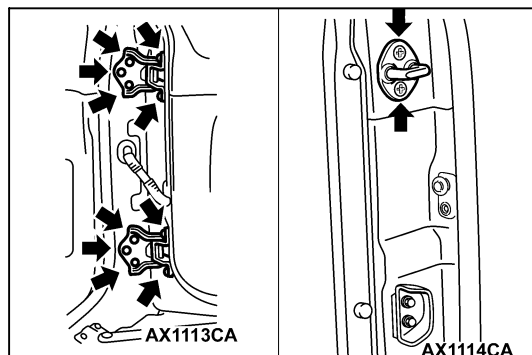
SPECIAL TOOL

| Tool | Number | Name | Use |
|--|----------|------------------|------------------------|
|  B990784 | MB990784 | Ornament remover | Back door trim removal |

TROUBLESHOOTING

NOTE

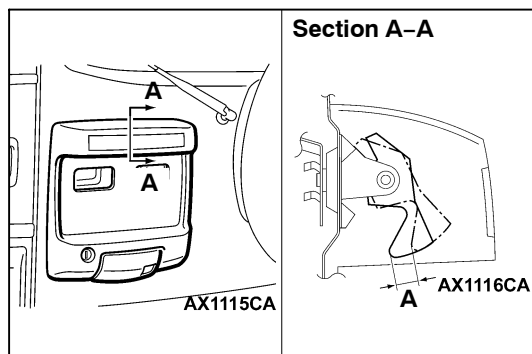
Power window main switch uses SWS system, for the power window main switch check, refer to GROUP 54B – SWS.



ON-VEHICLE SERVICE

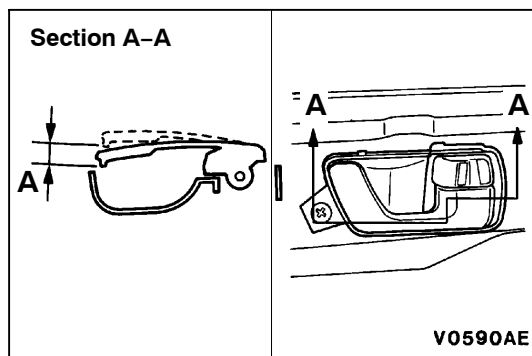
BACK DOOR FIT ADJUSTMENT

1. If the striker and latch mesh badly, move the striker forward and backward or right and left to adjust.
2. If uneven clearance is present between back door and body, reposition the hinge and striker and/or change the thickness of shim (change the number of shim) to adjust the clearance.



BACK DOOR OUTSIDE HANDLE PLAY CHECK

1. Measure the back door outside handle play.
Standard value (A): 2.3 mm
2. If the back door outside handle play is not within the standard value, check the back door outside handle and door latch assembly. Replace if necessary.



BACK DOOR INSIDE HANDLE PLAY CHECK

1. Check that the back door inside handle play is at the standard value.
Standard value (A): 5.3 mm or less
2. If the play is outside the standard value, remove the back door trim. (Refer to P.42-52.)
3. Adjust the back door inside handle play by using the clip which connects the back door inside handle and the rod.

BACK DOOR ASSEMBLY

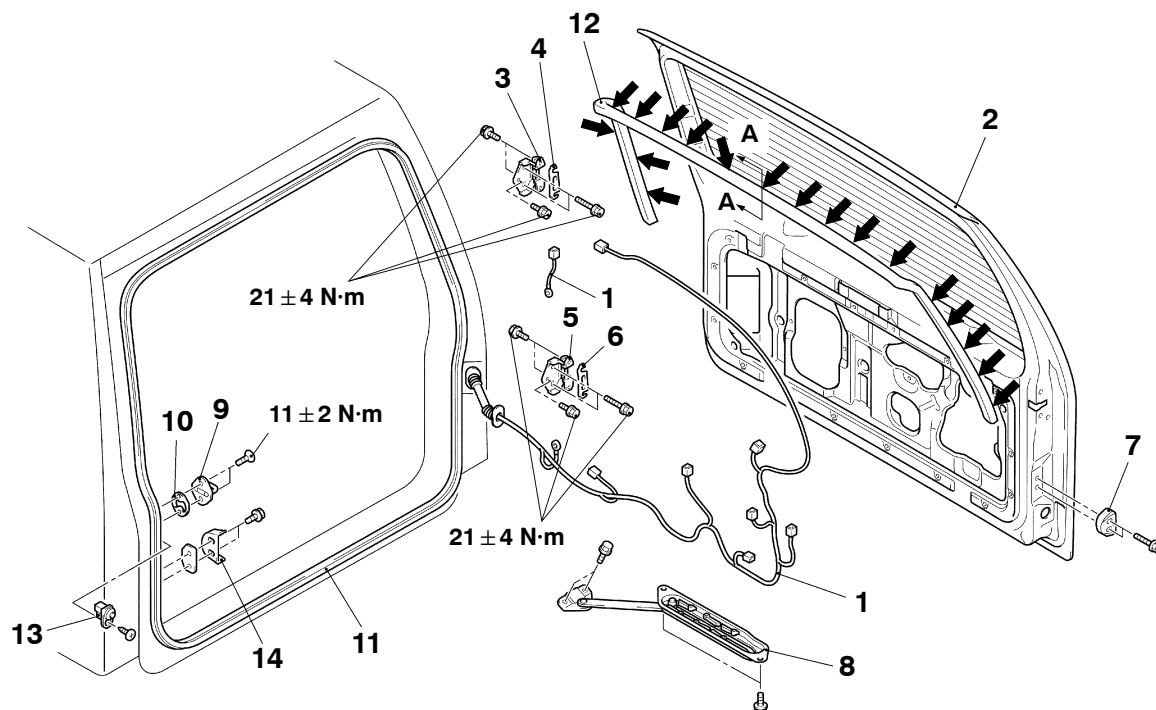
REMOVAL AND INSTALLATION

Pre-removal Operation

- High-mounted Stop Lamp Removal (Refer to GROUP 54A.)
- Spare Tyre Removal (Refer to GROUP 31.)
- Spare Tyre Carrier Assembly Removal

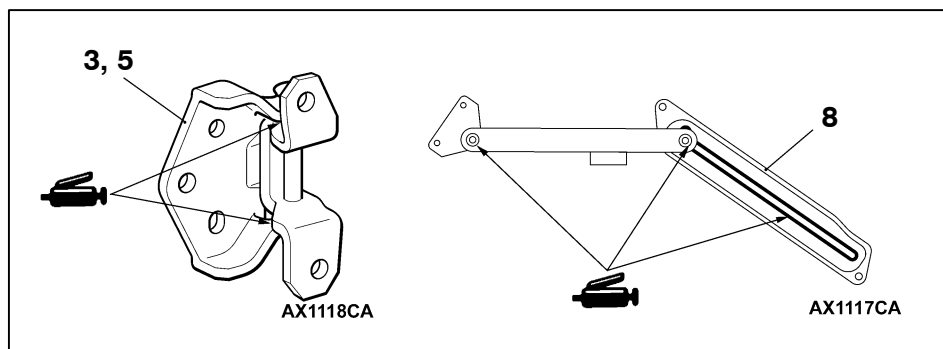
Pre-removal Operation

- High-mounted Stop Lamp Installation (Refer to GROUP 54A.)
- Spare Tyre Carrier Assembly Installation
- Spare Tyre Installation (Refer to GROUP 31.)
- Back Door Fit Adjustment (Refer to P.42-49)

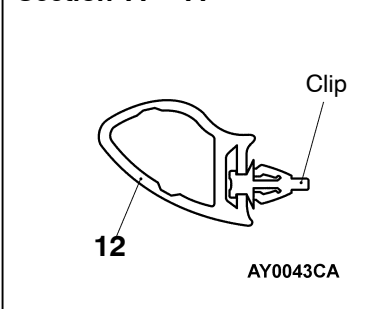


AY0032CA

← : Clip positions



Section A – A



Removal steps

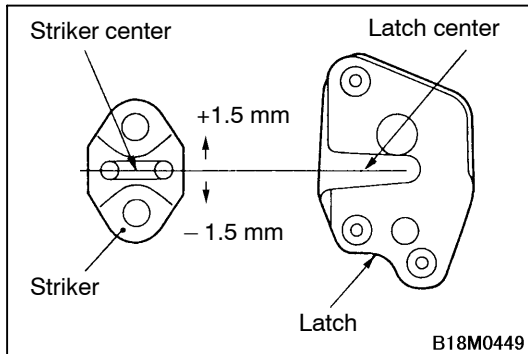
- Back door trim and waterproof film (Refer to P.42-52.)
 - Licence plate garnish (Refer to GROUP 51.)
1. Harness connector
 2. Back door assembly
 3. Back door upper hinge
 4. Shim
 5. Back door lower hinge

6. Shim
7. Damper mail
8. Back door stopper
9. Striker
10. Striker shim
11. Back door opening weatherstrip
12. Back door opening weatherstrip upper <Vehicles for Australia>
13. Door switch
14. Back door bumper, female

INSTALLATION SERVICE POINTS

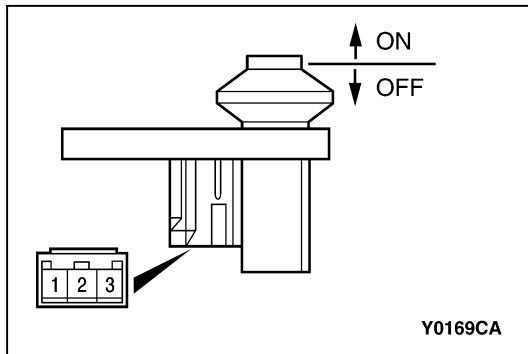
►A◄ BACK DOOR OPENING WEATHERSTRIP INSTALLATION

Align the marking section on the back door opening weatherstrip with the center of the body.



►B◄ STRIKER INSTALLATION

Install the striker so that the striker center does not deviate more than ± 1.5 mm from the latch center.



INSPECTION

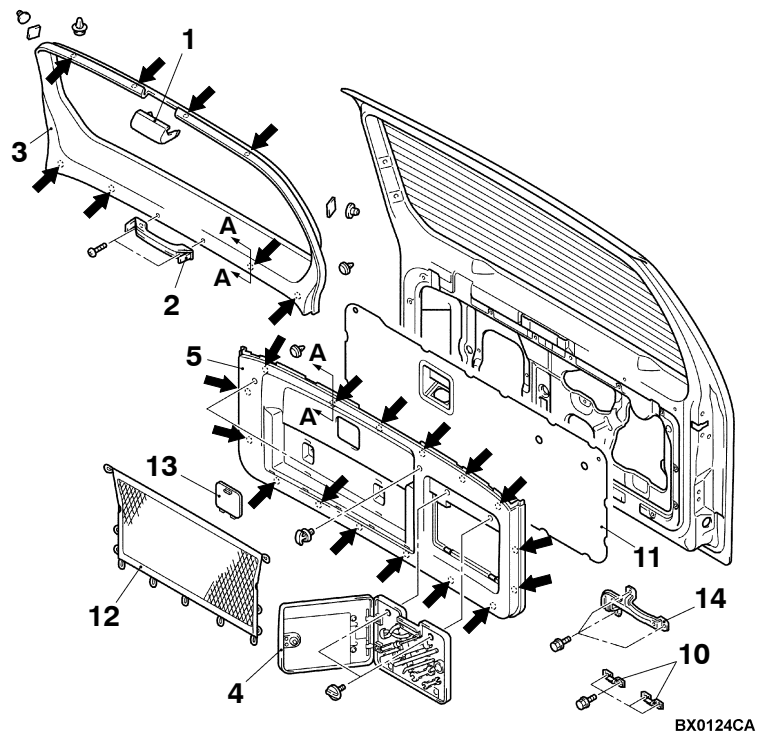
DOOR SWITCH CONTINUITY CHECK

| Switch position | Terminal No. | | |
|-----------------|--------------|---|---|
| | 1 | 2 | 3 |
| Released (ON) | | | |
| Pressed (OFF) | | | |

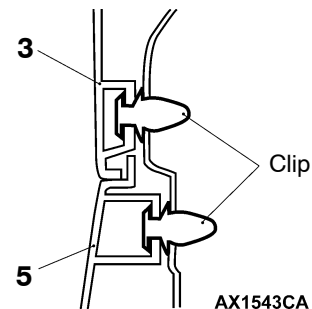
BACK DOOR TRIM AND WATERPROOF FILM

REMOVAL AND INSTALLATION

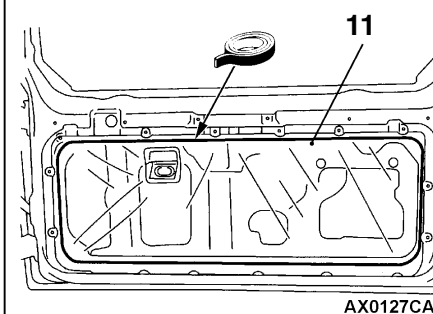
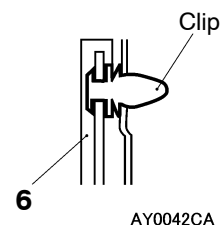
<Vehicles with toolbox>



Section A – A



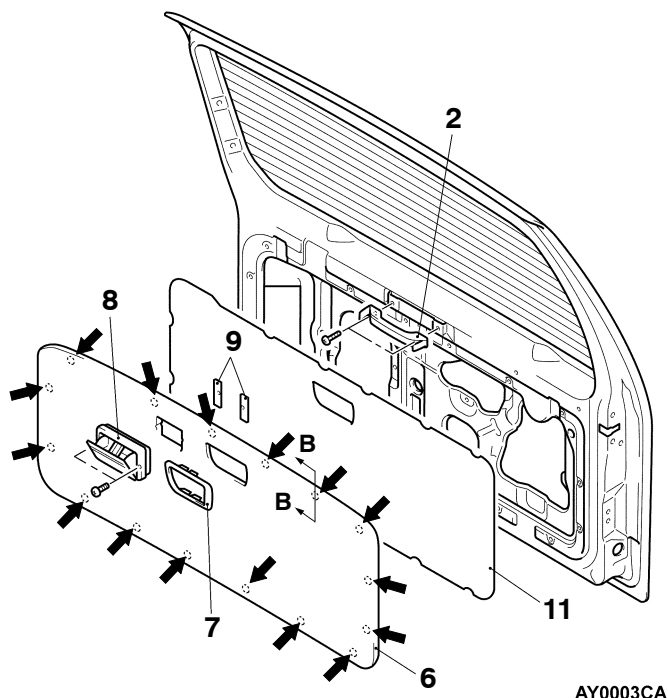
Section B – B



Sealant:
3M ATD Part No. 8625 or equivalent

← : Clip positions

<Vehicles without toolbox>



Removal steps

1. High-mounted stop lamp cover
- High-mounted stop lamp (Refer to GROUP 54A.)
- ▶A◀ 2. Door pull handle
3. Back door upper trim
4. Toolbox assembly
5. Back door lower trim
6. Back door trim

7. Back door inside handle cover
8. Ashtray <Long wheelbase>
9. Plate <Long wheelbase>
10. Toolbox bracket, lower
11. Waterproof film
12. Back door net
13. Washer tank lid
14. Toolbox bracket, upper

INSTALLATION SERVICE POINT**▶◀ DOOR PULL HANDLE INSTALLATION**

Install so that the arrow on the underside is pointing upwards.

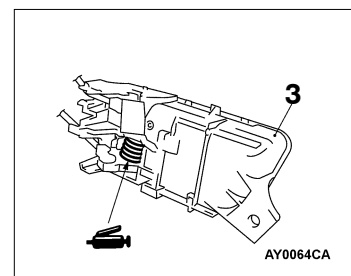
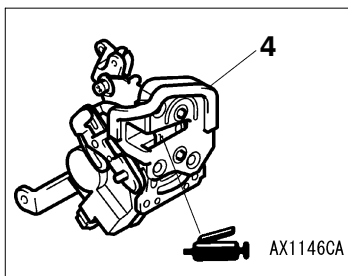
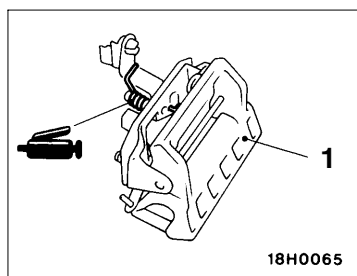
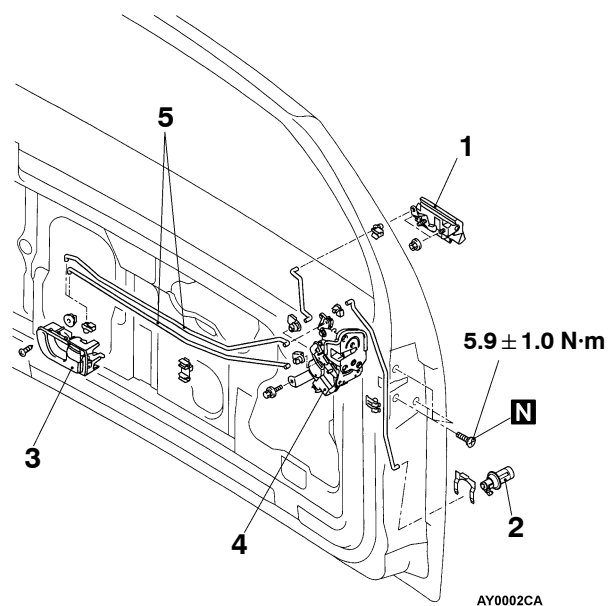
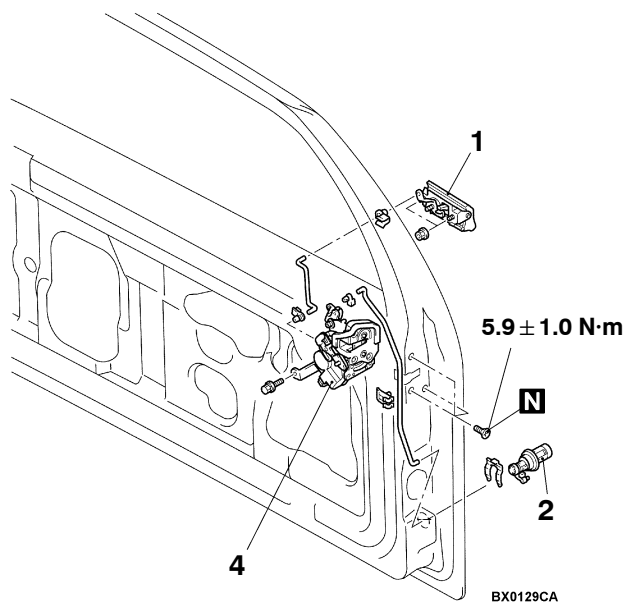
BACK DOOR HANDLE AND LATCH REMOVAL AND INSTALLATION

Post-installation Operation

- Outside Handle Play Check (Refer to P.42-49.)
- Inside Handle Play Check (Refer to P.42-49.)

<Vehicles without back door inside handle>

<Vehicles with back door inside handle>



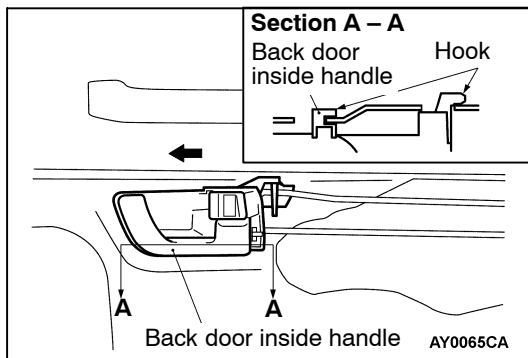
Back door outside handle and lock key cylinder removal steps

- Back door trim and waterproof film (Refer to P.42-52.)
 - Licence plate garnish (Refer to GROUP 51.)
1. Back door outside handle
 2. Back door lock key cylinder



Back door inside handle and latch removal steps

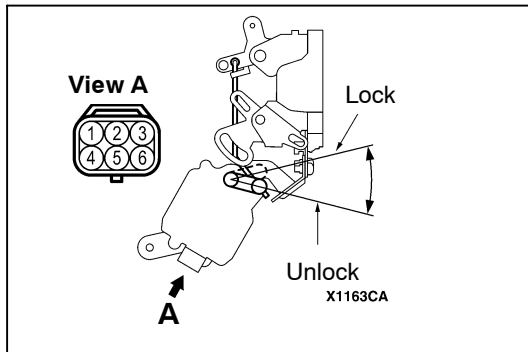
- Back door trim and waterproof film (Refer to P.42-52.)
3. Back door inside handle
 4. Back door latch assembly
 5. Link assembly



REMOVAL SERVICE POINT

◀A▶ BACK DOOR INSIDE HANDLE REMOVAL

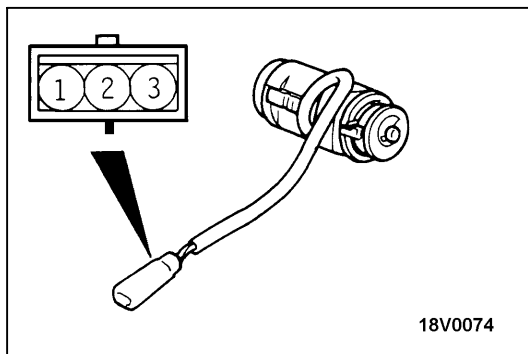
Slide the back door inside handle to the direction shown, and unhook the handle.



INSPECTION

BACK DOOR LOCK ACTUATOR CHECK

| Rod position | Terminal No. | | Rod operation |
|--------------|--------------|---|----------------|
| | 2 | 3 | |
| LOCK | ⊕ | ⊖ | LOCK to UNLOCK |
| UNLOCK | ⊖ | ⊕ | UNLOCK to LOCK |



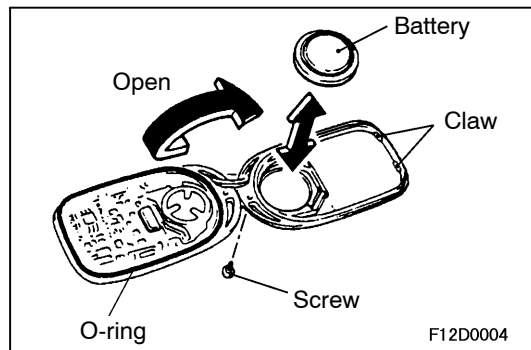
BACK DOOR LOCK KEY CYLINDER SWITCH CONTINUITY CHECK <Vehicles for South Africa and vehicles with theft-alarm system>

| Switch position | Terminal No. | | |
|-----------------|--------------|---|---|
| | 1 | 2 | 3 |
| LOCK | ○ | ○ | |
| OFF | | | |
| UNLOCK | | ○ | ○ |

KEYLESS ENTRY SYSTEM

TROUBLESHOOTING

The keyless entry system is controlled by the Smart Wiring System (SWS). For troubleshooting, refer to GROUP 54B – Troubleshooting.



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 <Vehicles except for Hong Kong>

Coin type battery CR1616 <Vehicles for Hong Kong>

3. Insert the claw first, and with care not to displace the O-ring, assemble the transmitter.
4. Check to see if the keyless entry system operates.

NOTE

- (1) 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.
- (2) If the O-ring is displaced during the assembly of the transmitter, water or dust penetrates in it causing trouble.

ENCRYPTED CODE REGISTRATION METHOD

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

- When either the transmitter or ETACS-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 four different codes can be stored in the memory area of the EEPROM (four different transmitters can be used). When the code for the first transmitter is registered, the previously-registered codes for four 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.

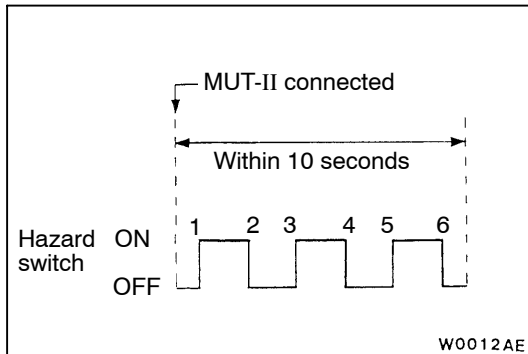
1. Check that the doors lock normally when the ignition key is inserted into the door key cylinder and turned.
2. Insert the ignition key in the ignition switch.
3. Connect the MUT-II to the diagnosis connector.

NOTE

This sets the system in encrypted code registration standby mode. If MUT-II is not used, connect terminal No.1 of the diagnosis connector to earth.

Caution

Always turn the ignition switch to LOCK (OFF) position before connecting and disconnecting the MUT-II or earth.



4. Within 10 seconds after connecting the MUT-II or earth, press the hazard switch six times.

NOTE

- (1) The doors will lock and unlock once after pressing the hazard switch six times, and the system will switch to registration mode.
 - (2) The hazard switch alternates between ON and OFF each time pressing the hazard switch (Refer to illustration).
5. 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.
 6. After registration is completed, the doors will be automatically locked and unlocked once.
 7. If you are using more than two transmitters or have added a second transmitter, the same registration procedure should be carried out for the remaining transmitters, and it should be carried out within one minute after registration of the code for the first transmitter has been completed. The registration procedure are all the same for all transmitters.
 8. Registration mode will be terminated under the following conditions.
 - When the encrypted codes for four transmitters have been registered;
 - When one minute has passed after registration mode started;
 - When the MUT-II is disconnected (earth is released);
 - When the ignition key is removed;
 9. 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 all of the doors.

ENABLING/DISABLING THE ANSWERBACK FUNCTION**<Vehicles except for Taiwan>**

Refer to GROUP 54B – SWS.

<Vehicles for Taiwan>

Enable or disable the hazard answerback and horn answerback by a special operation of the transmitter.

NOTE

In addition, the hazard answerback can be enabled or disabled by a special operation of the ETACS-ECU (Refer to GROUP 54B – SWS.)

ENABLING/DISABLING THE HAZARD ANSWERBACK FUNCTION

1. Remove the ignition key.
2. Push the “LOCK” switch while holding the “UNLOCK” switch pushed for four to ten seconds.
3. If the “LOCK” switch and “UNLOCK” switch are released in that order, the ETACS-ECU buzzer will sound, indicating that the hazard answerback function can be enabled or disabled when the doors are locked.

Enable the hazard answerback function when the doors are locked:

The ETACS-ECU buzzer will sound once.

Disable the hazard answerback function when the doors are locked:

The ETACS-ECU buzzer will sound twice.

If the “UNLOCK” switch and “LOCK” switch are released , the ETACS-ECU buzzer will sound, indicating that the hazard answerback function can be enabled or disabled when the doors are unlocked.

Enable the hazard answerback function when the doors are unlocked:

The ETACS-ECU buzzer will sound once.

Disable the hazard answerback function when the doors are unlocked:

The ETACS-ECU buzzer will sound twice.

ENABLING/DISABLING THE HONE ANSWERBACK FUNCTION

1. Remove the ignition key.
2. Push the “UNLOCK” switch while holding the “LOCK” switch pushed for four to ten seconds.
3. If the “LOCK” switch and “UNLOCK” switch are released , the ETACS-ECU buzzer will sound, indicating that the hone answerback function can be enabled or disabled when the doors are locked.

Enable the hone answerback function:

The ETACS-ECU buzzer will sound once.

Disable the hone answerback function:

The ETACS-ECU buzzer will sound twice.

SUNROOF

SERVICE SPECIFICATION

| Items | Standard value |
|--|----------------|
| Roof lid glass operating current A (at 20°C) | 7 or less |

Troubleshooting

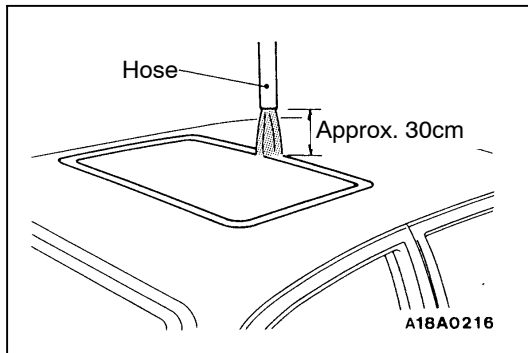
The sunroof is controlled by the SWS (Smart Wiring System). For troubleshooting procedures, refer to GROUP 54B – SWS Diagnosis.

ON-VEHICLE SERVICE

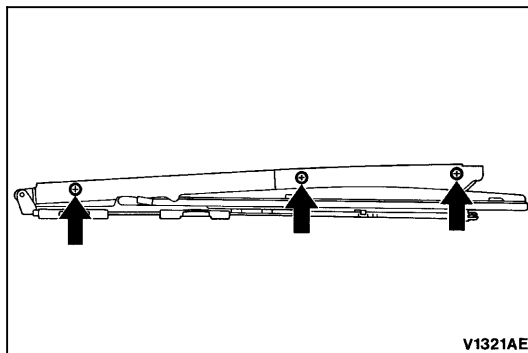
WATER TEST

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

1. Fully close the roof lid glass.
2. Adjust the water pressure so that water comes out of the hose to a height of approximately 50 cm when the hose is held vertically facing upwards.



3. Hold the end of the hose approximately 30 cm above the roof and let the water run onto the weatherstrip for 5 minutes or more.
4. While letting the water run onto the weatherstrip, check that there is no water leaking into the passenger compartment.



SUNROOF FIT ADJUSTMENT

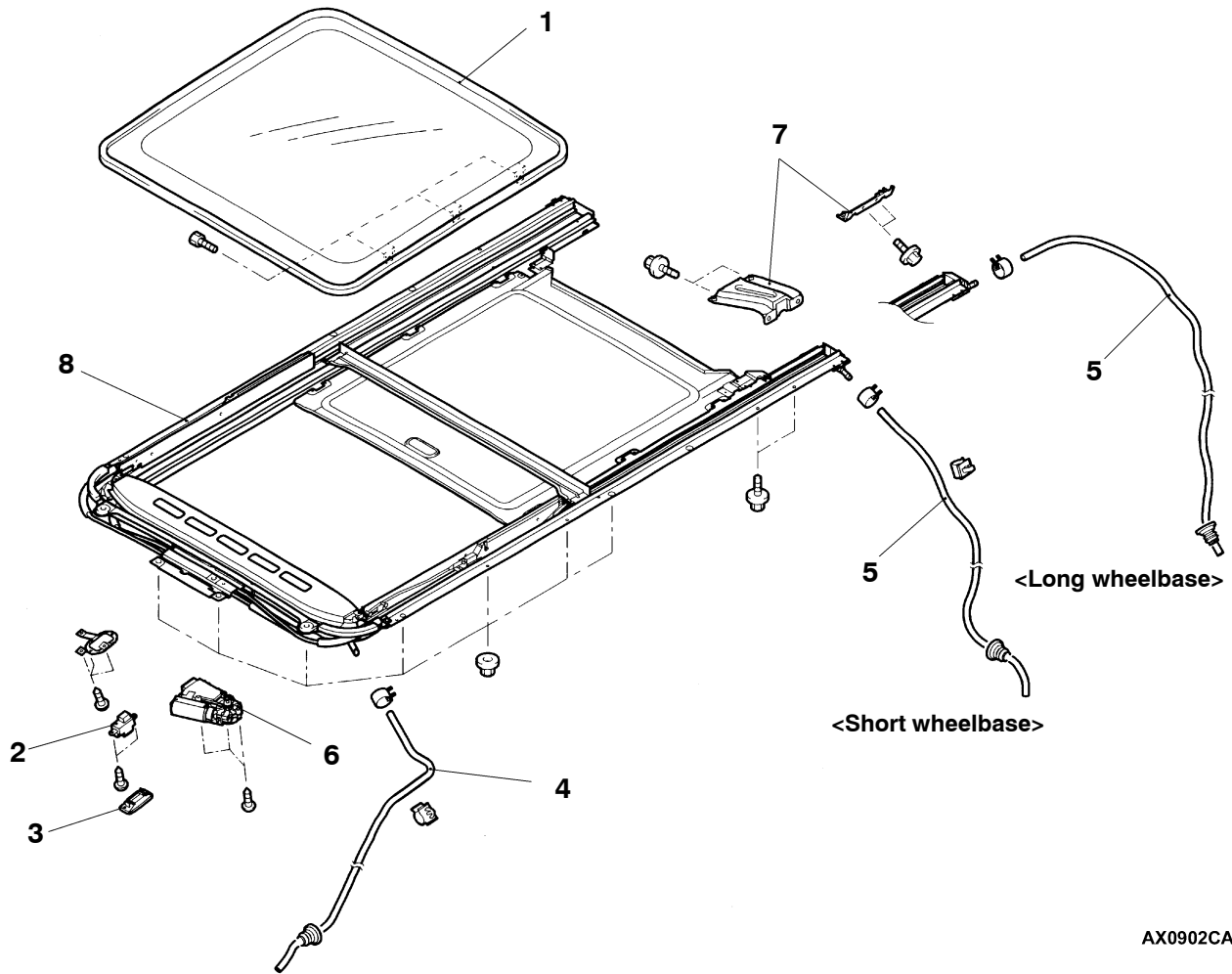
1. Fully close the roof lid glass.
2. Fully open the sunshade.
3. Loosen the roof lid glass assembly mounting screws, and then slide the roof lid glass assembly along the slot in the mechanism assembly to adjust the height of the roof lid glass.
4. After adjustment, check to be sure that the sunroof operates smoothly.

SUNROOF

REMOVAL AND INSTALLATION

Post-installation Operation

- Sunroof Water Test (Refer to P.42-58.)
- Sunroof Fit Adjustment (Refer to P.42-58.)



AX0902CA

1. Roof lid glass assembly

Sunroof switch removal steps

2. Sunroof switch cover
3. Sunroof switch

Drain hose removal steps

- Headlining
 - Instrument panel assembly (Front drain hose) (Refer to GROUP 52A.)
 - Rear mudguard (Rear drain hose) (Refer to GROUP 51.)
- ◀A▶ ▶A▶ 4. Drain hose (Front side)
- Pillar duct (Passenger's side) (Refer to GROUP 55.)
 - Rear quarter duct (Passenger's side) (Refer to GROUP 55.)
- ◀A▶ ▶A▶ 5. Drain hose (Rear side)

Sunroof motor assembly removal steps

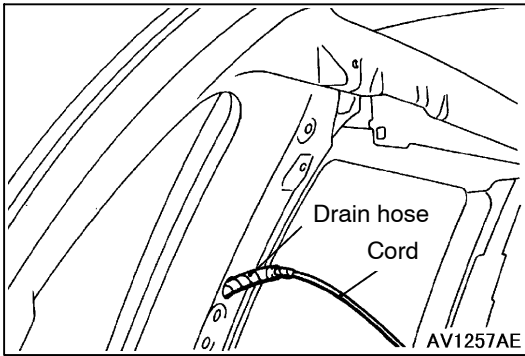
◀B▶ ▶B▶

- Headlining
- 6. Sunroof motor assembly

Sunroof assembly removal steps

◀A▶ ▶A▶

- Headlining
 - instrument panel assembly (Front drain hose) (Refer to GROUP 52A.)
 - Rear mudguard (Rear drain hose) (Refer to GROUP 51.)
- ◀A▶ ▶A▶ 4. Drain hose (Front side)
- Pillar duct (Passenger's side) (Refer to GROUP 55.)
 - Rear quarter duct (Passenger's side) (Refer to GROUP 55.)
- ◀A▶ ▶A▶ 5. Drain hose (Rear side)
7. Set bracket
 8. Sunroof assembly



REMOVAL SERVICE POINTS

◀A▶ DRAIN HOSE REMOVAL

Tie a cord to the end of the drain hose, and wind tape around it so that there is no unevenness. Then pull the drain hose out from the passenger compartment.

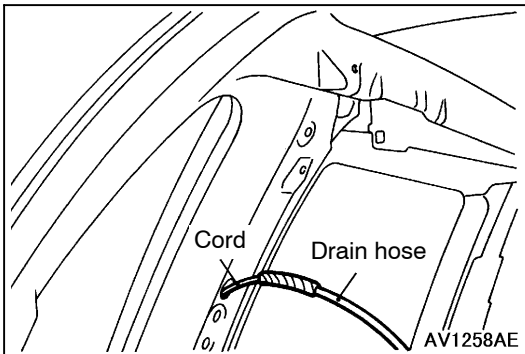
◀B▶ SUNROOF MOTOR ASSEMBLY REMOVAL

Caution

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

NOTE

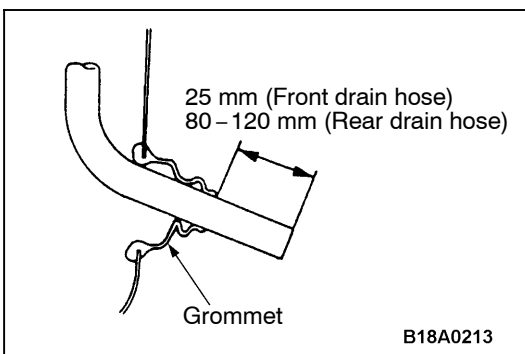
If there is a problem with the sunroof motor so that the roof lid glass cannot close fully, use an Allen key to turn the gear section of the sunroof motor to fully close the roof lid glass.



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 tape around it so that there is no unevenness.
2. Pull the cord to pull through the drain hose
3. Install the grommet, and then position the drain hose so that it protrudes from the grommet as shown in the illustration.



►B◄ SUNROOF MOTOR ASSEMBLY INSTALLATION

<INSTALLATION OF REMOVED MOTOR ASSEMBLY>

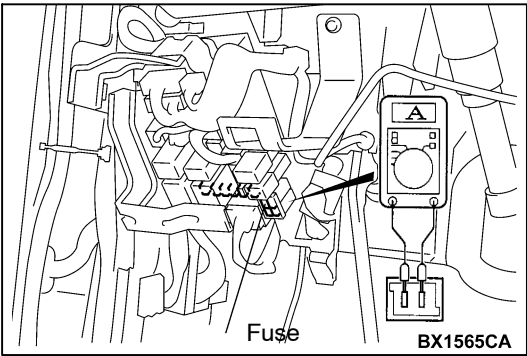
1. Install the roof lid glass assembly and the sunroof motor assembly with the sunroof motor assembly in the fully-closed position.
2. Connect the sunroof motor assembly harness connector and the sunroof switch harness connector to the vehicle wiring harness connector.
3. Operate the sunroof and check that it operates correctly.

<ACCESSORY (NEW) SUNROOF MOTOR ASSEMBLY INSTALLATION>

1. Install the roof lid glass assembly and the sunroof motor assembly with the sunroof motor assembly in the fully-closed position.
2. Connect the sunroof motor assembly harness connector and the sunroof switch harness connector to the vehicle wiring harness connector.
3. Operate the sunroof switch to slide the roof lid glass to the fully-open position, and then tilt it up in steps of 30 mm to the fully-open position and then keep pressing the switch for 3 seconds or more.
4. Operate the sunroof switch (CLOSE) using the one-touch function to slide the roof lid glass to the fully-closed position.
5. Operate the sunroof switch (OPEN) using the one-touch function to slide the roof lid glass to the fully-open position.
6. Operate the sunroof switch (CLOSE) using the one-touch function to slide the roof lid glass to the fully-closed position.
7. Press the tilt-up switch to operate the sunroof and check that learning is complete.

NOTE

- (1) During initialisation (learning mode), use only the CLOSE/DOWN switch to move the roof lid glass from the fully-closed position to the fully tilted open position. During initialisation, the TILT UP switch will not work when pressed. Furthermore, the sunroof-ECU will stop running in learning mode as soon as the roof lid glass is tilted up.
- (2) When the clamping prevention mechanism is cancelled, the operation is the same as when the roof lid glass operates 30 mm at a time.



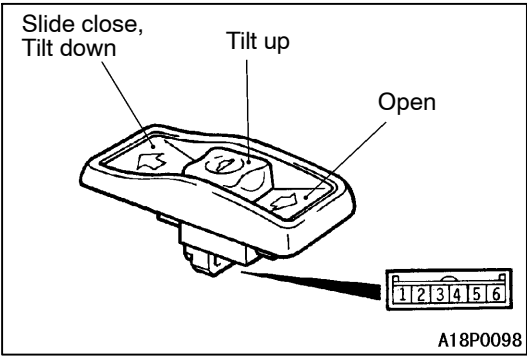
INSPECTION

ROOF LID GLASS OPERATION CURRENT CHECK

1. Remove the sunroof fuse and connect a circuit analyser as shown in the illustration.
2. Press the sunroof switch to operate the sunroof, and then measure the operation current while the roof lid glass is moving (except when the sunroof starts to operate, when it is fully open, when it is fully closed and when it is fully tilted up).

Standard value: 7 A or less (at 20°C)

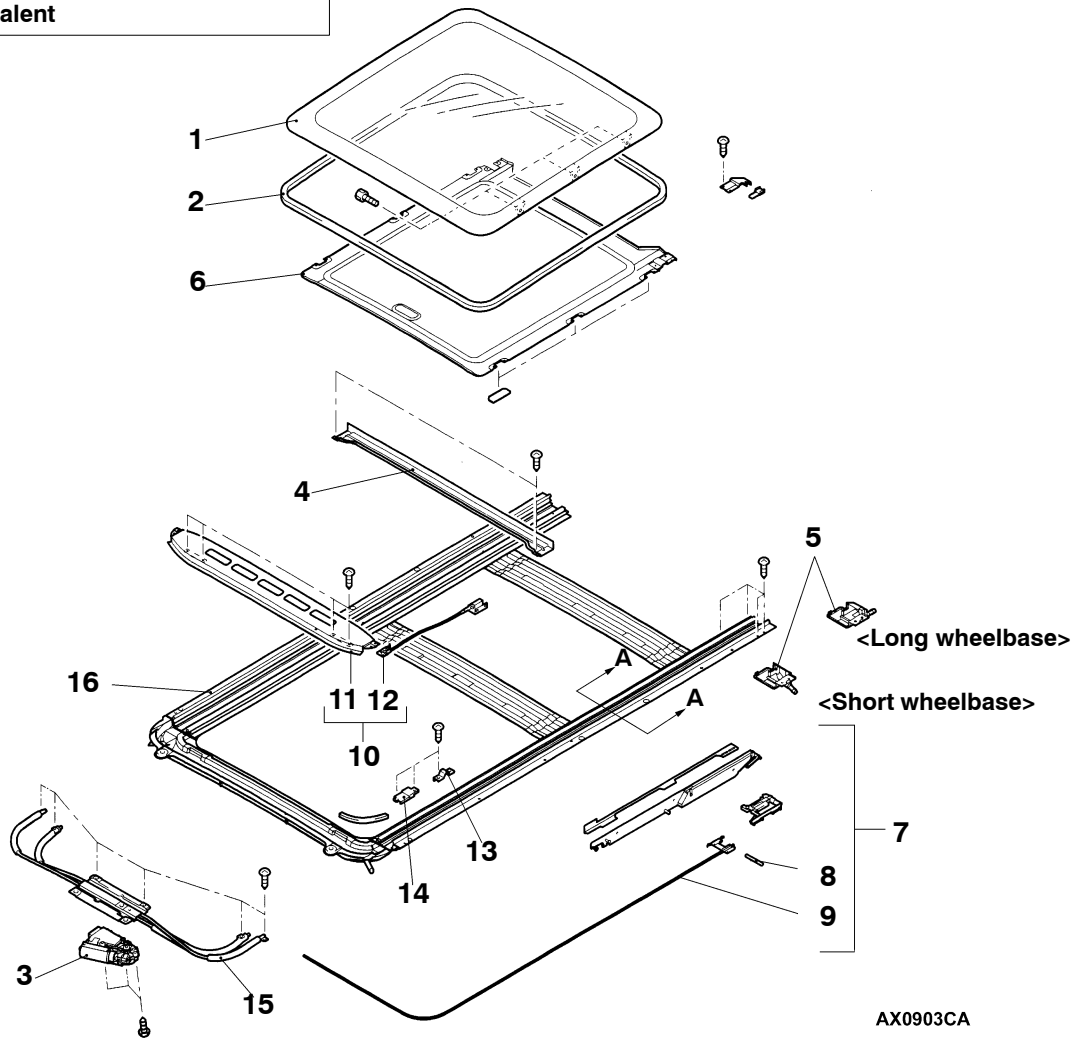
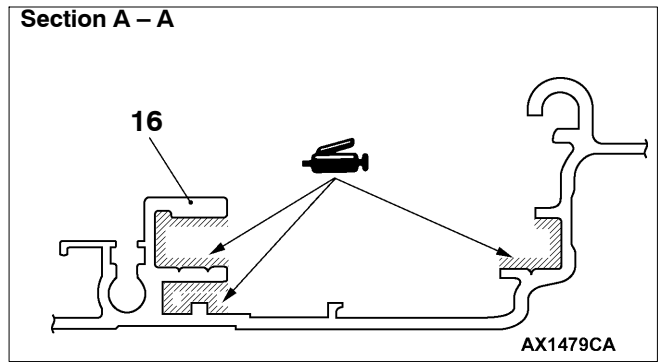
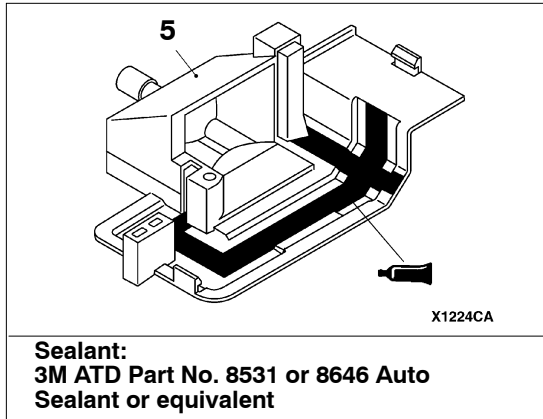
3. If the operation current is not within the standard value, check the following points.
 - Installation condition, warping or jamming of sunroof assembly
 - Sticking of drive cable
 - Tilt of roof lid glass



SUNROOF SWITCH CONTINUITY CHECK

| Switch position | Terminal No. | | | |
|------------------------|--------------|---|---|---|
| | 3 | 4 | 5 | 6 |
| Open | | ○ | ○ | |
| Off | | | | |
| Tilt up | ○ | ○ | | |
| Slide close, Tilt down | | ○ | | ○ |

DISASSEMBLY AND REASSEMBLY



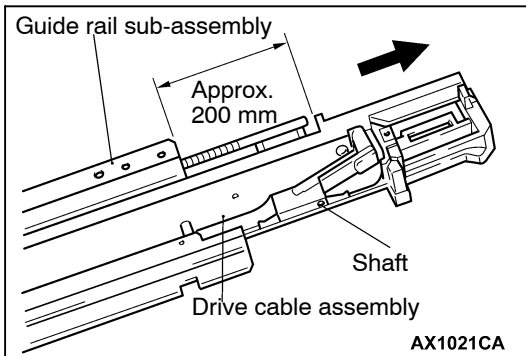
Disassembly steps

1. Roof lid glass assembly
2. Weatherstrip
3. Sunroof motor
4. Roof drip channel
5. Rear drip assembly
6. Sun shade assembly
7. Drive cable assembly
8. Shaft



9. Drive cable
10. Roof window deflector panel assembly
11. Deflector
12. Deflector link
13. Set plate
14. Front cover
15. Cable guide casing
16. Guide rail sub-assembly

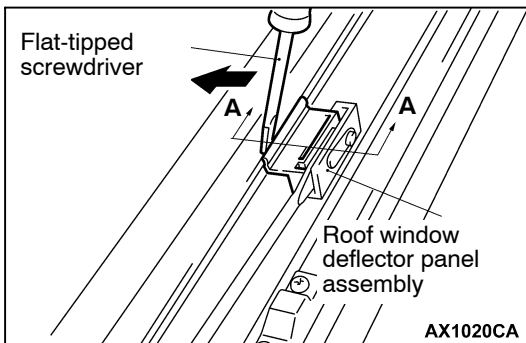




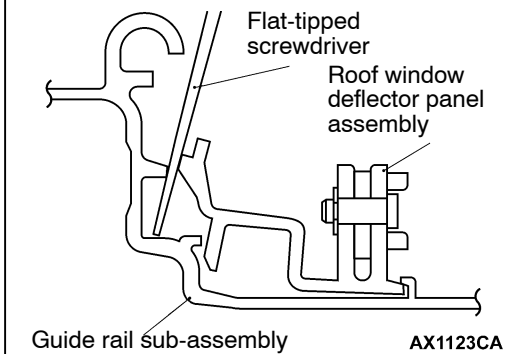
DISASSEMBLY SERVICE POINTS

◀A▶ SHAFT/DRIVE CABLE REMOVAL

After pulling out the drive cable assembly as shown in the illustration, remove the shaft and the drive cable.

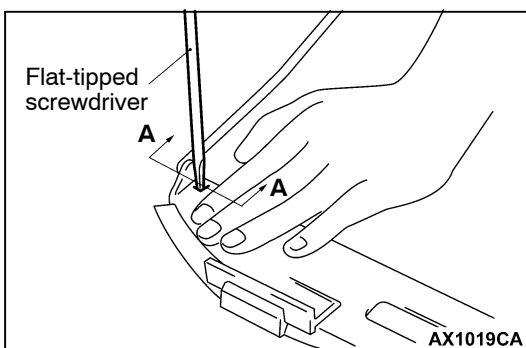


Section A – A

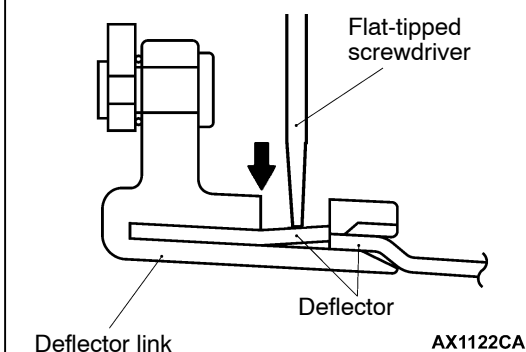


◀B▶ ROOF WINDOW DEFLECTOR PANEL ASSEMBLY REMOVAL

Twist a flat-tipped screwdriver or similar tool as shown in the illustration to remove the roof window deflector panel assembly.



Section A – A



◀C▶ DEFLECTOR/DEFLECTOR LINK REMOVAL

Use a flat-tipped screwdriver or similar tool to separate the deflector and the deflector panel as shown in the illustration.

REASSEMBLY SERVICE POINT**►A◄ SHAFT INSTALLATION**

Working outside the vehicle, install the shaft to the drive cable according to the procedure below.

