

GROUP 51

EXTERIOR

CONTENTS

FRONT BUMPER ASSEMBLY	51-3	MOULDINGS	51-20
ADHESIVE	51-3	SPECIAL TOOL	51-20
FRONT BUMPER ASSEMBLY	51-3	MOULDINGS	51-20
REMOVAL AND INSTALLATION	51-3	REMOVAL AND INSTALLATION	51-20
DISASSEMBLY AND REASSEMBLY	51-4		
REAR BUMPER ASSEMBLY	51-6	DOOR SASH TAPE	51-22
ADHESIVE	51-6	SPECIAL TOOL	51-22
REAR BUMPER ASSEMBLY	51-6	DOOR SASH TAPE	51-22
REMOVAL AND INSTALLATION	51-6	REMOVAL AND INSTALLATION	51-22
DISASSEMBLY AND REASSEMBLY	51-8		
RADIATOR GRILLE	51-10	TAILGATE SPOILER	51-27
REMOVAL AND INSTALLATION	51-10	SPECIAL TOOL	51-27
		TAILGATE SPOILER	51-27
		REMOVAL AND INSTALLATION	51-27
OVERFENDER		ROOF RAIL	51-28
<GLS, XLS, VR-X>	51-11	REMOVAL AND INSTALLATION	51-28
ADHESIVE	51-11		
SPECIAL TOOL	51-11	UNDER COVER	51-29
OVERFENDER	51-12	REMOVAL AND INSTALLATION	51-29
REMOVAL AND INSTALLATION	51-12		
GARNISHES	51-15	WINDSHIELD WIPER AND	
ADHESIVE	51-15	WASHER	51-30
SPECIAL TOOL	51-15	SERVICE SPECIFICATION	51-30
GARNISHES	51-15	TROUBLESHOOTING	51-30
REMOVAL AND INSTALLATION	51-15	WINDSHIELD WIPER	51-31
REMOVAL AND INSTALLATION	51-19	REMOVAL AND INSTALLATION	51-31
		INSPECTION	51-32
		WINDSHIELD WASHER	51-35
		REMOVAL AND INSTALLATION	51-35
		INSPECTION	51-36

Continued on next page

REAR WIPER AND WASHER.....	51-38	HEADLAMP WASHER.....	51-43
SERVICE SPECIFICATION	51-38	TROUBLESHOOTING	51-43
TROUBLESHOOTING	51-38	HEADLAMP WASHER	51-43
ON-VEHICLE SERVICE	51-38	REMOVAL AND INSTALLATION	51-43
CHECK OF REAR WIPER OPERATION WHEN SELECTOR LEVER IS AT THE "R" POSITION	51-38	INSPECTION.....	51-44
REAR WIPER AND WASHER	51-39	MARK	51-45
REMOVAL AND INSTALLATION.....	51-39	REMOVAL AND INSTALLATION	51-45
INSPECTION	51-40	OUTSIDE MIRROR.....	51-47
		REMOVAL AND INSTALLATION	51-47
		INSPECTION.....	51-49

FRONT BUMPER ASSEMBLY

ADHESIVE

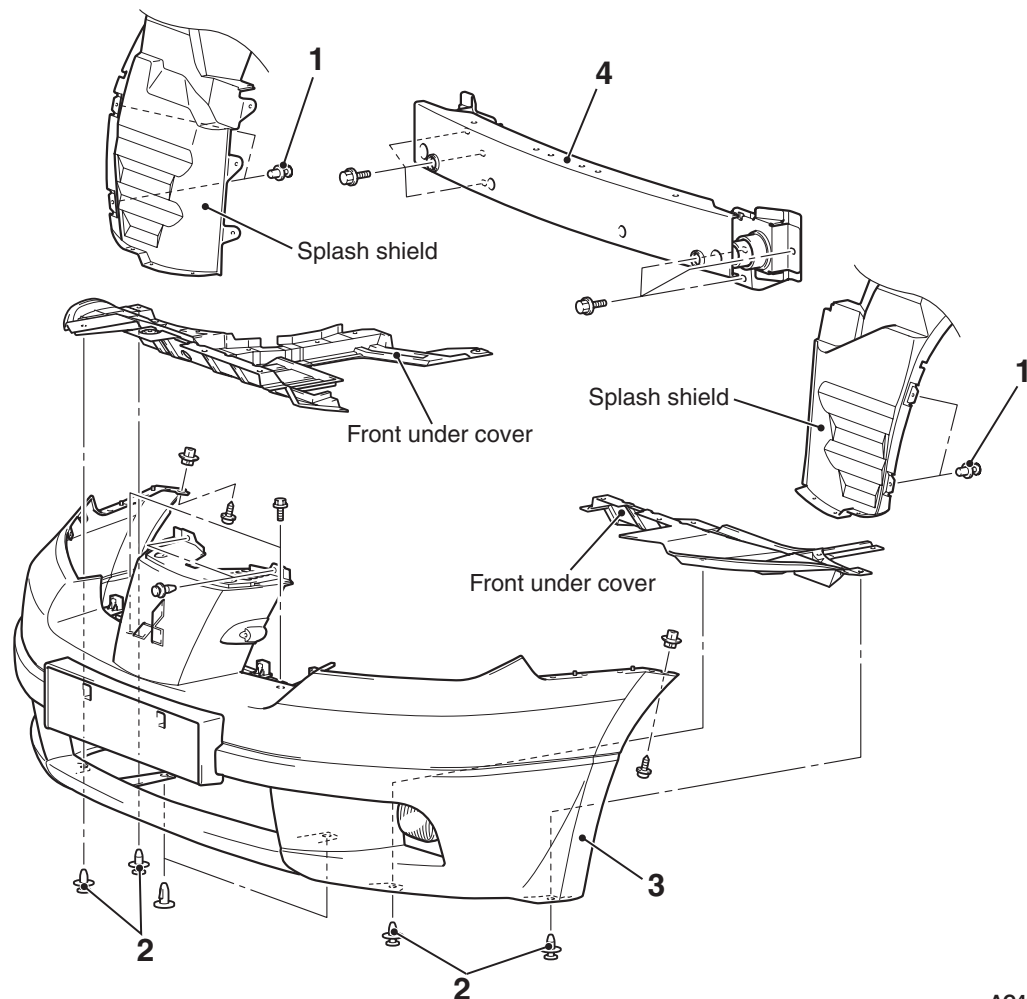
M1511000501203

Application	Specified adhesive
Front-three diamond mark	Double-sided tape: Generic products 0.8 mm thickness
Front bumper extension<GLS, XLS, VR-X>	Double-sided tape: Generic products a [14 mm width and 1.2 mm thickness], b [4.0 mm width and 1.2 mm thickness]

FRONT BUMPER ASSEMBLY

REMOVAL AND INSTALLATION

M1511001401102



AC400911AB

Removal steps

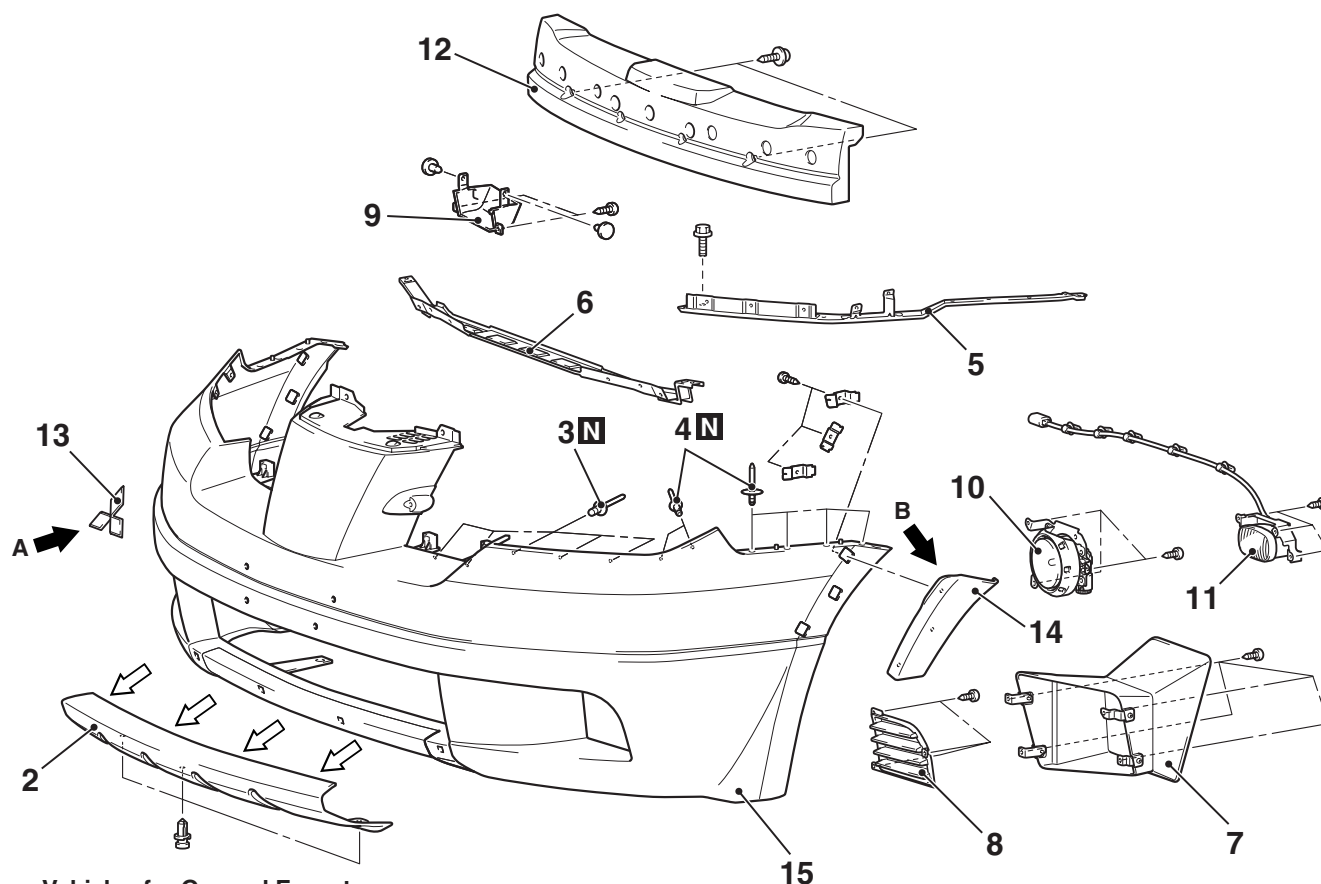
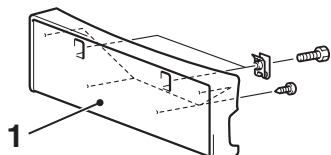
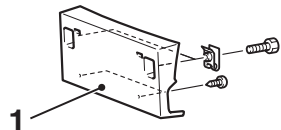
- Radiator grille (Refer to P.51-10).
- 1. Splash shield mounting clips
- 2. Front under cover mounting clips

Removal steps (Continued)

- Fog lamp connector connection
- 3. Front bumper assembly
- 4. Front bumper beam

DISASSEMBLY AND REASSEMBLY

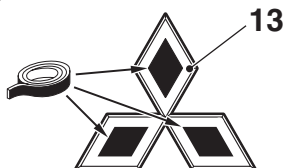
M1511001601106

<Vehicles for General Export
and GCC><Vehicles for Australia
and New Zealand>

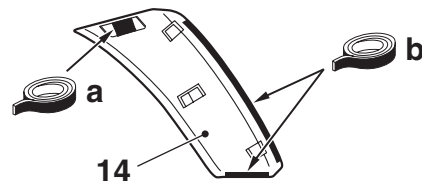
Note

← : Claw positions

View A

Double-sided tape:
Generic products, 0.8 mm thickness

View B

Double-sided tape: Generic products
a [14 mm width and 1.2 mm thickness]
b [4.0 mm width and 1.2 mm thickness]

AC504425AC

Disassembly steps

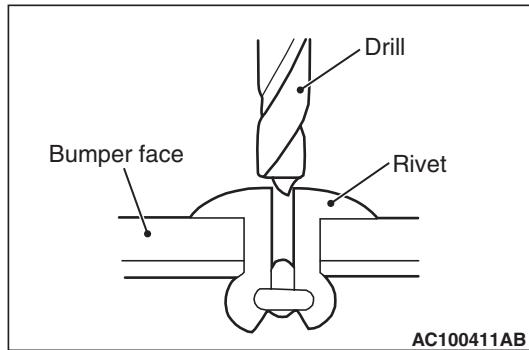
- <<A>> >>A<< 1. Licence plate garnish
<<A>> >>A<< 2. Front bumper cover
<<A>> >>A<< 3. Rivets A
<<A>> >>A<< 4. Rivets B
5. Front bumper side plate
6. Front bumper centre reinforcement
7. Oil cooler duct
8. Air intake bezel (Vehicles without
front fog lamp)
9. Fog lamp bezel (RH)

Disassembly steps (Continued)

10. Front fog lamp assembly <Vehicles
for General Export and GCC>
11. Front fog lamp assembly <Vehicles
for Australia and New Zealand>
12. Front bumper core
13. Front three-diamond mark
14. Front bumper extension <GLS, XLS,
VR-X>
15. Front bumper face

DISASSEMBLY SERVICE POINT

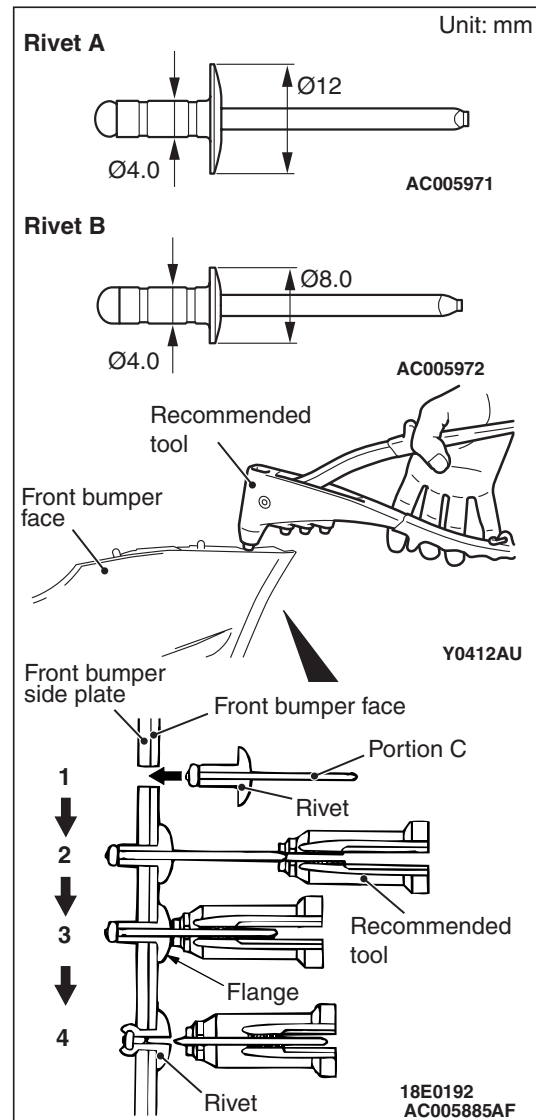
<<A>> RIVETS A / RIVETS B REMOVAL



Use a drill (ϕ 4.0 mm) to make a hole in the rivet to break it, and then remove the rivet.

REASSEMBLY SERVICE POINT

>>A<< RIVETS B / RIVETS A INSTALLATION



Use recommended tool shown in the illustration to connect the rivet by the following procedure.

1. Insert rivets A and rivets B into the front bumper face and front bumper upper plate.
2. Place the recommended tool over portion C of rivet.
3. While pushing the flange surface of the rivet with the recommended tool, press the handle of the tool.
4. The thin part of portion C of the rivet will break and the rivet will then be attached.

REAR BUMPER ASSEMBLY

ADHESIVE

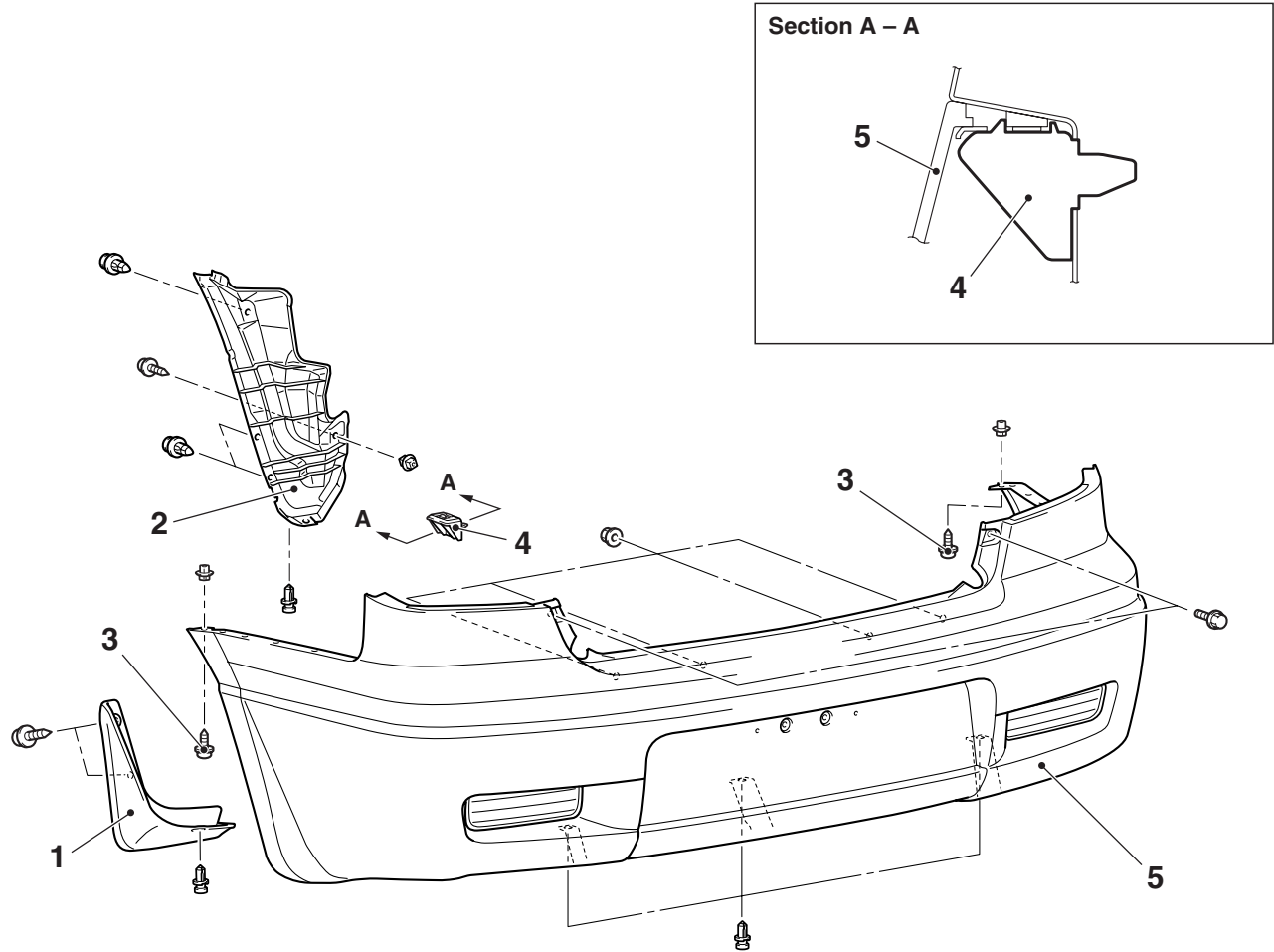
M1511000501214

Application	Specified adhesive
Rear bumper extension <GLS, XLS, VR-X>	Double-sided tape: Generic products 4.0 mm width and 1.2 mm thickness

REAR BUMPER ASSEMBLY

REMOVAL AND INSTALLATION

M1511001901000



AC401083AB

Removal steps

- Rear combination lamp
- Rear end trim
- 1. Mud guard
- 2. Rear splash shield
- 3. Tapping screw

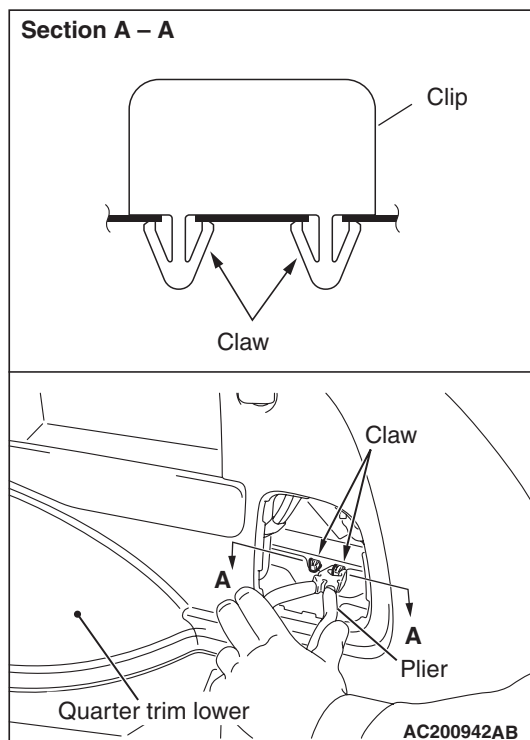
<<A>>

Removal steps (Continued)

- Ventilation cap (Refer to GROUP 52A, Trims [P.52A-19](#)).
- 4. Clips
- Rear bumper harness connector connection
- 5. Rear bumper assembly

REMOVAL SERVICE POINT

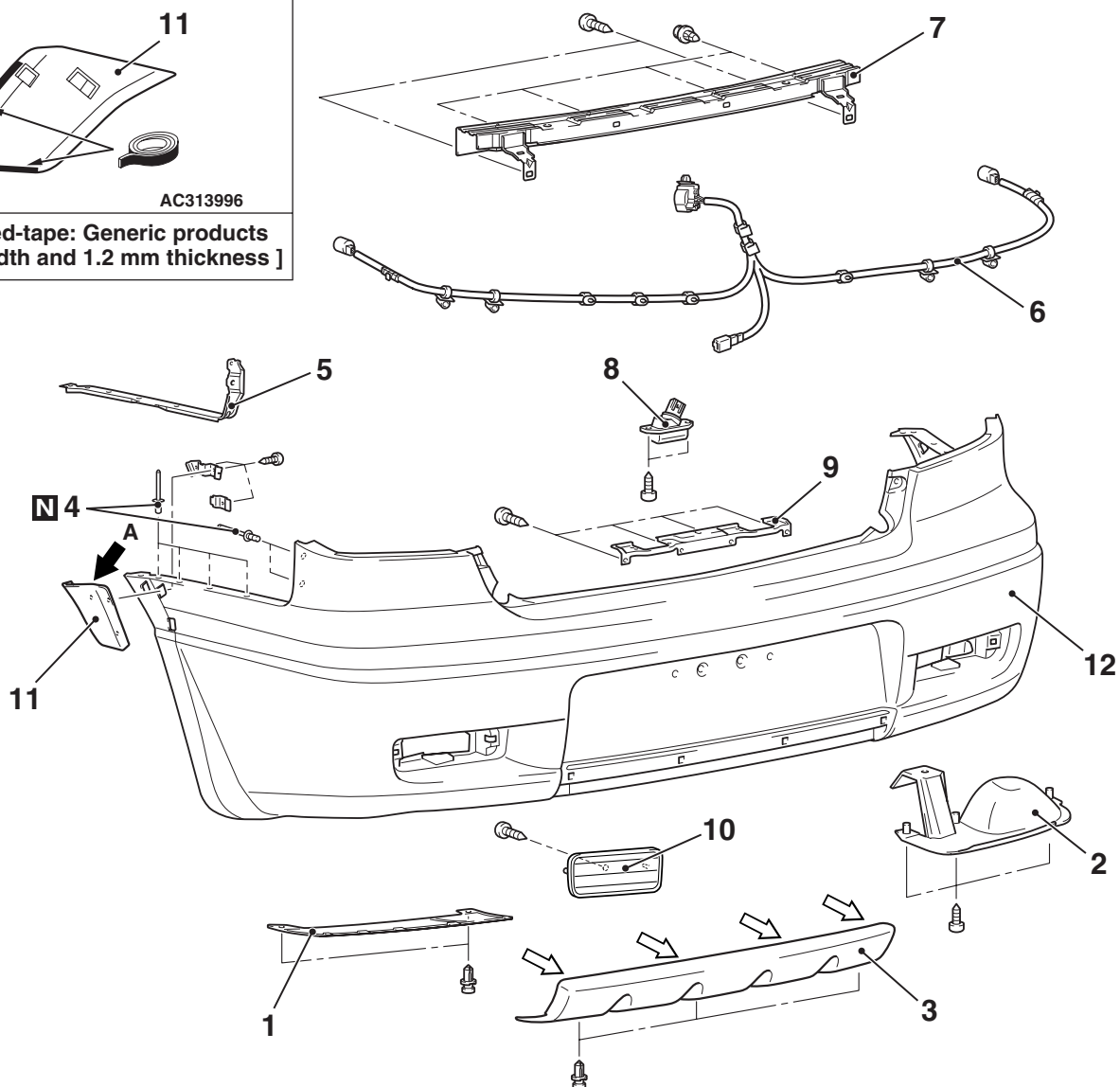
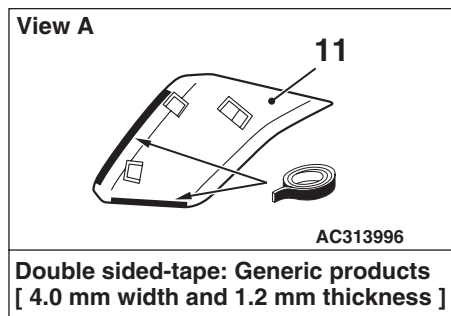
<<A>> CLIPS REMOVAL



Remove the clip with a pair of pliers by removing the claw of the clip from the cabin side.

DISASSEMBLY AND REASSEMBLY

M1511002100628



NOTE

: Claw positions

AC401375AB

Disassembly steps

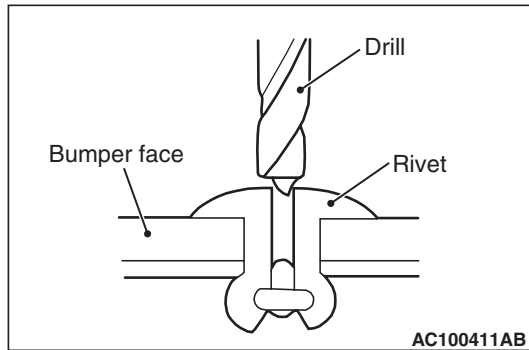
- <<A>> >>A<<
1. Side cover
 2. Muffler cover
 3. Rear bumper cover
 4. Rivets
 5. Rear bumper side plate
 6. Rear bumper harness
 7. Rear bumper reinforcement

Disassembly steps (Continued)

8. Licence plate lamp assembly
9. Licence plate bracket
10. Reflector
11. Rear bumper extension <GLS, XLS, VR-X>
12. Rear bumper face

DISASSEMBLY SERVICE POINT

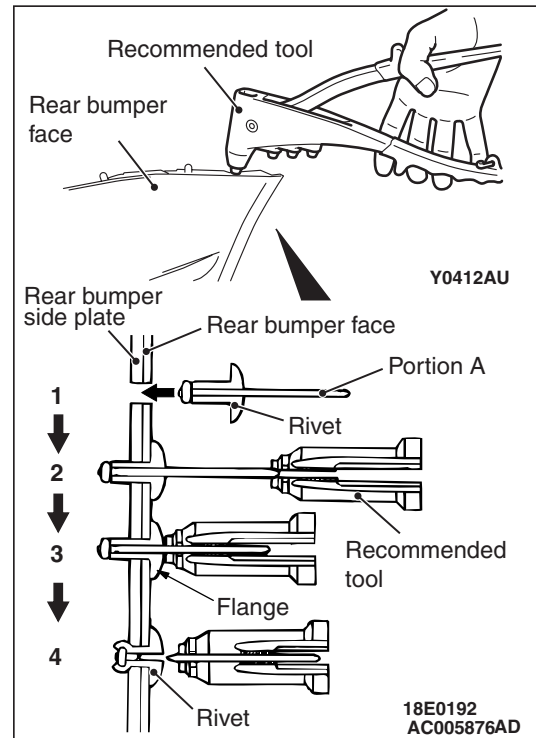
<<A>> RIVETS REMOVAL



Use a drill ($\phi 4.0$ mm) to make a hole in the rivet to break it, and then remove the rivet.

REASSEMBLY SERVICE POINT

>>A<< RIVETS INSTALLATION



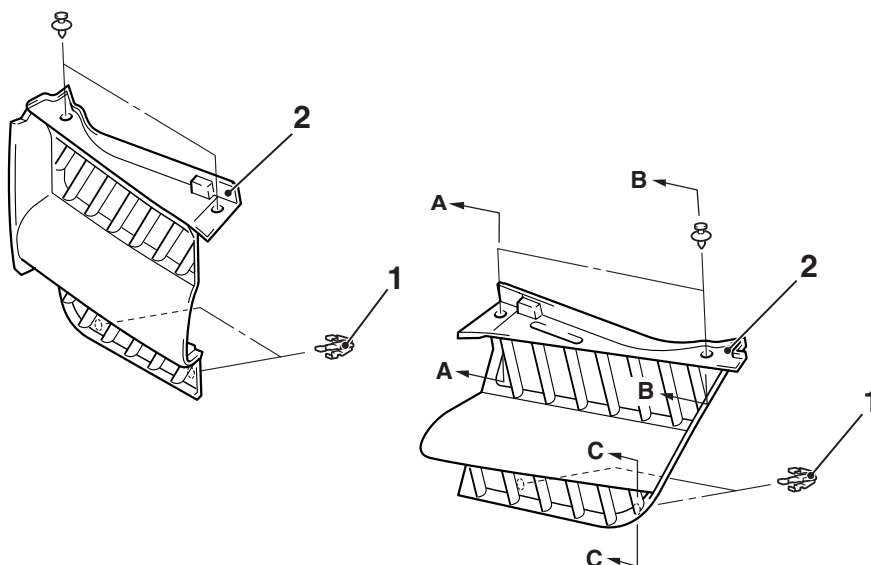
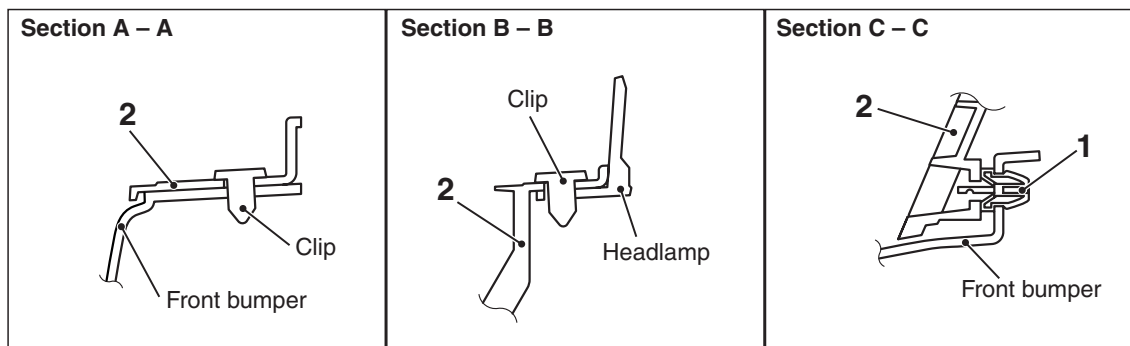
Use recommended tool shown in the illustration to connect the rivet by the following procedure.

1. Insert the rivet into the base material (rear bumper face, rear bumper side plate).
2. Place the recommended tool over portion A of rivet.
3. While pushing the flange surface of the rivet with the recommended tool, press the handle of the tool.
4. The thin part of portion A of the rivet will break and the rivet will then be attached.

RADIATOR GRILLE

REMOVAL AND INSTALLATION

M1511002900613



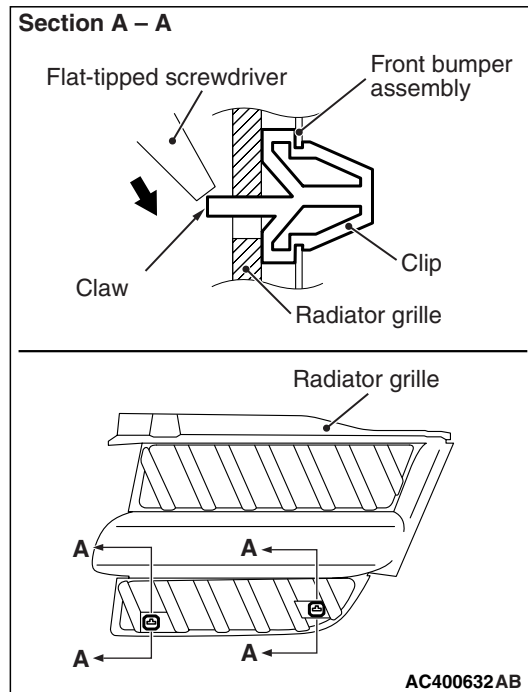
AC504440AB

Removal steps

- <<A>> 1. Clips
>>A<< 2. Radiator grilles

REMOVAL SERVICE POINT

<<A>> CLIPS REMOVAL



To remove the clips from the radiator grille gently pull forward the radiator grille, and use a flat-tipped screwdriver to hold the claw of the clip in the direction of the arrow.

INSTALLATION SERVICE POINT

>>A<< RADIATOR GRILLE INSTALLATION

Install the radiator grille with the clips installed.

OVERFENDER <GLS, XLS, VR-X>

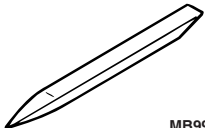
ADHESIVE

M1511000500879

Application	Specified adhesive
Front door/ rear door/ rear overfender	Double-sided tape: Generic products a [4.0 mm width and 0.4 mm thickness], b [6.0 mm width and 0.4 mm thickness], c [4.0 mm width and 1.2 mm thickness]

SPECIAL TOOL

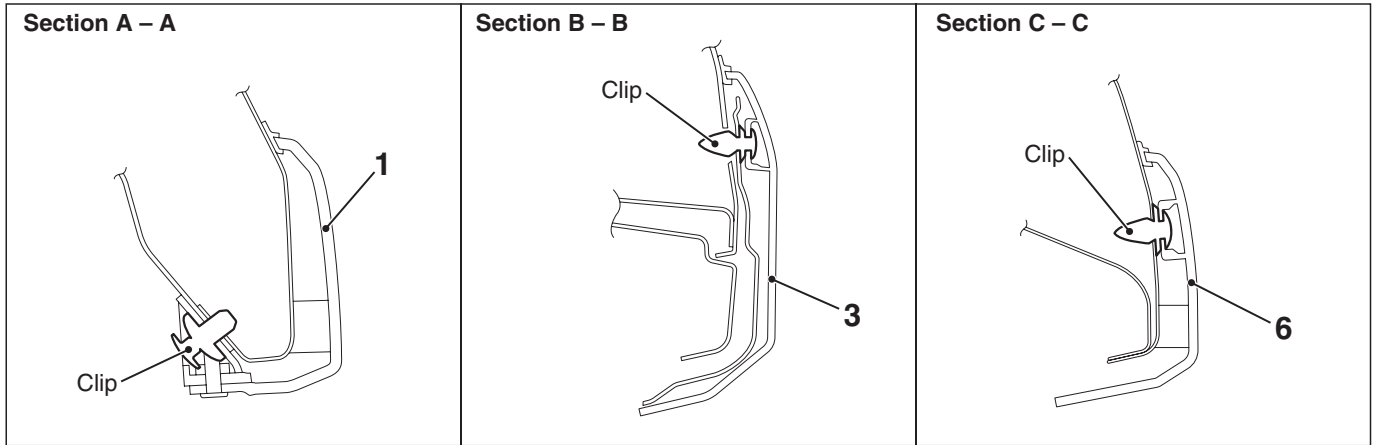
M1511000601620

Tool	Number	Name	Application
 MB990784	MB990784	Ornament remover	Removal of overfender

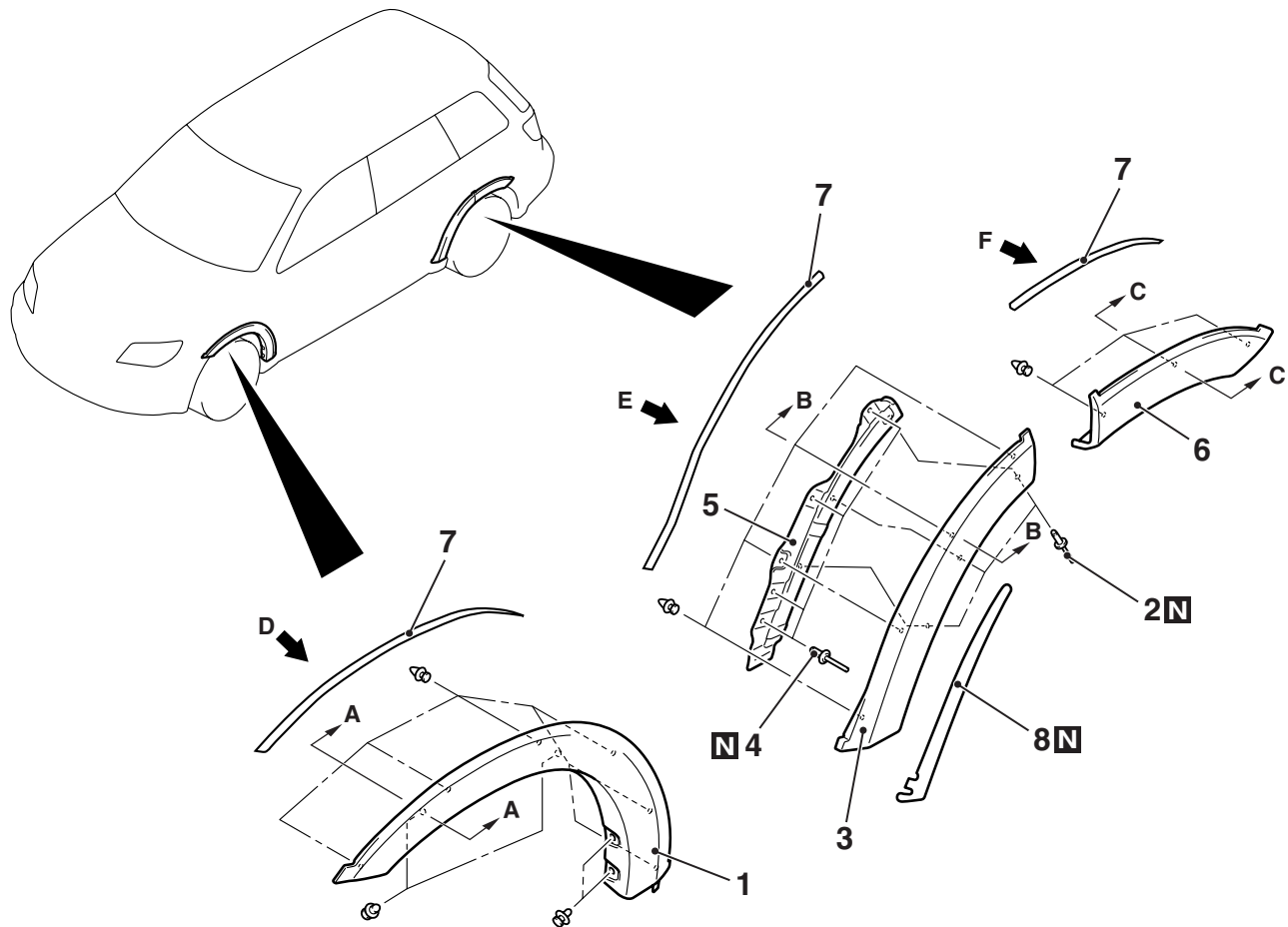
OVERFENDER

REMOVAL AND INSTALLATION

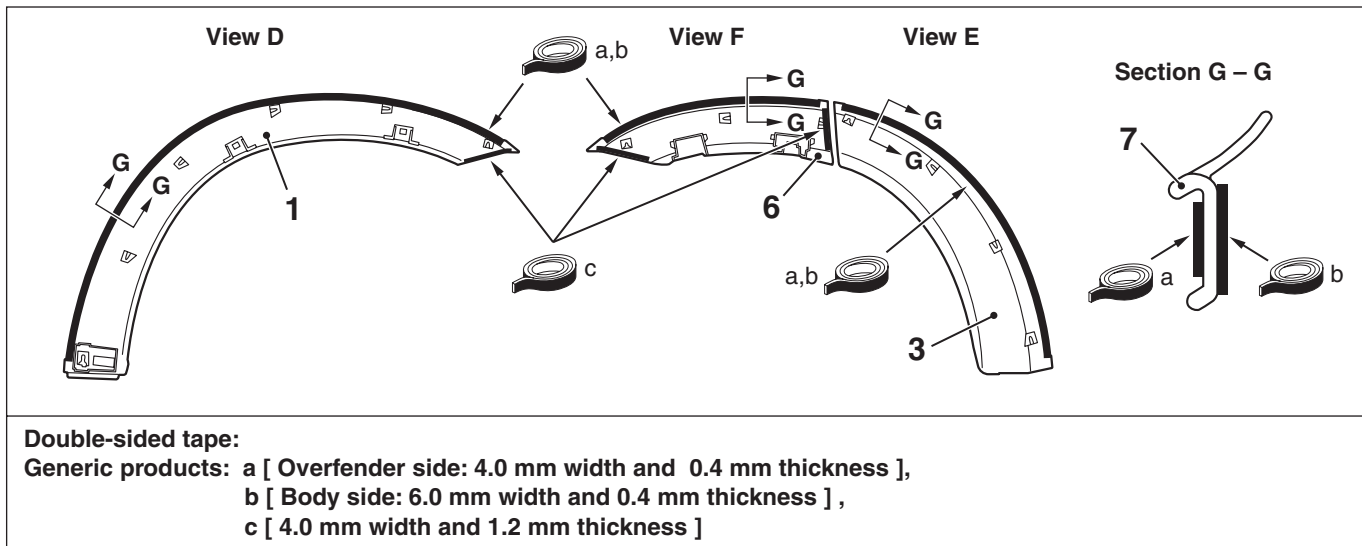
M1511024700123



AC504442AB



AC400578AE

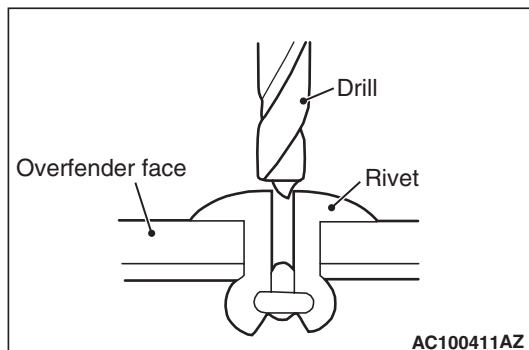


AC314063AB

- Removal steps**
- <<A>> >>A<< 1. Front overfender
<<A>> >>A<< 2. Rivet B
<<A>> >>A<< 3. Rear door overfender
<<A>> >>A<< 4. Rivet A
<<A>> >>A<< 5. Overfender extension bracket
<<A>> >>A<< 6. Rear overfender
<<A>> >>A<< 7. Protector
>>B<< 8. Rear door overfender protect film

REMOVAL SERVICE POINT

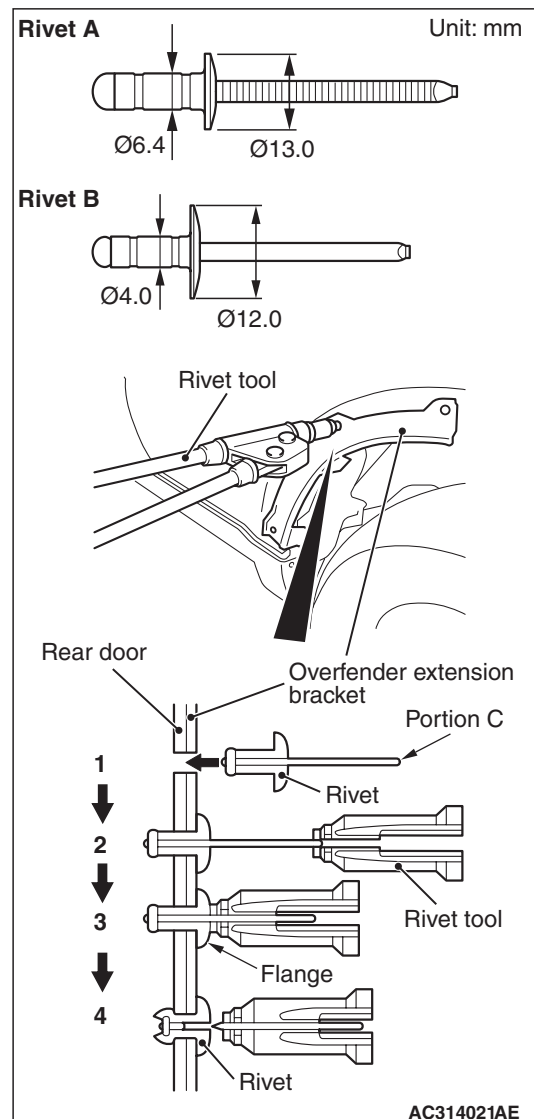
<<A>> RIVETS A / RIVETS B REMOVAL



Use a drill (ϕ 6.5 mm) to make a hole in the rivet A, and a drill (ϕ 4.0 mm) to rivet B to break them, and remove the rivets.

INSTALLATION SERVICE POINTS

>>A<< RIVETS A / RIVETS B INSTALLATION

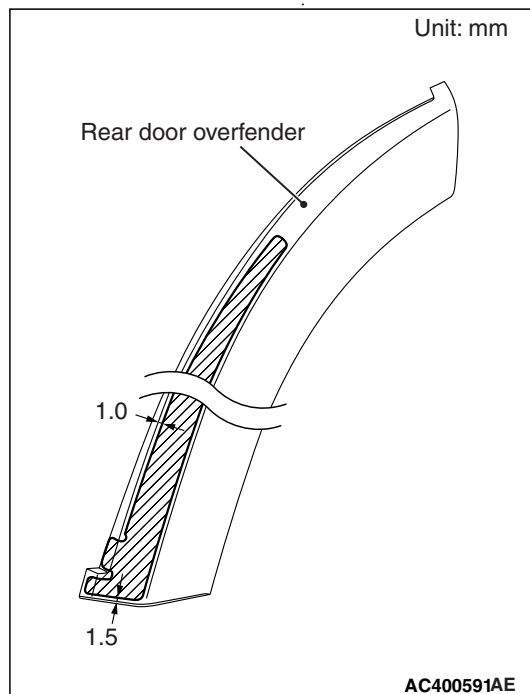


1. Insert rivets A and rivets B into the overfender extension bracket and rear door.
2. Insert "portion C" of the rivet into the rivet tool.
3. Pressing the flange surface of the rivet, grip the handle of the rivet tool.
4. The thinnest part of "portion C" is cut and the rivet is held in position.

>>B<< PROTECT FILM INSTALLATION

1. Installation position

CAUTION



The ambient temperature should be 20 to 38°C.

Ensure that the working area is clean.

- If ambient temperature is less than 20°C, heat the protect film and application surface to a temperature of 20 to 30°C.
 - Be careful that air bubbles are not formed under the protect film.
2. Installation procedure
 - (1) Wipe the protect film application surface and clean it with a rag moistened with isopropyl alcohol.
 - (2) Remove backing paper from the protect film, and apply the film to the specified position.

REMOVAL AND INSTALLATION SERVICE POINT

REMOVAL AND INSTALLATION OF DOUBLE-SIDED TAPE

The procedure is the same as removal and installation of side sill garnish double-sided tape. (Refer to P.51-15.)

GARNISHES

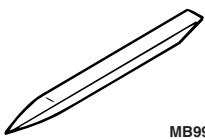
ADHESIVE

M1511000501184

Application	Specified adhesive
Side sill garnish <GLX, LS>	Double-sided tape: Generic products A [5.0 mm width 0.8 mm thickness], B [5.0 mm width 1.2 mm thickness]
Side sill garnish <GLS, XLS, VR-X>	Double-sided tape: Generic products 5.0 mm width 1.2 mm thickness

SPECIAL TOOL

M1511000600962

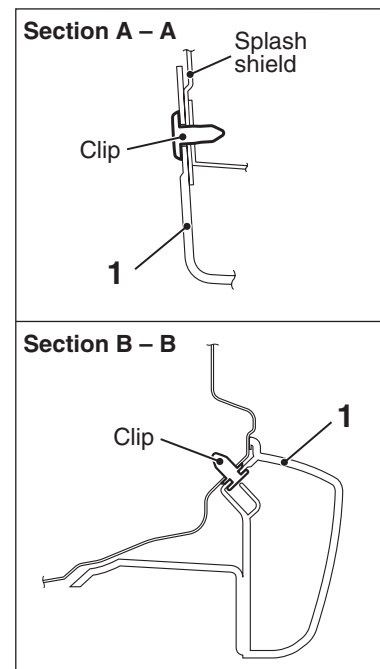
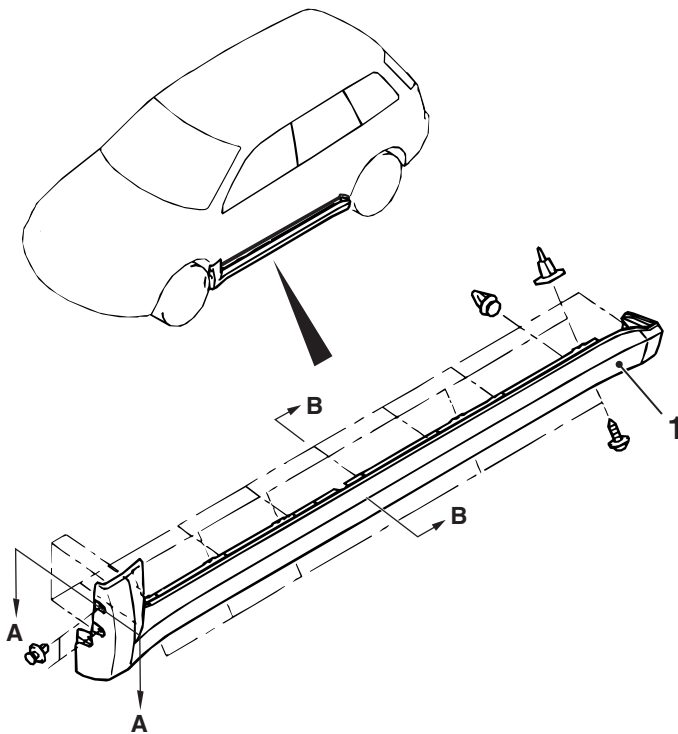
Tool	Number	Name	Application
 MB990784	MB990784	Ornament remover	Removal of side sill garnish

GARNISHES

REMOVAL AND INSTALLATION

M1511025200154

<GLX, LS>

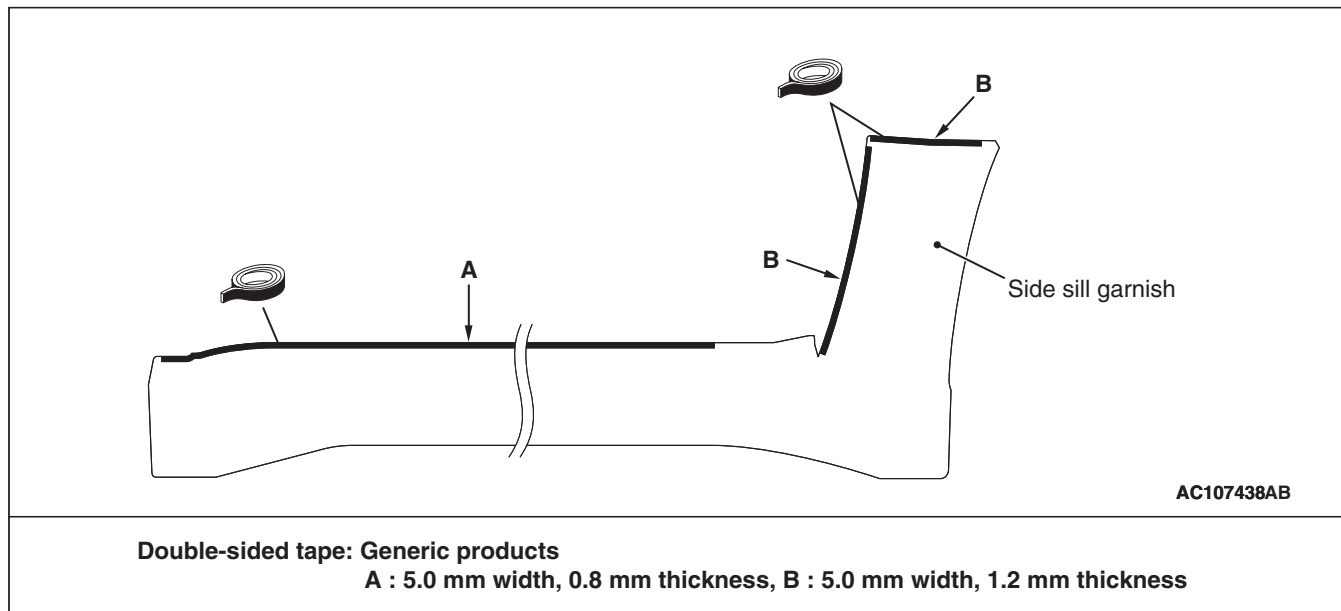


AC301940AC

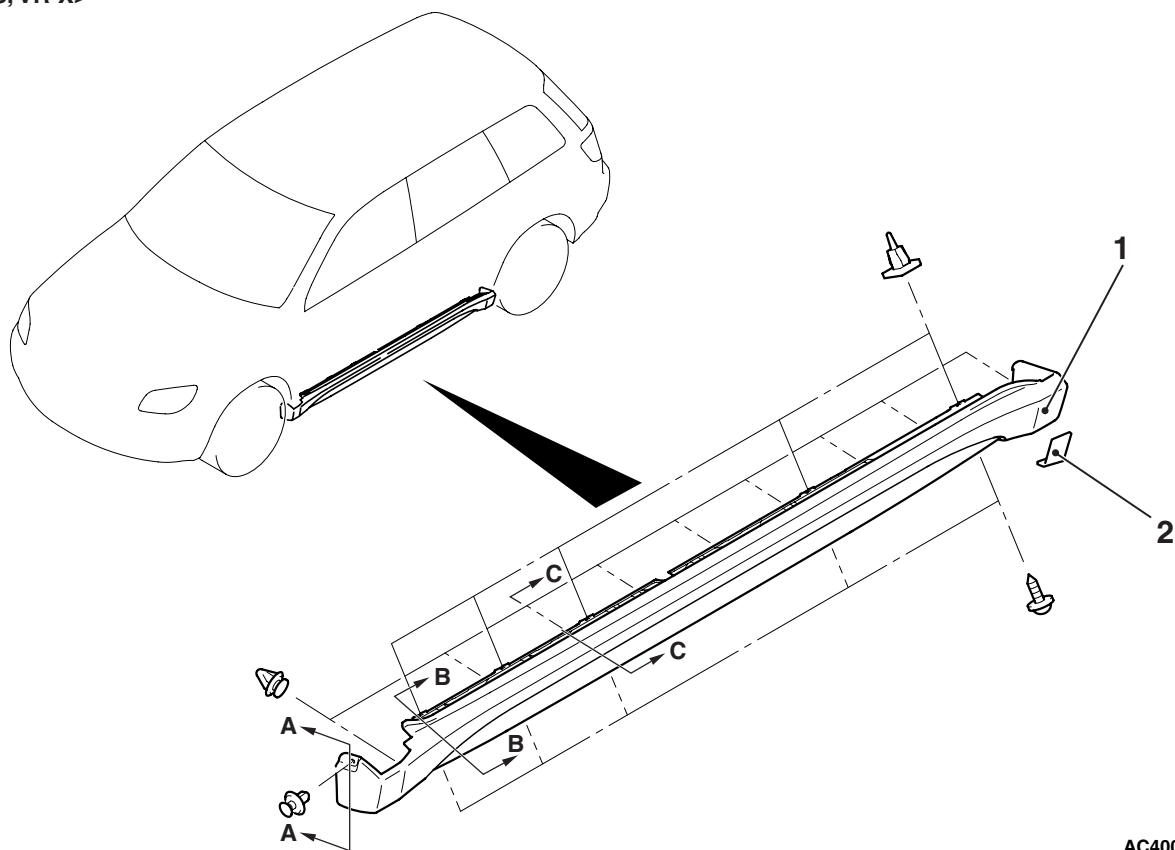
Removal steps

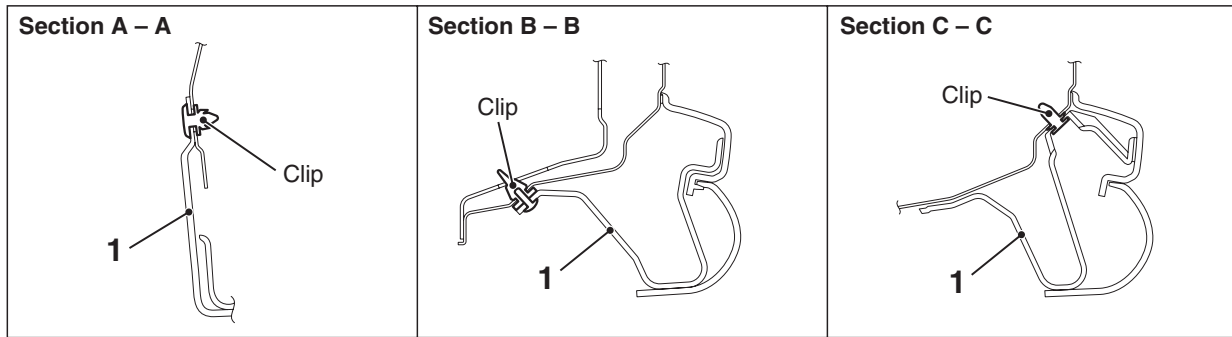
- Front deck garnish (Refer to [P.51-31](#)).
- <<A>> >>A<< 1. Side sill garnish

DOUBLE-SIDED TAPE AFFIXED LOCATION



<GLS, XLS, VR-X>



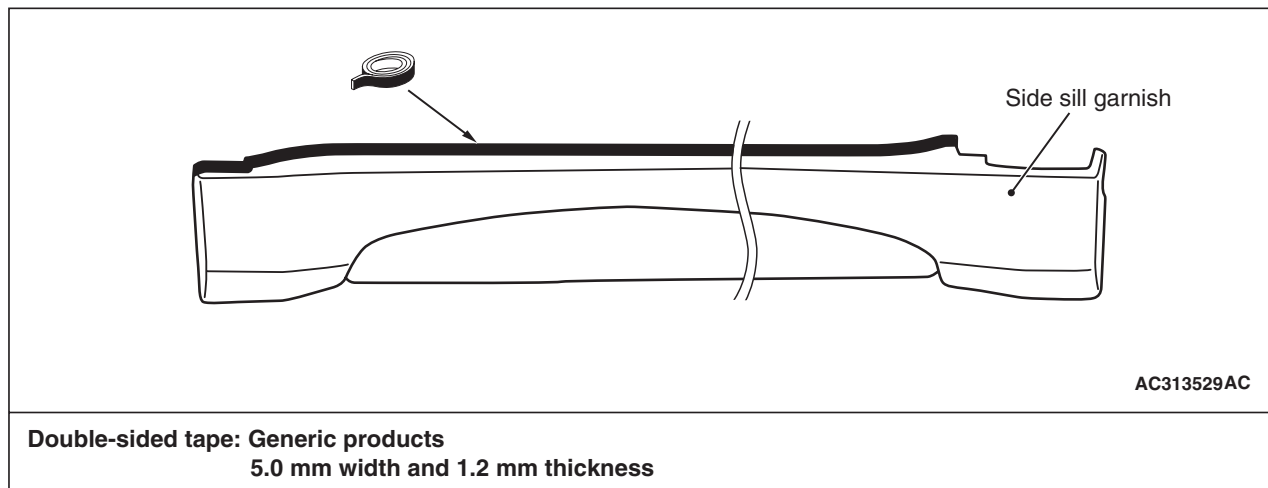


AC313734AB

Removal steps

- <<A>> >>A<< 1. Side sill garnish
>>B<< 2. Side sill garnish protect film

DOUBLE-SIDED TAPE AFFIXED LOCATION

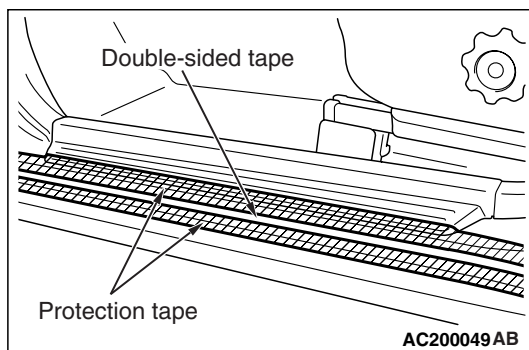


AC313529AC

REMOVAL SERVICE POINTS

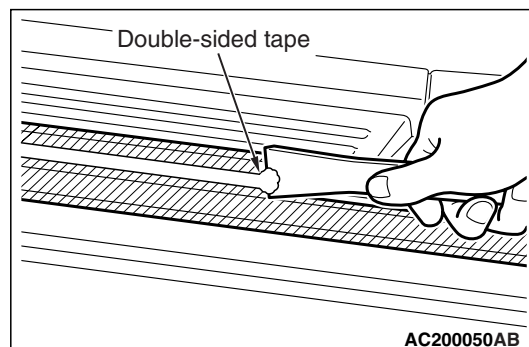
<<A>> SIDE SILL GARNISH REMOVAL

Gently lift and remove the side sill garnish. If there is any double-sided tape remaining on the side sill garnish, remove according to the following instructions.
<Remove both-side tape remaining on the body surface>



AC200049AB

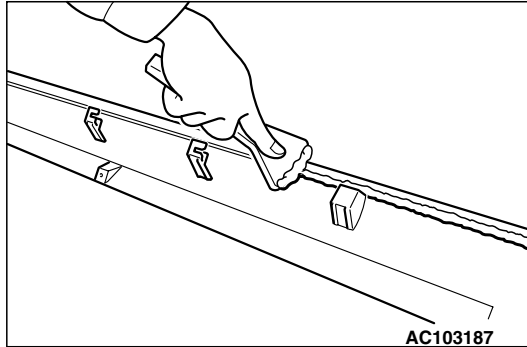
1. Attach protection tape all the way along the edges of the double-sided tape which is still adhering to the body.



AC200050AB

2. Scrape off the double-sided tape with a resin spatula as possible.
3. Peel off the protection tape.
4. Wipe the body surface and clean it with a rag moistened with isopropyl alcohol.

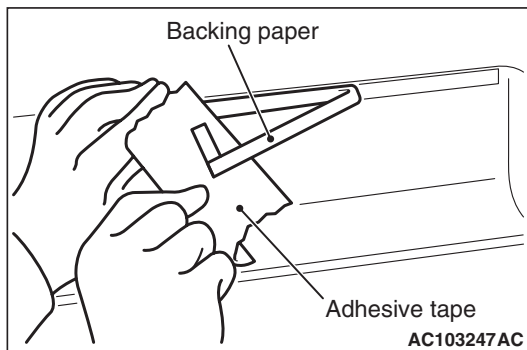
<Remove double-sided tape remaining on SIDE SILL GARNISH and adhere double-sided tape (when re-using SIDE SILL GARNISH)>



1. Scrape off the double-sided tape on the side sill garnish with a resin spatula as possible.
2. Wipe the side sill garnish surface and clean it with a rag moistened with isopropyl alcohol.
3. Remove only a small portion of the residual adhesive.
4. Adhere the double-sided tape as specified on the side sill garnish. (Refer to double-sided tape adherence location.)

INSTALLATION SERVICE POINTS

>>A<< ROOF DRIP MOULDING INSTALLATION

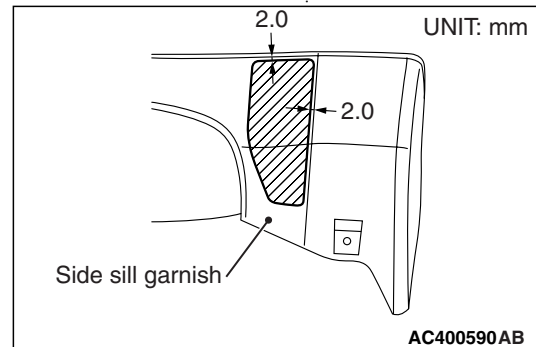


1. Tear off the double-sided tape backing paper.
NOTE: If you attach the adhesive tape to the edge of the backing paper, it will be easy to tear off.
2. Install the side sill garnish.
NOTE: If the double-sided tape is difficult to affix in cold temperature, etc., warm the bonding surfaces of the body and side sill garnish to about 40 – 60 °C before affixing the tape.
3. Firmly press in the side sill garnish.

>>B<< PROTECT FILM INSTALLATION <GLS, XLS, VR-X>

1. Installation position

⚠ CAUTION



The ambient temperature should be 20 to 38°C.
Ensure that the working area is clean.

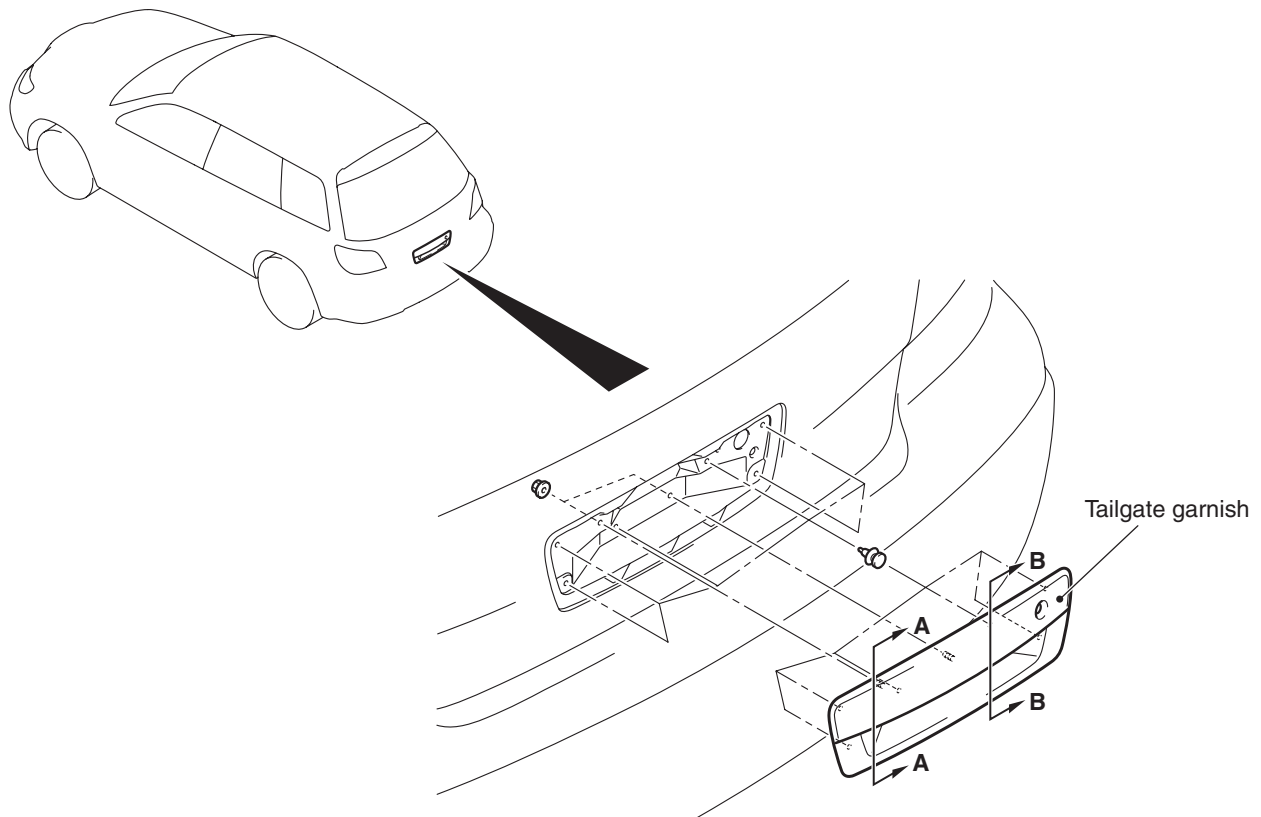
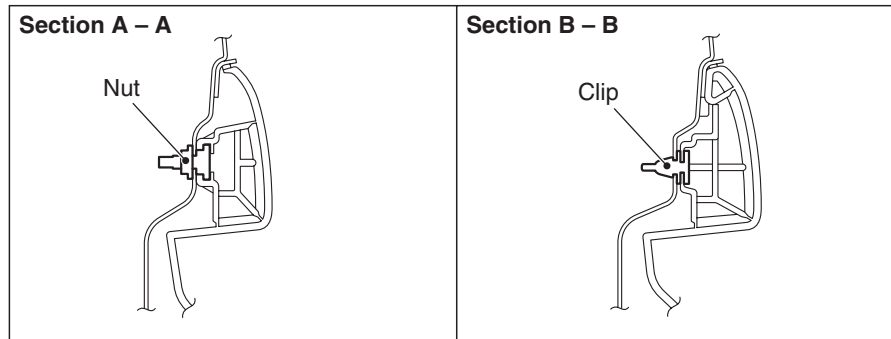
- If ambient temperature is less than 20°C, heat the protect film and application surface to a temperature of 20 to 30°C.
- Be careful that air bubbles are not formed under the protect film.

2. Installation procedure

- (1) Wipe the protect film application surface and clean it with a rag moistened with isopropyl alcohol.
- (2) Remove backing paper from the protect film, and apply the film to the specified position.

REMOVAL AND INSTALLATION

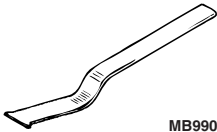
M1511025000064



MOULDINGS

SPECIAL TOOL

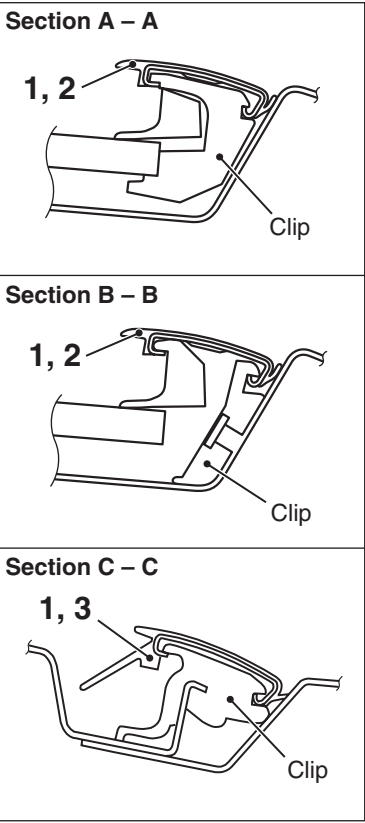
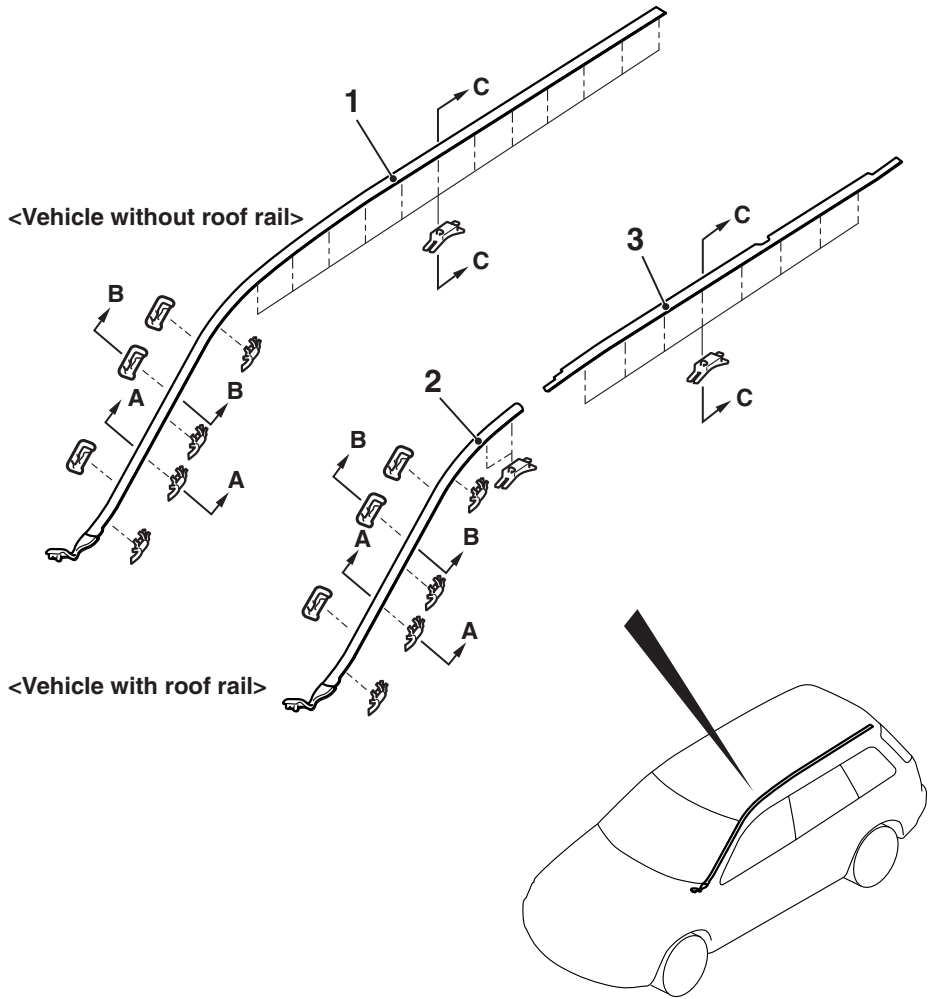
M1511000601255

Tool	Number	Name	Application
 MB990449	MB990449	Window moulding remover	Removal of roof drip moulding

MOULDINGS

REMOVAL AND INSTALLATION

M1511004700529



AC401149AB

Roof drip moulding removal steps
<Vehicles without roof rail>

<<A>> >>A<< 1. Roof drip moulding

Roof drip moulding removal steps
<Vehicles with roof rail>

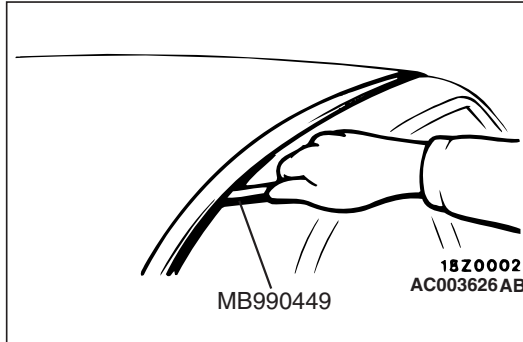
- Roof rail
- <<A>> >>A<< 2. Front roof drip moulding
- <<A>> >>A<< 3. Centre roof drip moulding

REMOVAL SERVICE POINT

<<A>> ROOF DRIP MOULDING REMOVAL

CAUTION

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



Use the special tool window moulding remover (MB990449) to pry out the moulding.

INSTALLATION SERVICE POINT

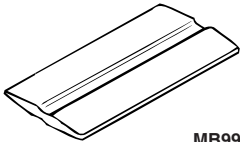
>>A<< ROOF DRIP MOULDING INSTALLATION

Install the clips to the roof drip moulding before installing the moulding to the vehicle body.

DOOR SASH TAPE

SPECIAL TOOL

M1511000601619

Tool	Number	Name	Application
 MB990528	MB990528	Stripe tape spatula	Installation of door sash tape

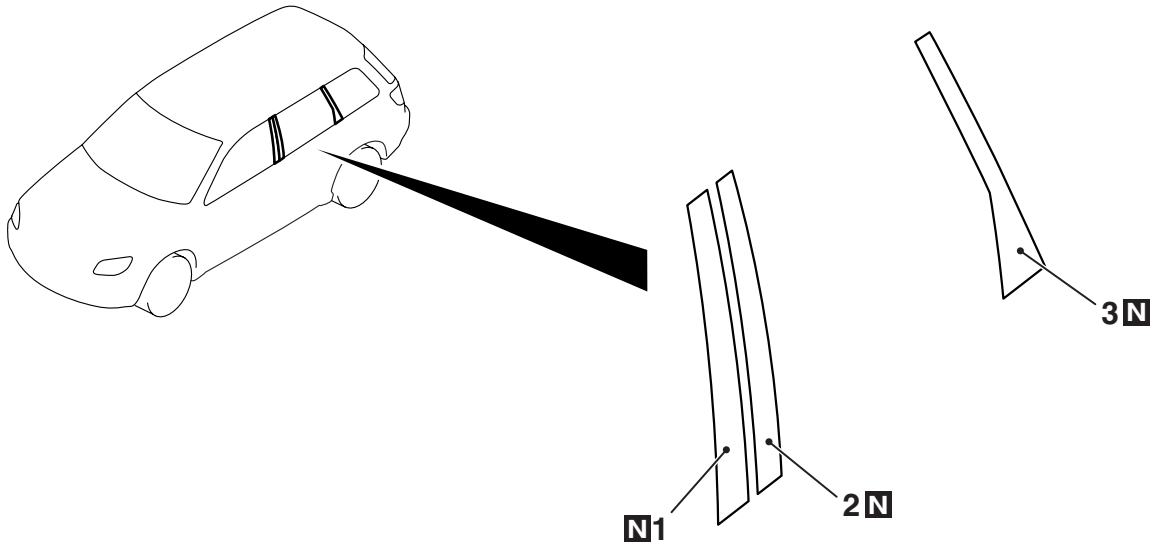
DOOR SASH TAPE

REMOVAL AND INSTALLATION

M1511024100132

Pre-removal and Post-installation Operation

- Door Trim Assembly Removal and Installation (Refer to GROUP 52A, Door Trim [P.52A-21](#)).
- Door Beltline Weatherstrip Inner Removal and Installation (Refer to GROUP 42, Window Glass Runchannel and Door Opening Weatherstrip [P.42-41](#)).
- Door Opening Weatherstrip Outer Removal and Installation (Refer to GROUP 42, Window Glass Runchannel and Door Opening Weatherstrip [P.42-41](#)).
- Door Window Glass Runchannel Removal and Installation (Refer to GROUP 42, Window Glass Runchannel and Door Opening Weatherstrip [P.42-41](#)).
- Door Beltline Moulding Removal and Installation (Refer to GROUP 42, Window Glass Runchannel and Door Opening Weatherstrip [P.42-41](#)).



AC313358AB

Front door sash tape removal
step

<<A>> >>A<< 1. Door sash tape rear

Rear door sash tape removal
step

<<A>> >>B<< 2. Door sash tape front
<<A>> >>B<< 3. Door sash tape rear

REMOVAL SERVICE POINT

<<A>> DOOR SASH TAPES REMOVAL

⚠ CAUTION

Pay attention to keep from getting burned by hot door panel or tapes.

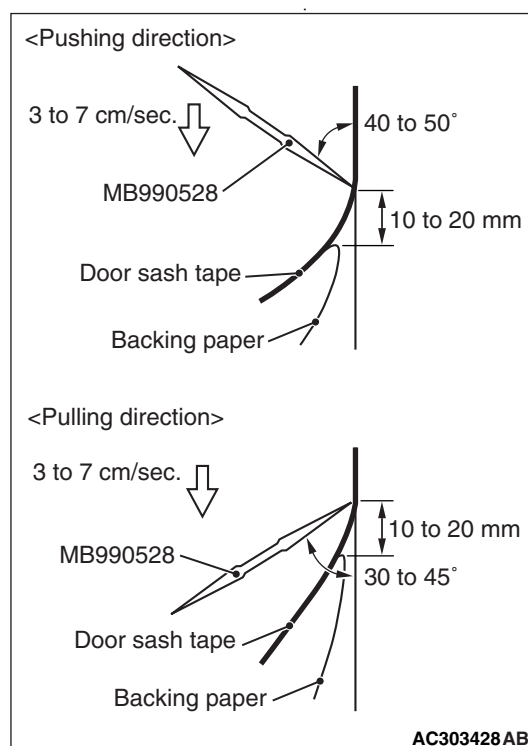
1. Use a hair drier to warm the tape.
2. Peel the tip of the tape with your finger, and then peel off the tape parallel to the application surface.

INSTALLATION SERVICE POINT

>>A<< FRONT DOOR SASH TAPE REAR INSTALLATION

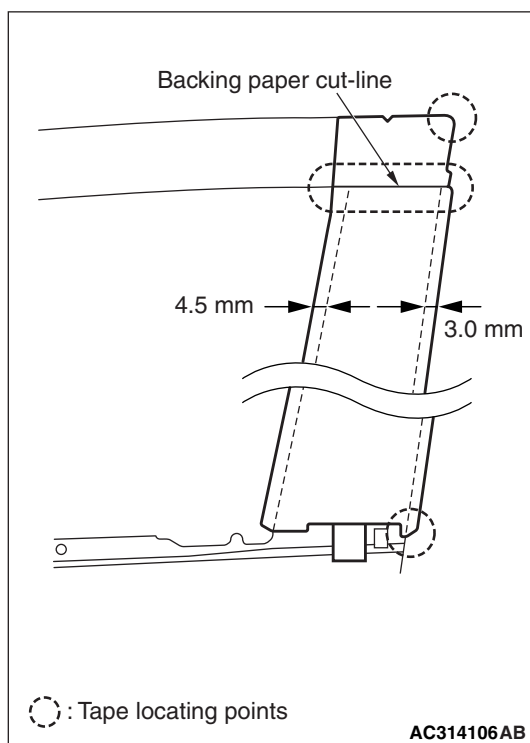
⚠ CAUTION

- The ambient temperature should be 20 to 30°C. Ensure that the working area is clean. Ideally, the tape application should be done at ambient temperature of 25°C.
- If ambient temperature is less than 15°C, heat the tape and application surface to a temperature of 20 to 30°C. If ambient temperature is 35°C or higher, cool down them.
- The adhesive property of the tape is deteriorated at low temperature, so the tape may come adrift easily. Meanwhile, it gets softened at hot temperature.
- When beginning to apply the tape, pay particular attention. If the end of the tape cannot be applied to the specified position with an accuracy of less than 1 mm, it may cause the poor appearance or adhesion.

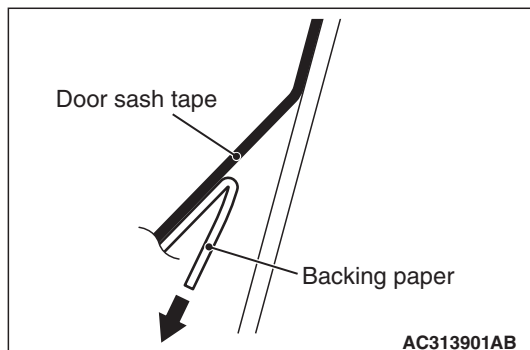


Use the special tool **Stripe Tape Spatula (MB990528)** to apply the tape with a steady pace and pressure. If you do not apply the tape with a steady pace or pressure, or abort the application, a shallow groove (lateral groove called as "Shock line") may be present on the tape surface. Meanwhile, if you apply it too quickly, air bubbles may be formed under the tape.

1. Wrap a soft cloth (synthetic fiber) around the tip of the special tool.
2. Use isopropyl alcohol to degrease the tape application surface.
3. Wipe away dirt from the tape.
4. Apply the front door sash tape rear according to the procedure below.

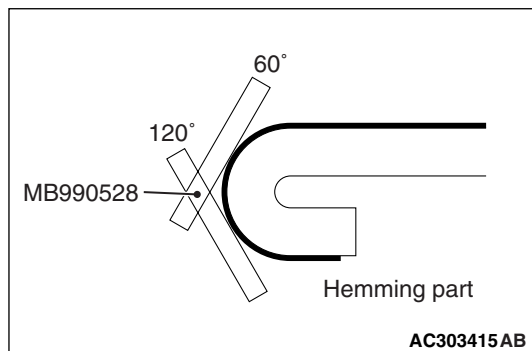


- (1) Align the tape with the upper and lower specified position.
- (2) Peel off the backing paper of the upper side by the cut line, and apply the top of tape temporarily.

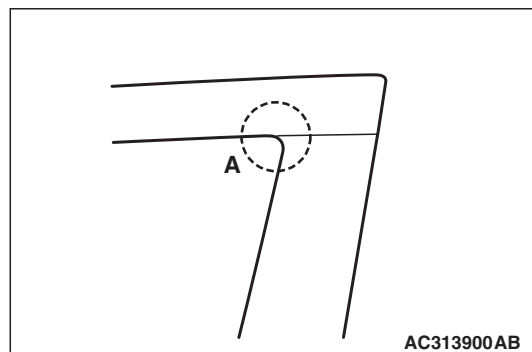


- (3) Peel off the backing paper under the tape by half of all tape.

- (4) Press the tape by a special tool Stripe Tape Spatula (MB990528).
- (5) While peeling off the remaining backing paper from up to down, press the tape by a special tool (MB990528).
- (6) Peel off the application tape from up to down towards 180 degrees.



- (7) Press the folded area of the tape end at 3 steps (60 degrees, 120 degrees, and holding), while rolling it toward the vehicle inside.

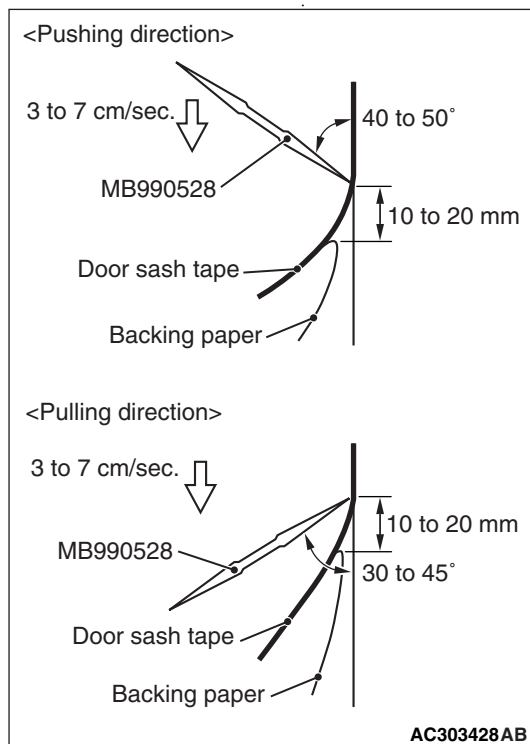


- (8) Finally, press the A area strongly by finger and roll the tape inside thoroughly (there are three slits on the tape).

>>B<< REAR DOOR SASH TAPE FRONT/REAR INSTALLATION

⚠ CAUTION

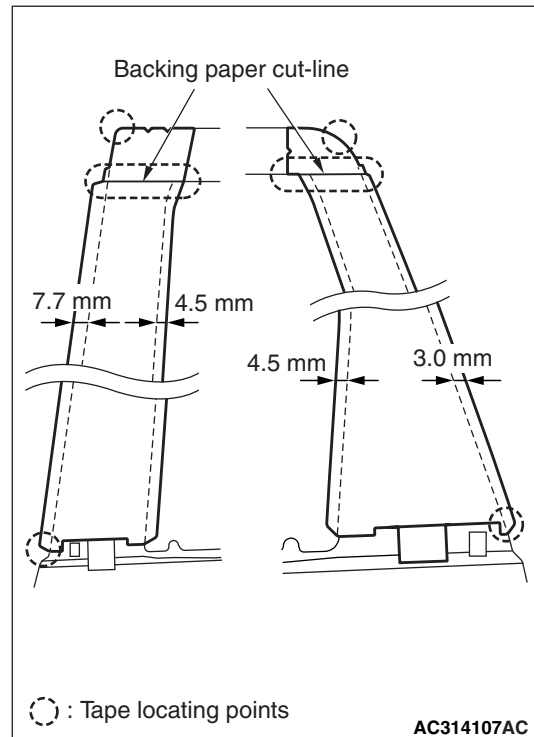
- The ambient temperature should be 20 to 30°C. Ensure that the working area is clean. Ideally, the tape application should be done at ambient temperature of 25°C.
- If ambient temperature is less than 15°C, heat the tape and application surface to a temperature of 20 to 30°C. If ambient temperature is 35°C or higher, cool down them.
- The adhesive property of the tape is deteriorated at low temperature, so the tape may come adrift easily. Meanwhile, it gets softened at hot temperature.
- When beginning to apply the tape, pay particular attention. If the end of the tape cannot be applied to the specified position with an accuracy of less than 1 mm, it may cause the poor appearance or adhesion.



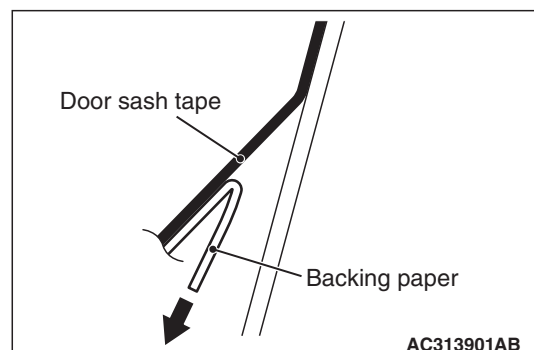
Use the special tool Stripe Tape Spatula (MB990528) to apply the tape with a steady pace and pressure. If you do not apply the tape with a steady pace or pressure, or abort the application, a shallow groove (lateral groove called as "Shock line") may be present on the tape surface. Meanwhile, if you apply it too quickly, air bubbles may be formed under the tape.

1. Wrap a soft cloth (synthetic fiber) around the tip of the special tool.

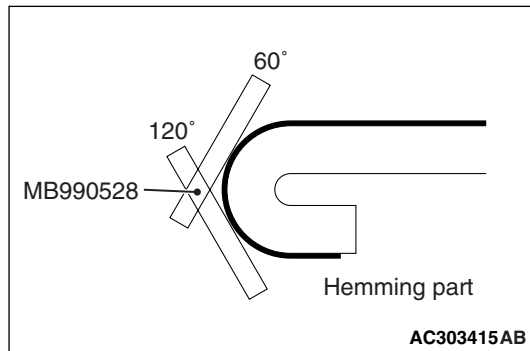
2. Use isopropyl alcohol to degrease the tape application surface.
3. Wipe away dirt from the tape.
4. Apply the rear door sash tape front/rear according to the procedure below.



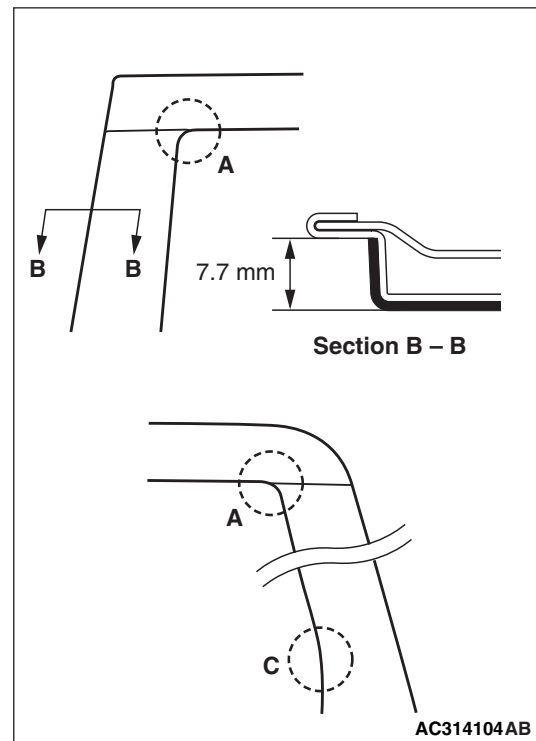
- (1) Align the tape with the upper and lower specified position.
- (2) Peel off the backing paper of the upper side by the cut line, and apply the top of tape temporarily.



- (3) Peel off the backing paper under the tape by half of all tape.
- (4) Press the tape by a special tool Stripe Tape Spatula (MB990528).
- (5) While peeling off the remaining backing paper from up to down, press the tape by a special tool (MB990528).
- (6) Peel off the application tape from up to down towards 180 degrees.



- (7) Press the folded area of the tape end at 3 steps (60 degrees, 120 degrees, and holding), while rolling it toward the vehicle inside.



- (8) Finally, press the A to C areas strongly by finger and roll the tape inside thoroughly.

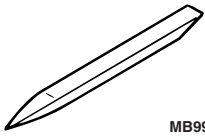
NOTE:

- In the A area, there are three slits on the tape.
- In the B area, press the stepped section downwards thoroughly.
- In the C area, press the R section thoroughly.

TAILGATE SPOILER

SPECIAL TOOL

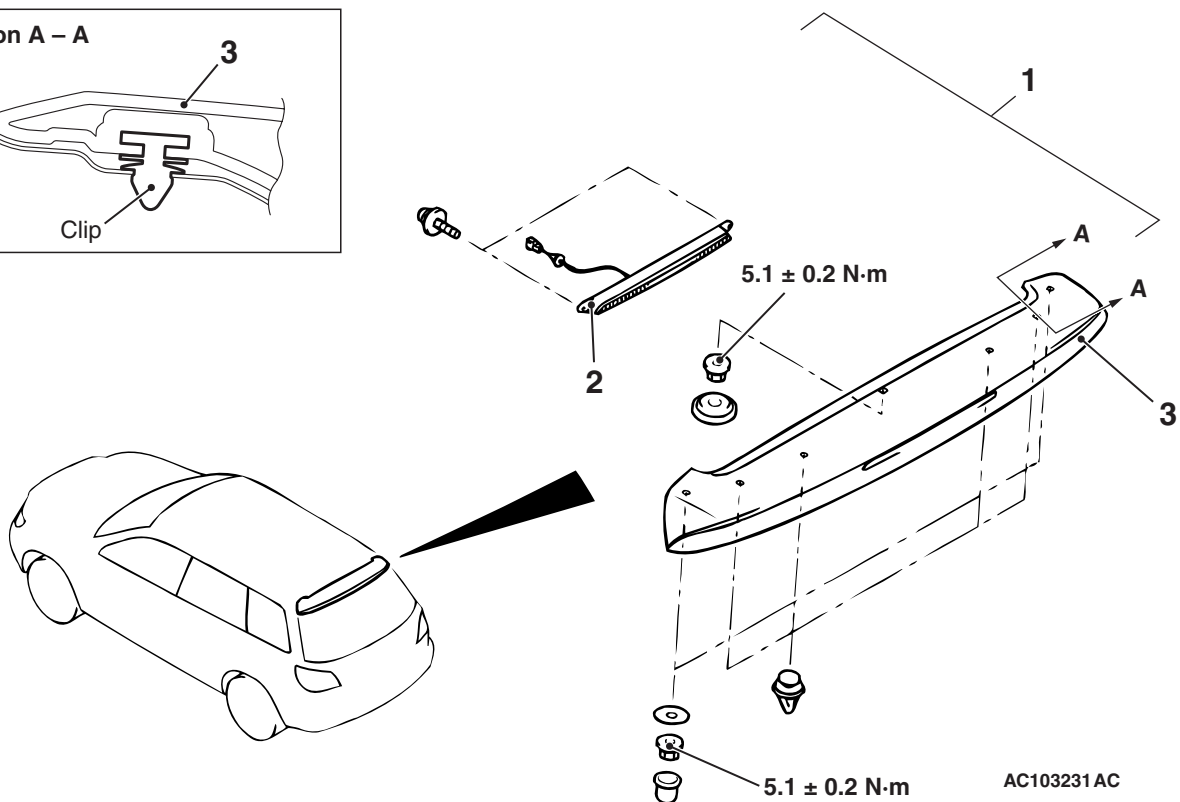
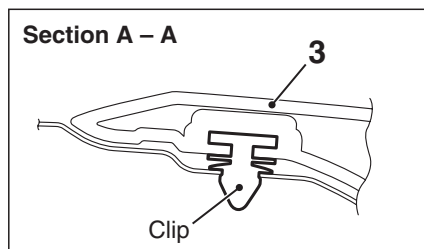
M1511000600973

Tool	Number	Name	Application
 MB990784	MB990784	Ornament remover	Removal of tailgate spoiler

TAILGATE SPOILER

REMOVAL AND INSTALLATION

M1511019900206



Removal steps

- Tailgate upper trim (Refer to GROUP 52A, Tailgate trim [P.52A-25](#)).
- High-mounted stop lamp connector connection

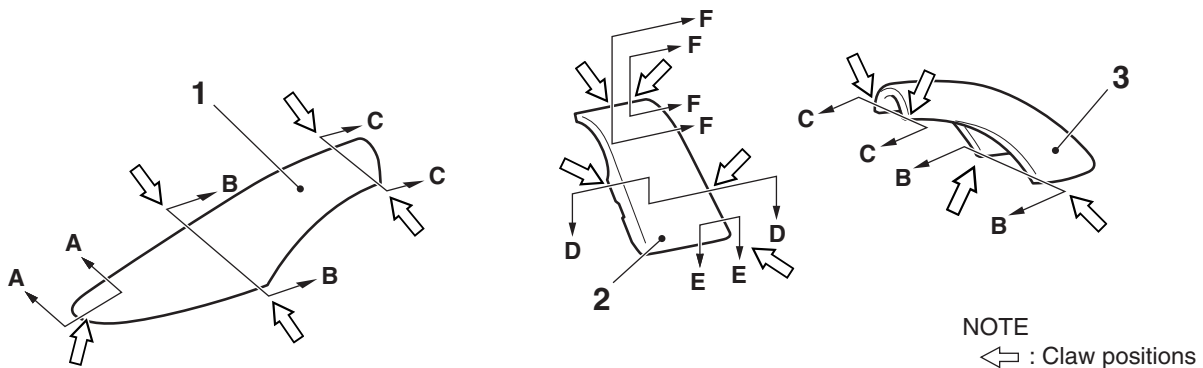
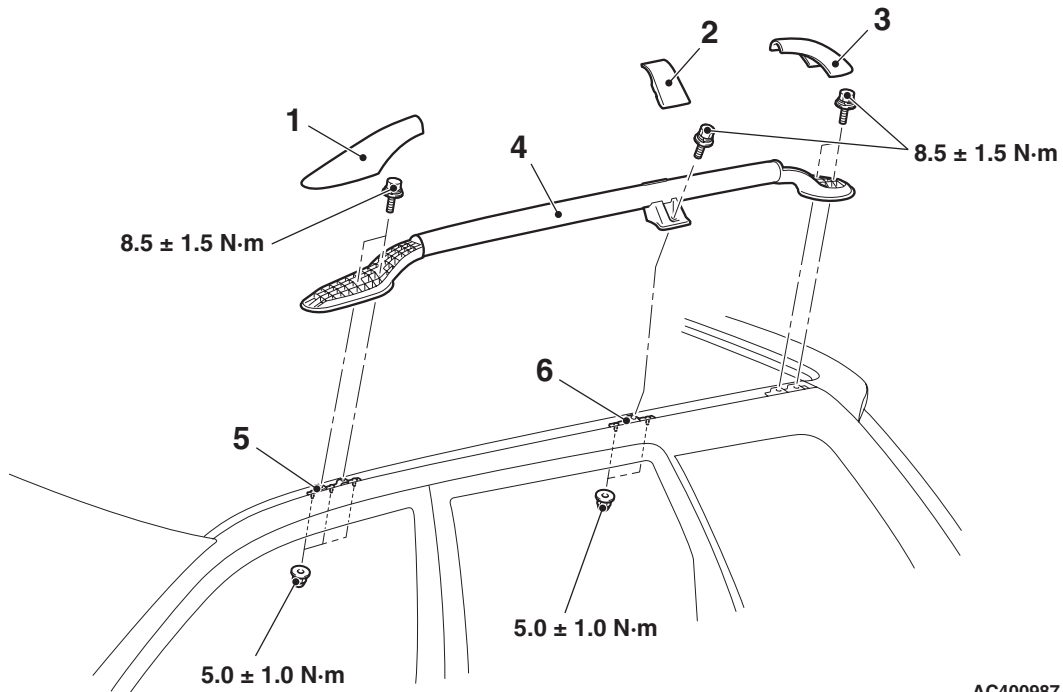
Removal steps (Continued)

- Rear washer hose connection
1. Tailgate spoiler assembly
 2. High-mounted stop lamp assembly
 3. Tailgate spoiler

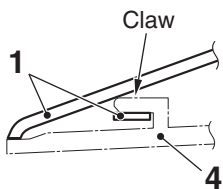
ROOF RAIL

REMOVAL AND INSTALLATION

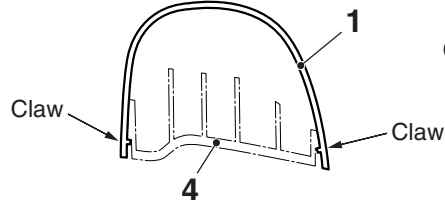
M1511016600358



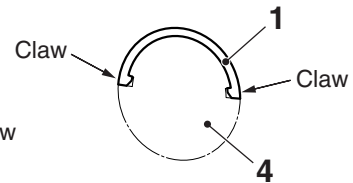
Section A – A



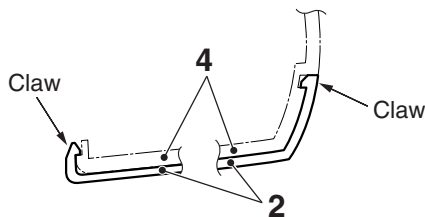
Section B – B



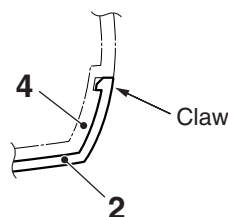
Section C – C



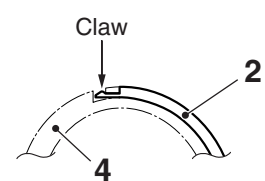
Section D – D



Section E – E



Section F – F



Removal steps

1. Front roof rail cover
2. Centre roof rail cover
3. Rear roof rail cover

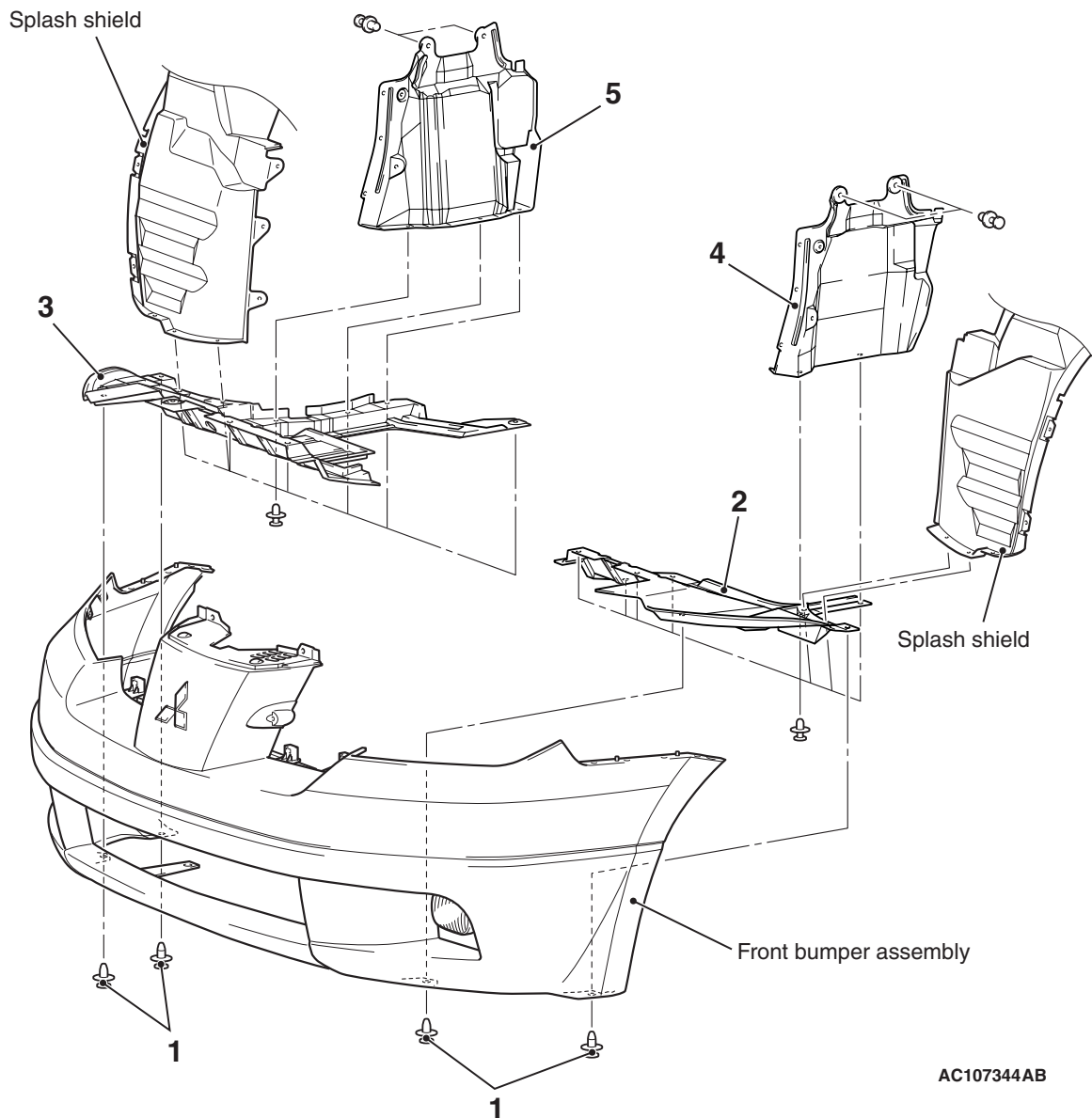
Removal steps (Continued)

4. Roof rail
5. Front roof rail bracket
6. Centre roof rail bracket

UNDER COVER

REMOVAL AND INSTALLATION

M1511019600227



AC107344AB

Removal steps

1. Front bumper assembly mounting clips
2. Front under cover (LH)

Removal steps (Continued)

3. Front under cover (RH)
4. Side under cover (LH)
5. Side under cover (RH)

WINDSHIELD WIPER AND WASHER

SERVICE SPECIFICATION

M1511000300400

Item	Standard value
Stop position of the windshield wiper arm/blade assembly (Distance between the edge of the wiper blade and the end of the deck garnish) mm	Driver's side: 30 ± 5 Passenger's side: 65 ± 5

TROUBLESHOOTING

M1511000700613

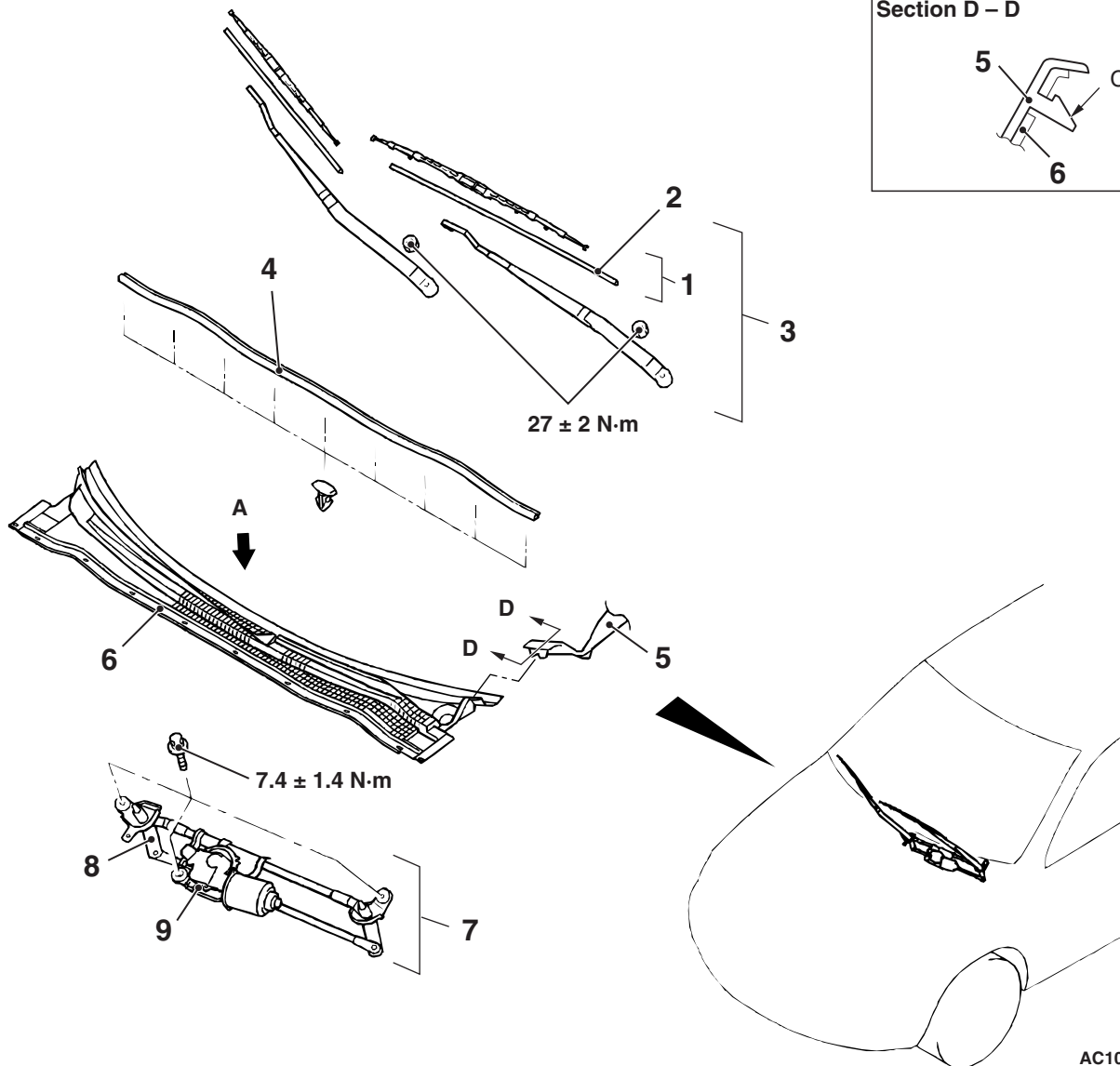
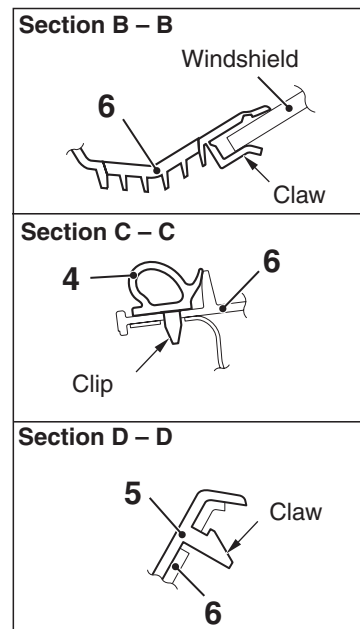
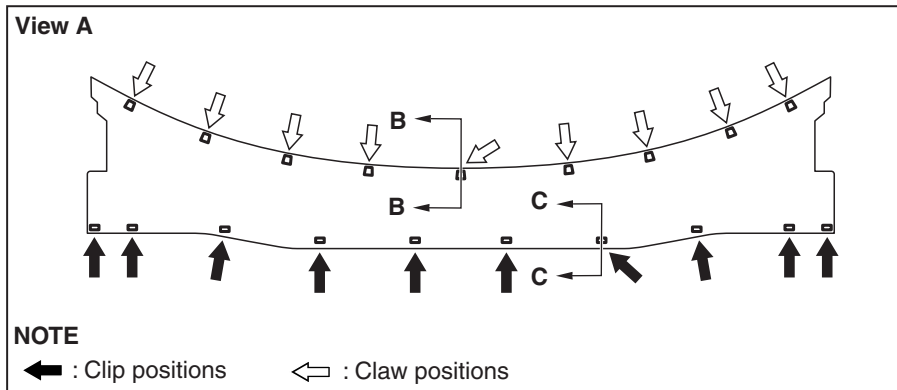
The windshield wiper and washer are controlled by the smart wiring system (SWS). For troubleshooting, refer to GROUP 54B, Troubleshooting [P.54B-25](#) or GROUP 54C, Troubleshooting [P.54C-18](#).

NOTE: Even when the ETACS-ECU has failed, the windshield wiper can work at low speed in fail-safe mode. (Normally, the windshield wiper operates when the ignition switch is at the "ACC" or "ON" position. But, if it enters the fail-safe mode, the wiper can operate only when the ignition switch is at the "ON" position.)

WINDSHIELD WIPER

REMOVAL AND INSTALLATION

M1511007900306

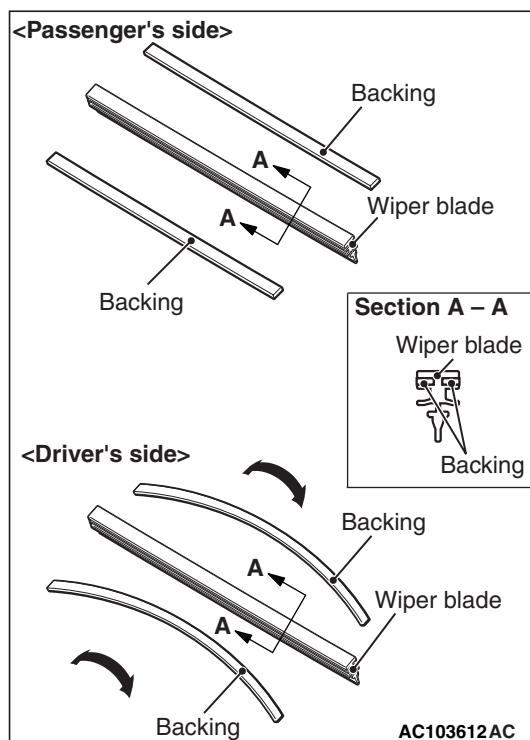


AC107419AC

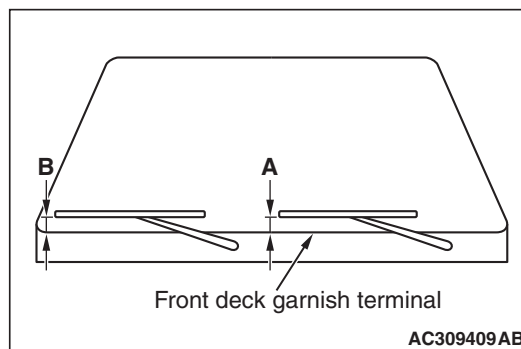
Windshield wiper motor and link assembly removal steps

5. Roof drip moulding and front deck garnish connection
6. Front deck garnish
7. Windshield wiper motor and link assembly
8. Link assembly
9. Windshield wiper motor assembly

NOTE: For removal and installation of the wiper and washer switch, refer to GROUP 54A, Column switch P.54A-65.

INSTALLATION SERVICE POINTS**>>A<< WIPER BLADE INSTALLATION****⚠ CAUTION**

For good windshield wiper wiping performance, use a passenger-side windshield wiper without an curve in the backing of the wiper blade. The windshield wiper on the driver's side should be a wiper blade with a curved backing.

>>B<< WIPER BLADE ASSEMBLY INSTALLATION

Install the wiper blade at the specified position (standard value).

Standard value:

Driver's side (A): 30 ± 5 mm

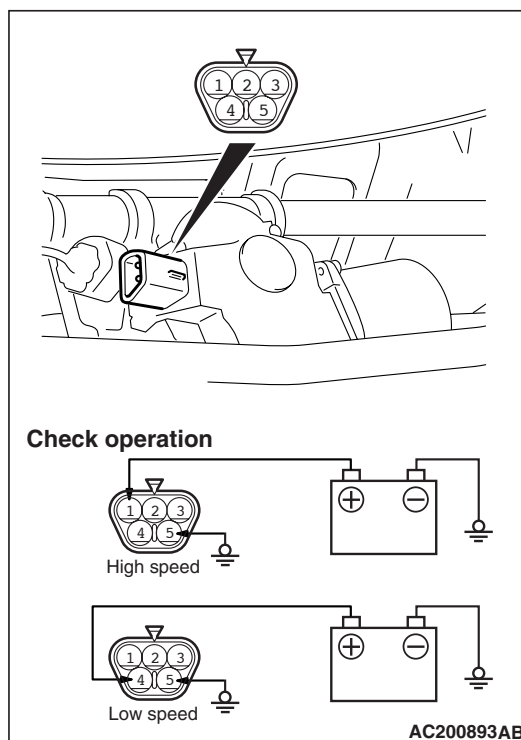
Passenger's side (B): 65 ± 5 mm

INSPECTION

M1511008000243

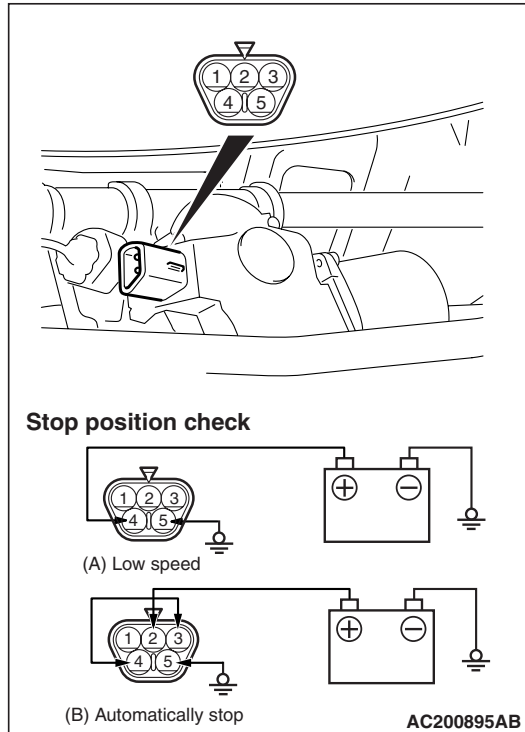
WINDSHIELD WIPER MOTOR CHECK

Inspect the windshield wiper motor by removing the harness connector with the motor attached to the vehicle.

Wiper motor at low or high speed operation

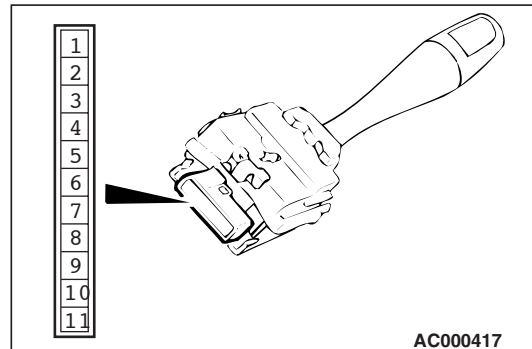
Connect the battery to the windshield wiper motor to inspect the operation of motor rotation in low or high speed.

Wiper motor at stop position operation



1. Connect the battery to the windshield wiper motor as shown in the illustration (A).
2. Run the windshield wiper motor at low speed, then disconnect the battery in the middle of the motor turning and check to see that the motor stops.
3. As shown in the illustration (B), connect the terminals of the windshield wiper motor connectors.
4. Check to see that the windshield wiper motor runs at low speed and then stops at the automatic stop position.

WINDSHIELD WIPER SWITCH CHECK <L.H. DRIVE VEHICLE>



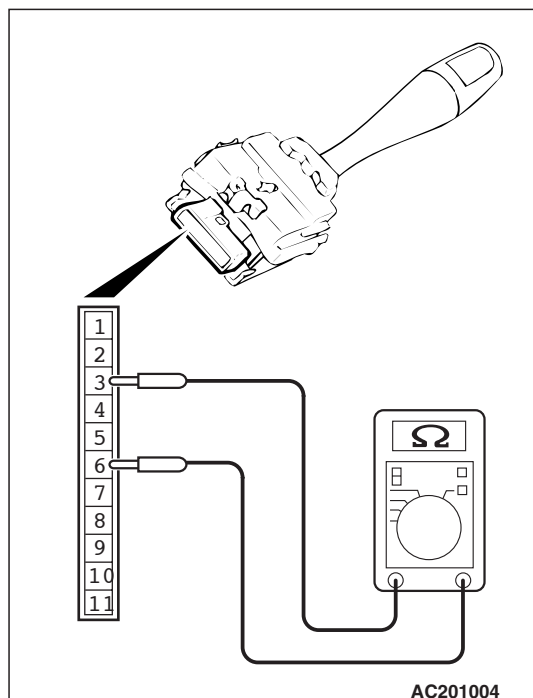
Check continuity between the switch terminals.

Switch position	Tester connection	Specified condition
OFF	6 – 11, 6 – 10, 6 – 9, 6 – 8	Open circuit
Windshield mist wiper switch	6 – 11	Less than 2 ohms
Windshield intermittent wiper switch	6 – 10	
Windshield low-speed wiper switch	6 – 9	
Windshield high-speed wiper switch	6 – 8	

<R.H. DRIVE VEHICLE>

NOTE: The windshield wiper switch is integrated in the column-ECU, so can not be checked as an individual part. However, its operation can be checked by the input signal check.

- Not using SWS monitor: Refer to GROUP 54B, Troubleshooting [P.54B-25](#).
- Using SWS monitor: Refer to GROUP 54C, Troubleshooting [P.54C-18](#).

**WINDSHIELD INTERMITTENT WIPER
VOLUME CHECK <L.H. DRIVE VEHICLE>**

Check that the resistance varies between 0 and 1 when the windshield intermittent volume is turned from FAST to SLOW by after measuring resistance between connector terminals 3 and 6 at the column switch.

<R.H. DRIVE VEHICLE>

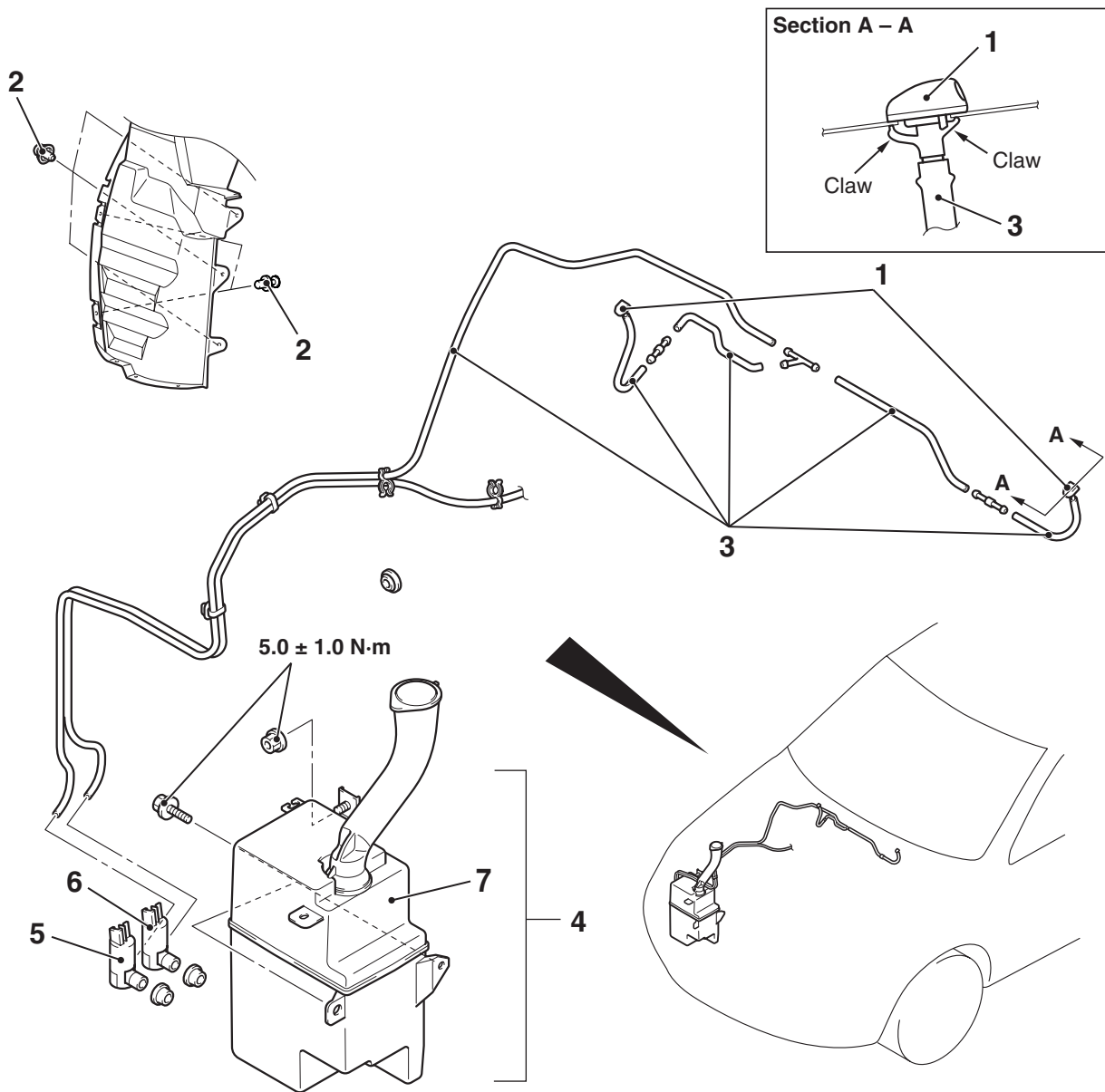
NOTE: The windshield wiper switch is integrated in the column-ECU, so can not be checked as an individual part. However, its operation can be checked by the input signal check.

- Not using SWS monitor: Refer to GROUP 54B, Troubleshooting [P.54B-25](#).
- Using SWS monitor: Refer to GROUP 54C, Troubleshooting [P.54C-18](#).

WINDSHIELD WASHER

REMOVAL AND INSTALLATION

M1511008200786



Windshield washer nozzle removal steps

- Connection of windshield washer hose

1. Windshield washer nozzle

Washer hose removal steps

2. Front splash shield (LH) mounting clip
- Connection of windshield washer nozzle
3. Windshield washer hose

AC200400 AD

Washer tank removal steps

- Front under cover (RH) (Refer to [P.51-29](#)).
- 2. Front splash shield (RH) mounting clip
- Connection of front washer hose and rear washer hose
- 4. Washer tank assembly
- 5. Windshield washer motor
- Headlamp washer motor (Refer to [P.51-43](#)).
- 6. Rear washer motor
- 7. Washer tank

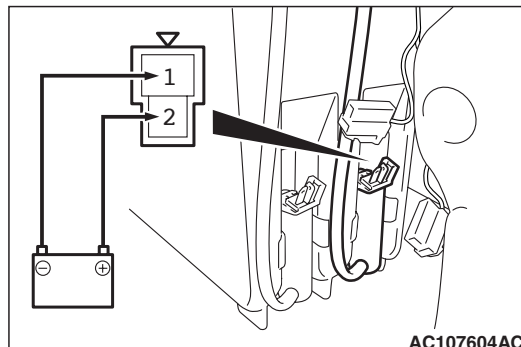
Washer motor removal steps

- Front under cover (LH) (Refer to P.51-29).
- Connection of front washer hose and rear washer hose
- 5. Windshield washer motor
- 6. Rear washer motor

NOTE: For removal and installation of the wiper and washer switch, refer to GROUP 54A, Column switch P.54A-65.

INSPECTION

M1511008300266

WINDSHIELD WASHER MOTOR CHECK

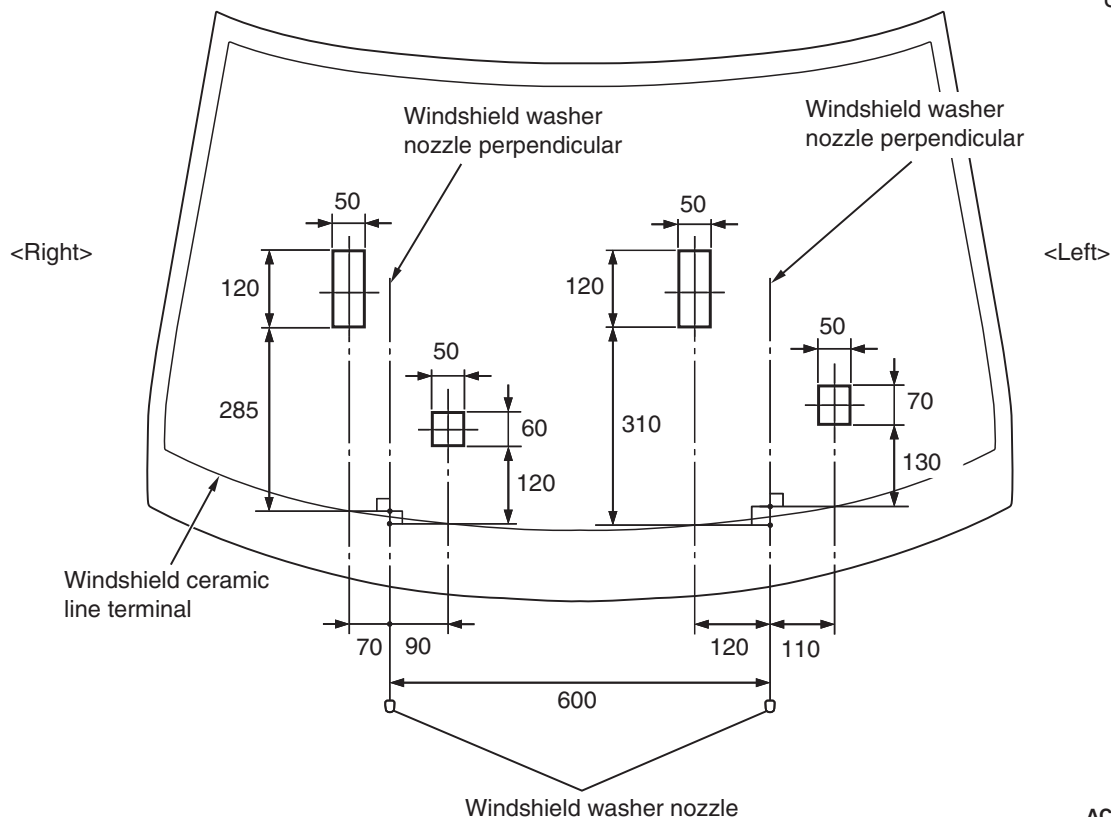
1. Remove the washer tank assembly with the washer hose attached. Then fill the washer tank with water.
2. Check to see that the water is vigorously sprayed when connecting the positive battery terminal to terminal number 2 and terminal number 1 to the negative battery terminal.

WINDSHIELD WASHER FLUID EJECTION CHECK

Move the nozzle to adjust the position so that the spray is in the area shown in the illustration.

<L.H.DRIVE VEHICLE>

Units: mm



AC107158 AB

Units: mm



AC000417

Switch position	Tester connection	Specified condition
OFF	6 – 7	Open circuit
Windshield washer switch	6 – 7	Less than 2 ohms

- *Not using SWS monitor: Refer to GROUP 54B, Troubleshooting [P.54B-25](#).*
- *Using SWS monitor: Refer to GROUP 54C, Troubleshooting [P.54C-18](#).*

REAR WIPER AND WASHER

SERVICE SPECIFICATION

M1511000300411

Item	Standard value
Rear wiper arm and blade assembly stop position (Distance between the edge of the wiper blade and the end of tailgate galss) mm	30 ± 5

TROUBLESHOOTING

M1511000700624

The rear wiper and washer are controlled by the smart wiring system (SWS). For troubleshooting, refer to GROUP 54B, Troubleshooting [P.54B-25](#) GROUP 54C, Troubleshooting [P.54C-18](#).

ON-VEHICLE SERVICE

CHECK OF REAR WIPER OPERATION
WHEN SELECTOR LEVER IS AT THE "R"
POSITION

M1511022100073

1. When the selector lever is moved to the "R" position with the rear wiper switch at the "INT" position, the wiper should operate twice or three times at low speed after approximately one second.
2. If not, troubleshoot. (Refer to GROUP 54B, Troubleshooting [P.54B-25](#) or GROUP 54C, Troubleshooting [P.54C-18](#).)

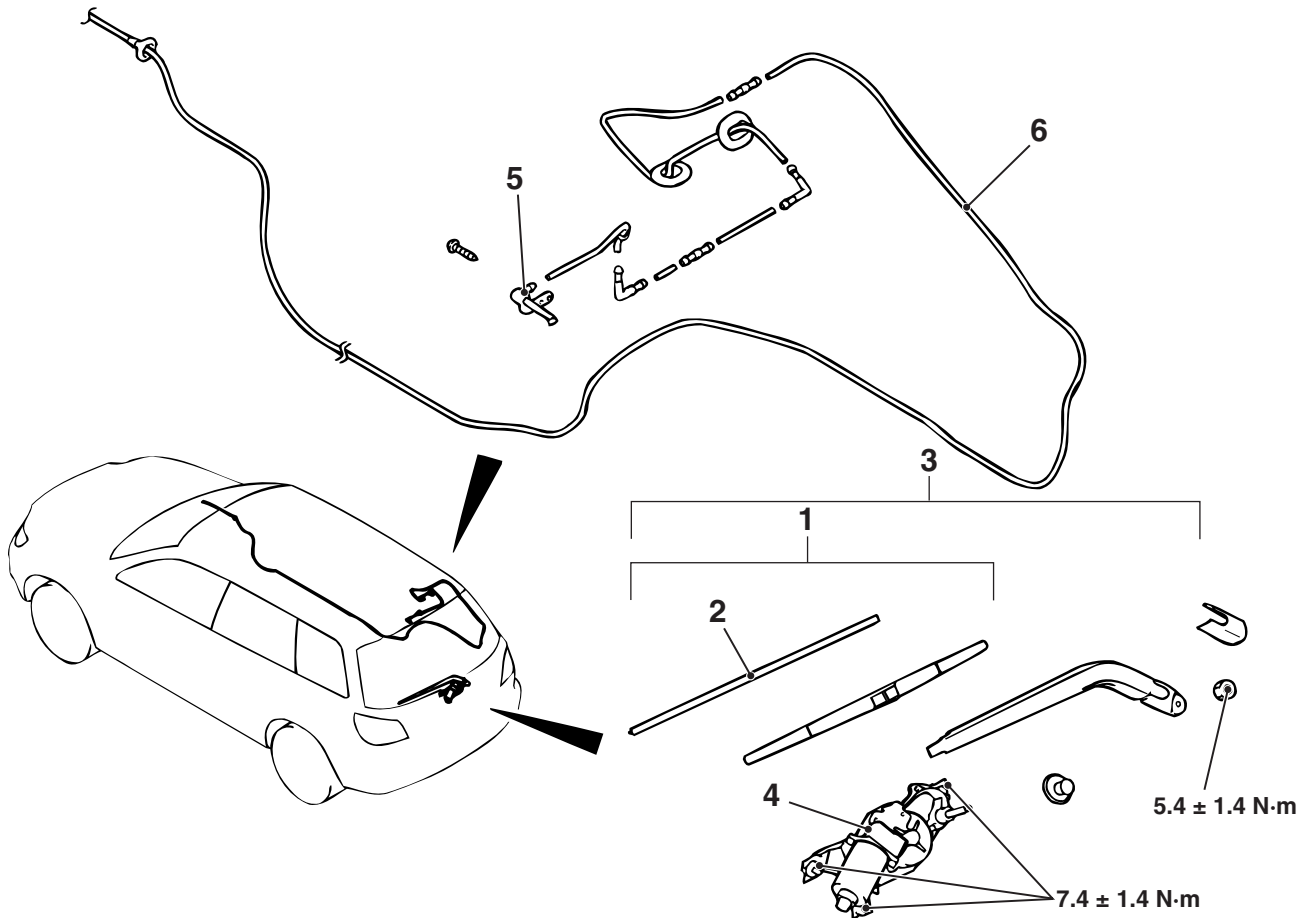
REAR WIPER AND WASHER

REMOVAL AND INSTALLATION

M1511008500464

Pre-removal and Post-installation Operation

Washer Tank Assembly and Rear Washer Motor Removal and Installation (Refer to [P.51-35.](#))



AC300618AB

Wiper blade assembly removal steps

1. Wiper blade assembly
- >>B<< 2. Wiper blade

Rear wiper motor removal steps

- >>A<< 3. Wiper arm and blade assembly
 - Tailgate lower trim (Refer to GROUP 52A, Tailgate trim [P.52A-25](#)).
 - Tailgate waterproof film (Refer to GROUP 42, Tailgate [P.42-49](#)).
4. Rear wiper motor assembly

Rear washer nozzle removal steps

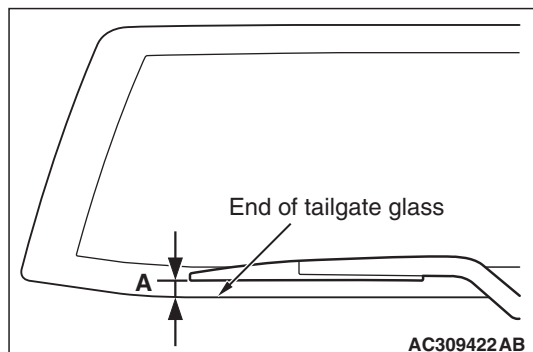
- High-mounted stop lamp assembly (Refer to GROUP 54A, High-mounted stop lamp [P.54A-61](#)).
- 5. Rear washer nozzle

Washer hose removal steps

- Cowl side trim, front scuff plate, centre pillar trim lower, rear scuff plate, rear pillar trim and rear shelf trim (Refer to GROUP 52A, Trims [P.52A-19](#)).
- Tailgate lower trim, tailgate side trim, tailgate upper trim (Refer to GROUP 52A, Tailgate trim [P.52A-25](#)).
- High-mounted stop lamp assembly (Refer to GROUP 54A, High-mounted stop lamp [P.54A-61](#)).
- 6. Rear washer hose

NOTE: For removal and installation of the wiper and washer switch, refer to GROUP 54A, Column switch [P.54A-65](#).

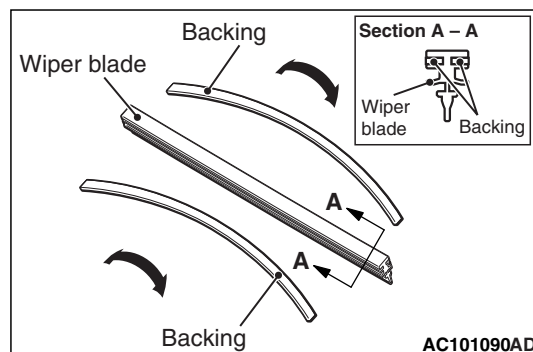
INSTALLATION SERVICE POINTS

>>A<< REAR WIPER ARM AND BLADE
ASSEMBLY INSTALLATION

Before installing the rear wiper arm and blade assembly, operate the rear wiper motor so that the motor stops at the predetermined park position. Install the rear wiper arm and blade assembly and adjust the rear wiper blade position so that the blade end stops at the predetermined position (standard position).

Standard value (A): 30 ± 5 mm

>>B<< WIPER BLADE INSTALLATION

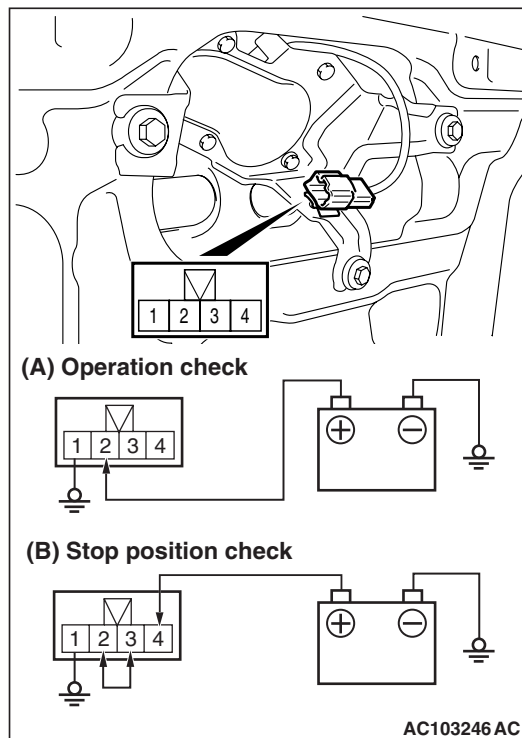
CAUTION

Use a curved backing like that shown for the backing of a wiper blade to ensure sustained wiper wiping performance.

INSPECTION

REAR WIPER MOTOR CHECK

M1511008600320



Inspect the rear wiper motor by removing the harness connector with the motor attached to the vehicle.

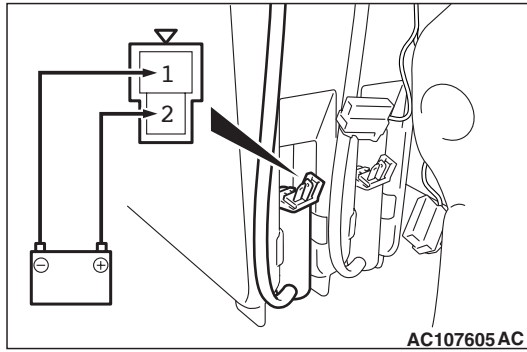
Wiper motor operation

Connect the battery to the rear wiper motor as shown in the illustration (A) and check the motor operation.

Wiper motor at stop position operation

1. Connect the battery to the rear wiper motor as shown in the illustration (A).
2. Disconnect the battery cable from the rear wiper motor while it is turning and then check to see that the motor stops.
3. Re-connect the battery as shown in the illustration (B).
4. Check to see that the rear wiper motor runs and then stops at the automatic stop position.

REAR WASHER MOTOR CHECK

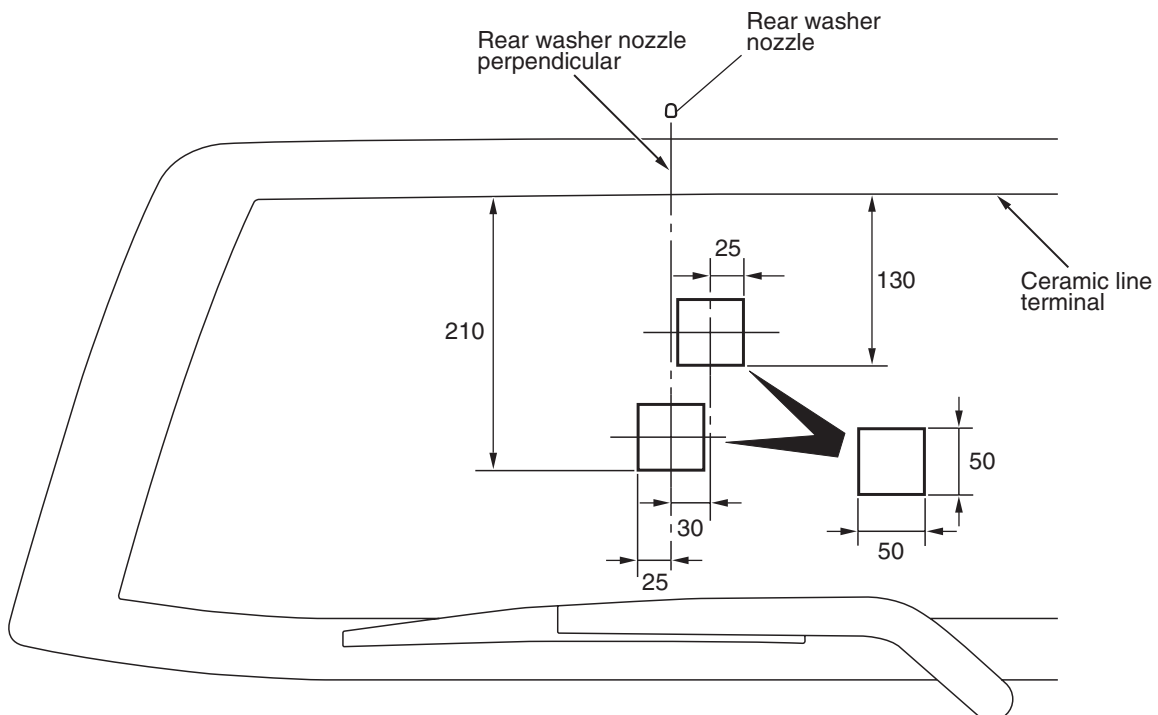


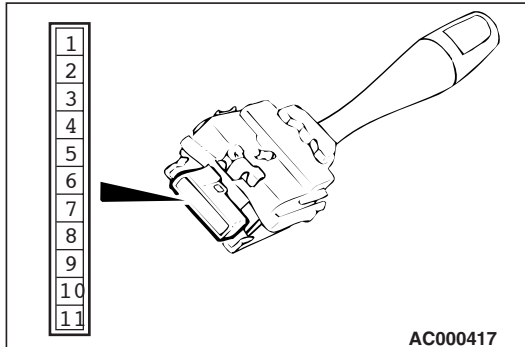
1. Remove the rear washer tank assembly with the washer hose attached. Then fill the washer tank with water.
2. Check to see that the water is vigorously sprayed when connecting the positive battery terminal to terminal number 2 and terminal number 1 to the negative battery terminal.

REAR WASHER FLUID EJECTION CHECK

Move the nozzle to adjust the position so that the spray is in the area shown in the illustration.

Units: mm



**REAR WIPER AND WASHER SWITCH
CHECK <L.H. DRIVE VEHICLE>**

Check continuity between the switch terminals.

Switch position	Tester connection	Specified condition
OFF	4 – 6, 5 – 6	Open circuit
Rear wiper switch	4 – 6	Less than 2 ohms
Rear washer switch	5 – 6	

<R.H. DRIVE VEHICLE>

NOTE: The rear wiper and washer switch is integrated in the column-ECU, so can not be checked as an individual part. However, its operation can be checked by the input signal check.

- Not using SWS monitor: Refer to GROUP 54B, Troubleshooting [P.54B-25](#).
- Using SWS monitor: Refer to GROUP 54C, Troubleshooting [P.54C-18](#).

HEADLAMP WASHER

TROUBLESHOOTING

M1511000700635

The headlamp washer is controlled by the Smart Wiring System (SWS). For troubleshooting, refer to GROUP 54B, Troubleshooting [P.54B-25](#) or GROUP 54C, Troubleshooting [P.54C-18](#).

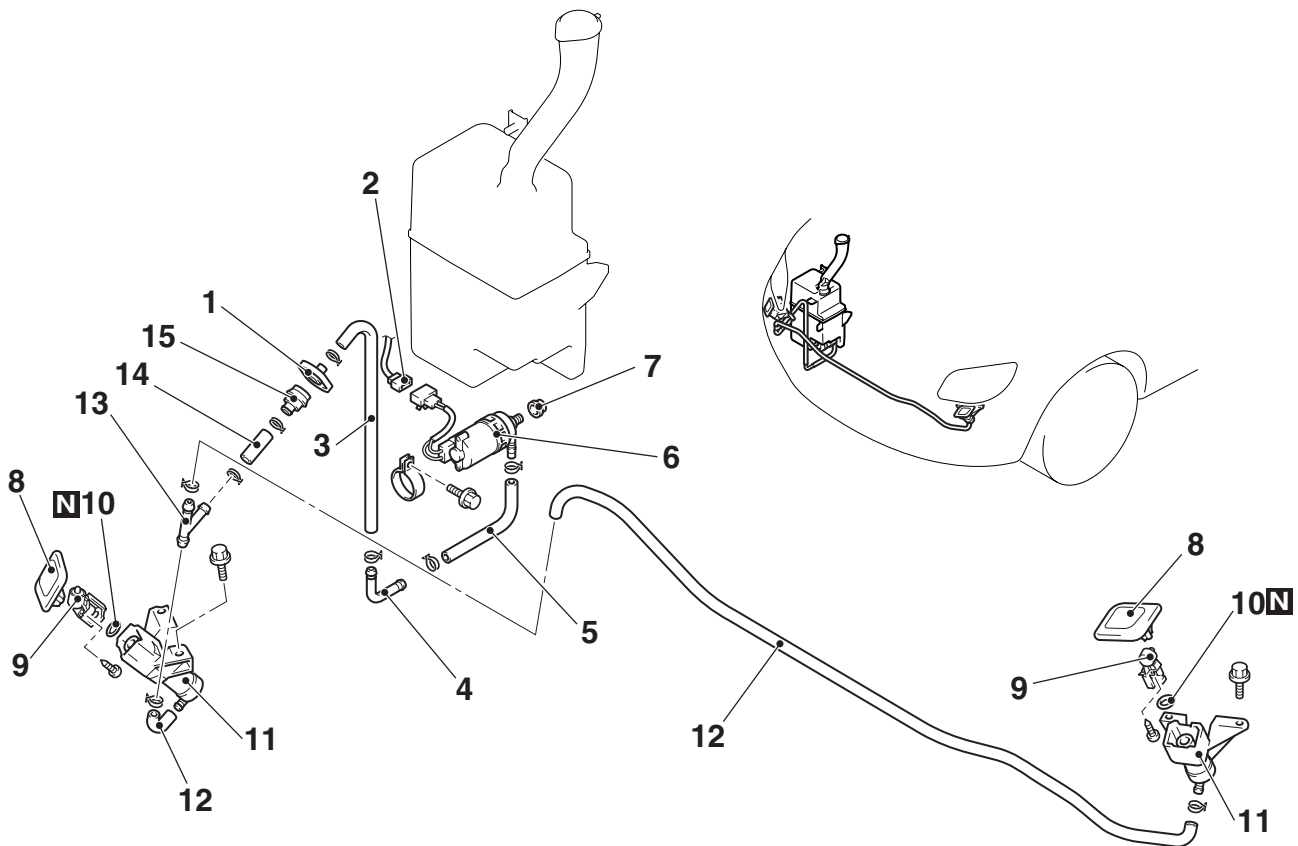
HEADLAMP WASHER

REMOVAL AND INSTALLATION

M1511009700115

Pre-removal and Post-installation Operation

- Radiator Grille Removal and Installation (Refer to [P.51-10](#)).
- Front Bumper Extension Removal and Installation (Refer to [P.51-3](#)).
- Under Cover Removal and Installation (Refer to [P.51-29](#)).



AC300298AB

Removal steps

- Washer fluid draining
- 1. Headlamp washer hose connection
- 2. Headlamp washer motor connector
- 3. Headlamp washer hose
- 4. Headlamp washer joint

Removal steps (Continued)

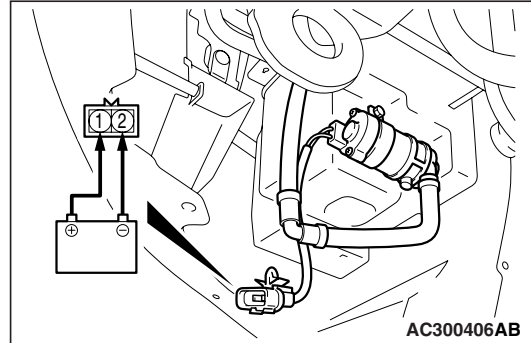
- 5. Headlamp washer hose
- 6. Headlamp washer motor
- 7. Headlamp washer motor packing
- Front bumper (Refer to [P.51-3](#)).
- 8. Headlamp washer cover

Removal steps (Continued)

9. Headlamp washer nozzle
10. O-ring
11. Headlamp washer actuator assembly
12. Headlamp washer hose
13. Headlamp washer joint
14. Headlamp washer hose
15. Headlamp washer joint

INSPECTION

M1511009800059

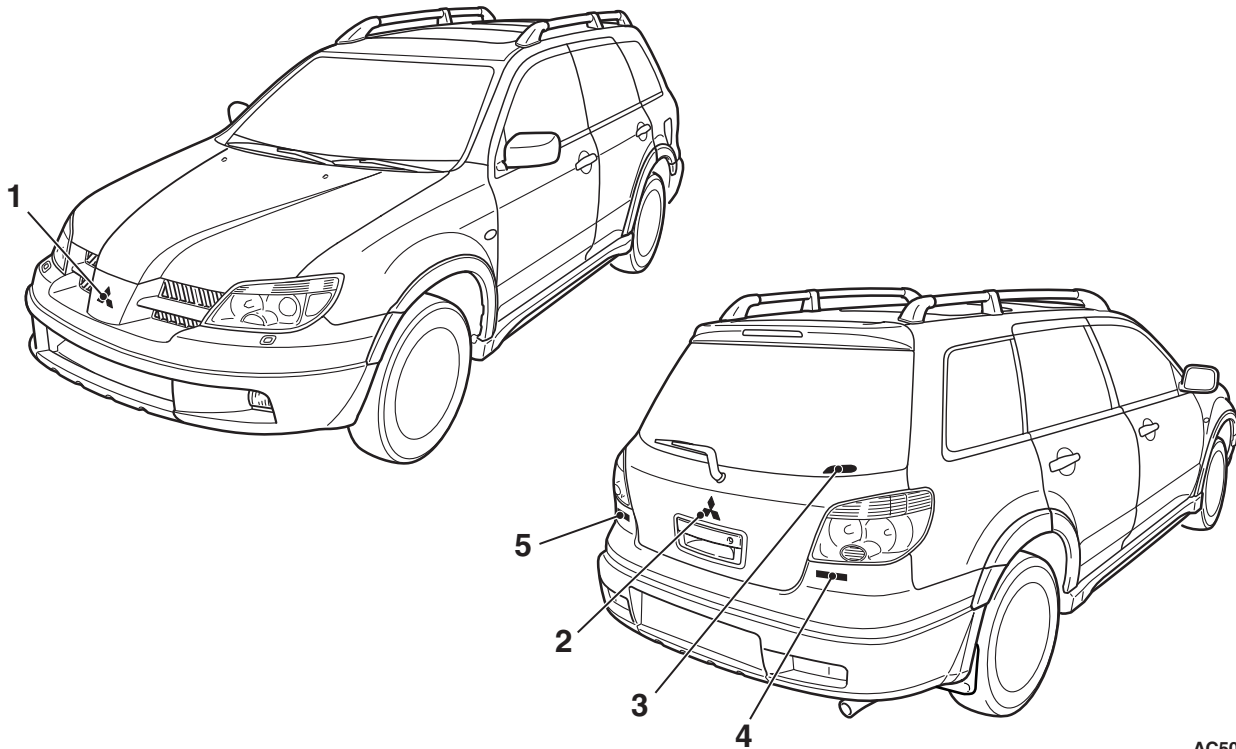
HEADLAMP WASHER MOTOR CHECK

1. Remove the headlamp washer motor connector.
2. Check to see that the water is vigorously sprayed when connecting the positive battery terminal to terminal number 1 and terminal number 2 to the negative battery terminal.

MARK

REMOVAL AND INSTALLATION

M1511011801413



AC504445AB

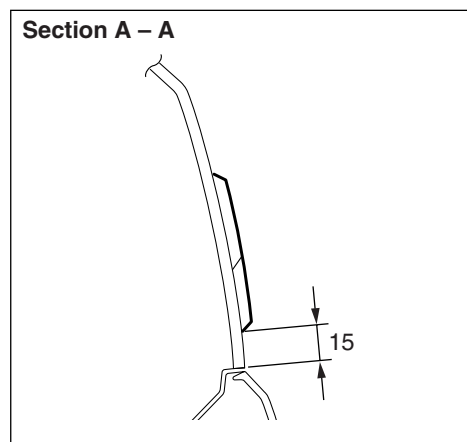
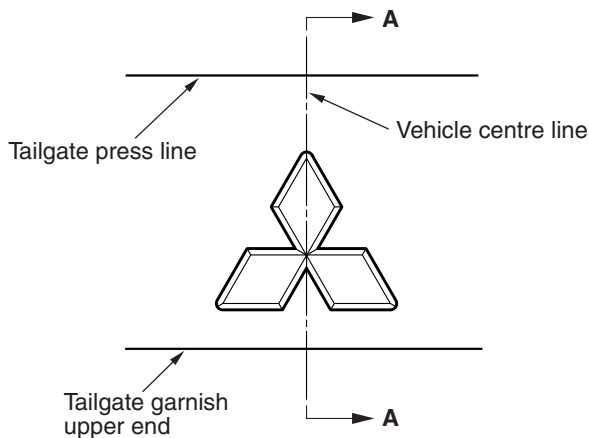
1. Front three-diamond mark (Refer to
P.51-4.)
>>A<< 2. Rear three-diamond mark

- >>A<< 3. AWD <Standard: Vehicles for
Australia and New Zealand>, 4WD
<Optional: Vehicles for Australia and
New Zealand> decal
>>A<< 4. GLX, GLS mark
>>A<< 5. OUTLANDER mark

INSTALLATION SERVICE POINT

>>A<< MARK INSTALLATION

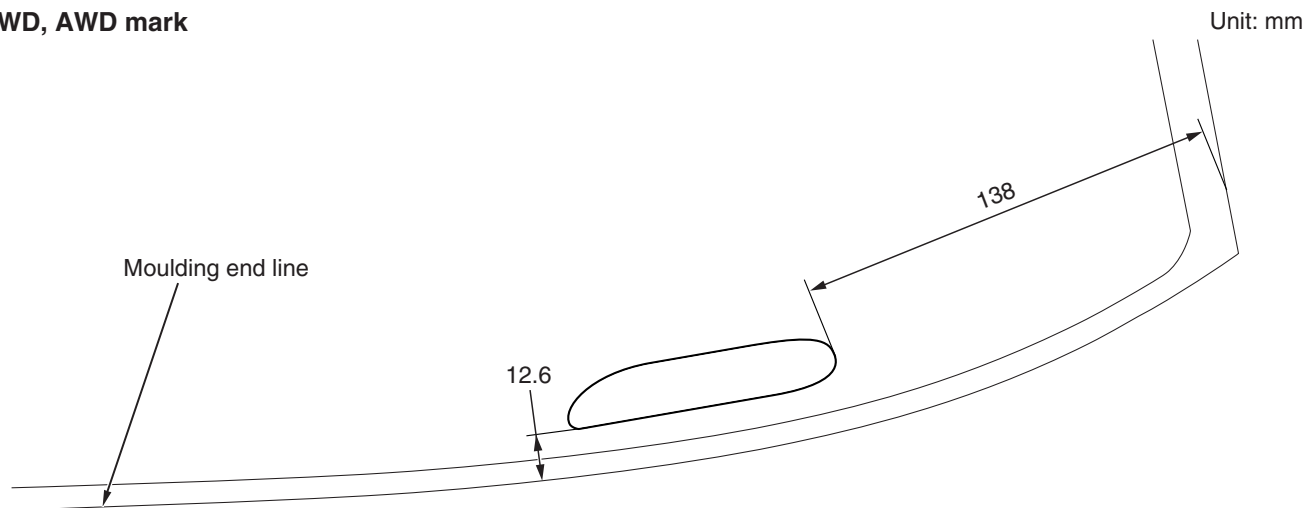
2. Rear three-diamond mark



Unit: mm

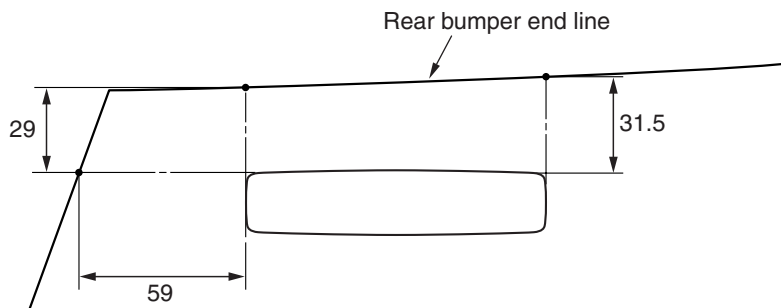
AC401366AB

3. 4WD, AWD mark



AC400900 AC

4. GLX, GLS mark



Unit: mm

AC401370AC

5. OUTLANDER mark



Unit: mm

AC400529AH

1. Clean the mark installation surfaces on the body with unleaded petrol.

⚠ CAUTION

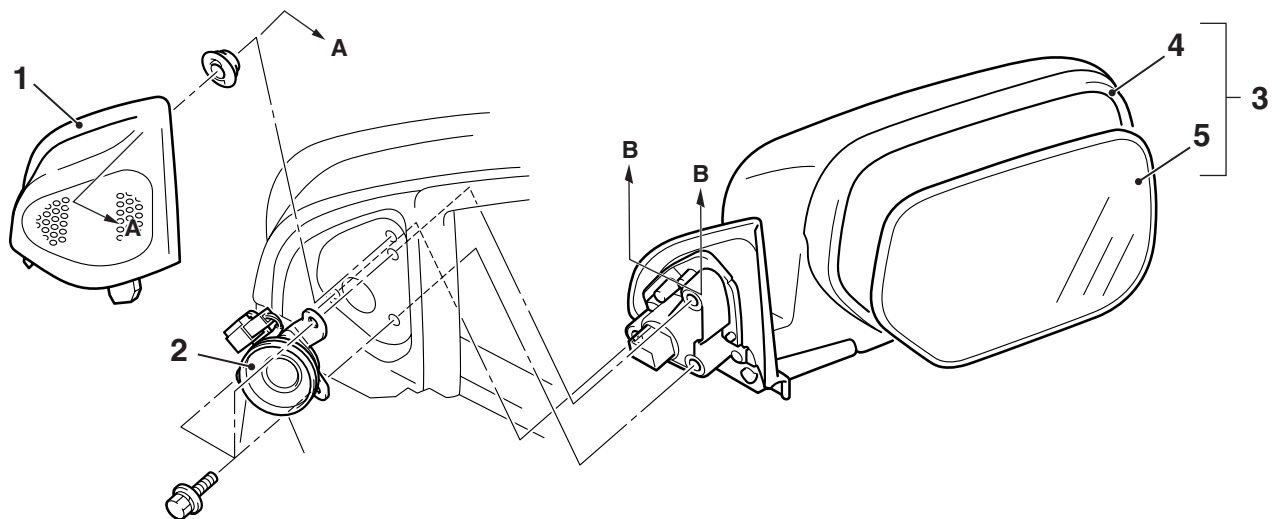
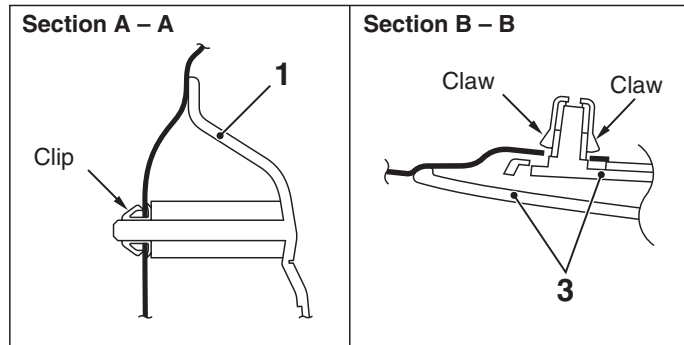
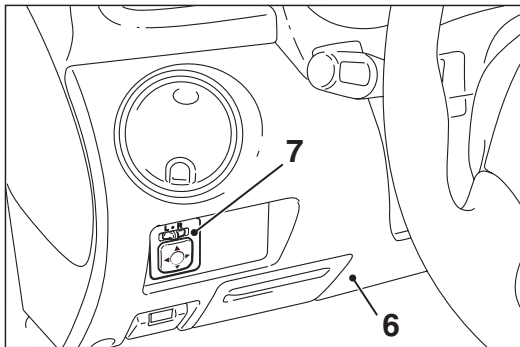
When attaching the marks, the ambient temperature should be 20 – 38°C and the air should be completely free of dust. If the ambient temperature is lower than 20°C, the marks and the places on the vehicle body where the marks are to be attached should be heated to 20 – 38°C.

2. Peel off the protection sheet on the back of the mark to paste it on the installation position.

OUTSIDE MIRROR

REMOVAL AND INSTALLATION

M1511006400579



AC201696AB

Door mirror removal steps

1. Delta cover
2. Tweeter
3. Door mirror assembly
4. Door mirror body assembly
5. Mirror

>>A<<

<<A>>

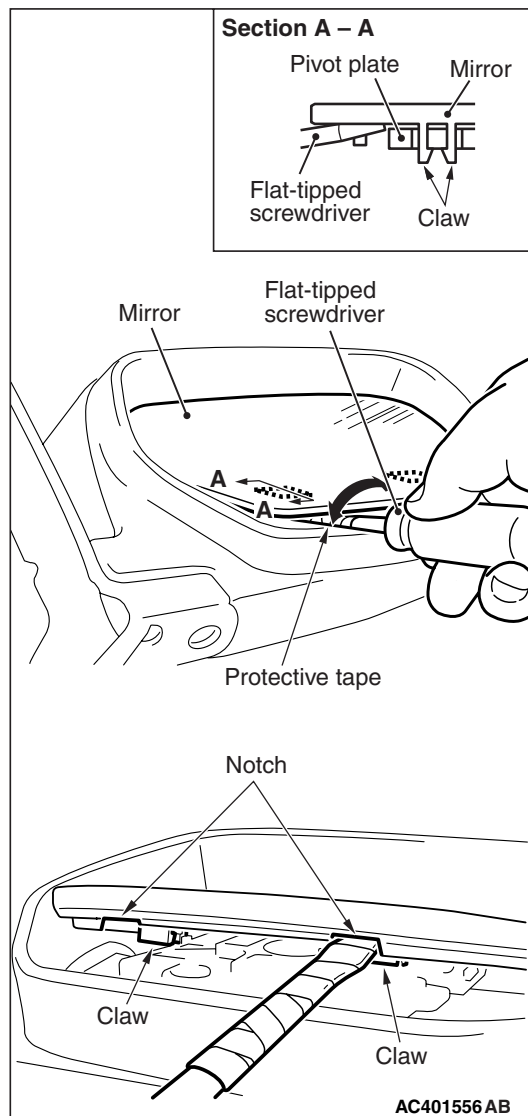
Remote controlled mirror switch removal steps

6. Instrument panel lower cover (Refer to GROUP 52A, Instrument panel [P.52A-3](#)<L.H. drive vehicles>, [P.52A-9](#)<R.H. drive vehicles>).
7. Remote controlled mirror switch

REMOVAL SERVICE POINT

<<A>> MIRROR REMOVAL

⚠ CAUTION



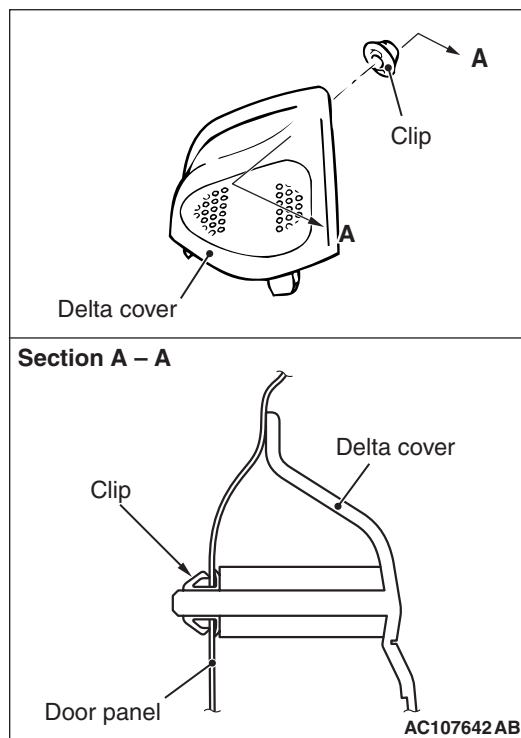
The claw of the mirror is prone to breakage when working in cold temperatures. Always warm up the mirror claw and claw periphery to 20°C or higher before handling.

Slant the mirror upward with your hands. Then insert a flat-tipped screwdriver wrapped with protective tape between the pivot plate and mirror through the cut-out from behind the mirror. Now pry off the mirror claw and remove the mirror as shown.

INSTALLATION SERVICE POINT

>>A<< DELTA COVER INSTALLATION

⚠ CAUTION

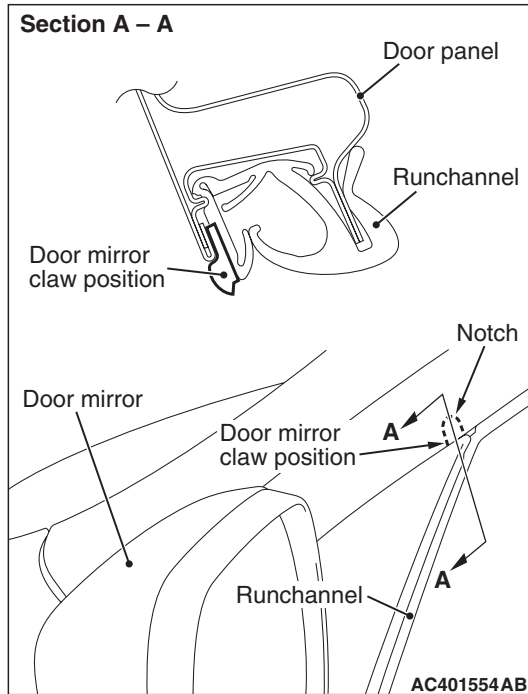


If the delta cover is placed with the clip on the door panel, the clip may be pushed into the door panel and fall off. Thus, special care is necessary.

Install the delta cover with the clip installed.

>>B<< DOOR MIRROR ASSEMBLY INSTALLATION

CAUTION

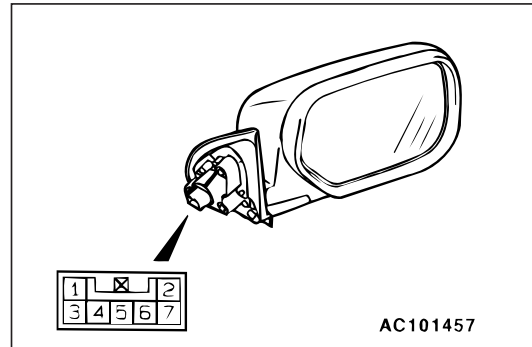


When assembling the door mirror, check to see that the claw of the door mirror is inserted in the notch of the front door runchannel.

INSPECTION

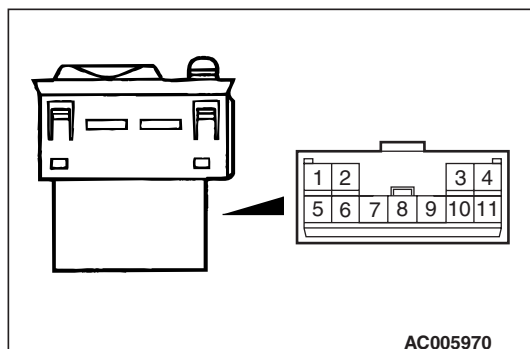
M1511006500446

ELECTRIC REMOTE CONTROL MIRROR OPERATION CHECK



Check that the mirror moves as described in the table when each terminal is connected to the battery.

Battery connection	Direction operation
<ul style="list-style-type: none"> Connect terminal 5 to the negative battery terminal. Connect terminal 7 to the positive battery terminal. 	Up
<ul style="list-style-type: none"> Connect terminal 5 to the positive battery terminal. Connect terminal 7 to the negative battery terminal. 	Down
<ul style="list-style-type: none"> Connect terminal 5 to the negative battery terminal. Connect terminal 6 to the positive battery terminal. 	Right
<ul style="list-style-type: none"> Connect terminal 5 to the positive battery terminal. Connect terminal 6 to the negative battery terminal. 	Left

DOOR MIRROR CONTROL SWITCH
CONTINUITY CHECK

Switch position		Tester connection	Specified condition
OFF		9 – 2, 9 – 3, 9 – 6, 9 – 10, 9 – 11, 1 – 2, 1 – 3, 1 – 6, 1 – 10, 1 – 11	Open circuit
Left side	OFF	9 – 6, 9 – 10, 9 – 11, 1 – 6, 1 – 10, 1 – 11	Open circuit
	Up	1 – 6, 9 – 11	Less than 2 ohms
	Down	1 – 11, 6 – 9	
	Right	1 – 6, 9 – 10	
	Left	1 – 10, 6 – 9	
Right side	OFF	9 – 2, 9 – 3, 9 – 6, 1 – 2, 1 – 3, 1 – 6	Open circuit
	Up	1 – 6, 3 – 9	Less than 2 ohms
	Down	1 – 3, 6 – 9	
	Right	1 – 6, 2 – 9	
	Left	1 – 2, 6 – 9	